Site Characterization Report
Blanco Plant – Former North Flare Pit
Bloomfield, New Mexico

NMOCD Incident No. NAUTOFCS000155
NMOCD Discharge Permit No. GW-049
NMOCD Facility ID No. fCS00000000005

Stantec

Prepared for:
El Paso CGP Company, LLC

Prepared by:
Stantec Consulting Services Inc.
11153 Aurora Avenue
Des Moines, Iowa 50322

Project No.: 193710298

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TABLE OF CONTENTS

Tables

Figures

Appendixes

ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
bgs	below ground surface
BLM	United States Bureau of Land Management
BTEX	benzene, toluene, ethylbenzene, and xylenes
Burlington	Burlington Environmental, Inc.
CH2M	CH2M Hill
DOT	United States Department of Transportation
DRO	diesel-range organics
EPCGP	El Paso CGP Company, LLC
EPFS	El Paso Field Services
EPNG	El Paso Natural Gas Company, LLC
Eurofins	Eurofins/TestAmerica Laboratories, Inc.
GMR	groundwater monitoring report
GRO	gasoline-range organics
ID	inside diameter
Jacobs	Jacobs Engineering Group, Inc.
LNAPL	light nonaqueous phase liquid
mg/L	milligram(s) per liter
mg/kg	milligram(s) per kilogram
MWH	Montgomery Watson Harza
NFP	North Flare Pit
NMED	New Mexico Environment Department
NMOCD	New Mexico Oil Conservation Division
NMOSE	New Mexico Office of the State Engineer
NMWQCC	New Mexico Water Quality Control Commission
ORO	oil-range organics
PID	photoionization detector
ppm	parts per million
QAQC	quality assurance/quality control
RRAL	recommended remediation action level
RCRA	Resource Conservation and Recovery Act
SSL	soil screening level
SVOC	semivolatile organic compound
TPH	total petroleum hydrocarbons
TCLP	toxicity characteristic leaching procedure
VOC	volatile organic compound

1. INTRODUCTION

1.1 SITE BACKGROUND

This Site Characterization Report (Report) has been prepared on behalf of El Paso CGP Company, LLC (EPCGP) to document the results of two phases of site characterization activities conducted at the Blanco Gas Plant – Former North Flare Pit (NFP) site. Unless otherwise noted, the NFP site characterization activities documented in the Report were completed by CH2M Hill (CH2M; now Jacobs Engineering Group, Inc. [Jacobs]), on behalf of EPCGP.

The NFP site is located at 81 Road 4900 in Bloomfield, San Juan County, New Mexico. Jacobs completed the site characterization to identify the nature and extent of hydrocarbon and nitrate impacts that may have resulted from historical operations in the northernmost portion of the site at or near the former NFP. Characterization activities were performed in two discrete phases occurring in September 2017 and from August to September 2019. Activities completed during these phases included advancement of soil borings, collection of soil samples, installation of monitoring wells, abandonment of existing dry monitoring wells, and collection of groundwater and light non-aqueous phase liquids (LNAPL) samples. Additionally, the Report also summarizes the results of groundwater sampling and monitoring completed at the NFP site from 2017 through 2020.

The NFP site location is shown on Figure 1. The NFP site plan is presented as Figure 2.

1.2 SITE LOCATION AND DESCRIPTION

The NFP site is located approximately 1.5 miles northeast of central Bloomfield, New Mexico, on land controlled by the U.S. Bureau of Land Management (BLM). The San Juan River is located approximately 2 miles south of the NFP site. The former NFP is located north of San Juan County Road 4900, on a portion of the Blanco Gas Plant, operated by Enterprise Products, and used for gas gathering activities with no active gas processing. On the south side of San Juan County Road 4900 is the main Blanco Gas Plant facility. The main Blanco Gas Plant facility is primarily owned and operated by Enterprise Products. El Paso Natural Gas Company (EPNG) operates natural gas compression facilities in one area of the main Blanco Gas Plant.

A pipeline pigging station and former evaporation pond are located on the northern portion of the Blanco Plant. An arroyo drainageway bisects the NFP site roughly south-southeastward from the former NFP. Land use surrounding the former NFP site to the west, north and east is not heavily industrialized, but includes oil and gas production and transmission infrastructure.

1.3 SUMMARY OF PREVIOUS INVESTIGATIONS

In 1985, the NMOCD issued a directive for oil and gas producers to cease discharging production fluids to unlined surface impoundments (pits) located in the groundwater recharge areas of the San Juan Basin and to the major river drainages to the San Juan, Animas, and La Plata Rivers. Once discharge had ceased, producers were required to investigate and remediate soil and groundwater contamination caused by these pits. In response, several investigations and removal actions were completed at the NFP site:

- One monitoring well (MW-2) was installed and sampled in 1988 in response to a 1987 New Mexico Environmental Improvement Division (currently the New Mexico Environment Department [NMED]) recommendation in support of a groundwater discharge plan application. Monitoring well MW-2 was located roughly 1,250 feet south-southeast of the former NFP location (Figure 2). Elevated concentrations of nitrate exceeding applicable New Mexico Water Quality Control Commission (NMWQCC) criteria were found in groundwater samples collected from MW-2.

- In January 1990, a second monitoring well (MW-19) was installed approximately 630 feet south-southeast of the former NFP location (Figure 2). This monitoring well was observed to exhibit an oily sheen on the groundwater. The reported concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX) in a groundwater sample collected from MW-19 exceeded the NMWQCC standards (MWH, 2012).

- In February 1992, hydrocarbon-contaminated soils were excavated and removed from the NFP. Groundwater was not encountered in the excavation during that soil removal. Some inaccessible hydrocarbon-contaminated soil located adjacent to the NFP was left in place. Following the excavation, a work plan describing planned activities for a subsurface investigation activites of the NFP was submitted to NMOCD.

- In September and October 1992, five groundwater monitoring wells (MW-20, MW-23, MW-24, MW-26, and MW-27) were installed south-southeast of the former NFP (Figure 2). Several additional soil borings were also advanced; however, these additional borings were not completed as monitoring wells, as significant groundwater was not encountered during drilling. LNAPL was encountered in monitoring wells MW-19, MW-26, and MW-27, and was sampled and anayzed for BTEX constituents. Concentrations of BTEX in groundwater samples collected from MW-23 and MW-24 exceeded their respective NMWQCC standards.

  The 1992 investigation suggested two possible sources of hydrocarbon contamination: the former NFP, and the original evaporation pond, formerly an unlined pit. The analysis of LNAPL samples indicated slightly weathered hydrocarbons ranging from C6 to C18 with a strong correlation to typical pipeline drip, which was known to have been discharged to both the NFP and the former unlined pit (Burlington, 1992).

- From 1993 through June 1995, EPNG conducted LNAPL removal from monitoring wells MW-19 and MW-26. Routine groundwater monitoring was also conducted during this period. By August 1995, LNAPL was not detected in the NFP site monitoring wells. In September 1995, EPNG submitted a work plan to NMOCD that proposed remdiation of BTEX impacts with nitrate addition, quarterly groundwater monitoring, and the abandonment of monitoring wells following the remediation of hydrocarbon constituents to below NMWQCC standards. Approval of this work plan was not received from the NMOCD, and groundwater monitoring at the site was discontinued (MWH, 2011).

- Periodic groundwater sampling resumed in 2000. Management of the NFP site was transferred from EPNG to El Paso Field Services (EPFS) in August 2001. In October 2001, sludge from the lined evaporation pond was excavated and removed. During the evaporation pond excavation, the liner was retracted, and soil samples were collected at depths from 1 to 4 feet below ground surface (bgs). The soil samples were submitted to an analytical laboratory for analysis of petroleum hydrocarbons. The soil samples reportedly contained no detectable quantities of petroleum hydrocarbons (MWH, 2011).

- In May 2002, the NMOCD requested EPFS submit historic monitoring and remediation data collected from the NFP site since 1994. EPFS submitted the requested data along with a work plan which proposed the installation and operation of a pilot air sparge system adjacent to MW-19 and MW-26 to remediate groundwater. NMOCD approved the work plan in February 2003 (MWH, 2011).

- In December 2002, a single air sparge well (SW-1) was installed north of MW-26. In April 2003, a skimmer pump was installed in MW-26. Through August 2003, approximately 7.6 gallons of LNAPL was recovered from MW-26 (MWH, 2011).

- An air sparge system was installed and became operational in June 2003. The air sparge system was operated until August 2009 and was successful in reducing BTEX concentrations in monitoring wells MW-19 and MW-26 (MWH, 2011).

- In May 2006, three additional monitoring wells were installed (MW-31, MW-32, and MW-33) in an effort to better characterize the NFP site (Figure 2). Monitoring well MW-20, which was damaged, was also plugged and abandoned. Within weeks of installation, measurable LNAPL was present in monitoring well MW-32. In September 2006, a skimmer pump was installed in monitoring well MW-32 to facilitate LNAPL removal. In August 2007, the skimmer was removed from MW-32 and LNAPL recovery continued using absorbant socks through 2013.

- Nitrate concentrations exceeded the associated NMWQCC standard in groundwater samples collected periocially from monitoring well MW-2 between 1989 and 1992, and, since 2014, from MW-33.

- In June 2009, EPFS suspended use of the air sparge system and began evaluating the NFP site for hydrocarbon rebound (MWH, 2011).

- In October 2013, an aboveground storage tank, formerly used to store recovered liquids, was removed. Semi-annual groundwater monitoring resumed in December 2013 (CH2M, 2014a).

- In March 2014, a work plan to conduct site characterization activities was submitted to the NMOCD. In August 2014, environmental remediation-related infrastructure associated with the air sparge system was decommissioned and disposed off site (Jacobs, 2020).

1.4 OVERVIEW OF SITE CHARACTERIZATION ACTIVITIES

As discussed in the Site Characterization Work Plan (Work Plan, CH2M, 2014b), the scope of work was developed by incorporating data gathered from investigative work performed at the NFP site prior to 2013, and NFP site activities completed in 2013. The Work Plan identified the following data gaps:

- The presence or extent of LNAPL in soil and groundwater near MW-32 was uncertain. Additional soil and groundwater data were required.

- Insufficient soil characterization data existed to address uncertainty regarding the presence of hydrocarbons in soil at the Blanco NFP. Additional soil and groundwater data were required.

- Decreasing water table elevations at the NFP site resulted in numerous monitoring wells going dry. Dry monitoring wells were identified for abandonment and new replacement monitoring wells were to be installed.

- Groundwater flow direction in the aquifer was uncertain. The installation of more monitoring wells in the area of the former NFP would provide for a better evaluation of groundwater flow direction.

NFP site characterization activities completed in 2017 included the following:

- Advancement of twelve soil borings to the top of bedrock, including collection of soil samples for laboratory analysis during advancement.

- Completion of of nine of the soil borings below the water table (presumed to be in bedrock or at the soil-bedrock interface), and construction of monitoring wells at each of these locations.

- Monitoring wells, both existing and newly-installed, were gauged and groundwater samples collected and submitted for laboratory analysis of BTEX and nitrate.

The results of the 2017 NFP site characterization activities indicated additional investigation was warranted. Subseqently, a Phase 2 Site Characterization Work Plan (Jacobs, 2019a) was submitted to the NMOCD in August 2019. The Phase 2 NFP site characterization activities included the following:

- Advancement of eight soil borings to 15 feet below the observed water table using rotosonic drilling techniques; each boring completed as a monitoring well. Soil samples were collected and submitted for laboratory analysis during soil boring advancement.
- The existing and newly-installed monitoring wells were gauged and groundwater samples collected and submitted for laboratory analysis of BTEX and nitrate.

1.5 CURRENT REGULATORY STATUS

The NFP site is regulated by the NMOCD, generally under the provisions of Ground Water Discharge Permit GW-049. In March 2020, the NMOCD assigned Incident Number NAUTOFCS000155 to the NFP site. NMOCD will track progress under this incident number. Previous groundwater monitoring activities were initiated pursuant to an NMOCD letter dated May 3, 2002, regarding remediation activities at the Blanco Plant (NMOCD, 2002).

2. SITE PHYSICAL SETTING

Unless otherwise notes, the following was sourced from information presented in the Work Plan (CH2M, 2014b).

2.1 CLIMATE

The climate of the NFP site area is semi-arid and can experience hot summers and cold winters with low precipitation throughout the year. The average annual snowfall is 10.9 inches and the average annual rainfall is 7.8 inches. The highest average temperatures occur in July (93 degrees Fahrenheit [°F]) and the lowest average temperatures occur in January (16.8°F).

2.2 TOPOGRAPHY AND HYDROLOGY

The NFP site is located on the eastern Colorado Plateau, with an average elevation of 5,500 feet. The topography surrounding the NFP site is composed of plains and valleys with mesas, buttes, and dissected by canyons. Surrounding uplands exceed elevations of 9,000 feet above mean sea level.

The San Juan River and its tributaries comprise the main drainage system in the area. The San Juan River flows through the city of Bloomfield (City), approximately 2 miles south of the NFP site.

A water supply channel, known as Citizens Ditch, is located approximately one-half mile south of the former NFP. Citizens Ditch carries water diverted from the San Juan River to the Aragon Reservoir, at which point the water enters the City's surface water treatment facility for use as potable water supply (bloomfieldnm/water treatment.html).

An arroyo drainageway bisects the NFP site, sloping roughly south-southeastward from the former NFP area.

2.3 GEOLOGY

The NFP site is underlain by Quaternary alluvium, which consists of sand, silt, clay, and gravel with a thickness varying from less than 3 feet to more than 75 feet (EPNG, 1989). Beneath the alluvium is the Tertiary Nacimiento Formation, which consists of interbedded coarse-to-medium-grained arkosic sandstone, siltstone, and shale, which were reportedly deposited as channel fill and floodplain deposits (New Mexico Bureau of Mines and Mineral Resources, 1983).

In 1992, Burlington Environmental, Inc. (Burlington) conducted a hydrogeologic investigation specific to the former NFP area (Burlington, 1992). Eight borings were drilled in the area to the south-southeast of the former NFP. The borings were advanced through approximately 19 feet of silty/clayey sand, underlain by silty/sandy clay with laminated siltstone and mudstone. In the soil borings for monitoring wells MW-24, MW-26, and MW-27, a sand layer with gravel and clay was encountered just above the sandstone bedrock, possibly indicating a relict channel feature. Similarly, a thick sandy unit was encountered in the soil boring for monitoring well MW-19 (Brown, 1990). Sandstone was encountered at depths ranging from approximately 50 to 70 feet bgs, with the greatest depths occurring beneath the possible relict channel feature. The borings reportedly terminated in gypsum-cemented sandstone that Burlington characterized as an apparent aquitard. Groundwater saturation was encountered either within the laminated siltstone/mudstone or just above the sandstone, depending on the location.

2.4 HYDROGEOLOGY

Regional groundwater flow in the San Juan Basin is from the topographically high outcrop areas at the margins of the basin, toward the lower outcrop areas. The San Juan River Valley is considered as the main discharge area of the San Juan Basin (Stone et al., 1983). The San Juan River is located approximately 2 miles to the south of the NFP site. Groundwater level measurements collected duringgauging events indicate groundwater near the former NFP flows toward the south and southeast.

Based on the available data for monitoring wells MW-24, MW-26, MW-27, and MW-33 recorded through the 2011 annual groundwater monitoring event, groundwater elevations (at least within the apparent relict channel) reportedly decreased by approximately 15 feet since the initial environmental investigation in 1988 (MWH, 2012). Between 2006 and 2011, two large changes in the groundwater elevation occurred at MW-33; an increase of approximately 20 feet from August to November 2007 and a decrease of approximately 15 feet between February and May 2008. Between April and November 2017, the groundwater elevation again increased by approximately 12 feet. However, the same two periods in 2007 and 2008, groundwater level fluctuations at monitoring wells within the relict channel (MW-24, MW-26, and MW-27) were less than 1 foot (Table 1). It was suggested that infiltration from the former NFP and/or the original unlined evaporation pond provided for increased groundwater recharge. In their report, Montgomery Watson-Harza (MWH) suggested that water level stability or rise appeared to be a common pattern among monitoring wells (i.e., MW-23 and MW-32) that are located away from the apparent relict channel, in locations where the encountered competent bedrock surface is higher. It was concluded that, if a hydraulic connection exists between groundwater encountered at higher elevations in the bedrock with groundwater occurring in the apparent relict channel, it was not well understood (MWH, 2012).

Historically, the groundwater elevation data for the former NFP were presented separately from data collected from the Blanco South Flare Pit and D Plant Area site, located to the south of the former NFP. Since completion of the September 2017 NFP site characterization activities, groundwater elevation data and groundwater flow direction for both sites have been combined on a single map. This provides a more comprehensive depiction of the groundwater flow direction for the Blanco Gas Plant.

3. SITE INVESTIGATION ACTIVITIES

Unless otherwise noted, this section describes the activites completed by CH2M Hill (now Jacobs) as part of the NFP site characterization.

3.1 PREPARATION ACTIVITIES

Prior to mobilization for the NFP site characterization activities completed in August 2017, New Mexico Office of State Engineer (NMOSE) permits were obtained to install montoring wells MW-40 through MW-48, and to abandon monitoring wells MW-2, MW-19, MW-24, MW-26, MW-27, and MW-31, and air sparge well SW-1, on August 17, 2017. NMOSE permits to install monitoring wells MW-49 through MW-56 were obtained on May 9, 2019. New Mexico 811 utility locate requests identifying the work areas were submitted on August 29, 2017, and August 5, 2019. Soil boring and monitoring well locations were staked prior to initiating the utility locate notifications.

3.2 DRILLING AND SOIL SAMPLING ACTIVITIES

3.2.1 Soil Borings

Prior to advancement with drilling equipment, each soil boring location was cleared for subsurface utilities to at least 10 feet bgs using hydro-excavation techniques performed by Riley Industrial Services, Inc., and Badger Daylighting, Inc. in 2017 and 2019, respectively. Once cleared for utilities, the soil borings were advanced to the field-interpreted top of bedrock, with soil samples retrieved for visual inspection, lithologic characterization, photoionization detector (PID) screening for total volatile organic compounds (VOCs), and potential laboratory analysis. The locations of the soil borings are depicted on Figure 2. A summary of drilling and soil sampling activities conducted in September 2017 and August 2019 is provided below.

3.2.1.1 August-September 2017

A total of 12 soil borings (MW-40 through MW-48, and SB-1 through SB-3) were advanced using a TerraSonic model 150cc rotary sonic drill rig with nominal 8-inch inside diameter (ID) casing. Nine (MW-40 through MW-48) of the twelve soil borings were completed as monitoring wells as described in Section 3.3. The soil borings logs prepared by CH2M for MW-40 through MW-48, and SB-1 through SB-3, are included in Appendix A.

3.2.1.2 August 2019

A total of eight soil borings (MW-49 through MW-56) were advanced using a TerraSonic model 150cc rotary sonic drill rig with nominal 8-inch ID casing. Following advancement and soil sampling, the eight soil borings were completed as monitoring wells as described in Section 3.3. The soil borings logs prepared by Jacobs for MW-49 through MW-56 are included in Appendix A.

3.2.2 Soil Sample Collection

Soil cores were collected continuously during soil boring advancement using a 10-foot-long core barrel. Recovered, soil cores were placed into plastic bags in 2-foot-long segments. A total of 127 soil samples; 81 including eight field duplicates in September 2017 and 48 including four duplicates in August 2019, were retained from the 20 soil borings and submitted for laboratory analysis of BTEX constituents.

The soil samples recovered during advancement were logged for lithology following the Unified Soil Classification System, field-apparent moisture content, and evidence of hydrocarbons including observed soil staining, and odors. These data are reported on the soil boring logs (Appendix A). Soil was field screened for VOCs with a PID along the entire length of each recovered core. Portions of recovered soil from the top, middle, and bottom portion of each 2-foot sample segment was also placed into a 1-gallon zip-top bag for further headspace screening with a PID. The headspace screening method involved the following process:

- Approximately 4 ounces of soil was placed into a 1-gallon zip-top bag and the bag was sealed.
- After approximately 10 minutes, the tip of the PID probe was inserted through the plastic bag and the highest measured PID reading was recorded on the boring log.

The field screening results were included in the soil boring logs provided in Appendix A.

Soil samples were retained for laboratory analysis from the portions of the soil cores where suspected hydrocarbons were observed, defined by elevated headspace readings, staining, and/or odors. Where no indication of potential elevated VOCs were observed, soil samples were retained for laboratory analysis of changes in lithology, or at a minimum every ten feet to the top of field-apparent bedrock or the top of the field-apparent water table, whichever was encountered first.

3.2.3 Soil Sample Analysis

Soil samples collected for laboratory analysis were submitted under chain of custody protocols to the Eurofins/TestAmerica Laboratory in Houston, Texas (Eurofins), for analysis of BTEX constituents using EPA Method 8260B.

Quality assurance/quality control (QAQC) samples were also collected to ensure proper sample handling and to provide information for laboratory data validation. These included field duplicates, trip blanks, and matrix spike duplicate samples.

During the August 2019 activities, three soil samples retained during advancement of soil boring MW-56 at depth intervals of 10 to 11 feet bgs, 19 to 20 feet bgs, and 29 to 30 feet bgs, were not analyzed at the laboratory. The delayed delivery of the samples to the laboratory by the shipping company resulted in a sample receipt temperature of 16 degrees Celsius (°C). As reported laboratory results would have been biased low, and as no suspected hydrocarbon staining, odors, or elevated PID readings were observed during logging, these samples were not analyzed.

3.3 MONITORING WELL INSTALLATION

Seventeen of the 20 soil borings advanced in 2017 and 2019 were completed as monitoring wells MW-40 through MW-56. Well completion details are summarized on Table 1. The well construction details are included with the soil boring logs in Appendix A. Each monitoring well was completed as an above-grade surface completion with lockable cover and lockable well cap. At each newly-installed monitoring well location, bumper posts were installed. The bumper posts and protective covers were painted safety yellow, and the unique monitoring well identification stenciled onto the completion.

3.3.1 September 2017

The soil borings converted to monitoring wells were advanced at least 25 feet below the top of the field-apparent water table, as defined by water levels in nearby existing monitoring wells and visible saturation in recovered soil cores. The monitoring wells were constructed with the screened interval intersecting the field-apparent water table, with a minimum of 15 feet of screen located above the field-apparent water table. Total well installation depths ranged from 82 feet bgs (MW-48), to 102 feet bgs (MW-40, MW-41, and MW-43) as presented on the well construction logs in Appendix A.

Monitoring well MW-42 was originally advanced to a depth of 100 feet bgs and the sonic casing left in the borehole during a scheduled break. Upon returning to the Site to resume drilling, the depth to water in the borehole was measured to be approximately 50 feet bgs. Rather then installing a submerged well screen (if set at a total depth of 100 feet bgs), the borehole was backfilled with bentonite chips from the total depth (100 feet bgs) of the borehole to approximately 87 feet bgs. The monitoring well was then installed such that 15 feet of screen remained above the observed water table.

3.3.2 August 2019

During the August 2019 drilling event, nine soil borings were advanced at least 15 feet below the top of the field-apparent water table. The monitoring wells were screened across the top of the bedrock surface, and the field-apparent water table. With a minimum 10 feet of unsaturated screen to allow for fluctuations on thewater table. As summaried on the well construction logs within Appendix A, well installation depths ranged from 51 feet bgs (MW-55) to 85 feet bgs (MW-53).

3.3.3 Well Development

Following installation, the monitoring wells were developed by swabbing and bailing each monitoring well dry. Purge water was containerized in a temporary storage tank pending removal and disposal off-site. For the monitoring wells installed and developed in 2019, approximately 25 gallons of potable water was added to facilitate swabbing of each monitoring well , and then removed via bailing. Development information for each monitoring well is documented on the well construction forms included in Appendix A.

Upon completion of well development activities in 2017 and 2019, a HydraSleeve sampler was installed in each monitoring well to facilitate future groundwater sampling.

3.4 DECONTAMINATION

The drill rig and supporting downhole equipment were decontaminated and inspected prior to arrival to the NFP site. Decontamination of sonic casing, core barrels, and downhole equipment was completed between drilling locations and at the completion of project activities. Spent decontamination water was containerized in a temporary storage tank pending removal and disposal off-site.

3.5 MONITORING WELL AND SOIL BORING ABANDONMENT ACTIVITIES

Six monitoring wells (MW-2, MW-19, MW-24, MW-26, MW-27 and MW-31) and one air sparge well (SW-1) were abandoned in September 2017. The wells were abandoned by filling the well screen and casing with a cement-bentonite grout slurry consisting of 95 percent Portland cement and 5 percent sodium bentonite through a tremie pipe from the bottom of the well to approximately 3 feet bgs. The well completions, and well casings to three feet bgs, were also removed. The upper 3 feet of the well bore was filled with a Portland cement plug and finished flush with the ground surface.

Following advancement and soil sampling, soil borings SB-1 through SB-3 were plugged to the surface utilizing a cement-bentonite grout slurry consisting of 95 percent Portland cement and 5 percent sodium bentonite using a tumie pipe. The surface of each soil boring was sealed with Portland Cement.

Copies of the NMOSE plugging forms for the abandoned monitoring wells and plugged soil borings are included in Appendix B.

3.6 MANAGEMENT OF INVESTIGATION-DERIVED WASTES

In 2017, the mud generated during hydro-excavation activties was containerized in the vacuum truck and transported offsite for disposal at the Envirotech, Inc., landfarm under a U.S. Department of Transportation (DOT)-approved transport manifest or bill of lading. A copy of the completed manifest is included in Appendix C.

Soil cuttings, including solids from equipment decontamination, were placed into lined roll-off containers. In 2017, the roll-off containers were transported to the Envirotech, Inc., landfarm for disposal under a DOT-approved manifest or bill of lading, included in Appendix C. In 2019, the soil and solids, including hydro-excavated solids, were sent to Envirotech using using New Mexico Energy, Minerals, and Natural Resources Form C-138 (C-138). Copies of the waste disposal documentation is included in Appendix C.

Water generated during well development and decontamination activities was containerized at the source and transferred daily to an onsite water storage tank. Upon completion of site investigation activities, the water was removed from the storage tank and transported to Basin Disposal, Inc., for disposal utililizing a DOT-approved manifest in 2017, and a C-138 form in 2019. Copies of the waste disposal documentation is included in Appendix C.

Construction and well abandonment debris, as well as other solid trash (plastic/paper bags, disposable and uncontaminated personal protective equipment, etc.), was placed into a 3-cubic-yard commercial disposal trash receptacle at the Blanco Plant EPNG office.

3.7 LOCATION AND ELEVATION SURVEY

The newly-installed and existing monitoring well locations at the NFP site were surveyed for horizontal location and vertical elevation by Sakura Engineering, a New Mexico-licensed surveyor. Soil boring locations SB-1 through SB-3 were also surveyed for horizontal location and vertical elevation. Location and elevation information for the new and existing monitoring wells and soil borings SB-1 through SB-3 are summarized on Table 1.

3.8 SITE CHARACTERIZATION GROUNDWATER SAMPLING

Following completion of monitoring well installation and development activities, the existing and newly-installed monitoring wells were gauged and groundwater samples collected on a semi-annual basis to assess groundwater elevations and the extent of hydrocarbon and nitrate impact to groundwater. Groundwater samples were collected approximately 1.5 months after development of the September 2017 monitoring wells, and approximately one month after development of the August 2019 monitoring wells. A summary of the groundwater gauging and sampling activities completed by CH2M (2017) and by Jacobs (2018 and 2019) were presented in annual groundwater monitoring reports (GMRs) previously submitted to the NMOCD.

The results of groundwater sampling and monitoring completed by Stantec in 2020 were evaluated as part ofthe NFP site characterization. Stantec's groundwater sampling and monitoring activities are documented in the 2020 Annual GMR, previously submitted to the NMOCD (Stantec, 2021).

During the November 2018, and April and September 2019 groundwater monitoring events, measurable LNAPL was found to be present in monitoring well MW-32. Measurable LNAPL was also found to be present in monitoring well MW-47 during the September 2019 sampling event. Instead of collecting groundwater samples from monitoring wells where LNAPL was present, Jacobs collected LNAPL samples from these monitoring wells and submitted them to Eurofins for analysis of total petroleum hydrocarbons (TPH) diesel-range organics (DRO), TPH gasoline-range organics (GRO), and TPH oil-range organics (ORO) via EPA SW-846 Method 8015M. Stantec did not collect LNAPL samples in 2020 for laboratory analysis.

4. RESULTS

This section discusses the results of the site characterization activities, including subsurface geology, the nature and extent of hydrocarbons in soil, and the nature and extent of BTEX constituents and nitrate in groundwater at the NFP site.

4.1 GEOLOGY

Based on the soil boring logs compiled during site characterization activities, Jacobs constructed five hydrogeological cross-sections to better evaluate the subsurface geology within the investigation area (Figure 3). The cross-sections constructed by Jacobs are presented in Appendix D. Additionally, Jacobs constructed a bedrock surface elevation map across the investigation area, as depicted on Figure 4. The soil boring logs and associated cross-sections indicate that the NFP site is underlain by unconsolidated sand, silt, and clay soils ranging in thickness from 33 feet (at MW-53) to up to 75 feet bgs (at MW-50). The unconsolidated soils were underlain by either sandstone or shale, with shale predominantly the first encountered bedrock at or north of the former NFP, while sandstone was predominantly encountered as the first bedrock south the former NFP area. Areas of interbedded shale and sandstone were also encountered (MW-45 and MW-48).

Based on the soil boring logs, the sandstone bedrock, where encountered, was described as massive, cemented, and dry. However, the shale bedrock, where encountered, was fractured, with saturation. Encountered groundwater-bearing units include the fractured shale and relatively thin layers of alluvium directly overlaying dry sandstone bedrock. With the exception of a wet sandy unit overlying bedrock at MW-50, "wet" unconsolidated units overlying bedrock, where present, were predominantly classified as clayey soils.

As depicted on Figure 4, the top of the bedrock surface is generally consistent from northwest to southeast and east, with the exception of a topgraphic bedrock low in the vicinity of MW-44 and MW-45. Depth to bedrock in the area of MW-44 and MW-45 was logged at 70 feet bgs. The slope of the bedrock surface appears steepest in the vicinity of the former NFP, and, with the exception of the topographic low noted around MW-44 and MW-45, becomes more gentle to southeast.

4.2 HYDROCARBON OBSERVATIONS AND FIELD SCREENING READINGS

Based on the soil boring logs, field-apparent hydrocarbon staining and/or odors were observed in portions of the soil samples recovered from nine of the 20 soil borings advanced (SB-2, SB-3, MW-44, MW-45, MW-47, MW-48, MW-51, MW-52, and MW-55). One or more soil samples collected from SB-2, SB-3, MW-44, MW-45, MW-47, MW-48, and MW-51 exhibited headspace measurements greater than 500 parts per million (ppm) vapor. With the exception of monitoring well MW-52, soil samples exhibiting elevated headspace values were associated with soil boring and monitoring well locations either adjacent to or southeast (the historical downgradient direction) of the former NFP and the former evaporation pond (Figure 2).

4.3 SOIL ANALYTICAL RESULTS

Soil analytical data were evaluated against the New Mexico Industrial/Occupational Soil Screening Levels (SSLs, NMED, 2019) for BTEX constituents, and the NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (NMOCD Guidelines) (NMOCD, 1993). Recommended Remediation Action Levels (RRALs) for individual ethylbenzene, toluene, or xylenes constituents have not been established in the NMOCD Guidelines. Soil analytical results are summarized in Table 2. Laboratory analytical reports are provided in Appendix E. Soil samples with exceedances of the NMOCD Guidelines for Remediation of 10 milligrams per kilograms (mg/kg) for benzene and 50 mg/kg for total BTEX are depicted on Figure 5.

Benzene concentrations exceeded the NMOCD-recommended remediation action level of 10 mg/kg (NMOCD, 1993) in at least one soil sample collected from soil boring SB-03 (36-37 feet bgs) and MW-45 (48-49 feet bgs, 59-60 feet bgs, and 69-70 feet bgs). The highest benzene concentration (61.8 mg/kg) was reported in a sample collected from soil boring SB-03, located adjacent to the former NFP. Soil staining and hydrocarbon odors were noted at the depth intervals of each of the 19 analytical samples where detectable benzene concentrations were reported (see the soil boring logs in Appendix A).

Individual BTEX constituent calculations did not exceed any of the applicable NMED SSLs. The NMOCD has established a RRAL for a summation of BTEX constituents of 50 mg/kg in soil. Total BTEX exceeded the 50 mg/kg RRAL in at least one sample collected from SB-03, MW-45, and MW-48 (Table 2). Soil samples with detectable total BTEX concentrations above reporting limits occurred in silt, sand, and lean clay soils located at depth adjacent to the former NFP and former evaporation pond (Figure 5). Additionally, the detectable total BTEX concentrations in soil generally correlate with the locations and depths of elevated PID headspace readings of soils samples collected during soil boring activities.

4.4 GROUNDWATER RESULTS

The results of groundwater gauging and sampling completed from 2017 through 2019, the period in which site characterization activities were conducted, have been documented in annual GMRs previously replaced by CH2M (2018) and Jacobs (2019 and 2020), with subsequent sampling and monitoring completed in 2020 (Stantec, 2021). Historical gauging data and the calculated groundwater elevations are presented on Table 3. Groundwater analytical laboratory reports for the groundwater sample data collected from 2017 through 2020 were included in the previously submitted GMRs. The groundwater analytical results were evaluated against the applicable NMWQCC Standards.

4.4.1 Groundwater Elevation and Gradient

Based on the soil boring logs, groundwater predominantly occurs in the unconsolidated soil immediately above bedrock, and in fractured and weathered shale bedrock. Due to the apparent low permeability and/or limited thickness of saturated soils or shale encountered during advancement, groundwater elevations in a number of the monitoring wells completed during site characterization activities rose slowly in the months following their completion, as noted in Table 3. As a result, NFP site-wide groundwater levels measured in 2020 appear to be more representative of static conditions, and were utilized in the site characterization discussion.

Based on 2020 well gauging data, depth-to-water measurements ranged from approximately 41 feet bgs in the northwestern portion of the NFP site (MW-53), to approximately 73 feet bgs, southeast of the former evaporation pond(MW-50).

Maps depicting groundwater elevations measured during the April, August, and November 2020 groundwater gauging events are provided as Figures 6, 7, and 8, respectively. Figure 8 also incorporates groundwater gaging data from the adjacent Blanco South Flare Pit and D Plant Area site. The general direction of groundwater flow at the NFP site is to the southeast in the area of the former NFP and central portion of the NFP site, and more southerly in the southern portion of the NFP site. Uilizing the November 2020 gauging data from MW-47 and MW-53, the groundwater gradient in the former NFP area was calculated at approximately 0.065 feet per foot.

Groundwater levels at MW-33 appear anomalous in comparison to groundwater levels in adjacent monitoring wells at the NFP site. In 2020, the groundwater elevations measured in MW-33 are approximately 19 feet higher than adjacent monitoring well MW-43, and approximately 17 feet higher than adjacent monitoring well MW-41. As Table 3 shows, groundwater elevations in MW-33 were historically similar to those observed in MW-41 and MW-43 from June 2007 through August 2008, and from November 2008 through June 2015. However, June 2007 and August 2008, and after June 2015, groundwater levels rose up to 22 feet higher then the historical lows. While the exact cause of the higher groundwater elevations in MW-33 is unknown, the monitoring well is located within the arroyo and could potentially be inundated by runoff following large precipitation events.

4.4.2 Light Non-Aqueous Phase Liquid

During site characterization activities, LNAPL was observed as a sheen in MW-32 during the November 2018 sampling event (<0.01 foot thick), and has been present up to 1.16 feet thick (April 2019). Historically, LNAPL was present in MW-32 following installation in 2006, through at least 2011 (MWH, 2012), and from November 2015 through April 2017 (CH2M, 2018).

LNAPL was also detected as a sheenin MW-47 during the September 2019 sampling event, and up to 0.03 feet in (November 2020). LNAPL was not reported to be present in former monitoring well MW-20, which was located near MW-47, and plugged and abandoned in 2002 (Appendix F). However, field evidence of hydrocarbons were noted at depths ranging from 40 to 50 feet bgs during advancement of MW-47, and BTEX constituents were confirmed in a soil sample collected from 44-45 feet bgs.

A summary of the analytical data for the LNAPL samples submitted by Jacobs is presented in Table 4. The analytical laboratory reports for the LNAPL samples were included in the 2018 and 2019 annual GMRs submitted by Jacobs. Analysis of LNAPL samples collected from MW-32 during November 2018 and April and October 2019, indicate it contains a mixture of GRO, DRO, and ORO. The analytical results of the LNAPL sample collected from MW-47 in October 2019 indicates a content of 92 percent DRO.

4.4.3 Groundwater Analytical Results

A summary of groundwater analytical data collected at the NFP site is presented in Tables 5 and 6. Groundwater analytical results from sampling completed in April and November 2020 are summarized on Figures 9 and 10, respectively. Analytical laboratory reports for groundwater samples collected from 2017 through 2020 were presented in the respective annual groundwater monitoring reports previously submitted to the NMOCD.

Over the eight sampling events completed from 2017 through 2020, benzene concentrations exceeded the applicable NMWQCC standard of 0.01 mg/L in at least one groundwater sample collected from monitoring wells MW-23, MW-32, MW-44, MW-45, MW-47, MW-48, MW-51, and MW-52. Concentrations of toluene exceeded the NMWQCC standard of 0.75 mg/L in at least one groundwater sample collected from monitoring well MW-32 and MW-48. Concentrations of total xylenes exceeded the NMWQCC standard of 0.62 mg/L in at least one groundewater sample collected from monitoring wells MW-23, MW-32, MW-45, and MW-47. Concentrations of ethylenzene did not exceed the applicable NMWQCC standard of 0.750 mg/L in any of the groundwater samples collected from 2017 through 2020. The monitoring wells with groundwater samples exceeding NMWQCC standards for benzene, toluene, and/or xylenes are either adjacent to the former NFP or are located in the downgradient direction within the central portion of the NFP site.

Over the eight sampling events completed from 2017 through 2020, nitrate concentrations exceeded the applicable NMWQCC standard of 10 mg/L in at least one groundwater sample collected from monitoring wells MW-33, MW-40, MW-50 and MW-54. Historically, eight of the nine groundwater samples collected from monitoring well MW-33 have exhibited nitrate concentrations exceeding the applicable NMWQCC standard. Nitrate concrentrations in groundwater samples collected from MW-40 exceeded the applicable NMWQCC standard in three of eight samples collected, while MW-50 and MW-54 exceeded the applicable NMWQCC standard each in one of four samples collected. As noted previously, MW-33 is located within the arroyo any may have periodically been inundated by stormwater from heavy precipitation events. Monitoring well MW-40 is located near former monitoring well MW-2, which also reported nitrate concentrations that exceeded applicable NMWQCC standards.

5. CONCLUSIONS

Groundwater-bearing units at the NFP site are generally limited to unconsolidated soils immediately above competent sandstone bedrock and within fractured and weathered shale bedrock. Groundwater recharge into the new-installed monitoring wells generally tooks months before static conditions were noted, likely reflecting of the limited thickness and/or low permeability of the water bearing units. The sandstone bedrock was found largely to be non-water bearing. Groundwater flow across the area of the NFP site is generally follows the topography of the bedrock surface, with the exception of a bedrock surface topographic low noted in soil boring logs for MW-44, MW-45, and MW-50, where depth to bedrock was 70 feet or greater bgs. While hydrocarbon impacts were noted in the soils immediately above-bedrock, the presence of a buried relict channel containing coarse-grained sediments controlling groundwater movement was not readily evident from the information presented in the site characterization boring logs. Anomously-high groundwater elevations documented in monitoring well MW-33 may be the result of stormwater having inundating this monitoring well.

During gauging and sampling activities, LNAPL was encountered in monitoring well MW-32, located in the former NFP, and MW-47, located downgradient of the former NFP. Analysisof LNAPL samples indicate GRO and DRO constituents dominate the current TPH composition at MW-32 and MW-47, although a greater DRO fraction was present in the LNAPL sample from MW-47. The results are generally consistent with the previous conclusion thatl LNAPL was the result of historic condensate disposal practices at the former NFP.

Evidence of hydrocarbons (odors and/or staining, and elevated PID readings) in soil were found in the northern portion of the NFP site, extending fromthe area of the former NFP, southeastward to the area including MW-44 and MW-45, in the central portion of the NFP site. Benzene and/or total BTEX concentrations in soil exceeded their respective NMOCD standards in soil samples submitted from three locations (SB-03 [28 to 44 feet bgs], MW-45 [39 to 70 feet bgs], and MW-48 [39-40 feet bgs). Soil boring SB-03 and monitoring well MW-48 are located adjacent to the former NFP, where soils inaccessible to excavation, were left in place on1992. Monitoring well MW-45 is located adjacent to the former evaporation pond. Soils in these areas are potentially the source of LNAPL and dissolved phase hydrocarbons documented during this investigation. Benzene and BTEX concentrations in soil samples submitted for analysis in the remainder of the soil borings were below the NMOCD-RRALs.

Dissolved BTEX constituents are present around the former NFP and in monitoring wells to the southeast towards and including the southwestern porton of the former evaporation pond. Based on the soil boring logs completed around the former NFP, hydrocarbons may have migrated into the shale bedrock underlying the former NFP. However, hydrocarbon impacts orginating from the former NFP have migrated and appear to havecomingled with hydrocarbons originating from the former evaporation pond area. With the exception of areas east and northeast of the former NFP, the extent of dissolved BTEX is largely delineated laterally. The dry sandstone bedrock appears to represent a viable confining unit.

Concentrations of nitrate in groundwater in the southern part of the NFP exceeded the NMWQCC standard at MW-33, MW-40, MW-44, and MW-50 at least once since 2017. Nitrate exceedences in MW-33 may be related to the source of anomolonsly high groundwater elevations documented at this location, potentially from an off-site source to the north and transported in stormwater. There is no known nitrate source at the NFP site, and nitrates are not known to have been stored or used at the former NFP or former evaporation pond.

6. REFERENCES

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Tables

Table 1. Monitoring Well and Soil Boring Details

Site Characterization Report

Blanco Plant - North Flare Pit, Bloomfield, New Mexico

Well ID	Easting (ft)	Northing (ft)	Ground Surface Elevation (ft amsl)	Top of Casing (ft amsl)	Total Depth (ft btoc)	Total Borehole Depth Elevation (ft amsl)	Screen Interval (ft bgs)	Screen Interval Elevation (ft amsl) from Top to Bottom	Top of Sandstone Bedrock Elevation (ft amsl)	Top of Shale Bedrock Elevation (ft amsl)	September 2019 Groundwater Elevation (ft amsl)	Water Column (ft)	Screen Length (ft)	Well Diameter (in)
MW-23	2,686,128.04	2,087,013.80	5,632.16	5,634.33	66	5,568.3	50 - 65	5,582.2 - 5,567.2	5,574.2	NE	5574.94	7.78	15	4
MW-32	2,685,814.59	2,087,349.77	5,647.20	5,650.00	81.4	5,568.6	40.4 - 80.6	5,606.8 - 5,566.6	NE	5,619.2	5591.90	25.3	40.2	4
MW-33	2,686,260.36	2,086,548.94	5,623.68	5,625.44	80.8	5,544.7	52.1- 80.1	5,571.6 - 5,543.6	5,570.7	NE	5576.14	32.54	28	2
MW-40	2,686,334.64	2,086,220.46	5,619.59	5,621.43	103.4	5,518.0	51.1 - 101.1	5,568.5 - 5,518.5	5,561.6	NE	5557.90	39.41	50	4
MW-41	2,686,317.46	2,086,395.91	5,627.88	5,629.52	103.6	5,525.9	51.5 - 101.5	5,576.4 - 5,526.4	5,566.9	NE	5556.50	30.12	50	4
MW-42	2,686,044.29	2,086,655.56	5,621.26	5,623.91	89.1	5,534.8	36 - 86	5,585.3 - 5,535.3	5,576.3	5,526.3	5554.56	21.95	50	4
MW-43	2,686,177.07	2,086,665.13	5,623.79	5,626.45	101.6	5,524.9	48.4 - 98.4	5,575.5 - 5,525.5	5,566.8	5,545.8	5557.33	34.28	50	4
MW-44	2,686,104.00	2,086,792.65	5,624.36	5,626.89	103.0	5,523.9	50 - 100	5,574.4 - 5,524.4	5,554.4	NE	5559.10	36.24	50	4
MW-45	2,686,247.97	2,086,914.12	5,631.59	5,633.95	103.5	5,530.5	50.6 - 100.6	5,581.0 - 5,531.0	5,551.6	5,561.6	5561.28	31.19	50	4
MW-46	2,685,719.83	2,087,220.84	5,648.61	5,650.99	88.1	5,562.9	35.25 - 85.25	5,613.4 - 5,563.4	5,570.6	5,603.6	5602.50	41.73	50	4
MW-47	2,685,919.43	2,087,242.70	5,635.18	5,637.74	91.6	5,546.2	38.5 - 88.5	5,596.7 - 5,546.7	5,584.2	5,582.6	5590.97	47.01	50	4
MW-48	2,685,788.60	2,087,440.51	5,648.99	5,651.40	81.9	5,569.5	29.0 - 79.0	5,620.0 - 5,570.0	5,583.0	5,609.0	5597.56	30.35	50	4
MW-49	2,686,222.58	2,086,796.89	5,629.14	5,631.77	73.6	5,558.1	46 - 71	5,583.1 - 5,558.1	5,572.1	5,557.1	5559.74	1.60	25	4
MW-50	2,686,431.76	2,086,909.07	5,640.18	5,643.04	75.9	5,567.2	48 - 73	5,592.2 - 5,567.2	5,565.2	NE	5567.72	0.54	25	4
MW-51	2,686,092.14	2,087,220.55	5,637.09	5,639.50	67.4	5,572.1	40 - 65	5,599.1 - 5,574.1	5,581.1	5,580.1	5577.60	3.51	25	4
MW-52	2,686,018.60	2,087,441.48	5,640.96	5,643.83	54.9	5,589.0	27 - 52	5,614.0 - 5,589.0	5,565.0	5,589.0	5591.42	2.46	25	4
MW-53	2,685,764.77	2,087,548.05	5,653.61	5,656.17	87.6	5,568.6	60 - 85	5,593.6 - 5,568.6	NE	5,620.6	5596.27	27.66	25	4
MW-54	2,685,729.64	2,087,349.78	5,648.83	5,651.30	65.5	5,585.8	38 - 63	5,610.8 - 5,585.8	5,586.8	5,608.8	5591.75	5.92	25	4
MW-55	2,685,908.67	2,087,040.90	5,631.08	5,633.54	53.5	5,580.1	26 - 51	5,605.1 - 5,580.1	5,591.1	5,587.1	5583.58	3.50	25	4
MW-56	2,686,020.21	2,086,804.86	5,625.19	5,627.88	59.7	5,568.2	32 - 57	5,593.2 - 5,568.2	5,576.2	NE	5569.77	1.58	25	4
SB-01	2,685,757.53	2,087,378.35	5,648.51	N/A	43	5,605.5	N/A	N/A	NE	5,609.5	N/A	N/A	N/A	N/A
SB-02	2,685,793.95	2,087,303.95	5,647.21	N/A	43	5,604.2	N/A	N/A	NE	5,607.2	N/A	N/A	N/A	N/A
SB-03	2,685,868.90	2,087,323.73	5,639.81	N/A	49	5,590.8	N/A	N/A	NE	5,595.8	N/A	N/A	N/A	N/A

Notes:

Top of bedrock elevation calculated using ground surface elevation and depth of bedrock from ground surface, as presented on soil boring logs.

Water column calculated from the September 2019 groundwater elevation and the elevation of the bottom of the well screen.

amsl = above mean sea level

btoc = below top of casing

ft = feet

in = inches

N/A = well not installed or no longer present.

NE = none encountered

Table 2. Summary of Soil Analytical Results
Site Characterization Report
Blanco Plant - North Flare Pit, Bloomfield, New Mexico

Analyte	New Mexico Industrial/Occupational Soil Screening Criteria[a] (mg/kg)	NMOCD Recommended Remediation Action Level[b] (mg/kg)	SB-01					SB-02					SB-03							
			1-2 ft bgs	12-13 ft bgs	19-21 ft bgs	31-32 ft bgs	38-39 ft bgs	1-2 ft bgs	12-14 ft bgs	20-21 ft bgs	28-30 ft bgs	39-40 ft bgs	1-2 ft bgs	13-14 ft bgs	20-21 ft bgs	28-30 ft bgs	33-34 ft bgs	36-37 ft bgs	40-42 ft bgs	43-44 ft bgs
		Sample Date	9/6/2017	9/22/2017	9/22/2017	9/22/2017	9/22/2017	9/6/2017	9/22/2017	9/22/2017	9/22/2017	9/22/2017	9/6/2017	9/22/2017	9/22/2017	9/22/2017	9/22/2017	9/22/2017	9/22/2017	9/22/2017
Volatile Organic Compounds																				
Benzene	87.2	10	<0.000589	<0.000588	<0.000712	<0.000592	<0.000527	<0.000585	<0.000618	<0.000616	**0.093**	**0.00229 J**	<0.000624	<0.000616	<0.000662	**5.73**	**5.59**	**61.8**	**4.28**	**7.32**
Ethylbenzene	368	NE	<0.000954	<0.000952	0.00115 UJ	<0.000958	<0.000854	<0.000947	<0.001	<0.000997	**0.044**	<0.000931	<0.00101	0.000997 UJ	<0.00107	**12.5**	**5.14**	**13.4**	**4.16**	**4.88**
Toluene	61,340	NE	<0.00129	<0.00129	<0.00156	<0.0013	<0.00116	<0.001628	<0.00135	<0.00135	<0.00143	**0.0102**	<0.00137	0.00135 UJ	<0.00145	**11.4**	**66.8**	**261**	**28.1**	**43.1**
Xylenes, Total	4,275	NE	<0.00106	<0.00106	**0.00265 J**	<0.00106	<0.000946	<0.00105	<0.00110	<0.00111	**0.117**	**0.00425 J**	<0.00112	0.0011 UJ	**0.00713**	**182**	**81.9**	**216**	**60.6**	**76.8**
Total BTEX	NE	50[c]	<0.00129	<0.00129	**0.00265 J**	<0.0013	<0.00116	<0.00105	<0.001	<0.00135	**0.25**	**0.02**	<0.00137	0.00135 UJ	**0.00713**	**212**	**159**	**552**	**97**	**132**

Analyte	New Mexico Industrial/Occupational Soil Screening Criteria[a] (mg/kg)	NMOCD Recommended Remediation Action Level[b] (mg/kg)	MW-40							MW-41							MW-42		
			1-2 ft bgs	11-12 ft bgs	19-20 ft bgs	29-30 ft bgs	39-40 ft bgs	50-51 ft bgs	57-58 ft bgs	1-2 ft bgs	12-14 ft bgs	20-22 ft bgs	35-36 ft bgs	40-41 ft bgs	50-51 ft bgs	60-61 ft bgs	64-65 ft bgs	1-2 ft bgs	13-15 ft bgs	20-21 ft bgs
		Sample Date	9/5/2017	9/7/2017	9/7/2017	9/7/2017	9/7/2017	9/7/2017	9/7/2017	9/5/2017	9/13/2017	9/13/2017	9/13/2017	9/13/2017	9/13/2017	9/13/2017	9/13/2017	9/6/2017	9/15/2017	9/15/2017
Volatile Organic Compounds																				
Benzene	87.2	10	<0.000617	<0.000576	<0.000593	<0.000655	<0.000627	<0.000603	<0.000555	<0.00063	<0.000662	<0.000649	<0.000583	<0.00066	<0.000808	<0.000573	<0.000631	<0.00131	<0.000663	<0.000658
Ethylbenzene	368	NE	<0.000999	<0.000933	<0.00096	<0.00106	<0.00102	<0.000976	<0.000898	<0.00102	<0.00107	<0.00105	<0.000943	<0.00107	<0.00131	<0.000928	<0.00102	<0.00213	<0.00107	<0.00106
Toluene	61,340	NE	<0.00135	<0.00126	<0.0013	<0.00144	<0.00137	<0.00132	<0.00122	<0.00138	<0.00145	<0.00142	<0.00128	<0.00145	<0.00177	<0.00126	<0.00138	<0.00288	<0.00145	<0.00144
Xylenes, Total	4,275	NE	<0.00111	<0.00103	<0.0013	<0.00118	<0.00113	<0.00108	<0.000995	<0.00113	<0.00119	<0.00116	<0.00105	<0.00118	<0.00145	<0.00103	<0.00113	<0.00236	<0.00119	<0.00118
Total BTEX	NE	50[c]	<0.00135	<0.00126	<0.0013	<0.00144	<0.00137	<0.00132	<0.00122	<0.00138	<0.00145	<0.00142	<0.00128	<0.00145	<0.00177	<0.00126	<0.00138	<0.00288	<0.00145	<0.00144

Analyte	New Mexico Industrial/Occupational Soil Screening Criteria[a] (mg/kg)	NMOCD Recommended Remediation Action Level[b] (mg/kg)	MW-42		MW-43						MW-44								MW-45	
			30-31 ft bgs	40-41 ft bgs	1-2 ft bgs	14-15 ft bgs	20-21 ft bgs	25-26 ft bgs	41-42 ft bgs	54-55 ft bgs	1-2 ft bgs	14-16 ft bgs	20-21 ft bgs	31-32 ft bgs	41-42 ft bgs	53-54 ft bgs	62-63 ft bgs	69-70 ft bgs	1-2 ft bgs	13-14 ft bgs
		Sample Date	9/15/2017	9/15/2017	9/5/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/8/2017	9/6/2017	9/10/2017	9/10/2017	9/10/2017	9/10/2017	9/10/2017	9/10/2017	9/10/2017	9/5/2017	9/11/2017
Volatile Organic Compounds																				
Benzene	87.2	10	<0.000666	<0.000645	<0.00131	<0.00068	<0.000619	<0.000564	<0.000655	<0.000583	<0.0012	**0.0025 J**	<0.000592	<0.000671	<0.000562	<0.000654	<0.000511	<0.000581	<0.00089	<0.000644
Ethylbenzene	368	NE	<0.00108	<0.00104	<0.00212	<0.0011	<0.001	<0.000913	<0.00106	**0.00644**	<0.00194	<0.00108	<0.000958	<0.00109	<0.00091	<0.00106	**0.00293 J**	<0.00094	<0.00144	<0.00104
Toluene	61,340	NE	<0.00146	<0.00141	<0.00286	<0.00149	<0.00135	<0.00123	<0.00143	<0.00128	<0.00262	<0.00146	<0.0013	<0.00147	<0.00123	<0.00143	<0.00112	<0.00127	<0.00195	<0.00141
Xylenes, Total	4,275	NE	<0.00119	<0.00116	<0.00235	<0.00122	<0.00111	<0.00101	<0.00117	**0.0139**	<0.00215	<0.00119	<0.00106	<0.0012	<0.00101	<0.00117	<0.000917	<0.00104	<0.0016	<0.00116
Total BTEX	NE	50[c]	<0.00146	<0.00141	<0.00286	<0.00149	<0.00135	<0.00123	<0.00143	**0.02**	<0.00262	**0.0025 J**	<0.0013	<0.00147	<0.00123	<0.00143	**0.00293 J**	<0.00127	<0.00195	<0.00141

Analyte	New Mexico Industrial/Occupational Soil Screening Criteria[a] (mg/kg)	NMOCD Recommended Remediation Action Level[b] (mg/kg)	MW-45							MW-46						MW-47				
			23-24 ft bgs	31-32 ft bgs	35-36 ft bgs	39-40 ft bgs	48-49 ft bgs	59-60 ft bgs	69-70 ft bgs	1-2 ft bgs	12-13 ft bgs	25-26 ft bgs	35-36 ft bgs	41-42 ft bgs	49-50 ft bgs	1-2 ft bgs	12-13 ft bgs	20-21 ft bgs	30-31 ft bgs	39-40 ft bgs
		Sample Date	9/12/2017	9/12/2017	9/12/2017	9/12/2017	9/12/2017	9/12/2017	4/12/2017	9/6/2017	9/18/2017	9/18/2017	9/18/2017	9/18/2017	9/18/2017	9/6/2017	9/19/2017	9/19/2017	9/19/2017	9/19/2017
Volatile Organic Compounds																				
Benzene	87.2	10	**0.0011 J**	**0.102**	**0.224 J**	**1.22**	**25.1**	**20.1**	**21.6**	<0.000704	<0.000685	<0.000645	<0.000657	<0.000704	<0.000549	<0.00106	<0.000685	<0.000664	<0.000586	**0.0064**
Ethylbenzene	368	NE	<0.000997	**0.101**	**0.440 J**	**4.82**	**29.5**	**5.51**	**16**	<0.00114	<0.00111	<0.00104	<0.00106	<0.00114	<0.000889	<0.00172	<0.00111	<0.00107	<0.000949	**0.0438**
Toluene	61,340	NE	**0.00135 J**	<0.0012	**0.498 J**	**4.87**	**45.9**	**4.92**	**20.7**	<0.00154	<0.0015	<0.00141	<0.00144	<0.00154	<0.0012	<0.00232	<0.0015	<0.00145	<0.00128	<0.00113
Xylenes, Total	4,275	NE	<0.00235	**0.00316 J**	**4.02 J**	**54.8**	**317**	**77.1**	**155**	<0.00126	<0.00123	<0.00116	<0.00118	<0.00126	<0.000985	<0.0019	<0.00123	<0.00119	<0.00105	**0.104**
Total BTEX	NE	50[c]	**0.0**	**0.2**	**5.2**	**66**	**418**	**108**	**213**	<0.00154	<0.0015	<0.00141	<0.00144	<0.00154	<0.0012	<0.00232	<0.0015	<0.00145	<0.00128	**0.2**

Table 2. Summary of Soil Analytical Results
Site Characterization Report
Blanco Plant - North Flare Pit, Bloomfield, New Mexico

Analyte	New Mexico Industrial/Occupational Soil Screening Criteria[a] (mg/kg)	NMOCD Recommended Remediation Action Level[b] (mg/kg)	MW-47			MW-48						MW-49							MW-50		
			44-45 ft bgs	46-47 ft bgs	47-49 ft bgs	1-2 ft bgs	12-13 ft bgs	21-22 ft bgs	29-30 ft bgs	36-37 ft bgs	39-40 ft bgs	1-2 ft bgs	14-15 ft bgs	19-20 ft bgs	29-30 ft bgs	39-40 ft bgs	49-50 ft bgs	56-57 ft bgs	1-2 ft bgs	12-13 ft bgs	19-20 ft bgs
		Sample Date	9/19/2017	9/19/2017	9/19/2017	9/6/2017	9/21/2017	9/21/2017	9/21/2017	9/21/2017	9/21/2017	8/15/2019	8/17/2019	8/17/2019	8/17/2019	8/17/2019	8/17/2019	8/17/2019	8/14/2019	8/18/2019	8/18/2019
Volatile Organic Compounds																					
Benzene	87.2	10	**6.08**	**0.049**	**1.82**	<0.00107	<0.00067	<0.000632	<0.00053	**0.00581**	**3.88**	<0.000603	<0.000625	<0.000612	<0.000599	<0.000644	<0.000634	<0.000626	0.000651 UJ	<0.000653	<0.00068
Ethylbenzene	368	NE	**1.67**	**0.00398 J**	**0.524**	<0.00173	<0.00108	<0.00102	<0.000858	**0.0102**	**1.8**	<0.000976	<0.00101	<0.000991	<0.00097	<0.00104	<0.00103	<0.00101	0.00105 UJ	<0.00106	<0.0011
Toluene	61,340	NE	<0.18	**0.00727**	**9.25**	<0.00234	<0.00147	<0.00138	<0.00116	**0.0377**	**23.3**	<0.00132	<0.00137	<0.00134	<0.00131	<0.00141	<0.00139	<0.00137	0.00143 UJ	<0.00143	<0.00149
Xylenes, Total	4,275	NE	**40.4**	**0.132**	**5.29**	<0.00191	<0.0012	<0.00113	<0.000951	**0.156**	**25.2**	<0.00108	<0.00112	<0.0011	<0.00107	<0.00116	<0.00114	<0.00112	0.00117 UJ	<0.00117	<0.00122
Total BTEX	NE	50[c]	**48**	**0.2**	**17**	<0.00234	<0.00147	<0.00138	<0.00116	**0.2**	**54**	<0.00132	<0.00137	<0.00134	<0.00131	<0.00141	<0.00139	<0.00137	0.00143 UJ	<0.00143	<0.00149

