Parkhill

STAGE 1 ABATEMENT PLAN

Closed City of Truth or Consequences Former Bureau of Land Management Landfill
Elephant Butte, New Mexico

May | 2025

Parkhill Project # 43866.24

Parkhill

May 28, 2025

Mr. Noel Hernandez
Project Manager
New Mexico Environment Department
Ground Water Quality Bureau
P.O. Box 5469
Santa Fe, NM 87502-5469

Re: 43866.24 Truth or Consequences Closed BLM Landfill
Stage 1 Abatement Plan Proposal

Dear Recipient:

On behalf of our client, City of Truth or Consequences (TorC), New Mexico, Parkhill is pleased to submit to the New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) this Proposed Stage 1 Abatement Plan (S1AP) for the Truth or Consequences Closed BLM Landfill in response to a Corrective Action Report Approval letter received from GWQB on July 31, 2024. The letter requested submittal of a S1AP for the Site pursuant to the requirements of 20.6.2.4106.B NMAC. This S1AP outlines an approach to conduct an investigation that adequately characterizes Site conditions and provides data necessary to select and develop an effective abatement option for the facility.

We appreciate the Bureau's review of the enclosed information and look forward to your feedback on this Plan. Please contact me at 406.544.2133 or ayuhas@parkhill.com if you have any questions or if we can be of additional assistance.

Sincerely,

PARKHILL

By _____
Andrew N. Yuhas, PG
Professional Geologist

ANY/pp
Enclosures: Proposed TorC BLM Landfill Stage 1 Abatement Plan

cc: Mr. Andy Alvarez, Sanitation Director, T or C

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EXHIBITS

1.0 INTRODUCTION

On behalf of our client, the City of Truth or Consequences (T or C), Parkhill is pleased to submit this Stage 1 Abatement Plan Proposal (Plan) for the closed City of Truth or Consequences Former Bureau of Land Management Landfill (TCBLM). This Plan has been prepared in response to the "Corrective Action Report Approval and Stage 1 Abatement Plan Submittal Required" letter from the New Mexico Environment Department (NMED) Groundwater Quality Bureau (GWQB) dated July 28, 2024 (Exhibit A) and provided in response to Parkhill's Groundwater Monitoring Well Completion Report for the facility (Parkhill, March 4, 2024)

The scope of work proposed in this report is designed to satisfy the Stage 1 Abatement Plan Proposal requirements in 20.6.2.4106.C NMAC, and will provide the data and approach necessary to design an effective and appropriate abatement Plan for this site.

In this Plan, Section 1 consists of the introduction, site location, site history, hydrogeology, nature of discharge, and previous investigations. Section 2 outlines the nature and known extent of contamination as well as data gaps being addressed in the Plan. Section 3 details the scope of work for executing this Plan and completing future groundwater monitoring. Section 4 discusses long-term groundwater monitoring. Section 5 provides a Quality Assurance Project Plan (QAPP) to ensure usable data is generated, Section 6 covers reporting, and Section 7 lists references used in composing this Plan. Exhibits to this Plan are provided to support the Plan, as well as detail historical groundwater analytical results and describe the groundwater monitoring network currently in place at the facility. Exhibits are as follows:

- Exhibit A NMED Communications
- Exhibit B Groundwater Monitoring Network Map
- Exhibit C Site Location Map
- Exhibit D Available Borehole logs
- Exhibit E Groundwater Monitoring Well Construction Details
- Exhibit F Historical Groundwater Analytical Results
- Exhibit G Site Specific Health and Safety Plan

1.1 SITE LOCATION

The TCBLM is located in the City of Elephant Butte, Sierra County, New Mexico on an approximately 30±-acre parcel of land owned by the City of Truth or Consequences (Exhibit B). The parcel on which the Landfill is located is identified as Lot 3, Section 22, Township 13 South, Range 4 West, NMPM. The property is located immediately southwest of the Sierra de Rio Golf Course and west of Clubhouse Road, Elephant Butte, New Mexico (Exhibit C).

1.2 SITE HISTORY

In March 1961, the City of T or C entered into a lease with the US Department of the Interior Bureau of Land Management (BLM) to use the property for solid waste disposal under the Recreation and Public Purposes Act of June 14, 1926 (44 Stat. 741), and assigned number NM 037574 to the lease. The site's use as a landfill pre-dates any State solid waste regulations, so the site is classified as "non-registered" by NMED, and compliance with current Rules is administered by GWQB.

The site was used as a Municipal Solid Waste Landfill from 1961 through 1974. During this timeframe, waste was disposed by dumping it from the east side of the elevated access road (NM Highway 52), allowing it to fall down the slopes and then be burned. In approximately 1968, due to concerns raised by the New Mexico Department of Health, T or C altered their operations and began disposing of their waste

on lower ground, and pushing dirt over the waste with heavy machinery. By December 1974, use of the site as a landfill ceased, and an inspection by BLM verified that the site was closed in accordance with the terms of the lease.

In August 2006, a Work Plan proposing further site assessment for any potential environmental contaminant issues that might be discovered in conjunction with additional local land development was submitted to NMED on behalf of T or C by BASCOR Environmental of Mt. Prospect, IL (BASCOR). The work plan was treated as a Corrective Action Report Work Plan under Water Quality Control Commission (WQCC) Regulations (20.6.2.1203.A NMAC) since the landfill ceased disposal operations prior to May 14, 1989, the date on which landfill closure plan requirements became effective in New Mexico. The objectives of the 2006 Work Plan were to acquire further field data to determine an appropriate waste cover system and to provide updated data on groundwater quality.

In 2013, a Corrective Action Plan (CAP) and Quality Assurance Project Plan (QAPP) were prepared by BASCOR. The CAP consisted of further environmental sampling and investigation to determine the best approach to mitigating further impact on groundwater by the landfilled waste. As a result of the CAP, additional final cover for the landfill was designed and constructed in compliance with NMED requirements, and the monitoring program outlined in the CAP was initiated.

In 2016, as a result of the completion of closure construction activities outlined in the BASCOR CAP/QAPP, the 30±-acre BLM parcel was sold to the City of T or C through a Recreation and Public Purposes Act Land Patent. The Landfill is currently monitored annually for groundwater quality and final cover integrity and condition by Parkhill as a continuation of requirements set forth in the 2013 BASCOR CAP (Sections 1.5.4 and 1.4.4).

1.3 SITE GEOLOGY AND HYDROGEOLOGY

The TCBLM is located in the northern portion of the Mexican Highland section of the Basin and Range physiographic Province (Lozinsky, 1985). Regional topography ranges from low rolling hills to rugged canyonlands. All drainages in the area, excepting the Rio Grande, are ephemeral. Dominant geology in the region including the Landfill consists of unconsolidated to semi-consolidated sand, silt, clay, gravel, and cobbles of the Palomas Formation of the upper Santa Fe Group, as well as surficial quaternary alluvium. The Landfill is located approximately 2.5 miles west of Elephant Butte Lake in the Rio Grande Rift, a series of north-south trending structural basins bordered by uplifts. Sediments in the immediate vicinity consist of upper Tertiary/Quaternary Santa Fe Group sediments at least 2,000 meters (~6,500 feet) thick.

Shallow groundwater is unconfined in quaternary alluvial deposits within and beneath the floodplain of the Rio Grande. Locally, groundwater is encountered in the shallow surficial alluvium at depths ranging from 2 to 30 feet below ground surface. Monitoring wells installed at the Landfill yield very low quantities of groundwater of marginal quality (high TDS). Depths to water beneath the landfill range from 18 to 30 feet below ground surface. Calculated groundwater flow beneath the facility is generally to the south (Exhibit C).

1.4 NATURE OF DISCHARGE

Potential contamination detected at TCBLM is limited to groundwater impacts from waste disposal in an unlined area (i.e., the Landfill). Infiltration of stormwater may have the potential to transfer constituents to

the shallow water table, and may expose the underlying strata to contaminants originally contained in the waste. Chemicals within waste materials may leach out of the waste and into the vadose zone and shallow groundwater if conditions within the soil cap installed over the waste in 2006 allow excess stormwater to infiltrate (i.e., through cracking or erosion of the cap material).

Terracon collected groundwater samples from TCBLM network wells during their August 2013 limited Site Investigation (LSI), performed as part of the BASCOR CAP/QAPP, and only monitoring well MW-8 contained detected concentrations of Volatile organic Compounds (VOCs). 4-isopropyltoluene was reported as detected in well MW-8 at a nominal concentration of 0.97µg/L. During the LSI, RCRA metals (arsenic, cadmium, selenium, and silver) were not reported as detected above their respective reporting limits in groundwater samples.

Constituents which were reported as detected at concentrations exceeding their respective laboratory reporting limits are summarized in Table 1 (Terracon, 2013). These constituents are compared with their respective NMED regulatory limits found in 20.6.2.3103 NMAC; Standards for Groundwater containing 10,000 mg/l TDS Concentration or Less, Part A. Human Health Standards.

Currently (2024), constituents reported as detected at concentrations exceeding groundwater protection standards in wells sampled at the Landfill are limited to chloride and manganese. Table 2 summarizes the analytical results of these constituents for samples collected from the TCBLM monitoring well network in December 2024. Exhibit F provides historical analytical results from 2013 through 2024, and shows that concentrations of the site-specific analyte list have declined or remained relatively consistent over time.

1.5 PREVIOUS INVESTIGATIONS AND INTERIM ACTIONS

1.5.1 C.C. JOHNSON & MALHOTRA, P.C.

In October 1990, C.C. Johnson & Malhotra, P.C. (CCJM) completed a Preliminary Assessment (PA) Report for BLM (CCJM, 1990). The purpose of the PA was to assess whether site conditions posed a risk to human health and the environment. CCJM evaluated background information and collected four surface soil samples from the site. Three samples (SL01, SL02, and SL03) were from sediments (surface soil) in different drainage pathways leading from landfilled areas toward the eastern site boundary and one sample (SL04) was collected west of the access road to evaluate background conditions.

Each soil sample was analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and metals. Two VOCs (chloroform and toluene) were detected in two of the soil samples (SL01 and SL03), but at concentrations below the analytical quantitation limit. Therefore, these values were flagged as estimated. Low concentrations (a maximum of 110 parts per billion) of several SVOCs were detected in two of the samples (SL02 and SL03). The pesticide 4,4'-DDE was the only compound detected above detection limits and was found only in sample SL02. No PCBs were detected in any of the samples. Background sample SL04 did not contain detectable concentrations of VOCs, SVOCs, PCBs, or pesticides. Detected compounds in soil were compared to generic Soil Screening Levels (SSLs) published by the NMED Hazardous Waste Bureau and Ground Water Quality Bureau [NMED, 2005] and the concentrations of all detected compounds in soil were below the residential SSLs.

Between October 1993 and May 1994, CCJM completed the following additional site investigation activities on behalf of BLM (CCJM, 1995):

- Collected and analyzed 2 samples of background soil;
- Collected and analyzed 8 samples of waste (WS01 through WS08);
- Installed 4 shallow groundwater monitoring wells (MW01 through MW04);
- Installed 6 temporary well points (WP01 through WP06);
- Sampled and analyzed groundwater from monitoring wells and temporary well points; and
- Completed a monitoring well and sample location elevation survey.

CCJM installed the four 2-inch diameter monitoring wells MW01 through MW04 at depths between 15 and 26 feet below land surface.

Low concentrations of chemicals of concern (VOCs, SVOCs, pesticides, PCBs, and metals) were detected in environmental samples collected from surface and subsurface soil, sediment, and waste sources. With the exception of arsenic and lead detected at WS01, all sample concentrations were below the NMED SSLs. Sample WS01 was collected from a steep slope at the southeast corner of the landfill.

Groundwater samples were collected from monitoring wells and well points and analyzed for VOCs, SVOCs, pesticides, PCBs, and total and dissolved metals. Low concentrations of certain chemicals of concern were detected, but all were below their respective groundwater protection standards (20.6.2 NMAC, New Mexico Water Quality Control Commission Regulations).

During their investigation, CCJM also collected water level data from the monitoring wells to assess the groundwater flow direction. Based on measurements made in three of the wells (no level data were collected from well MW-04), CCJM determined that the groundwater flow direction was south-southeast, which is consistent with current calculated groundwater flow.

1.5.2 NEW MEXICO ENVIRONMENT DEPARTMENT

On November 13, 1997, the New Mexico Environment Department (NMED) collected groundwater samples from the four monitoring wells installed by CCJM. Samples were submitted for analysis of VOCs, SVOCs, pesticides, PCBs, and metals. All samples were below their respective groundwater protection standards, with the exception of manganese detected in samples from wells MW03 and MW04.

1.5.3 SOUDER, MILLER & ASSOCIATES (OFFSITE SAMPLING)

In November 2004, Souder, Miller and Associates, on behalf of Tiger Run Investments, collected soil samples from 12 locations from an area south of the former T or C landfill property boundary that was used for solid waste disposal (fly dumping). Two samples (SS-1 and SS-2) were collected from within the former disposal area limits and the remaining samples (SS-3 through SS-12) were collected from the toe of the disposal area slopes. Samples were collected within 3 inches of the ground surface and submitted to a laboratory for analysis of VOCs, pesticides, PCBs, and total lead.

VOCs were not detected above laboratory detection limits in any of the samples, and 7 of the 12 samples did not contain pesticides or PCBs above laboratory detection limits. The samples also contained low concentrations of lead except for sample S-1, which contained 68,000 milligrams per kilogram (mg/kg)

lead. Subsequent groundwater sampling has not indicated levels of lead above standards in network monitoring wells.

1.5.4 – BASCOR ENVIRONMENTAL, INC.

In August 2006, a Work Plan proposing further site assessment for potential environmental contaminant issues that might be discovered in conjunction with additional local land development was submitted to NMED on behalf of T or C by BASCOR Environmental of Mt. Prospect, IL (BASCOR). The work plan was treated as a Corrective Action Report Work Plan under Water Quality Control Commission (WQCC) Regulations (20.6.2.1203.A NMAC) since the landfill ceased disposal operations prior to May 14, 1989, the date on which landfill closure plan requirements became effective in New Mexico. The objectives of the 2006 Work Plan were to acquire further field data to determine an appropriate waste cover system and to provide updated data on groundwater quality.

In 2007 the easternmost portion of the subject site, which was never used for municipal solid waste disposal (approximately 10.7 acres), was developed into a golf course driving range/practice facility to supplement the Sierra del Rio golf course as a part of the Turtleback Mountain Resort. The driving range was inadvertently extended to the west over 2.75 acres of landfill disposal area. A soil cover system was placed over the area containing waste as part of the closure process of the landfill agreed to by BLM, NMED, T or C and Turtleback Mountain Partners (TMP). The cover was intended to prevent direct contact with waste materials and to minimize precipitation infiltration through waste.

During range construction, TMP had also installed irrigation lines directly over the 2.75 acres of landfill disposal area west of the approved driving range facility. After the practice facility was operated for several seasons, it was discovered by NMED that the irrigation system had been extended onto the former landfill area which had been previously approved by NMED. To address concerns related to potential increased leachate generation caused by irrigation, NMED requested a limited site investigation that included installation and sampling of additional groundwater monitoring wells, soil vapor monitoring points; and the completion of soil borings to evaluate the extent and thickness of the soil cover over the entirety of the landfill. The results of the site investigation were documented in a Limited Site Investigation Report (Terracon, August 2013).

In October 2013, BASCOR prepared a Corrective Action Plan (CAP) on behalf of TMP as a condition for completion of the patent of the 30 acre BLM parcel to T or C. The CAP was intended to document corrective action activities related to previous driving range-specific irrigation implemented directly over landfill wastes.

The CAP also describes additional long term monitoring activities designed to assess the potential environmental impacts from the previous irrigation of the driving range. The CAP includes the following elements:

- Sampling and Analysis Plan;
- Maintenance Plan; and
- Contingency Plan.

The BASCOR CAP also proposed a groundwater sampling and analysis plan, which applied to the existing groundwater monitoring well network in place at the time (Monitoring wells MW-1, 2R, 3R, 4, 5, 6, 7, 8, 9, and 10), with sampling conducted at wells MW-1, 3R, 5, 8, 9, and 10 (Exhibit C). Sampling was conducted using either low-flow pumping or with disposable bailers depending on depth to groundwater,

recharge rates, and water column thickness in each well. Sampling under the BASCOR CAP was conducted according to the following schedule:

Date	Quarterly Event	Semiannual Event	Annual Event
September 2013	X		
December 2013	X		
March 2014	X		
June 2104	X		
December 2014		X	
June 2015		X	
December 2015		X	
June 2016		X	
June 2017			X
June 2018			X

1.5.5 PARKHILL

Parkhill conducted groundwater monitoring at the TCBLM from 2014 through 2018 in accordance with the 2013 BASCOR CAP, and from 2019 to 2024 (beyond the schedule identified by the CAP, but pursuant to methods and analyte lists prescribed in the CAP) at the direction of NMED GWQB.

Pursuant to conversations with and subsequent requests by GWQB following the 2022 groundwater sampling and reporting event, Parkhill installed one new upgradient groundwater monitoring well (MW-5R) and two new downgradient (MW-11 and MW-12) groundwater monitoring wells in October 2023. These wells were installed to address steadily declining groundwater elevations beneath the site, which had been decreasing since installation of upgradient well MW-5 in 2007. The new monitoring wells were installed and incorporated into the monitoring well network beginning with the November 2023 monitoring event. Additionally, during the installation of the three new wells, existing monitoring wells MW-2R and MW-5 (both dry) were plugged and abandoned in accordance with GWQB requests and NM OSE plugging and abandonment guidelines; existing wells MW-3R, MW-8, 9, and 10 also were reconfigured from their original vault-style monitoring well to an above-ground locking steel casing with protective bollards in order to reduce the potential for contamination and inadvertent damage.