Analyte	New Mexico Industrial/Occupational Soil Screening Criteria[a] (mg/kg)	NMOCD Recommended Remediation Action Level[b] (mg/kg)	MW-50				MW-51						MW-52					MW-53			
			29-30 ft bgs	39-40 ft bgs	49-50 ft bgs	57-58 ft bgs	1-2 ft bgs	13-14 ft bgs	19-20 ft bgs	29-30 ft bgs	39-40 ft bgs	49-50 ft bgs	1-2 ft bgs	10-11 ft bgs	19-20 ft bgs	29-30 ft bgs	36-37 ft bgs	1-2 ft bgs	9-10 ft bgs	19-20 ft bgs	29-30 ft bgs
		Sample Date	8/18/2019	8/18/2019	8/18/2019	8/18/2019	8/14/2019	8/19/2019	8/19/2019	8/19/2019	8/19/2019	8/19/2019	8/14/2019	8/24/2019	8/24/2019	8/24/2019	8/24/2019	8/15/2019	8/22/2019	8/22/2019	8/22/2019
Volatile Organic Compounds																					
Benzene	87.2	10	<0..000675	<0.000725	<0.000705	<0.000669	<0.000607	<0.00314	<0.00322	<0.00313	<0.000649	**1.36**	<0.000568	<0.000647	<0.000629	<0.000671	<0.000641	<0.000674	<0.000633	<0.000647	<0.000597
Ethylbenzene	368	NE	<0.00109	<0.00117	<0.00114	<0.00108	<0.000983	<0.00509	<0.00521	<0.00507	<0.00105	**1.12**	<0.00092	<0.00105	<0.00102	<0.00109	<0.00104	<0.00109	<0.00102	<0.00105	<0.000967
Toluene	61,340	NE	<0.00148	<0.00159	<0.00154	<0.00147	<0.00133	<0.00688	<0.00705	<0.00686	**0.00174 J**	**5.86**	<0.00124	<0.00142	<0.00138	<0.00147	<0.00141	<0.00148	<0.00139	<0.00142	<0.00131
Xylenes, Total	4,275	NE	<0.00121	<0.0013	<0.00126	<0.0012	<0.00109	<0.00563	<0.00578	<0.00561	**0.0105**	**18.2**	<0.00102	<0.00116	<0.00113	<0.0012	<0.00115	<0.00121	<0.00114	<0.00116	<0.00107
Total BTEX	NE	50[c]	<0.00148	<0.00159	<0.00154	<0.00147	<0.00133	<0.00688	<0.00705	<0.00686	**0.01**	**27**	<0.00124	<0.00142	<0.00138	<0.00147	<0.00141	<0.00148	<0.00139	<0.00142	<0.00131

Analyte	New Mexico Industrial/Occupational Soil Screening Criteria[a] (mg/kg)	NMOCD Recommended Remediation Action Level[b] (mg/kg)	MW-53	MW-54					MW-55					MW-56	
			32-33 ft bgs	0-1 ft bgs	10-11 ft bgs	19-20 ft bgs	29-30 ft bgs	39-40 ft bgs	1-2 ft bgs	10-11 ft bgs	19-20 ft bgs	29-30 ft bgs	34-35 ft bgs	0-1 ft bgs	41-42 ft bgs
		Sample Date	8/22/2019	8/14/2019	8/20/2019	8/20/2019	8/20/2019	8/20/2019	8/14/2019	8/15/2019	8/15/2019	8/15/2019	8/15/2019	8/16/2019	8/17/2019
Volatile Organic Compounds															
Benzene	87.2	10	<0.000673	<0.00894	<0.000644	<0.000594	<0.000642	<0.00058	<0.00061	<0.000695	<0.000634	<0.000642	**0.00542**	<0.000742	<0.000748
Ethylbenzene	368	NE	<0.00109	<0.00145	<0.00104	<0.000962	<0.00104	<0.000939	<0.000988	**0.00134 J**	<0.00103	<0.00104	<0.00105	<0.0012	<0.00121
Toluene	61,340	NE	<0.00147	<0.00196	<0.00141	<0.0013	<0.00141	<0.00127	<0.00134	<0.00152	<0.00139	<0.00141	**0.0079**	<0.00163	<0.00164
Xylenes, Total	4,275	NE	<0.00121	<0.0016	<0.00115	<0.00107	<0.00115	<0.00104	<0.00109	**0.00134 J**	<0.00114	<0.00115	**0.0133**	<0.00133	<0.00134
Total BTEX	NE	50[c]	<0.00147	<0.00196	<0.00141	<0.0013	<0.00141	<0.00127	<0.00134	**0.003**	<0.00139	<0.00141	**0.03**	<0.00163	<0.00164

Notes:
[a] New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Volume I, Soil Screening Guidance for Human Health Risk Assessments. Table A-1 NMED Soil Screening Levels, June 2019
[b] Calculated following Section IV.A.2.b. of the NMOCD Guidelines for Remediation of Leaks, Spills and Releases. August 13, 1993. The depth to groundwater at the site is less than 50 feet, which generates a Total Ranking Score of 20 that indicates the listed Remediation Action Level is required.
[c] Calculated following Section IV.A.2.b. of the NMOCD Guidelines for Remediation of Leaks, Spills, and Releases. August 13, 1993. The recommended Remediation Action Level is for a summation of all BTEX components.
Bold text indicates detected concentration
Shaded text indicates detected concentration exceeding the screening criteria or recommended action level
< = Analyte was not detected above the method detection limit
BTEX = benzene, toluene, ethylbenzene, and xylenes
ft bgs = feet below ground surface
J = Analyte detected at concentration above instrument detection limit but below method detection limit
mg/kg = milligrams per kilogram
NE = not established
NMED = New Mexico Environment Department
NMOCD = New Mexico Oil Conservation Division

Table 3
Groundwater Elevation Data
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	TOC Elevation (ft amsl)	Measurement Date	Depth to Product (ft btoc)	LNAPL Thickness (feet)	Depth to Water (ft btoc)	GW Elevation (ft amsl)
MW-23	5634.33	9/25/1992	NA	NA	57.11	5577.22
		2/1/1993	NA	NA	NA	NA
		2/25/1993	NA	NA	NA	NA
		6/8/1993	NA	NA	NA	NA
		9/29/1993	NA	NA	NA	NA
		2/10/1994	NA	NA	NA	NA
		5/13/1994	NA	NA	NA	NA
		8/22/1994	NA	NA	NA	NA
		11/13/2000	NA	NA	57.02	5577.31
		3/26/2001	NA	NA	57.07	5577.26
		5/30/2002	NA	NA	57.08	5577.25
		6/2/2003	NA	NA	57.12	5577.21
		8/4/2003	NA	NA	57.06	5577.27
		9/3/2003	NA	NA	57.11	5577.22
		12/16/2003	NA	NA	57.31	5577.02
		5/17/2004	NA	NA	57.14	5577.19
		8/23/2004	NA	NA	57.04	5577.29
		11/22/2004	NA	NA	57.13	5577.2
		2/23/2005	NA	NA	57.13	5577.2
		5/23/2005	NA	NA	57.22	5577.11
		8/30/2005	NA	NA	57.18	5577.15
		11/17/2005	NA	NA	57.29	5577.04
		2/21/2006	NA	NA	57.25	5577.08
		6/8/2006	NA	NA	57.44	5576.89
		8/15/2006	NA	NA	57.40	5576.93
		11/3/2006	NA	NA	57.41	5576.92
		2/26/2007	NA	NA	57.44	5576.89
		5/29/2007	NA	NA	57.47	5576.86
		8/22/2007	NA	NA	57.49	5576.84
		11/28/2007	NA	NA	57.62	5576.71
		2/20/2008	NA	NA	57.57	5576.76
		5/22/2008	NA	NA	57.40	5576.93
		8/21/2008	NA	NA	57.70	5576.63
		11/6/2008	NA	NA	57.81	5576.52
		2/17/2009	NA	NA	57.69	5576.64
		5/11/2009	NA	NA	57.83	5576.50
		8/26/2009	NA	NA	57.93	5576.4
		2/18/2010	NA	NA	57.89	5576.44
		8/25/2010	NA	NA	58.11	5576.22
		2/23/2011	NA	NA	58.04	5576.29
		8/31/2011	NA	NA	58.12	5576.21
		12/17/2013	NP	NP	58.58	5575.75
		6/18/2014	NP	NP	58.53	5575.8
		12/16/2014	NP	NP	58.7	5575.63
		6/24/2015	NP	NP	58.91	5575.42
		12/16/2015	NP	NP	58.82	5575.51
		6/29/2016	NP	NP	58.96	5575.37
		12/13/2016	NP	NP	58.98	5575.35
MW-23	5634.33	4/27/2017	NP	NP	58.94	5575.39
		11/14/2017	NP	NP	59.13	5575.20
		1/28/2018	NP	NP	59.31	5575.02
		4/2/2018	NP	NP	59.1	5575.23
		11/13/2018	NP	NP	59.4	5574.93
		4/16/2019	NP	NP	59.31	5575.02
		9/23/2019	NP	NP	59.39	5574.94
		10/15/2019	NP	NP	59.42	5574.91
		4/27/2020	NP	NP	60.40	5573.93
		8/18/2020	NP	NP	59.41	5574.92
		11/17/2020	NP	NP	59.53	5574.80

Table 3
Groundwater Elevation Data
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	TOC Elevation (ft amsl)	Measurement Date	Depth to Product (ft btoc)	LNAPL Thickness (feet)	Depth to Water (ft btoc)	GW Elevation (ft amsl)
MW-32	5650	8/26/2009	NA	NA	59.09	5590.91
		2/18/2010	NA	NA	58.93	5591.07
		2/22/2011	NA	NA	58.98	5591.02
		12/17/2013	NP	NP	59.19	5590.81
		6/18/2014	NP	NP	58.83	5591.17
		12/16/2014	NP	NP	58.61	5591.39
		6/24/2015	58.60	0.22	58.82	5591.18
		12/16/2015	58.45	0.46	58.91	5591.09
		6/29/2016	58.60	0.50	59.10	5590.90
		12/13/2016	Sheen	Sheen	58.93	5591.07
		4/27/2017	Sheen	Sheen	58.35	5591.65
		11/14/2017	NP	NP	58.30	5591.70
		1/28/2018	NP	NP	58.48	5591.52
		4/2/2018	NP	NP	58.37	5591.63
		11/13/2018	Sheen	Sheen	58.15	5591.85
		4/16/2019	58.15	1.16	59.31	5590.69
		9/23/2019	58.20	0.10	58.10	5591.90
		10/15/2019	57.99	0.38	58.37	5591.63
		4/27/2020	58.13	0.84	58.97	5591.76
		8/18/2020	58.20	0.20	58.40	5591.28
		11/17/2020	58.29	0.11	58.40	5591.21
MW-33	5625.44	6/8/2006	NA	NA	77.58	5547.86
		8/15/2006	NA	NA	71.71	5553.73
		11/3/2006	NA	NA	71.07	5554.37
		2/26/2007	NA	NA	70.33	5555.11
		5/29/2007	NA	NA	70.71	5554.73
		8/22/2007	NA	NA	71.29	5554.15
		11/28/2007	NA	NA	51.66	5573.78
		2/20/2008	NA	NA	52.51	5572.93
		5/22/2008	NA	NA	67.47	5557.97
		8/21/2008	NA	NA	69.81	5555.63
		11/6/2008	NA	NA	71.07	5554.37
		2/17/2009	NA	NA	70.33	5555.11
		5/11/2009	NA	NA	69.70	5555.74
		8/26/2009	NA	NA	69.60	5555.84
		2/18/2010	NA	NA	68.90	5556.54
		8/25/2010	NA	NA	68.90	5556.54
		2/22/2011	NA	NA	68.54	5556.9
		8/31/2011	NA	NA	69.18	5556.26
		12/17/2013	NP	NP	68.40	5557.04
		6/18/2014	NP	NP	68.70	5556.74
		12/16/2014	NP	NP	69.19	5556.25
MW-33	5625.44	6/24/2015	NP	NP	69.15	5556.29
		12/16/2015	NP	NP	70.70	5554.74
		6/29/2016	NP	NP	58.16	5567.28
		12/13/2016	NP	NP	63.50	5561.94
		4/27/2017	NP	NP	61.85	5563.59
		11/14/2017	NP	NP	49.98	5575.46
		1/28/2018	NP	NP	49.39	5576.05
		4/2/2018	NP	NP	49.20	5576.24
		11/13/2018	NP	NP	48.93	5576.51
		4/16/2019	NP	NP	49.34	5576.10
		9/23/2019	NP	NP	49.30	5576.14
		10/15/2019	NP	NP	49.19	5576.25
		4/27/2020	NP	NP	49.08	5576.36
		8/18/2020	NP	NP	49.44	5576.00
		11/17/2020	NP	NP	49.62	5575.82

Table 3
Groundwater Elevation Data
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	TOC Elevation (ft amsl)	Measurement Date	Depth to Product (ft btoc)	LNAPL Thickness (feet)	Depth to Water (ft btoc)	GW Elevation (ft amsl)
MW-40	5621.43	11/14/2017	NP	NP	64.25	5557.18
		1/28/2018	NP	NP	64.23	5557.20
		4/2/2018	NP	NP	63.69	5557.74
		11/13/2018	NP	NP	63.72	5557.71
		4/16/2019	NP	NP	63.34	5558.09
		9/23/2019	NP	NP	63.53	5557.90
		10/15/2019	NP	NP	63.48	5557.95
		4/27/2020	NP	NP	63.34	5558.09
		8/18/2020	NP	NP	63.51	5557.92
		11/17/2020	NP	NP	63.59	5557.84
MW-41	5629.52	11/14/2017	NP	NP	89.48	5540.04
		1/28/2018	NP	NP	86.85	5542.67
		4/2/2018	NP	NP	83.29	5546.23
		11/13/2018	NP	NP	77.70	5551.82
		4/16/2019	NP	NP	75.44	5554.08
		9/23/2019	NP	NP	73.02	5556.50
		10/15/2019	NP	NP	73.09	5556.43
		4/27/2020	NP	NP	71.20	5558.32
		8/18/2020	NP	NP	71.06	5558.46
		11/17/2020	NP	NP	71.01	5558.51
MW-42	5623.91	11/14/2017	NP	NP	69.10	5554.81
		1/28/2018	NP	NP	69.07	5554.84
		4/2/2018	NP	NP	68.71	5555.20
		11/13/2018	NP	NP	69.05	5554.86
		4/16/2019	NP	NP	69.96	5553.95
		9/23/2019	NP	NP	69.35	5554.56
		10/15/2019	NP	NP	69.30	5554.61
		4/27/2020	NP	NP	69.42	5554.49
		8/18/2020	NP	NP	69.81	5554.10
		11/17/2020	NP	NP	69.91	5554.00
MW-43	5626.44	11/14/2017	NP	NP	69.19	5557.25
		1/28/2018	NP	NP	69.40	5557.04
		4/2/2018	NP	NP	68.55	5557.89
		11/13/2018	NP	NP	68.78	5557.66
		4/16/2019	NP	NP	68.63	5557.81
		9/23/2019	NP	NP	69.11	5557.33
		10/15/2019	NP	NP	69.11	5557.33
		4/27/2020	NP	NP	69.26	5557.18
		8/18/2020	NP	NP	69.74	5556.70
		11/17/2020	NP	NP	69.95	5556.49
MW-44	5626.89	11/14/2017	NP	NP	68.31	5558.58
		1/28/2018	NP	NP	68.45	5558.44
		4/2/2018	NP	NP	68.12	5558.77
		11/13/2018	NP	NP	68.01	5558.88
		4/16/2019	NP	NP	67.65	5559.24
		9/23/2019	NP	NP	67.79	5559.10
		10/15/2019	NP	NP	67.81	5559.08
		4/27/2020	NP	NP	67.79	5559.10
		8/18/2020	NP	NP	68.48	5558.41
		11/17/2020	NP	NP	68.12	5558.77
MW-45	5633.95	11/14/2017	NP	NP	73.13	5560.82
		1/28/2018	NP	NP	72.84	5561.11
		4/2/2018	NP	NP	72.35	5561.60
		11/13/2018	NP	NP	72.18	5561.77
		4/16/2019	NP	NP	72.16	5561.79
		9/23/2019	NP	NP	72.67	5561.28
		10/15/2019	NP	NP	72.69	5561.26
		4/27/2020	NP	NP	73.05	5560.90
		8/18/2020	NP	NP	73.61	5560.34
		11/17/2020	NP	NP	74.00	5559.95

Table 3
Groundwater Elevation Data
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	TOC Elevation (ft amsl)	Measurement Date	Depth to Product (ft btoc)	LNAPL Thickness (feet)	Depth to Water (ft btoc)	GW Elevation (ft amsl)
MW-46	5650.99	11/14/2017	NP	NP	47.32	5603.67
		1/28/2018	NP	NP	46.56	5604.43
		4/2/2018	NP	NP	46.45	5604.54
		11/13/2018	NP	NP	47.38	5603.61
		4/16/2019	NP	NP	47.15	5603.84
		9/23/2019	NP	NP	48.49	5602.50
		10/15/2019	NP	NP	47.90	5603.09
		4/27/2020	NP	NP	46.74	5604.25
		8/18/2020	NP	NP	48.45	5602.54
		11/17/2020	NP	NP	48.10	5602.89
MW-47	5637.74	11/14/2017	NP	NP	71.82	5565.92
		1/28/2018	NP	NP	62.02	5575.72
		4/2/2018	NP	NP	55.34	5582.40
		11/13/2018	NP	NP	48.22	5589.52
		4/16/2019	NP	NP	47.06	5590.68
		9/23/2019	Sheen	Sheen	46.77	5590.97
		10/15/2019	46.90	0.01	46.91	5590.83
		4/27/2020	46.71	<0.01	46.71	5591.03
		8/18/2020	46.46	<0.01	46.46	5591.28
		11/17/2020	47.50	0.03	47.53	5590.26
MW-48	5651.4	11/14/2017	NP	NP	57.82	5593.58
		1/28/2018	NP	NP	55.15	5596.25
		4/2/2018	NP	NP	54.25	5597.15
		11/13/2018	NP	NP	54.15	5597.25
		4/16/2019	NP	NP	54.13	5597.27
		9/23/2019	NP	NP	53.84	5597.56
		10/15/2019	NP	NP	53.88	5597.52
		4/27/2020	NP	NP	53.68	5597.72
		8/18/2020	NP	NP	53.62	5597.78
		11/17/2020	NP	NP	53.58	5597.82
MW-49	5631.77	9/23/2019	NP	NP	72.03	5559.74
		10/15/2019	NP	NP	72.27	5559.50
		4/27/2020	NP	NP	72.64	5559.13
		8/18/2020	NP	NP	73.04	5558.73
		11/17/2020	NP	NP	73.13	5558.64
MW-50	5643.04	9/23/2019	NP	NP	75.32	5567.72
		10/15/2019	NP	NP	75.45	5567.59
		4/27/2020	NP	NP	75.40	5567.64
		8/18/2020	NP	NP	75.62	5567.42
		11/17/2020	NP	NP	75.64	5567.40
MW-51	5639.50	9/23/2019	NP	NP	61.90	5577.60
		10/15/2019	NP	NP	58.68	5580.82
		4/27/2020	NP	NP	51.82	5587.68
		8/18/2020	NP	NP	51.30	5588.20
		11/17/2020	NP	NP	51.12	5588.38
MW-52	5643.83	9/23/2019	NP	NP	52.41	5591.42
		10/15/2019	NP	NP	51.98	5591.85
		4/27/2020	NP	NP	49.90	5593.93
		8/18/2020	NP	NP	49.90	5593.93
		11/17/2020	NP	NP	49.93	5593.90
MW-53	5656.17	9/23/2019	NP	NP	59.90	5596.27
		10/15/2019	NP	NP	47.92	5608.25
		4/27/2020	NP	NP	43.35	5612.82
		8/18/2020	NP	NP	43.27	5612.90
		11/17/2020	NP	NP	43.29	5612.88
MW-54	5651.30	9/23/2019	NP	NP	59.55	5591.75
		10/15/2019	NP	NP	59.56	5591.74
		4/27/2020	NP	NP	59.38	5591.92
		8/18/2020	NP	NP	59.30	5592.00
		11/17/2020	NP	NP	59.41	5591.89

Table 3
Groundwater Elevation Data
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	TOC Elevation (ft amsl)	Measurement Date	Depth to Product (ft btoc)	LNAPL Thickness (feet)	Depth to Water (ft btoc)	GW Elevation (ft amsl)
MW-55	5633.54	9/23/2019	NP	NP	49.96	5583.58
		10/15/2019	NP	NP	49.29	5584.25
		4/27/2020	NP	NP	48.85	5584.69
		8/18/2020	NP	NP	48.91	5584.63
		11/17/2020	NP	NP	48.93	5584.61
MW-56	5627.88	9/23/2019	NP	NP	58.11	5569.77
		10/15/2019	NP	NP	58.45	5569.43
		4/27/2020	NP	NP	59.45	5568.43
		8/18/2020	NP	NP	59.80	5568.08
		11/17/2020	NP	NP	59.80	5568.08

Notes:
Monitoring wells abandoned prior to 2017 have been removed from the table.
ft amsl = feet above mean sea level
ft btoc = feet below top of casing
NA = Historical data not available
NM = not measured
NP = no product measured
TOC = top of casing

Table 4
Summary of LNAPL Analytical Results
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	Sample Date	GRO C6-C12 (mg/kg)	DRO >C12-C28 (mg/kg)	ORO >C28-C35 (mg/kg)
MW-32	11/14/2018	1,210,000	114,000	< 8,930
	4/16/2019	981,000	132,000	9,470
	10/15/2019	52,700	142,000	25,300
MW-47	10/15/2019	<22,300 J*	294,000	< 34,100

Notes:

* analytical results for GRO collected from MW-47 are reported in milligrams per liter (mg/L)
< = not detected above listed method detection limit
DRO = diesel range organices
GRO = gasoline range organics
J = reported result is estimated. Sample analyzed outside of hold time for GRO in water.
mg/kg = milligrams per kilogram
ORO = oil range organics
LNAPL = light non-aqueous phase liquids

Table 5
Summary of BTEX Groundwater Analytical Results
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard (mg/L):		0.01	0.75	0.75	0.62
MW-23	9/25/1992	2.77	0.221	7.69	6.09
	2/1/1993	2.9	3.5	0.19	4.1
	2/25/1993	2.9	0.19	3.5	4.1
	6/8/1993	1.68	0.0301	1.85	2.906
	9/29/1993	2.133	0.216	1.807	3.823
	2/10/1994	2.09	0.151	1.15	2.66
	5/13/1994	3.53	0.255	0.852	2.15
	8/22/1994	3.27	0.212	0.353	1.176
	11/13/2000	3.7	<0.025	0.84	1.4
	3/26/2001	7.2	<0.025	0.52	1.3
	5/30/2002	9.3	<0.05	0.36	1.5
	6/2/2003	8.92	<0.010	0.337	1.45
	8/4/2003	2.25	<0.010	0.1	0.337
	9/3/2003	3.86	0.0078	0.208	0.768
	12/16/2003	5.08	<0.05	<0.05	0.219
	5/17/2004	8.02	<0.013	0.208	1.49
	8/23/2004	4.48	<0.025	0.16	0.966
	11/22/2004	3.36	<0.001	<0.001	<0.002
	2/23/2005	7.45	<0.001	0.321	1.38
	5/23/2005	9.9	0.0365	0.27	1.65
	8/30/2005	3.76	<0.005	0.0532	0.199
	11/17/2005	5.28	0.0026	0.203	0.863
	2/21/2006	4.9	0.0049	0.0567	0.71
	6/8/2006	3.47	<0.001	<0.001	0.373
	8/15/2006	6.49	0.0266	0.165	1.27
	11/3/2006	3.92	0.0263	0.103	0.735
	2/26/2007	8.91	0.0307	0.276	1.6
	5/29/2007	6.41	<0.011	0.276	1.24
	8/22/2007	5.11	0.0145	0.172	0.855
	11/28/2007	5.82	<0.05	0.147	1.08
	2/20/2008	8.29 B	0.0093	0.271	1.87 B
	5/22/2008	4.86	<0.1	0.14	0.891
	8/21/2008	5.92	<0.1	0.146	1.25
	11/6/2008	6.59	0.0042	0.186	1.4
	2/17/2009	6.01	<0.05	0.219	1.52
	5/11/2009	6.74	0.0054	0.162	1.53
	8/26/2009	6.71	0.0358 J	0.278	1.72
	2/18/2010	6.55	<0.1	0.227	1.5
	8/25/2010	5.5	<0.025	0.152	1.22
	2/23/2011	5.84	0.0088	0.16	1.23
	8/31/2011	6.27	0.0038	0.174	1.38
	12/17/2013	6.34	0.00965 J	0.101	0.964
	6/19/2014	8.58	<0.0075	0.149	1.48
	12/17/2014	9.7	<0.0075	0.141	1.41
	6/24/2015	7.64	<0.00396	0.224	0.983
	12/16/2015	8.09	<0.00396	0.169	1.36
	6/29/2016	9.13	<0.00396	0.181	1.58
	12/13/2016	9.13	<0.0099	0.206	1.66
	4/27/2017	7.89	<0.0099	0.163	1.21
	11/14/2017	8.61	0.0037 J	0.166	1.13
	4/2/2018	8.13	<0.0099	0.206	1.69
	11/14/2018	9.87	<0.0099	0.174	1.16
	4/17/2019	10.5	<0.00495	0.211	1.26
	9/24/2019	10.7	0.0139	0.362	1.82
	4/28/2020	8.75	<0.00396	0.159	0.945
	11/18/2020	7.8 J-	<0.021	0.087 J-	0.51 J-

Table 5
Summary of BTEX Groundwater Analytical Results
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard (mg/L):		**0.01**	**0.75**	**0.75**	**0.62**
MW-32	8/26/2009	**9.05**	**16.3**	**0.48**	**6.39**
	2/18/2010	**11.3**	**16.2**	**0.397**	**4.96**
	2/22/2011	**9.45**	**12.1**	**0.386**	**4.63**
	12/17/2013	**5.88**	**0.54**	**0.303**	**4.3**
	6/19/2014	**6.65 JH**	**2.24**	**0.324**	**5.41**
	12/17/2014	**1.57**	**0.736**	**0.098**	**1.57**
	6/24/2015	**3.91**	**0.0807**	**0.504**	**4.08**
	12/16/2015	**4.2**	**1.95**	**0.499**	**7.56**
	6/29/2016	**7.01**	**15**	**0.624**	**24.8**
	12/13/2016	**5.84**	**2.14**	**0.57**	**6.74**
	4/27/2017	**10.2**	**8.65**	**0.497**	**6.53**
	11/14/2017	**6.53**	**11**	**0.447**	**5.91**
	4/2/2018	**4.92**	**4.38**	**0.516**	**7.73**
	11/14/2018	**4.42**	**0.389 J**	**0.384**	**4.98**
	4/17/2019	Sample not collected. PSH in well			
	10/15/2019	Sample not collected. PSH in well			
	4/28/2020	Sample not collected. PSH in well			
	11/18/2020	Sample not collected. PSH in well			
MW-33	6/8/2006	**0.0011**	**0.0042**	<0.001	**0.0045**
	8/15/2006	**0.0301**	**0.0377**	<0.05	**0.0246**
	11/3/2006	<0.001	**0.0013**	<0.001	<0.002
	2/26/2007	<0.001	<0.001	<0.001	<0.002
	5/29/2007	<0.001	<0.001	<0.001	<0.002
	8/22/2007	<0.001	<0.001	<0.001	<0.002
	11/28/2007	<0.002	<0.002	<0.002	<0.006
	2/20/2008	**0.00099 UB**	**0.001 UB**	<0.001	**0.001 UB**
	5/22/2008	<0.001	<0.001	<0.001	<0.002
	8/21/2008	<0.001	<0.001	<0.001	<0.003
	11/6/2008	**0.0021**	<0.002	<0.002	**0.002 J**
	2/17/2009	**0.0015**	**0.00030 J**	<0.001	**0.0022**
	5/11/2009	<0.002	<0.002	<0.002	<0.006
	8/26/2009	<0.001	<0.001	<0.001	<0.002
	2/18/2010	**0.00098 J**	<0.001	<0.001	**0.00099 J**
	8/25/2010	**0.0004 J**	<0.001	<0.001	<0.002
	2/22/2011	**0.00055 J**	<0.001	<0.001	<0.001
	8/31/2011	**0.00045 J**	<0.001	<0.001	<0.001
	12/17/2013	**0.00501**	**0.000221 J**	**0.000110 J**	**0.000444 J**
	6/19/2014	<0.00008	<0.00015	<0.00011	<0.00026
	12/17/2014	<0.00008	<0.00015	<0.00011	<0.00026
	6/24/2015	<0.000176	<0.000198	<0.000212	<0.000366
	12/16/2015	**0.000185**	**0.000634**	<0.000212	**0.000422**
	6/29/2016	<0.000176	**0.000544 J**	<0.000212	**0.00131 J**
	12/13/2016	<0.000176	<0.000198	<0.000212	<0.000366
	4/27/2017	<0.000176	<0.000198	<0.000212	<0.000366
	11/14/2017	<0.000176	<0.000198	<0.000212	<0.000366
	4/2/2018	<0.000176	<0.000198	<0.000212	<0.000366
	11/14/2018	<0.000176	<0.000198	<0.000212	<0.000366
	4/17/2019	<0.000176	<0.000198	<0.000212	<0.000366
	9/24/2019	**0.00035 J**	<0.0002	<0.00021	<0.00037
	4/28/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016
MW-40	11/14/2017	<0.000176	<0.000198	<0.000212	<0.000366
	4/2/2018	<0.000176	<0.000198	<0.000212	<0.000366
	11/14/2018	<0.000176	<0.000198	<0.000212	<0.000366
	4/17/2019	<0.000176	<0.000198	<0.000212	<0.000366
	9/24/2019	<0.00018	<0.0002	<0.00021	<0.00037
	4/27/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016

Table 5
Summary of BTEX Groundwater Analytical Results
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard (mg/L):		**0.01**	**0.75**	**0.75**	**0.62**
MW-41	11/14/2017	**0.000239 J**	**0.000536 J**	<0.000212	<0.000366
	4/2/2018	<0.000176	<0.000198	<0.000212	<0.000366
	11/14/2018	<0.000176	<0.000198	<0.000212	<0.000366
	4/16/2019	<0.000176	<0.000198	<0.000212	<0.000366
	9/24/2019	<0.00018	<0.0002	<0.00021	<0.00037
	4/27/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016
MW-42	11/14/2017	<0.000176	<0.000198	<0.000212	<0.000366
	4/2/2018	<0.000176	<0.000198	<0.000212	<0.000366
	11/14/2018	<0.000176	<0.000198	<0.000212	<0.000366
	4/16/2019	<0.000176	<0.000198	<0.000212	**0.000403 J**
	9/23/2019	<0.00018	<0.0002	<0.00021	<0.00037
	4/27/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016
MW-43	11/14/2017	<0.000176	<0.000198	<0.000212	<0.000366
	4/2/2018	<0.000176	<0.000198	**0.000226 J**	<0.000366
	11/14/2018	<0.000176	<0.000198	<0.000212	**0.000967 J**
	4/17/2019	<0.000176	<0.000198	<0.000212	<0.000366
	9/24/2019	<0.00018	<0.0002	<0.00021	**0.00059 J**
	4/28/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016
MW-44	11/14/2017	**0.227**	**0.000245 J**	**0.0177**	**0.000451 J**
	4/2/2018	**0.675**	<0.00099	**0.00198 J**	<0.00183
	11/14/2018	**0.646**	<0.00099	**0.00421 J**	<0.00183
	4/16/2019	**1.43**	<0.00198	**0.0161**	<0.00366
	9/24/2019	**1.32**	<0.00396	**0.0122 J**	<0.00732
	4/28/2020	**0.796**	<0.00396	**0.013 J**	<0.00732
	11/18/2020	**0.34 J-**	<0.00082	**0.0058 J-**	<0.0032
Duplicate	11/18/2020 (Dup-01)	**0.25 J-**	<0.00041 UJ	**0.0062 J-**	<0.0016 UJ
MW-45	11/14/2017	**1.25**	**0.0053**	**0.201**	**1.66**
	4/2/2018	**1.65**	**0.0116**	**0.254**	**0.0524**
	11/14/2018	**6.47**	**0.107**	**0.103**	**0.315**
	4/17/2019	**2.5 J**	<0.00396	<0.00424	<0.00732
	9/24/2019	**2.86**	**0.126**	**0.0678**	**0.353**
	4/28/2020	**0.15**	**0.00143**	**0.000996 J**	**0.00465**
	11/18/2020	**0.32**	**0.0056**	**0.0021**	**0.012 J**
MW-46	11/14/2017	<0.000176	<0.000198	<0.000212	<0.000366
	4/2/2018	<0.000176	<0.000198	<0.000212	<0.000366
	11/14/2018	**0.000258 J**	<0.000198	<0.000212	<0.000366
	4/16/2019	**0.000234 J**	<0.000198	<0.000212	<0.000366
	9/23/2019	<0.00018	<0.0002	<0.00021	<0.00037
	4/28/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016
MW-47	11/14/2017	**0.831**	**0.0935**	**0.0529**	**0.327**
	4/2/2018	**1.33**	**0.0185 J**	**0.130**	**0.256**
	11/14/2018	**2.28**	**0.239**	**0.314**	**2.79**
	4/16/2019	**2.55**	**0.239**	**0.379**	**4.55**
	10/15/2019	Sample not collected. PSH in well			
	4/28/2020	Sample not collected. PSH in well			
	11/18/2020	Sample not collected. PSH in well			
MW-48	11/14/2017	**0.969**	**0.994**	**0.0241**	**0.294**
	4/2/2018	**1.47**	**0.0216**	**0.0440**	**0.107**
	11/14/2018	**1.21**	**0.00487 J**	**0.0346**	**0.00919 J**
	4/16/2019	**0.706**	**0.00164**	**0.0491**	**0.00238**
	9/24/2019	**1.4**	**0.00245 J**	**0.0351**	**0.00813 J**
	4/28/2020	**1.8**	**0.000852 J**	**0.0342**	**0.000465 J**
	11/18/2020	**1.8**	<0.0041	**0.019**	<0.016
Duplicate	11/18/2020 (Dup-02)	**1.8**	<0.0041	**0.020**	<0.016
MW-49	9/24/2019	<0.00018	**0.0002 J**	<0.00021	<0.00037
	4/28/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016
MW-50	9/23/2019	<0.00018	<0.0002	<0.00021	<0.00037
	4/28/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016
MW-51	9/24/2019	**0.201**	**0.0621**	**0.00655**	**0.161**
	4/28/2020	<0.000176	<0.000198	**0.000331 J**	<0.000366
Duplicate	4/28/2020 (MD-51)	<0.000176	<0.000198	**0.000394 J**	<0.000366
MW-51	11/18/2020	**0.58**	**0.0048 J**	**0.029**	**0.032 J**

Table 5
Summary of BTEX Groundwater Analytical Results
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
NMWQCC Standard (mg/L):		**0.01**	**0.75**	**0.75**	**0.62**
MW-52	9/24/2019	<0.00018	<0.0002	**0.00043 J**	<0.00037
	4/28/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	**0.23 J-**	<0.00041	**0.0072 J-**	<0.0016
MW-53	9/24/2019	<0.00018	<0.0002	<0.00021	<0.00037
	4/27/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016
MW-54	9/24/2019	<0.00018	<0.0002	<0.00021	<0.00037
	4/28/2020	<0.000176	<0.000198	<0.000212	<0.000366
Duplicate	4/28/2020 (MD-54)	<0.000176	<0.000198	<0.000212	<0.000366
MW-54	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016
MW-55	9/24/2019	<0.00018	<0.0002	<0.00021	**0.00051 J**
	4/27/2020	**0.00697**	**0.00253**	<0.000212	**0.000644 J**
	11/18/2020	**0.0048**	**0.00097 J**	<0.00050	<0.0016
MW-56	9/24/2019	<0.00018	<0.0002	<0.00021	<0.00037
	4/28/2020	<0.000176	<0.000198	<0.000212	<0.000366
	11/18/2020	<0.00038	<0.00041	<0.00050	<0.0016

Notes:
Analytical data from monitoring wells abandoned prior to 2017 has been removed from the table
Bolded text indicates a detected concentration
Highlighted cells and bold text indicates the concentration exceeded NMWQCC standard
B = Analyte detected in an associated QA/QC blank; sample result unaffected
J = Analyte detected at concentration above instrument detection limit but below method detection limit
J- = The analyte was positively identified; the quantitation is an estimation with a potential low bias
JH = Estimated with a high bias, actual concentration may be lower than the concentration reported
PSH = phase-seperated hydrocarbons
UB = Analyte detected in an associated QA/QC blank; sample result considered non-detect
< = The analyte was not detected above the listed method detection limit

Table 6
Summary of Nitrate Groundwater Analytical Results
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

Monitoring Well	Sample Date	Nitrate (mg/L)
NMWQCC Standard (mg/L):		10
MW-23	4/2/2018	<0.628
	9/24/2019	1.26 J
	4/28/2020	<0.0251
	11/18/2020	**0.10**
MW-32	4/2/2018	<0.628
	9/24/2019	NC
	4/28/2020	NC
	11/18/2020	NC
MW-33	12/17/2014	**19**
	11/14/2017	**80.9**
	4/2/2018	**154**
	11/14/2018	**87.8**
	4/17/2019	**72**
	9/24/2019	**80.4**
	4/28/2020	<0.0251
	11/18/2020	**54 J-**
MW-40	11/14/2017	<0.017
	4/2/2018	<0.628
	11/14/2018	**12.5**
	4/17/2019	**1.17**
	9/24/2019	**0.58**
	4/27/2020	**15.4**
	11/18/2020	**40 J-**
MW-41	11/14/2017	<0.017
	4/2/2018	<0.628
	11/14/2018	<0.0251
	4/16/2019	<0.0251
	9/24/2019	<0.0251
	4/27/2020	<0.502
	11/18/2020	**4.9**
MW-42	4/2/2018	<0.628
	9/24/2019	<0.0251
	4/27/2020	<0.502
	11/18/2020	<0.033
MW-43	4/2/2018	<0.628
	9/24/2019	<0.0251
	4/28/2020	<0.0251
	11/18/2020	<0.033
MW-44	4/2/2018	<0.628
	9/24/2019	<0.0251
	4/28/2020	<0.0251 R
	11/18/2020	**0.089 J**
Dup-01 (Duplicate)	11/18/2020	**0.095 J**
MW-45	4/2/2018	<0.628
	9/24/2019	<0.0251
	4/28/2020	<0.0251
	11/18/2020	<0.033
MW-46	4/2/2018	<0.628
	9/23/2019	<0.0251
	4/28/2020	<0.0251
	11/18/2020	<0.033
MW-47	4/2/2018	<0.628
	9/24/2019	NC
	4/28/2020	NC
	11/18/2020	NC

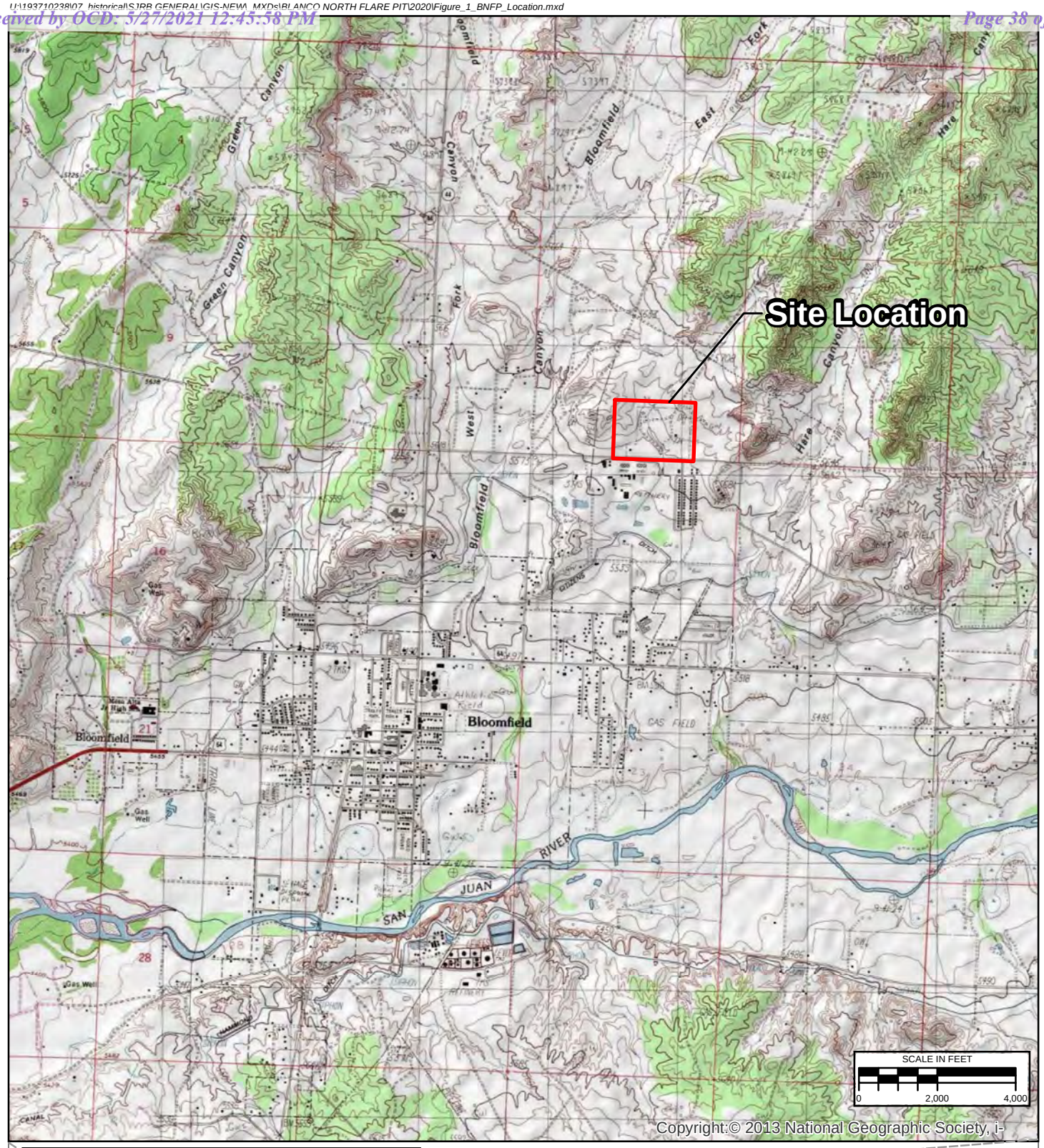
Table 6
Summary of Nitrate Groundwater Analytical Results
Blanco Gas Plant - North Flare Pit, Bloomfield, New Mexico

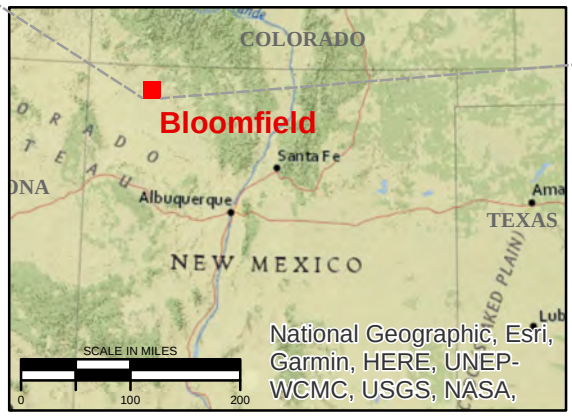
Monitoring Well	Sample Date	Nitrate (mg/L)
NMWQCC Standard (mg/L):		10
MW-48	4/2/2018	<0.628
	9/24/2019	<0.0251
	4/28/2020	<0.0251
	11/18/2020	<0.033
Dup-02 (Duplicate)	11/18/2020	<0.033 UJ
MW-49	9/24/2019	<0.0251
	4/28/2020	<0.0251
	11/18/2020	<0.033
MW-50	9/23/2019	**16.7 J**
	4/28/2020	**4.08**
	11/18/2020	**4.2**
MW-51	9/24/2019	<0.0251
	4/28/2020	<0.0251
	4/28/2020 (MD-51)	<0.0251
	11/18/2020	<0.033
MW-52	9/24/2019	**1.04**
	4/28/2020	<0.0251
	11/18/2020	<0.033
MW-53	9/24/2019	<0.0251 R
	4/27/2020	<0.502 J
	11/18/2020	<0.033
MW-54	9/24/2019	<0.0251
	4/28/2020	<0.0251
	4/28/2020 (MD-54)	<0.0251
	11/18/2020	**13 J-**
MW-55	9/24/2019	<0.0251
	4/27/2020	<0.502
	11/18/2020	<0.033
MW-56	9/24/2019	<0.0251
	4/28/2020	<0.0251
	11/18/2020	**0.46**

Notes:
Bolded text indicates detected concentration
Highlighted and bold cells indicate concentration exceeded NMWQCC standard
< = analyte not detected above listed method detection limit
J = reported result estimated
J- = The analyte was positively identified; the quantitation is an estimation with a potential low bias
NC = sample not collected from location

R = analytical result rejectected due to poor recovery on the matrix spike/matrix spike duplicate
UJ = The method detection limit is estimated

Figures





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REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2/9/2021	SLG	SLG	SRV

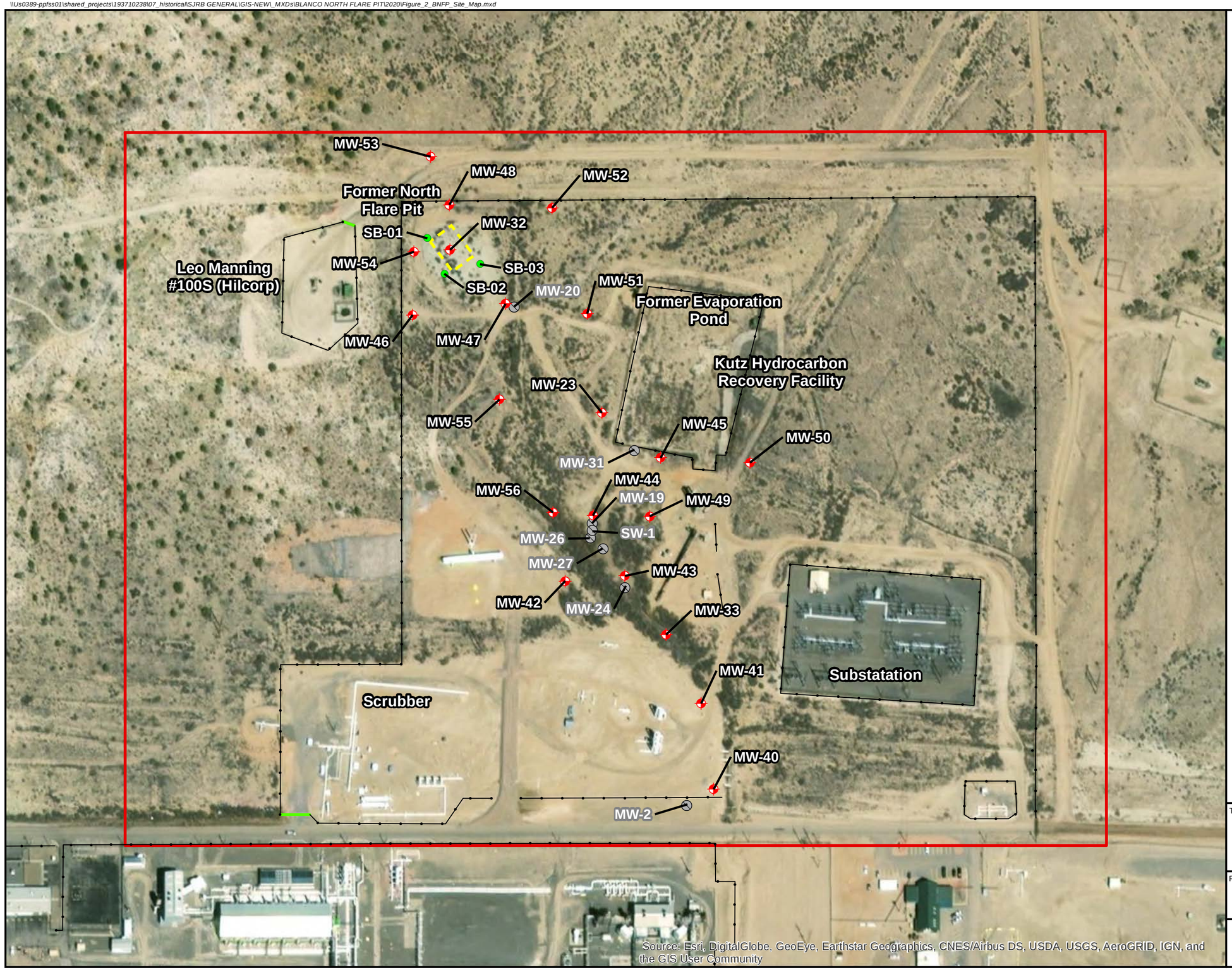
TITLE: **SITE LOCATION**

Stantec

PROJECT: **BLANCO NORTH FLARE PIT**
BLOOMFIELD, NEW MEXICO

FIGURE: **1**

\\Us0389-ppfss01\shared_projects\193710238\07_historical\SJRB GENERAL\GIS-NEW_MXDs\BLANCO NORTH FLARE PIT\2020\Figure_2_BNFP_Site_Map.mxd



LEGEND

- MONITORING WELL
- ABANDONED/DESTROYED MONITORING WELL
- SOIL BORING
- FENCE
- GATE
- FORMER FLARE PIT
- STUDY AREA

N

SCALE IN FEET

0 100 200

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	4/2/2021	SLG	SLG	SRV

TITLE:

SITE PLAN

PROJECT:

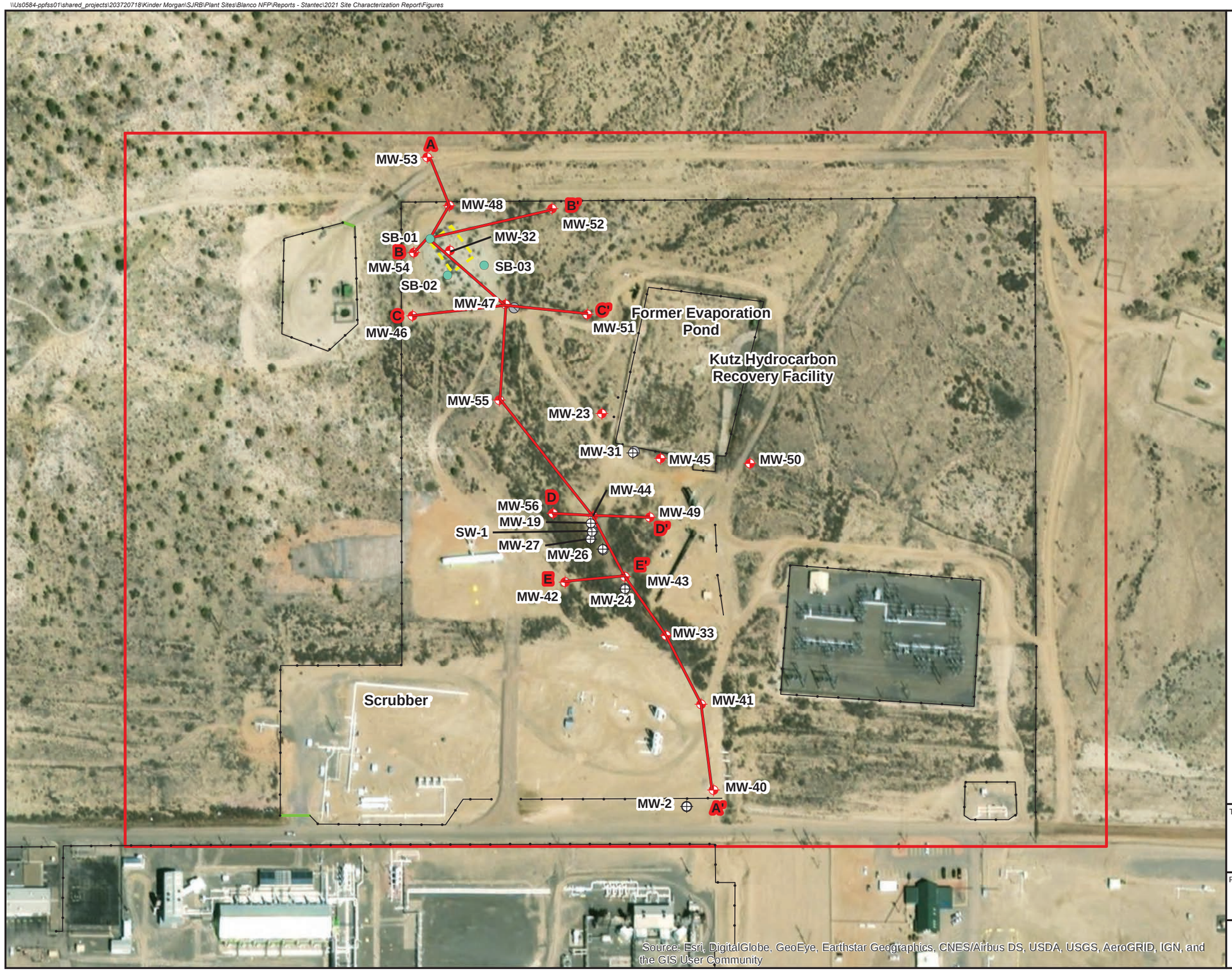
BLANCO PLANT - NORTH FLARE PIT
BLOOMFIELD, NEW MEXICO

Stantec

Figure No.:

2

\\Us0584-ppfss01\shared_projects\203720718\Kinder Morgan\SJRB\Plant Sites\Blanco NFP\Reports - Stantec\2021 Site Characterization Report\Figures



LEGEND

- MONITORING WELL
- SOIL BORING
- WELLS ABANDONED IN 2017
- FENCE
- GATE
- FORMER FLARE PIT
- STUDY AREA

N

SCALE IN FEET

0 100 200

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	4/19/2021	SAH	SAH	SRV

TITLE:

CROSS-SECTION LINES

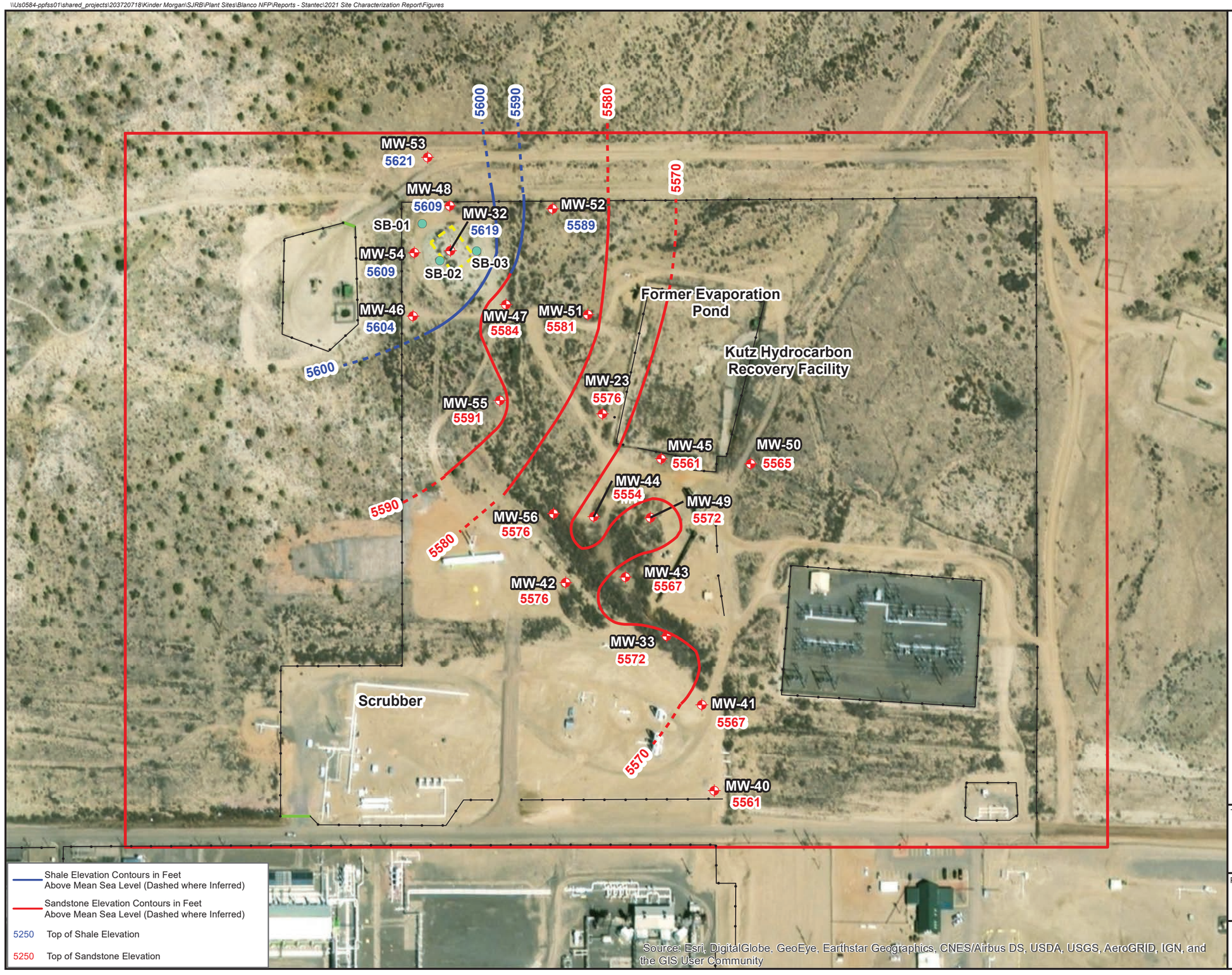
PROJECT:

BLANCO PLANT - NORTH FLARE PIT
BLOOMFIELD, NEW MEXICO

Stantec

Figure No.: 3

\\Us0584-ppfss01\shared_projects\203720718\Kinder Morgan\SJRB\Plant Sites\Blanco NFP\Reports - Stantec\2021 Site Characterization Report\Figures



LEGEND

- MONITORING WELL
- SOIL BORING
- FENCE
- GATE
- FORMER FLARE PIT
- STUDY AREA

N

SCALE IN FEET

0 100 200

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	5/20/2021	SAH	SAH	SRV

TITLE:

TOP OF BEDROCK ELEVATION

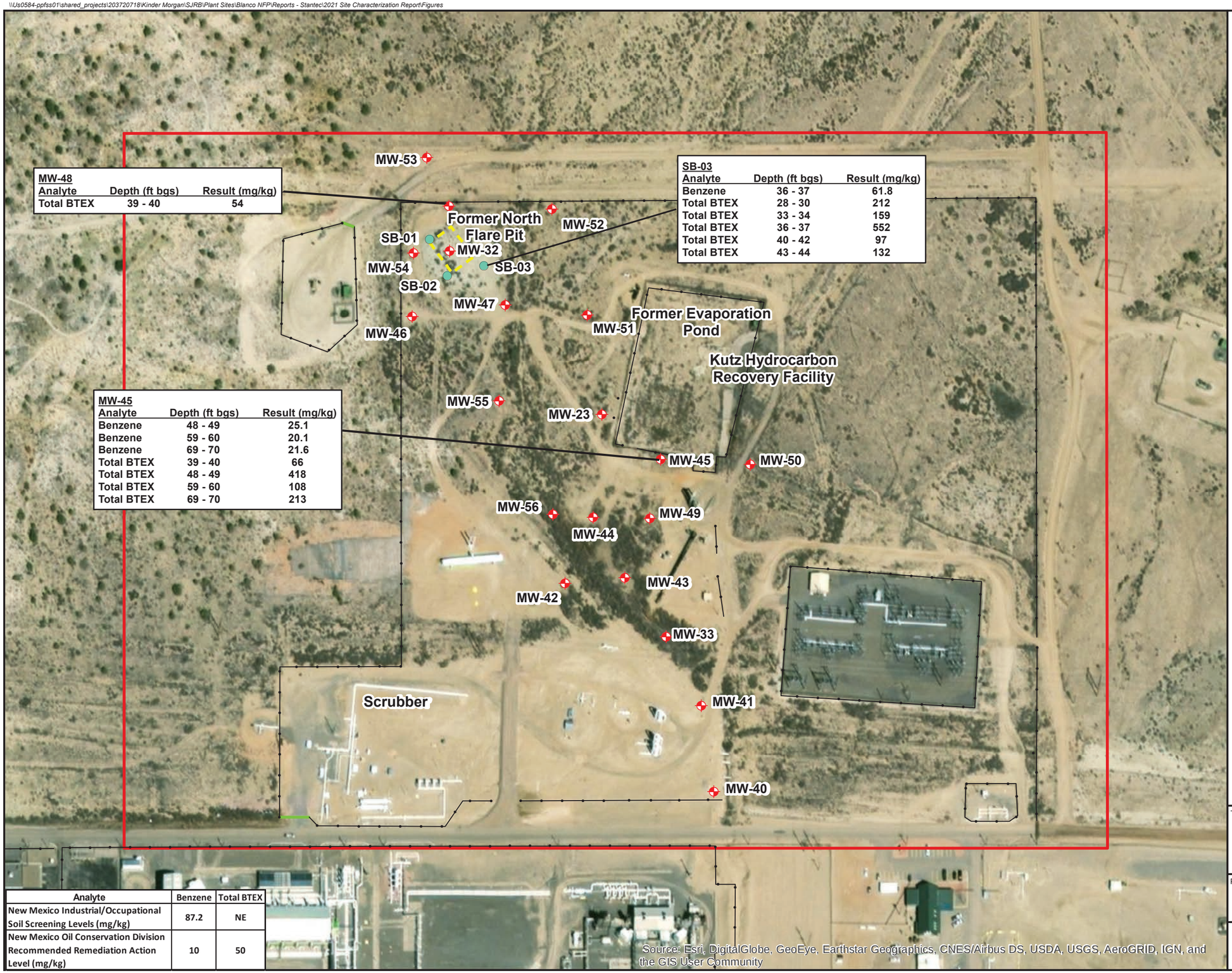
PROJECT:

BLANCO PLANT - NORTH FLARE PIT
BLOOMFIELD, NEW MEXICO

Stantec

Figure No.: 4

\\Us0584-ppfss01\shared_projects\203720718\Kinder Morgan\SJRB\Plant Sites\Blanco NFP\Reports - Stantec\2021 Site Characterization Report\Figures



MW-48

Analyte	Depth (ft bgs)	Result (mg/kg)
Total BTEX	39 - 40	54

SB-03

Analyte	Depth (ft bgs)	Result (mg/kg)
Benzene	36 - 37	61.8
Total BTEX	28 - 30	212
Total BTEX	33 - 34	159
Total BTEX	36 - 37	552
Total BTEX	40 - 42	97
Total BTEX	43 - 44	132

MW-45

Analyte	Depth (ft bgs)	Result (mg/kg)
Benzene	48 - 49	25.1
Benzene	59 - 60	20.1
Benzene	69 - 70	21.6
Total BTEX	39 - 40	66
Total BTEX	48 - 49	418
Total BTEX	59 - 60	108
Total BTEX	69 - 70	213

Analyte	Benzene	Total BTEX
New Mexico Industrial/Occupational Soil Screening Levels (mg/kg)	87.2	NE
New Mexico Oil Conservation Division Recommended Remediation Action Level (mg/kg)	10	50

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

- MONITORING WELL
- SOIL BORING
- FENCE
- GATE
- FORMER FLARE PIT STUDY
- AREA

Notes:
BTEX = benzene, toluene, ethylbenzene, and xylenes
ft bgs = feet below ground surface
mg/kg = milligram(s) per killogram
NE = not established

N

SCALE IN FEET
0 100 200

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	5/20/2021	SAH	SAH	SRV

TITLE:
SOIL EXCEEDANCES OF SCREENING CRITERIA

PROJECT:
BLANCO PLANT - NORTH FLARE PIT
BLOOMFIELD, NEW MEXICO

Stantec

Figure No.:
5

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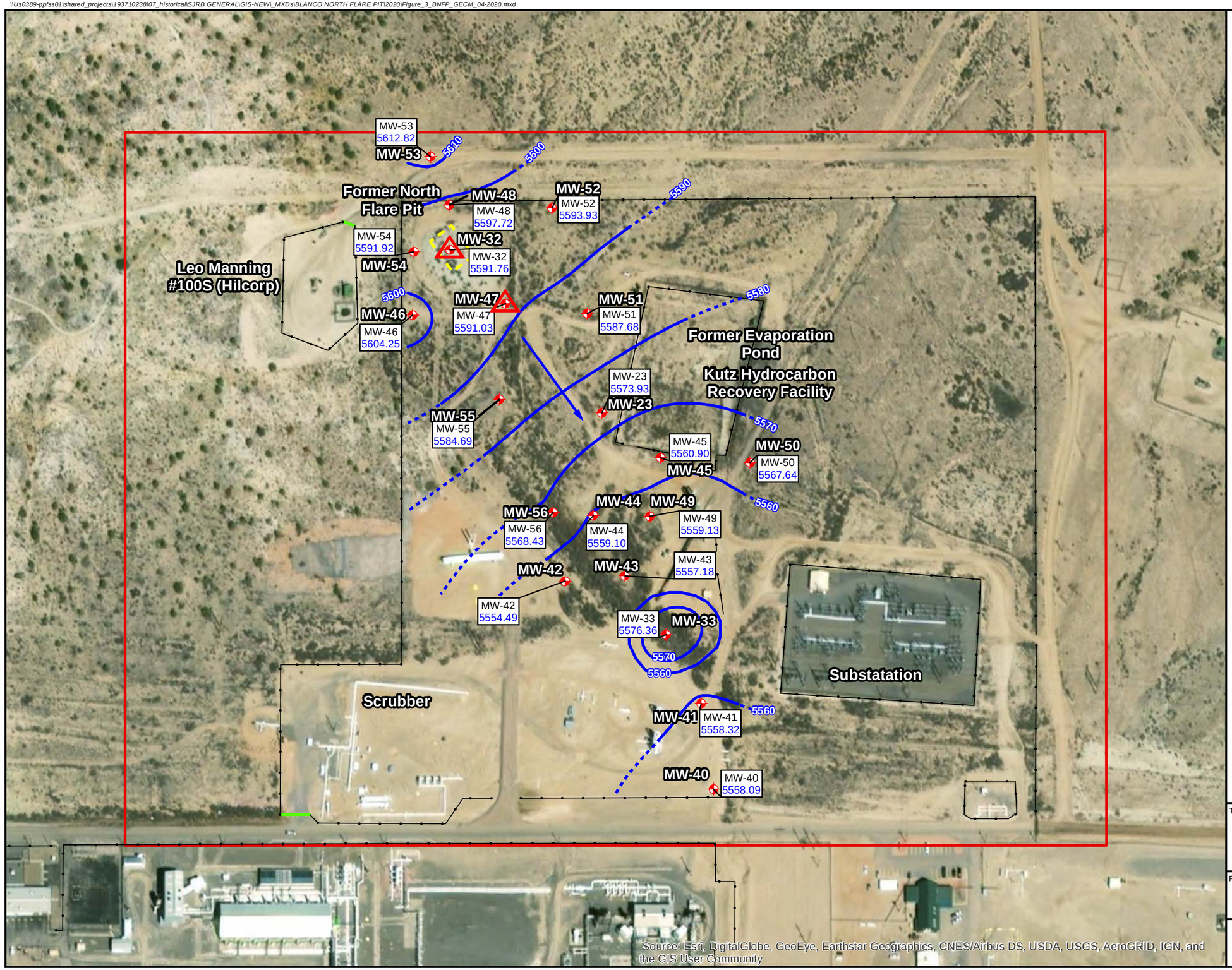


LEGEND

- MONITORING WELL
- MONITORING WELL WITH MEASURABLE FREE PRODUCT
- FENCE
- GATE
- FORMER FLARE PIT
- STUDY AREA
- 6021.62 — GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS WHERE PRESENT (FEET ABOVE MEAN SEA LEVEL).
- 5564 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL).
- DIRECTION OF APPARENT GROUNDWATER FLOW

N

SCALE IN FEET

0 100 200

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	4/2/2021	SLG	SLG	SRV

TITLE:

GROUNDWATER ELEVATION MAP
APRIL 27, 2020

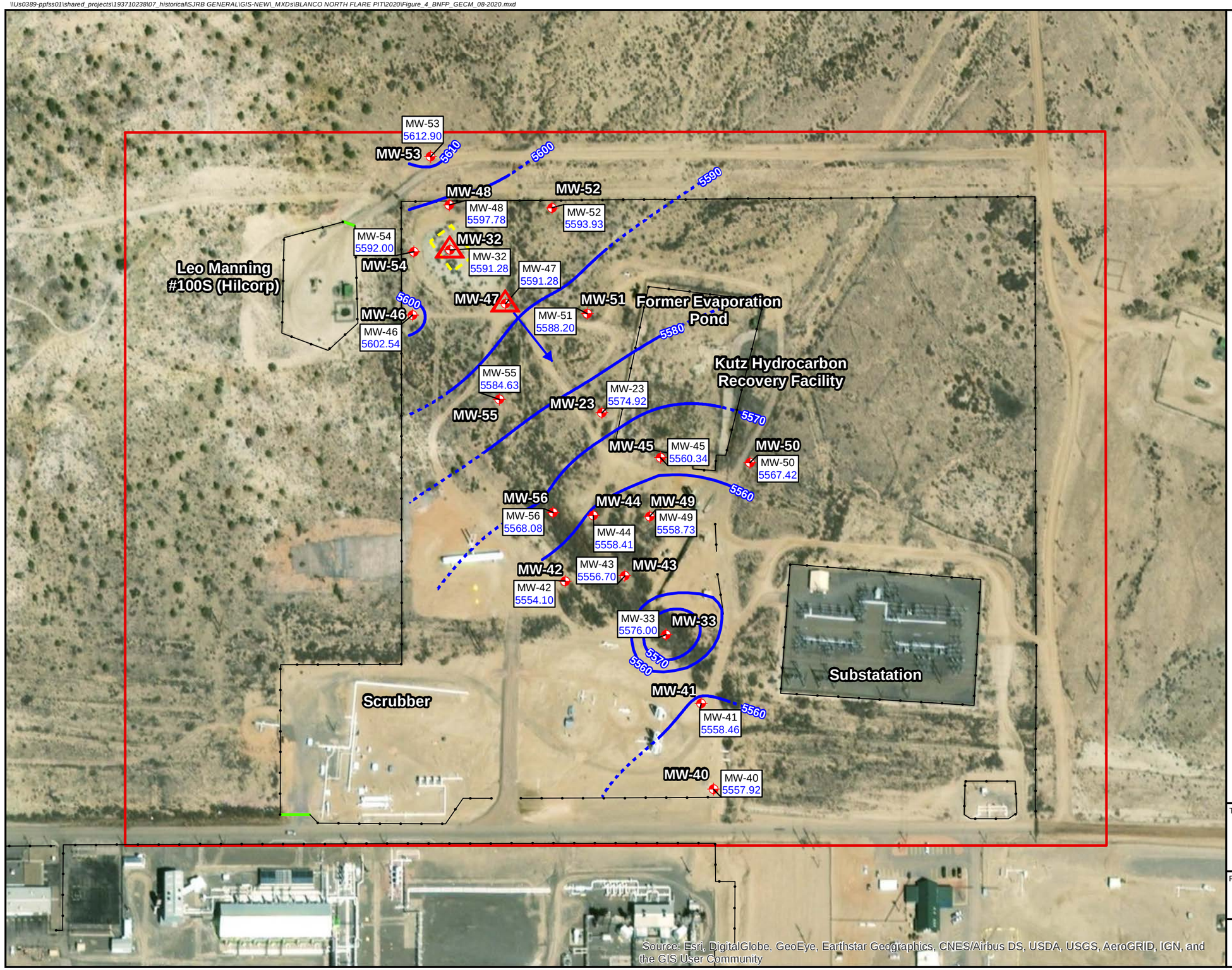
PROJECT:

BLANCO PLANT - NORTH FLARE PIT
BLOOMFIELD, NEW MEXICO

Stantec

Figure No.: 6

\\Us0389-ppfss01\shared_projects\193710238\07_historical\SJRB GENERAL\GIS-NEW_MXDs\BLANCO NORTH FLARE PIT\2020\Figure_4_BNFP_GECM_08-2020.mxd



LEGEND

- MONITORING WELL
- MONITORING WELL WITH MEASURABLE FREE PRODUCT
- FENCE
- GATE
- FORMER FLARE PIT
- STUDY AREA
- 6021.62 — GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS WHERE PRESENT (FEET ABOVE MEAN SEA LEVEL).
- 6021 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL).
- DIRECTION OF APPARENT GROUNDWATER FLOW

N

SCALE IN FEET

0 100 200

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	9/20/2021	SAH	SAH	SRV

TITLE:

GROUNDWATER ELEVATION MAP
AUGUST 18, 2020

PROJECT:

BLANCO PLANT - NORTH FLARE PIT
BLOOMFIELD, NEW MEXICO

Stantec

Figure No.: 7

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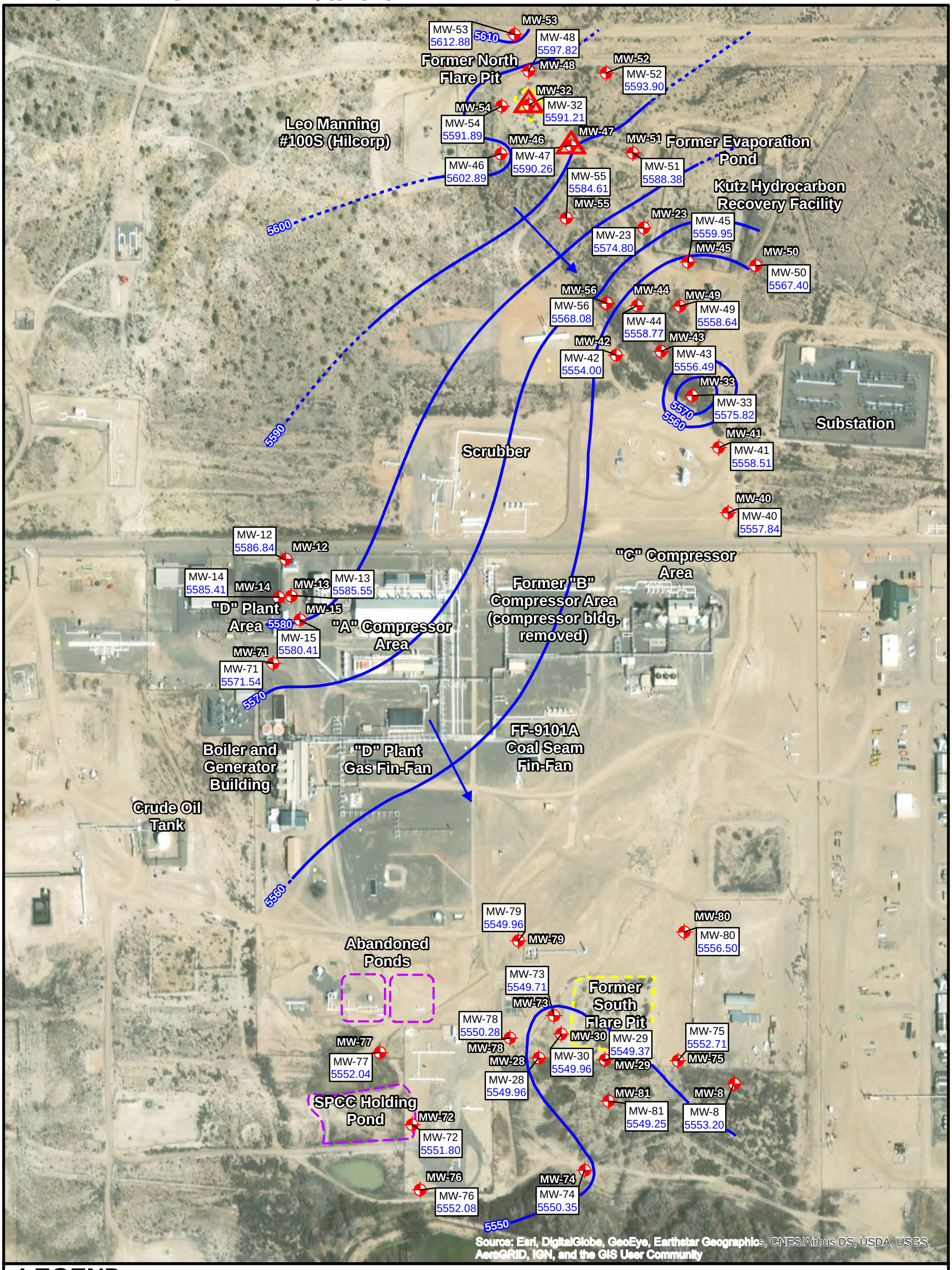


LEGEND

- MONITORING WELL
- MONITORING WELL WITH MEASURABLE FREE PRODUCT
- SITE FEATURE
- FLARE PIT
- 6021.62 — GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS WHERE PRESENT (FEET ABOVE MEAN SEA LEVEL).
- 6021 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL).
- DIRECTION OF APPARENT GROUNDWATER FLOW

N

SCALE IN FEET

0 200 400

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	5/20/2021	SAH	SAH	SRV

TITLE:

GROUNDWATER ELEVATION MAP
NOVEMBER 17, 2020

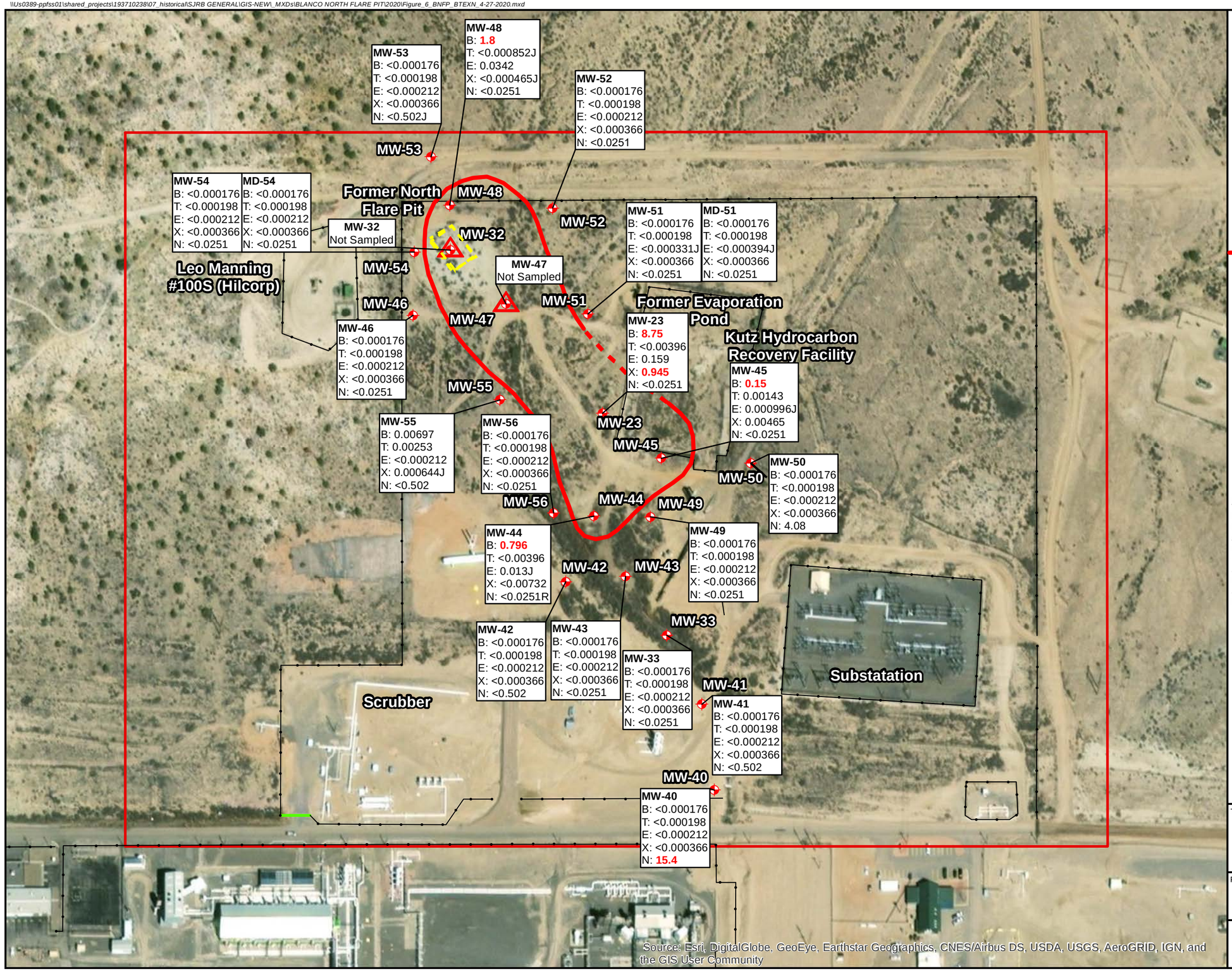
PROJECT:

BLANCO PLANT
BLOOMFIELD, NEW MEXICO

Stantec

Figure No.: 8

\\Us0389-ppfss01\shared_projects\193710238\07_historical\SJRB GENERAL\GIS-NEW_MXDs\BLANCO NORTH FLARE PIT\2020\Figure_6_BNFP_BTEXN_4-27-2020.mxd



LEGEND

- MONITORING WELL
- MONITORING WELL WITH MEASURABLE FREE PRODUCT
- FENCE
- GATE
- FORMER FLARE PIT
- STUDY AREA
- 0.01 — BENZENE 0.01 mg/L ISOCONCENTRATION IN GROUNDWATER. DASHED WHERE INFERRED.

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE/RED** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
mg/L = MILLIGRAMS PER LITER
<1 = BELOW METHOD DETECTION LIMIT
J = INDICATES ESTIMATED CONCENTRATION INDETERMINATE BIAS
J- = INDICATES ESTIMATED CONCENTRATION BIAS LOW
MD-XX = DUPLICATE SAMPLE RESULT

ANALYTE	NMWQCC STANDARDS
B = Benzene	0.01 mg/L
T = Toluene	0.75 mg/L
E = Ethylbenzene	0.75 mg/L
X = Total Xylenes	0.62 mg/L
N = Nitrate	10 mg/L

N

SCALE IN FEET
0 100 200

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	5/20/2021	SAH	SAH	SRV

TITLE:
GROUNDWATER ANALYTICAL RESULTS APRIL 27 & 28, 2020

PROJECT:
BLANCO PLANT - NORTH FLARE PIT BLOOMFIELD, NEW MEXICO

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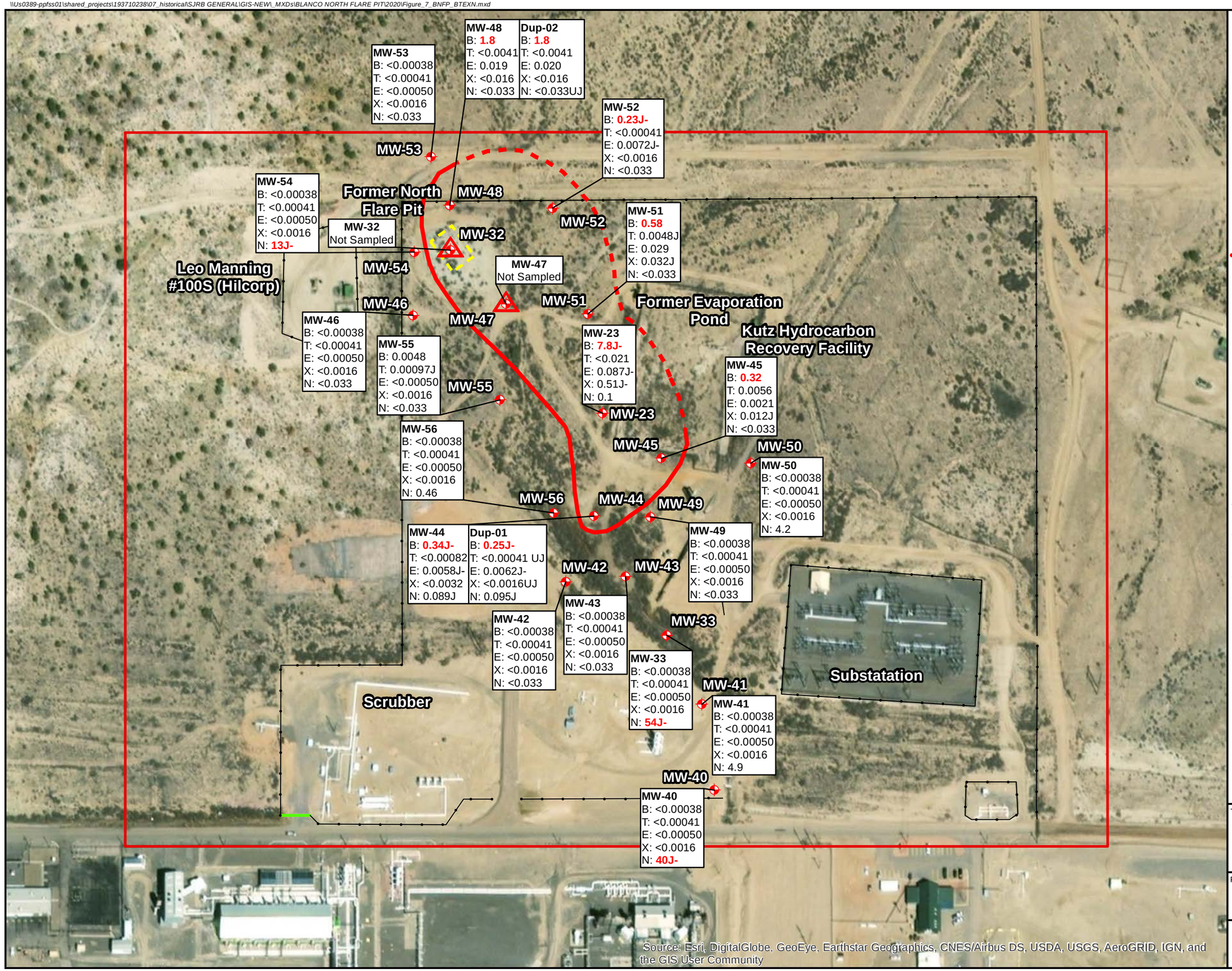
Figure No.: 9

\\Us0389-ppfss01\shared_projects\193710238\07_historical\SJRB GENERAL\GIS-NEW_MXDs\BLANCO NORTH FLARE PIT\2020\Figure_7_BNFP_BTEXN.mxd



LEGEND

- MONITORING WELL
- MONITORING WELL WITH MEASURABLE FREE PRODUCT
- FENCE
- GATE
- FORMER FLARE PIT
- STUDY AREA
- 0.01 — BENZENE 0.01 mg/L ISOCONCENTRATION IN GROUNDWATER. DASHED WHERE INFERRED.

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE/RED** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
NS = NOT SAMPLED
mg/L = MILLIGRAMS PER LITER
<1 = BELOW METHOD DETECTION LIMIT
J = INDICATES ESTIMATED CONCENTRATION INDETERMINATE BIAS
J- = INDICATES ESTIMATED CONCENTRATION BIAS LOW
Dup = DUPLICATE SAMPLE RESULT

ANALYTE	NMWQCC STANDARDS
B = Benzene	0.01 mg/L
T = Toluene	0.75 mg/L
E = Ethylbenzene	0.75 mg/L
X = Total Xylenes	0.62 mg/L
N = Nitrate	10 mg/L

N

SCALE IN FEET
0 100 200

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	5/20/2021	SAH	SAH	SRV

TITLE:
GROUNDWATER ANALYTICAL RESULTS NOVEMBER 18, 2020

PROJECT:
BLANCO PLANT - NORTH FLARE PIT BLOOMFIELD, NEW MEXICO

Stantec

Figure No.: 10

Appendix A
Soil Boring Logs and Well Completion Diagrams

ch2m: SM	PROJECT NUMBER 477041.06.03	BORING NUMBER SB-01	SHEET # 1 of 2
	SOIL BORING LOG		LOGGER: **Luke Hill/CH2M**
PROJECT : **Blanco Gas Plant - North Flare Pit Site Investigation**	Start Date: **9/22/2017** End Date: **9/22/2017**	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087378.354 Easting: 2685757.531 / TOTAL DEPTH OF BORING: **43 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		**Soil removed via hydro-excavation**	
2	1	SP	**POORLY GRADED SAND** (SP), 5YR 3/3, dark reddish brown, moist, non-plastic, noncohesive, loose, 5 - 7 % clay	VOCs = 0.2 ppm
3				
4				
5				
6				
7	0		**Soil removed via hydro-excavation**	
8				
9				
10				
11				
12				
13	11	SP	**SILTY SAND** (SP), 2.5Y 5/3, light olive brown, dry, non-plastic, noncohesive, predominantly fine-grained sand	VOCs = 8.2 ppm
14				
15				VOCs = 10.1 ppm
16				
17				VOCs = 2.5 ppm
18				
19				VOCs = 3.1 ppm
20				
21				
22				
23				VOCs = 2.0 ppm
24	2	CL	**LEAN CLAY** (CL), 2.5Y 6/2, light brownish gray, dry, non-plastic, noncohesive	VOCs = 3.0 ppm
25				

Sampler Signature: **L. Hill** Date: **9/22/2017**

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER SB-01
	SOIL BORING LOG	SHEET # 2 of 2
		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/22/2017 End Date: 9/22/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket
COORDINATES: Northing: 2087378.354 Easting: 2685757.531	TOTAL DEPTH OF BORING: 43 feet	

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	7	CL	LEAN CLAY (CL), 2.5Y 6/2, light brownish gray, dry, non-plastic, noncohesive	
27				VOCs = 1.0 ppm
28				VOCs = 1.0 ppm
29				
30				VOCs = 0.3 ppm
31				
32				VOCs = 0.8 ppm
33	5	CL	LEAN CLAY (CL), 2.5Y 6/2, light brownish gray, dry, non-plastic, noncohesive	
34				
35				VOCs = 0.8 ppm
36				
37				VOCs = 0.3 ppm
38	2	CL	LEAN CLAY (CL), 2.5Y 3/1, very dark gray, dry to moist, low plasticity, cohesive	
39				VOCs = 0.6 ppm
40	3	Shale	SHALE, 2.5Y 3/1, and 2.5/1, very dark gray and black, medium hard	
41				
42				
43	1	Shale	SHALE, 2.5Y 3/1 and 2.5/1, very dark gray and black, hard	
44			End of boring	
45				
46				
47				
48				
49				
50				

Sampler Signature: L. Hill Date: 9/22/2017

	PROJECT NUMBER	BORING NUMBER	
ch2m: SM	477041.06.03	SB-02	

SOIL BORING LOG

PROJECT : **Blanco Gas Plant - North Flare Pit Site Investigation**	Start Date: **9/22/2017** End Date: **9/22/2017**	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087303.947 Easting: 2685793.953

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		**Soil removed via hydro-excavation**	
2	1	SP	**POORLY GRADED SAND** (SP), 5YR 5/2, reddish gray, dry, non-plastic, noncohesive, loose, 5 - 10 % silt	VOCs = 0.3 ppm
3	0		**Soil removed via hydro-excavation**	
13	13	SP	**POORLY GRADED SAND** (SP), 2.5Y 5/3, light olive brown, dry, non-plastic, noncohesive, predominantly fine to medium grained sand	VOCs = 0.3 ppm VOCs = 0.2 ppm VOCs = 0.2 ppm VOCs = 0.4 ppm VOCs = 0.3 ppm VOCs = 1.0 ppm VOCs = 1.1 ppm

Sampler Signature: **L. Hill** Date: **9/22/2017**

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER SB-02	SHEET # 2 of 2	
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M	
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/22/2017 End Date: 9/22/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087303.947 Easting: 2685793.953	TOTAL DEPTH OF BORING: 43 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	1	SP	**POORLY GRADED SAND** (SP), 2.5Y 5/3, light olive brown, dry, non-plastic, noncohesive, predominantly fine to medium grained sand	VOCs = 2.1 ppm
27	2	CL	**LEAN CLAY** (CL), 2.5Y 7/2, light gray, dry, non-plastic, noncohesive	VOCs = 15 ppm
28				
29	3	CL	**LEAN CLAY** (CL), 2.5Y 3/1, very dark gray, dry, non-plastic, noncohesive	VOCs = 850 ppm staining, strong odor
30				
31				VOCs = 1003.5 ppm staining, strong odor
32	2	CL	**LEAN CLAY** (CL), 2.5Y 4/3, olive brown, dry, non-plastic, noncohesive	VOCs = 24.1 ppm
33				
34	7	CL	**LEAN CLAY** (CL), 2.5Y 4/3, olive brown, dry, non-plastic, noncohesive	
35				VOCs = 24.8 ppm
36				VOCs = 12.5 ppm
37				
38				VOCs = 15 ppm
39				
40				VOCs = 36.2 ppm
41	4	Shale	**SHALE**, 2.5Y 3/1 and 2.5/1, very dark gray and black, medium hard to hard	
42				
43				
44				
45			end of boring	
46				
47				
48				
49				
50				

Sampler Signature: L. Hill Date: 9/22/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER SB-03	SHEET # 1 of 2
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/22/2017 End Date: 9/22/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087323.734 Easting: 2685868.896 TOTAL DEPTH OF BORING: 49 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		**Soil removed via hydro-excavation**	
2	1	ML	**SILTY SAND** (P), 5Y 4/2, olive gray, dry, non-plastic, noncohesive, fine grained sand	VOCs = 0.0 ppm
3	0		**Soil removed via hydro-excavation**	
13	13	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 2.5Y 4/4, olive brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 0.5 ppm VOCs = 1.5 ppm VOCs = 4.8 ppm VOCs = 4.6 ppm VOCs = 9.4 ppm

Sampler Signature: L. Hill Date: 9/22/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER SB-03	SHEET # 2 of 2	
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M	
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/22/2017 End Date: 9/22/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087323.734 Easting: 2685868.896	TOTAL DEPTH OF BORING: 49 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	1	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 2.5Y 4/4, olive brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 1.0 ppm odor
27			**LEAN CLAY WITH SAND** (CL), 2.5Y 3/1 and 2.5/1, very dark gray and black, moist, low plasticity, cohesive, fine to medium grained sand	
28	4	CL		VOCs = 1,800 ppm staining, strong odor
29				
30				VOCs = 2,000+ ppm staining, strong odor
31	14	CL	**CLAY WITH SAND** (CL), 2.5Y 6/4, light yellowish brown, dry to moist, non-plastic, noncohesive, fine grained sand, lenses of 2.5Y 3/1 with very dark gray staining	VOCs = 1,600+ ppm odor
32				
33				
34				VOCs = 1,400+ ppm odor
35				
36				VOCs = 1,706.2 ppm odor
37				
38				
39				VOCs = 1,813.9 ppm odor
40				
41				VOCs = 1,966.2 ppm odor
42				
43				VOCs = 1,500+ ppm odor
44				
45	5	Shale	**SHALE**, 5Y 6/3, pale olive, dry, medium hard to hard	
46				
47				
48				
49				
50			end of boring	

Sampler Signature: L. Hill Date: 9/22/2017

ch2m SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-40	SHEET # 1 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/7/2017 End Date: 9/23/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086220.888 Easting: 2686334.628 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		Soil removed via hydro-excavation	
2	1	SP	POORLY GRADED SAND (SP), 5YR 5/2, reddish gray, dry, non-plastic, noncohesive, medium density, predominately fine to medium grained sand, some silt	VOCs = 0.0 ppm
3	0		Soil removed via hydro-excavation	
12	4	SP-SM	POORLY GRADED SAND WITH SILT (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, predominantely fine to medium grained sand	VOCs = 0.5 ppm VOCs = 0.3 ppm
16	4	CL	LEAN CLAY (CL), 5Y 5/3, olive, dry, low plasticity, cohesive	VOCs = 0.2 ppm
20	5	CL	LEAN CLAY WITH SAND (CL), 5Y 5/3, olive, dry, low plasticity, cohesive, fine grained sand	VOCs = 0.0 ppm VOCs = 0.0 ppm
25				

Sampler Signature: L. Hill Date: 9/7/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-40
	SOIL BORING LOG	SHEET # 2 of 4
		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/7/2017 End Date: 9/23/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket
COORDINATES: Northing: 2086220.888 Easting: 2686334.628	TOTAL DEPTH OF BORING: 100 feet	

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	3	CL	**LEAN CLAY WITH SAND** (CL), 5Y 5/3, olive, dry, low plasticity, cohesive, fine grained sand	VOCs = 0.0 ppm
27				
28				VOCs = 0.0 ppm
29	2	SP	**POORLY GRADED SAND** (SP), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	
30				VOCs = 0.0 ppm
31	2	CL	**LEAN CLAY** (CL), 5Y 4/2, olive gray, dry to moist, medium plasticity, cohesive	
32				VOCs = 0.5 ppm
33	8	CL	**LEAN CLAY** (CL), 5Y 3/2, dark olive gray, dry to moist, medium plasticity, cohesive	
34				VOCs = 0.4 ppm
35				
36				VOCs = 0.5 ppm
37				
38				VOCs = 0.2 ppm
39				
40				VOCs = 0.2 ppm
41	5	CL	**LEAN CLAY WITH SAND** (CL), 5Y 4/2, olive gray, dry to moist, medium plasticity, cohesive, predominantly fine to medium grained sand	VOCs = 2.0 ppm
42				
43				VOCs = 0.2 ppm
44				
45				VOCs = 0.2 ppm
46	5	CL	**LEAN CLAY WITH SAND** (CL), 5Y 4/2, olive gray, dry to moist, low plasticity, cohesive, predominately medium grained sand	
47				VOCs = 0.5 ppm
48				
49				VOCs = 0.5 ppm
50				

Sampler Signature: L. Hill Date: 9/7/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-40	SHEET # 3 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/7/2017 End Date: 9/23/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086220.888 Easting: 2686334.628 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	5	CL	**LEAN CLAY WITH SAND** (CL), 5Y 4/2, olive gray, dry to moist, low plasticity, cohesive, predominately medium grained sand	VOCs = 0.2 ppm
52				
53				VOCs = 0.2 ppm
54				
55				VOCs = 0.1 ppm
56	3	CL	**LEAN CLAY WITH SAND** (CL), 5Y 5/3, olive, dry to moist, low to medium plasticity, cohesive, medium grained sand	VOCs = 0.3 ppm
57				
58				
59	5	Sandstone	**SANDSTONE**, 5Y 7/2, light gray, fine to medium grained sand, hard	VOCs = 0.4 ppm
60				
61				
62				
63	6	Sandstone	**SANDSTONE**, 5Y 7/2, light gray, fine to medium grained sand, hard	
64				
65				
66				
67				
68				
69	7	Sandstone/ Shale	**SANDSTONE,** 5Y 7/2, light gray, fine to medium grained sand, hard, interbedded with **SHALE**.	
70				
71				
72				
73				
74				
75				

Sampler Signature: L. Hill Date: 9/7/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-40	SHEET # 4 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/7/2017 End Date: 9/23/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086220.888 Easting: 2686334.628 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76	5	Sandstone	**SANDSTONE**, 5Y 7/2, light gray, fine to medium grained sand, hard	
77				
78				
79				
80	7	Sandstone	**SANDSTONE,** 5Y 7/2, light gray, fine to medium grained sand, hard	
81				
82				
83				
84				
85	6	Sandstone	**SANDSTONE**, 5Y 7/2, light gray, fine to medium grained sand, hard	
86				
87				
88				
89				
90	7	Sandstone	**SANDSTONE**, 5Y 7/2, light gray, fine to medium grained sand, hard	
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				end of boring

Sampler Signature: L. Hill Date: 9/7/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-41	SHEET # 1 of 4
	SOIL BORING LOG		LOGGER: **Luke Hill/CH2M**
PROJECT : **Blanco Gas Plant - North Flare Pit Site Investigation**	Start Date: **9/13/2017** End Date: **9/26/2017**	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086397.095 Easting: 2686317.074 TOTAL DEPTH OF BORING: **100 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		**Soil removed via hydro-excavation**	
2	1	SP-SM	**POORLY GRADED SAND** (SP), 2.5YR 4/4, reddish brown, dry, non-plastic, noncohesive, loose, some silt	VOCs = 0.0 ppm
3			**Soil removed via hydro-excavation**	
4				
5				
6				
7	0			
8				
9				
10				
11				
12				
13	13	SP-SM	**POORLY GRADED SAND WITH SILT AND GRAVEL** (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand, 0.5" - 1.0" gravel	VOCs = 30 ppm
14				
15				VOCs = 30 ppm
16				
17				VOCs = 25 ppm
18				
19				VOCs = 22 ppm
20				
21				VOCs = 10 ppm
22				
23				VOCs = 4.3 ppm
24				
25				

Sampler Signature: **L. Hill** Date: **9/13/2017**

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-41	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/13/2017 End Date: 9/26/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086397.095 Easting: 2686317.074 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	5	SP-SM	**POORLY GRADED SAND WITH SILT AND GRAVEL** (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand, 0.5" - 1.0" gravel	VOCs = 5.0 ppm
27				
28				VOCs = 3.5 ppm
29				
30				VOCs = 2.2 ppm
31	8	SP-SM	**POORLY GRADED SAND WITH SILT AND GRAVEL** (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand, 0.5" - 1.0" gravel	
32				
33				
34				VOCs = 0.5 ppm
35				
36				VOCs = 8.0 ppm
37				
38				VOCs = 1.3 ppm
39	12	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 4/3, brown, dry to moist, non-plastic, noncohesive, fine to medium grained sand	
40				VOCs = 1.3 ppm
41				VOCs = 1.1 ppm
42				
43				VOCs = 0.6 ppm
44				
45				VOCs = 0.2 ppm
46				
47				VOCs = 0.4 ppm
48				VOCs = 0.2 ppm
49				
50				

Sampler Signature: L. Hill Date: 9/13/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-41	SHEET # 3 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/13/2017 End Date: 9/26/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086397.095 Easting: 2686317.074 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	3	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 4/3, brown, dry to moist, non-plastic, noncohesive, fine to medium grained sand	VOCs = 0.2 ppm
52				
53				VOCs = 0.1 ppm
54	8	CL	**LEAN CLAY WITH SAND** (CL), 2.5Y 4/2, dark grayish brown, dry to moist, low to medium plasticity, cohesive, fine to medium grained sand	
55				VOCs = 0.1 ppm
56				
57				VOCs = 0.3 ppm
58				VOCs = 0.1 ppm
59				
60				
61				VOCs = 0.2 ppm
62	4	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, medium hard to hard	
63				
64				
65				
66	10	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, medium hard to hard	
67				
68				
69				
70				
71				
72				
73				
74				
75				

Sampler Signature: L. Hill Date: 9/13/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-41	SHEET # 4 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/13/2017 End Date: 9/26/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086397.095 Easting: 2686317.074 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76			**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, medium hard to hard	
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88	25	Sandstone		
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				end of boring

Sampler Signature: L. Hill Date: 9/13/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-42	SHEET # 1 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/14/2017 End Date: 9/24/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086656.211 Easting: 2686045.200 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		Soil removed via hydro-excavation	
2	1	SP	POORLY GRADED SAND (SP), 5YR 4/4, reddish brown, dry, non-plastic, noncohesive, medium density, some silt	VOCs = 0.0 ppm
3				
4				
5				
6				
7	0		Soil removed via hydro-excavation	
8				
9				
10				
11				
12				
13				
14	6	ML	SILT (ML), 10YR 6/3, pale brown, dry, non-plastic, noncohesive	VOCs = 0.0 ppm
15				
16				VOCs = 0.0 ppm
17				
18				VOCs = 0.0 ppm
19				
20	6	SP-SM	POORLY GRADED SAND WITH SILT (SP-SM), 10YR 7/3, very pale brown, dry, non-plastic, noncohesive, predominantly fine to medium grained sand	VOCs = 0.0 ppm
21				
22				VOCs = 0.0 ppm
23				
24				VOCs = 0.2 ppm
25				

Sampler Signature: L. Hill Date: 9/14/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-42	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: **Luke Hill/CH2M**
PROJECT : **Blanco Gas Plant - North Flare Pit Site Investigation**	Start Date: **9/14/2017** End Date: **9/24/2017**	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086656.211 Easting: 2686045.200 TOTAL DEPTH OF BORING: **100 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	6	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 7/3, very pale brown, dry, non-plastic, noncohesive, predominantly fine to medium grained sand	VOCs = 0.1 ppm
27				
28				VOCs = 0.0 ppm
29				
30				VOCs = 0.0 ppm
31				
32	4	ML	**SILT** (ML), 2.5Y 3/1, very dark gray, dry, non-plastic, noncohesive	VOCs = 0.0 ppm
33				
34				VOCs = 0.0 ppm
35				
36	7	ML	**SILT** (ML), 2.5Y 3/1, very dark gray, dry, non-plastic, noncohesive	VOCs = 0.0 ppm
37				
38				VOCs = 0.0 ppm
39				
40				VOCs = 0.0 ppm
41				
42				VOCs = 0.0 ppm
43				
44	2	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 5/8, yellowish brown, dry to moist, non-plastic, noncohesive, predominantly fine to medium grained sand	VOCs = 0.0 ppm
45				
46	5	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard	
47				
48				
49				
50				

Sampler Signature: L. Hill Date: 9/14/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-42	SHEET # 3 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/14/2017 End Date: 9/24/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086656.211 Easting: 2686045.200 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51			**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard	
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63	25	Sandstone		
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				

Sampler Signature: L. Hill Date: 9/14/2017

ch2m SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-42	SHEET # 4 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/14/2017 End Date: 9/24/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086656.211 Easting: 2686045.200 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76			**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, medium to hard	
77				
78				
79				
80				
81				
82				
83				
84				
85	20	Sandstone		
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96			**SHALE**, GLEY 2 3/1, very dark bluish gray, wet, intact, some fractures. At 100, shale becomes more friable, fractured, and dry. At 102, shale is back to intact and dry.	
97				
98	5	Shale		
99				
100				end of boring

Sampler Signature: L. Hill Date: 9/14/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-43	SHEET # 1 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/8/2017 End Date: 9/10/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER:	COORDINATES: Northing: 2086663.621 Easting: 2686176.495 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	
1	0		Soil removed via hydro-excavation	
2	1	SP-ML	POORLY GRADED SAND (SP), 5YR 4/4, reddish brown, dry, non-plastic, medium density, some silt	VOCs = 0.0 ppm
3	0		Soil removed via hydro-excavation	
15	6	SP-SM	POORLY GRADED SAND WITH SILT (SP-SM), 10YR 4/4, dark yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 2.2 ppm
17				VOCs = 1.3 ppm
19				VOCs = 0.5 ppm
21	4	SP-SM	POORLY GRADED SAND WITH SILT (SP-SM), 10YR 4/4, dark yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 3.1 ppm
25	1	CL	LEAN CLAY WITH SAND (CL), 10YR 4/4, dark yellowish brown, dry, low plasticity, cohesive, 20 - 30% fine to medium grained sand	

Sampler Signature: L. Hill 9/8/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-43	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/8/2017 End Date: 9/10/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086663.621 Easting: 2686176.495 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	3	CL	**LEAN CLAY WITH SAND** (CL), 10YR 4/4, dark yellowish brown, dry, low plasticity, cohesive, 20 - 30% fine to medium grained sand	VOCs = 4.5 ppm
27				
28				VOCs = 0.6 ppm
29	5	CL	**LEAN CLAY WITH SAND** (CL), 10YR 4/3, brown, dry to moist, medium plasticity, cohesive, 20 - 30% fine to medium grained sand	
30				VOCs = 0.2 ppm
31				
32				VOCs = 0.7 ppm
33				
34	1	CL	**LEAN CLAY WITH SAND** (CL), 10YR 4/3, brown, dry to moist, medium plasticity, cohesive, 10% fine to medium grained sand	VOCs = 0.1 ppm
35	4	CL	**LEAN CLAY WITH SAND** (CL), 10YR 4/3, brown, dry, medium plasticity, cohesive, fine grained sand	
36				VOCs = 0.3 ppm
37				
38				VOCs = 2.8 ppm
39	2	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 4/4, dark yellowish brown, non-plastic, noncohesive, fine to medium grained sand	
40				VOCs = 3.0 ppm
41	6	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 4/4, dark yellowish brown, non-plastic, noncohesive, fine to medium grained sand	
42				VOCs = 5.3 ppm
43				
44				VOCs = 3.0 ppm
45				
46				VOCs = 4.3 ppm
47	3	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 4/4, dark yellowish brown, non-plastic, noncohesive, fine to medium grained sand	
48				
49				VOCs = 2.4 ppm
50	1	CL	**LEAN CLAY WITH SAND** (CL), 10YR 3/1, very dark gray, moist, medium plasticity, cohesive, fine to medium grained sand	

Sampler Signature: L. Hill Date: 9/8/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-43	SHEET # 3 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/8/2017 End Date: 9/10/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086663.621 Easting: 2686176.495 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	5	CL	**LEAN CLAY WITH SAND** (CL), 10YR 3/1, very dark gray, moist, medium plasticity, cohesive, fine to medium grained sand	VOCs = 4.5 ppm
52				
53				VOCs = 6.9 ppm
54				
55				VOCs = 23.0 ppm
56	2	CL	**LEAN CLAY WITH SAND** (CL), 10YR 5/1, gray, moist, medium plasticity, cohesive, ~30 - 40% medium grained sand	VOCs = 20.5 ppm
57				
58	8	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard, slightly weathered	
59				
60				
61				
62				
63				
64				
65				
66	2	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard, slightly weathered	
67				
68	8	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard, slightly weathered	
69				
70				
71				
72				
73				
74				
75				

Sampler Signature: L. Hill Date: 9/8/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-43	SHEET # 4 of 4
	SOIL BORING LOG		LOGGER: **Luke Hill/CH2M**
PROJECT : **Blanco Gas Plant - North Flare Pit Site Investigation**	Start Date: **9/8/2017** End Date: **9/10/2017**	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086663.621 Easting: 2686176.495 / TOTAL DEPTH OF BORING: **100 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76	3	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard, slightly weathered	
77				
78				
79	8	Shale	**SHALE**, 7.5YR 2.5/1 to 7.5YR 3/1, black to very dark gray, thinly bedded, medium hard	
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97	2	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard	
98				
99	2	Shale	**SHALE**, 7.5YR 2.5/1 to 7.5YR 3/1, black to very dark gray, thinly bedded, medium hard	
100				end of boring

Sampler Signature: **L. Hill** Date: **9/8/2017**

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-44
	SOIL BORING LOG	SHEET # 1 of 4
		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/10/2017 End Date: 9/11/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket
		COORDINATES: Northing: 2086793.892 Easting: 2686103.988
		TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		Soil removed via hydro-excavation	
2	1	SP	POORLY GRADED SAND (SP), 5YR 4/4, reddish brown, dry, non-plastic, noncohesive, medium density	VOCs = 0.0 ppm
3	0		Soil removed via hydro-excavation	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15	6	SP-SM	POORLY GRADED SAND WITH SILT (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 100 ppm
16				
17				VOCs = 115 ppm
18				
19				VOCs = 125 ppm
20				
21	2	SP-SM	POORLY GRADED SAND WITH SILT (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, predominantly medium grained sand	VOCs = 38 ppm
22				
23	2	CL	LEAN CLAY (CL), 7.5YR 4/1, dark gray, dry, high plasticity, cohesive	VOCs = 9.7 ppm
24				
25	1	SP-SM	POORLY GRADED SAND WITH SILT (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	

Sampler Signature: L. Hill Date: 9/10/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-44	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/10/2017 End Date: 9/11/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086793.892 Easting: 2686103.988 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	1	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 30 ppm
27	2	CL	**LEAN CLAY** (CL), 7.5YR 4/1, dark gray, dry, high plasticity, cohesive	
28				VOCs = 30 ppm
29	2	CL	**LEAN CLAY WITH SAND** (CL), dry, 7.5YR 4/1, dark gray, dry, medium plasticity, cohesive, fine to medium grained sand	
30				VOCs = 25 ppm
31	8	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 1.6 ppm
32				
33				VOCs = 0.5 ppm
34				
35				VOCs = 0.5 ppm
36				
37				VOCs = 0.5 ppm
38				
39	6	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 748 ppm odor
40				
41				VOCs = 1,000+ ppm odor
42				
43				VOCs = 1,000+ ppm odor
44				
45	4	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 1,000 ppm
46				
47				VOCs = 8.1 ppm
48				
49	2	CL	**LEAN CLAY WITH SAND** (CL), 10YR 5/4, yellowish brown, dry, low plasticity, cohesive, fine grained sand	VOCs = 1.2 ppm
50				

Sampler Signature: L. Hill Date: 9/10/2017

ch2m: SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-44	SHEET # 3 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/10/2017 End Date: 9/11/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086793.892 Easting: 2686103.988 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	5	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 1.7 ppm
52				
53				VOCs = 120 ppm odor
54				VOCs = 101 ppm odor
55				
56	6	CL	**LEAN CLAY WITH SAND** (CL), 2.5Y 4/2, dark grayish brown, moist, low plasticity, cohesive, fine grained sand	VOCs = 232 ppm odor
57				
58				VOCs = 260 ppm strong odor
59				
60				VOCs = 235 ppm strong odor
61				
62	4	CL	**LEAN CLAY WITH GRAVEL AND SAND** (CL), 7.5YR 3/1, very dark gray, moist, medium plasticity, cohesive, medium grained sand, 0.5" - 1.0" subangular gravel.	VOCs = 383 ppm strong odor, black staining
63				
64				VOCs = 363 ppm strong odor, black staining
65				
66	5	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 0.0 ppm
67				
68				
69				VOCs = 0.0 ppm
70				
71	5	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard	
72				
73				
74				
75				

Sampler Signature: L. Hill Date: 9/10/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-44	SHEET # 4 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/10/2017 End Date: 9/11/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086793.892 Easting: 2686103.988 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76			**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard	
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88	25	Sandstone		
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				end of boring

Sampler Signature: L. Hill Date: 9/10/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-45
	SOIL BORING LOG	SHEET # 1 of 4
		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/11/2017 End Date: 9/12/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket
COORDINATES: Northing: 2086915.306 Easting: 2686248.014	TOTAL DEPTH OF BORING: 100 feet	

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		Soil removed via hydro-excavation	
2	1	SP	POORLY GRADED SAND (SP), 5YR 4/4, reddish brown, dry, non-plastic, noncohesive, loose, some silt	VOCs = 0.3 ppm
3	0		Soil removed via hydro-excavation	
12	7	SP-SM	POORLY GRADED SAND WITH SILT (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 0.5 ppm VOCs = 0.4 ppm VOCs = 0.5 ppm
19	7	SP-SM	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand, 0.5" - 3.0" gravel/cobbles	VOCs = 0.5 ppm VOCs = 3.6 ppm

Sampler Signature: L. Hill Date: 9/11/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-45	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: **Luke Hill/CH2M**
PROJECT : **Blanco Gas Plant - North Flare Pit Site Investigation**	Start Date: **9/11/2017** End Date: **9/12/2017**	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086915.306 Easting: 2686248.014 / TOTAL DEPTH OF BORING: **100 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	5	SP-SM	**POORLY GRADED SAND WITH SILT AND GRAVEL** (SP-SM), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand, 0.5" - 3.0" gravel/cobbles	VOCs = 2.8 ppm
27				
28				VOCs = 1.5 ppm
29				
30				VOCs = 0.6 ppm
31	13	CL	**LEAN CLAY WITH SAND** (CL), 2.5Y 2.5/1 and 2.5Y 3/1, black to very dark gray, dry to moist, low to medium plasticity, cohesive, fine grained sand	VOCs = 1,000+ ppm staining, strong odor
32				
33				VOCs = 2,000+ ppm staining, strong odors
34				
35				VOCs = 2,000+ ppm staining, strong odors
36				
37				VOCs = 2,000+ ppm staining, strong odors
38				
39				VOCs = 2,000+ ppm staining, strong odors
40				
41				
42				VOCs = 2,000+ ppm staining, strong odors
43				
44	6	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 2.5Y 3/1 and 2.5Y 2.5/1, black to very dark gray, dry to moist, non-plastic, noncohesive, fine to medium grained sand	VOCs = 2,000+ ppm staining, strong odors
45				
46				VOCs = 2,000+ ppm staining, strong odors
47				
48				VOCs = 2,000+ ppm staining, strong odors
49				
50	1	CL	**LEAN CLAY WITH SAND** (CL), 2.5Y 2.5/1 and 2.5Y 3/1, black to very dark gray, dry to moist, low to medium plasticity, cohesive, fine to medium grained sand	

Sampler Signature: **L. Hill** Date: **9/11/2017**

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-45	SHEET # 3 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/11/2017 End Date: 9/12/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086915.306 Easting: 2686248.014 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	8	CL	**LEAN CLAY WITH SAND** (CL), 2.5Y 2.5/1 and 2.5Y 3/1, black to very dark gray, dry to moist, low to medium plasticity, cohesive, fine to medium grained sand	VOCs = 2,000+ ppm strong odor, staining
52				
53				VOCs = 2,000+ ppm strong odor, staining
54				
55				VOCs = 2,000+ ppm strong odor, staining
56				
57				VOCs = 2,000+ ppm strong odor, staining
58				
59	12	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 2.5Y 2.5/1 and 2.5Y 3/1, black to very dark gray, dry to moist, non-plastic, noncohesive, fine to medium grained sand	VOCs = 2,000+ ppm strong odor, staining
60				
61				VOCs = 2,000+ ppm strong odor, staining
62				
63				VOCs = 2,000+ ppm strong odor, staining
64				
65				VOCs = 2,000+ ppm strong odor, staining
66				
67				VOCs = 2,000+ ppm strong odor, staining
68				
69				VOCs = 2,000+ ppm strong odor, staining
70				
71	5	Sandstone/ Shale	**INTERBEDDED SANDSTONE AND SHALE**, weathered sandstone, fractured zones are moist to wet, fine to medium grained sand, 2.5Y 6/1, gray, medium hard	
72				
73				
74				
75				