The monitoring well network at the TCBLM is currently comprised of nine monitoring wells as shown in Exhibit C. Wells MW-3R, 5R, 8, 9, 10, 11, and 12 currently yield sufficient water volumes for sampling and analytical purposes. The water levels and recharge rates for wells MW-1 and MW-4 are insufficient for sampling, and they are used as piezometers for measuring depth to water only. Parkhill has conducted 10 groundwater sampling events from September 2013 through June 2018 according to the schedule provided in Section 3.1 of the CAP., and six annual post-CAP events (i.e., June 2019 through December 2024) for the monitoring parameters listed in Section 3.1 of the CAP, consisting of the following constituents:

- Volatile Organic Compounds (Method 8260B)
- Semi-Volatile Organic Compounds (Method 8270C)
- Pesticides
- Herbicides
- RCRA Metals (As, Ba, Cd, Cr, Pb, Se, Ag) (field filtered)
- Mercury (Hg)
- Iron, Magnesium, Manganese, and Sodium (field filtered)
- Alkalinity
- Cyanide
- Nitrate as N, Nitrite as N, Chloride, and Sulfate

In order to maintain consistency with the provisions of the approved CAP (BASCOR, 2013), and as requested by GWQB, samples collected by Parkhill to date have been analyzed for the entire suite of parameters listed above.

2.0 KNOWN NATURE AND EXTENT OF CONTAMINATION

The following sections provide a summary of known impacts to soil, soil vapor, and groundwater to date.

2.1 SOIL IMPACTS

In October 1990, C.C. Johnson & Malhotra, P.C. (CCJM) collected four surface soil samples from the site. Three samples (SL01, SL02, and SL03) were from sediments (surface soil) in different drainage pathways leading from landfilled areas toward the eastern site boundary and one sample (SL04) was collected west of the access road to evaluate background conditions.

Each soil sample was analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and metals. Two VOCs (chloroform and toluene) were detected in two of the soil samples (SL01 and SL03), but at concentrations below the analytical quantitation limit. Therefore, these values were flagged as estimated. Low concentrations (a maximum of 110 parts per billion) of several SVOCs were detected in two of the samples (SL02 and SL03). The pesticide 4,4'-DDE was the only compound detected above detection limits and was found only in sample SL02. No PCBs were detected in any of the samples. Background sample SL04 did not contain detectable concentrations of VOCs, SVOCs, PCBs, or pesticides. Detected compounds in soil were compared to generic Soil Screening Levels (SSLs) published by the NMED Hazardous Waste Bureau and Ground Water Quality Bureau [NMED, 2005] and the concentrations of all detected compounds in soil were below published residential SSLs.

2.2 SOIL VAPOR IMPACTS

Soil vapor samples were collected by Terracon on two occasions during the Limited Site Investigation (2013). Four vapor points were installed immediately beneath the landfill cap into waste. A vapor sample was collected from each sampling point and analyzed for volatile organic compounds (VOCs) and methane.

Soil gas samples were collected on May 21, 2013 from all 4 sample points, and analyzed for VOCs and methane. VOCs and Methane were not detected in those samples above laboratory reporting limits. Samples collected on June 25, 2013 from VP-3 and VP-4 were also analyzed for VOCs and methane. The VOC compound dichlorodifluoromethane (CFC-12) was detected in both samples above laboratory reporting limits at concentrations of 0.47 micrograms per liter (µg/l) and 0.86 µg/l, respectively. The VOC compound trichlorofluoromethane (CFC-11) was detected in the VP-4 sample above laboratory reporting limits at a concentration of 0.17 µg/L. Methane was not detected in the May 21, 2013 samples collected from VP-3 and VP-4 above the laboratory reporting limit.

2.3 GROUNDWATER IMPACTS

In 1993 and 1994, CCJM installed and sampled four monitoring wells (MW-1through MW-4). The samples were analyzed for VOCs, SVOCs, pesticides, PCBs, and total and dissolved metals. Low concentrations of certain chemicals of concern were detected, but all were below their respective groundwater standards.

In November 1997, NMED collected groundwater samples from wells MW-1 through MW-4, and all samples were below their respective groundwater standards with the exception of manganese, which was reported above its standard of 0.2 µg/l in wells MW-3 and MW-4.

In 2013, Terracon performed groundwater sampling as part of their Limited Site Investigation. Samples were collected from monitoring wells MW-3R, MW-5, MW-8, MW-9 and MW-10. The samples did not exhibit VOC, SVOC, pesticide or herbicide concentrations above the laboratory reporting limits with the exception of sample collected from Well MW-8. The MW-8 groundwater sample contained the VOC 4-Isopropyltoluene at 0.97 micrograms per liter. Additionally, groundwater samples collected from the monitoring wells during this investigation did not exhibit the RCRA metals arsenic, cadmium, selenium or silver above their respective laboratory reporting limits. Terracon concluded that, based on review of the analytical results from groundwater samples collected during the LSI, groundwater at the site appears to contain chloride at concentrations exceeding applicable NMED Human Health Standard of 250 mg/l. At the time of sampling, Terracon also indicated that downgradient monitoring well MW-10 contained chromium and lead in excess of the NMED Human Health Standards of 0.05 mg/l for this metal, but that trend did not continue into the routing sampling proposed in the BASCOR CAP.

Beginning in 2014, Parkhill was retained by the City to conduct groundwater sampling at the landfill for monitoring wells MW-1, MW-3R, MW-5, MW-8, MW-9, and MW-10 for the full set of parameters prescribed in the BASCOR CAP. To date, with the exceptions of manganese and/or chloride in nearly all downgradient monitoring wells, groundwater has not exhibited concentrations of analytes above their respective groundwater protection standards, or EPA maximum contaminant levels (MCLs) (Exhibit F). Samples collected from new monitoring wells MW-5R, MW-11 and MW-12 (installed in October 2023) have produced similar analytical results to the network wells that they replaced or are proximal to. The three new wells have been sampled concurrently with the existing network wells in 2023 and 2024, and will undergo additional sampling/monitoring as described later in this Plan.

Organic Parameters

Groundwater samples are analyzed for the alternate list of organic parameters provided in Exhibit F. A limited number of organic parameters have been detected above their respective laboratory practical quantitation limit (PQL) in groundwater samples collected at the site. These periodic detections are outliers in the site's analytical history. Historical parameter analytical results, including exceedances of standards, are summarized in Exhibit F for the period from 2013-2024. During the November 2023 event, the only organic parameter reported as detected for this sampling event was Dimethyl tetrachloroterephthalate (DCPA or Dacthal®) in downgradient monitoring well MW-12 at a concentration of 2.80 µg/L (laboratory PQL = 1.0 µg/L). Close proximity to both the Sierra del Rio golf course and driving range upgradient of well MW-12 suggest that this detection can likely be attributed to the historical use of DCPA at these facilities.

DCPA is an herbicide historically used at golf courses and driving ranges to control the growth of annual grasses and weeds, and does not have an established groundwater standard or EPA MCL. DCPA has been a registered herbicide since 1958 and has been used for controlling annual grasses such as crabgrass, and certain broad-leaved weeds. It was popular at golf courses and driving ranges because it does not target turf grasses. The manufacture, distribution and use of DCPA was cancelled in October 2024 by EPA. Additionally, DCPA has a relatively short half-life (14-100 days), and future detections in this or other wells is not anticipated.

Inorganic Parameters

For each monitoring event (2013-2024), laboratory analytical results for each inorganic parameter are compared to the corresponding regulatory Groundwater Protection Standard (GWPS) listed in 20.6.2.3103 NMAC. As shown in Exhibit F, with the exception of chloride in wells MW-3R, MW-8, MW-10, MW-11, and MW-12; and manganese in wells MW-8, MW-9, and MW-12; no other reported inorganic parameter concentration currently meets or exceeds its respective regulatory GWPS.

2.4 DATA GAPS

Data gaps in groundwater quality information at the Landfill originated with declining water levels in monitoring wells MW-5 and MW-1 beginning between 2019 and 2020, respectively. These gaps were addressed by the installation and sampling of replacement wells MW-5R and MW-12 in October and November 2023. It is anticipated the data gaps will be further resolved through the installation and one-time sampling of proposed temporary upgradient monitoring well MW-13T (Section 3.2). This installation and sampling event is designed to establish an additional upgradient ground water quality data point without the potential for any impacts from the landfill or other unknown waste disposal in the area beyond the current accepted limits of waste at the TCBLM. The location of MW-13T will be surveyed by a New Mexico Professional Licensed Surveyor to facilitate the extension of the current groundwater elevation contour map. MW-13T will be sampled in accordance with the protocols in Section 4.2, and analytical results are anticipated to best describe the quality of additional unimpacted groundwater further upgradient of the landfill and permanent upgradient well MW-5R for comparison to the remaining monitoring network wells (Exhibit C).

As a continuance of the monitoring schedule and protocols set forth in the 2013 BASCOR CAP and Quality Assurance Project Plan (QAPP), sampling and analysis will continue in existing network monitoring wells as described in Section 4.1 until such time that a sufficient number of samples (i.e., eight samples) indicate no impact from surrounding landfilled waste in compliance with 20.6.2.4103.D or E NMAC. Samples will be collected as described in Section 4.2, and managed, analyzed, and reported in accordance with Table 4.

The stability exhibited in historical and recent results indicate that the elevated detections of chloride and manganese are likely not occurring as a result of landfilled waste emplaced in TCBLM. Groundwater quality beneath the site should continue to be monitored as described in Section 4.0 for the list of parameters listed in Table 5.

3.0 SCOPE OF WORK TO COMPLETE SITE CHARACTERIZATION

3.1 WELL INVENTORY

To capture any monitoring, domestic, or municipal wells installed since 2013, Parkhill will perform an up-to-date well inventory of public and private water supply wells located within 1-mile of TCBLM property. The inventory will be accomplished through the use of the New Mexico Office of the State Engineer (NMOSE) POD Locations Mapping Tool [https://gis.ose.state.nm.us/gisapps/ose_pod_locations/] .

3.2 MONITORING WELL INSTALLATION

To obtain additional upgradient groundwater conditions without potential for impact from the landfill or other unmapped solid waste disposal activities within the City property boundary, but outside of the established limits of waste (Exhibit C), temporary monitoring well, MW-13T, is proposed to be installed approximately 1,100 feet north of the identified solid waste disposal boundary (Exhibit C).

The proposed installation and one-time grab-sampling of temporary monitoring point MW-13T for the analytes identified in the 2013 BASCOR CAP, described in Section 3.2, and summarized in Exhibit F, is intended to capture water quality in a more-distal upgradient location from the landfill boundary, and will assist in characterizing shallow groundwater quality without any potential for impact from waste disposal activities. The analytical results obtained from MW-13T will be compared with existing analytical results from upgradient monitoring wells MW-5 (2013-2019) and MW-5R (2023-2024), as well as results obtained from other downgradient and side-gradient network monitoring wells, and used to characterize true upgradient water quality.

Temporary monitoring point MW-13T will be installed and sampled as described below.

PROPOSED WELL CONSTRUCTION

Monitoring point MW-13T is proposed to be installed as a temporary monitoring point, and will be constructed in accordance with NMOSE rules (19.27.4.29 and 19.27.4.30 NMAC), as well as US EPA guidance as follows:

The well will be advanced using direct push or hollow-stem auger methods with minimum introduction of foreign fluids into the borehole to reduce formation damage. The driller shall warrant that the proposed drilling and well installation techniques will result in a properly completed temporary monitoring point with a minimum amount of formation damage and maximum well efficiency that will allow collection of a formation-representative water sample.

The drilling equipment used to complete the monitoring well shall be capable of advancing boreholes from the ground surface to depths of up to 50 feet bgs. The drilling rig shall be capable of installing pre-fabricated flush joint SCH 40 PVC threaded well casing and screen and flush-jointed SCH 40 machine-slotted (0.010”) screen section and any annular materials to depths of up to 50 feet bgs. The driller may suggest equivalent alternate materials but shall obtain prior approval from Parkhill.

All drilling equipment must be clean and in good working condition. Fluids and other drilling materials from the drilling rig (oil, hydraulic fluid, etc.) will not be allowed to contaminate the drill sites, cuttings, or borehole. This is even more crucial for a temporary monitoring point installation, as only one sample will be collected prior to backfilling and plugging the boring. Compressed air used in drilling and/or well development shall be free of contaminants. Tool joint grease must be vegetable oil-based or equivalent. No drilling fluids or additives may be utilized without the approval of Parkhill.

Casing

- All well casing shall be new 1.0 or 2.0-inch ID pre-fabricated flush joint SCH 40 PVC threaded pipe; and must be inspected and approved by the Parkhill before it is installed.
- The driller shall document lengths of casing installed into the borehole.
- The casing shall be plastic-packaged environmental grade pipe that is free of solvents and other contaminants.

Screen

- The well screen shall be new 1.0 or 2.0-inch ID pre-fabricated flush joint SCH 40 PVC threaded factory-slotted pipe.
- The slot size shall be 0.010 inches, machine-slotted.

- The well screen shall be plastic-packaged environmental grade screen that is free of solvents and other contaminants.
- A cap must be installed at the bottom of the well screen.

Annular Sand Filter Packs

- If used, the sand filter pack material shall consist of clean, durable, well-rounded grains that are smooth and uniform.
- The filter pack material shall be minimum 95% graded silica sand, with less than 5% calcareous material by weight; and not contain any silt, clay, organic matter or other deleterious materials.
- Colorado 12-20 Silica Sand® (or approved equivalent) will be used.·For wells deeper than 30 feet, the filter pack material shall be placed by pump and tremie line method to at least 2 feet above the screened casing section.
- The well should be surged or bailed to settle the sand pack, and additional sand added as necessary prior to the emplacement of the bentonite seal

Annular Bentonite Seals

- Annular bentonite seals will not be used as part of a temporary monitoring well installation.

Annular Grout Seals

- Annular grout seals will not be used as part of a temporary monitoring well installation.

Well Development

The driller shall have the capability to purge water from the boreholes using a portable submersible pump or bailer. Purging will continue until produced water is of low turbidity and relatively constant temperature and conductivity, as determined by Parkhill. For this proposed temporary well, development will be limited to purging several well volumes and subsequent grab sampling upon clearing to an acceptable turbidity. The driller will discharge the development water at on-site locations deemed acceptable by Parkhill.

Surveying

The location and ground elevation of well MW-13T will be surveyed by a New Mexico Professional Licensed Surveyor (PLS). The survey will be recorded in New Mexico State Plane Coordinates, West Zone, North American Datum 1983, and will include northing and easting to one-tenth of a foot accuracy. The elevations of the ground surface for the temporary well will also be surveyed to the nearest hundredth foot in order to verify groundwater flow direction and gradient.

Well Plugging and Abandonment

As a temporary installation, well MW-13T will be plugged within 48 hours of installation and sampling. Plugging will be accomplished as required in the NM OSE Well Plugging Handbook (June 2020 edition).

4.0 LONG TERM GROUNDWATER MONITORING

Long-term groundwater monitoring is proposed to continue much as it has been conducted since 2017. Following construction, development, one-time sampling and plugging of temporary monitoring well MW-13T, sampling and analysis at the remaining (permanent) active monitoring wells at the landfill will take place quarterly for six monitoring events from the date of approval of this Plan as the proposed long-term groundwater monitoring program.

The results from the six quarterly monitoring events will be combined with the two most recent events (2023 and 2024) conducted on all current monitoring network wells to construct a comprehensive database of water quality upgradient and downgradient of the TCBLM. Those eight sets of results will be reviewed and, in the event that results comply with the standards set forth in 20.6.2.4103.D, the City will request a finding of no further action necessary. In the event that the results from the eight events do not satisfy the requirements of 20.6.2.4103.D NMAC, sampling will continue on an annual basis. Annual sampling will continue until such time that a sufficient number of events have occurred to prove that groundwater quality complies with one of the alternative abatement standards listed in 20.6.2.4103.E NMAC to support the proposal that the Landfill is having no quantifiable effect on groundwater quality, and poses no risk to human health, welfare or the environment.

The analyte list proposed for long-term monitoring at TCBLM is the list originally proposed in the 2013 BASCOR CAP (Table 5). It is anticipated that this analyte list will continue to capture fluctuations in currently-detected constituents, as well as retaining the ability to detect releases from activities occurring on City property unrelated to the landfill (i.e., driving range and golf course maintenance, fertilization, vegetation control, pest control, etc.).

In summary, this Stage 1 Abatement Plan proposes that the sampling be conducted on a quarterly basis for a period of 1.5 years (six sampling events to be added to the two sampling events already conducted in 2023 and 2024) in order to collect the required eight sets of analytical results sufficient to support the proposal that the groundwater quality meets the abatement standards of 20.6.2.3103 NMAC; and that the reported detections of manganese and chloride in excess of groundwater protection standards in some network wells is representative of background water quality in the area, and that the landfill is not impacting groundwater quality in the area downgradient of the facility.

4.1 SAMPLING REGIMEN AND SCHEDULE

The current active monitoring well network at the TCBLM (MW-3R, MW-5R, MW-8, MW-9, MW-10, MW-11, and MW-12) will be sampled on a quarterly basis for six additional events as described above. Wells will be sampled in accordance with procedures described in the BASCOR CAP, and this Abatement Plan. Sampling results and groundwater elevation data will be provided to GWQB on a quarterly basis. If for any reason conditions at a monitoring well preclude sample collection (i.e., groundwater level decline causes a well to contain insufficient water for sample collection, or a well is damaged to the degree that sample collection is not possible), a formal request to cease sample collection at the specific well documenting the reason for that request will be submitted to NMED GWQB.

4.2 SAMPLING PROTOCOLS

As part of the long-term groundwater monitoring plan, samples will be collected immediately following purging and parameter stabilization at each well. Purge volume, temperature, specific conductance, and pH for each well will be measured in the field during purging; and immediately prior to sample collection (Exhibit F). The samples will be analyzed for the currently-sampled list proposed in the current CAP (BASCOR, 2013). Chemical preservatives are added to the sample bottles, as appropriate, by the certified analytical laboratory prior to the collection of samples. Following collection, the groundwater samples are immediately placed in a cooler containing ice and maintained at approximately 4°C until delivery to a laboratory nationally certified through the National Environmental Laboratory Accreditation Program (NELAP).

Existing monitoring wells MW-3R, MW-5R, MW-8, MW-9, MW-10, MW-11 and MW-12 will be sampled. Water level measurements will be collected from each well prior to purging and sampling using an electronic water level meter and these data will be used to develop an updated groundwater potentiometric surface map (Exhibit C).