Sampler Signature: L. Hill Date: 9/11/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-45	SHEET # 4 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/11/2017 End Date: 9/12/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2086915.306 Easting: 2686248.014 TOTAL DEPTH OF BORING: 100 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76	5	Sandstone/ Shale	**INTERBEDDED SANDSTONE/SHALE**, weathered sandstone, fractured zones are moist to wet, fine to medium grained sand, 2.5Y 6/1, gray, medium hard	
77				
78				
79				
80				
81	20	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard	
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				end of boring

Sampler Signature: L. Hill Date: 9/11/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-46	SHEET # 1 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/18/2017 End Date: 9/19/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087221.960 Easting: 2685719.838 TOTAL DEPTH OF BORING: 86 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		**Soil removed via hydro-excavation**	
2	1	SP	**POORLY GRADED SAND** (SP), 5YR 3/4, reddish brown, dry, non-plastic, noncohesive, loose, 5% small gravel	VOCs = 0.1 ppm
3	0		**Soil removed via hydro-excavation**	
12	5	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 5YR 6/3, light reddish brown, dry, non-cohesive, nonplastic, very loose, predominately fine to medium grained sand	VOCs = 0.0 ppm VOCs = 0.0 ppm
17	3	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 5YR 6/3, light reddish brown, dry, non-cohesive, nonplastic, very loose, predominately fine to medium grained sand, cemented potential caliche in fractures/open space in soil	VOCs = 0.0 ppm
20	5	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 5YR 6/3, light reddish brown, dry, non-plastic, noncohesive, loose, weakly cemented with caliche in fractures, predominately fine to medium grained sand	VOCs = 0.1 ppm VOCs = 0.1 ppm
25				

Sampler Signature: L. Hill Date: 9/18/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-46	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/18/2017 End Date: 9/19/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087221.960 Easting: 2685719.838 TOTAL DEPTH OF BORING: 86 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	5	CL	**SANDY LEAN CLAY** (CL), 10YR 6/4, light yellowish brown, moist, medium plasticity, cohesive, medium density, weakly cemented with caliche	VOCs = 0.0 ppm
27				
28				
29				VOCs = 0.0 ppm
30				
31	3	CL	**SANDY LEAN CLAY** (CL), 7.5YR 5/3, brown, moist, medium plasticity, cohesive	VOCs = 0.0 ppm
32				
33				
34	7	CL	**LEAN CLAY** (CL), 7.5YR 3/2, dark brown, moist, medium plasticity, 3-5% sand from 33.5' - 35', 0-3% sand from 35' - 40', laminated	VOCs = 0.0 ppm
35				
36				VOCs = 0.0 ppm
37				
38				VOCs = 0.2 ppm
39				
40				VOCs = 0.4 ppm
41	4	CL	**LEAN CLAY** (CL), 7.5YR 3/2, dark brown, moist, medium plasticity, medium density	
42				
43				
44				
45	1	CL	**LEAN CLAY** (CL), GLEY 1 4/N, dark gray, wet, plastic, cohesive, dense	VOCs = 0.1 ppm
46	2	Shale	**SHALE,** GLEY 1 4/N, dark gray, wet in fractures, fissile, weakly cemented	
47				VOCs = 0.0 ppm
48	3	Shale	**SHALE**, GLEY 1 3/N, very dark gray, wet in fractures, fissile, weakly cemented	
49				
50				

Sampler Signature: L. Hill Date: 9/18/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-46	SHEET # 3 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/18/2017 End Date: 9/19/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087221.960 Easting: 2685719.838 TOTAL DEPTH OF BORING: 86 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	5	Shale	**SHALE**, GLEY 1 3/N, very dark gray, wet in fractures, fissile, weakly cemented	
52				
53				
54				
55				
56	20	Shale	**SHALE**, GLEY 1 3/N, very dark gray, wet in fractures, fissile, hard	
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				

Sampler Signature: L. Hill Date: 9/18/2017

ch2m: SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-46	SHEET # 4 of 4	
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M	
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/18/2017 End Date: 9/19/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087221.960 Easting: 2685719.838	TOTAL DEPTH OF BORING: 86 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76	3	Shale	**SHALE**, GLEY 1 3/N, very dark gray, wet in fractures, fissile, hard	
77				
78				
79	8	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard	
80				
81				
82				
83				
84				
85				
86				
87				end of boring
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

Sampler Signature: L. Hill Date: 9/18/2017

ch2m: SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-47	SHEET # 1 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/19/2017 End Date: 9/24/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087243.579 Easting: 2685918.631 TOTAL DEPTH OF BORING: 89 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		**Soil removed via hydro-excavation**	
2	1	SP	**POORLY GRADED SAND** (SP), 5YR 4/3, reddish brown, dry, nonplastic, noncohesive, medium density.	VOCs = 0.0 ppm
3			**Soil removed via hydro-excavation**	
4				
5				
6				
7	0			
8				
9				
10				
11				
12				
13	13	CL	**SANDY LEAN CLAY** (CL), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 3.5 ppm
14				
15				
16				VOCs = 0.0 ppm
17				
18				VOCs = 0.0 ppm
19				
20				VOCs = 0.0 ppm
21				
22				VOCs = 25 ppm
23				
24				VOCs = 20 ppm
25				

Sampler Signature: L. Hill Date: 9/19/2017

ch2m	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-47	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/19/2017 End Date: 9/24/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087243.579 Easting: 2685918.631 TOTAL DEPTH OF BORING: 89 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	11	CL	**SANDY CLAY** (CL), 10YR 5/4, yellowish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 32 ppm
27				
28				VOCs = 30 ppm
29				
30				VOCs = 40 ppm
31				
32				
33				VOCs = 25 ppm
34				
35				
36				VOCs = 0.9 ppm
37	2	CL	**LEAN CLAY WITH SAND** (CL), 10YR 5/3, brown, dry to moist, low plasticity, cohesive, fine grained sand	
38				VOCs = 7.3 ppm
39	5	CL	**LEAN CLAY WITH SAND** (CL), 2.5Y 3/1, very dark gray, moist to wet, low to medium plasticity, cohesive, fine grained sand	
40				VOCs = 200+ ppm staining, strong odor
41				VOCs = 1,500+ ppm staining, strong odor
42				
43				VOCs = 875.2 ppm staining, strong odor
44	4	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 2.5Y 4/1 to 2.5Y 3/1, dark gray to very dark gray, moist to wet, non-plastic, noncohesive, fine to medium grained sand	
45				VOCs = 822 ppm staining, strong odor
46				
47				VOCs = 395 ppm staining, strong odor
48	2	CL	**LEAN CLAY WITH SAND** (CL), 2.5Y 2.5/1, black, moist to wet, low plasticity, cohesive, fine grained sand	VOCs = 446 ppm staining, strong odor
49				
50	1	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 2.5Y 4/1, dark gray, moist, non-plastic, noncohesive, fine to medium grained sand	

Sampler Signature: L. Hill Date: 9/19/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-47	SHEET # 3 of 4	
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M	
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/19/2017 End Date: 9/24/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087243.579 Easting: 2685918.631	TOTAL DEPTH OF BORING: 89 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	1	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 2.5Y 4/1, dark gray, moist, non-plastic, noncohesive, fine to medium grained sand	VOCs = 392 ppm staining, strong odor
52	2	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, fine to medium grained sand, hard	
53				
54	7	Shale	**SHALE**, 2.5Y 2.5/1, black, hard	
55				
56				
57				
58				
59				
60				
61	12	Shale/ Sandstone	**INTERBEDDED SHALE/SANDSTONE**, 2.5Y 2.5Y/1 and 2.5Y 6/1, black and gray, sandstone is fine to medium grained, hard	
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				

Sampler Signature: L. Hill Date: 9/19/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-47	SHEET # 4 of 4	
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M	
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/19/2017 End Date: 9/24/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087243.579 Easting: 2685918.631	TOTAL DEPTH OF BORING: 89 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76	6	Shale/ Sandstone	**INTERBEDDED SHALE/SANDSTONE,** 2.5Y 2.5Y/1 and 2.5Y 6/1, black and gray, sandstone is fine to medium grained, hard	
82	8	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, sandstone is fine grained, hard	
90			end of boring	

Sampler Signature: L. Hill Date: 9/18/2017

ch2m.	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-48	SHEET # 1 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/21/2017 End Date: 9/22/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087441.692 Easting: 2685788.725 / TOTAL DEPTH OF BORING: 80 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	0		**Soil removed via hydro-excavation**	
2	1	SP	**POORLY GRADED SAND** (SP), 5YR 5/2, reddish gray, dry, non-plastic, noncohesive, 5-10% silt	VOCs = 0.2 ppm
3	0		**Soil removed via hydro-excavation**	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13	10	SP-SM	**POORLY GRADED SAND WITH SILT** (SP-SM), 2.5Y 5/2, grayish brown, dry, non-plastic, noncohesive, fine to medium grained sand	VOCs = 3.0 ppm
14				
15				VOCs = 1.0 ppm
16				
17				VOCs = 0.6 ppm
18				
19				VOCs = 0.3 ppm
20				
21				
22				VOCs = 0.3 ppm
23	3	SC	**CLAYEY SAND** (CL), 2.5Y 5/3, light olive brown, dry, non-plastic, noncohesive, fine grained sand	
24				VOCs = 0.3 ppm
25				VOCs = 0.7 ppm

Sampler Signature: L. Hill Date: 9/21/2017

ch2m: SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-48	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/21/2017 End Date: 9/22/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087441.692 Easting: 2685788.725 TOTAL DEPTH OF BORING: 80 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26–30	5	CL	**CLAYEY SAND** (CL), 2.5Y 5/3, light olive brown, dry, non-plastic, noncohesive, fine grained sand	VOCs = 0.7 ppm VOCs = 0.2 ppm VOCs = 0.0 ppm
30–31	1	CL	**LEAN CLAY** (CL), 2.5Y 3/2, very dark grayish brown, moist, medium plasticity, cohesive	VOCs = 1.6 ppm
32–33	2	CL	**LEAN CLAY** (CL), 2.5Y 3/2, very dark grayish brown, moist to wet, medium plasticity, cohesive, fine grained sand	VOCs = 3.3 ppm
34–35	2	CL	**LEAN CLAY** (CL), 2.5Y 3/2, very dark grayish brown, moist to wet, medium plasticity, cohesive, with fine grained sand and 0.5" gravel	VOCs = 6.7 ppm
36–40	5	CL	**CLAY WITH SAND** (CL), 5Y 5/2, olive gray, moist, non-plastic, noncohesive, fine grain sand From 39' - 40', 2.5Y 3/1, very dark gray	VOCs = 609 ppm petroleum odor VOCs = 534 ppm petroleum odor VOCs = 763 ppm staining, strong odor
41–43	3	Shale	**SHALE**, 2.5Y 5/1, gray, wet in fractures, hard	
44–50	7	Shale	**SHALE**, 2.5Y 5/1, gray, wet in fractures, hard	

Sampler Signature: L. Hill Date: 9/21/2017

ch2m. SM	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-48	SHEET # 3 of 3
	SOIL BORING LOG		LOGGER: Luke Hill/CH2M
PROJECT : Blanco Gas Plant - North Flare Pit Site Investigation	Start Date: 9/21/2017 End Date: 9/22/2017	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087441.692 Easting: 2685788.725 TOTAL DEPTH OF BORING: 80 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	16	Shale	**SHALE**, 2.5Y 3/1 and 2.5/1, very dark gray and black, wet in fractures, hard	
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67	9	Shale/ Sandstone	**INTERBEDDED SHALE/SANDSTONE**, 2.5Y 3/1 and 2.5/1, very dark gray and black, hard Sandstone is fine grained	
68				
69				
70				
71				
72				
73				
74				
75				

Sampler Signature: L. Hill Date: 9/21/2017

ch2m	PROJECT NUMBER 477041.06.03	BORING NUMBER MW-48	SHEET # 4 of 4
	SOIL BORING LOG		LOGGER: **Luke Hill/CH2M**
PROJECT : **Blanco Gas Plant - North Flare Pit Site Investigation**	Start Date: **9/21/2017** End Date: **9/22/2017**	DRILLING METHOD/EQUIPMENT: TerraSonic, 150 cc MiniSonic DRILLING CONTRACTOR/DRILLER: Yellow Jacket	COORDINATES: Northing: 2087441.692 Easting: 2685788.725 TOTAL DEPTH OF BORING: 80 **feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76	5	Shale/Sandstone	INTERBEDDED SHALE/SANDSTONE, 2.5Y 3/1 and 2.5/1, very dark gray and black, hard Sandstone is fine grained	
77				
78				
79				
80				
81				end of boring
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

Sampler Signature: **L. Hill** Date: **9/21/2017**

ch2m: SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-49	SHEET # 1 of 3
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/17/2019** End Date: **8/18/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2086796.893 Easting: 2686222.583 / TOTAL DEPTH OF BORING: **73 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	14	SP	**SILTY SAND** (SP), 2.5Y 5/4, light olive brown, dry, non-plastic, stiff, compact, poorly graded fine to medium grained sand	
2			**Soil removed via hydro-excavation**	VOCs = 0.0 ppm.
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15	10	SP	**SILTY SAND** (SP), 2.5Y 5/4, light olive brown, dry, loose, fine to medium grained sand, poorly graded	Sample (14-15) collected at 1505
16				VOCs = 0.0 ppm.
17				
18				VOCs = 0.0 ppm.
19				
20				Sample (19-20) collected at 1515
21				VOCs = 0.0 ppm.
22		SP	**POORLY GRADED SAND** (SP), 2.5Y 5/4, light olive brown, dry, loose, fine to coarse grained sand, some silt	VOCs = 0.0 ppm.
23				VOCs = 0.0 ppm.
24				
25				VOCs = 0.0 ppm.

Sampler Signature: A. Turkasz Date: **8/17/2019**

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-49	SHEET # 2 of 3
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/17/2019** End Date: **8/18/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2086796.893 Easting: 2686222.583 / TOTAL DEPTH OF BORING: **73 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	7	CL	**LEAN CLAY** (CL), 2.5Y 5/3, light olive brown, dry, non to low-plasticity, stiff, brittle, little fine grained sand, trace white veins	VOCs = 0.0 ppm.
27				VOCs = 0.0 ppm.
28				
29				VOCs = 0.1 ppm.
30				Sample (29-30) collected at 1525
31				VOCs = 0.0 ppm.
32	10	CL	**LEAN CLAY** (CL), 2.5Y 5/3, light olive brown, dry, non to low-plasticity, stiff, brittle, some fine to coarse grained sand, white veins	VOCs = 0.0 ppm.
33				VOCs = 0.0 ppm.
34				
35				VOCs= 0.0 ppm.
36		SP	**POORLY GRADED SAND** (SP), 2.5Y 6/4, light yellowish brown, dry, loose, fine to coarse grained sand, subrounded grains	VOCs= 0.0 ppm.
37				VOCs= 0.0 ppm.
38				
39				VOCs= 0.0 ppm.
40				Sample (39-40) collected at 1610
41				VOCs = 0.0 ppm.
42	9	SP	**POORLY GRADED SAND** (SP), 2.5Y 6/4, light yellowish brown, dry, loose, fine to coarse grained sand, subrounded grains	
43				VOCs = 0.0 ppm.
44				
45				VOCs = 0.0 ppm.
46				
47				VOCs = 0.0 ppm.
48		SP	**POORLY GRADED SAND** (SP), 2.5Y 6/4, light yellowish brown, dry, loose, fine to coarse grained sand, subrounded grains, some dry clay	VOCs = 0.0 ppm.
49				
50		CL	**LEAN CLAY** (CL) 2.5Y 6/4, light yellowish brown, dry, stiff, brittle, some fine grained sand, some interbedded silt layers	Sample (49-50) collected at 1640

Sampler Signature: A. Turkasz Date: **8/17/2019**

ch2m: SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-49	SHEET # 3 of 3
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/17/2019** End Date: **8/18/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2086796.893 Easting: 2686222.583 / TOTAL DEPTH OF BORING: **73 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	10	CL	**LEAN CLAY** (CL), 2.5Y6/4, light yellowish brown, dry, stiff, brittle, some fine grained sand, some interbedded silt layers	VOCs = 0.0 ppm.
52				
53		SP	**POORLY GRADED SAND** (SP), 2.5Y 6/3, light yellowish brown, dry, loose, some cementing, fine to course grained sand, some weathered sandstone, orange staining	VOCs = 0.1 ppm.
54				VOCs = 0.0 ppm.
55				
56				VOCs = 0.0 ppm.
57				Sample (56-57) collected at 1745
58		Sandstone	**SANDSTONE**, N8, white with light blue, very fine to coarse grained sand, dry to moist, stiff to brittle, heavy to medium cementing	*bedrock at 57' bgs
59				VOCs = 0.0 ppm.
60	6			VOCs = 0.0 ppm.
61				
62		Sandstone	**SANDSTONE**, N8, white with light blue, very fine to coarse grained sand, water within sandstone from 61' - 67', stiff to brittle, heavy to medium cementing	VOCs = 0.0 ppm.
63				
64				VOCs = 0.0 ppm.
65				*8/18/2019 drilling starts at 66' bgs
66	7			VOCs = 0.0 ppm.
67				
68		Sandstone	**SANDSTONE**, N8, white with light blue, dry to moist, looser, less consolidated, less cementation, very fine to coarse grained sand,	VOCs = 0.0 ppm.
69				
70				VOCs = 0.0 ppm.
71				
72		Shale	**SHALE**, N4, dark gray, dry, brittle, trace fine to medium grained sand	VOCs = 0.0 ppm.
73				
74			**End of boring**	* Well to be set at 67' bgs. as instructed by J. Minchak
75				

Sampler Signature: A. Turkasz Date: **8/17/2019**

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-50	SHEET # 1 of 4
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/18/2019** End Date: **8/18/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2086909.069 Easting: 2686431.759 / TOTAL DEPTH OF BORING: **78 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	12	SP	**SILTY SAND** (SP), 2.5 Y 5/4, light olive brown, dry, loose, brittle, compacted, fine to coarse grained sand, poorly graded	VOCs = 0.0 ppm.
2			**Soil removed via hydro-excavation**	
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13	10	ML	**SANDY SILT** (ML), 2.5Y 5/4, light olive brown, dry, non-plastic, loose, fine grained sand	Sample (12-13) collected at 1345
14				VOCs = 0.0 ppm.
15				VOCs = 0.0 ppm.
16				
17			**SANDY SILT** (ML), 2.5Y 5/4, light olive brown, dry, non-plastic, loose, fine grained sand	VOCs = 0.0 ppm.
18				
19				VOCs = 0.0 ppm.
20			**SANDY SILT** (ML), 2.5Y 5/4, light olive brown, dry, non-plastic, loose, fine grained sand	Sample (19 - 20) collected at 1355
21				VOCs = 0.0 ppm.
22				
23		SP	**SILTY SAND** (SP), 2.5Y 5/4, light olive brown, dry, non-plastic, loose, fine to coarse grained sand, some clay, poorly graded	VOCs = 0.0 ppm.
24				
25				VOCs = 0.0 ppm.

Sampler Signature: A. Turkasz Date: **8/18/2019**

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-50	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/18/2019** End Date: **8/18/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2086909.069 Easting: 2686431.759 / TOTAL DEPTH OF BORING: **78 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	10	SP	**SILTY SAND** (SP), 2.5Y 5/4, light olive brown, dry, non-plastic, loose, fine to coarse grained sand, some clay, poorly graded	VOCs = 0.0 ppm.
27				VOCs = 0.0 ppm.
28				
29				Sample (29 - 30) collected at 1415
30				VOCs = 0.0 ppm.
31				
32		SP	**SILTY SAND** (SP), 2.5Y 5/4, light olive brown, dry, non-plastic, loose, fine to coarse grained sand, some clay, poorly graded, interbedded layers of clay	VOCs = 0.0 ppm.
33				VOCs = 0.1 ppm.
34				
35	8	CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/4, light yellowish brown, dry, non-plastic, medium stiff, brittle, fine to medium grained sand	VOCs = 0.0 ppm.
36				
37				VOCs = 0.0 ppm.
38				VOCs = 0.0 ppm.
39				Sample (39 - 40) collected at 1500
40				
41	8	CL	**SANDY LEAN CLAY** (CL), 2.5 Y 6/4, light yellowish brown, dry, non-plastic, medium stiff, brittle, fine to medium grained sand	VOCs = 0.0 ppm.
42				VOCs = 0.1 ppm.
43				
44				VOCs = 0.0 ppm.
45				
46				VOCs = 0.0 ppm.
47			**SANDY LEAN CLAY** (CL), 2.5 Y 6/4, light yellowish brown, dry, non-plastic, medium stiff, brittle, some fine to coarse grained sand	VOCs = 0.0 ppm.
48				
49	10	CL	**SANDY LEAN CLAY** (CL), 2.5 Y 6/4, light yellowish brown, dry, non-plastic, medium stiff, brittle, some fine to coarse grained sand	Sample (49 - 50) collected at 1510
50				VOCs = 0.0 ppm.

Sampler Signature: A. Turkasz Date: **8/18/2019**

ch2m: SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-50	SHEET # 3 of 4
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/18/2019** End Date: **8/18/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2086909.069 Easting: 2686431.759 / TOTAL DEPTH OF BORING: **78 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	10	CL	**SANDY LEAN CLAY** (CL), 2.5 Y 6/4, light yellowish brown, dry, non-plastic, medium stiff, brittle, some fine to coarse grained sand	VOCs = 0.0 ppm.
52				
53				VOCs = 0.0 ppm.
54				
55			**SANDY LEAN CLAY** (CL), 2.5 Y 6/4, light yellowish brown, moist, non-plastic, medium stiff, brittle, little fine to coarse grained sand layers	VOCs = 0.0 ppm.
56				VOCs = 0.0 ppm.
57			**SANDY LEAN CLAY** (CL), 2.5 Y 6/4, light yellowish brown, moist, non-plastic, medium stiff, brittle, little fine to coarse grained sand layers	Sample (57 - 58) collected at 1630
58				VOCs = 0.0 ppm. *Water at 58' bgs.
59	9	CL	**SANDY LEAN CLAY** (CL), 2.5Y 5/3, light olive brown, moist, medium-plasticity fine to coarse grained sand, soft to stiff	VOCs = 0.0 ppm.
60				
61				VOCs = 0.2 ppm.
62				
63				VOCs = 0.1 ppm.
64				
65				VOCs = 0.0 ppm.
66				
67				VOCs = 0.0 ppm.
68	6	SP	**POORLY GRADED SAND** (SP) 2.5Y 6/2, light brownish gray, moist to wet, loose, fine to coarse grained sand, some weathered sandstone with orange staining	VOCs = 0.0 ppm.
69				
70				
71				VOCs = 0.0 ppm.
72				
73			**POORLY GRADED SAND** (SP) 2.5Y 6/2, light brownish gray, moist to wet, loose, fine to coarse grained sand, some weathered sandstone with orange staining	VOCs = 0.2 ppm.
74	5	SP	**POORLY GRADED SAND** (SP) 2.5Y 6/2, light brownish gray, moist to wet, loose, fine to coarse grained sand, some weathered sandstone with orange staining	VOCs = 0.1 ppm.
75				

Sampler Signature: A. Turkasz Date: **8/18/2019**

ch2m: SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-50	SHEET # 4 of 4
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/18/2019** End Date: **8/18/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2086909.069 Easting: 2686431.759 / TOTAL DEPTH OF BORING: **78 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76	5	Sandstone	**SANDSTONE**, N8, white with slight blue, dry to moist, fine to coarse grained sand, heavy to light cementation, stiff to medium stiff	* bedrock at 75' bgs.
77				VOCs = 0.0 ppm.
78				*backfill with bentonite to set well at 73' bgs.
79			**End of boring**	
80				
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94				
95				
96				
97				
98				
99				
100				

Sampler Signature: A. Turkasz Date: **8/18/2019**

ch2m: SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-51	SHEET # 1 of 3	
	SOIL BORING LOG		LOGGER: **A. Turkasz**	
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/19/2019** End Date: **8/20/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2087220.549 Easting: 2686092.139	TOTAL DEPTH OF BORING: **66 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	13	SP	**SILTY SAND** (SP) 2.5Y 5/4, light olive brown, dry, loose, fine to coarse grained sand, poorly graded	VOCs = 0.0 ppm.
2			**Soil removed via hydro-excavation**	
3				
4				
5				
6				
7				*0' - 13' Hydro excavated
8				
9				
10				
11				
12				
13				
14	7	SP	**SILTY SAND** (SP), 2.5Y 5/4, light olive brown, dry, loose, fine to coarse grained sand, poorly graded	VOCs = 0.0 ppm. Sample (13 - 14) collected at 1325
15				
16				VOCs = 0.0 ppm.
17		CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/4, light yellowish brown, dry, non-plastic, soft, fine to medium grained sand, brittle	VOCs = 0.0 ppm.
18				
19				Sample (19 - 20) and field duplicate collected at 1340
20				
21	10	CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/4, light yellowish brown, dry, non-plastic, soft, more fine grained sand, brittle	VOCs = 0.0 ppm.
22				
23				VOCs = 0.0 ppm.
24				VOCs = 0.0 ppm.
25				VOCs = 0.0 ppm.

Sampler Signature: A. Turkasz Date: **8/20/2019**

ch2m. SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-51	SHEET # 2 of 3
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/19/2019** End Date: **8/20/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2087220.549 Easting: 2686092.139 / TOTAL DEPTH OF BORING: **66 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	10	CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/4, light yellowish brown, dry, non-plastic, soft, fine grained sand, brittle	VOCs = 0.1 ppm.
27				VOCs = 0.0 ppm.
28				VOCs = 0.0 ppm.
29				Sample (29 - 30) collected at 1350
30				
31	10	CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/4, light yellowish brown, dry, non-plastic, soft, 12" fine to coarse grained sand layer, brittle	VOCs = 0.0 ppm.
32				
33				VOCs = 0.0 ppm.
34				VOCs = 0.3 ppm.
35		CL	**LEAN CLAY** (CL), 2.5Y 6/3 light yellowish brown, dry to moist, non-plastic, medium stiff, some fine grained sand, trace white veins	VOCs = 0.0 ppm.
36				
37				VOCs = 0.1 ppm.
38				
39				Sample (39 - 40) collected at 1400
40				VOCs = 0.2 ppm.
41	7	CL	**LEAN CLAY** (CL), 2.5Y 6/3 light yellowish brown, dry to moist, non-plastic, medium stiff, some fine grained sand, trace white veins, trace orange staining	VOCs = 0.0 ppm.
42		CL	**LEAN CLAY** (CL), 2.5Y 6/3 light yellowish brown, dry to moist, non-plastic, medium stiff, some fine grained sand, trace white veins, trace orange staining, trace dark dry nodules	
43				VOCs = 0.0 ppm.
44				
45		CL	**LEAN CLAY** (CL), 2.5Y 3/3, dark olive brown, moist, non-plastic, soft, some fine grained sand, strong odor, black staining	VOCs = 446.3 ppm.
46				
47				VOCs = 387.5 ppm.
48	9	CL	**LEAN CLAY** (CL), 2.5Y 3/3, dark olive brown, moist, non-plastic, soft, some fine grained sand, strong odor, black staining	VOCs = 701.8 ppm. *highest PID hit
49				Sample (49 - 50) collected at 1500
50				VOCs = 505.1 ppm *water at 50' bgs.

Sampler Signature: A. Turkasz Date: **8/20/2019**

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-51	SHEET # 3 of 3
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/19/2019** End Date: **8/20/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2087220.549 Easting: 2686092.139 / TOTAL DEPTH OF BORING: **66 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	9	CL	**LEAN CLAY** (CL), 2.5Y 3/3, dark olive brown, moist, non-plastic, soft, some fine grained sand, strong odor, black staining	VOCs = 153.6 ppm.
52				
53		SP	**POORLY GRADED SAND** (SP), 2.5Y 5/4, light olive brown, dry to moist, fine to coarse grained sand, some cementation, some weathered sandstone, strong odor	VOCs = 417.4 ppm. *bedrock at 53' bgs.
54				
55				PID 17.9 ppm.
56				PID 29.5 ppm. *resume drilling at 56' on 8/20/2019
57	10	Sandstone	**SANDSTONE**, 2.5Y 6/1, gray, dry, stiff, heavy cementation, fine to medium grained sand	VOCs = 2.1 ppm.
58		Shale	**SHALE**, 2.5Y 3/1, very dark gray, dry to moist, stiff to medium stiff, trace fine grained sand, waxy texture on fracture plane where moisture is present	VOCs = 0.5 ppm.
59				VOCs = 0.3 ppm.
60				VOCs = 0.2 ppm.
61				
62				VOCs = 0.8 ppm.
63			**SHALE**, 2.5Y 3/1, very dark gray, dry, stiff to medium stiff, trace fine grained sand	VOCs = 2.0 ppm.
64				
65			**SHALE**, 2.5Y 3/1, very dark gray, dry, stiff to medium stiff, laminated interbedded cemented fine grained sandstone layers	VOCs = 9.2 ppm.
66				VOCs = 2.0 ppm.
67			**End of boring**	
68				
69				
70				
71				
72				
73				
74				
75				

Sampler Signature: A. Turkasz Date: **8/20/2019**

ch2m: SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-52	SHEET # 1 of 4
	SOIL BORING LOG		LOGGER: A. Turkasz
PROJECT : Phase 2 Site Investigation - Blanco Plant North Flare Pit	Start Date: 8/24/2019 End Date: 8/24/2019	DRILLING METHOD/EQUIPMENT: Rotosonic DRILLING CONTRACTOR/DRILLER: Cascade Drilling	COORDINATES: Northing: 2087441.475 Easting: 2686018.604 TOTAL DEPTH OF BORING: 79 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	8	SP	**SILTY SAND** (SP), 2.5Y 5/4, light olive brown, dry, loose, fine to coarse grained sand	VOCs = 0.0 ppm.
2			**Soil removed via hydro-excavation**	
3				
4				
5				
6				
7				
8				
9	12	CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/4, light yellowish brown, dry, medium stiff to very soft, fine grained sand	VOCs = 0.0 ppm. VOCs = 0.0 ppm.
10				Sample (10 - 11) collected at 0825 VOCs = 0.0 ppm.
11				
12				
13				VOCs = 0.0 ppm.
14				
15				
16			**SANDY LEAN CLAY** (CL), 2.5Y 6/4, light yellowish brown, dry, medium stiff to soft, fine grained sand	VOCs = 0.0 ppm.
17				VOCs = 0.0 ppm.
18				
19				
20				Sample (19 - 20) collected at 0835 VOCs = 0.0 ppm.
21	10	CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/4, light yellowish brown, dry, medium stiff to soft, fine grained sand	
22				VOCs = 0.0 ppm.
23		SP	**POORLY GRADED SAND** (SP), 2.5Y 6/4, light yellowish brown, dry, loose, fine to coarse grained sand	
24				VOCs = 0.0 ppm.
25				

Sampler Signature: A. Turkasz Date: 8/24/2019

ch2m. SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-52	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/24/2019** End Date: **8/24/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2087441.475 Easting: 2686018.604 / TOTAL DEPTH OF BORING: **79 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	10	CL	**LEAN CLAY** (CL), 2.5Y 4/3, olive brown, moist, non-plastic, stiff, some fine grained sand	VOCs = 0.0 ppm.
27				
28				VOCs = 0.1 ppm
29				Sample (29 - 30) with MS/MSD collected at 0905
30		CL	**LEAN CLAY** (CL), 2.5Y 6/3, light yellowish brown, dry, non-plastic, brittle, some fine to medium grained sand	
31	10	CL	**LEAN CLAY** (CL), 2.5Y 6/3, light yellowish brown, dry, non-plastic, brittle, some fine to medium grained sand	VOCs = 0.0 ppm.
32				
33				
34				
35				VOCs = 0.0 ppm.
36				Sample (36 - 37) collected at 0940
37				VOCs = 0.0 ppm. *water at 37' bgs.
38		CL	**SANDY CLAY** (CL), 2.5Y 5/2, grayish brown, moist, low to medium-plasticity, soft to medium stiff, fine to medium grained sand	
39				VOCs = 0.0 ppm.
40	9	CL	**SANDY LEAN CLAY** (CL), 2.5Y 5/2, grayish brown, moist, low to medium-plasticity, soft to medium stiff, fine to medium grained sand	
41				VOCs = 0.1 ppm.
42				
43				VOCs = 0.0 ppm.
44				
45				VOCs = 0.8 ppm.
46				
47		CL	**SANDY LEAN CLAY** (CL), 2.5Y 5/2, grayish brown, moist, low to medium-plasticity, soft to medium stiff fine to medium grained sand, odor	VOCs = 186.7 ppm.
48				
49	9	CL	**SANDY LEAN CLAY** (CL), 2.5Y 5/2, grayish brown, moist, low to medium-plasticity, soft to medium stiff fine to medium grained sand, odor	
50				VOCs = 150.4 ppm.

Sampler Signature: A. Turkasz Date: **8/24/2019**

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-52	SHEET # 3 of 4
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/24/2019** End Date: **8/24/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2087441.475 Easting: 2686018.604 / TOTAL DEPTH OF BORING: **79 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	9	CL	**SANDY LEAN CLAY** (CL), 2.5Y 5/2, grayish brown, moist, low to medium-plasticity, soft to medium stiff, fine to medium grained sand, odor	VOCs = 52.2 ppm.
52				*bedrock at 52' bgs. VOCs = 6.8 ppm.
53		Shale	**SHALE**, 2.5Y 5/4, light olive brown, moist in fractures, stiff, some siltstone, little fine grained sand	VOCs = 2.3 ppm.
54				VOCs = 0.9 ppm.
55		Shale	**SHALE**, 2.5Y 6/4, light yellowish brown, dry, stiff, brittle, some shale present, little fine grained sand	
56				VOCs = 1.6 ppm.
57				
58				VOCs = 0.4 ppm.
59	12	Shale	**SHALE**, 2.5Y 6/4, light yellowish brown, moist, stiff, brittle, some shale present, little fine grained sand, some weathered sandstone	VOCs = 0.1 ppm.
60				
61				
62		Shale	**SHALE**, Gley N4, dark gray, moist within fractures, stiff, some fine grained sand	VOCs = 0.0 ppm.
63				
64			**SHALE**, Gley N4, dark gray, moist within fractures, stiff, some fine grained sand, interbedded fine grained sandstone layers	VOCs = 0.0 ppm.
65				
66				VOCs = 0.0 ppm.
67			**SHALE**, Gley N4, dark gray, wet, stiff, some fine grained sand, interbedded fine grained sandstone layers	
68				VOCs = 0.1 ppm.
69				
70				VOCs = 0.0 ppm.
71	9	Shale	**SHALE**, Gley N4, dark gray, wet, stiff, some fine grained sand, interbedded fine grained sandstone layers	
72				VOCs = 0.0 ppm.
73				
74				VOCs = 0.0 ppm.
75				

Sampler Signature: A. Turkasz Date: **8/24/2019**

ch2m. SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-52	SHEET # 4 of 4
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/24/2019** End Date: **8/24/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2087441.475 Easting: 2686018.604 / TOTAL DEPTH OF BORING: **79 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76	9	Shale	**SHALE**, Gley N4, dark gray, wet, stiff, some fine grained sand, interbedded fine grained sandstone layers	
77		Sandstone	**SANDSTONE**, Gley N7, light gray, dry to moist, heavily cemented, fine to medium grained sand	VOCs = 0.0 ppm.
78				VOCs = 0.0 ppm.
79				VOCs = 0.0 ppm.
80			**End of boring**	
81				
82				
83				
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Sampler Signature: A. Turkasz Date: **8/24/2019**

ch2m. SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-53	SHEET # 1 of 4
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/22/2019** End Date: **8/23/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2087548.049 Easting: 2685764.767 / TOTAL DEPTH OF BORING: **86 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	9	SP	**SILTY SAND** (SP), 2.5Y 5/44, light olive brown, dry, loose, poorly graded, fine to coarse grained sand	VOCs = 0.0 ppm.
2–9			**Soil removed via hydro-excavation**	
10	11	CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/3, light yellowish brown, dry, non-plastic, medium stiff, fine to coarse grained sand, some weathered shale float	VOCs = 0.0 ppm. Sample (9 - 10) collected at 1205 with duplicate
11–15				VOCs = 0.0 ppm. / VOCs = 0.0 ppm. / VOCs = 0.0 ppm.
16–20		CL	**LEAN CLAY** (CL), 2.5Y 4/3, olive brown, dry, non-plastic, stiff,, some fine grained sand, some weathered sandstone float, some weathered shale float	VOCs = 0.0 ppm. / Sample (19-20) collected at 1225 / VOCs = 0.0 ppm.
21	10	CL	**LEAN CLAY** (CL), 2.5Y 4/3, olive brown, dry, non-plastic, stiff, some fine grained sand, some weathered sandstone float, some weathered shale float	
22–25		SC	**CLAYEY SAND** (SC), 2.5Y 5/3 light yellowish brown, dry to moist, fine to medium grained sand, some weathered sandstone with moisture within fractures	VOCs = 0.1 ppm. / VOCs = 0.0 ppm.

Sampler Signature: A. Turkasz Date: **8/23/2019**

ch2m. SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-53	SHEET # 2 of 4
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/22/2019** End Date: **8/23/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2087548.049 Easting: 2685764.767 / TOTAL DEPTH OF BORING: **86 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	10	SC	**CLAYEY SAND** (SC), 2.5Y 5/3 light yellowish brown, dry to moist, fine to medium grained sand, some weathered sandstone with moisture within fractures	VOCs = 0.0 ppm.
27				
28				VOCs = 0.1 ppm.
29				
30				Sample (29 - 30) collected at 1235 VOCs = 0.0 ppm.
31	8	CL	**SANDY LEAN CLAY** (CL), 2.5Y 5/4, light olive brown, dry, non-plastic, medium stiff, fine grained sand, little weathered shale	
32				VOCs = 0.0 ppm. Sample (32 - 33) collected at 1330
33				
34		Shale	**SHALE**, 2.5Y 6/1, gray, dry, stiff, moist in fractures, some siltstone	VOCs = 0.1 ppm.
35				
36				VOCs = 0.1 ppm.
37		Shale	**SHALE**, 2.5Y 6/1, gray, dry, medium stiff, brittle, moist in fractures, occasional shale and fine grained sand layers	
38				VOCs = 0.0 ppm.
39	7	Shale	**SHALE**, 2.5Y 6/1, gray, dry, moist in fractures, brittle, occasional shale and fine grained sand layers	
40				VOCs = 0.0 ppm.
41				
42				VOCs = 0.2 ppm.
43				
44				VOCs = 0.2 ppm.
45			**SHALE**, 2.5Y 6/1, gray, dry, moist in fractures, brittle, occasional shale and fine grained sand layers	
46	9	Shale	**SHALE** (SH), 2.5Y 4/1, dark gray, dry to moist in fractures, stiff, brittle, some siltstone	VOCs = 0.1 ppm.
47				
48				VOCs = 0.0 ppm.
49				
50				VOCs = 0.1 ppm.

Sampler Signature: A. Turkasz Date: **8/23/2019**

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-53
	SOIL BORING LOG	SHEET # 3 of 4
		LOGGER: A. Turkasz
PROJECT : Phase 2 Site Investigation - Blanco Plant North Flare Pit	Start Date: 8/22/2019 End Date: 8/23/2019	DRILLING METHOD/EQUIPMENT: Rotosonic DRILLING CONTRACTOR/DRILLER: Cascade Drilling
COORDINATES: Northing: 2087548.049 Easting: 2685764.767	TOTAL DEPTH OF BORING: 86 feet	

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	9	Shale	**SHALE**, 2.5Y 4/1, dark gray, dry to moist in fractures, stiff, brittle, some siltstone	VOCs = 0.0 ppm.
52				
53				VOCs = 0.1 ppm.
54			**SHALE**, 2.5Y 4/1, dark gray, dry to slightly moist in fractures, stiff, brittle, some siltstone	
55	9	Shale	**SHALE**, 2.5Y 4/1, dark gray, dry to moist in fractures, stiff, brittle, some siltstone	VOCs = 0.1 ppm.
56				
57				VOCs = 0.0 ppm. *Stopped at 59' on 8/22/19 *Boring resumed at 59" on 8/23/19
58				
59				VOCs = 0.0 ppm.
60				
61				VOCs = 0.0 ppm.
62				
63				VOCs = 0.1 ppm.
64	7	Shale	**SHALE**, 2.5Y 4/1, dark gray, dry to moist in fractures, stiff, brittle, some siltstone, some layers of cemented fine grained sandstone	VOCs = 0.0 ppm.
65				
66				VOCs = 0.0 ppm.
67				
68			**SHALE**, 2.5Y 4/1, dark gray, dry to moist in fractures, stiff, brittle, some siltstone, some layers of cemented fine grained sandstone	VOCs = 0.0 ppm.
69				
70				VOCs = 0.1 ppm.
71	6	Shale	**SHALE**, 2.5Y 4/1, dark gray, dry to moist in fractures, stiff, brittle, some siltstone, occasional sandstone	
72		Shale	**SANDY SHALE**, Gley N4, dark gray, wet within fractures, stiff, brittle, fine to medium grained sand, unconsolidated wet fine to medium grained sand between shale fractures	VOCs = 0.0 ppm.
73				VOCs = 0.0 ppm.
74				
75				

Sampler Signature: A. Turkasz Date: 8/23/2019

	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-53	SHEET # 4 of 4
ch2m. SM	**SOIL BORING LOG**		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/22/2019** End Date: **8/23/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2087548.049 Easting: 2685764.767 / TOTAL DEPTH OF BORING: **86 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
76	6	Shale	**SHALE**, Gley N 4/1, dark gray, dry to moist in fractures, some fine grained sand	VOCs = 0.1 ppm.
77				
78				VOCs = 0.1 ppm.
79				
80			**SHALE**, Gley N 4/1, dark gray, moist, some fine grained sand	VOCs = 0.0 ppm.
81				
82				VOCs = 0.0 ppm.
83				
84				VOCs = 0.1 ppm.
85				
86				VOCs = 0.0 ppm.
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

Sampler Signature: A. Turkasz Date: **8/23/2019**

ch2m: SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-54	SHEET # 1 of 3
	SOIL BORING LOG		LOGGER: **A. Turkasz**
PROJECT : **Phase 2 Site Investigation - Blanco Plant North Flare Pit**	Start Date: **8/20/2019** End Date: **8/21/2019**	DRILLING METHOD/EQUIPMENT: **Rotosonic** DRILLING CONTRACTOR/DRILLER: **Cascade Drilling**	COORDINATES: Northing: 2087349.776 Easting: 2685729.638 / TOTAL DEPTH OF BORING: **75 feet**

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	10	SP	**SILTY SAND** (SP), 2.5Y 5/4, light olive brown, dry, loose, brittle, poorly graded, fine to coarse grained sand	VOCs = 0.0 ppm.
2			**Soil removed via hydro-excavation**	
3				
4				
5				
6				
7				
8				
9				
10				
11	10	SC	**CLAYEY SAND** (SP), 2.5Y 5/4, light olive brown, dry, non-plastic, loose, fine to coarse grained sand, some silt, some weathered sandstone and shale float	VOCs = 0.0 ppm.
12				*Sample (10 - 11) collected at 1440 with MS/MSD
13				VOCs = 0.0 ppm
14				
15				VOCs = 0.1 ppm.
16				
17				VOCs = 0.0 ppm.
18		CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/2, light brownish gray, dry to moist, non-plastic, medium stiff, trace weathered sandstone float, little orange staining	
19				VOCs = 0.0 ppm
20				*Sample (19 - 20) collected at 1450 with duplicate
21	9	CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/2, light brownish gray, dry to moist, non-plastic, medium stiff, trace weathered sandstone float, little orange staining	
22				VOCs = 0.0 ppm.
23				
24			**SANDY LEAN CLAY** (CL), 2.5Y 6/2, light brownish gray, dry to moist, brittle, non-plastic, trace weathered sandstone float, little orange staining	
25				VOCs = 0.1 ppm.

Sampler Signature: A. Turkasz Date: **8/21/2019**

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-54
	SOIL BORING LOG	SHEET # 2 of 3
		LOGGER: A. Turkasz

PROJECT : Phase 2 Site Investigation - Blanco Plant North Flare Pit	Start Date: 8/20/2019 End Date: 8/21/2019	DRILLING METHOD/EQUIPMENT: Rotosonic DRILLING CONTRACTOR/DRILLER: Cascade Drilling	COORDINATES: Northing: 2087349.776 Easting: 2685729.638
			TOTAL DEPTH OF BORING: 75 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	9	CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/2, light brownish gray, dry to moist, non-plastic, medium stiff, trace weathered sandstone float, little orange staining	VOCs = 0.0 ppm.
27				VOCs = 0.0 ppm.
28			**SANDY LEAN CLAY** (CL), 2.5Y 6/2, light brownish gray, dry to moist, non-plastic, medium stiff, trace weathered sandstone float, little orange staining, fine grained sand	
29				VOCs = 0.0 ppm.
30	9	CL	**SANDY LEAN CLAY** (CL), 2.5Y 6/2, light brownish gray, dry to moist, non-plastic, medium stiff, trace weathered sandstone float, little orange staining, fine grained sand	*Sample (29 - 30) collected at 1507
31				VOCs = 0.0 ppm.
32		CL	**SANDY LEAN CLAY** (CL), 2.5Y 4/1, dark gray, dry, non-plastic, some fine grained sand, medium stiff to stiff	VOCs = 0.0 ppm.
33				
34				
35				VOCs = 0.0 ppm.
36			**SANDY LEAN CLAY** (CL), 2.5Y 4/1, dark gray, dry, non-plastic, some fine grained sand, medium stiff to stiff	
37				VOCs = 0.0 ppm.
38				
39	9	CL	**SANDY LEAN CLAY** (CL), 2.5Y 4/1, dark gray, dry, non-plastic, some fine grained sand, medium stiff to stiff	VOCs = 0.0 ppm.
40			**SANDY LEAN CLAY** (CL), 2.5Y 4/1, dark gray, dry, non-plastic, some fine grained sand, medium stiff to stiff, occasional pieces of shale	*Sample (39 - 40) collected at 1605
41		Shale	**SHALE**, 2.5Y 6/1, gray, dry, medium stiff, some fine grained sand, occasional shale, occasional fine grained sandstone	*bedrock at 40' bgs *Boring begins at 41' bgs 8/21/2019
42				VOCs = 0.0 ppm.
43				VOCs = 0.0 ppm.
44				
45				VOCs = 0.0 ppm.
46				
47				VOCs = 0.0 ppm.
48	6	Shale	**SHALE**, 2.5Y 6/1, gray, moist, softer, some fine grained sand, occasional shale, occasional fine grained sandstone, moisture within fractures and unconsolidated rock	*Water at 48' bgs. VOCs = 0.0 ppm.
49				
50				

Sampler Signature: A. Turkasz Date: 8/21/2019

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-54
	SOIL BORING LOG	SHEET # 3 of 3
		LOGGER: A. Turkasz
PROJECT : Phase 2 Site Investigation - Blanco Plant North Flare Pit	Start Date: 8/20/2019 End Date: 8/21/2019	DRILLING METHOD/EQUIPMENT: Rotosonic DRILLING CONTRACTOR/DRILLER: Cascade Drilling
COORDINATES: Northing: 2087349.776 Easting: 2685729.638	TOTAL DEPTH OF BORING: 75 feet	

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	6	Shale	**SHALE**, 2.5Y 6/1, gray, moist, soft, some fine grained sand, occasional shale, occasional fine grained sandstone, moisture within fractures and loose rock	VOCs = 0.0 ppm.
52				
53				VOCs = 0.0 ppm.
54	6	Shale	**SHALE**, 2.5Y 6/1, gray, moist, soft, some fine grained sand, occasional shale, occasional fine grained sandstone, moisture within fractures and loose rock	
55				VOCs = 0.0 ppm.
56		Shale	**SHALE**, 2.5Y 4/1, dark gray, dry, stiff, medium stiff, little fine grained sand, slightly moist within fractures	
57				VOCs = 0.0 ppm.
58				
59				
60	3	Shale	**SHALE**, 2.5Y 4/1, dark gray, dry, moist within fractures, stiff, some brittle, little fine grained sand	VOCs = 0.0 ppm.
61				VOCs = 0.0 ppm.
62				
63	3	Sandstone/ Shale	**INTERBEDDED SANDSTONE/SHALE**, 2.5Y 5/1, gray, moist to dry, moisture in shale fractures, fine grained sandstone, shale is stiff, brittle, sandstone is stiff and heavily cemented	VOCs = 0.0 ppm.
64				
65				VOCs = 0.0 ppm.
66	5	Sandstone/ Shale	**INTERBEDDED SANDSTONE/SHALE**, 2.5Y 5/1, gray, moist to dry, moisture in shale fractures, fine grained sandstone, shale is stiff, brittle, sandstone is stiff and heavily cemented	VOCs = 0.1 ppm.
67			**INTERBEDDED SANDSTONE/SHALE**, 2.5Y 5/1, gray, moist to dry, moisture in shale fractures, fine grained sandstone, shale is stiff, brittle, less consolidated, sandstone is stiff and heavily cemented	
68				VOCs = 0.0 ppm.
69		Sandstone	**SANDSTONE**, Gley N8/, white, dry, very stiff, heavily cemented, fine to medium grained sand	VOCs = 0.0 ppm.
70				
71	5	Sandstone	**SANDSTONE**, Gley N8/, white, dry, very stiff, heavily cemented, fine to medium grained sand	VOCs = 0.0 ppm.
72				
73				VOCs = 0.0 ppm.
74				
75			**End of Boring**	VOCs = 0.0 ppm.

Sampler Signature: A. Turkasz Date: **8/21/2019**

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-55	SHEET # 1 of 3
	SOIL BORING LOG		LOGGER: A. Turkasz
PROJECT : Phase 2 Site Investigation - Blanco Plant North Flare Pit	Start Date: 8/15/2019 End Date: 8/15/2019	DRILLING METHOD/EQUIPMENT: Rotosonic DRILLING CONTRACTOR/DRILLER: Cascade Drilling	COORDINATES: Northing: 2087040.904 Easting: 2685908.668 TOTAL DEPTH OF BORING: 52 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	10	SP	**POORLY GRADED SAND** (SP), 2.5YR 5/3, light olive brown, dry, loose, fine to coarse grained sand, trace clay, sub-rounded grains, some silt	VOCs = 0.0 ppm.
2			**Soil removed via hydro-excavation**	
3				
4				
5				
6				
7				
8				
9				
10				
11	10	SC	**CLAYEY SAND** (SC), 2.5YR 5/4, light olive brown, dry, non-plastic, loose, well graded, fine to medium grained sub-rounded sand, some silt	*Sample (10 - 11) collected at 1100
12				VOCs = 0.0 ppm.
13				
14				VOCs = 0.0 ppm.
15				
16				
17				VOCs = 0.0 ppm.
18				
19		SC	**CLAYEY SAND** (SC), 2.5YR 5/4, light olive brown, dry, non-plastic, loose, well graded, fine to medium grained sub-rounded sand, some silt, more clay	*Sample (19 - 20) collected at 1115
20				VOCs = 0.0 ppm.
21	9	SC	**CLAYEY SAND** (SC), 2.5YR 5/4, light olive brown, dry, non-plastic, loose, well graded, fine to medium grained sub-rounded sand, some silt, more clay	VOCs = 0.0 ppm.
22				
23				
24				VOCs = 0.0 ppm.
25				

Sampler Signature: A. Turkasz Date: 8/15/2019

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-55
	SOIL BORING LOG	SHEET # 2 of 3
		LOGGER: A. Turkasz

PROJECT : Phase 2 Site Investigation - Blanco Plant North Flare Pit	Start Date: 8/15/2019 End Date: 8/15/2019	DRILLING METHOD/EQUIPMENT: Rotosonic DRILLING CONTRACTOR/DRILLER: Cascade Drilling	COORDINATES: Northing: 2087040.904 Easting: 2685908.668
			TOTAL DEPTH OF BORING: 52 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	9	CL	**SANDY LEAN CLAY** (CL), 2.5Y 5/3, light olive brown, dry, non-plastic, stiff to very soft, fine to medium grained sand, slight cementing, veins present	VOCs = 0.0 ppm.
27				
28				
29				VOCs = 0.0 ppm. *Sample (29 - 30) collected at 1125
30	9	CL	**SANDY LEAN CLAY** (CL), 2.5Y 5/3, light olive brown, dry, non-plastic, stiff to very soft, fine to medium grained sand, slight cementing, veins present	
31		CL	**LEAN CLAY** (CL), 2.5Y 4/3, olive brown, dry to moist, low to non-plastic, medium stiff to very soft, some fine grained sand, sub-rounded, little white veins / mineral deposit	VOCs = 0.0 ppm.
32				
33				VOCs = 0.0 ppm.
34				
35		CL	**LEAN CLAY** (CL), 2.5Y 3/2, very dark grayish brown, dry, non-plastic, medium stiff, little fine grained sand, trace nodules of black staining, slight odor	*sample (34 - 35) collected at 1210
36				VOCs = 3.7 ppm. *Significant moisture at 36' bgs.
37				
38				
39	6	CL	**LEAN CLAY** (CL), 2.5Y 3/2, very dark grayish brown, moist, non-plastic, medium stiff, little fine grained sand, trace nodules of black staining, slight odor, interbedded mudstone	VOCs = 5.7 ppm.
40				*Bedrock at 40' bgs.
41		Sandstone	**SANDSTONE**, 2.5Y 6/3, light yellowish brown, dry to moist, very stiff to medium stiff, slight odor, fine grained sand, trace black staining, orange and gray banding *Moist areas have a mild odor	VOCs = 3.3 ppm.
42				
43				VOCs = 0.4 ppm.
44				
45	8	Shale	**SHALE**, 2.5Y 5/1, gray, dry to moist, very stiff to medium stiff, little fine grained sand	VOCs = 0.2 ppm.
46				
47			**SHALE**, 2.5Y 5/1, gray, moist, medium stiff, fine to medium grained sand	VOCs = 0.0 ppm.
48			**SHALE**, 2.5Y 5/1, gray, moist, medium stiff, fine to medium grained sand	VOCs = 0.0 ppm.
49				
50				VOCs = 0.0 ppm.

Sampler Signature: A. Turkasz Date: 8/15/2019

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-55	SHEET # 3 of 3
	SOIL BORING LOG		LOGGER: A. Turkasz
PROJECT : Phase 2 Site Investigation - Blanco Plant North Flare Pit	Start Date: 8/15/2019 End Date: 8/15/2019	DRILLING METHOD/EQUIPMENT: Rotosonic DRILLING CONTRACTOR/DRILLER: Cascade Drilling	COORDINATES: Northing: 2087040.904 Easting: 2685908.668 TOTAL DEPTH OF BORING: 52 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	8	Sandstone	**SANDSTONE**, N 8/, white, dry, non-plastic, very stiff to medium stiff, white cementing, gray to dark gray banding, fine to coarse grained sand	VOCs = 0.4 ppm. VOCs = 0.3 ppm.
52			End of boring	
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				

Sampler Signature: A. Turkasz Date: 8/15/2019

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-56
	SOIL BORING LOG	SHEET # 1 of 3
		LOGGER: A. Turkasz
PROJECT : Phase 2 Site Investigation - Blanco Plant North Flare Pit	Start Date: 8/16/2019 End Date: 8/17/2019	DRILLING METHOD/EQUIPMENT: Rotosonic DRILLING CONTRACTOR/DRILLER: Cascade Drilling
		COORDINATES: Northing: 2086804.857 Easting: 2686020.212
		TOTAL DEPTH OF BORING: 60 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
1	10	SM	**WELL GRADED SAND** (SW), 2.5YR 5/3, light olive brown, dry, non-plastic, loose, predominantly fine grained sand, some silt	VOCs = 0.0 ppm.
2			**Soil removed via hydro-excavation**	
3				
4				
5				
6				
7				
8				
9				
10				
11	10	SP	**POORLY GRADED SAND** (SP), 2.5Y 6/3, light yellow brown, dry, loose, fine to coarse grained sand, fine grained sub-rounded gravel near bottom	*Sample (10 - 11) collected at 1405 VOCs = 0.0 ppm.
12				
13				
14				VOCs = 0.0 ppm.
15		CL	**SANDY LEAN CLAY** (CL) 2.5Y 6/3, light yellow brown, dry, non-plastic, stiff to medium stiff, fine grained sand, some silt, trace fine grained sub-rounded gravel	VOCs = 0.0 ppm.
16				
17				
18				VOCs = 0.0 ppm.
19				
20				*Sample (19 - 20) collected at 1410 with duplicate
21	10	CL	**SANDY LEAN CLAY** (CL) 2.5Y 6/3, light yellow brown, dry, non-plastic, stiff to medium stiff, fine grained sand, some silt, trace fine grained sub-rounded gravel, minor white veins present	VOCs = 0.0 ppm.
22				
23				VOCs = 0.0 ppm.
24				
25				

Sampler Signature: A. Turkasz Date: 8/17/2019

ch2m.	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-56	SHEET # 2 of 3	
	SOIL BORING LOG		LOGGER: A. Turkasz	
PROJECT : Phase 2 Site Investigation - Blanco Plant North Flare Pit	Start Date: 8/16/2019 End Date: 8/17/2019	DRILLING METHOD/EQUIPMENT: Rotosonic DRILLING CONTRACTOR/DRILLER: Cascade Drilling	COORDINATES: Northing: 2086804.857 Easting: 2686020.212	TOTAL DEPTH OF BORING: 60 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
26	10	CL	**SANDY LEAN CLAY** (CL) 2.5Y 6/3, light yellow brown, dry, non-plastic, stiff to medium stiff, fine grained sand, some silt, trace fine grained sub-rounded gravel, minor white veins present	VOCs = 0.0 ppm.
27				
28				VOCs = 0.0
29				*Sample (29 - 30) collected at 1425
30			**SANDY LEAN CLAY** (CL) 2.5Y 6/3, light yellow brown, dry, non-plastic, stiff to medium stiff, fine grained sand, some silt, trace fine grained gravel, iron like pieces, minor white veins present	
31	9	CL	**SANDY LEAN CLAY** (CL) 2.5Y 6/3, light yellow brown, dry, non-plastic, stiff to medium stiff, fine grained sand, some silt, trace fine grained gravel, iron like pieces, minor white veins present *32' - 33' dark red iron like staining with fine to coarse grained gravel of same color	VOCs = 0.0 ppm.
32				
33				VOCs = 0.0 ppm.
34		CL	**LEAN CLAY** (CL) 2.5Y 3/1, very dark gray, moist, non to low-plasticity, soft, trace fine grained sand, little shale pieces	VOCs = 0.0 ppm.
35				
36				
37				VOCs = 0.0 ppm.
38		SP	**POORLY GRADED SAND WITH GRAVEL** (SP), 10YR 4/6, dark yellowish brown, dry to moist, loose, fine to coarse grained sand, fine to coarse grained sub-rounded gravel, some clay, some subrounded cobbles, sandstone pieces	VOCs = 0.0 ppm.
39				
40	9	CL	**LEAN CLAY** (CL) 2.5Y 4/3 olive brown, dry, non-plastic, medium stiff, little interbedded silt	*8/17/2019 begin boring at 40' bgs. VOCs = 0.0 ppm.
41				*Sample (41 - 42) collected at 0920
42				
43		CL	**LEAN CLAY** (CL) 10YR 3/3, dark brown, moist, medium to high plasticity, soft, slow dilatancy, little fine to medium grained sand, trace sub-rounded fine grained gravel, trace black staining	VOCs = 0.0 ppm. *water at 42' bgs
44				VOCs = 0.0 ppm.
45				
46			**LEAN CLAY** (CL) 10YR 3/3, dark brown, moist, soft, medium to high plasticity, low dilatancy, more fine to medium grained sand, trace sub-rounded fine grained gravel, trace black staining	VOCs = 0.0 ppm.
47				
48		CL	**LEAN CLAY** (CL) 10YR 3/3, dark brown, moist, medium to high plasticity, soft, low dilatancy, more fine to medium grained sand, trace sub-rounded fine grained gravel, trace black staining, some weathered sandstone (light gray with light orange staining)	
49	6	CL	**LEAN CLAY** (CL) 10YR 3/3, dark brown, moist, medium to high plasticity, soft, low dilatancy, more fine to medium grained sand, trace sub-rounded fine grained gravel, trace black staining, some weathered sandstone (light gray with light orange staining)	VOCs = 0.0 ppm.
50		Sandstone	**SANDSTONE,** N8/ white with slight light blue, dry to moist, fine to medium grained sand, cemented heavily, stiff to medium stiff	*Bedrock at 49' bgs.

Sampler Signature: A. Turkasz Date: 8/17/2019

ch2m: SM	PROJECT NUMBER 707467CH 01.02	BORING NUMBER MW-56	SHEET # 3 of 3
	SOIL BORING LOG		LOGGER: A. Turkasz
PROJECT : Phase 2 Site Investigation - Blanco Plant North Flare Pit	Start Date: 8/16/2019 End Date: 8/17/2019	DRILLING METHOD/EQUIPMENT: Rotosonic DRILLING CONTRACTOR/DRILLER: Cascade Drilling	COORDINATES: Northing: 2086804.857 Easting: 2686020.212 TOTAL DEPTH OF BORING: 60 feet

DEPTH BELOW SURFACE (FT)	RECOVERY (FT)	USCS CODE	SOIL DESCRIPTION	COMMENTS/NOTES, PID RESULTS, SAMPLE COLLECTION (Date, Time, Sample ID)
51	6	Sandstone	**SANDSTONE,** N8/, white with slight light blue, dry to moist, fine to medium grained sand, heavily cemented	VOCs = 0.0 ppm.
52				
53				VOCs = 0.0 ppm.
54				
55	6	Sandstone	**SANDSTONE,** N8/, white with slight light blue, moist, fine to coarse grained sand, medium cementing, stiff to medium stiff	VOCs = 0.0 ppm.
56				
57				VOCs = 0.0 ppm.
58				
59				
60				
61			**End of boring**	
62				
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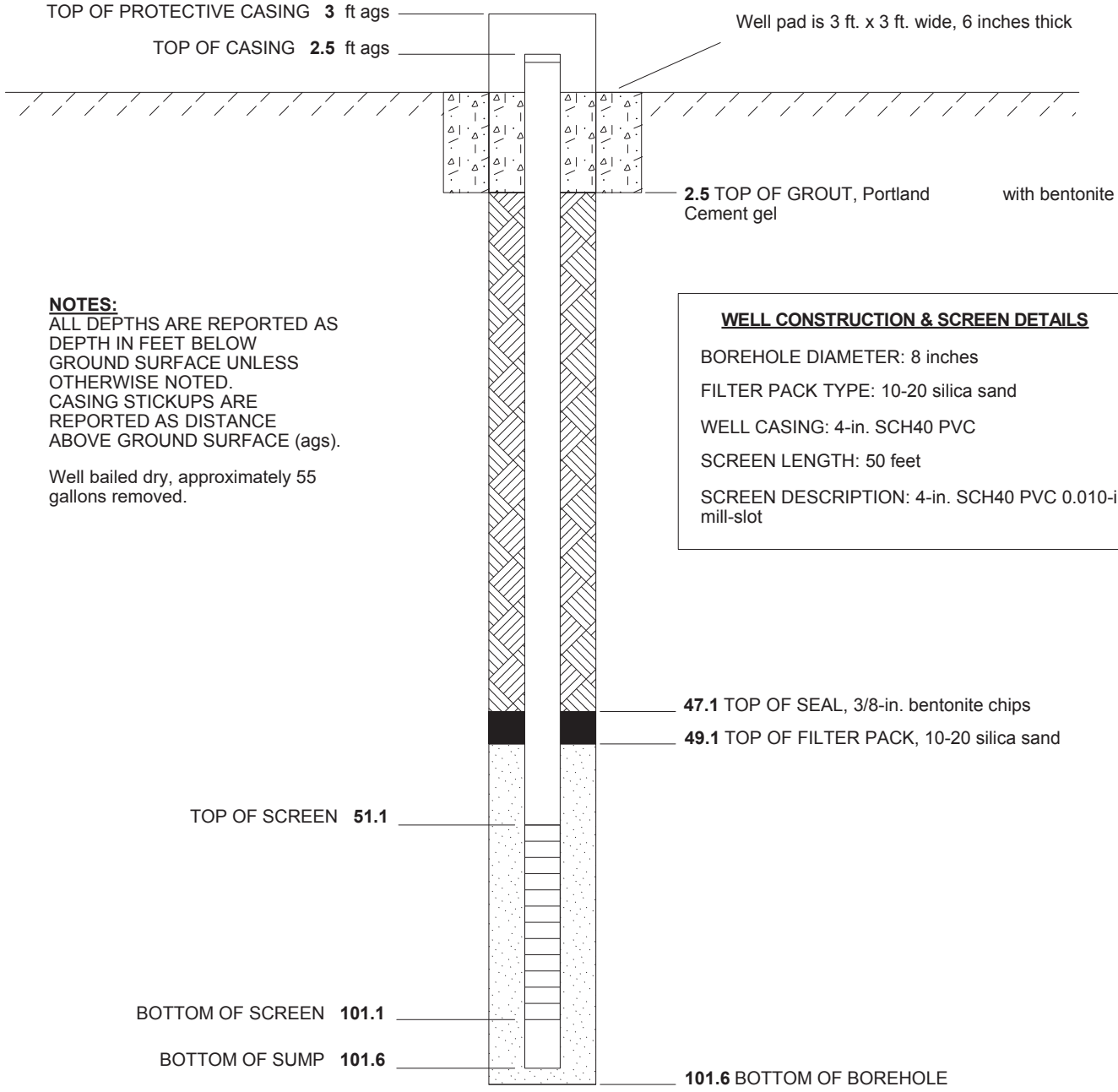
75				

Sampler Signature: A. Turkasz Date: 8/17/2019

PROJECT NUMBER:	WELL NUMBER:
477041.06.03	MW-40

Well Completion Diagram

PROJECT : Blanco Gas Plant - North Flare Pit		LOCATION : Bloomfield, New Mexico	
ELEVATION : 5619.59 ft amsl	TOC : 5621.43 ft amsl	DRILLING CONTRACTOR AND DRILL RIG : Yellow Jacket Drilling, 150 cc TerraSonic Rig	
COORDINATES : 2686334.64 ft E, 2086220.46 ft N		DRILLING METHOD AND EQUIPMENT : 8-inch casing w/continuous core	
WATER LEVEL : 64.25 ft btoc		START : 9/7/2017	END : 9/16/2017 LOGGER : Luke Hill



NOTES:
ALL DEPTHS ARE REPORTED AS DEPTH IN FEET BELOW GROUND SURFACE UNLESS OTHERWISE NOTED.
CASING STICKUPS ARE REPORTED AS DISTANCE ABOVE GROUND SURFACE (ags).

Well bailed dry, approximately 55 gallons removed.

WELL CONSTRUCTION & SCREEN DETAILS

BOREHOLE DIAMETER: 8 inches

FILTER PACK TYPE: 10-20 silica sand

WELL CASING: 4-in. SCH40 PVC

SCREEN LENGTH: 50 feet

SCREEN DESCRIPTION: 4-in. SCH40 PVC 0.010-in. mill-slot

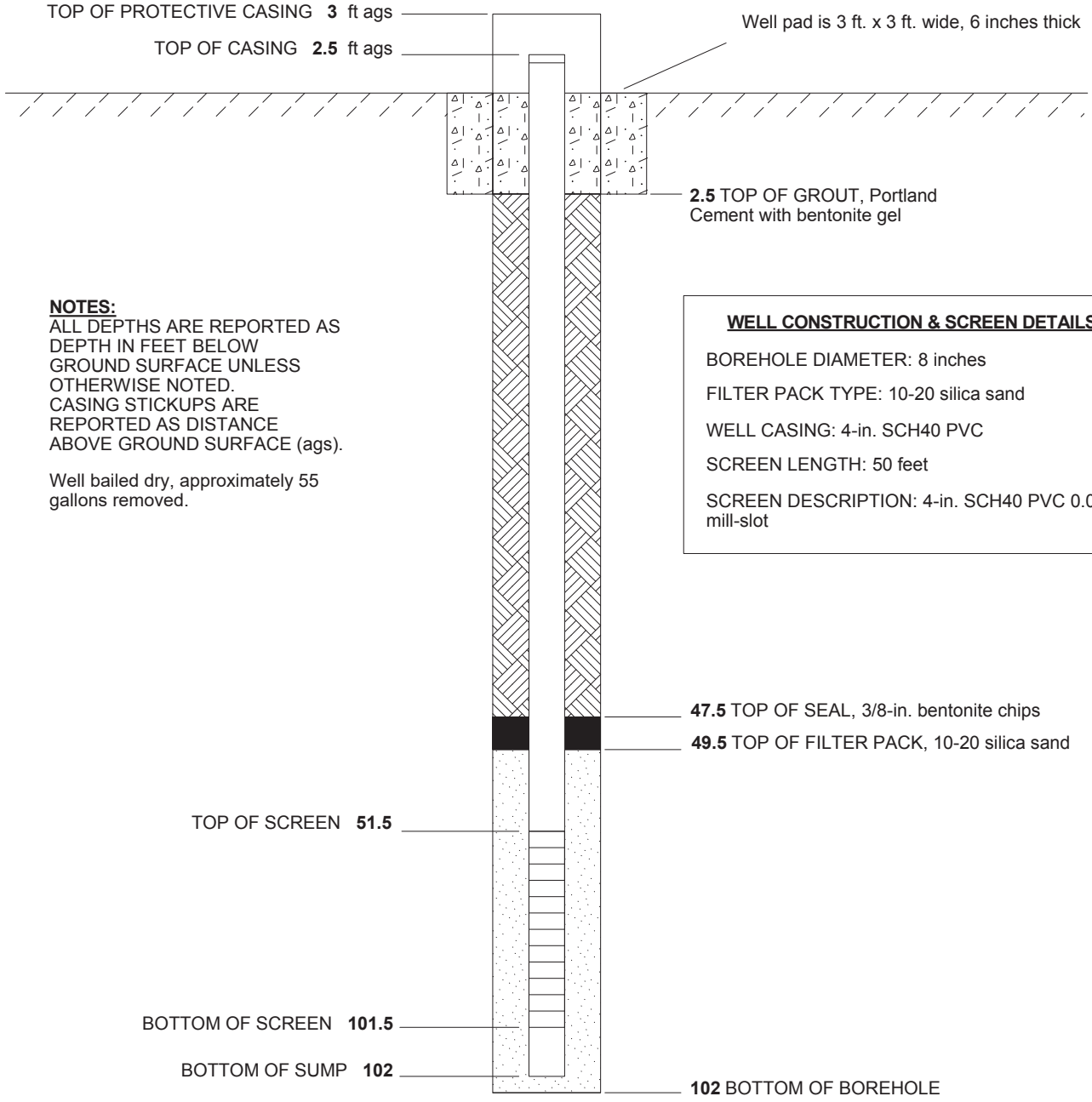
WELL DIAGRAM IS NOT TO SCALE

WELL COMPLETION DIAGRAM; CH2M GEOTECH_12_COMMERCIAL.GLB; COMMERCIAL_PROJECT.GPJ; CH2M GEOTECH_12_CG.GDT; 6/15/15

PROJECT NUMBER:	WELL NUMBER:
477041.06.03	MW-41

Well Completion Diagram

PROJECT : Blanco Gas Plant - North Flare Pit		LOCATION : Bloomfield, New Mexico	
ELEVATION : 5627.88 ft amsl	TOC : 5629.52 ft amsl	DRILLING CONTRACTOR AND DRILL RIG : Yellow Jacket Drilling, 150 cc TerraSonic Rig	
COORDINATES : 2686317. 46 ft E, 2086395.91 ft N		DRILLING METHOD AND EQUIPMENT : 8-inch casing w/continuous core	
WATER LEVEL : 89.49 ft btoc		START : 9/13/2017	END : 9/25/2017 LOGGER : Luke Hill



NOTES:
ALL DEPTHS ARE REPORTED AS DEPTH IN FEET BELOW GROUND SURFACE UNLESS OTHERWISE NOTED.
CASING STICKUPS ARE REPORTED AS DISTANCE ABOVE GROUND SURFACE (ags).

Well bailed dry, approximately 55 gallons removed.

WELL CONSTRUCTION & SCREEN DETAILS

BOREHOLE DIAMETER: 8 inches

FILTER PACK TYPE: 10-20 silica sand

WELL CASING: 4-in. SCH40 PVC

SCREEN LENGTH: 50 feet

SCREEN DESCRIPTION: 4-in. SCH40 PVC 0.010-in. mill-slot

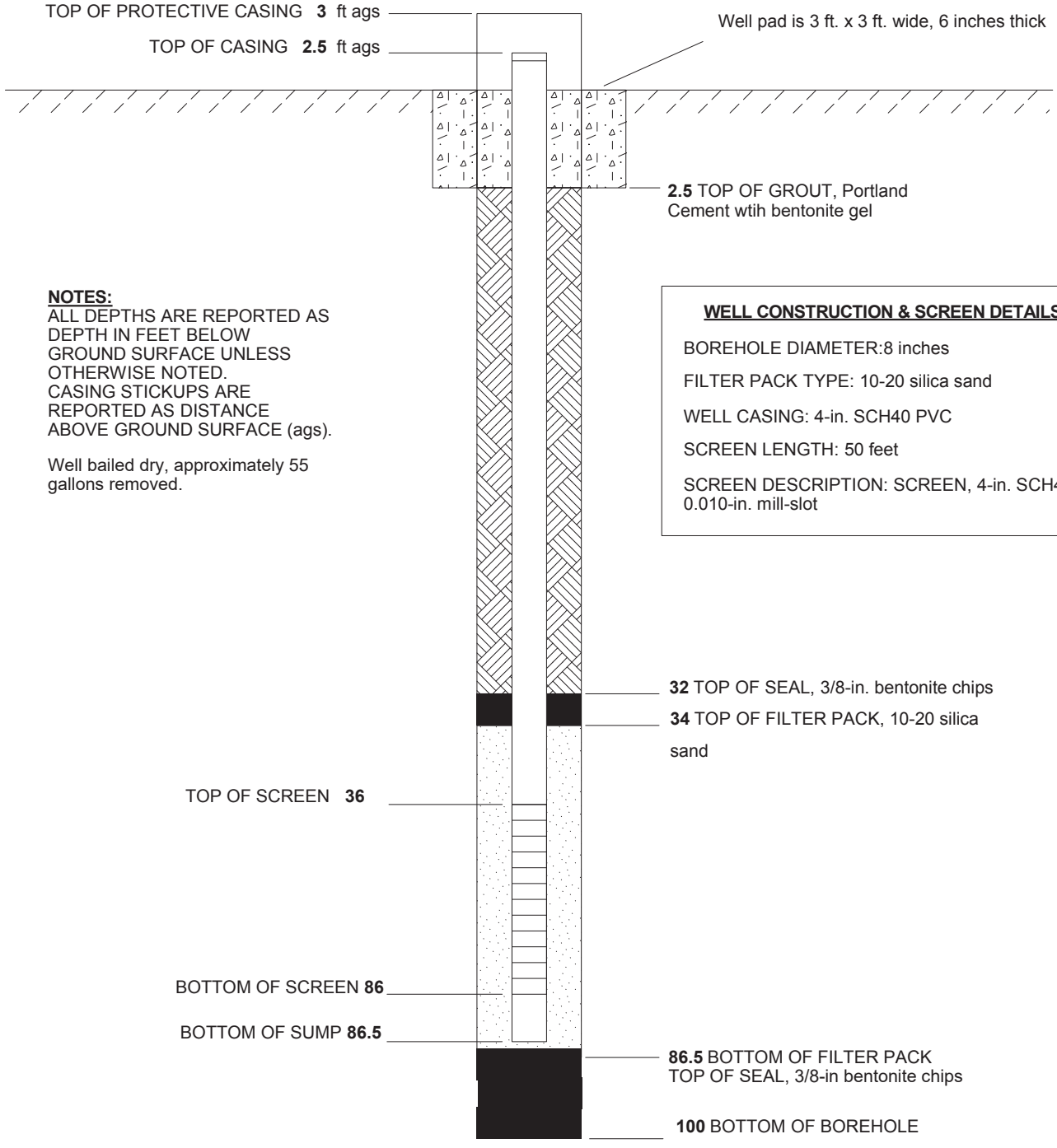
WELL DIAGRAM IS NOT TO SCALE

WELL COMPLETION DIAGRAM; CH2M GEOTECH_12_COMMERCIAL.GLB; COMMERCIAL_PROJECT.GPJ; CH2M GEOTECH_12_CG.GDT; 6/15/15

PROJECT NUMBER:	WELL NUMBER:
477041.06.03	MW-42

Well Completion Diagram

PROJECT : Blanco Gas Plant - North Flare Pit		LOCATION : Bloomfield, New Mexico	
ELEVATION : 5621.26 ft amsl	TOC : 5623.91 ft amsl	DRILLING CONTRACTOR AND DRILL RIG : Yellow Jacket Drilling, 150cc TerraSonic Rig	
COORDINATES : 2686044.29 ft N, 2086655.56 ft N		DRILLING METHOD AND EQUIPMENT : 8-inch casing w/continuous core	
WATER LEVEL : 69.10 ft btoc		START : 9/15/2017	END : 9/17/2017 LOGGER : Luke Hill



NOTES:
ALL DEPTHS ARE REPORTED AS DEPTH IN FEET BELOW GROUND SURFACE UNLESS OTHERWISE NOTED.
CASING STICKUPS ARE REPORTED AS DISTANCE ABOVE GROUND SURFACE (ags).

Well bailed dry, approximately 55 gallons removed.

WELL CONSTRUCTION & SCREEN DETAILS

BOREHOLE DIAMETER:8 inches

FILTER PACK TYPE: 10-20 silica sand

WELL CASING: 4-in. SCH40 PVC

SCREEN LENGTH: 50 feet

SCREEN DESCRIPTION: SCREEN, 4-in. SCH40 PVC 0.010-in. mill-slot

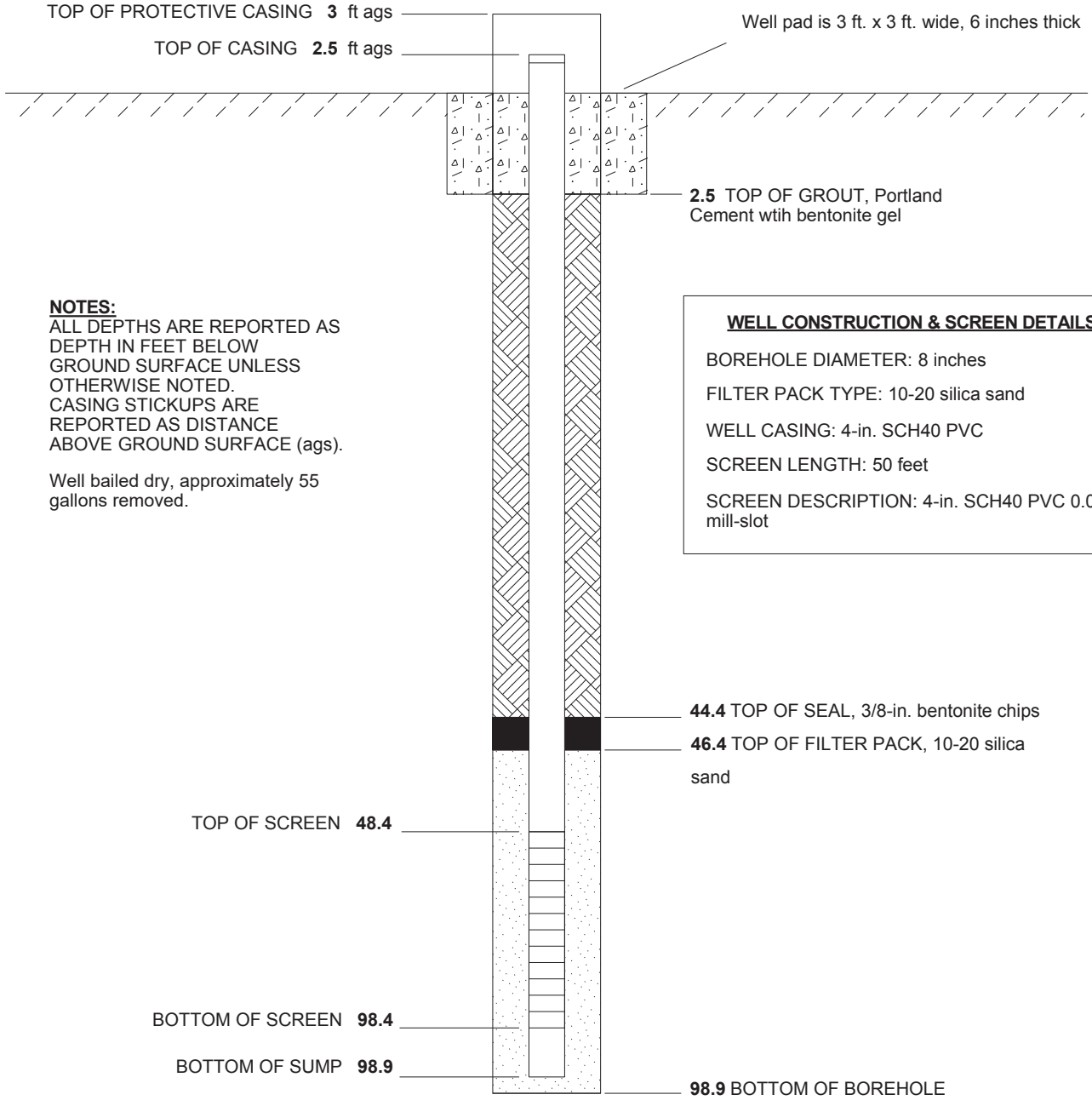
WELL DIAGRAM IS NOT TO SCALE

WELL COMPLETION DIAGRAM; CH2M GEOTECH_12_COMMERCIAL.GLB; COMMERCIAL_PROJECT.GPJ; CH2M GEOTECH_12_CG.GDT; 6/15/15

PROJECT NUMBER:	WELL NUMBER:
477041.06.03	MW-43

Well Completion Diagram

PROJECT : Blanco Gas Plant - North Flare Pit		LOCATION : Bloomfield, New Mexico	
ELEVATION : 5623.89 ft amsl	TOC : 5626.44 ft amsl	DRILLING CONTRACTOR AND DRILL RIG : Yellow Jacket Drilling, 150cc TerraSonic Rig	
COORDINATES : 2686175.90 ft E, 2086662.18 ft N		DRILLING METHOD AND EQUIPMENT : 8-inch casing w/continuous core	
WATER LEVEL : 69.19 ft btoc		START : 9/8/2017	END : 9/10/2017 LOGGER : Luke Hill



NOTES:
ALL DEPTHS ARE REPORTED AS DEPTH IN FEET BELOW GROUND SURFACE UNLESS OTHERWISE NOTED.
CASING STICKUPS ARE REPORTED AS DISTANCE ABOVE GROUND SURFACE (ags).

Well bailed dry, approximately 55 gallons removed.

WELL CONSTRUCTION & SCREEN DETAILS

BOREHOLE DIAMETER: 8 inches

FILTER PACK TYPE: 10-20 silica sand

WELL CASING: 4-in. SCH40 PVC

SCREEN LENGTH: 50 feet

SCREEN DESCRIPTION: 4-in. SCH40 PVC 0.010-in. mill-slot

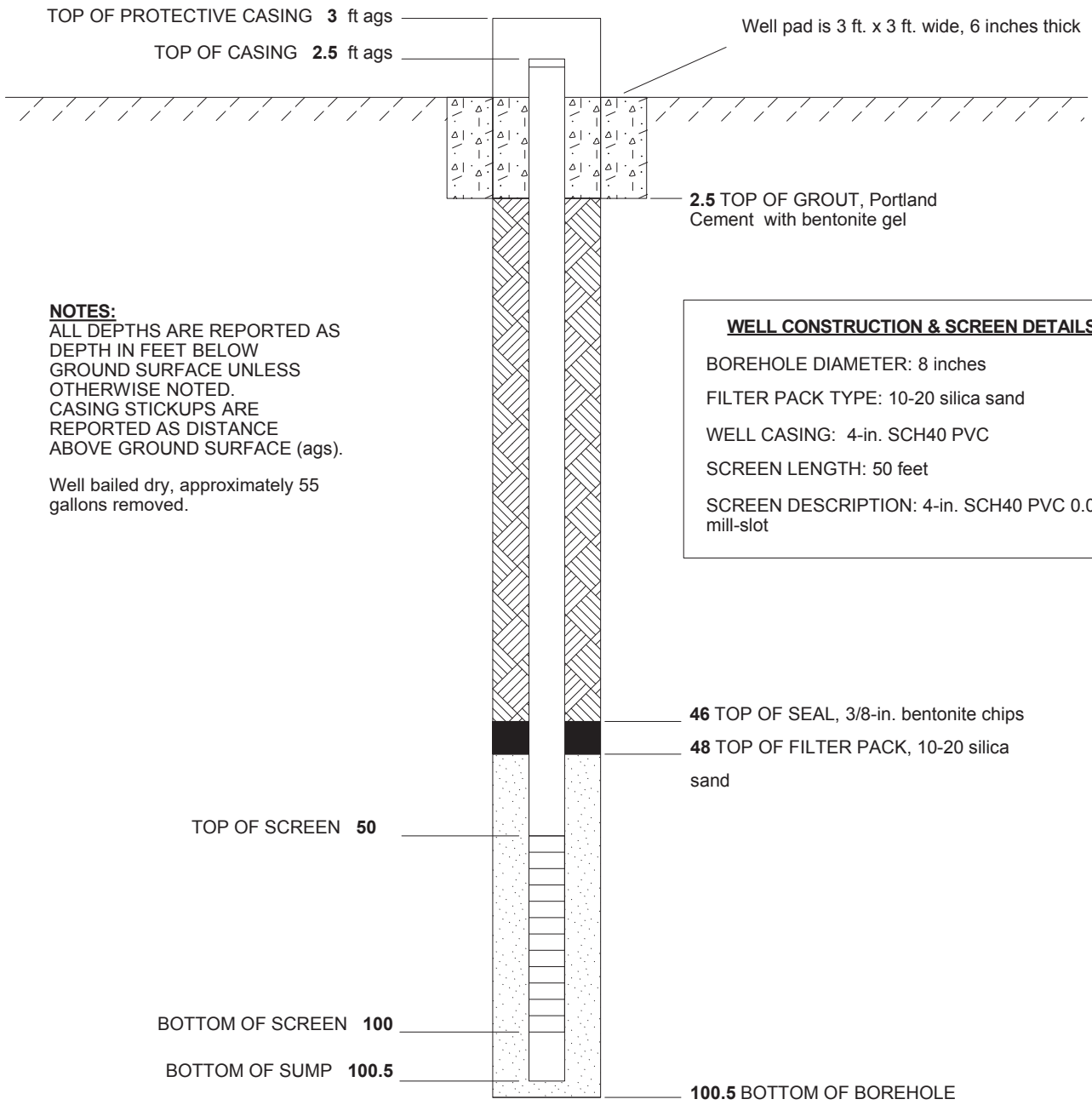
WELL DIAGRAM IS NOT TO SCALE

WELL COMPLETION DIAGRAM; CH2M GEOTECH_12_COMMERCIAL.GLB; COMMERCIAL_PROJECT.GPJ; CH2M GEOTECH_12_CG.GDT; 6/15/15

PROJECT NUMBER:	WELL NUMBER:
477041.06.03	MW-44

Well Completion Diagram

PROJECT : Blanco Gas Plant - North Flare Pit		LOCATION : Bloomfield, New Mexico	
ELEVATION : 5624.36 ft amsl	TOC : 5626.89 ft amsl	DRILLING CONTRACTOR AND DRILL RIG : Yellow Jacket Drilling, 150cc TerraSonic Rig	
COORDINATES : 2686104 ft E, 2086792.65 ft N		DRILLING METHOD AND EQUIPMENT : 8-inch casing w/continuous core	
WATER LEVEL : 68.31 ft btoc		START : 9/10/2017	END : 9/11/2017 LOGGER : Luke Hill



NOTES:
ALL DEPTHS ARE REPORTED AS DEPTH IN FEET BELOW GROUND SURFACE UNLESS OTHERWISE NOTED.
CASING STICKUPS ARE REPORTED AS DISTANCE ABOVE GROUND SURFACE (ags).

Well bailed dry, approximately 55 gallons removed.

WELL CONSTRUCTION & SCREEN DETAILS

BOREHOLE DIAMETER: 8 inches

FILTER PACK TYPE: 10-20 silica sand

WELL CASING: 4-in. SCH40 PVC

SCREEN LENGTH: 50 feet

SCREEN DESCRIPTION: 4-in. SCH40 PVC 0.010-in. mill-slot

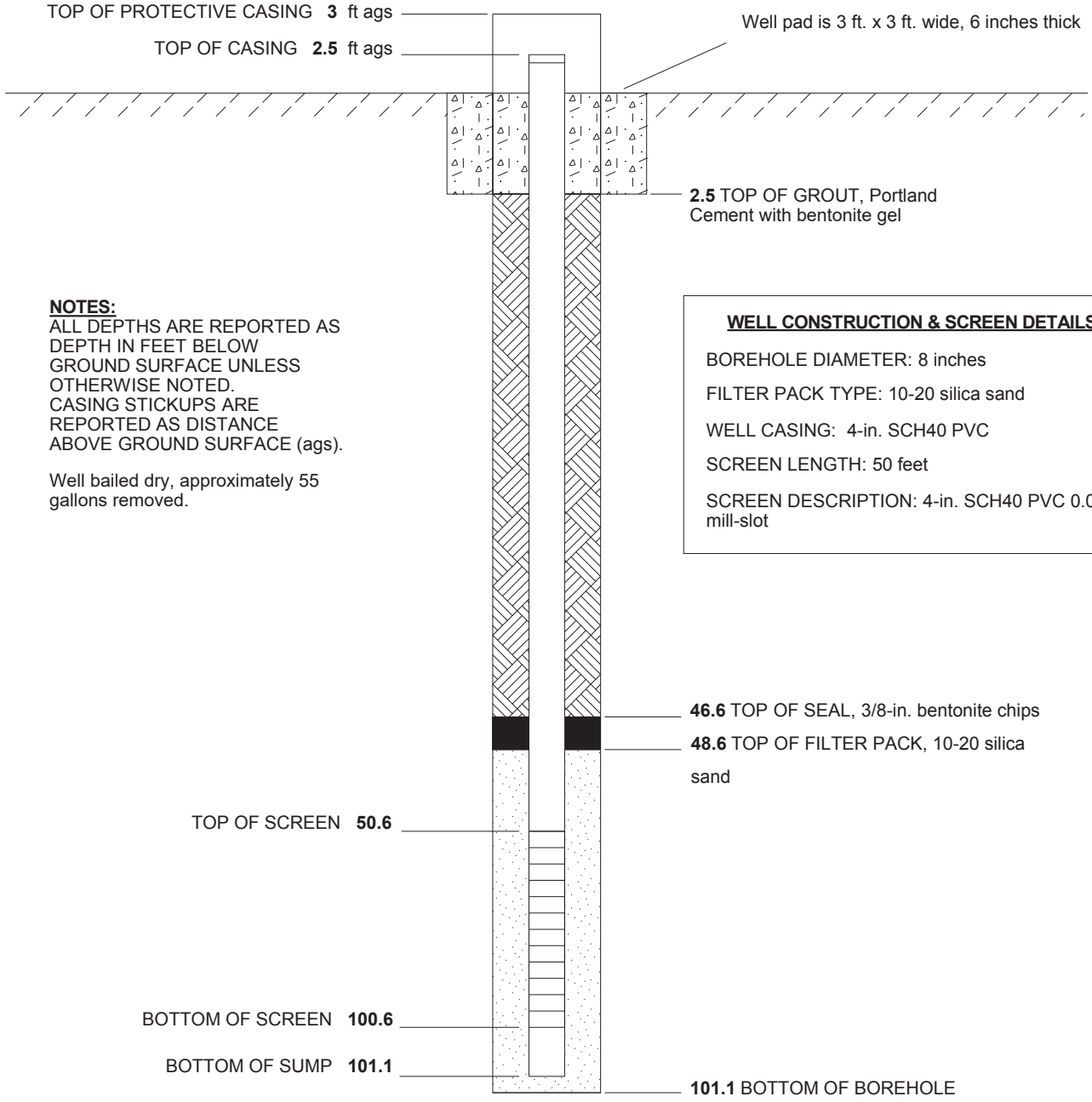
WELL DIAGRAM IS NOT TO SCALE

WELL COMPLETION DIAGRAM; CH2M GEOTECH_12_COMMERCIAL.GLB; COMMERCIAL_PROJECT.GPJ; CH2M GEOTECH_12_CG.GDT; 6/15/15

PROJECT NUMBER:	WELL NUMBER:
477041.06.03	MW-45

Well Completion Diagram

PROJECT : Blanco Gas Plant - North Flare Pit		LOCATION : Bloomfield, New Mexico	
ELEVATION : 5631.59 ft amsl	TOC : 56.33.95 ft amsl	DRILLING CONTRACTOR AND DRILL RIG : Yellow Jacket Drilling, 150cc TerraSonic Rig	
COORDINATES : 2686247.97 ft E, 2086914.12 ft N		DRILLING METHOD AND EQUIPMENT : 8inch casing w/continuous core	
WATER LEVEL : 79.13 ft btoc		START : 9/11/2017	END : 9/13/2017 LOGGER : Luke Hill



NOTES:
ALL DEPTHS ARE REPORTED AS DEPTH IN FEET BELOW GROUND SURFACE UNLESS OTHERWISE NOTED.
CASING STICKUPS ARE REPORTED AS DISTANCE ABOVE GROUND SURFACE (ags).

Well bailed dry, approximately 55 gallons removed.

WELL CONSTRUCTION & SCREEN DETAILS

BOREHOLE DIAMETER: 8 inches

FILTER PACK TYPE: 10-20 silica sand

WELL CASING: 4-in. SCH40 PVC

SCREEN LENGTH: 50 feet

SCREEN DESCRIPTION: 4-in. SCH40 PVC 0.010-in. mill-slot

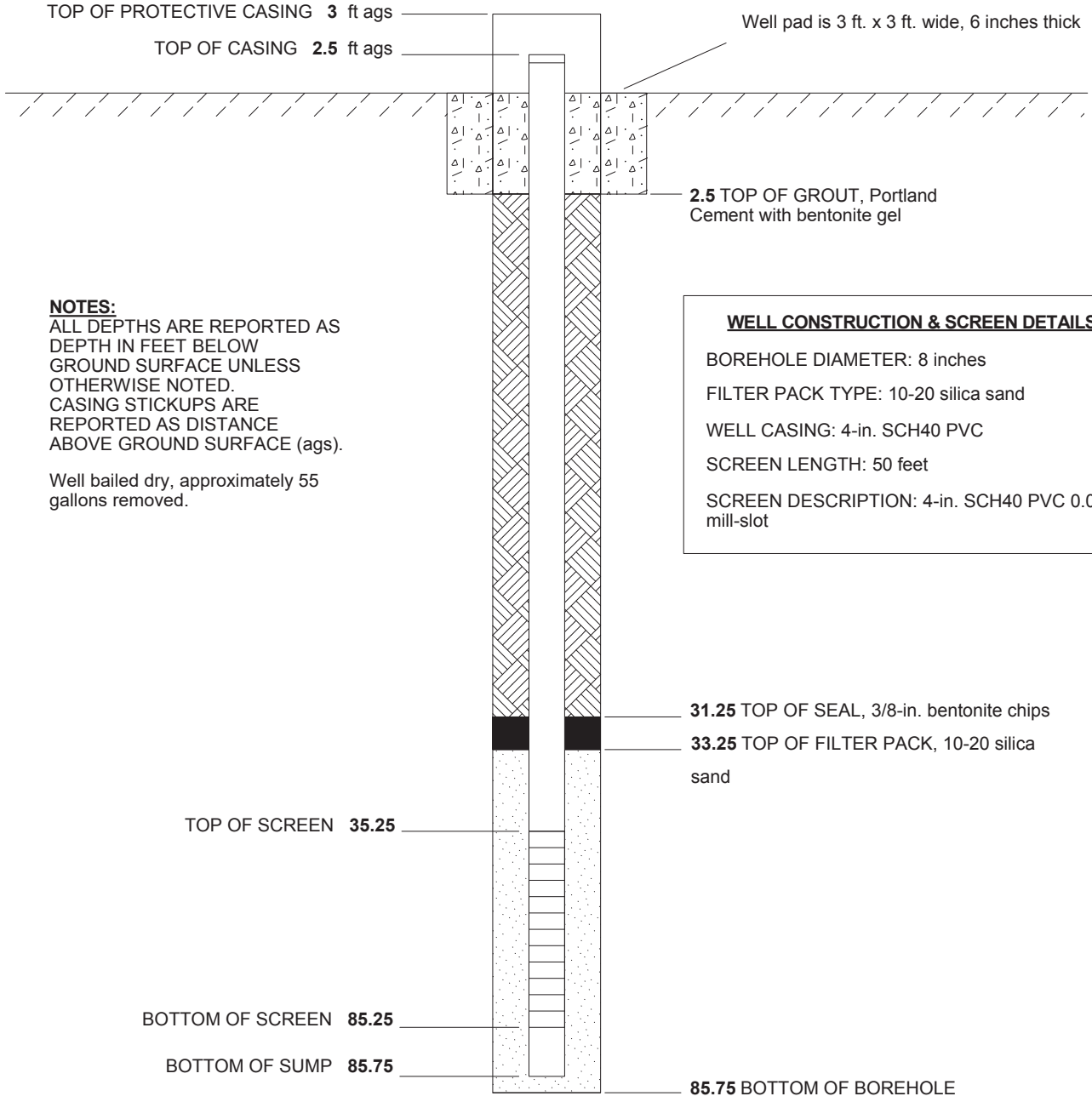
WELL DIAGRAM IS NOT TO SCALE

WELL COMPLETION DIAGRAM; CH2M GEOTECH_12_COMMERCIAL.GLB; COMMERCIAL_PROJECT.GPJ; CH2M GEOTECH_12_CG.GDT; 6/15/15

PROJECT NUMBER:	WELL NUMBER:
477041.06.03	MW-46

Well Completion Diagram

PROJECT : Blanco Gas Plant - North Flare Pit		LOCATION : Bloomfield, New Mexico	
ELEVATION : 5648.61 ft amsl	TOC : 5633.95 ft amsl	DRILLING CONTRACTOR AND DRILL RIG : Yellow Jacket Drilling, 150cc TerraSonic Rig	
COORDINATES : 2685719.83 ft E, 2087220.84 ft N		DRILLING METHOD AND EQUIPMENT : 8-inch casing w/continuous core	
WATER LEVEL : 47.32 ft btoc		START : 9/18/2017	END : 9/19/2017 LOGGER : Luke Hill



NOTES:
ALL DEPTHS ARE REPORTED AS DEPTH IN FEET BELOW GROUND SURFACE UNLESS OTHERWISE NOTED.
CASING STICKUPS ARE REPORTED AS DISTANCE ABOVE GROUND SURFACE (ags).

Well bailed dry, approximately 55 gallons removed.

WELL CONSTRUCTION & SCREEN DETAILS

BOREHOLE DIAMETER: 8 inches

FILTER PACK TYPE: 10-20 silica sand

WELL CASING: 4-in. SCH40 PVC

SCREEN LENGTH: 50 feet

SCREEN DESCRIPTION: 4-in. SCH40 PVC 0.010-in. mill-slot

WELL DIAGRAM IS NOT TO SCALE

WELL COMPLETION DIAGRAM; CH2M GEOTECH_12_COMMERCIAL.GLB; COMMERCIAL_PROJECT.GPJ; CH2M GEOTECH_12_CG.GDT; 6/15/15

PROJECT NUMBER: 477041.06.03	WELL NUMBER: MW-47

Well Completion Diagram

PROJECT : Blanco Gas Plant - North Flare Pit

LOCATION : Bloomfield, New Mexico

ELEVATION : 5635.18 ft amsl TOC : 5637.74 ft amsl

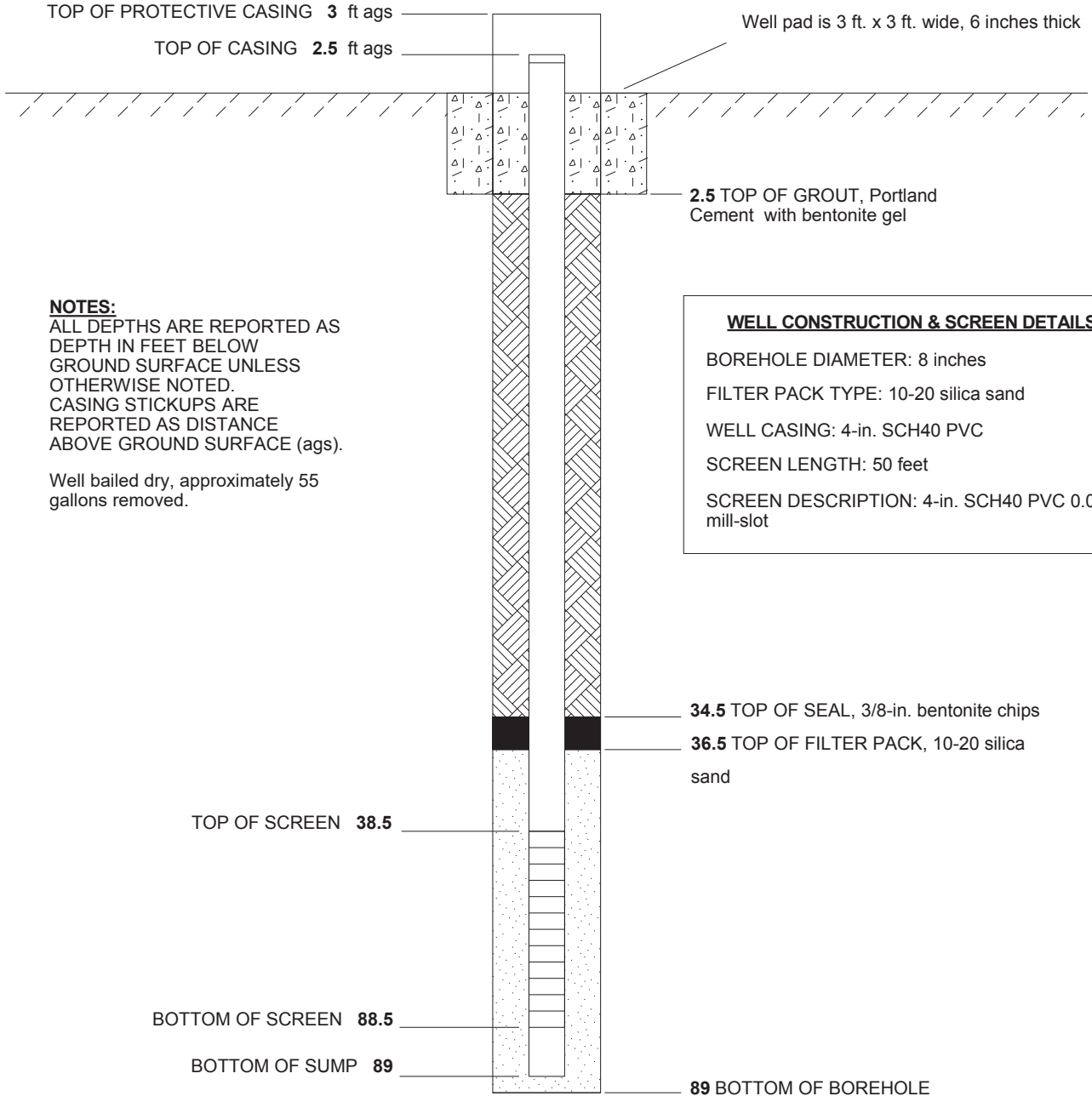
DRILLING CONTRACTOR AND DRILL RIG : Yellow Jacket Drilling, 150cc TerraSonic Rig

COORDINATES : 2685919.43 ft E, 2087242.7 ft N

DRILLING METHOD AND EQUIPMENT : 8-inch casing w/continuous core

WATER LEVEL : 71.82 ft btoc

START : 9/19/2017 END : 9/20/2017 LOGGER : Luke Hill



NOTES:
ALL DEPTHS ARE REPORTED AS DEPTH IN FEET BELOW GROUND SURFACE UNLESS OTHERWISE NOTED.
CASING STICKUPS ARE REPORTED AS DISTANCE ABOVE GROUND SURFACE (ags).

Well bailed dry, approximately 55 gallons removed.

WELL CONSTRUCTION & SCREEN DETAILS

BOREHOLE DIAMETER: 8 inches

FILTER PACK TYPE: 10-20 silica sand

WELL CASING: 4-in. SCH40 PVC

SCREEN LENGTH: 50 feet

SCREEN DESCRIPTION: 4-in. SCH40 PVC 0.010-in. mill-slot

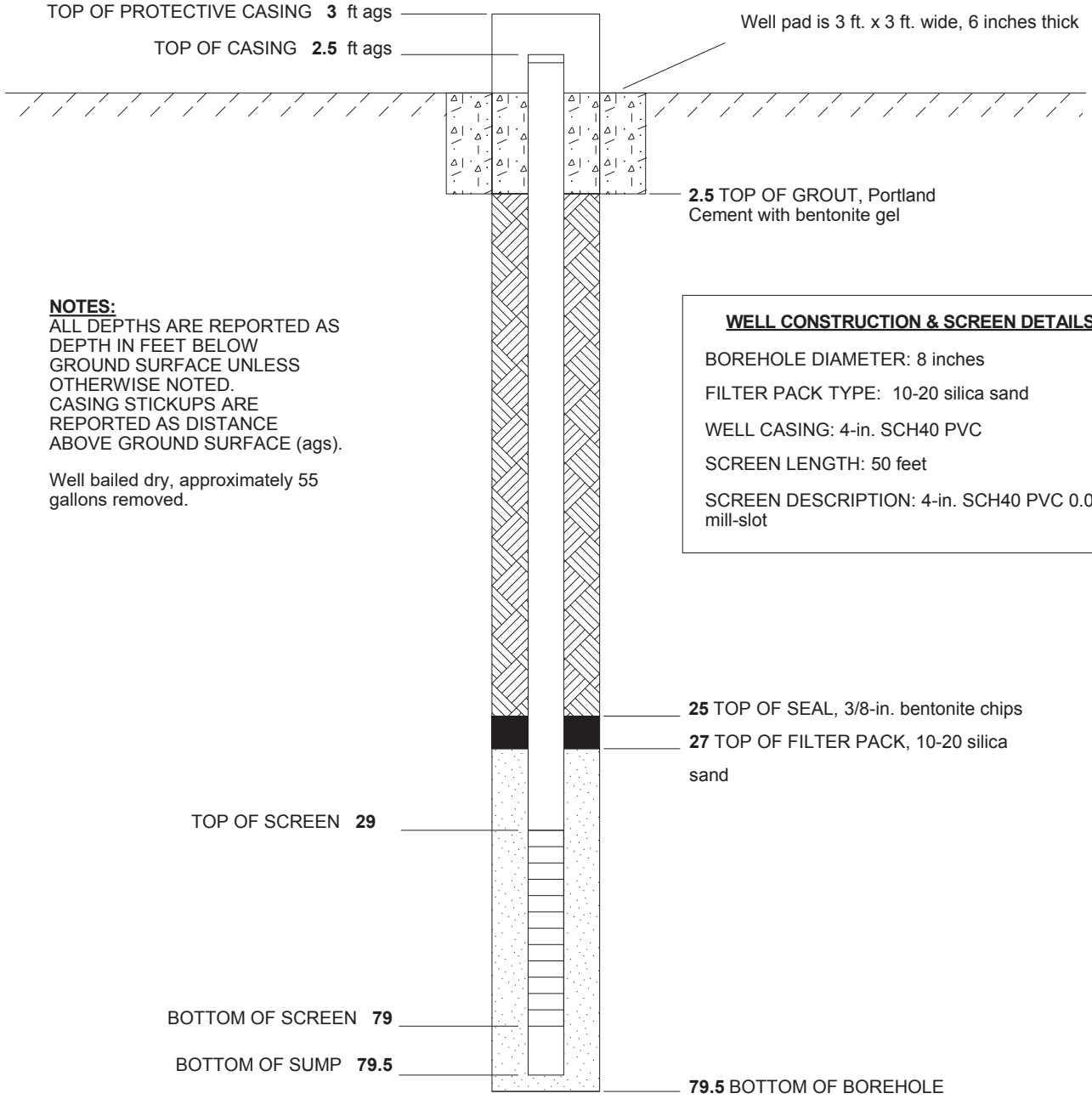
WELL DIAGRAM IS NOT TO SCALE

WELL COMPLETION DIAGRAM; CH2M GEOTECH_12_COMMERCIAL.GLB; COMMERCIAL_PROJECT.GPJ; CH2M GEOTECH_12_CG.GDT; 6/15/15

PROJECT NUMBER:	WELL NUMBER:
477041.06.03	MW-48

Well Completion Diagram

PROJECT : Blanco Gas Plant - North Flare Pit		LOCATION : Bloomfield, New Mexico	
ELEVATION : 5648.99 ft amsl	TOC : 5651.40 ft amsl	DRILLING CONTRACTOR AND DRILL RIG : Yellow Jacket Drilling, 150cc TerraSonic Rig	
COORDINATES : 2685788.6 ft E, 2087440.51 ft N		DRILLING METHOD AND EQUIPMENT : 8-inch Casing w/continuous core	
WATER LEVEL : 57.82 ft btoc		START : 9/21/2017	END : 9/22/2017 LOGGER : Luke Hill



NOTES:
ALL DEPTHS ARE REPORTED AS DEPTH IN FEET BELOW GROUND SURFACE UNLESS OTHERWISE NOTED.
CASING STICKUPS ARE REPORTED AS DISTANCE ABOVE GROUND SURFACE (ags).

Well bailed dry, approximately 55 gallons removed.

WELL CONSTRUCTION & SCREEN DETAILS

BOREHOLE DIAMETER: 8 inches

FILTER PACK TYPE: 10-20 silica sand

WELL CASING: 4-in. SCH40 PVC

SCREEN LENGTH: 50 feet

SCREEN DESCRIPTION: 4-in. SCH40 PVC 0.010-in. mill-slot

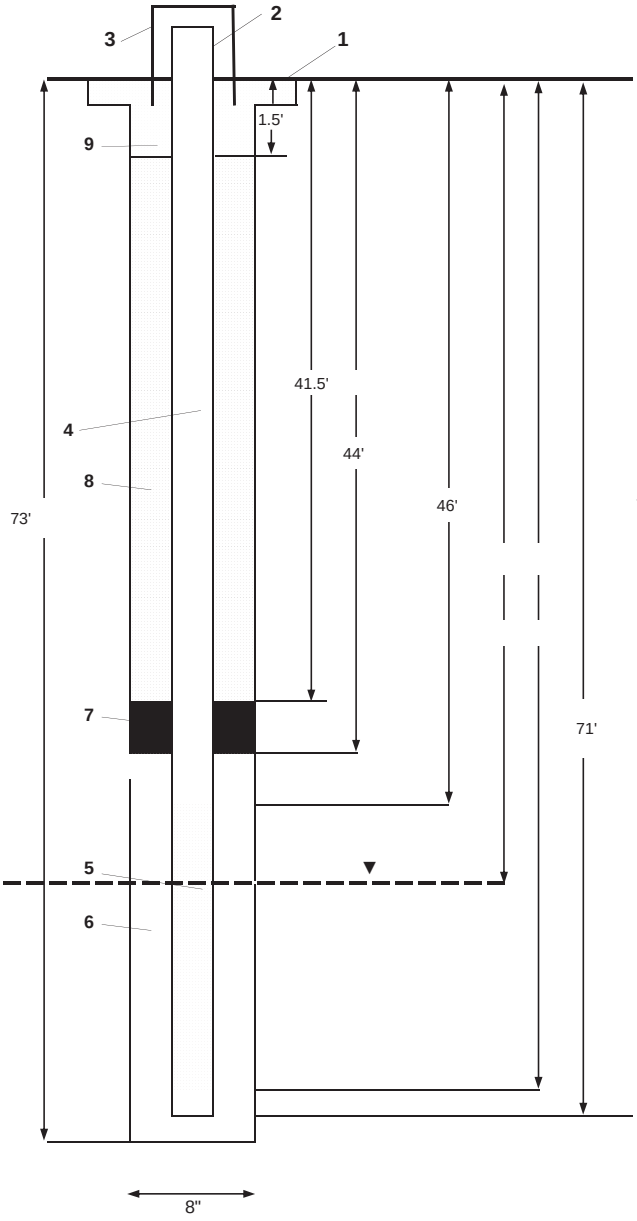
WELL DIAGRAM IS NOT TO SCALE

WELL COMPLETION DIAGRAM; CH2M GEOTECH_12_COMMERCIAL.GLB; COMMERCIAL_PROJECT.GPJ; CH2M GEOTECH_12_CG.GDT; 6/15/15

PROJECT NUMBER	WELL NUMBER	
707467CH.01.02	MW-49	SHEET 1 OF 1

WELL COMPLETION DIAGRAM

PROJECT : Blanco Plant North Flare Pit - Phase 2 Site Investigation
LOCATION : Bloomfield, NM
DRILLING CONTRACTOR : Cascade Drilling
COORDINATES : 2686222.583 ft E, 2086796.893 ft N
DRILLING METHOD AND EQUIPMENT USED : Rotosonic
DRILLER: Josh Parks
WATER LEVEL : 61' bgs.
START : 8/17/2019
END : 8/18/2019
LOGGER : Alex Turkasz



Not to scale

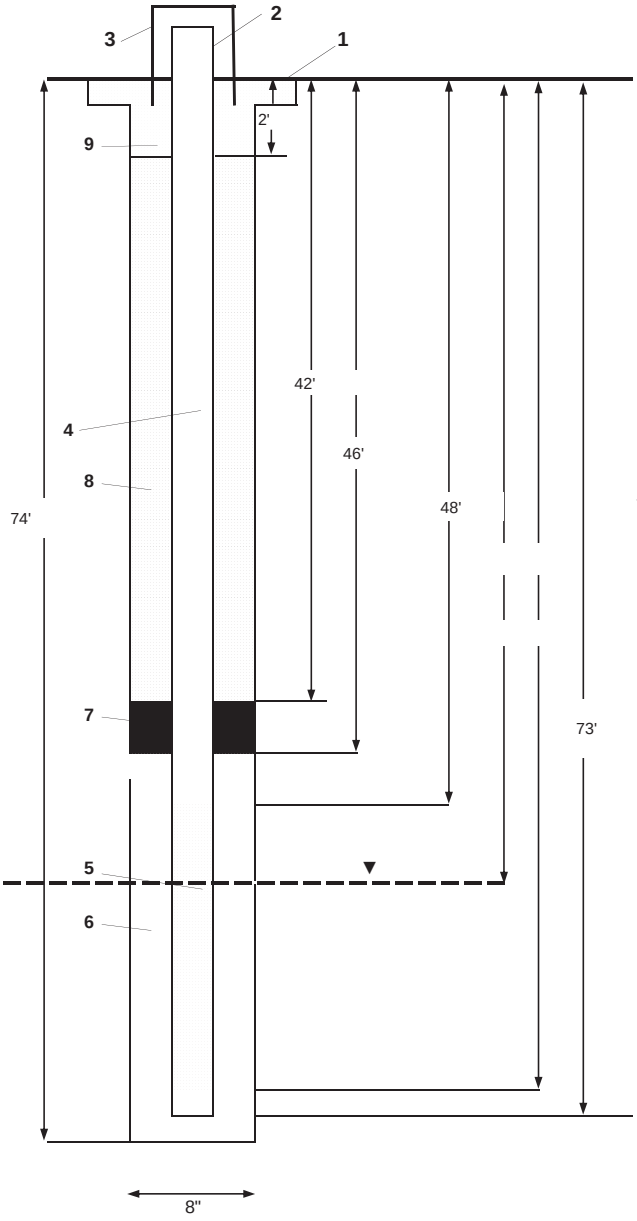
1-	Ground elevation at well	5,629.14
2-	Top of PVC casing elevation	5,631.77
	a) protective cover elevation	5,632.23
3-	Wellhead protection cover type	Monument
	a) weep hole?	N/A
	b) concrete pad dimensions	3' x 3' x 6"
4-	Dia./type of well casing	4" Schedule-40 PVC
5-	Type/slot size of screen	0.010" mill slot screen
		46' - 71' bgs.
6-	Type screen filter	12/20 silica sand
	a) calculated volume	NM
	b) actual volume installed	7 bags
	c) placement	Pour
7-	Type of seal	3/8" hydrated bentonite chips
	a) calculated volume	NM
	b) actual volume installed	1 bag
	c) placement	Pour
8-	Type of seal	Portland/bentonite grout mix
	a) calculated volume	NM
	b) actual volume installed	25 bags/1.5 bags
	c) placement	Tremie pipe
9-	Cement	
	a) cement mix used	4,000 PSI concrete
	b) calculated volume	NM
	c) actual volume installed	NM
	d) placement	0' - 1.5' bgs.
	Development method	swab, surge, bail
	Estimated purge volume	> 26 gallons
	Development time	N/A

Comments: Development: Due to minimal water within the screened interval, approximately 25 gallons of water were added to the well to swab, well bailed dry.