Groundwater samples will be collected using low-flow purging or hand-bailing techniques. The required equipment for low-flow sampling includes:

- Electronic depth-to-water meter;
- Portable submersible low-flow stainless steel pump (RF-2 or equivalent) and controller
- Gasoline-powered generator to power the pump/controller
- Dedicated polyethylene discharge tubing;
- Multi-parameter flow cell capable of reading: Temperature, pH, conductivity, Oxidation-reduction potential, Dissolved oxygen, and turbidity.
- 5-gallon buckets; and
- Disposable polyethylene bailers with new or dedicated bailing twine.

The general procedures for low-flow sampling are as follows:

1. At the beginning of the sampling event, calibrate the flow cell following the manufacturer's recommendations,
2. Unlock the well cap, and measure the static depth to groundwater in each well using an electronic depth-to-water meter. Calculate the volume of water in the well.
3. Lower the portable submersible pump into the well so that the intake screen of the pump is approximately at the midpoint of the wetted well screen;
4. Connect the portable submersible pump to the pump controller and flow cell inlet, attach additional discharge tubing to the flow cell outlet and insert the end into a 5-gallon bucket;
5. Start the pump and flow cell; adjust the discharge rate to ensure that it is no more than 1,000 mL/minute (or 1 gallon in 3.8 minutes).
6. Monitor the flow cell display and record readings at consistent intervals (i.e., every 3 minutes) to assess parameter stabilization;
7. Upon stabilization of parameters to within acceptable variances, disconnect the flow cell from the sample train, record the time of sample start, and fill the appropriate containers using the discharge tubing from the pump.

8. After sampling a well, decontaminate the pump and discharge tubing using non-phosphate detergent and a distilled water rinse.
9. Repeat procedure at other wells, repeating the decontamination procedure between each; and
10. Record all measurements on appropriate log forms or in a field notebook.

Groundwater samples will be submitted to Eurofins Environment Testing South Central of Albuquerque, NM (Eurofins) for analysis of those constituents listed in Table 5. One duplicate sample and one field blank sample will be collected as a quality control (QC) check. QC samples will be analyzed for VOCs only. Upon receipt of the analytical data, Parkhill will evaluate whether site conditions have changed significantly. A discussion of the results will be included in each Quarterly Progress Report submitted to NMED GWQB.

4.3 SAMPLING SCHEDULE

For active monitoring network wells (not including proposed (temporary) upgradient well MW-13T), the following schedule is proposed in order to establish the required minimum eight consecutive sampling events required in 20.6.2.4103 NMAC. Quarterly sampling is proposed for all current network wells. Two sampling events (November 2023 and December 2024) have already been conducted for the existing analyte list (Exhibit E) at all active network wells, and are being proposed as the first two of the eight events.

The proposed schedule for implementation of this Plan, including the six additional semiannual sampling events taking place in 2025 and 2026, is presented as follows:

Date	**Activity**
November 21, 2023	5th routine annual post-CAP monitoring event (1st Stage 1 abatement sampling event) and report submittal to GWQB
December 3, 2024	6th routine annual post-CAP monitoring event (2nd Stage 1 abatement sampling event) and report submittal to GWQB
May 27, 2025	Submittal of draft S1AP Proposal
June 27, 2025	GWQB comments on Draft S1AP
July 27, 2025	Response to Comments on Draft Plan submitted
August 27, 2025	GWQB Approval of S1AP
September 16, 2025	3rd Stage 1 abatement sampling event and Quarterly progress report
November 1, 2025	Installation and one-time sampling of new temporary upgradient well MW-13T
November 2025	4th Stage 1 abatement sampling event and Quarterly progress report
February 2026	5th Stage 1 abatement sampling event and Quarterly progress report
May 2026	6th Stage 1 abatement sampling event and Quarterly progress report
August 2026	7th Stage 1 abatement sampling event and Quarterly progress report
November 2026	8th Stage 1 abatement sampling event and Quarterly progress report
January 2027	Submittal of S1AP Investigation Report

5.0 QUALITY ASSURANCE PROJECT PLAN

This section of the TCBLM S1AP provides the Quality Assurance Project Plan (QAPP) for conducting the sampling described in Section 4.0.

5.1 GOALS OF THIS S1AP

The overall objectives for this Plan are shown in Table 3 and include:

1. drilling, one-time sampling, plugging and abandonment of temporary upgradient monitoring well MW-13T to be located approximately 1,100 feet north of the Landfill
2. performing six additional quarterly monitoring events for the purpose of establishing background water quality values for all network wells for a site-wide comparison of all wells to the quality of presumed unimpacted upgradient water collected from proposed temporary well MW-13T, and establish a plan for potential future abatement actions at the site.

5.2 TRAINING

Personnel who work on-site are required to meet the Occupational Safety and Health Administration (OSHA) training requirements defined in Title 29 of the Code of Federal Regulations Part 1910.120(e). These requirements include 40 hours of formal off-site instruction, a minimum of 3 days of field experience at this site under the supervision of experienced field personnel; and 8 hours of annual OSHA refresher training, as applicable. Field personnel must be familiar with the health and safety program requirements, training requirements, PPE requirements, and health-hazard monitoring procedures and techniques as they apply to this site.

5.3 DOCUMENTATION AND RECORDS

Sections 5.4 through 5.7 discuss in detail the documentation of field activities and preparing laboratory data packages. Section 6.0 also describes reports that will be generated as a result of this project.

5.4 SAMPLE MANAGEMENT

Proper sample handling procedures, including sample identification and labeling, documentation, and chain of custody (COC) procedures are crucial to a successful and complete Monitoring Plan.

Sample Identification

Each sample collected during field activities will be identified using a unique sample identification (ID) number for each event. The monitoring well name, as well as date and time of collection will be recorded on the COC forms, sample bottle labels, and in the field forms. Sample IDs, collection time, and collection date will be listed on each sample label and the COC forms submitted to the laboratory.

Sample Labels

A sample label will be affixed to each sample container. The label will be completed with the following information written in indelible ink:

- Project location
- Sample ID
- Date and time of sample collection
- Preservative used
- Sample collector's initials
- Analysis required

Sample Documentation

During sampling, field personnel will observe the following general procedures for maintaining field documentation:

- Documentation will be completed on blank field forms in permanent black or blue ink.
- Every attempt will be made to ensure legibility of data entry on field forms and labels.

• Errors will be corrected by crossing out the entry with a single line and then dating and initialing the correction.

Chain of Custody
Field personnel will use standard sample custody procedures to maintain and document sample integrity during collection, transportation, storage, and analysis. A sample will be considered to be in custody if one of the following statements applies:

It is in a person's physical possession or view.
It is in a secure area with restricted access.
It is placed in a container and secured with an official seal in such a way that the sample cannot be reached without breaking the seal.

COC procedures provide an accurate written record that traces the possession of samples from the time of collection in the field to the time of acceptance at the laboratory. The COC form will be used to document the details of all samples collected and the analyses required. Information that field personnel will record on the COC form includes:

- Project name and number
- Sampling location
- Name and signature of sampler
- Destination of sample (laboratory name)
- Sample ID
- Date and time of sample collection
- Number and type of containers filled
- Analyses requested
- Preservatives used (if applicable)
- Filtering (if applicable)
- Signatures of individuals involved in custody transfer, including the date and time of transfer
- Project contact and phone number
- Any pertinent notes regarding samples (i.e., short hold times, dissolved analyses, etc.)

Samples will be hand-delivered to a local analytical laboratory (e.g., Eurofins) for analysis. If, for some reason, the samples must be shipped to the analytical laboratory by Federal Express or UPS, the COC form will be placed in a waterproof plastic bag and taped to the inside of the shipping container used to transport the samples (cooler or similar). Shipment tracking information will serve as evidence of custody transfer between field personnel and the courier, and between the courier and the laboratory. Copies of the COC form and the airbill will be retained and filed by field personnel before the containers are shipped.

Upon receipt, laboratory personnel will sign the accompanying COC forms and retain copies of the forms as permanent records. Laboratory personnel will record all pertinent information concerning the samples, including the date and time received, sample condition at the time of receipt (sealed, unsealed, or broken container; temperature; or other relevant remarks), the sample IDs, temperature of the samples, and any unique laboratory identification numbers for the samples.

5.5 ANALYTICAL METHODS

Analytical methods to be used for samples are specified in Table 4. Table 4 also specifies the sample quantities, holding times, and preservatives, when available.

5.6 MANAGEMENT OF DEVIATIONS

Minor deviations, including field equipment or instrument malfunction (pump, flow cell, etc.) will be addressed by field crew and the project manager as they occur. Any deviations from the Plan will be noted on field forms and included in the final report to NMED. Significant deviations will be addressed by the field crew, project manager and NMED Ground Water Quality Bureau (GWQB). If possible, consensus on correcting or proposing alternatives to address the deviation will be achieved prior to executing any

work plan changes. It is anticipated that the NMED GWQB Project Manager or other agency representative will be available for communication via telephone during fieldwork conducted during regular business hours. If a situation arises that requires work plan deviation, every attempt will be made to reach an NMED GWQB representative and professional judgement will be used to adjust work plan specifications as needed.

5.7 DATA VERIFICATION AND USABILITY

This section covers the procedures to review and evaluate field and laboratory data, as well as the procedures for verifying that the data are sufficient to meet data quality parameters for the project. Parkhill will perform data review on all laboratory results obtained during the execution of this Plan. Validation will not be performed. Data will be reviewed for holding times, handling and preservation procedures, chain of custody, acceptance within temperature requirements, and to ensure reported data meet method limits for project goals.

All laboratory data will be reviewed to ensure usability. The data evaluation strategy will not be a full data validation process but will determine if the analytical results are within the QC limits set for the project. In this process, data usability will be assessed. Specifically, sample handling requirements, holding times, duplicate results, and QC control limits will be reviewed.

Field data recorded on field forms at the time of sampling will be provided with the final Site Investigation Report. Laboratory data are received in electronic form and will be reviewed, summarized, and provided in the body of the report. Original laboratory reports will also be provided as exhibits to the final Investigation Report. Some data may be presented graphically to help identify trends in water quality over time. Problems encountered during field work or anomalous laboratory analytical results may require appropriate corrective action to ensure that the problems are resolved (i.e., verification resampling) if they cannot be resolved with the laboratory or through field data review.

6.0 REPORTING

The outcome of this S1AP will be documented in a final S1AP Investigation Report (20.6.2.4106.C(6) NMAC). This report will include a description of field operations, any deviations from the S1AP, the raw and summarized analytical data, as well as graphical representations of spatial data (i.e., groundwater elevation and flow direction). Supporting information such as evaluation of analytical data from historical sampling and analytical events from this site will be included. The report will include a section on data gaps, if any are identified during the period of the Stage 1 Abatement Plan, and recommendations for subsequent data collection. The report will also document all field activities and results of the Plan, and will include the following:

- Potentiometric surface maps for each sampling event
- Laboratory data summary tables
- Available boring/monitor well logs
- Field data collection forms for each event
- Laboratory reports

7.0 REFERENCES

- Corrective Action Plan for the Former Truth or Consequences Landfill, Elephant Butte, New Mexico, BASCOR Environmental, Inc., October 29, 2013
- Quality Assurance Project Plan for the Former Truth or Consequences Landfill, Elephant Butte, New Mexico, BASCOR Environmental, Inc., October 29, 2013
- Limited Site Investigation Report, Former Truth or Consequences Landfill, Terracon, August 21, 2013
- Groundwater well installation report, Parkhill, March 4, 2024

TABLES

Table 1

Summary of Detections in Groundwater (8/2013)

Analyte	NMED Standard[1]	Units	MW-3R	MW-5	MW-8	MW-9	MW-10
Detected RCRA Metals							
Barium	1	mg/l	ND	0.13	0.11	0.22	1.1
Chromium	0.05	mg/l	ND	0.0087	ND	0.01	**0.13**
Mercury	0.002	mg/l	ND	0.000055J	ND	ND	ND
Lead	0.05	mg/l	ND	0.0091	ND	ND	**0.073**
Anions and General Chemistry							
Nitrate	10	mg/l	ND	0.54	8.5	ND	2
Chloride	250	mg/l	170	159	**710**	**290**	**380**
Sulfate	600	mg/l	180	120	220	140	260
Magnesium	NE	--	ND	8	54	47	100
Calcium	NE	--	170	80.6	270	170	370
Manganese	0.2	mg/l	NA	NA	NA	NA	NA
Sodium	NE	--	180	163	250	260	290
Alkalinity	NE	--	300	210	270	310	310
Bicarbonate Alkalinity	NE	--	300	210	270	310	310

NOTES:

[1] NMED Standard Values consistent with 20.6.2.3103 NMAC standards present in 2013

NA = Not analyzed in 2013.

NE = Standard not established.

ND = Not Detected.

J = Analyte was reported as detected lower than the laboratory Practical Quantitation Limit (PQL)

Table 2
Summary of Detections in Groundwater (12/2024)

Analyte	NMED Standard[1]	Units	MW-3R	MW-5R[2,3]	MW-8	MW-9	MW-10	MW-11[2]	MW-12[2,4]
Detected RCRA Metals									
Barium	2.0	mg/l	0.069	0.0466	0.0617	0.0636	0.0629	0.177	0.0562
Chromium	0.05	mg/l	ND	ND	ND	ND	ND	ND	ND
Mercury	0.002	mg/l	ND	ND	ND	ND	ND	ND	ND
Lead	0.015	mg/l	ND	0.00119	ND	ND	ND	ND	ND
Anions and General Chemistry									
Nitrate	10	mg/l	1.41	0.228	0.89	ND	ND	0.373	2.87
Chloride	250	mg/l	144	64.9	**291**	155	**547**	**477**	**489**
Sulfate	600	mg/l	172	124	125	118	278	72.1	158
Magnesium	NE	--	21.9	4.62	31.5	24.1	37.8	15.5	31.4
Calcium	NE	--	NA	NA	NA	NA	NA	NA	NA
Manganese	0.2	mg/L	0.193	0.0276	**0.383**	**0.521**	0.00938	ND	**0.398**
Sodium	NE	--	165	148	168	117	344	155	227
Alkalinity	NE	--	298	185	397	321	340	109	314
Bicarbonate Alkalinity	NE	--	298	185	397	321	340	109	314

NOTES

[1] NMED Standard Values consistent with standards in place in 2024.

[2] Wells MW-5R, MW-11 and MW-12 installed in October 2023 and sampled in November 2023 and December 2024.

[3] Well 5R was installed as a replacement for well MW-5, which had gone dry between the June 2019 and June 2020 sampling events.

[4] Well MW-12 was installed as a replacement for Well MW-1, which experienced significant water level decline and insufficient water column for samples to be collected in 2021 and 2022.

NA - Not analyzed in 2024.

NE – Standard not established.

ND – Not Detected above the laboratory Reporting Limit (RL).

Table 3
Summary of Stage 1 Abatement Plan Scope of Work

Boring/Well	Description	Borings	Analysis	Field Sceening	Depth (feet BGS)
MW-13T	One temporary direct push or hollow-stem auger well competed to approximately 35 feet BGS upgradient and northeast of the Landfill and driving range. Five nine feet of sscreen below water table, one foot above	1	Reduced list (Table 4)	DTW, Temperature, conductivity, pH, ORP, DO	35
Well Plugging	Grouting	0	NA	NA	35
Waste Disposal Characterization	Drill Cuttings	0	NA	NA	NA
Long-Term Sampling	Quarterly groundwater sampling at active network wells	0	Reduced list (Table 4)	DTW, Temperature, conductivity, pH, ORP, DO	18-40

NOTES:
bgs = below ground surface
ORP = oxidation/reduction potential
DO = Dissolved Oxygen
DTW = Depth to Water

Table 4
Groundwater Analytical Methods

Analyte(s)	Analytical Method(s)	Preservative	Container	Sample Hold Time
Volatile Organic Compounds (VOCs)	USEPA 8260B	Hydrochloric Acid	40mL VOA (4)	14 days
Semi-Volatile Organic Compounds (SVOCs)	USEPA 8270C	Unpreserved	1-liter amber glass	7 days
Pesticides	USEPA 8081B	Unpreserved	1-liter amber glass	7 days
Herbicides	USEPA 8151A or 8321B	Unpreserved	1-liter amber glass	7 days
RCRA Metals	USEPA 200.7 Rev 4.4	HNO_3	125 mL plastic	6 months
	USEPA 200.8 Rev 5.4	HNO_3	125 mL plastic	6 months
	USEPA 245.1 (Hg)	HNO_3	250 mL plastic	28 days
Iron, Magnesium, Manganese, Sodium (field filtered)	USEPA 200.7 Rev 4.4	HNO_3	125 mL plastic	6 months
Alkalinity	SM 2320B	Unpreserved	250 mL plastic	7 days
Cyanide	SM 4500-CN-E	Unpreserved	1 L plastic	14 days
Nitrate as N, Nitrite as N, Chloride, Sulfate	USEPA 300.0	Unpreserved	250 mL plastic	48 hours

Table 5
Proposed Analyte List for Long-Term Monitoring

Analyte(s)	Analytical Method(s)
Volatile Organic Compounds (VOCs)	USEPA 8260B
Semi-Volatile Organic Compounds (SVOCs)	USEPA 8270C
Organochlorine Pesticides	
4,4-DDD	USEPA 8081B
4,4'-DDE	
4,4'-DDT	
Aldrin	
alpha-BHC	
alpha-Chlordane	
beta-BHC	
Chlordane	
delta-BHC	
Dieldrin	
Endosulfan I	
Endosulfan II	
Endosulfan sulfate	
Endrin	
Endinr aldehyde	
Endrin ketone	
gamma-BHC (Lindane)	
Heptachlor	
Heptachlor epoxide	
Methoxychlor	
Toxaphene	
gamma-Chlordane	
Herbicides	
2,4-D	USEPA 8151A or 8321B
2,4-DB	
2,4,5-TP (Silvex)	
2,4,5-TP (Silvex)	
Dalapon	
Dicamba	
Dichlorprop	
Dinoseb	

Table 5 (cont.)