PROJECT NUMBER	WELL NUMBER	
707467CH.01.02	MW-50	SHEET 1 OF 1

WELL COMPLETION DIAGRAM

PROJECT : Blanco Plant North Flare Pit
LOCATION : Bloomfield, NM
DRILLING CONTRACTOR : Cascade Drilling
COORDINATES : 2686431.759 ft E, 2086909.069 ft N
DRILLING METHOD AND EQUIPMENT USED : Rotosonic
DRILLER: Josh Parks
WATER LEVEL : 58' bgs.
START : 8/18/2019
END : 8/18/2019
LOGGER : Alex Turkasz



Not to scale

1-	Ground elevation at well	
2-	Top of PVC casing elevation	
	a) protective cover elevation	
3-	Wellhead protection cover type	Monument
	a) weep hole?	N/A
	b) concrete pad dimensions	3' x 3' x 6"
4-	Dia./type of well casing	4" Schedule-40 PVC
5-	Type/slot size of screen	0.010" mill slot screen 48' - 73' bgs.
6-	Type screen filter	12/20 silica screen
	a) calculated volume	NM
	b) actual volume installed	7 bags
	c) placement	46' - 74' bgs.
7-	Type of seal	3/8" hydrated bentonite chips
	a) calculated volume	NM
	b) actual volume installed	3/4 bag
	c) placement	42' - 46'
8-	Type of seal	Portland/bentonite grout mix
	a) calculated volume	NM
	b) actual volume installed	15 bags(94 lbs) / 1 bag
	c) placement	2' - 42' bgs.
9-	Cement	
	a) cement mix used	4,000 PSI concrete
	b) calculated volume	NM
	c) actual volume installed	NM
	d) placement	0' - 2' bgs.
	Development method	swab, surge, bail
	Estimated purge volume	> 26 gallons
	Development time	N/A

Comments: Backfilled from 78' to 74' with one bag of 3/8" bentonite chips

Development: Due to minimal water within the screened interval about 25 gallons of water were added to the well to swab and purged dry.

PROJECT NUMBER	WELL NUMBER	
707467CH.01.02	MW-51	SHEET 1 OF 1

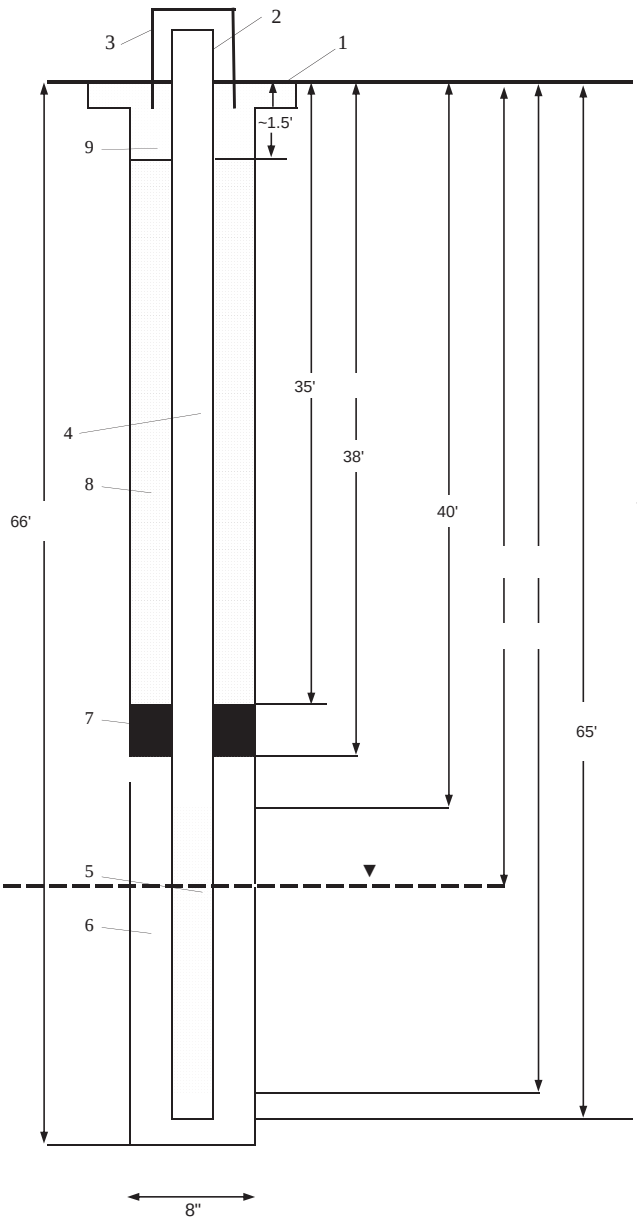
WELL COMPLETION DIAGRAM

PROJECT : Blanco Plant North Flare Pit LOCATION : Bloomfield, NM

DRILLING CONTRACTOR : Cascade Drilling COORDINATES : 2686092.139 ft E, 2087220.549 ft N

DRILLING METHOD AND EQUIPMENT USED : Rotosonic DRILLER: Josh Parks

WATER LEVEL : 50' bgs. START : 8/19/2019 END : 8/20/2019 LOGGER : Alex Turkasz



Not to scale

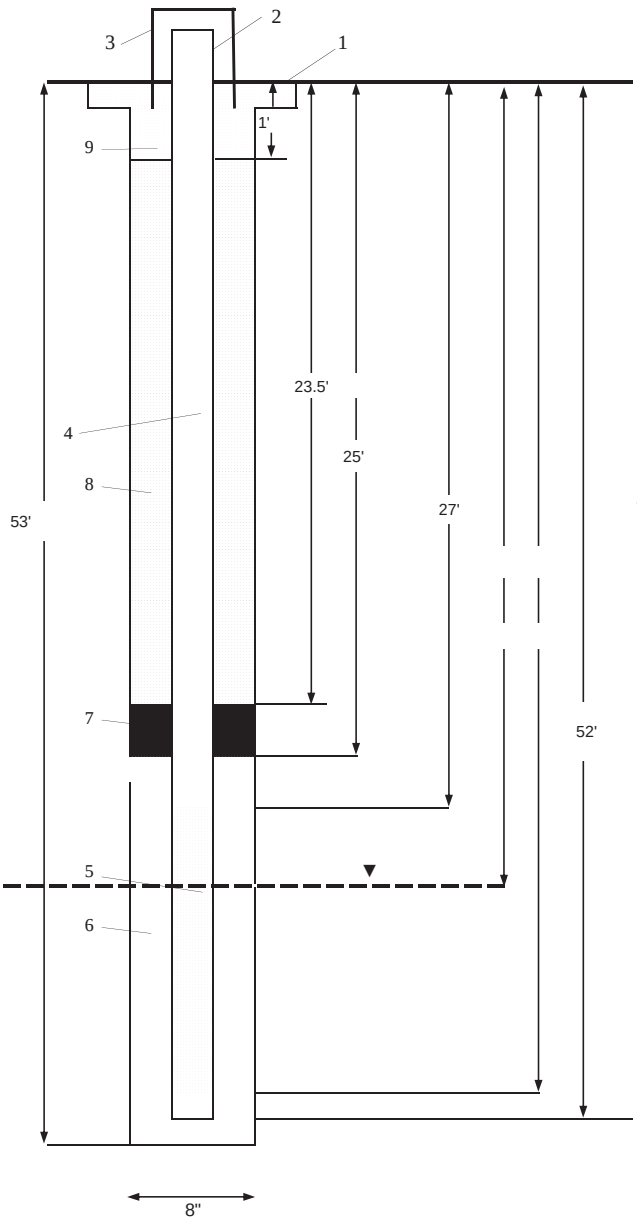
1-	Ground elevation at well	
2-	Top of PVC casing elevation	
	a) protective cover elevation	
3-	Wellhead protection cover type	Monument
	a) weep hole?	N/A
	b) concrete pad dimensions	3' x 3' x 6"
4-	Dia./type of well casing	4" Schedule-40 PVC
5-	Type/slot size of screen	0.010" mill slot screen 40' - 65' bgs.
6-	Type screen filter	12/20 silica sand
	a) calculated volume	NM
	b) actual volume installed	10 bags
	c) placement	38' - 66' bgs.
7-	Type of seal	3/8" hydrated bentonite chips
	a) calculated volume	NM
	b) actual volume installed	1 bag
	c) placement	35' - 38' bgs.
8-	Type of seal	Portland/bentonite grout mix
	a) calculated volume	NM
	b) actual volume installed	NM
	c) placement	1.5' - 35' bgs.
9-	Cement	
	a) cement mix used	4,000 PSI concrete
	b) calculated volume	NM
	c) actual volume installed	NM
	d) placement	0' - 1.5' bgs.
	Development method	swab, surge, bail
	Estimated purge volume	> 26 gallons
	Development time	N/A

Comments: Development: Due to minimal water within the screened interval about 25 gallons of water were added to the well to swab and purged dry.

PROJECT NUMBER	WELL NUMBER	
707467CH.01.02	MW-52	SHEET 1 OF 1

WELL COMPLETION DIAGRAM

PROJECT : Blanco Plant North Flare Pit	LOCATION : Bloomfield, NM		
DRILLING CONTRACTOR : Cascade Drilling	COORDINATES : 2686018.604 ft E, 2087441.475 ft N		
DRILLING METHOD AND EQUIPMENT USED : Rotosonic		DRILLER:	Josh Parks
WATER LEVEL : 37' bgs.	START : 8/24/2019 END : 8/24/2019	LOGGER :	Alex Turkasz



Not to scale

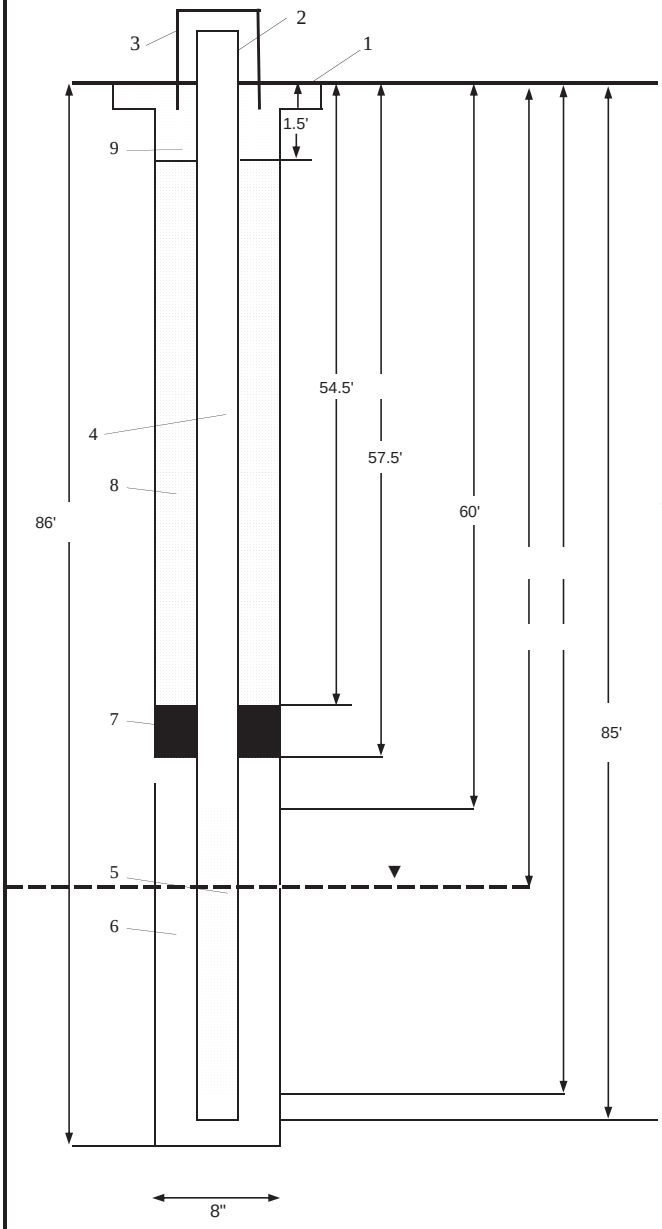
1-	Ground elevation at well	
2-	Top of PVC casing elevation	
	a) protective cover elevation	
3-	Wellhead protection cover type	Monument
	a) weep hole?	N/A
	b) concrete pad dimensions	3' x 3' x 6"
4-	Dia./type of well casing	4" Schedule-40 PVC
5-	Type/slot size of screen	0.010" mill slot screen 27' - 52' bgs.
6-	Type screen filter	12/20 silica sand
	a) calculated volume	NM
	b) actual volume installed	NM
	c) placement	25' - 53' bgs.
7-	Type of seal	3/8" hydrated bentonite chips
	a) calculated volume	NM
	b) actual volume installed	1 bag
	c) placement	23.5' - 25' bgs.
8-	Type of seal	Portland/bentonite grout mix
	a) calculated volume	NM
	b) actual volume installed	NM
	c) placement	1' - 23.5' bgs.
9-	Cement	
	a) cement mix used	4,000 PSI concrete
	b) calculated volume	NM
	c) actual volume installed	NM
	d) placement	0' - 1' bgs.
	Development method	swab, surge, bail
	Estimated purge volume	> 26 gallons
	Development time	N/A

Comments: Development: Due to minimal water within the screened interval about 25 gallons of water were added to the well to swab and purged dry.

PROJECT NUMBER	WELL NUMBER	
707467CH.01.02	MW-53	SHEET 1 OF 1

WELL COMPLETION DIAGRAM

PROJECT : Blanco Plant North Flare Pit
LOCATION : Bloomfield, NM
DRILLING CONTRACTOR : Cascade Drilling
COORDINATES : 2685764.767 ft E, 2087548.049 ft N
DRILLING METHOD AND EQUIPMENT USED : Rotosonic
DRILLER: Josh Parks
WATER LEVEL : 71' bgs.
START : 8/22/2019
END : 8/23/2019
LOGGER : Alex Turkasz



Not to scale

1-	Ground elevation at well	
2-	Top of PVC casing elevation	
	a) protective cover elevation	
3-	Wellhead protection cover type	Monument
	a) weep hole?	N/A
	b) concrete pad dimensions	3' x 3' x 6"
4-	Dia./type of well casing	4" Schedule-40 PVC
5-	Type/slot size of screen	0.010" mill slot screen 60' - 85' bgs.
6-	Type screen filter	12/20 silica sand
	a) calculated volume	NM
	b) actual volume installed	12 bags
	c) placement	57.5' - 86' bgs.
7-	Type of seal	3/8" hydrated bentonite chips
	a) calculated volume	NM
	b) actual volume installed	1 bag
	c) placement	54.5' - 57.5' bgs.
8-	Type of seal	Portland/bentonite grout mix
	a) calculated volume	NM
	b) actual volume installed	NM
	c) placement	1.5' - 54.5' bgs.
9-	Cement	
	a) cement mix used	4,000 PSI concrete
	b) calculated volume	NM
	c) actual volume installed	NM
	d) placement	0' - 1.5' bgs.
	Development method	swab, surge, bail
	Estimated purge volume	about 30 gallons
	Development time	N/A

Comments: Development: Due to minimal water within the screened interval about 25 gallons of water were added to the well to swab and purged dry.

PROJECT NUMBER	WELL NUMBER	
707467CH.01.02	MW-54	SHEET 1 OF 1

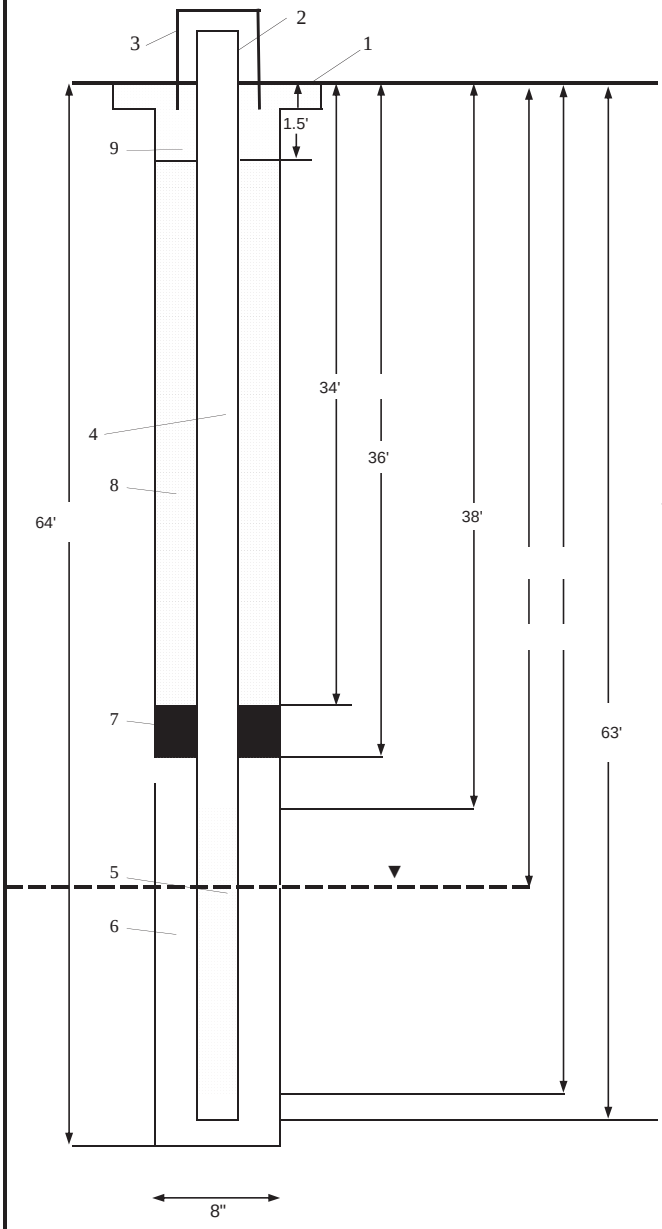
WELL COMPLETION DIAGRAM

PROJECT : Blanco Plant North Flare Pit LOCATION : Bloomfield, NM

DRILLING CONTRACTOR : Cascade Drilling COORDINATES : 2685729.638 ft E, 2087349.776 ft N

DRILLING METHOD AND EQUIPMENT USED : Rotosonic DRILLER: Josh Parks

WATER LEVEL : 48' bgs. START : 8/20/2019 END : 8/21/2019 LOGGER : Alex Turkasz



Not to scale

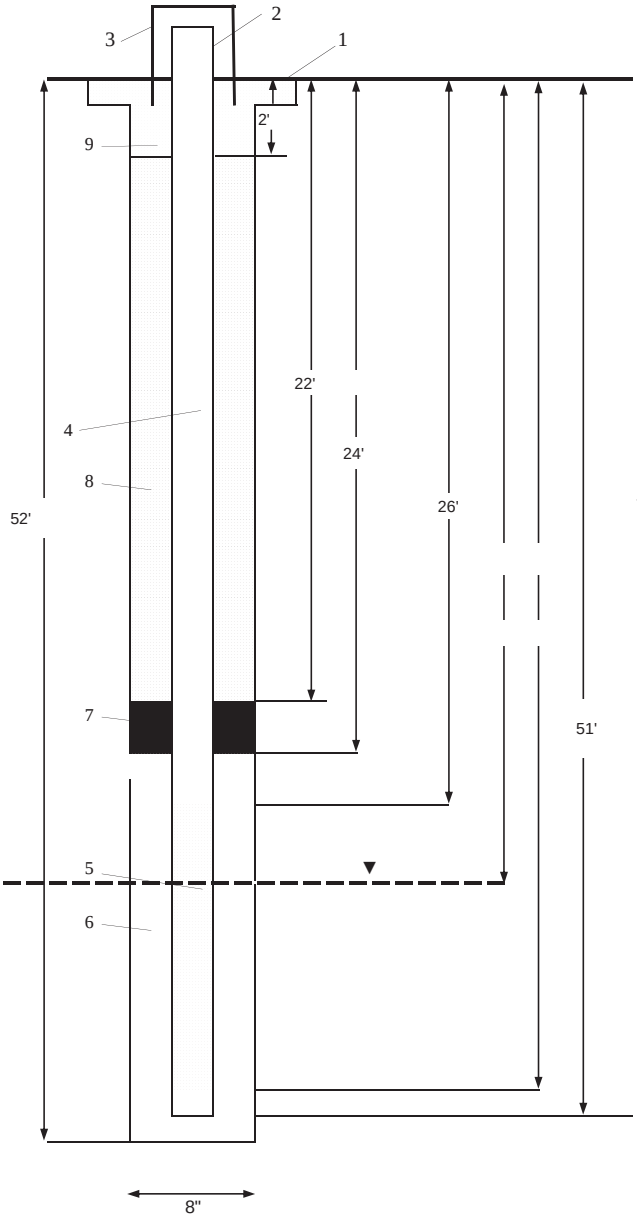
1-	Ground elevation at well	
2-	Top of PVC casing elevation	
	a) protective cover elevation	
3-	Wellhead protection cover type	Monument
	a) weep hole?	N/A
	b) concrete pad dimensions	3' x 3' x 6"
4-	Dia./type of well casing	4" Schedule-40 PVC
5-	Type/slot size of screen	0.010" mill slot screen 38' - 63' bgs.
6-	Type screen filter	12/20 silica sand
	a) calculated volume	NM
	b) actual volume installed	16 bags
	c) placement	36' - 64' bgs.
7-	Type of seal	3/8" hydrated bentonite chips
	a) calculated volume	NM
	b) actual volume installed	1 bag
	c) placement	34' - 36' bgs.
8-	Type of seal	Portland/bentonite grout mix
	a) calculated volume	NM
	b) actual volume installed	NM
	c) placement	1.5' - 34' bgs.
9-	Cement	
	a) cement mix used	4,000 PSI concrete
	b) calculated volume	NM
	c) actual volume installed	NM
	d) placement	0' - 1.5' bgs.
	Development method	swab, surge, bail
	Estimated purge volume	~ 30 gallons
	Development time	N/A

Comments: Development: Due to minimal water within the screened interval about 25 gallons of water were added to the well to swab and purged dry.

PROJECT NUMBER	WELL NUMBER	
707467CH.01.02	MW-55	SHEET 1 OF 1

WELL COMPLETION DIAGRAM

PROJECT : Blanco Plant North Flare Pit	LOCATION : Bloomfield, NM		
DRILLING CONTRACTOR : Cascade Drilling	COORDINATES : 2685908.668 ft E, 2087040.904 ft N		
DRILLING METHOD AND EQUIPMENT USED : Rotosonic		DRILLER:	Josh Parks
WATER LEVEL : 36' bgs.	START : 8/15/2019 END : 8/15/2019	LOGGER :	Alex Turkasz



Not to scale

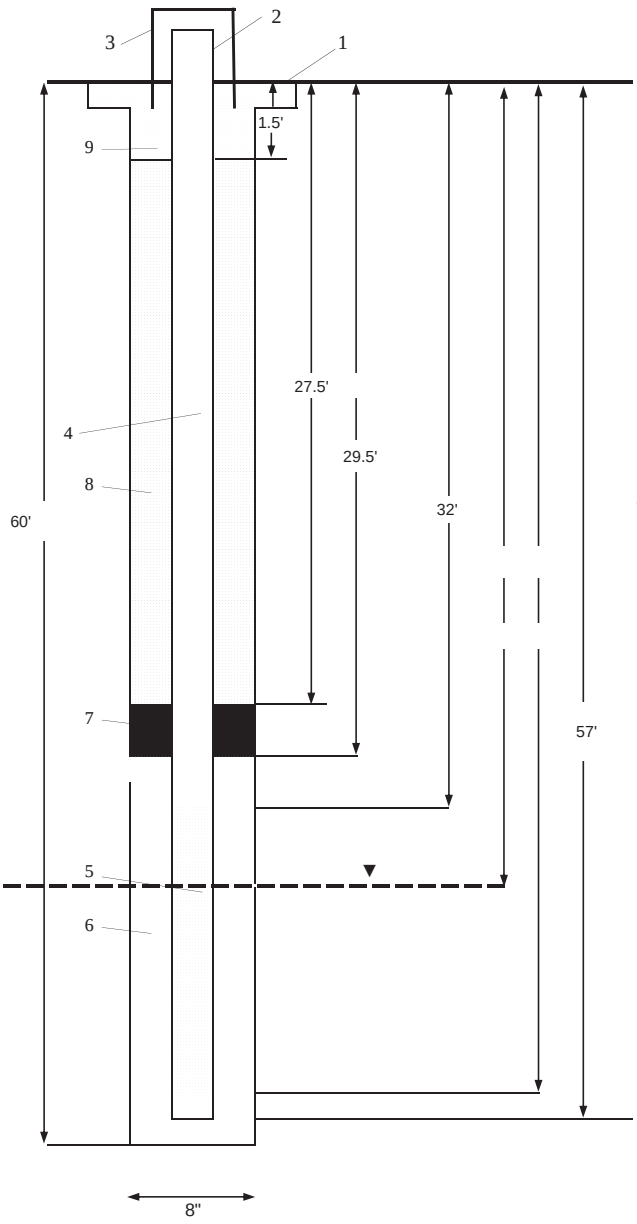
1- Ground elevation at well	
2- Top of PVC casing elevation	
a) protective cover elevation	
3- Wellhead protection cover type	Monument
a) weep hole?	N/A
b) concrete pad dimensions	3' x 3' x 6"
4- Dia./type of well casing	4" Schedule-40 PVC
5- Type/slot size of screen	0.010" mill slot screen
	26' - 51' bgs.
6- Type screen filter	12/20 silica sand
a) calculated volume	NM
b) actual volume installed	13.5 bags
c) placement	24' - 52' bgs.
7- Type of seal	3/8" bentonite chips
a) calculated volume	NM
b) actual volume installed	1 bag
c) placement	22' - 24' bgs.
8- Type of seal	Portland/bentonite grout mix
a) calculated volume	NM
b) actual volume installed	18 bags
c) placement	2' - 22' bgs.
9- Cement	
a) cement mix used	4,000 PSI concrete
b) calculated volume	NM
c) actual volume installed	NM
d) placement	0' - 2' bgs.
Development method	swab, surge, bail
Estimated purge volume	> 26 gallons
Development time	N/A

Comments: Development: Due to minimal water within the screened interval about 25 gallons of water were added to the well to swab and purged dry.

PROJECT NUMBER	WELL NUMBER	
707467CH.01.02	MW-56	SHEET 1 OF 1

WELL COMPLETION DIAGRAM

PROJECT : Blanco Plant North Flare Pit	LOCATION : Bloomfield, NM		
DRILLING CONTRACTOR : Cascade Drilling	COORDINATES : 2686020.212 ft E, 2086804.857 ft N		
DRILLING METHOD AND EQUIPMENT USED : Rotosonic		DRILLER:	Josh Parks
WATER LEVEL : 42' bgs.	START : 8/16/2019 END : 8/17/2019	LOGGER :	Alex Turkasz



Not to scale

1- Ground elevation at well	
2- Top of PVC casing elevation	
a) protective cover elevation	
3- Wellhead protection cover type	Monument
a) weep hole?	N/A
b) concrete pad dimensions	3' x 3' x 6"
4- Dia./type of well casing	4" Schedule-40 PVC
5- Type/slot size of screen	0.010" mil slot screen
	32' - 57' bgs.
6- Type screen filter	12/20 silica sand
a) calculated volume	NM
b) actual volume installed	12 bags
c) placement	29.5' - 60' bgs.
7- Type of seal	3/8" hydrated bentonite chips
a) calculated volume	NM
b) actual volume installed	1 bag
c) placement	27.5' - 29.5' bgs.
8- Type of seal	Portland/bentonite grout mix
a) calculated volume	19 bags / 1.25 bags
b) actual volume installed	NM
c) placement	1.5' - 27.5' bgs.
9- Cement	
a) cement mix used	4,000 PSI concrete
b) calculated volume	NM
c) actual volume installed	NM
d) placement	0' - 1.5' bgs.
Development method	swab, surge, bail
Estimated purge volume	> 26 gallons
Development time	N/A

Comments: Development: Due to minimal water within the screened interval about 25 gallons of water were added to the well to swab and purged dry.

Appendix B
NMOSE Plugging Forms

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SB-01

Well owner: El Paso CGP Company, LLC Phone No.: 713-420-3475

Mailing address: 1001 Louisiana Street, Room 956

City: Houston State: Texas Zip code: 77002

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Yellow Jacket Drilling Services, LLC

2) New Mexico Well Driller License No.: WD-1458 Expiration Date: 10/31/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Carlos Hernandez

4) Date well plugging began: 9/22/17 Date well plugging concluded: 9/23/17

5) GPS Well Location: Latitude: 36 deg, 44 min, 10.64 sec
Longitude: 107 deg, 57 min, 38.47 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 43 ft below ground level (bgl), by the following manner: manual tag line measurement

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 8/16/17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Cement bentonite grout	112.93 gallons	112.93 gallons	Tremie pipe	Soil boring drilled and abandoned, no casing installed

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Richard LeBlanc, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

R. LeBlanc. 10/20/17

Signature of Well Driller Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: **A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC**

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SB-02

Well owner: El Paso CGP Company, LLC Phone No.: 713-420-3475

Mailing address: 1001 Louisiana Street, Room 956

City: Houston State: Texas Zip code: 77002

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Yellow Jacket Drilling Services, LLC

2) New Mexico Well Driller License No.: WD-1458 Expiration Date: 10/31/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Carlos Hernandez

4) Date well plugging began: 9/22/17 Date well plugging concluded: 9/23/17

5) GPS Well Location: Latitude: 36 deg, 44 min, 10.07 sec
Longitude: 107 deg, 57 min, 38.12 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 44 ft below ground level (bgl), by the following manner: manual tag line measurement

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 8/16/17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Cement bentonite grout	115.56 gallons	115.56 gallons	Tremie pipe	Soil boring drilled and abandoned, no casing installed

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Richard LeBlanc, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

R LeBlanc. 10/20/17

Signature of Well Driller Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SB-03

Well owner: El Paso CGP Company, LLC Phone No.: 713-420-3475

Mailing address: 1001 Louisiana Street, Room 956

City: Houston State: Texas Zip code: 77002

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Yellow Jacket Drilling Services, LLC

2) New Mexico Well Driller License No.: WD-1458 Expiration Date: 10/31/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Carlos Hernandez

4) Date well plugging began: 9/22/17 Date well plugging concluded: 9/23/17

5) GPS Well Location: Latitude: 36 deg, 44 min, 10.16 sec
Longitude: 107 deg, 57 min, 37.35 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 49 ft below ground level (bgl), by the following manner: manual tag line measurement

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 8/16/17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Cement bentonite grout	128.69 gallons	128.69 gallons	Tremie pipe	Soil boring drilled and abandoned, no casing installed

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Richard LeBlanc, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

R. LeBlanc. 10/20/17

Signature of Well Driller Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: SW-1

Well owner: El Paso CGP Company, LLC Phone No.: 713-420-3475

Mailing address: 1001 Louisiana Street, Room 956

City: Houston State: Texas Zip code: 77002

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Yellow Jacket Drilling Services, LLC

2) New Mexico Well Driller License No.: WD-1458 Expiration Date: 10/31/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Carlos Hernandez

4) Date well plugging began: 9/12/17 Date well plugging concluded: 9/13/17

5) GPS Well Location: Latitude: 36 deg, 44 min, 04.86 sec
Longitude: 107 deg, 57 min, 35.40 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 57 ft below ground level (bgl), by the following manner: manual tag line measurement

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 8/21/17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Cement bentonite grout	9.35 gallons	9.35 gallons	Tremie pipe	This well was not permitted and is being plugged pursuant a plugging plan submitted 8/23/17

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Richard LeBlanc, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

R. LeBlanc. 10/20/17

Signature of Well Driller Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: **A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC**

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: MW-2

Well owner: El Paso CGP Company, LLC Phone No.: 713-420-3475

Mailing address: 1001 Louisiana Street, Room 956

City: Houston State: Texas Zip code: 77002

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Yellow Jacket Drilling Services, LLC

2) New Mexico Well Driller License No.: WD-1458 Expiration Date: 10/31/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Carlos Hernandez

4) Date well plugging began: 9/13/17 Date well plugging concluded: 9/14/17

5) GPS Well Location: Latitude: 36 deg, 43 min, 59.19 sec
Longitude: 107 deg, 57 min, 32.04 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 56 ft below ground level (bgl), by the following manner: manual tag line measurement

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 8/21/17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Cement bentonite grout	36.80 gallons	36.80 gallons	Tremie pipe	This well was not permitted and is being plugged pursuant a plugging plan submitted 8/23/17

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Richard LeBlanc, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

R LeBlanc. 10/20/17

Signature of Well Driller Date

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: MW-24

Well owner: El Paso CGP Company, LLC Phone No.: 713-420-3475

Mailing address: 1001 Louisiana Street, Room 956

City: Houston State: Texas Zip code: 77002

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Yellow Jacket Drilling Services, LLC

2) New Mexico Well Driller License No.: WD-1458 Expiration Date: 10/31/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Carlos Hernandez

4) Date well plugging began: 9/12/17 Date well plugging concluded: 9/13/17

5) GPS Well Location: Latitude: 36 deg, 44 min, 03.73 sec
Longitude: 107 deg, 57 min, 33.67 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 67 ft below ground level (bgl), by the following manner: manual tag line measurement

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 8/21/17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Cement bentonite grout	43.99 gallons	43.99 gallons	Tremie pipe	This well was not permitted and is being plugged pursuant a plugging plan submitted 8/23/17

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Richard LeBlanc, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

R. LeBlanc. 10/20/17

Signature of Well Driller Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: MW-27

Well owner: El Paso CGP Company, LLC Phone No.: 713-420-3475

Mailing address: 1001 Louisiana Street, Room 956

City: Houston State: Texas Zip code: 77002

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Yellow Jacket Drilling Services, LLC

2) New Mexico Well Driller License No.: WD-1458 Expiration Date: 10/31/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Carlos Hernandez

4) Date well plugging began: 9/12/17 Date well plugging concluded: 9/13/17

5) GPS Well Location: Latitude: 36 deg, 44 min, 04.70 sec
Longitude: 107 deg, 57 min, 34.54 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 65 ft below ground level (bgl), by the following manner: manual tag line measurement

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 8/21/17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Cement bentonite grout	42.71 gallons	42.71 gallons	Tremie pipe	This well was not permitted and is being plugged pursuant a plugging plan submitted 8/23/17

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Richard LeBlanc, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

R. LeBlanc. 10/20/17

Signature of Well Driller Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: MW-31

Well owner: El Paso CGP Company, LLC Phone No.: 713-420-3475

Mailing address: 1001 Louisiana Street, Room 956

City: Houston State: Texas Zip code: 77002

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Yellow Jacket Drilling Services, LLC

2) New Mexico Well Driller License No.: WD-1458 Expiration Date: 10/31/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Carlos Hernandez

4) Date well plugging began: 9/12/17 Date well plugging concluded: 9/13/17

5) GPS Well Location: Latitude: 33 deg, 44 min, 06.49 sec
Longitude: 107 deg, 57 min, 33.42 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 71 ft below ground level (bgl), by the following manner: manual tag line measurement

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 8/21/17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Cement bentonite grout	46.60 gallons	46.60 gallons	Tremie pipe	This well is being plugged pursuant to plugging plan

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Richard LeBlanc, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

R. LeBlanc. 10/20/17

Signature of Well Driller Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: MW-19

Well owner: El Paso CGP Company, LLC Phone No.: 713-420-3475

Mailing address: 1001 Louisiana Street, Room 956

City: Houston State: Texas Zip code: 77002

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Yellow Jacket Drilling Services, LLC

2) New Mexico Well Driller License No.: WD-1458 Expiration Date: 10/31/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Carlos Hernandez

4) Date well plugging began: 9/12/17 Date well plugging concluded: 9/13/17

5) GPS Well Location: Latitude: 36 deg, 44 min, 04.06 sec
Longitude: 107 deg, 57 min, 36.63 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 66 ft below ground level (bgl), by the following manner: manual tag line measurement

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 8/21/17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Cement bentonite grout	10.85 gallons	10.85 gallons	Tremie pipe	OSE Permit approval #SJ-2466

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Richard LeBlanc , say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

R. LeBlanc. 10/20/17

Signature of Well Driller Date

Version: September 8, 2009
Page 2 of 2

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: MW-26

Well owner: El Paso CGP Company, LLC Phone No.: 713-420-3475

Mailing address: 1001 Louisiana Street, Room 956

City: Houston State: Texas Zip code: 77002

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Yellow Jacket Drilling Services, LLC

2) New Mexico Well Driller License No.: WD-1458 Expiration Date: 10/31/18

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Carlos Hernandez

4) Date well plugging began: 9/12/17 Date well plugging concluded: 9/13/17

5) GPS Well Location: Latitude: 36 deg, 44 min, 04.13 sec
Longitude: 107 deg, 57 min, 35.64 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 65 ft below ground level (bgl), by the following manner: manual tag line measurement

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 8/21/17

9) Were all plugging activities consistent with an approved plugging plan? YES If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	Cement bentonite grout	10.70 gallons	10.70 gallons	Tremie pipe	OSE Permit approval #SJ-2466-S

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Richard LeBlanc, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

R. LeBlanc. 10/20/17

Signature of Well Driller Date

Version: September 8, 2009
Page 2 of 2

Appendix C
Investigation-Derived Waste Disposal Paperwork

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 004

2. Page 1 of 1

3. Generator's Name and Mailing Address El Paso CGP Company, LLC
10014 Louisiana St Ste 9561
Houston, TX 77022
ATTN: Joe Wiley

4. Generator's Phone (713) 420-3475

5. Transporter 1 Company Name M&R Trucking

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone 505 326 5541

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
EnviroTech Inc. Soil Remediation Facility #43 Road 7175, South of Bloomfield, NM 87413

10. US EPA ID Number

E. State Facility's ID NM-01-0011

F. Facility's Phone 505 632 0615

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. Nonhazardous soil Truck #1006	1	Roll off box	12	CyDS
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
Blanco North Flare Pit environmental investigation waste

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.
on behalf of El Paso CGP Company, LLC.

Printed/Typed Name	Signature	Date (Month / Day / Year)
L. Hill	L. Hill	11 / 20 / 17

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month / Day / Year)
Marc D. Johnston		11 / 20 / 17

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month / Day / Year)

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date (Month / Day / Year)
Gary Robinson	Gary Robinson	11 / 20 / 17

Rev. 3/95

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 003

2. Page 1 of 1

3. Generator's Name and Mailing Address El Paso CGP Company, LLC
10014 Louisiana St. Ste 9561
Houston, TX 77022
ATTN: Joe Wiley

4. Generator's Phone (713) 420-3475

5. Transporter 1 Company Name M&R Trucking

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone 505 326 5541

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
Basin Disposal Inc
200 Montana, Bloomfield, NM
87413 (505) 632-8936

10. US EPA ID Number

E. State Facility's ID NM-01-005

F. Facility's Phone

GENERATOR

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. nonhazardous purge /decontamination water Truck #3367			20	BBL
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
Blanco North Flare pit environmental investigation waste

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Basin Rejected Load went to Envirotech Land Farm

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.
On behalf of El Paso CGP Company, LLC.

Printed/Typed Name Luke Hill | Signature Luke Hill | Date Month 11 Day 20 Year 17

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name Johnny Hall | Signature | Date Month 11 Day 20 Year 17

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name Gary Robinson | Signature Gary Robinson | Date Month 11 Day 20 Year 2017

Rev. 3/95

012

BASIN DISPOSAL

30 Years of Environmental Health and Safety Excellence

200 Montana, Bloomfield, NM 87413
505-632-8936 or 505-334-3013
OPEN 24 Hours per Day

NO. 700576
NMOCD PERMIT: NM -001-0005
Oil Field Waste Document, Form C138
INVOICE:

DATE 11-20-17

GENERATOR: ~~El Paso~~ CH2M

HAULING CO. M&R

ORDERED BY: George Brahs

DEL. TKT#. 129325

BILL TO: El Paso

DRIVER: Johnny
(Print Full Name)

CODES:

WASTE DESCRIPTION: ☒ Exempt Oilfield Waste ☑ Produced Water ☐ Drilling/Completion Fluids ☐ Reserve Pit

STATE: ☑ NM ☐ CO ☐ AZ ☐ UT

TREATMENT/DISPOSAL METHODS: ☒ EVAPORATION ☒ INJECTION ☒ TREATING PLANT

NO.	TRUCK	LOCATION(S)	VOLUME	COST	H2S	COST	TOTAL	TIME
1	3369	Blanco North Flare	80	40			17NOV20 56	8:41AM
2	3069	Blanco North Flare	40	20			17NOV20	9:39AM
3				4	6.6			
4								
5								

OK

I, _____ representitive or authorized agent for the above generator and hauler hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination that the above described waste is RCRA Exempt Oil field wastes.

☑ Approved ☐ Denied ATTENDANT SIGNATURE _____

san juan reproduction 168-6

BADGER DAYLIGHTING™

BILL OF LADING

BDG 053752

Ticket Number: ____________

Generator

Material Description: Mud with Produce Water

Load Count: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Name:
Street Address:
City, Province or State:
Postal or Zip:

Phone No:

Material Type:
☐ Soil/Solids
☐ Water
☐ Both

Excavation Area Coordinates:

Lat: ____________ Long: ____________

LSD (CN Optional): ____________

Generator or Authorized Representative Certification:
This is to certify that the above named materials are properly characterized and that the transporter is authorized to use the named disposition site.

Authorized Signature: [signature] (Signature) Print Name: [illegible] (Name/Company Name) Date: [illegible] (Date Shipped)

Transporter

Name: Badger Daylighting

Badger Area: [illegible]

Street Address:
City, Province or State:
Postal or Zip:

Phone No:

Authorized Signature: [signature] (Signature) Print Name: Austin Keller (Name/Company Name) Date: 1-28-19 (Date Shipped)

Disposition Facility

Name:
Street Address:
City, Province or State:
Postal or Zip:

Phone No:

Quantity/Units - Daily Total

20 BBLS
(Full Load Equivalents)

Disposition Area Coordinates

Lat: ____________ Long: ____________

LSD (CN Optional): ____________

Authorized Signature: Gary Robinson (Signature) Print Name: Gary Robinson Envirotech (Name/Company Name) Date: 1-28-19 (Date Shipped)

*Note: For unsupervised unloading areas write "N/A" in the signature spot for the disposition site authorized signer.

BASIN DISPOSAL

30 Years of Environmental Health and Safety Excellence

200 Montana, Bloomfield, NM 87413
505-632-8936 or 505-334-3013
OPEN 24 Hours per Day

NO. 777223

NMOCD PERMIT: NM -001-0005

Oil Field Waste Document, Form C138

INVOICE:

DATE: 10 16 15

DEL. TKT#.

GENERATOR: [illegible]

BILL TO: [illegible]

HAULING CO. [illegible]

DRIVER: [illegible]
(Print Full Name)

ORDERED BY: [illegible]

CODES:

WASTE DESCRIPTION: ☒ **Exempt Oilfield Waste** ☐ Produced Water ☐ Drilling/Completion Fluids

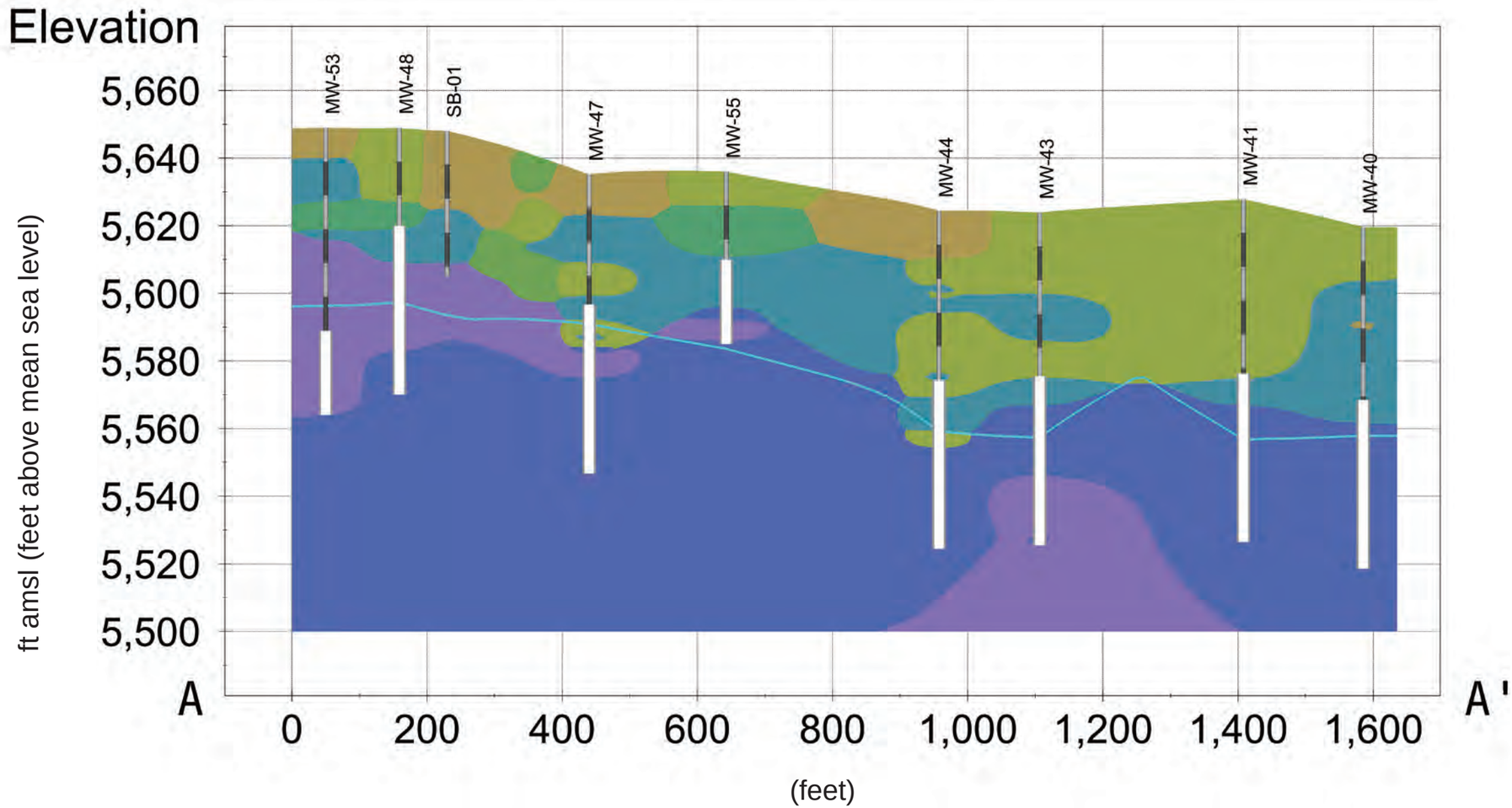
STATE: ☐ NM ☐ CO ☐ AZ ☐ UT

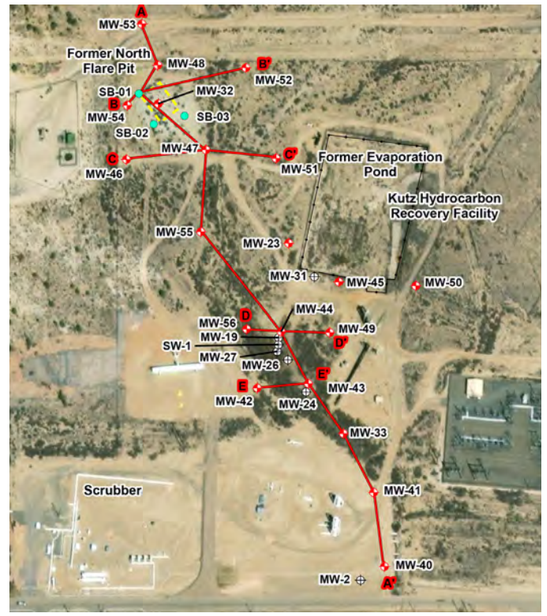
TREATMENT/DISPOSAL METHODS: ☒ EVAPORATION ☒ INJECTION ☒ TREATING PLANT

NO.	TRUCK	LOCATION(S)	VOLUME	COST	H2S	COST	TOTAL	TIME
1		[illegible] Gas Plant		20			20	
2		[illegible] Gas Plant						
3								
4								
5								

15 OCT 16 12:15

Appendix D
Lithologic Cross-Sections



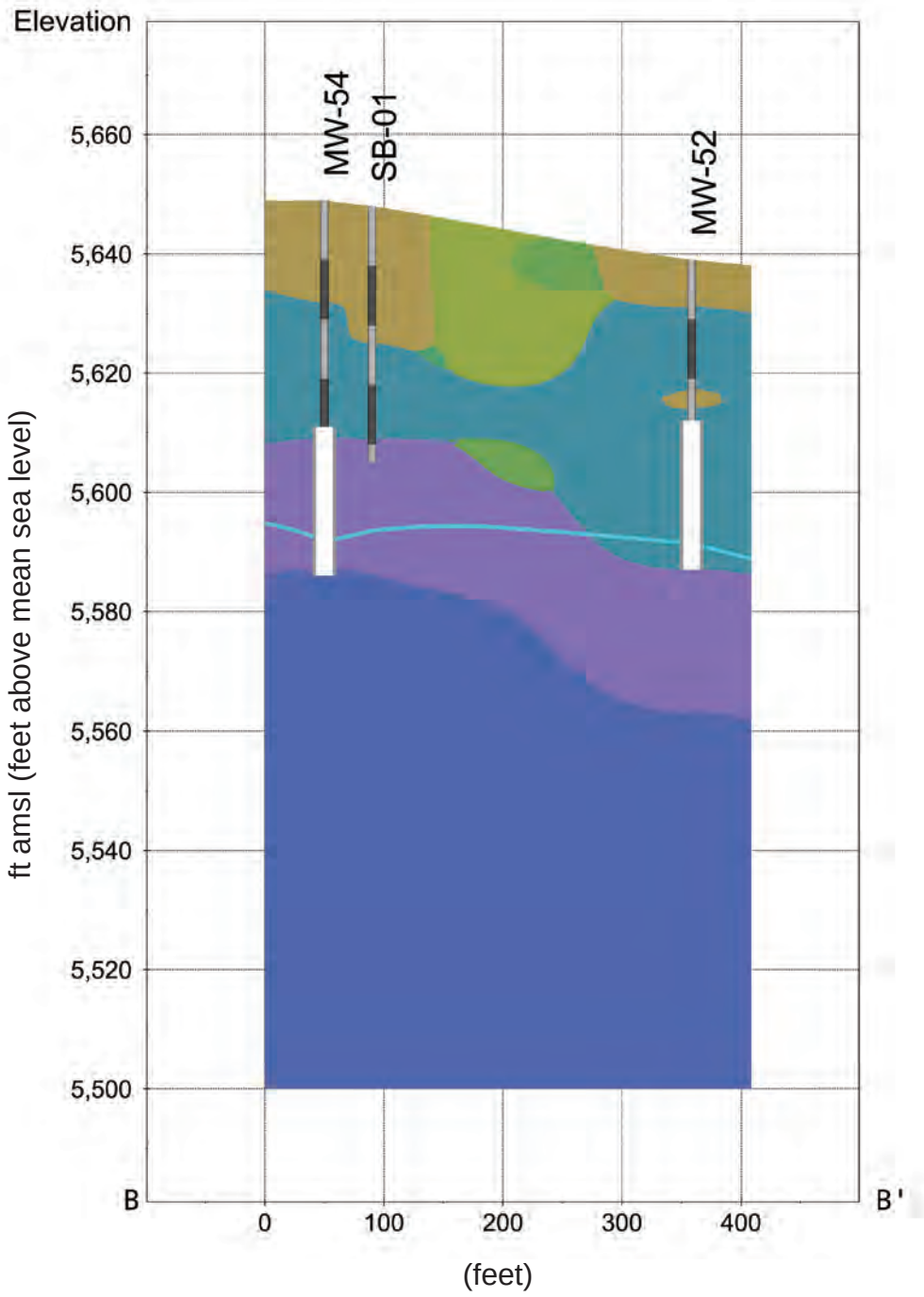


LEGEND

- GW = well graded gravel
- SW = well graded sand
- SP = poorly graded sand
- ML = silt
- SC = clayey sand
- CL = lean clay
- SS = sandstone bedrock
- SH = shale bedrock
- Groundwater Elevation

Appendix D1 - Lithologic Cross-Section
A-A' Site Characterization Report
Blanco Plant - North Flare Pit Bloomfield,
New Mexico

JACOBS

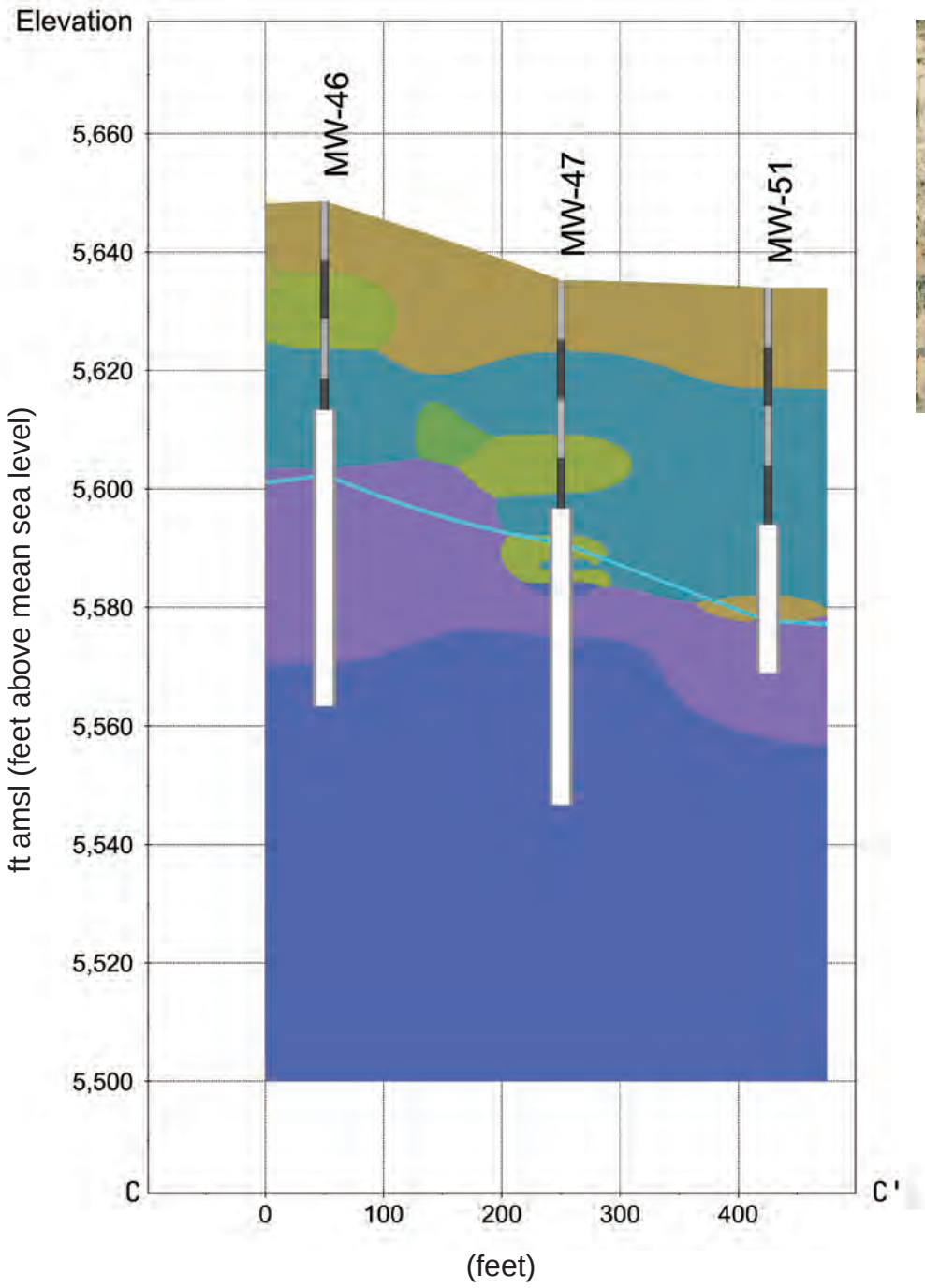


LEGEND

- GW = well graded gravel
- SW = well graded sand
- SP = poorly graded sand
- ML = silt
- SC = clayey sand
- CL = lean clay
- SS = sandstone bedrock
- SH = shale bedrock
- Groundwater Elevation

Appendix D2 - Lithologic Cross-Section B-B' Site Characterization Report Blanco Plant - North Flare Pit Bloomfield, New Mexico

JACOBS

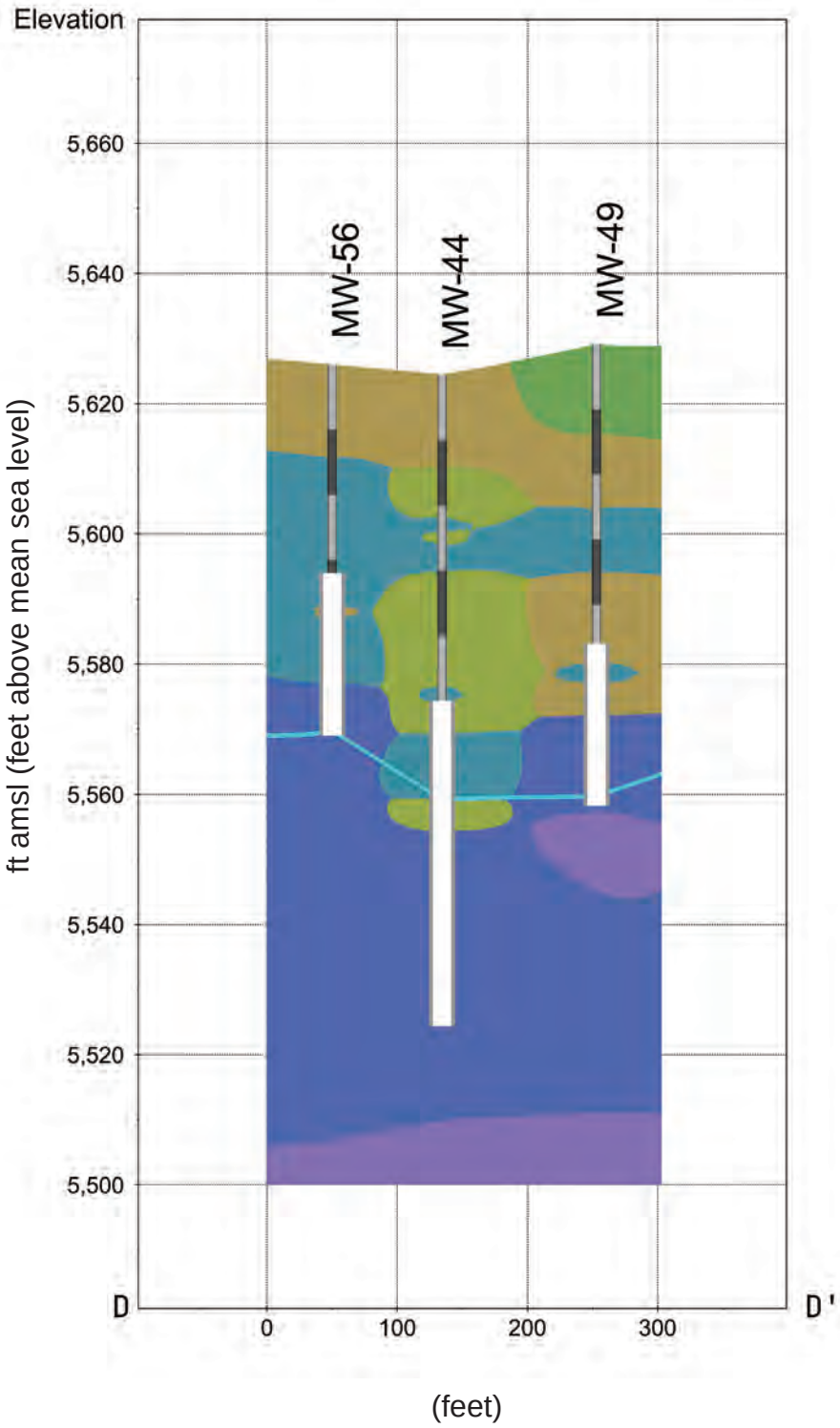


LEGEND

- GW = well graded gravel
- SW = well graded sand
- SP = poorly graded sand
- ML = silt
- SC = clayey sand
- CL = lean clay
- SS = sandstone bedrock
- SH = shale bedrock
- Groundwater Elevation

Appendix D3 - Lithologic Cross-Section C-C' Site Characterization Report Blanco Plant - North Flare Pit Bloomfield, New Mexico

JACOBS

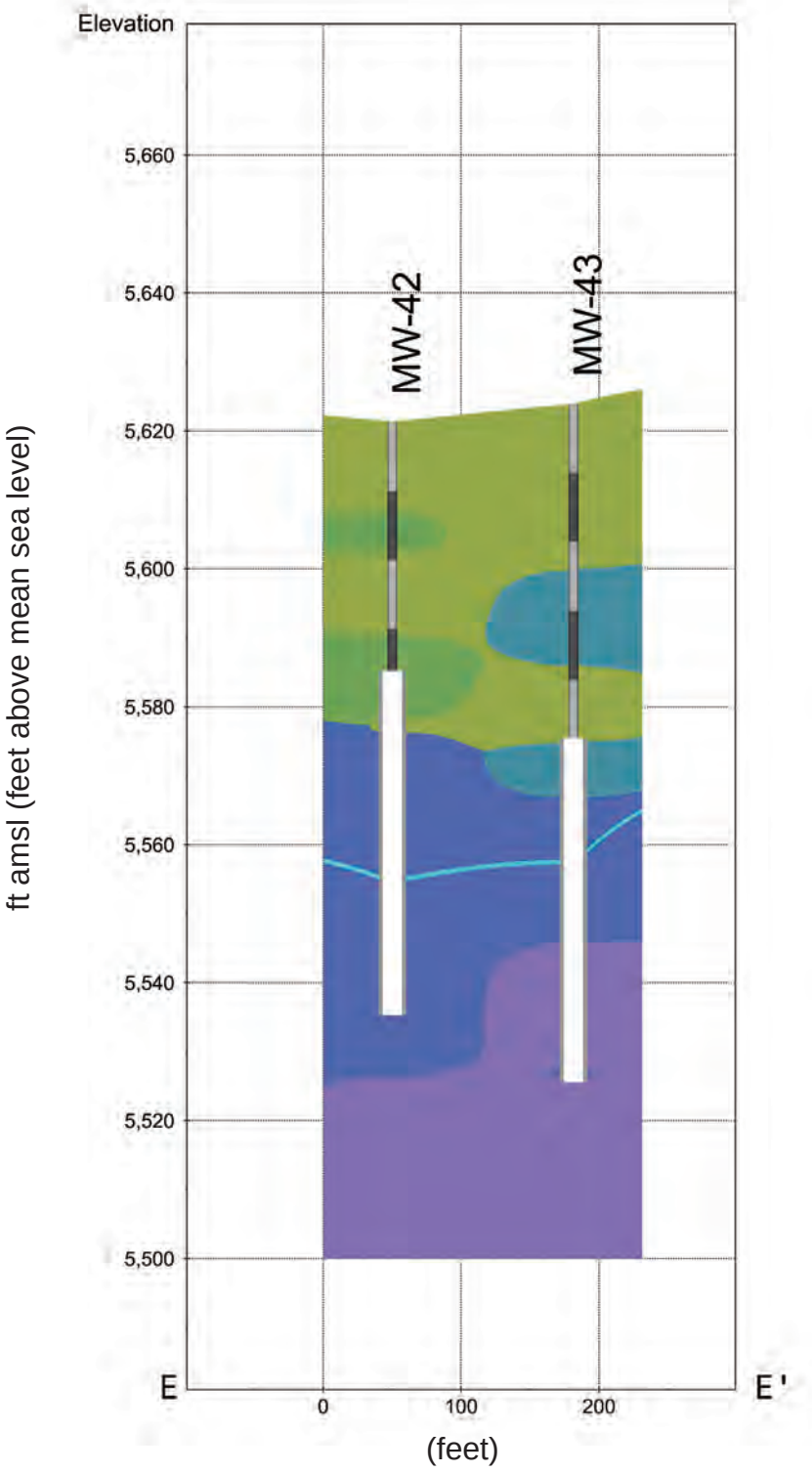


LEGEND

- GW = well graded gravel
- SW = well graded sand
- SP = poorly graded sand
- ML = silt
- SC = clayey sand
- CL = lean clay
- SS = sandstone bedrock
- SH = shale bedrock
- Groundwater Elevation

Appendix D4 - Lithologic Cross-Section
D-D' Site Characterization Report
Blanco Plant - North Flare Pit Bloomfield, New Mexico

JACOBS



LEGEND

- GW = well graded gravel
- SW = well graded sand
- SP = poorly graded sand
- ML = silt
- SC = clayey sand
- CL = lean clay
- SS = sandstone bedrock
- SH = shale bedrock
- Groundwater Elevation

Appendix D5 - Lithologic Cross-Section
E-E' Site Characterization Report
Blanco Plant - North Flare Pit Bloomfield, New Mexico

JACOBS

Appendix E
Soil Laboratory Analytical Reports
Part 1

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-147434-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-147434-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☑	☐	☐	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

DL: Samples BlancoNFP-MW23-04272017 (600-147434-1)[50X], BlancoNFP-MW23-04272017 (600-147434-1)[500X], BlancoNFP-MD23-04272017 (600-147434-2)[50X], BlancoNFP-MD23-04272017 (600-147434-2)[500X], BlancoNFP-MW32-04272017 (600-147434-3)[50X] and BlancoNFP-MW32-04272017 (600-147434-3)[500X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

TB: Trip Blank was all ND so no flags applied

FD: BlancoNFP-MD23-04272017 is a duplicate of BlancoNFP-MW23-04272017. Precision is within criteria so no flags applied.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-153431-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	0.9 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-153431-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☐	☑	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☑	☐	☐	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

FD: MD04-NFP-1-2-09052017 is a field duplicate of MW40-NFP-1-2-09052017 - both were all ND so precision met criteria.

TB: Trip blank TB01-NFP-09052017 was all ND so no flags were applied.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-153515-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	0.2 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-153515-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

FD: MD01-NFP-1-2-09062017 is a field duplicate of SB01-NFP-1-2-09062017 - both were all ND so precision met criteria.

TB: Trip blank TB: TB02-NFP-1-2-09062017 was all ND so no flags applied.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-153582-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	0.6 deg F
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-153582-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☐	☑	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

OT: Sample MW40-NFP-29-30-09072017 (600-153582-5) received one of the vials with the stir bar broken: MW40-NFP-29-30-09072017. Other vials for the sample were uncompromised and were sifficient for analysis.

IS: The 1,4-Dichlorobenzene-d4 Internal standard responses were above acceptance criteria for samples MW40-NFP-11-12-09072017 (600-153582-3) and MW40-NFP-19-20-09072017 (600-153582-4). This ISTD does not correspond to any of the requested target compounds; therefore no data were qualified.

TB: TB03-NFP-09072017 was all ND so no flags applied.

FD: MD05-NFP-57-58-09072017 is a duplicate of MW40-NFP-57-58-09072017 and both were all ND so no flags applied..

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-153598-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	1.8 deg F
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: UJ-MS					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-153598-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☐	☑	☐	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

limits in MS for all analytes and in MSD for two analytes. Associated LCS/LCSD met the acceptance criteria. No analytes detected in parent sample. Flagged ethylbenzene and toluene results in parents sample as UJ-MS.

TB: Trip blank TB04-NFP-09082017 was all ND so no flags applied

FD: MD08-NFP-54-55-09082017 is a duplicate of MW43-NFP-54-55-09082017 - RPDs for detections were < 30% or < +/-MQL so no flags were applied.

Data Usability Review: Data Package

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-153701-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Laboratory Data Package Signature Page included?	☑	☐	☐	
Date of sample collection included?	☑	☐	☐	
Sample receipt temperature ≤ 6° C?	☑	☐	☐	3.4 deg F
Signed COCs included?	☑	☐	☐	
Field ID included?	☑	☐	☐	
Laboratory ID included?	☑	☐	☐	
Date of analysis included?	☑	☐	☐	
Date of sample preparation included?	☑	☐	☐	
Detection levels included?	☑	☐	☐	
Method reference included?	☑	☐	☐	
Sample matrix included?	☑	☐	☐	
Sample results included?	☑	☐	☐	
Case narrative included, where required?	☑	☐	☐	

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.

COMMENTS
VOCs: No DV flags applied

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-153701-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☑	☐	☐	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: Trip blank TB05-NFP-09102017 was all ND so no flags applied

FD: MD09-NFP-14-16-09102017 is a duplicate of MW44-NFP-14-16-09102017. Precision within criteria so no flags applied

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-153854-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	0.9 deg F
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: J-LR					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-153854-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

LR: All analytical values in sample MW45-NFP-35-36-09122017 (600-153854-9) were reported as Estimated (E) as the result was above the Upper Calibration Level. The sample(s) was re-analyzed from the medium level (methanol) vial, but was not reported due to the result being below the RL at this dilution. The nature of prep method 5035A negates the ability to run the samples at an intermediate dilution to achieve a result within the calibration range, so the "E" values are the best analytical results achievable and were flagged J-LR

TB: Trip blank TB06-NFP-09122017 had headspace but was analyzed and was all ND so no flags applied.

DL: The following samples required a medium level dilution to bring the concentration of target analytes within the calibration range: MW45-NFP-39-40-09122017 (600-153854-5), MW45-NFP-48-49-09122017 (600-153854-6), MW45-NFP-59-60-09122017 (600-153854-7) and MW45-NFP-69-70-09122017 (600-153854-8). Elevated reporting limits (RLs) are provided.
FD: MD10-NFP-23-24-09122017 is a duplicate of MW45-NFP-23-24-09122017. Precision was within criteria so no flags applied.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-153884-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	5.4 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-153884-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☑	☐	☐	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: Trip blank TB07-NFP-09132017 (600-153884-1) had headspace but was analyzed and was all ND so no flags applied.

FD: MD06-NFP-12-14-09132017 is a field duplicate of MW41-NFP-12-14-09132017. Both were all ND so precision within criteria.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-153982-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	2.1 deg F
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-153982-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: Trip blank TB08-NFP-09152017 was all ND so no flags applied

FD: MD07-NFP-20-21-09152017 is a duplicate of MD07-NFP-20-21-09152017 - both were all ND so no flags applied

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-154065-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	4.7 deg F
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-154065-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: Trip blank TB-09182017 was all ND so no flags were applied

Data Usability Review: Data Package			
Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-154152-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Laboratory Data Package Signature Page included?	☑	☐	☐	
Date of sample collection included?	☑	☐	☐	
Sample receipt temperature ≤ 6° C?	☑	☐	☐	4.8 deg F
Signed COCs included?	☑	☐	☐	
Field ID included?	☑	☐	☐	
Laboratory ID included?	☑	☐	☐	
Date of analysis included?	☑	☐	☐	
Date of sample preparation included?	☑	☐	☐	
Detection levels included?	☑	☐	☐	
Method reference included?	☑	☐	☐	
Sample matrix included?	☑	☐	☐	
Sample results included?	☑	☐	☐	
Case narrative included, where required?	☑	☐	☐	

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.

COMMENTS
VOCs: No DV flags applied

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-154152-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

DL: The following samples was diluted due to the nature of the sample matrix: MW47-NFP-44-45-09192017 (600-154152-6) and MW47-NFP-47-49-09192017 (600-154152-8). Elevated reporting limits (RLs) are provided.

TB: Trip blank TB10-NFP-09192017 was all ND so no flags applied

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-154335-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	0.8 deg F
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-154335-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

DL: Method(s) 8260B: The following sample was diluted due to the nature of the sample matrix: MW48-NFP-39-40-09212017 (600-154335-5). Elevated reporting limits (RLs) are provided.

TB: Trip blank TB11-NFP-09212017 was all ND so no flags applied

Data Usability Review: Data Package			
Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-154372-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Laboratory Data Package Signature Page included?	☑	☐	☐	
Date of sample collection included?	☑	☐	☐	
Sample receipt temperature ≤ 6° C?	☑	☐	☐	3.4 deg C
Signed COCs included?	☑	☐	☐	
Field ID included?	☑	☐	☐	
Laboratory ID included?	☑	☐	☐	
Date of analysis included?	☑	☐	☐	
Date of sample preparation included?	☑	☐	☐	
Detection levels included?	☑	☐	☐	
Method reference included?	☑	☐	☐	
Sample matrix included?	☑	☐	☐	
Sample results included?	☑	☐	☐	
Case narrative included, where required?	☑	☐	☐	

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.

COMMENTS
VOCs: UJ-MD

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-154372-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☐	☑	☐	
RPD criteria met? (< 20% water, <50% soil)	☐	☑	☐	
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

MD: Method(s) 8260B: 600-154372-2 MSD failed the RPD criteria for Ethylbenzene, Toluene and Xylenes, Total. Flagged results UJ-MD.

DL: Method(s) 8260B: The following samples required a medium level dilution to bring the concentration of target analytes within the calibration range: SB03-NFP-28-30-09222017 (600-154372-5), SB03-NFP-33-34-09222017 (600-154372-6), SB03-NFP-36-37-09222017 (600-154372-7), SB03-NFP-40-42-09222017 (600-154372-8) and SB03-NFP-43-44-09222017 (600-154372-9). Elevated reporting limits (RLs) are provided.

TB: Trip blank TB14-NFP-09222017 was all ND so no flags applied

FD: MD03-NFP-20-21-09222017 is a duplicate of SB03-NFP-20-21-09222017 - precision within criteria so no flags applied.
MS: Method(s) 8260B: 600-154372-2 MS recovered all analytes below criteria but they all passed in the MSD and the LCS/LCSD so no flags were applied.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-154374-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	2.6 deg F
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: J-MD, UJ-MD					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-154374-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☐	☑	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☑	☐	☐	
RPD criteria met? (< 20% water, <50% soil)	☐	☑	☐	
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

SS: Surrogate recovees were outside control limits in the MSD on sample SB01-NFP-19-21-09222017 (600-154374-3[MSD]). Surrogates passed in MS and parent sample. No flags were applied

TB: Trip blank TB12-NFP-09222017 was all ND so no flags were applied.

MD: The sample size used in the preparation of the MS/MSD associated with batch 222044 was outside the 10% difference. As the RPD calculation is based upon the MS/MSD concentration as opposed to the MS/MSD percent recovery, elevated %RPD values were obtained for ethylbenzene and xylenes but due to differing masses imprecision was actually likely minimal but ND results were flagged UJ-MD and detection flagged J-MD.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-154375-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	0.6 deg F
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-154375-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: Trip blank TB13-NFP-09222017 was all ND so no flags were applied.

FD: MD02-NFP-12-14-09222017 is a duplicate of SB02-NFP-12-14-09222017. Both were all ND so precision within criteria.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**477041.06.07**
Project / Affected Property:	**Blanco North 2017**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-157080-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	5.1 deg F
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: J-SS					
Nitrate: No DV flags applied					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-157080-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☐	☑	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☑	☐	☐	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

SS: Method(s) 8260B: 1,2-DCA-d4 recovered high in BlancoNFP-MW44-11142017 (600-157080-6) and BlancoNFP-MW23-11142017 (600-157080-11). Samples were re-analyzed at a dilution with passing surrogates. The detections from the straight run with the failing surrogates were qualified J-SS.

TB, OT: Trip blank BlancoNFP-TB01-11142017 (600-157080-15) had headspace. No analytes were detected.

DL: The following samples were diluted to bring the concentration of target analytes within the calibration range:Blan coNFP-MW44-11142017 (600-157080-6), BlancoNFP-MW45-11142017 (600-157080-7), BlancoNFP-MW47-11142017 (600-157080-9), BlancoNFP-MW48-11142017 (600-157080-10), BlancoNFP-MW23-11142017 (600-157080-11), BlancoNFP-MW32-11142017 (600-157080-12) and BlancoNFP-MD32-11142017 (600-157080-13). Elevated reporting limits (RLs) are provided.
FD: BlancoNFP-MD40-11142017 is a duplicate of BlancoNFP-MW40-11142017 - both were all ND so precision within criteria.
FD: BlancoNFP-MD32-11142017 is a duplicate of BlancoNFP-MW32-11142017 and precision was within criteria.

Data Usability Review: General Chemistry

Client Name:	**Kinder Morgan**	Project Number:	**477041.06.07**
Project / Affected Property:	**Blanco North 2017**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-157080-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

	ITEM	YES	NO	N/A	COMMENTS
	Preparatory/analytical holding time met?	☑	☐	☐	
	Method blank data included in Lab Package?	☑	☐	☐	
	Criteria met? (<MQL)	☑	☐	☐	
	QC check samples/LCS data included in lab package?	☑	☐	☐	
	%R criteria met?	☑	☐	☐	
	Matrix spike data included in lab package?	☑	☐	☐	
	%R criteria met? (AA/ICP 75-125%, Hg 85-115%)	☑	☐	☐	
	Sample duplicate data included in lab package?	☑	☐	☐	
	RPD criteria met? (RPD < 20%)	☑	☐	☐	
	Initial calibration documentation included in lab package?	☑	☐	☐	
	Calibration verification data included in lab package?	☑	☐	☐	
	%R criteria met? (Initial 90-110%)	☑	☐	☐	

Notes:

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

FD: BlancoNFP-MD40-11142017 is a duplicate of BlancoNFP-MW40-11142017 - both were all ND so precision within criteria.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-190242-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	5.4 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: UJ-IS					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-190242-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☑	☐	☐	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☐	☑	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: No target analytes detected in NFP-TB01-08142019.

FD: Precision between sample NFP-MW52-1-2-08142019 and its field duplicate NFP-MW52-1-2-08142019-2 was within acceptance criteria.

IS: One internal standard recovered slightly below 50% in sample NFP-MW50-1-2-08142019 (600-190242-7) so the sample was reanalyzed, but the reanlysis had carryover contamination of Toluene and Xylene from the previous run so the initial results were used and qualified as UJ (IS). No analytes were detected and the MS/MSD was performed on this sample and all values were within acceptance criteria.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-190340-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	1 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied.					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-190340-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: No analytes detected in trip blank NFP - TB02 - 08152019.

FD: Precision between NFP - MW49-01-02-08152019 and its field duplicate NFP - MW49-01-02-08152019-2 was within acceptance criteria (both were all non-detect).

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-190481-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	3.8 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied.					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-190481-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☐	☑	☐	See comments
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

DL,SS: Samples NFP-MW51-13-14-08192019 (600-190481-3), NFP-MW51-19-20-08192019 (600-190481-4) and NFP-MW51-29-30-08192019 (600-190481-6).had low internal standard responses in the straight runs (5g) so they were diluted due to the nature of the sample matrix and reanalyzed with acceptable internal standards. Only the reanalyzed runs were reported - elevated reporting limits (RLs) are provided.

TB: No target analytes detected in the trip blank NFP-TB05-08192019.

EB: No taraget analutes detected in the equipment blank NFP-EB04-08192019.

FD: Precision between sample NFP-MW51-19-20-08192019 and its field duplicate NFP-MW51-19-20-08192019-2 was within acceptance criteria (both samples were all ND).

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-190487-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	-9.9º C and 3.8º C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied.					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-190487-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: No target analytes detected in the trip blank NFP-TB04-08172019.

EB: Toluene detected in the equipment blank NFP-EB02-08172019 at 0.000258 J mg/L but was not detected in any associated samples so no data were qualified.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-190504-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	-9.9º C and 3.8º C.
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied.					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-190504-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

EB: No target analytes detected in equipment blank NFP-EB03-08182019.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-190551-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	3.4 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied.					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-190551-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☑	☐	☐	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: No target analytes detected in trip blank NFP-TB06-08202019.

EB: No target analytes detected in equipment blank NFP-EB05-08202019.

FD: Precision between sample NFP-MW54-19-20-08202019 and its field duplicaate NFP-MW54-19-20-08202019-2 was within acceptance criteria (both were all ND).

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-190733-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	3.2 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied.					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-190733-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: No target analytes detected in trip blank NFP - TB07 - 08222019.

EB: No target analytes detected in equipment blank NFP - EB06 - 08222019.

FD: Precision between sample NFP - MW53 -9-10- 08222019 and its field duplicate NFP - MW53 -9-10- 08222019 -2 was within acceptance criteria (both were all ND).

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-190912-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	5.2 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied.					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**707470CH 01.05**
Project / Affected Property:	**Blanco NFP Soil Inv 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-190912-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (laboratory specified limits)	☑	☐	☐	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

TB: No target analytes detected in trip blank NFP- TBO8 - 08242019.

EB: No target analytes detected in equipment blank NFP- EBO7 - 08242019.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**D3208100 A.PN.EV.01S**
Project / Affected Property:	**Blanco North 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-192500-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	1.6 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied.					
Nitrate, Nitrite: UJ (MS)					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**D3208100 A.PN.EV.01S**
Project / Affected Property:	**Blanco North 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-192500-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

FD: BlancoNFP-MW42-09232019 and its field duplicate BlancoNFP-MD42-09232019 precision was within criteria

TB: No analytes detected in trip blank BlancoNFP-TB01-09232019

Data Usability Review: Nitrate, Nitrite

Client Name:	**Kinder Morgan**	Project Number:	**D3208100 A.PN.EV.01S**
Project / Affected Property:	**Blanco North 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-192500-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

	ITEM	YES	NO	N/A	COMMENTS
	Preparatory/analytical holding time met?	☑	☐	☐	
	Method blank data included in Lab Package?	☑	☐	☐	
	Criteria met? (<MQL)	☑	☐	☐	
	QC check samples/LCS data included in lab package?	☑	☐	☐	
	%R criteria met?	☑	☐	☐	
	Matrix spike data included in lab package?	☑	☐	☐	
	%R criteria met? (AA/ICP 75-125%, Hg 85-115%)	☐	☑	☐	
	Sample duplicate data included in lab package?	☑	☐	☐	
	RPD criteria met? (RPD < 20%)	☑	☐	☐	
	Initial calibration documentation included in lab package?	☑	☐	☐	
	Calibration verification data included in lab package?	☑	☐	☐	
	%R criteria met? (Initial 90-110%)	☑	☐	☐	

Notes:

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

FD: BlancoNFP-MW42-09232019 and its field duplicate BlancoNFP-MD42-09232019 precision was within criteria

MS: Lab documented that the nitrate spike was inadvertently omitted during the prep process for 600-192500-2 MS/MSD but the nitrite (separate spike) passed and both nitrate and nitrite passed in the LCS so did not reject nitrate data but flagged UJ (MS)

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**D3208100 A.PN.EV.01S**
Project / Affected Property:	**Blanco North 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-192564-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	5.3 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
VOCs: No DV flags applied					
Nitrate, Nitrite: UJ (HT), R (MS)					

Data Usability Review: VOCs (GC/MS), SW-846 8260B

Client Name:	**Kinder Morgan**	Project Number:	**D3208100 A.PN.EV.01S**
Project / Affected Property:	**Blanco North 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-192564-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☑	☐	☐	
Surrogate data included in lab package?	☑	☐	☐	
%R criteria met? (use limits listed below or specify lab limits). Reject %R <10%.	☑	☐	☐	
R5 Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	LCS/LCSD
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☐	☑	☐	
%R criteria met? (laboratory specified limits)	☐	☐	☑	
RPD criteria met? (< 20% water, <50% soil)	☑	☐	☐	LCS/LCSD
Initial calibration documentation included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%RSD criteria met for CCC? (<30% RSD for CCC, >15% RSD must have fit)	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
RF criteria met for SPCC? RRF <0.05 rejected.	☑	☐	☐	
%D criteria met for CCC? (20% Max, Qualify >25%D)	☑	☐	☐	
Instrument Tune documentation included in lab package?	☑	☐	☐	
Instrument Tune Criteria met?	☑	☐	☐	
Internal standard data included in lab package?	☑	☐	☐	
Area within limits? (within -50% to +100% of last calibration check?	☑	☐	☐	
RRT within limits? (<30 sec. Difference from last calibration check?	☑	☐	☐	

Surrogates	Control Limits	Lab Limits?
1,2-Dichloroethane-d4	water 80-120%, soil 80-120%	
Dibromofluoromethane	water 86-118%, soil 80-120%	
Toluene-d8	water 88-110%, soil 81-117%	
4-Bromofluorobenzene	water 86-115%, soil 74-121%	

Notes:

* SPCC: chloromethane (0.1); 1,1-dichloroethane (0.1); bromoform (0.1); chlorobenzene (0.3); and 1,1,2,2-tetrachloroethane (0.3).

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

DL: The following samples were diluted to bring the concentration of target analytes within the calibration range: BlancoNFP-MW23-09242019 (600-192564-1), BlancoNFP-MW48-09242019 (600-192564-4), BlancoNFP-MW45-09242019 (600-192564-14), and BlancoNFP-MW44-09242019 (600-192564-16). Elevated reporting limits (RLs) are provided.

DL: The following samples were diluted due to the nature of the sample matrix: BlancoNFP-MW51-09242019 (600-192564-2), BlancoNFP-MW48-09242019 (600-192564-4), BlancoNFP-MW45-09242019 (600-192564-14), and BlancoNFP-MW44-09242019 (600-192564-16). Elevated reporting limits (RLs) are provided.

TB: No analytes detected in trip blank BlancoNFP-TB02-09232019
FD: Precision between BlancoNFP-MW43-09242019 and field duplicate BlancoNFP-MD43-09242019 was within criteria

Data Usability Review: Nitrate, Nitrite

Client Name:	**Kinder Morgan**	Project Number:	**D3208100 A.PN.EV.01S**
Project / Affected Property:	**Blanco North 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-192564-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

	ITEM	YES	NO	N/A	COMMENTS
	Preparatory/analytical holding time met?	☐	☑	☐	
	Method blank data included in Lab Package?	☑	☐	☐	
	Criteria met? (<MQL)	☑	☐	☐	
	QC check samples/LCS data included in lab package?	☑	☐	☐	
	%R criteria met?	☑	☐	☐	
	Matrix spike data included in lab package?	☑	☐	☐	
	%R criteria met? (AA/ICP 75-125%, Hg 85-115%)	☐	☑	☐	
	Sample duplicate data included in lab package?	☑	☐	☐	
	RPD criteria met? (RPD < 20%)	☑	☐	☐	
	Initial calibration documentation included in lab package?	☑	☐	☐	
	Calibration verification data included in lab package?	☑	☐	☐	
	%R criteria met? (Initial 90-110%)	☑	☐	☐	

Notes:

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

HT: Nitrate/nitrite samples BlancoNFP-MW46-09232019 (600-192564-9) and BlancoNFP-MW50-09232019 (600-192564-11) were analyzed slightly outside holding time - associated results were flagged UJ.

MS,HT: Nitrate/nitrite recovered outside criteria in 600-192564-1MS/MSD for analytical batch 600-275612. Recoveries were within criteria in the LCS. Excluded the initial straight run but used 50x dilution results (analyzed one day outside holding time) to combat matrix interference and flagged results UJ.

MS: Nitrate recovered 0% in 600-192564-12MS/MSD - rejected ND result in parent sample R.

FD: Precision between BlancoNFP-MW43-09242019 and field duplicate BlancoNFP-MD43-09242019 was within criteria

MS: Nitrate was recovered low in the MS/MSD on sample -11 but background concentration in the parent sample was >4x spike so no flags were applied.

Data Usability Review: Data Package					
Client Name:	**Kinder Morgan**		Project Number:		**D3208100 A.PN.EV.01S**
Project / Affected Property:	**Blanco North 2019**		Project Manager:		**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**		Lab SDG # / Job #:		**600-193913-1**
Reviewer:	**John Ynfante/HOU**				
Level of Review / Validation:	**Level 3**				
ITEM		**YES**	**NO**	**N/A**	**COMMENTS**
Laboratory Data Package Signature Page included?		☑	☐	☐	
Date of sample collection included?		☑	☐	☐	
Sample receipt temperature ≤ 6° C?		☑	☐	☐	0.9 deg C
Signed COCs included?		☑	☐	☐	
Field ID included?		☑	☐	☐	
Laboratory ID included?		☑	☐	☐	
Date of analysis included?		☑	☐	☐	
Date of sample preparation included?		☑	☐	☐	
Detection levels included?		☑	☐	☐	
Method reference included?		☑	☐	☐	
Sample matrix included?		☑	☐	☐	
Sample results included?		☑	☐	☐	
Case narrative included, where required?		☑	☐	☐	
Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.					
COMMENTS					
TPH: UJ (HT,OT)					

Data Usability Review: TPH (GC), SW-846 8015C

Client Name:	**Kinder Morgan**	Project Number:	**D3208100 A.PN.EV.01S**
Project / Affected Property:	**Blanco North 2019**	Project Manager:	**Jeff Minchak/ABQ**
Laboratory:	**TestAmerica-Houston**	Lab SDG # / Job #:	**600-193913-1**
Reviewer:	**John Ynfante/HOU**		
Level of Review / Validation:	**Level 3**		

ITEM	YES	NO	N/A	COMMENTS
Preparatory/analytical holding time met?	☐	☑	☐	
Surrogate data included in lab package?	☐	☑	☐	
%R criteria met? (specified limits) Reject <10%	☑	☐	☐	
Method blank data included in Lab Package?	☑	☐	☐	
Criteria met?	☑	☐	☐	
QC check samples/LCS data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☑	☐	☐	
Matrix spike data included in lab package?	☑	☐	☐	
%R criteria met? (specified limits)	☐	☑	☐	
RPD criteria met? (< 30% water, <50% soil)	☑	☐	☐	
Initial calibration documentation included in lab package?	☑	☐	☐	
%RSD/correlation criteria met?	☑	☐	☐	
Calibration verification data included in lab package?	☑	☐	☐	
%D criteria met?	☑	☐	☐	

Notes:

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; MQL - Method Quantitation Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative P

COMMENTS

HT,OT: Sample NFP-MW47-10152019-PRODUCT (600-193913-3) was reanalyzed 2 days outside of the 14 day GRO analytical holding time due to the sample being unable to be analyzed as a waste with consistent results. The sample was also analyzed multiple times as a water due to failure of quality control. The container also had headspace in the sample container. The matrix of the sample was non-routine/product. GRO result in the sample was flagged UJ.

DL: Method 8015C: The following sample was diluted due to the nature of the sample matrix: NFP-MW32-10152019-PRODUCT (600-193913-1). Elevated reporting limits (RLs) are provided.

DL,SS,MS: Sample NFP-MW32-10152019-PRODUCT (600-193913-1) was diluted due to the nature of the sample matrix: Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

MS: GRO was recovered low in 600-193913-3 MS for analytical batch 240-408470 but passed in the MSD, LCS and RPD so no flags were applied.

MS: DRO recovered outside criteria in 600-193913-1 MS/MSD but background concentration in the parent sample is >4x spike so no flags applied.

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ANALYTICAL REPORT

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-153431-1
Client Project/Site: Kinder Morgan Bloomfield, NM NFP
Revision: 1

For:
CH2M Hill Constructors, Inc.
14701 St. Mary's Lane
Suite 300
Houston, Texas 77079-2923

Attn: Mr. John Ynfante

Steve A Stepanski

Authorized for release by:
12/7/2020 4:16:23 PM
Steve Stepanski, Project Mgmt. Assistant
(713)690-4444
steve.stepanski@Eurofinset.com

Designee for

Cathy Upton, Project Manager I
(713)690-4444
cathy.upton@testamericainc.com

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory Job ID: 600-153431-1

Table of Contents

Case Narrative

Client: CH2M Hill Constructors, Inc. Job ID: 600-153431-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Job ID: 600-153431-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-153431-1

Comments
This report was revised to a level 2 deliverable per client request.

No additional comments.

Receipt
The samples were received on 9/6/2017 12:44 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.9º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
2540B	Percent Moisture	SM20	TAL HOU

Protocol References:

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-153431-1	MW40-NFP-1-2-09052017	Solid	09/05/17 11:45	09/06/17 12:44
600-153431-2	MD04-NFP-1-2-09052017	Solid	09/05/17 11:50	09/06/17 12:44
600-153431-3	MW41-NFP-1-2-09052017	Solid	09/05/17 12:40	09/06/17 12:44
600-153431-4	TB01-NFP-09052017	Water	09/05/17 14:00	09/06/17 12:44
600-153431-5	MW45-NFP-1-2-09052017	Solid	09/05/17 14:05	09/06/17 12:44
600-153431-6	MW43-NFP-1-2-09052017	Solid	09/05/17 15:20	09/06/17 12:44

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Client Sample ID: MW40-NFP-1-2-09052017

Lab Sample ID: 600-153431-1
Date Collected: 09/05/17 11:45
Matrix: Solid
Date Received: 09/06/17 12:44
Percent Solids: 93.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000617	U	0.00490	0.000617	mg/Kg	☼	09/06/17 19:00	09/07/17 11:21	1
Ethylbenzene	0.000999	U	0.00490	0.000999	mg/Kg	☼	09/06/17 19:00	09/07/17 11:21	1
Toluene	0.00135	U	0.00490	0.00135	mg/Kg	☼	09/06/17 19:00	09/07/17 11:21	1
Xylenes, Total	0.00111	U	0.00490	0.00111	mg/Kg	☼	09/06/17 19:00	09/07/17 11:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*67*		*61 - 130*	*09/06/17 19:00*	*09/07/17 11:21*	*1*
Dibromofluoromethane	*73*		*68 - 140*	*09/06/17 19:00*	*09/07/17 11:21*	*1*
Toluene-d8 (Surr)	*68*		*50 - 130*	*09/06/17 19:00*	*09/07/17 11:21*	*1*
4-Bromofluorobenzene	*90*		*57 - 140*	*09/06/17 19:00*	*09/07/17 11:21*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.4		1.0	1.0	%			09/07/17 18:53	1
Percent Solids	93.6		1.0	1.0	%			09/07/17 18:53	1

Client Sample ID: MD04-NFP-1-2-09052017

Lab Sample ID: 600-153431-2
Date Collected: 09/05/17 11:50
Matrix: Solid
Date Received: 09/06/17 12:44
Percent Solids: 93.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000637	U	0.00505	0.000637	mg/Kg	☼	09/06/17 19:00	09/07/17 11:44	1
Ethylbenzene	0.00103	U	0.00505	0.00103	mg/Kg	☼	09/06/17 19:00	09/07/17 11:44	1
Toluene	0.00139	U	0.00505	0.00139	mg/Kg	☼	09/06/17 19:00	09/07/17 11:44	1
Xylenes, Total	0.00114	U	0.00505	0.00114	mg/Kg	☼	09/06/17 19:00	09/07/17 11:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*68*		*61 - 130*	*09/06/17 19:00*	*09/07/17 11:44*	*1*
Dibromofluoromethane	*73*		*68 - 140*	*09/06/17 19:00*	*09/07/17 11:44*	*1*
Toluene-d8 (Surr)	*68*		*50 - 130*	*09/06/17 19:00*	*09/07/17 11:44*	*1*
4-Bromofluorobenzene	*88*		*57 - 140*	*09/06/17 19:00*	*09/07/17 11:44*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.3		1.0	1.0	%			09/07/17 18:53	1
Percent Solids	93.7		1.0	1.0	%			09/07/17 18:53	1

Client Sample ID: MW41-NFP-1-2-09052017

Lab Sample ID: 600-153431-3
Date Collected: 09/05/17 12:40
Matrix: Solid
Date Received: 09/06/17 12:44
Percent Solids: 96.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg	☼	09/06/17 19:00	09/07/17 12:08	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg	☼	09/06/17 19:00	09/07/17 12:08	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg	☼	09/06/17 19:00	09/07/17 12:08	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg	☼	09/06/17 19:00	09/07/17 12:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*68*		*61 - 130*	*09/06/17 19:00*	*09/07/17 12:08*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153431-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Client Sample ID: MW41-NFP-1-2-09052017 Lab Sample ID: 600-153431-3

Date Collected: 09/05/17 12:40 **Matrix: Solid**
Date Received: 09/06/17 12:44 **Percent Solids: 96.3**

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	*82*		*68 - 140*	*09/06/17 19:00*	*09/07/17 12:08*	*1*
Toluene-d8 (Surr)	*68*		*50 - 130*	*09/06/17 19:00*	*09/07/17 12:08*	*1*
4-Bromofluorobenzene	*89*		*57 - 140*	*09/06/17 19:00*	*09/07/17 12:08*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**3.7**		1.0	1.0	%			09/07/17 18:53	1
Percent Solids	**96.3**		1.0	1.0	%			09/07/17 18:53	1

Client Sample ID: TB01-NFP-09052017 Lab Sample ID: 600-153431-4

Date Collected: 09/05/17 14:00 **Matrix: Water**
Date Received: 09/06/17 12:44

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/06/17 18:20	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/06/17 18:20	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/06/17 18:20	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/06/17 18:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*60*		*50 - 134*		*09/06/17 18:20*	*1*
Dibromofluoromethane	*68*		*62 - 130*		*09/06/17 18:20*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*09/06/17 18:20*	*1*
4-Bromofluorobenzene	*91*		*67 - 139*		*09/06/17 18:20*	*1*

Client Sample ID: MW45-NFP-1-2-09052017 Lab Sample ID: 600-153431-5

Date Collected: 09/05/17 14:05 **Matrix: Solid**
Date Received: 09/06/17 12:44 **Percent Solids: 95.0**

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000890	U	0.00706	0.000890	mg/Kg	☼	09/06/17 19:00	09/07/17 10:11	1
Ethylbenzene	0.00144	U	0.00706	0.00144	mg/Kg	☼	09/06/17 19:00	09/07/17 10:11	1
Toluene	0.00195	U	0.00706	0.00195	mg/Kg	☼	09/06/17 19:00	09/07/17 10:11	1
Xylenes, Total	0.00160	U	0.00706	0.00160	mg/Kg	☼	09/06/17 19:00	09/07/17 10:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*73*		*61 - 130*	*09/06/17 19:00*	*09/07/17 10:11*	*1*
Dibromofluoromethane	*82*		*68 - 140*	*09/06/17 19:00*	*09/07/17 10:11*	*1*
Toluene-d8 (Surr)	*72*		*50 - 130*	*09/06/17 19:00*	*09/07/17 10:11*	*1*
4-Bromofluorobenzene	*90*		*57 - 140*	*09/06/17 19:00*	*09/07/17 10:11*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**5.0**		1.0	1.0	%			09/07/17 18:53	1
Percent Solids	**95.0**		1.0	1.0	%			09/07/17 18:53	1

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Client Sample ID: MW43-NFP-1-2-09052017
Date Collected: 09/05/17 15:20
Date Received: 09/06/17 12:44

Lab Sample ID: 600-153431-6
Matrix: Solid
Percent Solids: 89.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00131	U	0.0104	0.00131	mg/Kg	☼	09/06/17 19:00	09/07/17 12:31	1
Ethylbenzene	0.00212	U	0.0104	0.00212	mg/Kg	☼	09/06/17 19:00	09/07/17 12:31	1
Toluene	0.00286	U	0.0104	0.00286	mg/Kg	☼	09/06/17 19:00	09/07/17 12:31	1
Xylenes, Total	0.00235	U	0.0104	0.00235	mg/Kg	☼	09/06/17 19:00	09/07/17 12:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*61 - 130*	*09/06/17 19:00*	*09/07/17 12:31*	*1*
Dibromofluoromethane	*83*		*68 - 140*	*09/06/17 19:00*	*09/07/17 12:31*	*1*
Toluene-d8 (Surr)	*71*		*50 - 130*	*09/06/17 19:00*	*09/07/17 12:31*	*1*
4-Bromofluorobenzene	*95*		*57 - 140*	*09/06/17 19:00*	*09/07/17 12:31*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.6		1.0	1.0	%			09/07/17 18:53	1
Percent Solids	89.4		1.0	1.0	%			09/07/17 18:53	1

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (61-130)	DBFM (68-140)	TOL (50-130)	BFB (57-140)
600-153431-1	MW40-NFP-1-2-09052017	67	73	68	90
600-153431-2	MD04-NFP-1-2-09052017	68	73	68	88
600-153431-3	MW41-NFP-1-2-09052017	68	82	68	89
600-153431-5	MW45-NFP-1-2-09052017	73	82	72	90
600-153431-5 MS	MW45-NFP-1-2-09052017	71	78	76	98
600-153431-5 MSD	MW45-NFP-1-2-09052017	76	80	76	99
600-153431-6	MW43-NFP-1-2-09052017	80	83	71	95
LCS 600-220734/3	Lab Control Sample	75	85	80	90
LCSD 600-220734/4	Lab Control Sample Dup	73	88	81	90
MB 600-220734/6	Method Blank	86	89	71	79

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (50-134)	DBFM (62-130)	TOL (70-130)	BFB (67-139)
600-153431-4	TB01-NFP-09052017	60	68	107	91
LCS 600-220646/3	Lab Control Sample	69	89	109	97
LCSD 600-220646/4	Lab Control Sample Dup	72	90	107	96
MB 600-220646/6	Method Blank	64	71	107	95

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-220646/6
Matrix: Water
Analysis Batch: 220646

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/06/17 09:46	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/06/17 09:46	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/06/17 09:46	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/06/17 09:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*64*		*50 - 134*		*09/06/17 09:46*	*1*
Dibromofluoromethane	*71*		*62 - 130*		*09/06/17 09:46*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*09/06/17 09:46*	*1*
4-Bromofluorobenzene	*95*		*67 - 139*		*09/06/17 09:46*	*1*

Lab Sample ID: LCS 600-220646/3
Matrix: Water
Analysis Batch: 220646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0100	0.01121		mg/L		112	70 - 130		
Ethylbenzene			0.0100	0.01078		mg/L		108	70 - 130		
Toluene			0.0100	0.01118		mg/L		112	70 - 130		
Xylenes, Total			0.0200	0.02152		mg/L		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*69*		*50 - 134*
Dibromofluoromethane	*89*		*62 - 130*
Toluene-d8 (Surr)	*109*		*70 - 130*
4-Bromofluorobenzene	*97*		*67 - 139*

Lab Sample ID: LCSD 600-220646/4
Matrix: Water
Analysis Batch: 220646

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0100	0.01152		mg/L		115	70 - 130	3	20
Ethylbenzene			0.0100	0.01089		mg/L		109	70 - 130	1	20
Toluene			0.0100	0.01117		mg/L		112	70 - 130	0	20
Xylenes, Total			0.0200	0.02165		mg/L		108	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*72*		*50 - 134*
Dibromofluoromethane	*90*		*62 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*
4-Bromofluorobenzene	*96*		*67 - 139*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-220734/6
Matrix: Solid
Analysis Batch: 220734

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/07/17 09:21	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/07/17 09:21	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/07/17 09:21	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/07/17 09:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 130*		*09/07/17 09:21*	*1*
Dibromofluoromethane	*89*		*68 - 140*		*09/07/17 09:21*	*1*
Toluene-d8 (Surr)	*71*		*50 - 130*		*09/07/17 09:21*	*1*
4-Bromofluorobenzene	*79*		*57 - 140*		*09/07/17 09:21*	*1*

Lab Sample ID: LCS 600-220734/3
Matrix: Solid
Analysis Batch: 220734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.04230		mg/Kg		85	70 - 131		
Ethylbenzene			0.0500	0.04487		mg/Kg		90	66 - 130		
Toluene			0.0500	0.04351		mg/Kg		87	67 - 130		
Xylenes, Total			0.100	0.08987		mg/Kg		90	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*75*		*61 - 130*
Dibromofluoromethane	*85*		*68 - 140*
Toluene-d8 (Surr)	*80*		*50 - 130*
4-Bromofluorobenzene	*90*		*57 - 140*

Lab Sample ID: LCSD 600-220734/4
Matrix: Solid
Analysis Batch: 220734

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04015		mg/Kg		80	70 - 131	5	30
Ethylbenzene			0.0500	0.04059		mg/Kg		81	66 - 130	10	30
Toluene			0.0500	0.03987		mg/Kg		80	67 - 130	9	30
Xylenes, Total			0.100	0.08148		mg/Kg		81	63 - 130	10	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*73*		*61 - 130*
Dibromofluoromethane	*88*		*68 - 140*
Toluene-d8 (Surr)	*81*		*50 - 130*
4-Bromofluorobenzene	*90*		*57 - 140*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 600-153431-5 MS
Matrix: Solid
Analysis Batch: 220734

Client Sample ID: MW45-NFP-1-2-09052017
Prep Type: Total/NA
Prep Batch: 220744

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.000890	U	0.0532	0.04756		mg/Kg	☼	89	70 - 131
Ethylbenzene	0.00144	U	0.0532	0.04750		mg/Kg	☼	89	66 - 130
Toluene	0.00195	U	0.0532	0.04728		mg/Kg	☼	89	67 - 130
Xylenes, Total	0.00160	U	0.106	0.09387		mg/Kg	☼	88	63 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*71*		*61 - 130*
Dibromofluoromethane	*78*		*68 - 140*
Toluene-d8 (Surr)	*76*		*50 - 130*
4-Bromofluorobenzene	*98*		*57 - 140*

Lab Sample ID: 600-153431-5 MSD
Matrix: Solid
Analysis Batch: 220734

Client Sample ID: MW45-NFP-1-2-09052017
Prep Type: Total/NA
Prep Batch: 220744

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.000890	U	0.0535	0.04722		mg/Kg	☼	88	70 - 131	1	30
Ethylbenzene	0.00144	U	0.0535	0.04644		mg/Kg	☼	87	66 - 130	2	30
Toluene	0.00195	U	0.0535	0.04594		mg/Kg	☼	86	67 - 130	3	30
Xylenes, Total	0.00160	U	0.107	0.09047		mg/Kg	☼	85	63 - 130	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*76*		*61 - 130*
Dibromofluoromethane	*80*		*68 - 140*
Toluene-d8 (Surr)	*76*		*50 - 130*
4-Bromofluorobenzene	*99*		*57 - 140*

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

GC/MS VOA

Analysis Batch: 220646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153431-4	TB01-NFP-09052017	Total/NA	Water	8260B	
MB 600-220646/6	Method Blank	Total/NA	Water	8260B	
LCS 600-220646/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-220646/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 220734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153431-1	MW40-NFP-1-2-09052017	Total/NA	Solid	8260B	220744
600-153431-2	MD04-NFP-1-2-09052017	Total/NA	Solid	8260B	220744
600-153431-3	MW41-NFP-1-2-09052017	Total/NA	Solid	8260B	220744
600-153431-5	MW45-NFP-1-2-09052017	Total/NA	Solid	8260B	220744
600-153431-6	MW43-NFP-1-2-09052017	Total/NA	Solid	8260B	220744
MB 600-220734/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-220734/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-220734/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
600-153431-5 MS	MW45-NFP-1-2-09052017	Total/NA	Solid	8260B	220744
600-153431-5 MSD	MW45-NFP-1-2-09052017	Total/NA	Solid	8260B	220744

Prep Batch: 220744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153431-1	MW40-NFP-1-2-09052017	Total/NA	Solid	5035_ASP	
600-153431-2	MD04-NFP-1-2-09052017	Total/NA	Solid	5035_ASP	
600-153431-3	MW41-NFP-1-2-09052017	Total/NA	Solid	5035_ASP	
600-153431-5	MW45-NFP-1-2-09052017	Total/NA	Solid	5035_ASP	
600-153431-6	MW43-NFP-1-2-09052017	Total/NA	Solid	5035_ASP	
600-153431-5 MS	MW45-NFP-1-2-09052017	Total/NA	Solid	5035_ASP	
600-153431-5 MSD	MW45-NFP-1-2-09052017	Total/NA	Solid	5035_ASP	

General Chemistry

Analysis Batch: 220815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153431-1	MW40-NFP-1-2-09052017	Total/NA	Solid	2540B	
600-153431-2	MD04-NFP-1-2-09052017	Total/NA	Solid	2540B	
600-153431-3	MW41-NFP-1-2-09052017	Total/NA	Solid	2540B	
600-153431-5	MW45-NFP-1-2-09052017	Total/NA	Solid	2540B	
600-153431-6	MW43-NFP-1-2-09052017	Total/NA	Solid	2540B	
600-153431-5 MS	MW45-NFP-1-2-09052017	Total/NA	Solid	2540B	
600-153431-5 MSD	MW45-NFP-1-2-09052017	Total/NA	Solid	2540B	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Client Sample ID: MW40-NFP-1-2-09052017 — **Lab Sample ID: 600-153431-1**
Date Collected: 09/05/17 11:45 — **Matrix: Solid**
Date Received: 09/06/17 12:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220815	09/07/17 18:53	B1K	TAL HOU

Client Sample ID: MW40-NFP-1-2-09052017 — **Lab Sample ID: 600-153431-1**
Date Collected: 09/05/17 11:45 — **Matrix: Solid**
Date Received: 09/06/17 12:44 — **Percent Solids: 93.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.456 g	5 mL	220744	09/06/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220734	09/07/17 11:21	WS1	TAL HOU

Client Sample ID: MD04-NFP-1-2-09052017 — **Lab Sample ID: 600-153431-2**
Date Collected: 09/05/17 11:50 — **Matrix: Solid**
Date Received: 09/06/17 12:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220815	09/07/17 18:53	B1K	TAL HOU

Client Sample ID: MD04-NFP-1-2-09052017 — **Lab Sample ID: 600-153431-2**
Date Collected: 09/05/17 11:50 — **Matrix: Solid**
Date Received: 09/06/17 12:44 — **Percent Solids: 93.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.282 g	5 mL	220744	09/06/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220734	09/07/17 11:44	WS1	TAL HOU

Client Sample ID: MW41-NFP-1-2-09052017 — **Lab Sample ID: 600-153431-3**
Date Collected: 09/05/17 12:40 — **Matrix: Solid**
Date Received: 09/06/17 12:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220815	09/07/17 18:53	B1K	TAL HOU

Client Sample ID: MW41-NFP-1-2-09052017 — **Lab Sample ID: 600-153431-3**
Date Collected: 09/05/17 12:40 — **Matrix: Solid**
Date Received: 09/06/17 12:44 — **Percent Solids: 96.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.19 g	5 mL	220744	09/06/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220734	09/07/17 12:08	WS1	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153431-1

Client Sample ID: TB01-NFP-09052017 — **Lab Sample ID: 600-153431-4**
Date Collected: 09/05/17 14:00 — **Matrix: Water**
Date Received: 09/06/17 12:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	220646	09/06/17 18:20	WS1	TAL HOU

Client Sample ID: MW45-NFP-1-2-09052017 — **Lab Sample ID: 600-153431-5**
Date Collected: 09/05/17 14:05 — **Matrix: Solid**
Date Received: 09/06/17 12:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220815	09/07/17 18:53	B1K	TAL HOU

Client Sample ID: MW45-NFP-1-2-09052017 — **Lab Sample ID: 600-153431-5**
Date Collected: 09/05/17 14:05 — **Matrix: Solid**
Date Received: 09/06/17 12:44 — **Percent Solids: 95.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			3.728 g	5 mL	220744	09/06/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220734	09/07/17 10:11	WS1	TAL HOU

Client Sample ID: MW43-NFP-1-2-09052017 — **Lab Sample ID: 600-153431-6**
Date Collected: 09/05/17 15:20 — **Matrix: Solid**
Date Received: 09/06/17 12:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220815	09/07/17 18:53	B1K	TAL HOU

Client Sample ID: MW43-NFP-1-2-09052017 — **Lab Sample ID: 600-153431-6**
Date Collected: 09/05/17 15:20 — **Matrix: Solid**
Date Received: 09/06/17 12:44 — **Percent Solids: 89.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			2.694 g	5 mL	220744	09/06/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220734	09/07/17 12:31	WS1	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153431-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-21	10-31-17
USDA	Federal		P330-17-00132	04-20-20

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica

Client Information	Sampler: AForsberg	Lab PM: Upton, Cathy L	Carrier Tracking No(s): 7455 1165 4035	COC No: 600-36947-10949.1
Client Contact: Aleeca Forsberg	Phone: 505 918 1800	E-Mail: cathy.upton@testamericainc.com		Page: Page 1 of 1
Company: CH2M Hill, Inc.				Job #:
Address: 3721 Rutledge Rd. NE Suite B-1	Due Date Requested:			
City: Albuquerque	TAT Requested (days): 10 BD Prelim; 14 BD Level3 Package (3e)			
State, Zip: NM, 87109				
Phone: 281-721-8546(Tel)	PO #: WD293112			
Email: Aleeca.Forsberg@CH2M.com	WO #:			
Project Name: Kinder Morgan Bloomfield, NM NFP	HOUSTON Project #: 60004617			
Site: BTEX Soils	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SOILS: 8260B_5035 - BTEX (SHORT HOLD-48HRs)	SOILS: Percent Moisture	WATERS: 8260B_LL - BTEX	Total Number of containers
			Preservation Code:				N	N	A	
MW40-NFP-1-2-09052017	9/5/17	1145	G	Soil			X	X		
MW04-NFP-1-2-09052017		1150	G	Soil			X	X		
MW41-NFP-1-2-09052017		1240	G	Soil			X	X		
TB01-NFP-09052017		1400	G	Soil					X	
MW45-NFP-09052017		1405	G	Soil			X	X		
MW45-NFP-09052017-MS		1405	G	Soil			X	X		
MW45-NFP-09052017-MSD		1405	G	Soil			X	X		
MW43-NFP-09052017		1520	G	Soil			X	X		
			G	Soil						
			G	Soil						
			G	Water						

600-15343 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Special Instructions/Note:

*** 48Hr Holding Time From Sample Collection

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Aleeca Forsberg	9/5/17 1630	CH2M		9/6/17 12:44	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receipt Check

Loc: 600
153431

'17 SEP 6 12:44

[ved: _____

JOB NUMBER: _____ CLIENT: CH2M

UNPACKED BY: _____ CARRIER/DRIVER: Fed-Ex

Custody Seal Present: ☑ YES ☐ NO Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
BW	Y / N	Y / N	0.9	676	0.0	0.9
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☑ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☐ YES ☐ NO

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☐ YES ☒ NO ☐ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		☒

COMMENTS: Trip Blanks - All have headspace

FedEx TRK# 0221 7455 1165 4035

WED – 0[illegible] PRIORITY OV[illegible]

HS-SA-WI-013 Rev. 3; 07/01/2014

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc. Job Number: 600-153431-1

Login Number: 153431 **List Source: TestAmerica Houston**
List Number: 1
Creator: Crafton, Tommie S

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

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ANALYTICAL REPORT

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-153515-1
Client Project/Site: Kinder Morgan Bloomfield, NM NFP
Revision: 1

For:
CH2M Hill Constructors, Inc.
14701 St. Mary's Lane
Suite 300
Houston, Texas 77079-2923

Attn: Mr. John Ynfante

Steve A Stepanski

Authorized for release by:
12/10/2020 9:59:31 AM
Steve Stepanski, Project Mgmt. Assistant
(713)690-4444
steve.stepanski@Eurofinset.com

Designee for

Cathy Upton, Project Manager I
(713)690-4444
cathy.upton@testamericainc.com

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory Job ID: 600-153515-1

Table of Contents

Case Narrative

Client: CH2M Hill Constructors, Inc. Job ID: 600-153515-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Job ID: 600-153515-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-153515-1

Comments
This report was revised to a Level 2 deliverable per client's request.