Herbicides (cont.)	
MCPA	USEPA 8151A or 8321B
MCPP	
Pentachlorophenol	
Anions	
Chloride	USEPA 300.0
Nitrate	
Nitrite	
Sulfate	
Metals (field-filtered)	
Barium	USEPA 200.7 Rev 4.4
Cadmium	
Chromium	
Iron	
Magnesium	
Manganese	
Silver	
Sodium	
Arsenic	USEPA 200.8 Rev 5.4
Lead	
Selenium	
Mercury	EPA 245.1
General	
Carbonate Alkalinity	SM 2320B
Bicarbonate Alkalinity	
Cyanide	SM 4500-CN-E

Exhibit A: NMED Correspondence

Via Email and Certified Mail

July 31, 2024

Andres Alvarez
Sanitation Director
601 Nadyne Courte
Truth or Consequences, NM 87901
aalvarez@torcnm.org

RE: Corrective Action Report Approval and Stage 1 Abatement Plan (S1AP) Submittal Required, Former Bureau of Land Management Landfill, Truth or Consequences, New Mexico

Dear Andres Alvarez,

The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) is in receipt of the report titled *Groundwater Monitoring Well Completion Report*, dated March 4, 2024, for the former Truth or Consequences / Bureau of Land Management Landfill (Site), and herein referred to as the Corrective Action Report (CAR). Parkhill submitted the CAR on behalf of the City of Truth or Consequences in accordance with Subsection 1203.A of the New Mexico Ground and Surface Water Protection Regulations (20.6.2 NMAC). The CAR details the installation, construction, development, and sampling of three replacement groundwater monitoring wells, the plugging and abandonment of two monitoring wells, and the reconfiguration of four monitoring wells from below-ground vaults to above-ground monument vaults. The CAR also includes all applicable New Mexico Office of the State Engineer permits and the elevation survey report prepared by Allsup Land Surveying for all new and existing monitoring wells.

GWQB has reviewed the CAR and the data provided therein, and pursuant to 20.6.2.1203.A NMAC, approves the CAR. In addition, this letter serves to inform the City of Truth or Consequences that 20.6.2.1203.A NMAC is no longer an appropriate regulatory pathway to complete future Site assessment, remediation, or mitigation. Therefore, pursuant to 20.6.2.1203.A(9) NMAC and 20.6.2.4104 NMAC, NMED hereby requires submittal of a Stage 1 Abatement Plan (S1AP) in conformance with 20.6.2.4106.B NMAC within 60 days of receipt of this correspondence. The purpose of a S1AP is to design and conduct site investigation(s) to adequately define site conditions and provide the data necessary to select and design an effective abatement option.

NMED will issue a press release within 30 days of receipt of the approved S1AP as required by 20.6.2.4108.A NMAC. The press release will summarize the following:

1. the source, extent, magnitude and significance of water pollution, as known at the time;
2. the proposed S1AP investigation; and
3. the name and telephone number of an agency contact who can provide additional information.

Please be advised that this approval does not relieve responsibility to obtain third-party access and to comply with all other federal, state, and local laws and regulations, including zoning requirements and nuisance ordinances.

Pursuant to the NMED Delegation Order dated February 19, 2024, the Cabinet Secretary has delegated the authority to sign letters requiring an Abatement Plan under the New Mexico Water Quality Act to the Chief of the GWQB. If you have any questions, please contact Noel Hernandez, State Cleanup Program Project Manager, at (505) 660-8497 or noel.hernandez@env.nm.gov or ros.general@env.nm.gov.

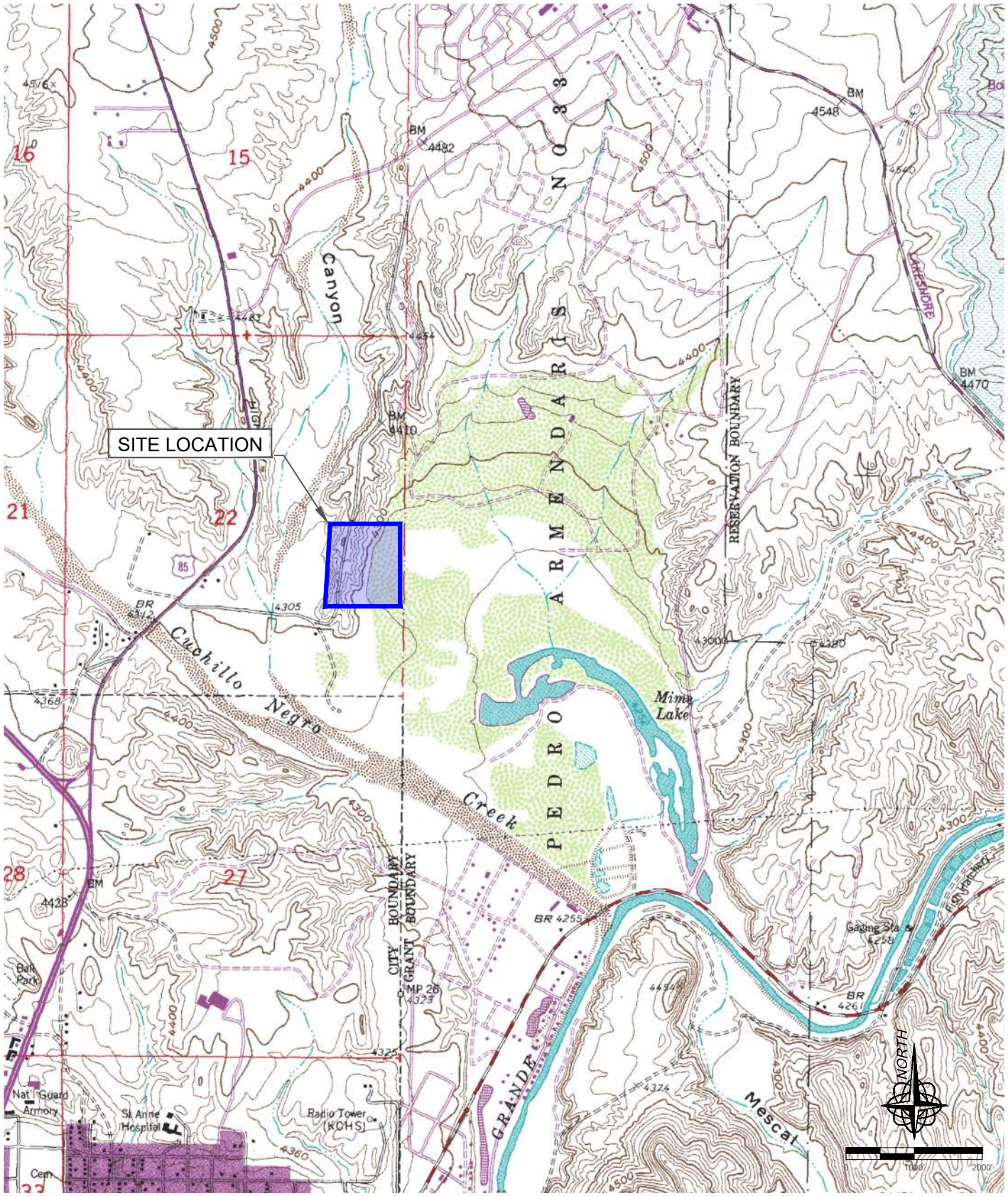
Sincerely,

Justin Ball Digitally signed by Justin Ball Date: 2024.07.31 11:25:23 -06'00'

Justin Ball, Chief
Ground Water Quality Bureau

cc: Andrew Yuhas, Parkhill, ayuhas@Parkhill.com
George Schuman, GWQB-ROS
Paul Chamberlain, GWQB-SCP
Noel Hernandez, GWQB-SCP
ROS Reading File

Exhibit B: Site Location Map



FILE NAME: \\projects-dfs\projects\2024\43866.24\03_DSGN\01_DWG\050_CIVIL\02_CONTENT\SITE LOCATION MAP EX A.dwg PRINTED: Wednesday, January 29, 2025 - 10:50pm

Parkhill

Parkhill.com

FORMER TRUTH OR CONSEQUENCES LANDFILL

TRUTH OR CONSEQUENCES, NEW MEXICO
SIERRA COUNTY,NEW MEXICO

SITE LOCATION MAP

Issue:	FINAL
Date:	11/11/2024
Project No:	43866.24
Sheet:	EXHIBIT B

Exhibit C: Facility Map/Site Plan and Potentiometric Surface Map

WELL LOCATION
43866.24
11/22/2024
C

Issue:
Project No:
Date:
Exhbit:

City of Truth or Consequnces BLM Landfill
Monitoring Well Locations and Site Layout

MW-13T
MW-5R
MW-5
MW-3R
MW-8
MW-10R
MW-9
MW-4
MW-1
MW-12
MW-2R
MW-11

LEGEND

Line/Boundary Type

- Fence
- Gate
- BLM Landfill Property
- Limit of Waste-T or C BLM Landfill
- Limit of Waste-Older Waste

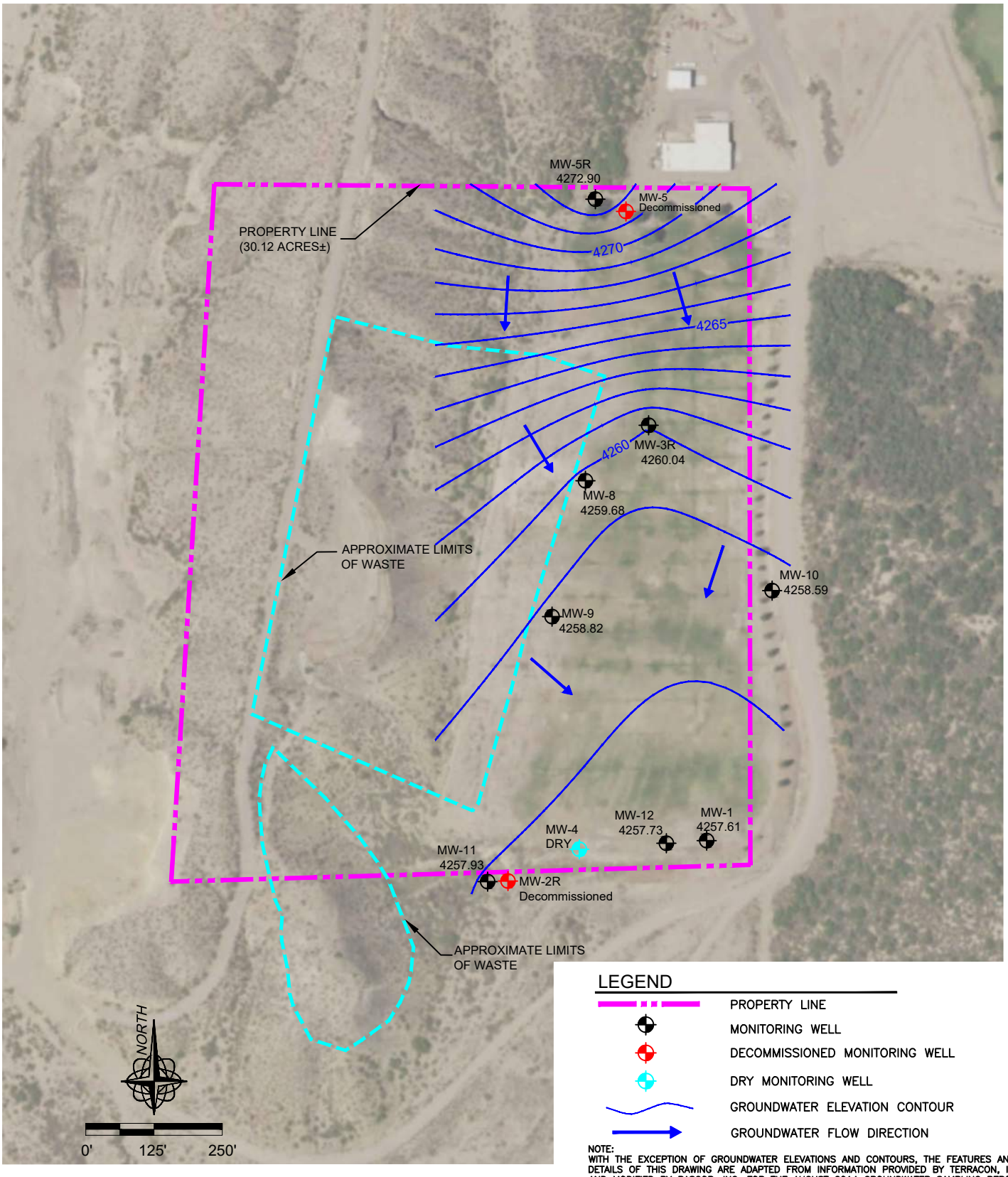
Monitoring Well Network

- (Existing)
- (Proposed)
- (Abandoned)

0 150 300 600
Feet

Parkhill

FILE NAME: A:\2024\43866.24\03_DSGN\01_DWG\050_CIVIL\02_CONTENT\TCBLM_SitePlan_B-Size.mxd LAYOUT NAME: Layers PRINTED: Friday, November 22, 2024 - 4:12:17 PM USER: ayuhas



NOTE:
WITH THE EXCEPTION OF GROUNDWATER ELEVATIONS AND CONTOURS, THE FEATURES AND DETAILS OF THIS DRAWING ARE ADAPTED FROM INFORMATION PROVIDED BY TERRACON, INC. AND MODIFIED BY BASCOR, INC. FOR THE AUGUST 2014 GROUNDWATER SAMPLING REPORT.

FILE NAME: \\projects-dfs\projects\2024\43866.24\03_DSGN\01_DWG\050_CIVIL\02_CONTENT\EXH-C_Site GWMAP-DECEMBER 3 2025.dwg PRINTED: Monday, April 07, 2025 - 11:14am

Parkhill

Parkhill.com

FORMER TRUTH OR CONSEQUENCES LANDFILL
GROUNDWATER ELEVATION CONTOUR MAP
DECEMBER 3, 2024

TRUTH OR CONSEQUENCES LANDFILL
TRUTH OR CONSEQUENCES, NEW MEXICO
SIERRA COUNTY, NEW MEXICO

GROUNDWATER ELEVATION CONTOUR MAP

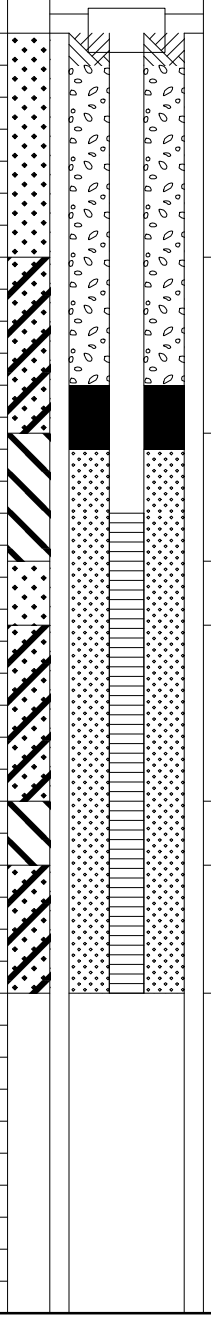
Issue:	FINAL
Date:	01/28/2025
Project No:	43427.24
Exhibit:	C

Exhibit D: Available Borehole Logs (MW-5R, 8, 9, 10, 11, 12)

SOIL BORING / MONITORING WELL LOG

PROJECT: Former Truth or Consequences Landfill
PROJECT NUMBER: 68137008
CLIENT: BASCOR Environmental, Inc.
BORING / WELL NUMBER: MW- 8
TOTAL DEPTH: 30.0'
TOP OF CASING: 4283.34
FIELD PERSONNEL: K. Williams

DRILLING COMPANY: Enviro-Drill
DRILLER: K. Saenz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER: 7 1/4"
SCREEN: Diam. 2.0" Length 15.0' Slot Size 0.010"
CASING: Diam. 2.0" Length 15.0' Type PVC
DATE DRILLED: 5-15-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					
			1.0		SAND, fine to medium, brown, 2" caliche, dry, no odor
	0.0		2.5		
			3.5		
5	0.0		5.0		
			6.0	7.0	
	0.0		7.5		SANDY CLAY, dark brown, soft, moist, no odor
			8.5		
10	0.0		10.0		
			11.0		
	0.0		12.5	12.5	
			13.5		CLAY, dark brown, moist, soft, no odor
15	0.0		15.0		
			16.0	16.5	
	0.0		17.5		SAND, fine-medium, dark brown, loose, moist
			18.5	18.5	
20	0.0		20.0		SANDY CLAY, dark brown, soft, moist, no odor
			21.0		
	0.0		22.5		
			23.5	24.0	
25	0.0		25.0		CLAY, dark brown, soft, saturated, no odor
			26.0	26.0	
	0.0		27.5		SANDY CLAY, brown, soft, saturated with 15% gravel
			28.5		
30	0.0		30.0	30.0	
					BOTTOM OF BORING at 30.0 FEET
35					
40					

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

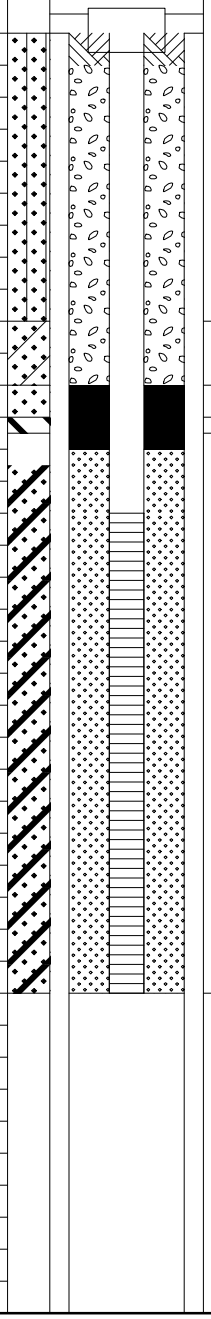
Terracon

MWL40 68137008.GPJ 7/15/13

SOIL BORING / MONITORING WELL LOG

PROJECT: Former Truth or Consequences Landfill
PROJECT NUMBER: 68137008
CLIENT: BASCOR Environmental, Inc.
BORING / WELL NUMBER: MW- 9
TOTAL DEPTH: 30.0'
TOP OF CASING: 4284.37
FIELD PERSONNEL: K. Williams

DRILLING COMPANY: Enviro-Drill
DRILLER: K. Saenz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER: 7 1/4"
SCREEN: Diam. 2.0" Length 15.0' Slot Size 0.010"
CASING: Diam. 2.0" Length 15.0' Type PVC
DATE DRILLED: 5-16-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					SILTY SAND, fine-medium, light brown, moist, no odor
			3.5		
5	0.0		5.0		
			6.0		
	0.0		7.5		
			8.5	9.0	
10	0.0		10.0		CLAYEY SAND, dark brown, loose, moist, no odor
			11.0	11.0	
				12.0	SAND, medium-fine, loose, moist, no odor
	0.0		12.5	12.5	CLAY, red-brown, medium hard, moist, no odor
			13.5		SANDY CLAY, dark brown, moist, no odor
15	0.0		15.0		
			16.0		
	0.0		17.5		
			18.5		- SANDY CLAY, with 3" burned material at 18.5', black, saturated
20 ▽	0.0		20.0		
25					
30				30.0	
					BOTTOM OF BORING at 30.0 FEET
35					
40					

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

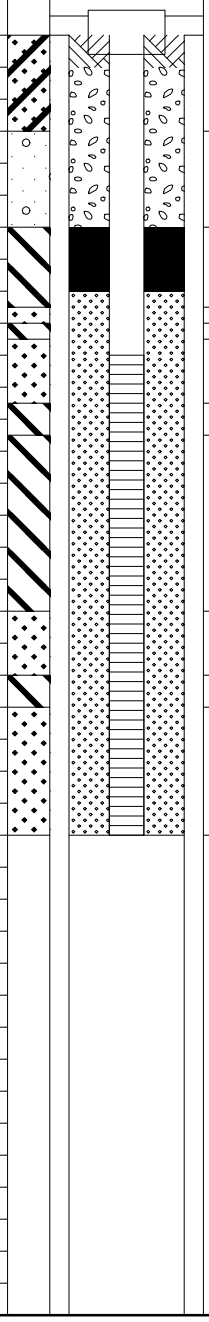
Terracon

MWL40 68137008.GPJ 7/15/13

SOIL BORING / MONITORING WELL LOG

PROJECT: Former Truth or Consequences Landfill
PROJECT NUMBER: 68137008
CLIENT: BASCOR Environmental, Inc.
BORING / WELL NUMBER: MW-10
TOTAL DEPTH: 25.0'
TOP OF CASING: 4272.87
FIELD PERSONNEL: K. Williams

DRILLING COMPANY: Enviro-Drill
DRILLER: K. Saenz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER: 7 1/4"
SCREEN: Diam. 2.0" Length 15.0' Slot Size 0.010"
CASING: Diam. 2.0" Length 10.0' Type PVC
DATE DRILLED: 5-16-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					
	0.0	X	1.0 – 2.5	3.0	SANDY CLAY, dark brown, moist, no odor
	0.0	X	3.5 – 5.0		Gravelly SAND, brown, loose, moist, no odor
5			6.0	6.0	
	0.0	X	7.5	8.5	CLAY, light brown, soft, moist, no odor
	0.0	X	10.0	9.0	SAND, dark brown, loose, moist, no odor
10			11.0	9.5	CLAY, brown, soft, moist, no odor
	0.0	X	12.5	11.5	SAND, dark brown, loose, moist
				12.5	CLAY, brown,soft, wet-saturated
	0.0	X	13.5 – 15.0		CLAY, brown, soft, saturated, no odor
15				18.0	
				20.0	SAND, fine grained, brown, loose, saturated, no odor
20				21.0	CLAY, brown, soft, saturated, no odor
					SAND, fine grained, brown, loose, saturated, no odor
25				25.0	
					BOTTOM OF BORING at 25.0 FEET
30					
35					
40					

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

Terracon

MWL40 68137008.GPJ 7/15/13

Parkhill
333 Rio Rancho Blvd.
Rio Rancho, NM 87124
505.867.6990

MONITORING WELL BOREHOLE LOG

SITE NAME AND LOCATION:
Former City of Truth or Consequences Landfill
Clubhouse Rd.
Elephant Butte, NM

NORTHING *33.16484* ° North
EASTING: *-107.2321* ° West
DATUM: *feet amsl*
ELEVATION: *4292.89'*

DRILLING METHOD:
Hollow-Stem Auger

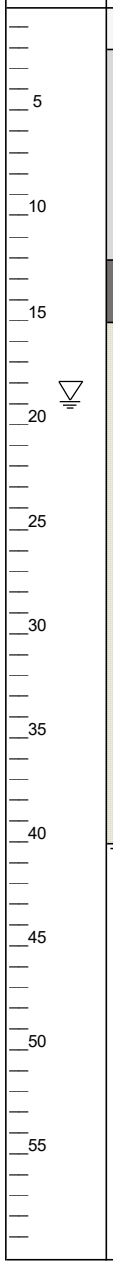
SAMPLING METHOD:
Split-Spoon : @ 5' and lithology changes

WATER LEVEL								
TIME							1230	1430
DATE							DATE	DATE
CASING DEPTH							10/25/23	10/25/23

BORING NO. **MW-5R**
SHEET 1 of 1
DRILLING START / FINISH

DRILL RIG: CME 75
ANGLE: 90 BEARING: NA

SURFACE CONDITIONS:
Gravel, colluvium, unimproved



DEPTH IN FEET (ELEVATION)	Description of Penetrated Materials	% OVERSIZE[1]	% GRAVEL[2]	% SAND[2]	% FINES[2]	COLOR	CONSISTENCY / CEMENTATION	Split Spoon Penetration (blows/0.5 foot)	OTHER TESTS
	Surface Deposits Surface gravels and colluvium. Loose, non indurated, non-plastic, friable								
5		50	35	15	0	NR	NP/FR	10/10/10	
	Alluvium/Colluvium Fine grain sand and gravel with minor fines. Brown, non-plastic, friable								
10		2	15	80	3	7.5YR 5/4	NP/FR	4/4/4	
	Qa - Valley floor and piedmont alluvium Fine sand, minor clays and fines, damp, semi-plastic, semi-friable								
15		0	0	50	50	7.5YR 6/4	SP/SF	3/8/8	
20		0	0	65	35	10YR 5/6	SP/SF	16/14/16	
25	Fine sand and silts, damp, non-plastic, friable	0	0	70	30	10YR 6/4	NP/FR	17/20/21	
30		0	0	80	20	10YR 6/4	NP/FR	15/24/32	
35		0	0	80	20	10YR 6/4	NP/FR	7/15/24	
40		0	0	80	20	10YR 5/4	NP/FR	7/17/24	
45									
50									
55									

DRILLING CONTRACTOR: Enviro-Drill, Inc.
LOGGED BY: ANDREW N. YUHAS P.G.
DATE: 2023-10-25
PROJECT NO.: 04078823.00
FILE NAME: 2023-10_TCBLM-WELLS_AsBuilt.xl

Parkhill
333 Rio Rancho Blvd.
Rio Rancho, NM 87124
505.867.6990

MONITORING WELL BOREHOLE LOG

SITE NAME AND LOCATION: *Former City of Truth or Consequences Landfill* *Clubhouse Rd.* *Elephant Butte, NM*	DRILLING METHOD: *Hollow-Stem Auger*	BORING NO. **MW-11**
	SAMPLING METHOD: *Split-Spoon : @ 5' and lithology changes*	SHEET 1 of 1
NORTHING *33.16116* ° North EASTING: *-107.2327* ° West DATUM: *feet amsl* ELEVATION: *4284.84'*		DRILLING START: *1215*; FINISH: *1430*
DRILL RIG: CME 75 ANGLE: 90 BEARING: NA	SURFACE CONDITIONS: *Flat ground, scrub, sandy*	DATE START: *10/23/23*; DATE FINISH: *10/23/23*

WATER LEVEL						
TIME						
DATE						
CASING DEPTH						

DEPTH IN FEET (ELEVATION)	WELL COMPLETION DETAILS	Description of Penetrated Materials	% OVERSIZE[1]	% GRAVEL[2]	% SAND[2]	% FINES[2]	COLOR	CONSISTENCY / CEMENTATION	Split Spoon Penetration (blows/0.5 foot)	OTHER TESTS
	Casing: Blank well casing 2" PVC SCH-40 FJ: 0-24 ft; Annular Fill: High-Strength Concrete 0-2 ft; Annular grout seal Portland Type I-II neat cement 2-19 ft; 3/8-in bentonite chips-hydrated 19-22 ft; 12/20 Colorado silica sand 22-45 ft; 2" SCH40 FJ PVC screen 0.010-slot : 24-44 ft	**Surface Deposits** Fine sand, tan to brown, dry, non-plastic, friable	0	0	90	10	7.5YR 7/2	NP/FR	--	
5		**Qa - Valley floor and piedmont alluvium** Fine to medium grained sand and gravels, grey, non-plastic, friable	0	40	50	10	7.5YR 7/3	NP/FR	3/3/3	
10		Fine brown sand with minor fines, slightly damp, non-plastic, friable.	0	0	95	5	7.5YR 7/3	NP/FR	3/3/3	
15			0	0	95	5	7.5YR 7/3	NP/FR	3/3/3	
20			0	1	98	1	7.5YR 7/3	SP/SF	3/3/3	
25		Fine brown sands with clays in cuttings, semi-plastic/semi-friable	0	1	89	10	7.5YR 5/4	SP/SF	3/7/5	
▽		Fine brown sand, wet with minor gravels, non-plastic, friable								
30		Wet medium to fine sand with minor gravels, semi-plastic, friable	0	50	50	0	--	SP/FR	1/1/1	
35			0	20	75	5	--	SP/SF	6/6/4	
40			0	5	75	20	5YR 5/4	NP/FR	7/14/16	
45	Total depth drilled: 45'		0	0	85	15	5YR 5/4	NP/FR	17/23/17	
50										
55										

DRILLING CONTRACTOR: Enviro-Drill, Inc.
LOGGED BY: ANDREW N. YUHAS P.G.
DATE: 2023-10-23
PROJECT NO.: 04078823.00
FILE NAME: 2023-10_TCBLM-WELLS_AsBuilt.xl

Parkhill
333 Rio Rancho Blvd.
Rio Rancho, NM 87124
505.867.6990

MONITORING WELL BOREHOLE LOG

SITE NAME AND LOCATION:
Former City of Truth or Consequences Landfill
Clubhouse Rd.
Elephant Butte, NM

NORTHING *33.16139°* North
EASTING: *-107.2316°* West
DATUM: *feet amsl*
ELEVATION: *4284.83'*

DRILL RIG: CME 75
ANGLE: 90 BEARING: NA

DRILLING METHOD:
Hollow-Stem Auger

SAMPLING METHOD:
Split-Spoon : @ 5' and lithology changes

WATER LEVEL							
TIME						0930	1130
DATE						DATE 10/24/23	DATE 10/24/23
CASING DEPTH							

BORING NO. **MW-12**
SHEET 1 of 1
DRILLING START / FINISH

SURFACE CONDITIONS:
South end of driving range, flat, meqsuite scrub

DEPTH IN FEET (ELEVATION)	WELL COMPLETION DETAILS	Description of Penetrated Materials	% OVERSIZE[1]	% GRAVEL[2]	% SAND[2]	% FINES[2]	COLOR	CONSISTENCY / CEMENTATION	Split Spoon Penetration (blows/0.5 foot)	OTHER TESTS
	Casing | Annular Fill									
	High-Strength Concrete 0-2 ft	**Surface Deposits** Fine sand, tan to brownm dry non-plastic, friable	0	5	90	5	NR	NP/FR	4/5/5	
5		**Qa - Valley floor and peidmont alluvium** Fine grained sand and minor gravels, grey, friable	0	5	90	5	7.5YR 5/4	NP/FR	4/5/5	
10	Annular grout seal Portland Type I-II neat cement 2-19 ft; Blank well casing 2" PVC SCH40 FJ; 0-24 ft		0	5	90	5	7.5YR 5/4	NP/FR	5/12/18	
15		Fine brown sand, friable with minor clays	0	0	75	25	7.5YR 5/4	NP/FR	3/3/4	
20	3/8-in bentonite chips-hydrated 19-22 ft	Fine brown sand, increasing clays, semi-plastic, friable	0	1	69	30	7.5YR 7/2	SP/FR	3/4/4	
25		Fine clayey sand, damp to wet, semi-plastic, semi-friale	0	0	40	60	7.5YR 4/3	SP/SF	2/3/4	
30			0	0	50	50	7.5YR 4/3	SP/SF	3/3/3	
35	2" SCH40 FJ PVC screen 0.010-slot - 24-44 ft; 12/20 Colorado silica sand 22-45 ft	Fine sand, wet, non-plastic, friable	0	0	50	50	7.5YR 4/3	SP/SF	3/3/3	
40			0	0	85	15	7.5YR 6/3	NP/FR	3/3/3	
45	Total depth drilled: 45'		0	0	65	35	7.5YR 4/1	NP/FR	3/3/3	
50										
55										

DRILLING CONTRACTOR: Enviro-Drill, Inc.
LOGGED BY: ANDREW N. YUHAS P.G.
DATE: 2023-10-24
PROJECT NO.: 04078823.00
FILE NAME: 2023-10_TCBLM-WELLS_AsBuilt.xls

Exhibit E: Groundwater Monitoring Well Details

Exhibit E - Monitoring Well Details

Well I.D.	Construction Material	Well Diameter (in.)	Top of Well Elevation[1] (fmsl)	Total Depth (fbtoc)	Screen Length (feet)	Well Location[2] (Site Survey)		Well Installation Date
						Northing (ft)	Easting (ft)	
MW-1	Sch 40 PVC	2	4284.16	27.75	10	786,797.14	2,907,296.78	08/02/94
MW-2R	Sch 40 PVC	2	--	--	--	--	--	03/14/07
MW-3R	Sch 40 PVC	2	4277.99	24.50	10	787,557.20	2,907,190.96	03/14/07
MW-4	Sch 40 PVC	2	4284.36	24.84	10	786,781.33	2,907,063.48	08/04/94
MW-5	Sch 40 PVC	2	Decomm.	--	10	--	--	03/14/07
MW-5R	Sch 40 PVC	2	4295.17	40.35	20	787,972.80	2,907,093.65	10/27/23
MW-6	--	--	4288.17	--	--	--	--	--
MW-7	Sch 40 PVC	2	4285.98	--	10	--	--	--
MW-8	Sch 40 PVC	2	4286.80	33.38	15	787,455.69	2,907,074.36	05/15/13
MW-9	Sch 40 PVC	2	4287.75	33.69	15	787,208.08	2,907,014.61	05/15/13
MW-10	Sch 40 PVC	2	4276.80	27.80	15	787,255.80	2,907,417.40	05/15/13
MW-11	Sch 40 PVC	2	4288.10	47.00	20	786,721.00	2,906,895.92	10/27/23
MW-12	Sch 40 PVC	2	4287.83	46.27	20	786,793.33	2,907,223.39	10/27/23

Notes:

[1] Top of Well Elevations provided by Allsup Land Surveying, November 2023.

[2] Provided by Allsup Land Surveying, November 2023.

Exhibit E - Monitoring Well Details

fbtoc: feet below "Measuring Point", as identified at top of PVC well casing.

Monitoring wells MW-2 and MW-5 were plugged ad abandoned in October 2023

Exhibit F: Summary of Historical Groundwater Laboratory Analytical Results (2013-2024)

EXHIBIT F

Summary of Laboratory Analytical Results

Notes for Summary of Laboratory Analytical Results

Sampling for 09/13 through 08/14 events performed by Terracon/BASCOR.

- Analytical data for these events as provided in *4th Quarterly Groundwater Sampling Event Report, Former Truth or Consequences Landfill (BASCOR, 08/27/14, Section 4.1)*
- For the 03/14 and 08/14 events, analyses for pesticides, VOCs, SVOCs, herbicides, and cyanide not performed.

Sampling for 12/14 through 12/24 events performed by Parkhill

Metals analyses for 09/13 and 12/13 events are for "Total Recoverable Metals" only (EPA Method 6010B).

Metals analyses for 03/14 and later events are for "Dissolved Metals" only (EPA Method 200.7 & 200.8).

NA = Not analyzed.

NR = Not recorded.

NS = Not sampled.

ND = Non-detect. Nomenclature as provided in *4th Quarterly Groundwater Sampling Event Report, Former Truth or Consequences Landfill (BASCOR, 08/27/14, Section 4.1)*

GWPS = Regulatory Groundwater Protection Standard (20.6.2.3103 NMAC, Subsections A, B, & C).

Bold values indicate detections that meet or exceed the GWPS.

"<" symbol for 12/14 through 12/24 events indicates parameter not detected above the laboratory Practical Quantitation Limit ("PQL")

MCL = Maximum Contaminant Level (EPA National Primary Drinking Water Regulations)
* = Sample was diluted by laboratory for analysis resulting in a higher laboratory reporting limit.

EXHIBIT F

Stage 1 Abetement Plan
Former Truth or Consequences BLM Landfill
December 2024

Summary of Laboratory Analytical Results

Well MW-3R	UNITS	Quarterly				Semi-Annual				Annual								GWPS
Inorganic Parameters		**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/19/19**	**06/04/20**	**06/15/21**	**06/15/22**	**11/21/23**	**12/03/24**	
EPA Method 300.0: Anions																		
Chloride, Cl^-	mg/L	240	**270**	200	**290**	**270**	230	170	170	**280**	**270**	**440**	**380**	**390**	210	**260**	144	250
Nitrite (as N), NO_2-N	mg/L	NA	NA	NA	NA	<0.10	<0.10	<0.10	<0.10	<0.10	2.7	<2.0	<2.0	3.6	1.8	<0.10	1.4	1.0
Nitrate (as N), NO_3-N	mg/L	0.49	1.4	0.76	2.2	1.4	1.0	0.14	0.71	0.97		4.5	3.3			1.7	<0.10	10
Sulfate, SO_4^{2-}	mg/L	190	200	170	180	220	190	160	150	170	190	220	190	210	220	190	172	600
EPA Method 200.7: Dissolved Metals																		
Barium, Ba	mg/L	0.036	0.038	0.048	0.066	0.073	0.060	0.048	0.058	0.076	0.071	0.10	0.14	0.11	0.084	0.084	0.069	2.0
Cadmium, Cd	mg/L	ND	ND	ND	ND	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.01
Chromium, Cr	mg/L	ND	ND	ND	ND	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.05
Iron, Fe	mg/L	ND	ND	0.37	0.034	0.12	<0.020	0.089	0.15	0.066	0.027	0.12	0.74	0.042	0.045	0.14	<0.020	1.0
Lead, Pb	mg/L	ND	ND	ND	ND	<0.0010	<0.0050	<0.0050	<0.00050	<0.00050	<0.0050	<0.00050	0.0015	<0.00050	<0.00050	<0.00050	<0.00050	0.015
Magnesium, Mg	mg/L	16	20	18	20	20	19	14	16	24	26	35	37	33	24	27	21.9	--
Manganese, Mn	mg/L	**0.21**	**0.29**	0.15	**0.26**	**0.35**	0.16	**0.21**	**0.21**	**0.24**	0.19	**0.29**	**0.56**	**0.23**	0.15	0.15	0.193	0.2
Silver, Ag	mg/L	ND	ND	ND	ND	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.05
Sodium, Na	mg/L	200	230	200	200	210	190	170	180	200	200	240	230	210	180	190	165	--
EPA Method 200.8: Dissolved Metals																		
Arsenic, As	mg/L	ND	ND	ND	0.0032	0.0029	0.0039	0.0031	0.0036	<0.010	0.003	0.0031	0.0031	0.0027	0.0027	0.0033	0.00304	0.1
Selenium, Se	mg/L	ND	ND	ND	0.0052	0.0040	<0.010	0.0016	<0.0050	<0.020	0.0038	0.0077	0.0078	0.0066	0.0046	0.0042	0.00335	0.05
EPA Method 245.1: Mercury																		
Mercury, Hg	mg/L	ND	ND	ND	ND	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.002
SM2320B: Alkalinity																		
Bicarbonate (as $CaCO_3$)	mg/L	330	330	360	300	320	305.5	284.4	291.3	384.3	315.4	333.4	378.8	292.5	310.8	286.1	298	--
Carbonate (as $CaCO_3$)	mg/L	ND	ND	ND	ND	<2.0	<2.0	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	--
Total Alkalinity (as $CaCO_3$)	mg/L	330	330	360	300	320	305.5	284.4	291.3	384.3	315.4	333.4	378.8	292.5	310.8	286.1	298	--
EPA Method 335.4: Cyanide																		
Cyanide, CN^-	mg/L	NA	NA	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.00500	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0050	0.2
Field Parameters																		
Temperature	°C	NR	NR	NR	NR	19.2	18.9	18.5	18.6	18.5	18.8	18.7	19.1	18.6	19.4	19.4	21.9	--
Field pH	SU	NR	NR	NR	NR	7.4	7.4	7.6	7.5	7.5	7.4	7.09	7.10	7.18	7.70	7.36	7.80	6 to 9
Field Specific Conductance	mS/cm	NR	NR	NR	NR	1.894	1.757	1.270	1.993	1.766	1.979	2.660	2.280	2.190	1.422	1.763	1.427	--
Detected Organic Parameters	**UNITS**	**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/19/19**	**06/04/20**	**06/15/21**	**06/15/22**	**11/21/23**	**12/03/24**	**EPA MCL**
EPA Method 8081: Pesticides																		
beta-BHC	µg/L	ND	ND	NA	NA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.050	--
EPA Method 8270C: Semivolatiles																		
3+4-Methylphenol	µg/L	ND	ND	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5.0	<10	<10	<10	--
EPA Method 8151A: Herbicides																		
2,4-D (2,4-Dichlorophenoxyacetic acid)	µg/L	ND	ND	NA	NA	1.27	<0.1	<0.1	<0.4	<2.22	<0.1	<0.1	<0.100	<0.100	<0.100	<0.100	<5.0	70
DCPA (Acid Metabolites)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	<0.100	<0.100	<0.100	NA	-
EPA Method 8260																		
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	12	<10	<10	<10	<10	<10	<10	--

EXHIBIT F

Stage 1 Abetement Plan
Former Truth or Consequences BLM Landfill
December 2024

Summary of Laboratory Analytical Results

Well MW-5R (Replacement for MW-5)	UNITS	Quarterly				Semi-Annual				Annual						MW-5R		GWPS
Inorganic Parameters		**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/19/19**	**06/04/20**	**06/15/21**	**06/15/22**	**11/21/23**	**12/03/24**	
EPA Method 300.0: Anions																		
Chloride, Cl^-	mg/L	210	210	120	180	180	150	160	83	150	150	150	NS	NS	NS	65	64.9	250
Nitrite (as N), NO_2-N	mg/L	NA	NA	NA	NA	<0.10	<1.0	<0.10	<0.10	<0.10	<1.0	<0.10	NS	NS	NS	<0.10	0.2	1.0
Nitrate (as N), NO_3-N	mg/L	0.46	2.1	2.1	0.4	0.69		0.57	<0.10	0.46		0.31	NS	NS	NS	0.24	<0.100	10
Sulfate, SO_4^{2-}	mg/L	120	130	140	120	120	120	130	120	120	120	130	NS	NS	NS	120	124	600
EPA Method 200.7: Dissolved Metals																		
Barium, Ba	mg/L	0.054	0.056	0.046	0.053	0.052	0.044	0.062	0.075	0.065	0.063	0.056	NS	NS	NS	0.031	0.0466	2.0
Cadmium, Cd	mg/L	ND	ND	ND	ND	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	NS	NS	NS	<0.0020	<0.0020	0.01
Chromium, Cr	mg/L	ND	ND	ND	ND	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	NS	NS	NS	<0.0060	<0.0060	0.05
Iron, Fe	mg/L	ND	ND	0.052	ND	0.044	<0.020	0.062	0.22	<0.020	0.051	<0.020	NS	NS	NS	0.19	1.61	1.0
Lead, Pb	mg/L	ND	ND	ND	ND	<0.0010	**0.060**	<0.0050	<0.00050	<0.0025	<0.0050	<0.00050	NS	NS	NS	<0.00050	0.00119	0.015
Magnesium, Mg	mg/L	7.6	9.5	7.3	7.4	6.6	6.0	7.8	7.8	7.4	7.1	6.0	NS	NS	NS	4.0	4.62	--
Manganese, Mn	mg/L	ND	ND	ND	ND	0.0040	<0.0020	0.0054	**0.84**	0.0085	0.0026	<0.0020	NS	NS	NS	0.035	0.0276	0.2
Silver, Ag	mg/L	ND	ND	ND	ND	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NS	NS	NS	<0.0050	<0.0050	0.05
Sodium, Na	mg/L	160	170	150	160	160	150	170	150	150	160	160	NS	NS	NS	140	148	--
EPA Method 200.8: Dissolved Metals																		
Arsenic, As	mg/L	ND	ND	ND	0.0022	0.0021	0.0030	0.0020	0.0085	0.0050	0.0017	0.0016	NS	NS	NS	0.0012	0.00104	0.1
Selenium, Se	mg/L	ND	ND	ND	0.0018	0.0013	<0.010	0.0016	<0.0010	<0.010	0.001	<0.0010	NS	NS	NS	0.001	<0.0010	0.05
EPA Method 245.1: Mercury																		
Mercury, Hg	mg/L	ND	ND	ND	ND	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	NS	NS	NS	<0.00020	<0.00020	0.002
SM2320B: Alkalinity																		
Bicarbonate (as $CaCO_3$)	mg/L	220	210	220	230	220	203.2	252.2	312.2	208.2	247	227.5	NS	NS	NS	185.9	185	--
Carbonate (as $CaCO_3$)	mg/L	ND	ND	ND	ND	<2.0	<2.0	<2.000	<2.000	<2.000	<2.000	<2.000	NS	NS	NS	<2.000	<2.000	--
Total Alkalinity (as $CaCO_3$)	mg/L	220	210	220	230	220	203.2	252.2	312.2	208.2	247	227.5	NS	NS	NS	185.9	185	--
EPA Method 335.4: Cyanide																		
Cyanide, CN^-	mg/L	NA	NA	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.00500	<0.0100	<0.0100	NS	NS	NS	<0.0100	<0.0050	0.2
Field Parameters																		
Temperature	°C	NR	NR	NR	NR	19.8	21.8	18.8	20.2	20.5	28.0	24.1	NS	NS	NS	23.35	22.7	--
Field pH	SU	NR	NR	NR	NR	7.3	7.4	7.3	7.4	7.3	7.2	7.07	NS	NS	NS	7.44	8.10	6 to 9
Field Specific Conductance	mS/cm	NR	NR	NR	NR	1.158	1.123	1.118	1.148	0.970	1.202	1.384	NS	NS	NS	0.872	0.895	--
Detected Organic Parameters	**UNITS**	**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/19/19**	**06/04/20**	**06/15/21**	**06/15/22**	**11/21/23**	**12/03/24**	**EPA MCL**
EPA Method 8081: Pesticides																		
beta-BHC	µg/L	ND	ND	NA	NA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	NS	NS	NS	<0.10	<0.050	--
EPA Method 8270C: Semivolatiles																		
3+4-Methylphenol	µg/L	ND	ND	NA	NA	<10	<10	<10	12	<10	<10	<10	NS	NS	NS	<10	<10	--
EPA Method 8151A: Herbicides																		
2,4-D (2,4-Dichlorophenoxyacetic acid)	µg/L	ND	ND	NA	NA	0.277	<0.1	<0.1	<0.4	<2.22	<0.1	<0.1	NS	NS	NS	<0.1	<5.0	70
DCPA (Acid Metabolites)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	NS	NS	<0.100	NA	-
EPA Method 8260																		
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	28	<10	NS	NS	NS	<10	<10	--

EXHIBIT F

Stage 1 Abetement Plan
Former Truth or Consequences BLM Landfill
December 2024

Summary of Laboratory Analytical Results

Well MW-8	UNITS	Quarterly				Semi-Annual				Annual								GWPS
Inorganic Parameters		**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/19/19**	**06/04/20**	**06/15/21**	**06/15/22**	**11/21/23**	**12/03/24**	
EPA Method 300.0: Anions																		
Chloride, Cl^-	mg/L	**620**	**840**	**760**	**590**	**500**	**420**	**420**	**360**	**360**	**300**	**350**	**350**	**350**	**330**	**310**	**291**	250
Nitrite (as N), NO_2-N	mg/L	NA	NA	NA	NA	<0.10	<2.0	<2.0	<0.10	<2.0	1.6	0.19	<0.10	<1.0	1.1	<0.10	0.890	1.0
Nitrate (as N), NO_3-N	mg/L	**12**	5.3	6.5	9.4	7.7	4.2	5.2	2.9	1.1		1.1	0.88			1.4	<0.10	10
Sulfate, SO_4^{2-}	mg/L	220	230	200	170	180	160	150	160	130	130	130	120	130	150	120	125	600
EPA Method 200.7: Dissolved Metals																		
Barium, Ba	mg/L	0.071	0.086	0.073	0.076	0.068	0.065	0.067	0.072	0.060	0.056	0.053	0.059	0.062	0.057	0.058	0.0617	2.0
Cadmium, Cd	mg/L	ND	ND	ND	ND	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0050	0.01
Chromium, Cr	mg/L	ND	ND	ND	ND	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.05
Iron, Fe	mg/L	ND	ND	ND	ND	<0.020	<0.020	0.043	<0.020	0.032	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	1.0
Lead, Pb	mg/L	ND	ND	ND	ND	<0.0010	<0.00050	<0.0050	<0.00050	<0.0025	<0.0050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.015
Magnesium, Mg	mg/L	41	63	57	42	37	34	34	34	28	27	26	30	31	30	30	31.5	--
Manganese, Mn	mg/L	**0.55**	**0.72**	**0.70**	**0.51**	**0.41**	**0.30**	**0.45**	**0.45**	**0.28**	**0.42**	**0.38**	**0.42**	**0.44**	**0.40**	**0.40**	**0.383**	0.2
Silver, Ag	mg/L	ND	ND	ND	ND	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.00791	0.05
Sodium, Na	mg/L	240	270	260	230	220	210	210	220	200	200	180	210	190	180	170	168	--
EPA Method 200.8: Dissolved Metals																		
Arsenic, As	mg/L	ND	ND	ND	0.0043	0.0037	0.0050	0.0042	0.0051	<0.0050	<0.0010	0.0050	0.0049	0.0053	0.0048	0.0047	0.00479	0.1
Selenium, Se	mg/L	ND	ND	ND	0.0055	0.0031	<0.010	<0.0050	<0.0050	<0.010	<0.0010	0.0028	0.0031	0.0044	0.0033	0.0051	0.00281	0.05
EPA Method 245.1: Mercury																		
Mercury, Hg	mg/L	ND	ND	ND	ND	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.002
SM2320B: Alkalinity																		
Bicarbonate (as $CaCO_3$)	mg/L	280	280	270	250	290	285.6	317.8	355.0	331.2	291.2	303.8	347.8	328.8	324.8	336.3	397	--
Carbonate (as $CaCO_3$)	mg/L	ND	ND	ND	ND	<2.0	<2.0	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	--
Total Alkalinity (as $CaCO_3$)	mg/L	280	280	270	250	290	285.6	317.8	355.0	331.2	291.2	303.8	347.8	328.8	324.8	336.3	397	--
EPA Method 335.4: Cyanide																		
Cyanide, CN^-	mg/L	NA	NA	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.00500	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0100	<0.0050	0.2
Field Parameters																		
Temperature	°C	NR	NR	NR	NR	19.2	21.0	20.3	21.1	21.1	21.5	21.6	22.1	21.5	22.4	20.9	20.6	--
Field pH	SU	NR	NR	NR	NR	7.2	7.1	7.4	7.6	7.2	7.5	6.99	7.18	7.14	7.60	7.19	7.60	6 to 9
Field Specific Conductance	mS/cm	NR	NR	NR	NR	2.4100	2.27	1.956	2.070	1.759	1.967	1.974	1.890	2.010	1.595	1.894	1.742	--

Detected Organic Parameters	**UNITS**	**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/19/19**	**06/04/20**	**06/15/21**	**06/15/22**	**11/21/22**	**12/03/24**	**EPA MCL**
EPA Method 8081: Pesticides																		
beta-BHC	µg/L	ND	ND	NA	NA	<0.10	<0.10	<0.10	0.13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.050	--
EPA Method 8270C: Semivolatiles																		
3+4-Methylphenol	µg/L	ND	ND	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5.0	<10	<10	<10	--
EPA Method 8151A: Herbicides																		
2,4-D (2,4-Dichlorophenoxyacetic acid)	µg/L	ND	ND	NA	NA	1.07	<0.1	<0.1	<0.4	<2.06	<0.1	<0.1	<0.1	<0.100	<0.100	<0.100	<5.0	70
DCPA (Acid Metabolites)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	<0.100	<0.100	<0.100	NA	-
EPA Method 8260																		
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--

EXHIBIT F

Stage 1 Abetement Plan
Former Truth or Consequences BLM Landfill
December 2024

Summary of Laboratory Analytical Results

Well MW-9	UNITS	Quarterly				Semi-Annual				Annual								GWPS
Inorganic Parameters		**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/19/19**	**07/07/20**	**06/15/21**	**06/15/22**	**11/21/23**	**12/03/24**	
EPA Method 300.0: Anions																		
Chloride, Cl^-	mg/L	**390**	**330**	**290**	**300**	**350**	**270**	220	240	180	190	180	190	200	210	180	155	250
Nitrite (as N), NO_2-N	mg/L	NA	NA	NA	NA	<2.0	<0.10	<0.10	<0.10	<0.10	<.1.0	<0.10	<0.50	<1.0	<1.0	<1.0	<0.10	1.0
Nitrate (as N), NO_3-N	mg/L	ND	ND	ND	ND	<0.10	<0.10	<0.10	<0.10	<0.10		<0.10	<0.50			<0.10	<0.10	10
Sulfate, SO_4^{2-}	mg/L	150	140	130	120	140	130	110	130	110	110	120	120	130	140	120	118	600
EPA Method 200.7: Dissolved Metals																		
Barium, Ba	mg/L	0.077	0.071	0.076	0.077	0.084	0.069	0.068	0.077	0.062	0.076	0.076	0.13	0.071	0.078	0.070	0.0636	2.0
Cadmium, Cd	mg/L	ND	ND	ND	ND	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.01
Chromium, Cr	mg/L	ND	ND	ND	ND	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.05
Iron, Fe	mg/L	0.53	0.99	**1.10**	0.59	0.85	0.53	0.63	0.42	0.44	0.47	0.48	**1.4**	0.17	0.55	<0.020	0.119	1.0
Lead, Pb	mg/L	ND	ND	ND	ND	<0.0010	<0.00050	<0.0050	<0.00050	<0.0025	<0.0050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.015
Magnesium, Mg	mg/L	43	42	39	39	41	38	38	37	32	32	31	30	26	30	29	24.1	--
Manganese, Mn	mg/L	**2.0**	**1.7**	**1.6**	**1.6**	**1.7**	**1.4**	**1.4**	**1.5**	**1.4**	**1.2**	**1.1**	**1.2**	**0.69**	**0.90**	**0.77**	**0.521**	0.2
Silver, Ag	mg/L	ND	ND	ND	ND	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.05
Sodium, Na	mg/L	140	150	140	130	150	130	140	140	130	130	130	130	130	130	120	117	--
EPA Method 200.8: Dissolved Metals																		
Arsenic, As	mg/L	ND	ND	ND	0.011	0.011	0.012	0.011	0.012	0.011	0.0096	0.0077	0.0072	0.0046	0.006	0.0035	0.00240	0.1
Selenium, Se	mg/L	ND	ND	ND	0.0034	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	0.05
EPA Method 245.1: Mercury																		
Mercury, Hg	mg/L	ND	ND	ND	ND	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.002
SM2320B: Alkalinity																		
Bicarbonate (as $CaCO_3$)	mg/L	310	330	320	290	320	293.4	320.9	311.9	332.6	350.4	370.1	381.7	328.9	339.2	353.8	321	--
Carbonate (as $CaCO_3$)	mg/L	ND	ND	ND	ND	<2.0	<2.0	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	--
Total Alkalinity (as $CaCO_3$)	mg/L	310	330	320	290	320	293.4	320.9	311.9	332.6	350.4	370.1	381.7	328.9	339.2	353.8	321	--
EPA Method 335.4: Cyanide																		
Cyanide, CN^-	mg/L	NA	NA	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.00500	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.00500	0.2
Field Parameters																		
Temperature	°C	NR	NR	NR	NR	18.8	21.4	20.2	21.5	21.4	22.1	22.3	22.0	22.5	23.5	21.3	21.0	--
Field pH	SU	NR	NR	NR	NR	7.1	7.1	7.1	7.2	7.6	7.3	6.91	6.74	6.86	7.30	7.00	7.20	6 to 9
Field Specific Conductance	mS/cm	NR	NR	NR	NR	1.965	1.696	1.505	1.524	1.332	1.574	1.575	1.531	1.571	1.336	1.492	1.362	--
Detected Organic Parameters	**UNITS**	**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/19/19**	**07/07/20**	**06/15/21**	**06/15/22**	**06/15/22**	**12/03/24**	**EPA MCL**
EPA Method 8081: Pesticides																		
beta-BHC	µg/L	ND	ND	NA	NA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.050	--
EPA Method 8270C: Semivolatiles																		
3+4-Methylphenol	µg/L	ND	ND	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5.0	<10	<10	<10	--
EPA Method 8151A: Herbicides																		
2,4-D (2,4-Dichlorophenoxyacetic acid)	µg/L	ND	ND	NA	NA	0.883	<0.1	<0.1	<0.4	<2.06	<0.1	<0.1	<0.1	<0.100	<0.100	<0.100	<5.0	70
DCPA (Acid Metabolites)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.110	<0.100	<0.100	<0.100	NA	-
EPA Method 8260																		
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--

EXHIBIT F

Stage 1 Abetement Plan
Former Truth or Consequences BLM Landfill
December 2024

Summary of Laboratory Analytical Results

Well MW-10	UNITS	Quarterly				Semi-Annual				Annual								GWPS
Inorganic Parameters		**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/27/19**	**06/04/20**	**06/15/21**	**06/15/22**	**11/21/23**	**12/03/24**	
EPA Method 300.0: Anions																		
Chloride, Cl^-	mg/L	**330**	**320**	**330**	**340**	**330**	**340**	**360**	**330**	**310**	**290**	**360**	**370**	**360**	**470**	**470**	**547**	250
Nitrite (as N), NO_2-N	mg/L	NA	NA	NA	NA	<2.0	<0.10	<2.0	<0.10	<2.0	<1.0	<2.0	<2.0	<1.0	<1.0	<0.10	<0.10	1.0
Nitrate (as N), NO_3-N	mg/L	0.39	0.37	0.98	ND	<0.10	0.42	<0.10	<0.10	0.52		0.22	0.34			<0.10	<0.10	10
Sulfate, SO_4^{2-}	mg/L	210	220	230	220	210	240	210	220	200	200	230	220	220	270	260	278	600
EPA Method 200.7: Dissolved Metals																		
Barium, Ba	mg/L	0.050	0.029	0.035	0.048	0.050	0.051	0.045	0.050	0.048	0.045	0.046	0.048	0.054	0.057	0.061	0.0629	2.0
Cadmium, Cd	mg/L	ND	ND	ND	ND	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.01
Chromium, Cr	mg/L	ND	ND	ND	ND	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.05
Iron, Fe	mg/L	ND	ND	0.029	ND	0.13	<0.020	0.049	0.054	0.057	0.073	<0.020	<0.020	0.031	0.055	<0.020	<0.020	1.0
Lead, Pb	mg/L	ND	ND	ND	ND	<0.0010	<0.0050	<0.0050	<0.00050	<0.0025	<0.0050	<0.00050	<0.00050	<0.00050	<0.0025*	<0.00050	<0.00050	0.015
Magnesium, Mg	mg/L	22	22	24	24	22	25	23	24	23	23	25	26	28	32	35	37.8	--
Manganese, Mn	mg/L	0.18	0.057	0.009	0.063	0.019	0.021	0.022	0.023	0.013	0.018	0.0069	0.013	0.014	0.020	0.028	0.00938	0.2
Silver, Ag	mg/L	ND	ND	ND	ND	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.00863	0.05
Sodium, Na	mg/L	270	270	280	270	280	290	280	290	270	290	280	320	310	320	330	344	--
EPA Method 200.8: Dissolved Metals																		
Arsenic, As	mg/L	ND	ND	ND	0.0050	0.0044	<0.010	0.0047	0.0051	<0.0050	0.0041	0.0039	0.0040	0.0040	<0.0050*	0.0043	0.0033	0.1
Selenium, Se	mg/L	ND	ND	ND	0.0040	<0.0050	<0.010	<0.0050	<0.0050	<0.020	<0.0010	0.0011	0.0022	0.0011	<0.0050*	0.0013	0.00155	0.05
EPA Method 245.1: Mercury																		
Mercury, Hg	mg/L	ND	ND	ND	ND	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.002
SM2320B: Alkalinity																		
Bicarbonate (as $CaCO_3$)	mg/L	290	280	290	290	290	301.2	317.7	311.3	307.0	308.9	323.8	328.9	308.1	321.2	328.0	340	--
Carbonate (as $CaCO_3$)	mg/L	ND	ND	ND	ND	<2.0	<2.0	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.00	--
Total Alkalinity (as $CaCO_3$)	mg/L	290	280	290	290	290	301.2	317.7	311.3	307.0	308.9	323.8	328.9	308.1	321.2	328.0	340	--
EPA Method 335.4: Cyanide																		
Cyanide, CN^-	mg/L	NA	NA	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.00500	<0.01	<0.01	<0.01	<0.0100	<0.0100	<0.0100	<0.0050	0.2
Field Parameters																		
Temperature	°C	NR	NR	NR	NR	19.3	20.4	20.3	20.3	20.4	20.3	20.7	20.6	20.1	20.4	22.55	22.6	--
Field pH	SU	NR	NR	NR	NR	7.4	7.3	7.3	7.8	7.6	7.6	7.31	7.21	7.21	7.40	6.90	7.40	6 to 9
Field Specific Conductance	mS/cm	NR	NR	NR	NR	2.08	2.17	1.855	1.943	1.809	2.100	2.160	2.200	2.390	2.110	2.5500	2.580	--
Detected Organic Parameters	**UNITS**	**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/27/19**	**06/04/20**	**06/15/21**	**06/15/22**	**11/21/23**	**12/03/24**	**EPA MCL**
EPA Method 8081: Pesticides																		
beta-BHC	µg/L	ND	ND	NA	NA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.050	--
EPA Method 8270C: Semivolatiles																		
3+4-Methylphenol	µg/L	ND	ND	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	--
EPA Method 8151A: Herbicides																		
2,4-D (2,4-Dichlorophenoxyacetic acid)	µg/L	ND	ND	NA	NA	1.61	<0.1	<0.1	<0.4	<2.06	<0.1	<0.1	<0.1	<0.100	<0.100	<0.100	<5.0	70
DCPA (Acid Metabolites)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	<0.100	<0.100	<0.100	NA	-
EPA Method 8260																		
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	11	<10	<10	<10	<10	<10	<10	--

EXHIBIT F

Stage 1 Abetement Plan
Former Truth or Consequences BLM Landfill
December 2024

Summary of Laboratory Analytical Results

Well MW-11	UNITS	Annual		GWPS
Inorganic Parameters		**11/21/23**	**12/03/24**	
EPA Method 300.0: Anions				
Chloride, Cl^-	mg/L	**450**	**477**	250
Nitrite (as N), NO_2-N	mg/L	<0.10	<0.10	1.0
Nitrate (as N), NO_3-N	mg/L	0.34	0.373	10
Sulfate, SO_4^{2-}	mg/L	70	72.1	600
EPA Method 200.7: Dissolved Metals				
Barium, Ba	mg/L	0.150	0.177	2.0
Cadmium, Cd	mg/L	<0.0020	<0.0020	0.01
Chromium, Cr	mg/L	<0.0060	<0.0060	0.05
Iron, Fe	mg/L	<0.020	<0.020	1.0
Lead, Pb	mg/L	<0.00050	<0.00050	0.015
Magnesium, Mg	mg/L	15	215.5	--
Manganese, Mn	mg/L	0.0053	<0.0020	0.2
Silver, Ag	mg/L	<0.0050	0.0106	0.05
Sodium, Na	mg/L	150	155	--
EPA Method 200.8: Dissolved Metals				
Arsenic, As	mg/L	0.0010	<0.00050	0.1
Selenium, Se	mg/L	0.0014	0.00102	0.05
EPA Method 245.1: Mercury				
Mercury, Hg	mg/L	<0.00020	<0.00020	0.002
SM2320B: Alkalinity				
Bicarbonate (as $CaCO_3$)	mg/L	105.4	106	--
Carbonate (as $CaCO_3$)	mg/L	<2.000	<2.000	--
Total Alkalinity (as $CaCO_3$)	mg/L	105.4	106	--
EPA Method 335.4: Cyanide				
Cyanide, CN^-	mg/L	<0.0100	<0.0050	0.2
Field Parameters				
Temperature	°C	21.5	21.1	--
Field pH	SU	7.25	7.80	6 to 9
Field Specific Conductance	mS/cm	1.779	1.803	--
Detected Organic Parameters	**UNITS**	**11/21/23**	**12/03/24**	**EPA MCL**
EPA Method 8081: Pesticides				
beta-BHC	µg/L	<0.10	<0.050	--
EPA Method 8270C: Semivolatiles				
3+4-Methylphenol	µg/L	<10	<10	--
EPA Method 8151A: Herbicides				
2,4-D (2,4-Dichlorophenoxyacetic acid)	µg/L	<0.100	<5	70
DCPA (Acid Metabolites)	µg/L	<0.100	NA	-
EPA Method 8260				
Acetone	µg/L	<10	<10	--

EXHIBIT F

Stage 1 Abetement Plan
Former Truth or Consequences BLM Landfill
December 2024

Summary of Laboratory Analytical Results

Well MW-12 (Replacement for MW-1)	UNITS	Quarterly				Semi-Annual				Annual						MW-12		GWPS
Inorganic Parameters		**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/19/19**	**06/04/20**	**06/15/21**	**06/15/22**	**11/21/23**	**12/03/24**	
EPA Method 300.0: Anions																		
Chloride, Cl^-	mg/L	**480**	**760**	**770**	**910**	**930**	**880**	**1,000**	**910**	**980**	**710**	**590**	**690**	NS	NS	**500**	**489**	250
Nitrite (as N), NO_2-N	mg/L	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0	9.7	<2.0	<2.0	NS	NS	<0.10	<0.100	--
Nitrate (as N), NO_3-N	mg/L	7.7	9.9	8.1	**12**	**22**	**15**	**15**	**13**	**20**		7.0	8.0	NS	NS	5.2	2.87	10
Sulfate, SO_4^{2-}	mg/L	130	170	180	170	190	220	240	270	300	330	290	290	NS	NS	210	158	600
EPA Method 200.7: Dissolved Metals																		
Barium, Ba	mg/L	0.17	0.11	0.14	0.14	0.17	0.17	0.15	0.16	0.14	0.10	0.077	0.084	NS	NS	0.058	0.0562	2.0
Cadmium, Cd	mg/L	ND	ND	ND	ND	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	NS	NS	<0.0020	<0.0020	0.01
Chromium, Cr	mg/L	ND	ND	ND	ND	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	NS	NS	<0.0060	<0.0060	0.05
Iron, Fe	mg/L	0.16	ND	ND	ND	<0.020	<0.020	0.14	0.046	<0.020	<0.020	<0.020	<0.020	NS	NS	<0.020	<0.020	1.0
Lead, Pb	mg/L	ND	ND	ND	ND	<0.0050	<0.0050	<0.0050	<0.00050	<0.0025	<0.0050	<0.00050	<0.00050	NS	NS	<0.00050	<0.00050	0.015
Magnesium, Mg	mg/L	31	51	53	58	62	69	68	75	75	64	51	55	NS	NS	36	31.4	--
Manganese, Mn	mg/L	**0.61**	0.15	0.042	0.10	0.12	0.090	0.11	0.080	0.013	0.010	0.0036	0.0040	NS	NS	**0.51**	**0.398**	0.2
Silver, Ag	mg/L	ND	ND	ND	ND	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0095	<0.0050	<0.0050	NS	NS	0.0060	0.00935	0.05
Sodium, Na	mg/L	190	300	300	290	320	330	330	340	330	330	290	330	NS	NS	270	227	--
EPA Method 200.8: Dissolved Metals																		
Arsenic, As	mg/L	ND	ND	ND	0.0041	<0.0050	<0.010	<0.0050	<0.010	<0.0050	0.0037	<0.0050	0.0029	NS	NS	0.0038	0.00282	0.1
Selenium, Se	mg/L	ND	ND	ND	0.014	<0.010	0.013	0.011	0.010	<0.020	0.0061	0.0077	0.0086	NS	NS	0.011	0.00695	0.05
EPA Method 245.1: Mercury																		
Mercury, Hg	mg/L	ND	ND	ND	ND	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	NS	NS	<0.00020	<0.00020	0.002
SM2320B: Alkalinity																		
Bicarbonate (as $CaCO_3$)	mg/L	280	310	320	310	290	308.5	290.8	317.4	328.5	350.5	367.2	368.4	NS	NS	339.8	314	--
Carbonate (as $CaCO_3$)	mg/L	ND	ND	ND	ND	<2.0	<2.0	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	NS	NS	<2.000	<2.000	--
Total Alkalinity (as $CaCO_3$)	mg/L	280	310	320	310	290	308.5	290.8	317.4	328.5	350.5	367.2	368.4	NS	NS	339.8	314	--
EPA Method 335.4: Cyanide																		
Cyanide, CN^-	mg/L	NA	NA	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.00500	<0.0100	<0.0100	<0.0100	NS	NS	<0.0100	<0.0050	0.2
Field Parameters																		
Temperature	°C	NR	NR	NR	NR	18.2	19.0	17.7	19.0	19.1	19.3	19.6	20.0	20.8	19.9	20.1	20.5	--
Field pH	SU	NR	NR	NR	NR	7.0	7.0	7.1	7.3	7.5	7.3	6.99	7.04	7.24	7.30	6.81	7.40	6 to 9
Field Specific Conductance	mS/cm	NR	NR	NR	NR	3.790	4.010	3.510	3.810	5.750	3.700	3.310	3.240	3.380	2.560	2.5447	2.2400	--
Detected Organic Parameters	**UNITS**	**09/17/13**	**12/05/13**	**03/12/14**	**08/27/14**	**12/18/14**	**06/16/15**	**12/22/15**	**06/07/16**	**06/01/17**	**06/20/18**	**06/19/19**	**06/04/20**	**06/15/21**	**06/15/22**	**11/21/23**	**12/03/24**	**EPA MCL**
EPA Method 8081: Pesticides																		
beta-BHC	µg/L	ND	ND	NA	NA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	NS	NS	<0.10	<0.0503	--
EPA Method 8270C: Semivolatiles																		
3+4-Methylphenol	µg/L	ND	ND	NA	NA	<10	<10	<10	<10	<10	<10	<10	<10	NS	NS	<10	<10	--
EPA Method 8151A: Herbicides																		
2,4-D (2,4-Dichlorophenoxyacetic acid)	µg/L	ND	ND	NA	NA	<0.1	<0.1	<0.1	<0.4	<2.22	<0.1	<0.1	<0.1	NS	NS	<0.1	<5.0	70
DCPA (Acid Metabolites)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	NS	NS	2.80	NA	-
EPA Method 8260																		
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	18	<10	<10	NS	NS	<10	<10	--

Exhibit G: Health and Safety Plan (Parkhill)

Parkhill

HEALTH AND SAFETY PLAN GROUNDWATER MONITORING WELL INSTALLATION

CITY OF T OR C BLM LANDFILL

Elephant Butte, New Mexico

November | 2024

Parkhill Project # 43866.24

TABLE OF CONTENTS

FIGURES

1.0 GENERAL INFORMATION

SITE: Closed City of T or C Landfill
PROJECT: Groundwater Monitoring Well Installation
LOCATION: Elephant Butte, New Mexico
PLAN PREPARED BY: Andrew N. Yuhas, PG

PROJECT OBJECTIVES: Drilling, installation and completion of one new temporary groundwater monitoring well at the closed City of T or C Landfill to maintain compliance with NMED Groundwater Quality Bureau requirements. This HASP pertains to Parkhill employees only, and will be provided to the DRILLER for attachment to their project HASP.

2.0 FACILITY DESCRIPTION

The closed City of Truth or Consequences Landfill (Landfill) property is comprised of 30-acres ± of land located in a portion of Section 22, Lot 3, Township 13 south, Range 4 west NMPM (Figure 1). The site is located in the City of Elephant Butte, immediately south of the Sierra de Rio golf course on Clubhouse Road, approximately 0.25-miles north of the City of Truth or Consequences, NM.

3.0 SCOPE OF WORK

Groundwater monitoring well installation activities consist of drilling, soil sampling activities, well construction, and development. The proposed location for the well is shown on Figure 2. The boring for the wells will be drilled CME 75 drill rig (or equivalent) capable of using both hollow-steam auger (HSA) and air-rotary methods. The boring will consist of one boring drilled to a total projected depth of approximately 50 feet below ground surface (bgs). During drilling, split-spoon samples will be collected at 5-foot intervals for visual classification beginning at 5 feet bgs. All borings will be completed as groundwater monitoring wells using 2 inch inner-diameter SCH 40 PVC casing, sand pack, hydrated bentonite, 5% bentonite-cement grout slurry and concrete surface finishing.

Alternatively, a temporary boring up to 3.75 inches in diameter will be advanced using a direct-push rig (Geoprobe 6620-DT or similar), and the well will be constructed using minimum 1-inch SCH 40 flush-threaded PVC casing and screen section. The casing will be left in place for up to 48 hours to allow the water in the bore to equilibrate and clear prior to sampling. Upon completion of sampling, the well will be plugged and abandoned according the NMED and NM Office of the state Engineer (NMOSE) Guidelines.

4.0 SITE SAFETY WORKPLAN

4.1 SITE PERIMETER AND SECURITY

The Landfill site is secured with a 4-strand barbed-wire fence and locking gates. The area in which the monitoring well is to be located is unsecured and is accessed from Clubhouse Road via Warm Springs Blvd. and Turtleback Pkwy (Figure 1).

4.2 PERSONAL PROTECTION

Modified Level D personal protective equipment (e.g., steel-toed boots, safety vest, hard hat, hearing protection, chemical-resistant gloves, dust mask, and eye protection) will be used for Parkhill personnel working on this project on an as-needed basis. If work conditions indicate that

upgraded personal protective equipment is warranted to protect health and safety, then workers will demobilize from the work zone until safe work conditions are reestablished.

4.3 HAZARD EVALUATION

Potential field hazards may include dust:

Dust may be generated during drilling-related activities. Breathing dust can cause respiratory irritation; inhalation of dust should be avoided. If dust generation limits visibility of workers or equipment operators, a water truck may be deployed for dust control if appropriate. When possible, workers should place themselves upwind of activities generating dust.

5.0 WORK LIMITATIONS

Work will be performed during daytime conditions. Nighttime work is not anticipated on this project.

6.0 EMERGENCY PROCEDURES

Basic First Aid and emergency equipment is located in Parkhill vehicles. Should an accident occur, work will immediately cease within the area. Appropriate project personnel (Section 7.0) and emergency agencies (Section 8.0) should be contacted immediately.

7.0 KEY PROJECT PERSONNEL AND PHONE NUMBERS

Parkhill

Michael Crepeau, PE	Parkhill Senior Associate/Project Manager
Office phone:	505.867.6990
Mobile phone:	505.410.1076
Andrew Yuhas, PG	Parkhill Professional Geologist/Project Manager
Office Phone:	505.504.7765
Mobile Phone:	406.544.2133
Tyler Zack, PE	Parkhill Civil Engineer/Project Manager
Office phone:	505.504.7764
Mobile phone:	505.366.8744

8.0 EMERGENCY PHONE NUMBERS

Fire

Elephant Butte Fire & Rescue	**911** or 575.744.5000
City of T or C Fire Department	**911** or 575.894.2345

Police

City of T or C Police Department	**911** or 575.894.1204
New Mexico State Police (T or C, NM Office):	**911** or 575.894.7118
Sierra County Sheriff	575.894.6617
Sierra County Dept. of Emergency Management	575.575.6125

Medical/Ambulance

EMS – T or C Fire Department	**911** or 575.894.2345
Ambulance	**911**

Hospital

Sierra Vista Hospital	575.894.2111

State/Federal Emergency Response Contacts

New Mexico Environment Department, Hazardous Waste Bureau, Santa Fe	505.827.1557
Spill Emergencies, 24-hr Hotline (NMED)	505.827.9329
EPA Region 6 Emergency Response 24-Hour Hotline	214.665.2222

9.0 HOSPITAL DIRECTIONS

The nearest hospital to the Landfill is the Sierra Vista Hospital and Rural Health Clinic (Figure 3) located approximately 2.7 miles south of the site in Truth or Consequences, NM. Directions are as follows:

From the Landfill, travel north on Clubhouse Rd. toward Turtleback Parkway for 0.5 miles. Turn left on Turtleback parkway and travel 0.8 miles. Turn left on Warm Springs Blvd and travel 0.8 miles. Turn left on NM-181 S and follow for 1.5 miles. Turn left on Date St. and travel 0.3 miles. Enter the first traffic circle and take the 2nd exit to N Date St. Enter the second traffic circle and continue on N Date St. For 0.7 miles, then turn left on E 9th Ave. Follow E 9th Ave for 0.4 miles, turn left on N Magnolia St. for 374 feet and the Hospital is on your left.

10.0 SAFETY BRIEFING

The following personnel were present at pre-job safety briefing conducted at _____ (time) on _____ (date) at _____ (location), and have read the above plan and are familiar with its provisions.

Name	Signature

Fully charged ABC Class fire extinguisher available on site? ☐ YES

Fully stocked First Aid Kit available on site? ☐ YES

All project personnel advised of location of nearest phone? ☐ YES

All project personnel advised of location of designated medical facility or facilities? ☐ YES

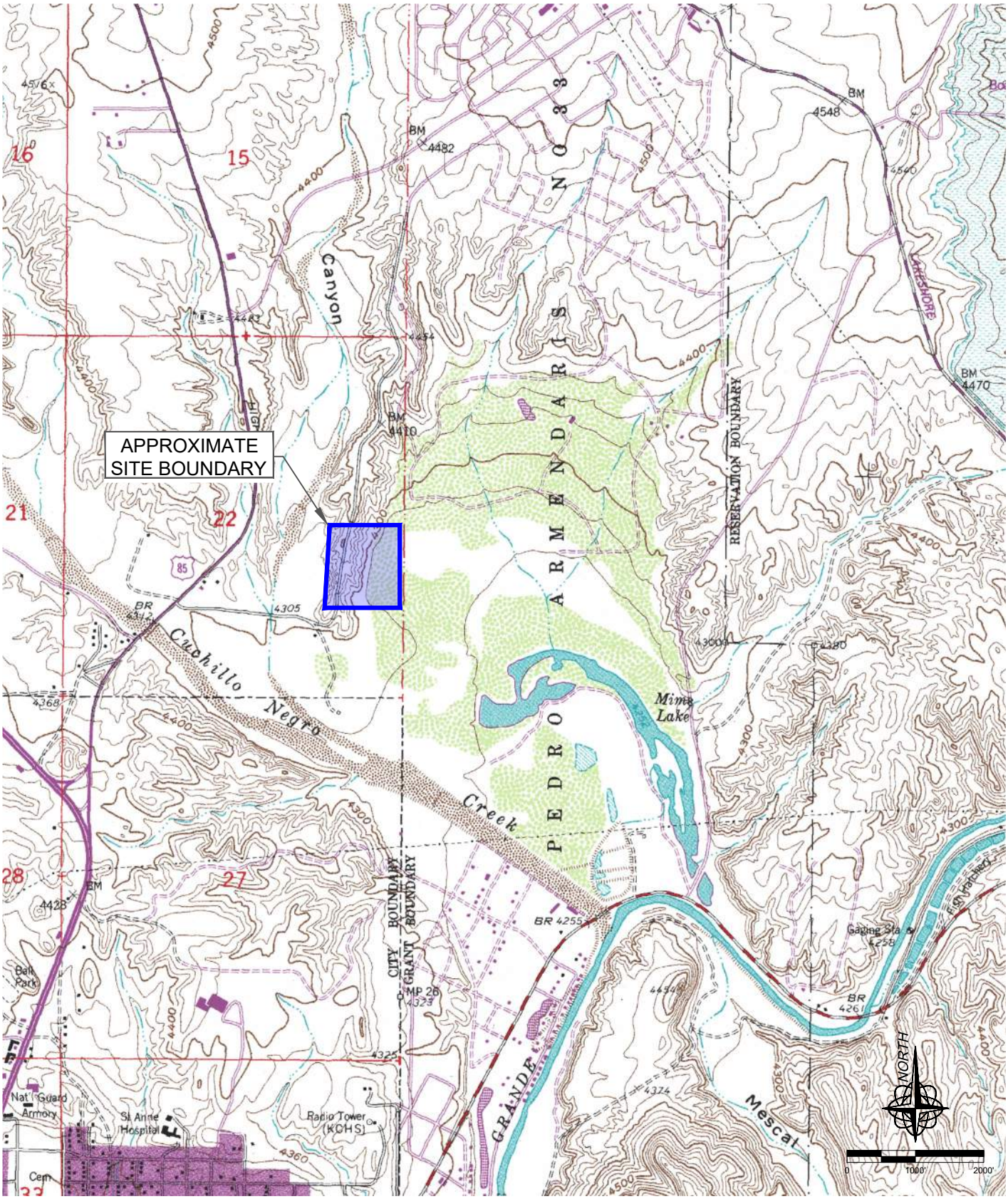
_____

Printed Name of Field Team Leader or Site Safety Officer

_____

Signature Date

Figure 1: Site Location Map



FILE NAME: A:\2023\40788.23\03_DSGN\01_DWG\050_CIVIL\02_CONTENT\FIG1_SITE LOCATION MAP.dwg PRINTED: Thursday, September 28, 2023 - 4:53pm

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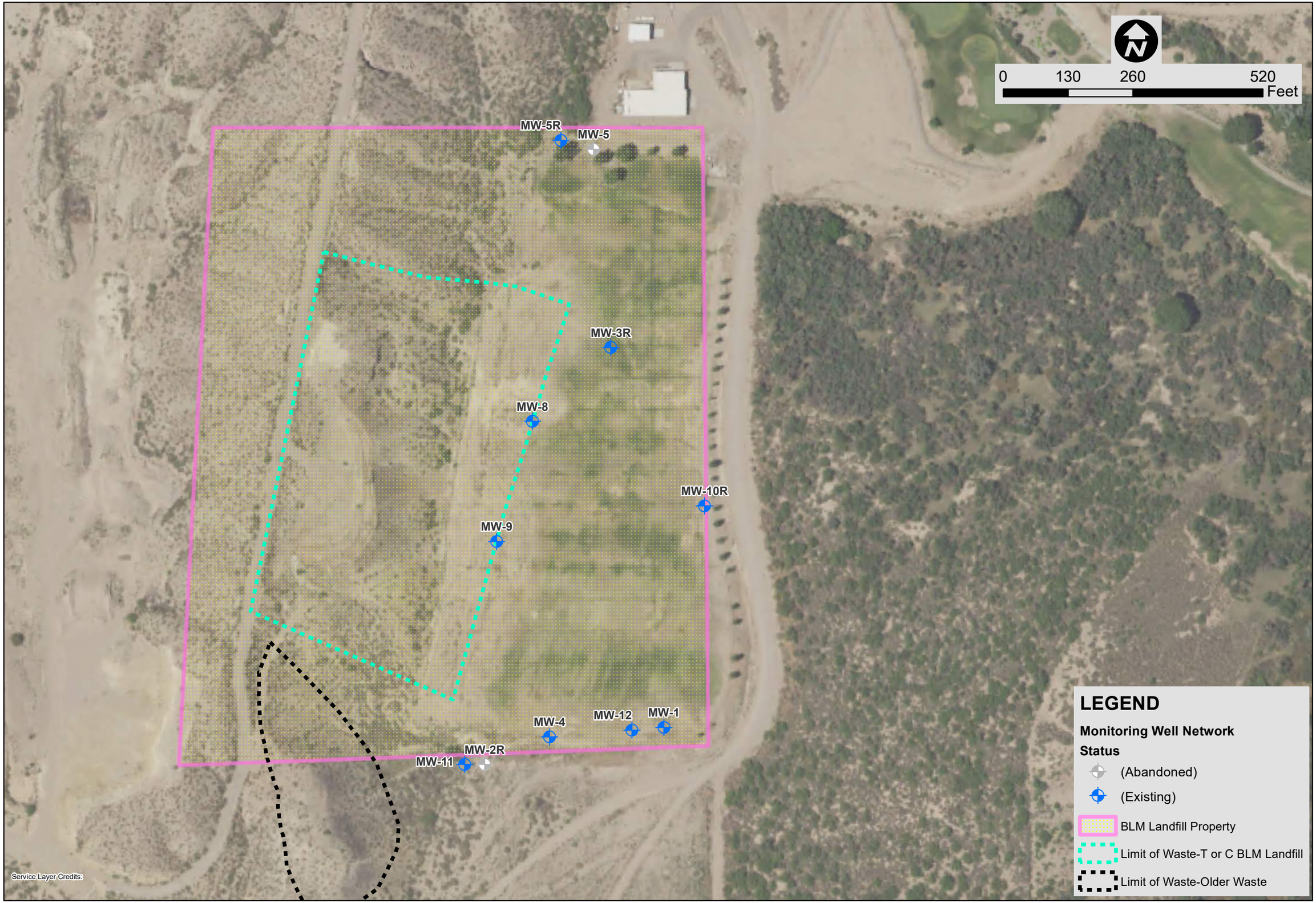
FORMER TRUTH OR CONSEQUENCES LANDFILL

TRUTH OR CONSEQUENCES, NEW MEXICO
505 SIMS ST.
TRUTH OR CONSEQUENCES, NEW MEXICO

SITE LOCATION MAP

Issue:	FINAL
Date:	03/20/2023
Project No:	4078823.00
Figure:	1

Figure 2: Facility Layout



FILE NAME: \\projects-dfs\projects\2024\43866.24\03_DSGN\01_DWG\050_CIVIL\02_CONTENTHASP_FIG2-SitePlan.mxd LAYOUT NAME: Layers PRINTED: Monday, April 7, 2025 - 12:01:14 PM USER: AYuhas

City of Truth or Consequnces BLM Landfill
Monitoring Well Replacement and Plugging

Issue: WELL REPLACEMENT
Project No: 04078823.00
Date: 10/05/2023
Figure: 2

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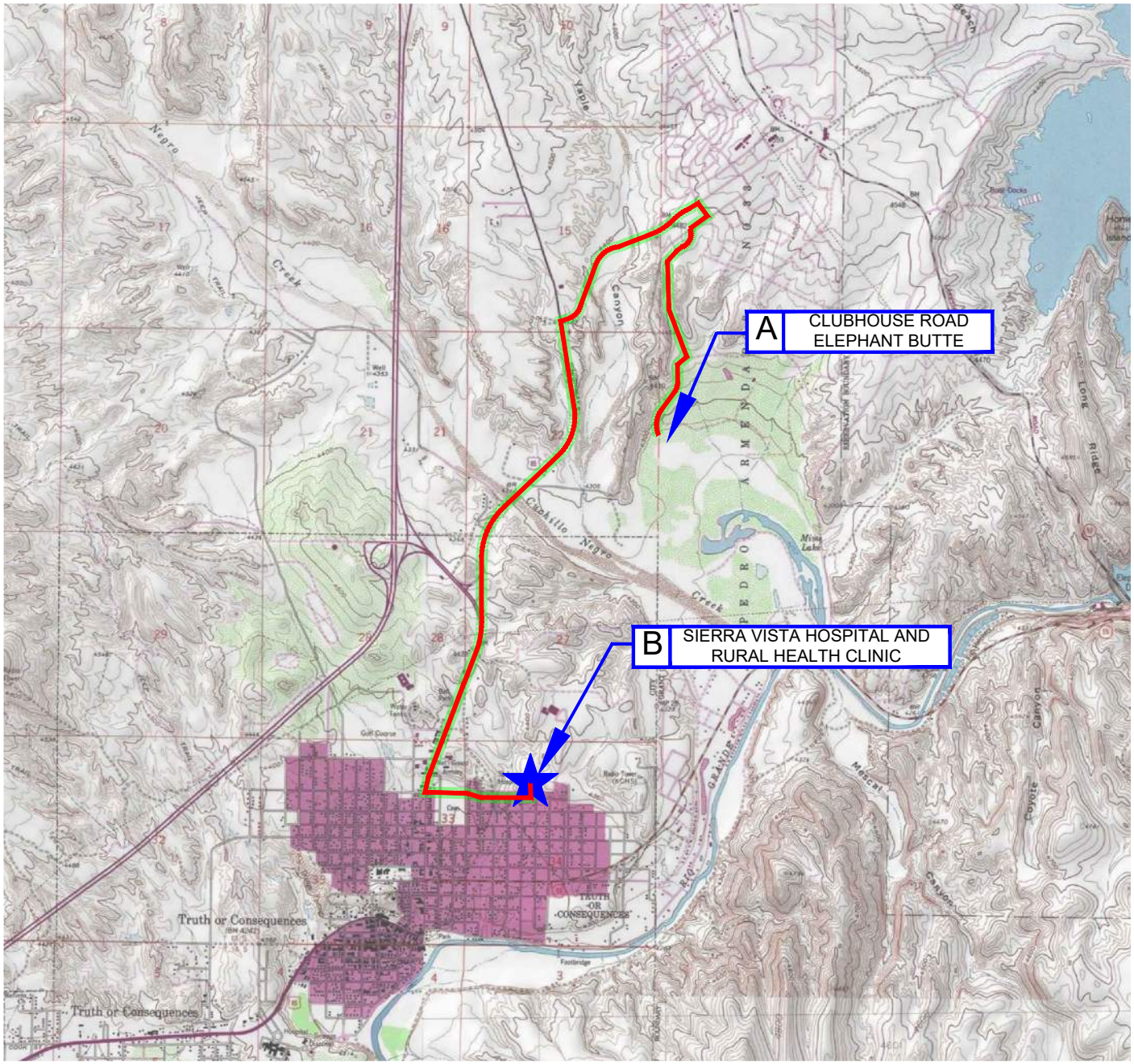
Figure 3: Hospital Location

FILE NAME: \\projects-dfs\projects\2023\40788.23\03_DSGN\01_DWG\050_CIVIL\02_CONTENTIT or C HOSPITAL LOCATION.dwg PRINTED: Tuesday, October 17, 2023 - 1:34pm

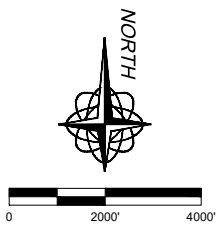


A: 101 CLUBHOUSE ROAD

1. Head north on Clubhouse Rd toward Turtleback Rd.
2. Turn left onto Turtleback Pkwy.
3. Turn left onto Warm Springs Blvd.
4. Turn left onto NM-181 S
5. Turn left onto N Date St.
6. At the traffic circle, take 2nd exit and stay on N Date St.
7. At the traffic circle, take the 1st exit and stay on N Date St.
8. Turn left onto E 9th Ave.
9. Turn left at Magnolia St.

B: SIERRA VISTA HOSPITAL AND RURAL HEALTH CLINIC
800 E 9TH AVE. T OR C

Note: A to B Travel Estimates: Approximately 13 minutes / 5.5 miles



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T OR C BLM LANDFILL

CITY OF T OR C
101 CLUBHOUSE ROAD
T OR C, NEW MEXICO

HOSPITAL LOCATION

Issue:	FINAL
Date:	10/09/2023
Project No:	40788.23
Figure:	3