Receipt
The samples were received on 9/7/2017 10:41 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.2º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
2540B	Percent Moisture	SM20	TAL HOU

Protocol References:

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-153515-1	MW42-NFP-1-2-09062017	Solid	09/06/17 08:22	09/07/17 10:41
600-153515-2	MW44-NFP-1-2-09062017	Solid	09/06/17 09:25	09/07/17 10:41
600-153515-3	MW47-NFP-1-2-09062017	Solid	09/06/17 10:25	09/07/17 10:41
600-153515-4	MW46--NFP-1-2-09062017	Solid	09/06/17 11:30	09/07/17 10:41
600-153515-5	TB02-NFP-1-2-09062017	Water	09/06/17 11:20	09/07/17 10:41
600-153515-6	SB02-NFP-1-2-09062017	Solid	09/06/17 12:40	09/07/17 10:41
600-153515-7	SB01-NFP-1-2-09062017	Solid	09/06/17 13:25	09/07/17 10:41
600-153515-8	MD01-NFP-1-2-09062017	Solid	09/06/17 13:30	09/07/17 10:41
600-153515-9	MW48-NFP-1-2-09062017	Solid	09/06/17 14:08	09/07/17 10:41

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Client Sample ID: MW42-NFP-1-2-09062017

Lab Sample ID: 600-153515-1
Date Collected: 09/06/17 08:22
Matrix: Solid
Date Received: 09/07/17 10:41
Percent Solids: 92.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00131	U	0.0104	0.00131	mg/Kg	☼	09/07/17 20:17	09/08/17 09:52	1
Ethylbenzene	0.00213	U	0.0104	0.00213	mg/Kg	☼	09/07/17 20:17	09/08/17 09:52	1
Toluene	0.00288	U	0.0104	0.00288	mg/Kg	☼	09/07/17 20:17	09/08/17 09:52	1
Xylenes, Total	0.00236	U	0.0104	0.00236	mg/Kg	☼	09/07/17 20:17	09/08/17 09:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*61 - 130*	*09/07/17 20:17*	*09/08/17 09:52*	*1*
Dibromofluoromethane	*82*		*68 - 140*	*09/07/17 20:17*	*09/08/17 09:52*	*1*
Toluene-d8 (Surr)	*72*		*50 - 130*	*09/07/17 20:17*	*09/08/17 09:52*	*1*
4-Bromofluorobenzene	*96*		*57 - 140*	*09/07/17 20:17*	*09/08/17 09:52*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**7.1**		1.0	1.0	%			09/08/17 14:36	1
Percent Solids	**92.9**		1.0	1.0	%			09/08/17 14:36	1

Client Sample ID: MW44-NFP-1-2-09062017

Lab Sample ID: 600-153515-2
Date Collected: 09/06/17 09:25
Matrix: Solid
Date Received: 09/07/17 10:41
Percent Solids: 95.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00120	U	0.00951	0.00120	mg/Kg	☼	09/07/17 20:17	09/08/17 10:15	1
Ethylbenzene	0.00194	U	0.00951	0.00194	mg/Kg	☼	09/07/17 20:17	09/08/17 10:15	1
Toluene	0.00262	U	0.00951	0.00262	mg/Kg	☼	09/07/17 20:17	09/08/17 10:15	1
Xylenes, Total	0.00215	U	0.00951	0.00215	mg/Kg	☼	09/07/17 20:17	09/08/17 10:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*61 - 130*	*09/07/17 20:17*	*09/08/17 10:15*	*1*
Dibromofluoromethane	*77*		*68 - 140*	*09/07/17 20:17*	*09/08/17 10:15*	*1*
Toluene-d8 (Surr)	*74*		*50 - 130*	*09/07/17 20:17*	*09/08/17 10:15*	*1*
4-Bromofluorobenzene	*98*		*57 - 140*	*09/07/17 20:17*	*09/08/17 10:15*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**4.8**		1.0	1.0	%			09/08/17 14:36	1
Percent Solids	**95.2**		1.0	1.0	%			09/08/17 14:36	1

Client Sample ID: MW47-NFP-1-2-09062017

Lab Sample ID: 600-153515-3
Date Collected: 09/06/17 10:25
Matrix: Solid
Date Received: 09/07/17 10:41
Percent Solids: 95.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00106	U	0.00841	0.00106	mg/Kg	☼	09/07/17 20:17	09/08/17 10:38	1
Ethylbenzene	0.00172	U	0.00841	0.00172	mg/Kg	☼	09/07/17 20:17	09/08/17 10:38	1
Toluene	0.00232	U	0.00841	0.00232	mg/Kg	☼	09/07/17 20:17	09/08/17 10:38	1
Xylenes, Total	0.00190	U	0.00841	0.00190	mg/Kg	☼	09/07/17 20:17	09/08/17 10:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*61 - 130*	*09/07/17 20:17*	*09/08/17 10:38*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Client Sample ID: MW47-NFP-1-2-09062017

Lab Sample ID: 600-153515-3
Date Collected: 09/06/17 10:25
Matrix: Solid
Date Received: 09/07/17 10:41
Percent Solids: 95.9

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*78*		*68 - 140*	*09/07/17 20:17*	*09/08/17 10:38*	*1*
Toluene-d8 (Surr)	*72*		*50 - 130*	*09/07/17 20:17*	*09/08/17 10:38*	*1*
4-Bromofluorobenzene	*93*		*57 - 140*	*09/07/17 20:17*	*09/08/17 10:38*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**4.1**		1.0	1.0	%			09/08/17 14:36	1
Percent Solids	**95.9**		1.0	1.0	%			09/08/17 14:36	1

Client Sample ID: MW46--NFP-1-2-09062017

Lab Sample ID: 600-153515-4
Date Collected: 09/06/17 11:30
Matrix: Solid
Date Received: 09/07/17 10:41
Percent Solids: 97.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000704	U	0.00558	0.000704	mg/Kg	☼	09/07/17 20:17	09/08/17 11:02	1
Ethylbenzene	0.00114	U	0.00558	0.00114	mg/Kg	☼	09/07/17 20:17	09/08/17 11:02	1
Toluene	0.00154	U	0.00558	0.00154	mg/Kg	☼	09/07/17 20:17	09/08/17 11:02	1
Xylenes, Total	0.00126	U	0.00558	0.00126	mg/Kg	☼	09/07/17 20:17	09/08/17 11:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*61 - 130*	*09/07/17 20:17*	*09/08/17 11:02*	*1*
Dibromofluoromethane	*82*		*68 - 140*	*09/07/17 20:17*	*09/08/17 11:02*	*1*
Toluene-d8 (Surr)	*72*		*50 - 130*	*09/07/17 20:17*	*09/08/17 11:02*	*1*
4-Bromofluorobenzene	*94*		*57 - 140*	*09/07/17 20:17*	*09/08/17 11:02*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**2.6**		1.0	1.0	%			09/08/17 14:36	1
Percent Solids	**97.4**		1.0	1.0	%			09/08/17 14:36	1

Client Sample ID: TB02-NFP-1-2-09062017

Lab Sample ID: 600-153515-5
Date Collected: 09/06/17 11:20
Matrix: Water
Date Received: 09/07/17 10:41

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/08/17 09:38	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/08/17 09:38	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/08/17 09:38	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/08/17 09:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*69*		*50 - 134*		*09/08/17 09:38*	*1*
Dibromofluoromethane	*83*		*62 - 130*		*09/08/17 09:38*	*1*
Toluene-d8 (Surr)	*116*		*70 - 130*		*09/08/17 09:38*	*1*
4-Bromofluorobenzene	*98*		*67 - 139*		*09/08/17 09:38*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Client Sample ID: SB02-NFP-1-2-09062017

Lab Sample ID: 600-153515-6
Date Collected: 09/06/17 12:40
Matrix: Solid
Date Received: 09/07/17 10:41
Percent Solids: 95.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000585	U	0.00464	0.000585	mg/Kg	☼	09/07/17 20:17	09/08/17 11:25	1
Ethylbenzene	0.000947	U	0.00464	0.000947	mg/Kg	☼	09/07/17 20:17	09/08/17 11:25	1
Toluene	0.00128	U	0.00464	0.00128	mg/Kg	☼	09/07/17 20:17	09/08/17 11:25	1
Xylenes, Total	0.00105	U	0.00464	0.00105	mg/Kg	☼	09/07/17 20:17	09/08/17 11:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 130*	*09/07/17 20:17*	*09/08/17 11:25*	*1*
Dibromofluoromethane	*80*		*68 - 140*	*09/07/17 20:17*	*09/08/17 11:25*	*1*
Toluene-d8 (Surr)	*75*		*50 - 130*	*09/07/17 20:17*	*09/08/17 11:25*	*1*
4-Bromofluorobenzene	*98*		*57 - 140*	*09/07/17 20:17*	*09/08/17 11:25*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.3		1.0	1.0	%			09/08/17 14:36	1
Percent Solids	95.7		1.0	1.0	%			09/08/17 14:36	1

Client Sample ID: SB01-NFP-1-2-09062017

Lab Sample ID: 600-153515-7
Date Collected: 09/06/17 13:25
Matrix: Solid
Date Received: 09/07/17 10:41
Percent Solids: 94.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000589	U	0.00468	0.000589	mg/Kg	☼	09/07/17 20:17	09/08/17 11:48	1
Ethylbenzene	0.000954	U	0.00468	0.000954	mg/Kg	☼	09/07/17 20:17	09/08/17 11:48	1
Toluene	0.00129	U	0.00468	0.00129	mg/Kg	☼	09/07/17 20:17	09/08/17 11:48	1
Xylenes, Total	0.00106	U	0.00468	0.00106	mg/Kg	☼	09/07/17 20:17	09/08/17 11:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*61 - 130*	*09/07/17 20:17*	*09/08/17 11:48*	*1*
Dibromofluoromethane	*76*		*68 - 140*	*09/07/17 20:17*	*09/08/17 11:48*	*1*
Toluene-d8 (Surr)	*74*		*50 - 130*	*09/07/17 20:17*	*09/08/17 11:48*	*1*
4-Bromofluorobenzene	*100*		*57 - 140*	*09/07/17 20:17*	*09/08/17 11:48*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.6		1.0	1.0	%			09/08/17 14:36	1
Percent Solids	94.4		1.0	1.0	%			09/08/17 14:36	1

Client Sample ID: MD01-NFP-1-2-09062017

Lab Sample ID: 600-153515-8
Date Collected: 09/06/17 13:30
Matrix: Solid
Date Received: 09/07/17 10:41
Percent Solids: 93.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000986	U	0.00783	0.000986	mg/Kg	☼	09/07/17 20:17	09/08/17 12:12	1
Ethylbenzene	0.00160	U	0.00783	0.00160	mg/Kg	☼	09/07/17 20:17	09/08/17 12:12	1
Toluene	0.00216	U	0.00783	0.00216	mg/Kg	☼	09/07/17 20:17	09/08/17 12:12	1
Xylenes, Total	0.00177	U	0.00783	0.00177	mg/Kg	☼	09/07/17 20:17	09/08/17 12:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*85*		*61 - 130*	*09/07/17 20:17*	*09/08/17 12:12*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153515-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Client Sample ID: MD01-NFP-1-2-09062017 Lab Sample ID: 600-153515-8

Date Collected: 09/06/17 13:30 **Matrix: Solid**
Date Received: 09/07/17 10:41 **Percent Solids: 93.6**

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*82*		*68 - 140*	*09/07/17 20:17*	*09/08/17 12:12*	*1*
Toluene-d8 (Surr)	*76*		*50 - 130*	*09/07/17 20:17*	*09/08/17 12:12*	*1*
4-Bromofluorobenzene	*100*		*57 - 140*	*09/07/17 20:17*	*09/08/17 12:12*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**6.4**		1.0	1.0	%			09/08/17 14:36	1
Percent Solids	**93.6**		1.0	1.0	%			09/08/17 14:36	1

Client Sample ID: MW48-NFP-1-2-09062017 Lab Sample ID: 600-153515-9

Date Collected: 09/06/17 14:08 **Matrix: Solid**
Date Received: 09/07/17 10:41 **Percent Solids: 95.9**

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00107	U	0.00847	0.00107	mg/Kg	☼	09/07/17 20:17	09/08/17 12:35	1
Ethylbenzene	0.00173	U	0.00847	0.00173	mg/Kg	☼	09/07/17 20:17	09/08/17 12:35	1
Toluene	0.00234	U	0.00847	0.00234	mg/Kg	☼	09/07/17 20:17	09/08/17 12:35	1
Xylenes, Total	0.00191	U	0.00847	0.00191	mg/Kg	☼	09/07/17 20:17	09/08/17 12:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*61 - 130*	*09/07/17 20:17*	*09/08/17 12:35*	*1*
Dibromofluoromethane	*88*		*68 - 140*	*09/07/17 20:17*	*09/08/17 12:35*	*1*
Toluene-d8 (Surr)	*77*		*50 - 130*	*09/07/17 20:17*	*09/08/17 12:35*	*1*
4-Bromofluorobenzene	*101*		*57 - 140*	*09/07/17 20:17*	*09/08/17 12:35*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**4.1**		1.0	1.0	%			09/08/17 14:36	1
Percent Solids	**95.9**		1.0	1.0	%			09/08/17 14:36	1

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(61-130)	(68-140)	(50-130)	(57-140)
600-153515-1	MW42-NFP-1-2-09062017	90	82	72	96
600-153515-2	MW44-NFP-1-2-09062017	79	77	74	98
600-153515-3	MW47-NFP-1-2-09062017	79	78	72	93
600-153515-4	MW46--NFP-1-2-09062017	83	82	72	94
600-153515-6	SB02-NFP-1-2-09062017	86	80	75	98
600-153515-7	SB01-NFP-1-2-09062017	89	76	74	100
600-153515-8	MD01-NFP-1-2-09062017	85	82	76	100
600-153515-9	MW48-NFP-1-2-09062017	95	88	77	101
LCS 600-220839/3	Lab Control Sample	85	81	79	103
LCSD 600-220839/4	Lab Control Sample Dup	87	85	79	107
MB 600-220839/6	Method Blank	91	76	67	96

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(50-134)	(62-130)	(70-130)	(67-139)
600-153515-5	TB02-NFP-1-2-09062017	69	83	116	98
LCS 600-220838/3	Lab Control Sample	70	91	100	80
LCSD 600-220838/4	Lab Control Sample Dup	74	96	105	87
MB 600-220838/5	Method Blank	75	87	113	98

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-220838/5
Matrix: Water
Analysis Batch: 220838

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/08/17 09:01	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/08/17 09:01	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/08/17 09:01	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/08/17 09:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*75*		*50 - 134*		*09/08/17 09:01*	*1*
Dibromofluoromethane	*87*		*62 - 130*		*09/08/17 09:01*	*1*
Toluene-d8 (Surr)	*113*		*70 - 130*		*09/08/17 09:01*	*1*
4-Bromofluorobenzene	*98*		*67 - 139*		*09/08/17 09:01*	*1*

Lab Sample ID: LCS 600-220838/3
Matrix: Water
Analysis Batch: 220838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0100	0.009400		mg/L		94	70 - 130		
Ethylbenzene			0.0100	0.01031		mg/L		103	70 - 130		
Toluene			0.0100	0.01043		mg/L		104	70 - 130		
Xylenes, Total			0.0200	0.01997		mg/L		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*70*		*50 - 134*
Dibromofluoromethane	*91*		*62 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene	*80*		*67 - 139*

Lab Sample ID: LCSD 600-220838/4
Matrix: Water
Analysis Batch: 220838

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0100	0.009904		mg/L		99	70 - 130	5	20
Ethylbenzene			0.0100	0.01082		mg/L		108	70 - 130	5	20
Toluene			0.0100	0.01115		mg/L		111	70 - 130	7	20
Xylenes, Total			0.0200	0.02149		mg/L		107	70 - 130	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*74*		*50 - 134*
Dibromofluoromethane	*96*		*62 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene	*87*		*67 - 139*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-220839/6
Matrix: Solid
Analysis Batch: 220839

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/08/17 09:05	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/08/17 09:05	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/08/17 09:05	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/08/17 09:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*61 - 130*		*09/08/17 09:05*	*1*
Dibromofluoromethane	*76*		*68 - 140*		*09/08/17 09:05*	*1*
Toluene-d8 (Surr)	*67*		*50 - 130*		*09/08/17 09:05*	*1*
4-Bromofluorobenzene	*96*		*57 - 140*		*09/08/17 09:05*	*1*

Lab Sample ID: LCS 600-220839/3
Matrix: Solid
Analysis Batch: 220839

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.04710		mg/Kg		94	70 - 131
Ethylbenzene	0.0500	0.04013		mg/Kg		80	66 - 130
Toluene	0.0500	0.04171		mg/Kg		83	67 - 130
Xylenes, Total	0.100	0.08172		mg/Kg		82	63 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*61 - 130*
Dibromofluoromethane	*81*		*68 - 140*
Toluene-d8 (Surr)	*79*		*50 - 130*
4-Bromofluorobenzene	*103*		*57 - 140*

Lab Sample ID: LCSD 600-220839/4
Matrix: Solid
Analysis Batch: 220839

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.05044		mg/Kg		101	70 - 131	7	30
Ethylbenzene	0.0500	0.04349		mg/Kg		87	66 - 130	8	30
Toluene	0.0500	0.04448		mg/Kg		89	67 - 130	6	30
Xylenes, Total	0.100	0.08709		mg/Kg		87	63 - 130	6	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*61 - 130*
Dibromofluoromethane	*85*		*68 - 140*
Toluene-d8 (Surr)	*79*		*50 - 130*
4-Bromofluorobenzene	*107*		*57 - 140*

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

GC/MS VOA

Analysis Batch: 220838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153515-5	TB02-NFP-1-2-09062017	Total/NA	Water	8260B	
MB 600-220838/5	Method Blank	Total/NA	Water	8260B	
LCS 600-220838/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-220838/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 220839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153515-1	MW42-NFP-1-2-09062017	Total/NA	Solid	8260B	220854
600-153515-2	MW44-NFP-1-2-09062017	Total/NA	Solid	8260B	220854
600-153515-3	MW47-NFP-1-2-09062017	Total/NA	Solid	8260B	220854
600-153515-4	MW46--NFP-1-2-09062017	Total/NA	Solid	8260B	220854
600-153515-6	SB02-NFP-1-2-09062017	Total/NA	Solid	8260B	220854
600-153515-7	SB01-NFP-1-2-09062017	Total/NA	Solid	8260B	220854
600-153515-8	MD01-NFP-1-2-09062017	Total/NA	Solid	8260B	220854
600-153515-9	MW48-NFP-1-2-09062017	Total/NA	Solid	8260B	220854
MB 600-220839/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-220839/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-220839/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 220854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153515-1	MW42-NFP-1-2-09062017	Total/NA	Solid	5035_ASP	
600-153515-2	MW44-NFP-1-2-09062017	Total/NA	Solid	5035_ASP	
600-153515-3	MW47-NFP-1-2-09062017	Total/NA	Solid	5035_ASP	
600-153515-4	MW46--NFP-1-2-09062017	Total/NA	Solid	5035_ASP	
600-153515-6	SB02-NFP-1-2-09062017	Total/NA	Solid	5035_ASP	
600-153515-7	SB01-NFP-1-2-09062017	Total/NA	Solid	5035_ASP	
600-153515-8	MD01-NFP-1-2-09062017	Total/NA	Solid	5035_ASP	
600-153515-9	MW48-NFP-1-2-09062017	Total/NA	Solid	5035_ASP	

General Chemistry

Analysis Batch: 220903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153515-1	MW42-NFP-1-2-09062017	Total/NA	Solid	2540B	
600-153515-2	MW44-NFP-1-2-09062017	Total/NA	Solid	2540B	
600-153515-3	MW47-NFP-1-2-09062017	Total/NA	Solid	2540B	
600-153515-4	MW46--NFP-1-2-09062017	Total/NA	Solid	2540B	
600-153515-6	SB02-NFP-1-2-09062017	Total/NA	Solid	2540B	
600-153515-7	SB01-NFP-1-2-09062017	Total/NA	Solid	2540B	
600-153515-8	MD01-NFP-1-2-09062017	Total/NA	Solid	2540B	
600-153515-9	MW48-NFP-1-2-09062017	Total/NA	Solid	2540B	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Client Sample ID: MW42-NFP-1-2-09062017 — **Lab Sample ID: 600-153515-1**
Date Collected: 09/06/17 08:22 — **Matrix: Solid**
Date Received: 09/07/17 10:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220903	09/08/17 14:36	B1K	TAL HOU

Client Sample ID: MW42-NFP-1-2-09062017 — **Lab Sample ID: 600-153515-1**
Date Collected: 09/06/17 08:22 — **Matrix: Solid**
Date Received: 09/07/17 10:41 — **Percent Solids: 92.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			2.581 g	5 mL	220854	09/07/17 20:17	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220839	09/08/17 09:52	WS1	TAL HOU

Client Sample ID: MW44-NFP-1-2-09062017 — **Lab Sample ID: 600-153515-2**
Date Collected: 09/06/17 09:25 — **Matrix: Solid**
Date Received: 09/07/17 10:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220903	09/08/17 14:36	B1K	TAL HOU

Client Sample ID: MW44-NFP-1-2-09062017 — **Lab Sample ID: 600-153515-2**
Date Collected: 09/06/17 09:25 — **Matrix: Solid**
Date Received: 09/07/17 10:41 — **Percent Solids: 95.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			2.763 g	5 mL	220854	09/07/17 20:17	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220839	09/08/17 10:15	WS1	TAL HOU

Client Sample ID: MW47-NFP-1-2-09062017 — **Lab Sample ID: 600-153515-3**
Date Collected: 09/06/17 10:25 — **Matrix: Solid**
Date Received: 09/07/17 10:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220903	09/08/17 14:36	B1K	TAL HOU

Client Sample ID: MW47-NFP-1-2-09062017 — **Lab Sample ID: 600-153515-3**
Date Collected: 09/06/17 10:25 — **Matrix: Solid**
Date Received: 09/07/17 10:41 — **Percent Solids: 95.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			3.1 g	5 mL	220854	09/07/17 20:17	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220839	09/08/17 10:38	WS1	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Client Sample ID: MW46--NFP-1-2-09062017 — **Lab Sample ID: 600-153515-4**
Date Collected: 09/06/17 11:30 — **Matrix: Solid**
Date Received: 09/07/17 10:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220903	09/08/17 14:36	B1K	TAL HOU

Client Sample ID: MW46--NFP-1-2-09062017 — **Lab Sample ID: 600-153515-4**
Date Collected: 09/06/17 11:30 — **Matrix: Solid**
Date Received: 09/07/17 10:41 — **Percent Solids: 97.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			4.595 g	5 mL	220854	09/07/17 20:17	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220839	09/08/17 11:02	WS1	TAL HOU

Client Sample ID: TB02-NFP-1-2-09062017 — **Lab Sample ID: 600-153515-5**
Date Collected: 09/06/17 11:20 — **Matrix: Water**
Date Received: 09/07/17 10:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	220838	09/08/17 09:38	WS1	TAL HOU

Client Sample ID: SB02-NFP-1-2-09062017 — **Lab Sample ID: 600-153515-6**
Date Collected: 09/06/17 12:40 — **Matrix: Solid**
Date Received: 09/07/17 10:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220903	09/08/17 14:36	B1K	TAL HOU

Client Sample ID: SB02-NFP-1-2-09062017 — **Lab Sample ID: 600-153515-6**
Date Collected: 09/06/17 12:40 — **Matrix: Solid**
Date Received: 09/07/17 10:41 — **Percent Solids: 95.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.631 g	5 mL	220854	09/07/17 20:17	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220839	09/08/17 11:25	WS1	TAL HOU

Client Sample ID: SB01-NFP-1-2-09062017 — **Lab Sample ID: 600-153515-7**
Date Collected: 09/06/17 13:25 — **Matrix: Solid**
Date Received: 09/07/17 10:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220903	09/08/17 14:36	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153515-1

Client Sample ID: SB01-NFP-1-2-09062017 — Lab Sample ID: 600-153515-7

Date Collected: 09/06/17 13:25 — **Matrix: Solid**
Date Received: 09/07/17 10:41 — **Percent Solids: 94.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.662 g	5 mL	220854	09/07/17 20:17	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220839	09/08/17 11:48	WS1	TAL HOU

Client Sample ID: MD01-NFP-1-2-09062017 — Lab Sample ID: 600-153515-8

Date Collected: 09/06/17 13:30 — **Matrix: Solid**
Date Received: 09/07/17 10:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220903	09/08/17 14:36	B1K	TAL HOU

Client Sample ID: MD01-NFP-1-2-09062017 — Lab Sample ID: 600-153515-8

Date Collected: 09/06/17 13:30 — **Matrix: Solid**
Date Received: 09/07/17 10:41 — **Percent Solids: 93.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			3.413 g	5 mL	220854	09/07/17 20:17	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220839	09/08/17 12:12	WS1	TAL HOU

Client Sample ID: MW48-NFP-1-2-09062017 — Lab Sample ID: 600-153515-9

Date Collected: 09/06/17 14:08 — **Matrix: Solid**
Date Received: 09/07/17 10:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			220903	09/08/17 14:36	B1K	TAL HOU

Client Sample ID: MW48-NFP-1-2-09062017 — Lab Sample ID: 600-153515-9

Date Collected: 09/06/17 14:08 — **Matrix: Solid**
Date Received: 09/07/17 10:41 — **Percent Solids: 95.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			3.079 g	5 mL	220854	09/07/17 20:17	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220839	09/08/17 12:35	WS1	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153515-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-21	10-31-17
USDA	Federal		P330-17-00132	04-20-20

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: A Forsberg	Lab PM: Upton, Cathy L	Carrier Tracking No(s): 7455 1165 4024	COC No: 600-36947-10949.1
Client Contact: Aleeca Forsberg	Phone: 505 918 1800	E-Mail: cathy.upton@testamericainc.com		Page: Page 1 of 1
Company: CH2M Hill, Inc.				Job #:
Address: 3721 Rutledge Rd. NE Suite B-1	Due Date Requested:			
City: Albuquerque	TAT Requested (days): 10 BD Prelim; 14 BD Level3 Package (3e)			
State, Zip: NM, 87109				
Phone: 281-721-8546(Tel)	PO #: WD293112			
Email: Aleeca.Forsberg@CH2M.com	WO #:			
Project Name: Kinder Morgan Bloomfield, NM NFP	HOUSTON Project #: 60004617			
Site: BTEX Soils	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SOILS: 8260B_5035 - BTEX (SHORT HOLD-48HRs)	SOILS: Percent Moisture	WATERS: 8260B_LL - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	A		
MW42-NFP-1-2-09062017	9/6/17	0822	G	Soil	N	N	X	X			*** 48Hr Holding Time
MW44-NFP-1-2-09062017		0925	G	Soil	N	N	X	X			From Sample Collection
MW47-NFP-1-2-09062017		1025	G	Soil	N	N	X	X			
MW46-NFP-1-2-09062017		1130	G	Soil	N	N	X	X			
TB02-NFP-1-2-09062017		1120	~~G~~	~~Soil~~ Water	N	N			X		
SB02-NFP-1-2-09062017		1240	G	Soil	N	N	X	X			
SB01-NFP-1-2-09062017		1325	G	Soil	N	N	X	X			
MD01-NFP-1-2-09062017		1330	G	Soil	N	N	X	X			
MW48-NFP-1-2-09062017		1408	G	Soil	N	N	X	X			
~~MW05B03-NFP~~			~~G~~	~~Soil~~			X	X			
~~SB03-NFP-1-2-09062017~~			~~G~~	~~Water~~			X	X			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer
☐ Return To Client ☐ Disposal By Lab ☐ Archive For

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

600-153515 Chain of Custody

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Aleeca Forsberg	9/6/17 1630	CH2M		9/7/16 10:41	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

Loc: 600
153515

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receipt Checklist

Date/Time Received: _____

JOB NUMBER: _____ CLIENT: CH2M Hill '17SEP 7 10:41

UNPACKED BY: Jeremy/SR CMC CARRIER/DRIVER: Fed-Ex

Custody Seal Present: ☒ YES ☐ NO Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
GRN	Y / N	Y / N	~~0.6~~	0.0		
	Y / N	Y / N	0.2	0.6	0.0	0.2
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				JCH
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☐ YES ☐ NO

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☒ YES ☐ NO ☐ NA 9/7/17

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X	

COMMENTS:

FedEx
TRK# 0221 7455 1165 4024
XH LKSA
THU – 07 SEP 10:30A
PRIORITY OVERNIGHT
77040
TX-US IAH

Containers not labeled individually. Each sample was labeled on a bigger bag.

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc. Job Number: 600-153515-1

Login Number: 153515 **List Source: TestAmerica Houston**
List Number: 1
Creator: Kovitch, Christina M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2°C IR676
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

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ANALYTICAL REPORT

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-153582-1
Client Project/Site: Kinder Morgan Bloomfield, NM NFP
Revision: 1

For:
CH2M Hill Constructors, Inc.
14701 St. Mary's Lane
Suite 300
Houston, Texas 77079-2923

Attn: Mr. John Ynfante

Steve A Stepanski

Authorized for release by:
12/10/2020 10:01:14 AM
Steve Stepanski, Project Mgmt. Assistant
(713)690-4444
steve.stepanski@Eurofinset.com

Designee for

Cathy Upton, Project Manager I
(713)690-4444
cathy.upton@testamericainc.com

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory Job ID: 600-153582-1

Table of Contents

Case Narrative

Client: CH2M Hill Constructors, Inc. Job ID: 600-153582-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Job ID: 600-153582-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-153582-1

Comments
This report was revised to a Level 2 deliverable per client's request.

Receipt
The samples were received on 9/8/2017 10:22 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.6º C.

Receipt Exceptions

Method(s) 5035, 8260B: For the following sample we received one of the vials with the stir bar broken: MW40-NFP-29-30-09072017 (600-153582-5). Sufficient volume remaining for analysis.

GC/MS VOA
Method(s) 8260B: The 1,4-Dichlorobenzene-d4 Internal standard responses were above acceptance criteria for samples MW40-NFP-11-12-09072017 (600-153582-3) and MW40-NFP-19-20-09072017 (600-153582-4). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
2540B	Percent Moisture	SM20	TAL HOU

Protocol References:

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-153582-1	TB03-NFP-09072017	Water	09/07/17 08:00	09/08/17 10:22
600-153582-2	SB03-NFP-1-2-09072017	Solid	09/07/17 08:10	09/08/17 10:22
600-153582-3	MW40-NFP-11-12-09072017	Solid	09/07/17 09:30	09/08/17 10:22
600-153582-4	MW40-NFP-19-20-09072017	Solid	09/07/17 09:35	09/08/17 10:22
600-153582-5	MW40-NFP-29-30-09072017	Solid	09/07/17 09:50	09/08/17 10:22
600-153582-6	MW40-NFP-39-40-09072017	Solid	09/07/17 10:10	09/08/17 10:22
600-153582-7	MW40-NFP-50-51-09072017	Solid	09/07/17 10:50	09/08/17 10:22
600-153582-8	MW40-NFP-57-58-09072017	Solid	09/07/17 12:50	09/08/17 10:22
600-153582-9	MD05-NFP-57-58-09072017	Solid	09/07/17 12:55	09/08/17 10:22

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Client Sample ID: TB03-NFP-09072017

Lab Sample ID: 600-153582-1
Date Collected: 09/07/17 08:00
Matrix: Water
Date Received: 09/08/17 10:22

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/09/17 16:34	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/09/17 16:34	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/09/17 16:34	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/09/17 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*77*		*50 - 134*		*09/09/17 16:34*	*1*
Dibromofluoromethane	*88*		*62 - 130*		*09/09/17 16:34*	*1*
Toluene-d8 (Surr)	*109*		*70 - 130*		*09/09/17 16:34*	*1*
4-Bromofluorobenzene	*94*		*67 - 139*		*09/09/17 16:34*	*1*

Client Sample ID: SB03-NFP-1-2-09072017

Lab Sample ID: 600-153582-2
Date Collected: 09/07/17 08:10
Matrix: Solid
Date Received: 09/08/17 10:22
Percent Solids: 88.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000624	U	0.00495	0.000624	mg/Kg	☼	09/08/17 19:00	09/11/17 14:51	1
Ethylbenzene	0.00101	U	0.00495	0.00101	mg/Kg	☼	09/08/17 19:00	09/11/17 14:51	1
Toluene	0.00137	U	0.00495	0.00137	mg/Kg	☼	09/08/17 19:00	09/11/17 14:51	1
Xylenes, Total	0.00112	U	0.00495	0.00112	mg/Kg	☼	09/08/17 19:00	09/11/17 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*61 - 130*	*09/08/17 19:00*	*09/11/17 14:51*	*1*
Dibromofluoromethane	*77*		*68 - 140*	*09/08/17 19:00*	*09/11/17 14:51*	*1*
Toluene-d8 (Surr)	*84*		*50 - 130*	*09/08/17 19:00*	*09/11/17 14:51*	*1*
4-Bromofluorobenzene	*101*		*57 - 140*	*09/08/17 19:00*	*09/11/17 14:51*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**11.9**		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	**88.1**		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: MW40-NFP-11-12-09072017

Lab Sample ID: 600-153582-3
Date Collected: 09/07/17 09:30
Matrix: Solid
Date Received: 09/08/17 10:22
Percent Solids: 92.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000576	U	0.00457	0.000576	mg/Kg	☼	09/08/17 19:00	09/11/17 15:16	1
Ethylbenzene	0.000933	U	0.00457	0.000933	mg/Kg	☼	09/08/17 19:00	09/11/17 15:16	1
Toluene	0.00126	U	0.00457	0.00126	mg/Kg	☼	09/08/17 19:00	09/11/17 15:16	1
Xylenes, Total	0.00103	U	0.00457	0.00103	mg/Kg	☼	09/08/17 19:00	09/11/17 15:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*61 - 130*	*09/08/17 19:00*	*09/11/17 15:16*	*1*
Dibromofluoromethane	*77*		*68 - 140*	*09/08/17 19:00*	*09/11/17 15:16*	*1*
Toluene-d8 (Surr)	*85*		*50 - 130*	*09/08/17 19:00*	*09/11/17 15:16*	*1*
4-Bromofluorobenzene	*79*	*	*57 - 140*	*09/08/17 19:00*	*09/11/17 15:16*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153582-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Client Sample ID: MW40-NFP-11-12-09072017 Lab Sample ID: 600-153582-3

Date Collected: 09/07/17 09:30 **Matrix: Solid**
Date Received: 09/08/17 10:22 **Percent Solids: 92.9**

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.1		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	92.9		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: MW40-NFP-19-20-09072017 Lab Sample ID: 600-153582-4

Date Collected: 09/07/17 09:35 **Matrix: Solid**
Date Received: 09/08/17 10:22 **Percent Solids: 83.2**

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000593	U	0.00471	0.000593	mg/Kg	☼	09/08/17 19:00	09/11/17 15:41	1
Ethylbenzene	0.000960	U	0.00471	0.000960	mg/Kg	☼	09/08/17 19:00	09/11/17 15:41	1
Toluene	0.00130	U	0.00471	0.00130	mg/Kg	☼	09/08/17 19:00	09/11/17 15:41	1
Xylenes, Total	0.00106	U	0.00471	0.00106	mg/Kg	☼	09/08/17 19:00	09/11/17 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*61 - 130*	*09/08/17 19:00*	*09/11/17 15:41*	*1*
Dibromofluoromethane	*76*		*68 - 140*	*09/08/17 19:00*	*09/11/17 15:41*	*1*
Toluene-d8 (Surr)	*86*		*50 - 130*	*09/08/17 19:00*	*09/11/17 15:41*	*1*
4-Bromofluorobenzene	*91*	*	*57 - 140*	*09/08/17 19:00*	*09/11/17 15:41*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16.8		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	83.2		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: MW40-NFP-29-30-09072017 Lab Sample ID: 600-153582-5

Date Collected: 09/07/17 09:50 **Matrix: Solid**
Date Received: 09/08/17 10:22 **Percent Solids: 94.5**

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000655	U	0.00520	0.000655	mg/Kg	☼	09/08/17 19:00	09/10/17 16:21	1
Ethylbenzene	0.00106	U	0.00520	0.00106	mg/Kg	☼	09/08/17 19:00	09/10/17 16:21	1
Toluene	0.00144	U	0.00520	0.00144	mg/Kg	☼	09/08/17 19:00	09/10/17 16:21	1
Xylenes, Total	0.00118	U	0.00520	0.00118	mg/Kg	☼	09/08/17 19:00	09/10/17 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*61 - 130*	*09/08/17 19:00*	*09/10/17 16:21*	*1*
Dibromofluoromethane	*87*		*68 - 140*	*09/08/17 19:00*	*09/10/17 16:21*	*1*
Toluene-d8 (Surr)	*88*		*50 - 130*	*09/08/17 19:00*	*09/10/17 16:21*	*1*
4-Bromofluorobenzene	*98*		*57 - 140*	*09/08/17 19:00*	*09/10/17 16:21*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.5		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	94.5		1.0	1.0	%			09/11/17 16:23	1

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Client Sample ID: MW40-NFP-39-40-09072017

Lab Sample ID: 600-153582-6
Date Collected: 09/07/17 10:10
Matrix: Solid
Date Received: 09/08/17 10:22
Percent Solids: 80.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000627	U	0.00498	0.000627	mg/Kg	☼	09/08/17 19:00	09/11/17 16:06	1
Ethylbenzene	0.00102	U	0.00498	0.00102	mg/Kg	☼	09/08/17 19:00	09/11/17 16:06	1
Toluene	0.00137	U	0.00498	0.00137	mg/Kg	☼	09/08/17 19:00	09/11/17 16:06	1
Xylenes, Total	0.00113	U	0.00498	0.00113	mg/Kg	☼	09/08/17 19:00	09/11/17 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*61 - 130*	*09/08/17 19:00*	*09/11/17 16:06*	*1*
Dibromofluoromethane	*78*		*68 - 140*	*09/08/17 19:00*	*09/11/17 16:06*	*1*
Toluene-d8 (Surr)	*87*		*50 - 130*	*09/08/17 19:00*	*09/11/17 16:06*	*1*
4-Bromofluorobenzene	*105*		*57 - 140*	*09/08/17 19:00*	*09/11/17 16:06*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**19.7**		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	**80.3**		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: MW40-NFP-50-51-09072017

Lab Sample ID: 600-153582-7
Date Collected: 09/07/17 10:50
Matrix: Solid
Date Received: 09/08/17 10:22
Percent Solids: 90.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000603	U	0.00478	0.000603	mg/Kg	☼	09/08/17 19:00	09/11/17 16:30	1
Ethylbenzene	0.000976	U	0.00478	0.000976	mg/Kg	☼	09/08/17 19:00	09/11/17 16:30	1
Toluene	0.00132	U	0.00478	0.00132	mg/Kg	☼	09/08/17 19:00	09/11/17 16:30	1
Xylenes, Total	0.00108	U	0.00478	0.00108	mg/Kg	☼	09/08/17 19:00	09/11/17 16:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 130*	*09/08/17 19:00*	*09/11/17 16:30*	*1*
Dibromofluoromethane	*76*		*68 - 140*	*09/08/17 19:00*	*09/11/17 16:30*	*1*
Toluene-d8 (Surr)	*84*		*50 - 130*	*09/08/17 19:00*	*09/11/17 16:30*	*1*
4-Bromofluorobenzene	*106*		*57 - 140*	*09/08/17 19:00*	*09/11/17 16:30*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**9.8**		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	**90.2**		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: MW40-NFP-57-58-09072017

Lab Sample ID: 600-153582-8
Date Collected: 09/07/17 12:50
Matrix: Solid
Date Received: 09/08/17 10:22
Percent Solids: 89.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000555	U	0.00440	0.000555	mg/Kg	☼	09/08/17 19:00	09/11/17 16:55	1
Ethylbenzene	0.000898	U	0.00440	0.000898	mg/Kg	☼	09/08/17 19:00	09/11/17 16:55	1
Toluene	0.00122	U	0.00440	0.00122	mg/Kg	☼	09/08/17 19:00	09/11/17 16:55	1
Xylenes, Total	0.000995	U	0.00440	0.000995	mg/Kg	☼	09/08/17 19:00	09/11/17 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*61 - 130*	*09/08/17 19:00*	*09/11/17 16:55*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Client Sample ID: MW40-NFP-57-58-09072017

Lab Sample ID: 600-153582-8
Date Collected: 09/07/17 12:50
Matrix: Solid
Date Received: 09/08/17 10:22
Percent Solids: 89.7

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*79*		*68 - 140*	*09/08/17 19:00*	*09/11/17 16:55*	*1*
Toluene-d8 (Surr)	*87*		*50 - 130*	*09/08/17 19:00*	*09/11/17 16:55*	*1*
4-Bromofluorobenzene	*107*		*57 - 140*	*09/08/17 19:00*	*09/11/17 16:55*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**10.3**		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	**89.7**		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: MD05-NFP-57-58-09072017

Lab Sample ID: 600-153582-9
Date Collected: 09/07/17 12:55
Matrix: Solid
Date Received: 09/08/17 10:22
Percent Solids: 87.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000564	U	0.00448	0.000564	mg/Kg	☼	09/08/17 19:00	09/11/17 17:20	1
Ethylbenzene	0.000913	U	0.00448	0.000913	mg/Kg	☼	09/08/17 19:00	09/11/17 17:20	1
Toluene	0.00124	U	0.00448	0.00124	mg/Kg	☼	09/08/17 19:00	09/11/17 17:20	1
Xylenes, Total	0.00101	U	0.00448	0.00101	mg/Kg	☼	09/08/17 19:00	09/11/17 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*61 - 130*	*09/08/17 19:00*	*09/11/17 17:20*	*1*
Dibromofluoromethane	*78*		*68 - 140*	*09/08/17 19:00*	*09/11/17 17:20*	*1*
Toluene-d8 (Surr)	*86*		*50 - 130*	*09/08/17 19:00*	*09/11/17 17:20*	*1*
4-Bromofluorobenzene	*107*		*57 - 140*	*09/08/17 19:00*	*09/11/17 17:20*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**12.2**		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	**87.8**		1.0	1.0	%			09/11/17 16:23	1

Definitions/Glossary

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153582-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	ISTD response or retention time outside acceptable limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(61-130)	(68-140)	(50-130)	(57-140)
600-153582-2	SB03-NFP-1-2-09072017	88	77	84	101
600-153582-3	MW40-NFP-11-12-09072017	83	77	85	79 *
600-153582-4	MW40-NFP-19-20-09072017	82	76	86	91 *
600-153582-5	MW40-NFP-29-30-09072017	89	87	88	98
600-153582-6	MW40-NFP-39-40-09072017	84	78	87	105
600-153582-7	MW40-NFP-50-51-09072017	86	76	84	106
600-153582-8	MW40-NFP-57-58-09072017	87	79	87	107
600-153582-9	MD05-NFP-57-58-09072017	84	78	86	107
LCS 600-220962/3	Lab Control Sample	82	89	102	106
LCS 600-220982/3	Lab Control Sample	92	82	94	120
LCSD 600-220962/4	Lab Control Sample Dup	81	85	103	108
LCSD 600-220982/4	Lab Control Sample Dup	92	84	96	122
MB 600-220962/6	Method Blank	97	89	84	95
MB 600-220982/6	Method Blank	108	86	85	111

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(50-134)	(62-130)	(70-130)	(67-139)
600-153582-1	TB03-NFP-09072017	77	88	109	94
LCS 600-220936/3	Lab Control Sample	80	102	104	91
LCSD 600-220936/4	Lab Control Sample Dup	87	106	106	91
MB 600-220936/5	Method Blank	80	91	112	97

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-220936/5
Matrix: Water
Analysis Batch: 220936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/09/17 14:55	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/09/17 14:55	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/09/17 14:55	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/09/17 14:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*50 - 134*		*09/09/17 14:55*	*1*
Dibromofluoromethane	*91*		*62 - 130*		*09/09/17 14:55*	*1*
Toluene-d8 (Surr)	*112*		*70 - 130*		*09/09/17 14:55*	*1*
4-Bromofluorobenzene	*97*		*67 - 139*		*09/09/17 14:55*	*1*

Lab Sample ID: LCS 600-220936/3
Matrix: Water
Analysis Batch: 220936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0100	0.01067		mg/L		107	70 - 130		
Ethylbenzene			0.0100	0.01090		mg/L		109	70 - 130		
Toluene			0.0100	0.01134		mg/L		113	70 - 130		
Xylenes, Total			0.0200	0.02192		mg/L		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*80*		*50 - 134*
Dibromofluoromethane	*102*		*62 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene	*91*		*67 - 139*

Lab Sample ID: LCSD 600-220936/4
Matrix: Water
Analysis Batch: 220936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0100	0.01107		mg/L		111	70 - 130	4	20
Ethylbenzene			0.0100	0.01161		mg/L		116	70 - 130	6	20
Toluene			0.0100	0.01186		mg/L		119	70 - 130	4	20
Xylenes, Total			0.0200	0.02327		mg/L		116	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*50 - 134*
Dibromofluoromethane	*106*		*62 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene	*91*		*67 - 139*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-220962/6
Matrix: Solid
Analysis Batch: 220962

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/10/17 15:58	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/10/17 15:58	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/10/17 15:58	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/10/17 15:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*61 - 130*		*09/10/17 15:58*	*1*
Dibromofluoromethane	*89*		*68 - 140*		*09/10/17 15:58*	*1*
Toluene-d8 (Surr)	*84*		*50 - 130*		*09/10/17 15:58*	*1*
4-Bromofluorobenzene	*95*		*57 - 140*		*09/10/17 15:58*	*1*

Lab Sample ID: LCS 600-220962/3
Matrix: Solid
Analysis Batch: 220962

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.03737		mg/Kg		75	70 - 131		
Ethylbenzene			0.0500	0.04142		mg/Kg		83	66 - 130		
Toluene			0.0500	0.04005		mg/Kg		80	67 - 130		
Xylenes, Total			0.100	0.08134		mg/Kg		81	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*82*		*61 - 130*
Dibromofluoromethane	*89*		*68 - 140*
Toluene-d8 (Surr)	*102*		*50 - 130*
4-Bromofluorobenzene	*106*		*57 - 140*

Lab Sample ID: LCSD 600-220962/4
Matrix: Solid
Analysis Batch: 220962

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04646		mg/Kg		93	70 - 131	22	30
Ethylbenzene			0.0500	0.04964		mg/Kg		99	66 - 130	18	30
Toluene			0.0500	0.04828		mg/Kg		97	67 - 130	19	30
Xylenes, Total			0.100	0.09824		mg/Kg		98	63 - 130	19	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*81*		*61 - 130*
Dibromofluoromethane	*85*		*68 - 140*
Toluene-d8 (Surr)	*103*		*50 - 130*
4-Bromofluorobenzene	*108*		*57 - 140*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-220982/6
Matrix: Solid
Analysis Batch: 220982

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/11/17 09:53	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/11/17 09:53	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/11/17 09:53	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/11/17 09:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*61 - 130*		*09/11/17 09:53*	*1*
Dibromofluoromethane	*86*		*68 - 140*		*09/11/17 09:53*	*1*
Toluene-d8 (Surr)	*85*		*50 - 130*		*09/11/17 09:53*	*1*
4-Bromofluorobenzene	*111*		*57 - 140*		*09/11/17 09:53*	*1*

Lab Sample ID: LCS 600-220982/3
Matrix: Solid
Analysis Batch: 220982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.04031		mg/Kg		81	70 - 131
Ethylbenzene	0.0500	0.03920		mg/Kg		78	66 - 130
Toluene	0.0500	0.03981		mg/Kg		80	67 - 130
Xylenes, Total	0.100	0.07846		mg/Kg		78	63 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*
Dibromofluoromethane	*82*		*68 - 140*
Toluene-d8 (Surr)	*94*		*50 - 130*
4-Bromofluorobenzene	*120*		*57 - 140*

Lab Sample ID: LCSD 600-220982/4
Matrix: Solid
Analysis Batch: 220982

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.04557		mg/Kg		91	70 - 131	12	30
Ethylbenzene	0.0500	0.04563		mg/Kg		91	66 - 130	15	30
Toluene	0.0500	0.04532		mg/Kg		91	67 - 130	13	30
Xylenes, Total	0.100	0.09170		mg/Kg		92	63 - 130	16	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*
Dibromofluoromethane	*84*		*68 - 140*
Toluene-d8 (Surr)	*96*		*50 - 130*
4-Bromofluorobenzene	*122*		*57 - 140*

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

GC/MS VOA

Analysis Batch: 220936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153582-1	TB03-NFP-09072017	Total/NA	Water	8260B	
MB 600-220936/5	Method Blank	Total/NA	Water	8260B	
LCS 600-220936/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-220936/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 220962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153582-5	MW40-NFP-29-30-09072017	Total/NA	Solid	8260B	220966
MB 600-220962/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-220962/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-220962/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 220966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153582-2	SB03-NFP-1-2-09072017	Total/NA	Solid	5035_ASP	
600-153582-3	MW40-NFP-11-12-09072017	Total/NA	Solid	5035_ASP	
600-153582-4	MW40-NFP-19-20-09072017	Total/NA	Solid	5035_ASP	
600-153582-5	MW40-NFP-29-30-09072017	Total/NA	Solid	5035_ASP	
600-153582-6	MW40-NFP-39-40-09072017	Total/NA	Solid	5035_ASP	
600-153582-7	MW40-NFP-50-51-09072017	Total/NA	Solid	5035_ASP	
600-153582-8	MW40-NFP-57-58-09072017	Total/NA	Solid	5035_ASP	
600-153582-9	MD05-NFP-57-58-09072017	Total/NA	Solid	5035_ASP	

Analysis Batch: 220982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153582-2	SB03-NFP-1-2-09072017	Total/NA	Solid	8260B	220966
600-153582-3	MW40-NFP-11-12-09072017	Total/NA	Solid	8260B	220966
600-153582-4	MW40-NFP-19-20-09072017	Total/NA	Solid	8260B	220966
600-153582-6	MW40-NFP-39-40-09072017	Total/NA	Solid	8260B	220966
600-153582-7	MW40-NFP-50-51-09072017	Total/NA	Solid	8260B	220966
600-153582-8	MW40-NFP-57-58-09072017	Total/NA	Solid	8260B	220966
600-153582-9	MD05-NFP-57-58-09072017	Total/NA	Solid	8260B	220966
MB 600-220982/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-220982/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-220982/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

General Chemistry

Analysis Batch: 221062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153582-2	SB03-NFP-1-2-09072017	Total/NA	Solid	2540B	
600-153582-3	MW40-NFP-11-12-09072017	Total/NA	Solid	2540B	
600-153582-4	MW40-NFP-19-20-09072017	Total/NA	Solid	2540B	
600-153582-5	MW40-NFP-29-30-09072017	Total/NA	Solid	2540B	
600-153582-6	MW40-NFP-39-40-09072017	Total/NA	Solid	2540B	
600-153582-7	MW40-NFP-50-51-09072017	Total/NA	Solid	2540B	
600-153582-8	MW40-NFP-57-58-09072017	Total/NA	Solid	2540B	
600-153582-9	MD05-NFP-57-58-09072017	Total/NA	Solid	2540B	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Client Sample ID: TB03-NFP-09072017 — **Lab Sample ID: 600-153582-1**
Date Collected: 09/07/17 08:00 — **Matrix: Water**
Date Received: 09/08/17 10:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	220936	09/09/17 16:34	WS1	TAL HOU

Client Sample ID: SB03-NFP-1-2-09072017 — **Lab Sample ID: 600-153582-2**
Date Collected: 09/07/17 08:10 — **Matrix: Solid**
Date Received: 09/08/17 10:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: SB03-NFP-1-2-09072017 — **Lab Sample ID: 600-153582-2**
Date Collected: 09/07/17 08:10 — **Matrix: Solid**
Date Received: 09/08/17 10:22 — **Percent Solids: 88.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.735 g	5 mL	220966	09/08/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 14:51	WS1	TAL HOU

Client Sample ID: MW40-NFP-11-12-09072017 — **Lab Sample ID: 600-153582-3**
Date Collected: 09/07/17 09:30 — **Matrix: Solid**
Date Received: 09/08/17 10:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: MW40-NFP-11-12-09072017 — **Lab Sample ID: 600-153582-3**
Date Collected: 09/07/17 09:30 — **Matrix: Solid**
Date Received: 09/08/17 10:22 — **Percent Solids: 92.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.885 g	5 mL	220966	09/08/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 15:16	WS1	TAL HOU

Client Sample ID: MW40-NFP-19-20-09072017 — **Lab Sample ID: 600-153582-4**
Date Collected: 09/07/17 09:35 — **Matrix: Solid**
Date Received: 09/08/17 10:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Client Sample ID: MW40-NFP-19-20-09072017 — **Lab Sample ID: 600-153582-4**
Date Collected: 09/07/17 09:35 — **Matrix: Solid**
Date Received: 09/08/17 10:22 — **Percent Solids: 83.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			6.385 g	5 mL	220966	09/08/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 15:41	WS1	TAL HOU

Client Sample ID: MW40-NFP-29-30-09072017 — **Lab Sample ID: 600-153582-5**
Date Collected: 09/07/17 09:50 — **Matrix: Solid**
Date Received: 09/08/17 10:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: MW40-NFP-29-30-09072017 — **Lab Sample ID: 600-153582-5**
Date Collected: 09/07/17 09:50 — **Matrix: Solid**
Date Received: 09/08/17 10:22 — **Percent Solids: 94.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.09 g	5 mL	220966	09/08/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220962	09/10/17 16:21	WS1	TAL HOU

Client Sample ID: MW40-NFP-39-40-09072017 — **Lab Sample ID: 600-153582-6**
Date Collected: 09/07/17 10:10 — **Matrix: Solid**
Date Received: 09/08/17 10:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: MW40-NFP-39-40-09072017 — **Lab Sample ID: 600-153582-6**
Date Collected: 09/07/17 10:10 — **Matrix: Solid**
Date Received: 09/08/17 10:22 — **Percent Solids: 80.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			6.251 g	5 mL	220966	09/08/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 16:06	WS1	TAL HOU

Client Sample ID: MW40-NFP-50-51-09072017 — **Lab Sample ID: 600-153582-7**
Date Collected: 09/07/17 10:50 — **Matrix: Solid**
Date Received: 09/08/17 10:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153582-1

Client Sample ID: MW40-NFP-50-51-09072017 — Lab Sample ID: 600-153582-7

Date Collected: 09/07/17 10:50 — **Matrix: Solid**
Date Received: 09/08/17 10:22 — **Percent Solids: 90.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.796 g	5 mL	220966	09/08/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 16:30	WS1	TAL HOU

Client Sample ID: MW40-NFP-57-58-09072017 — Lab Sample ID: 600-153582-8

Date Collected: 09/07/17 12:50 — **Matrix: Solid**
Date Received: 09/08/17 10:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: MW40-NFP-57-58-09072017 — Lab Sample ID: 600-153582-8

Date Collected: 09/07/17 12:50 — **Matrix: Solid**
Date Received: 09/08/17 10:22 — **Percent Solids: 89.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			6.326 g	5 mL	220966	09/08/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 16:55	WS1	TAL HOU

Client Sample ID: MD05-NFP-57-58-09072017 — Lab Sample ID: 600-153582-9

Date Collected: 09/07/17 12:55 — **Matrix: Solid**
Date Received: 09/08/17 10:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: MD05-NFP-57-58-09072017 — Lab Sample ID: 600-153582-9

Date Collected: 09/07/17 12:55 — **Matrix: Solid**
Date Received: 09/08/17 10:22 — **Percent Solids: 87.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			6.36 g	5 mL	220966	09/08/17 19:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 17:20	WS1	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153582-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-21	10-31-17
USDA	Federal		P330-17-00132	04-20-20

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: L. Hill	Lab PM: Upton, Cathy L	Carrier Tracking No(s):	COC No: 600-36947-10949.1
Client Contact: Aleeca Forsberg	Phone: 205-240-3235	E-Mail: cathy.upton@testamericainc.com		Page: Page 1 of 1
Company: CH2M Hill, Inc.				Job #:
Address: 3721 Rutledge Rd. NE Suite B-1	Due Date Requested:			
City: Albuquerque	TAT Requested (days): 10 BD Prelim; 14 BD Level3 Package (3e)			
State, Zip: NM, 87109				
Phone: 281-721-8546(Tel)	PO #: WD293112			
Email: Aleeca.Forsberg@CH2M.com	WO #:			
Project Name: Kinder Morgan Bloomfield, NM NFP	HOUSTON Project #: 60004617			
Site: BTEX Soils	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SOILS: 8260B_5035 - BTEX (SHORT HOLD-48HRs)	SOILS: Percent Moisture	WATERS: 8260B_LL - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	A		
TB03-NFP-09072017	9/7/17	0800	G	Soil	N	N			X		*** 48Hr Holding Time
SB03-NFP-1-2-09072017	9/7/17	0810	G	Soil	N	N	X	X			From Sample Collection
MW40-NFP-11-12-09072017	9/7/17	0930	G	Soil	N	N	X	X			
MW40-NFP-19-20-09072017	9/7/17	0935	G	Soil	N	N	X	X			
MW40-NFP-29-30-09072017	9/7/17	0950	G	Soil	N	N	X	X			
MW40-NFP-39-40-09072017	9/7/17	1010	G	Soil	N	N	X	X			
MW40-NFP-50-51-09072017	9/7/17	1050	G	Soil	N	N	X	X			
MW40-NFP-57-58-09072017	9/7/17	1250	G	Soil	N	N	X	X			
MD05-NFP-57-58-09072017	9/7/17	1255	G	Soil	N	N	X	X			
			G	Soil							
			G	Water							

600-153582 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: L. Hill	Date/Time: 9/7/17 1700	Company: CH2M	Received by:	Date/Time: 9/8/17 1022	Company: TA PGH
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

Loc: 600
153582

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receip'

48HR TERRACores

Date/Time Received:

JOB NUMBER:

CLIENT: CH2M Hill

UNPACKED BY: CH2M Hill Inc.

CARRIER/DRIVER: FedEx

'17 SEP 8 10:22

Custody Seal Present: ☒ YES ☐ NO

Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (℃)	Therm ID	Them CF	Corrected Temp (℃)
B:W	Y / N	Y / N	0.9	549	-0.3	0.6
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☐ YES ☐ NO

pH paper Lot #__________________

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☒ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X	

COMMENTS:

9/8/17

FedEx TRK# 0221 7455 1165 4013
FRI - 08 SEP 10:30A
PRIORITY OVERNIGHT

HS-SA-WI-013

Rev. 3; 07/01/2014

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc. Job Number: 600-153582-1

Login Number: 153582 **List Source: TestAmerica Houston**
List Number: 1
Creator: Crafton, Tommie S

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Refer to Job Narrative for details.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

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ANALYTICAL REPORT

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-153598-1
Client Project/Site: Kinder Morgan Bloomfield, NM NFP
Revision: 1

For:
CH2M Hill Constructors, Inc.
14701 St. Mary's Lane
Suite 300
Houston, Texas 77079-2923

Attn: Mr. John Ynfante

Steve A Stepanski

Authorized for release by:
12/10/2020 10:03:29 AM
Steve Stepanski, Project Mgmt. Assistant
(713)690-4444
steve.stepanski@Eurofinset.com

Designee for

Cathy Upton, Project Manager I
(713)690-4444
cathy.upton@testamericainc.com

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory Job ID: 600-153598-1

Table of Contents

Case Narrative

Client: CH2M Hill Constructors, Inc. Job ID: 600-153598-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Job ID: 600-153598-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-153598-1

Comments
This report was revised to a Level 2 deliverable per client's request.

Receipt
The samples were received on 9/9/2017 9:34 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8º C.

GC/MS VOA
Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 600-220967 and analytical batch 600-220962 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample/laboratory control sample duplicate (LCS/LCSD) met the acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
2540B	Percent Moisture	SM20	TAL HOU

Protocol References:

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-153598-1	TB04-NFP-09082017	Water	09/08/17 10:30	09/09/17 09:34
600-153598-2	MW43-NFP-14-15-09082017	Solid	09/08/17 12:00	09/09/17 09:34
600-153598-3	MW43-NFP-20-21-09082017	Solid	09/08/17 12:10	09/09/17 09:34
600-153598-4	MW43-NFP-25-26-09082017	Solid	09/08/17 12:20	09/09/17 09:34
600-153598-5	MW43-NFP-41-42-09082017	Solid	09/08/17 13:10	09/09/17 09:34
600-153598-6	MW43-NFP-54-55-09082017	Solid	09/08/17 13:30	09/09/17 09:34
600-153598-7	MD08-NFP-54-55-09082017	Solid	09/08/17 13:35	09/09/17 09:34

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Client Sample ID: TB04-NFP-09082017

Lab Sample ID: 600-153598-1
Matrix: Water
Date Collected: 09/08/17 10:30
Date Received: 09/09/17 09:34

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/09/17 16:59	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/09/17 16:59	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/09/17 16:59	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/09/17 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*77*		*50 - 134*		*09/09/17 16:59*	*1*
Dibromofluoromethane	*89*		*62 - 130*		*09/09/17 16:59*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*09/09/17 16:59*	*1*
4-Bromofluorobenzene	*95*		*67 - 139*		*09/09/17 16:59*	*1*

Client Sample ID: MW43-NFP-14-15-09082017

Lab Sample ID: 600-153598-2
Matrix: Solid
Date Collected: 09/08/17 12:00
Date Received: 09/09/17 09:34
Percent Solids: 83.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000680	U	0.00540	0.000680	mg/Kg	☼	09/09/17 14:00	09/10/17 22:35	1
Ethylbenzene	0.00110	U	0.00540	0.00110	mg/Kg	☼	09/09/17 14:00	09/10/17 22:35	1
Toluene	0.00149	U	0.00540	0.00149	mg/Kg	☼	09/09/17 14:00	09/10/17 22:35	1
Xylenes, Total	0.00122	U	0.00540	0.00122	mg/Kg	☼	09/09/17 14:00	09/10/17 22:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*61 - 130*	*09/09/17 14:00*	*09/10/17 22:35*	*1*
Dibromofluoromethane	*83*		*68 - 140*	*09/09/17 14:00*	*09/10/17 22:35*	*1*
Toluene-d8 (Surr)	*83*		*50 - 130*	*09/09/17 14:00*	*09/10/17 22:35*	*1*
4-Bromofluorobenzene	*101*		*57 - 140*	*09/09/17 14:00*	*09/10/17 22:35*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**16.8**		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	**83.2**		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: MW43-NFP-20-21-09082017

Lab Sample ID: 600-153598-3
Matrix: Solid
Date Collected: 09/08/17 12:10
Date Received: 09/09/17 09:34
Percent Solids: 91.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000619	U	0.00491	0.000619	mg/Kg	☼	09/09/17 14:00	09/10/17 22:58	1
Ethylbenzene	0.00100	U	0.00491	0.00100	mg/Kg	☼	09/09/17 14:00	09/10/17 22:58	1
Toluene	0.00135	U	0.00491	0.00135	mg/Kg	☼	09/09/17 14:00	09/10/17 22:58	1
Xylenes, Total	0.00111	U	0.00491	0.00111	mg/Kg	☼	09/09/17 14:00	09/10/17 22:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*61 - 130*	*09/09/17 14:00*	*09/10/17 22:58*	*1*
Dibromofluoromethane	*81*		*68 - 140*	*09/09/17 14:00*	*09/10/17 22:58*	*1*
Toluene-d8 (Surr)	*83*		*50 - 130*	*09/09/17 14:00*	*09/10/17 22:58*	*1*
4-Bromofluorobenzene	*104*		*57 - 140*	*09/09/17 14:00*	*09/10/17 22:58*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153598-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Client Sample ID: MW43-NFP-20-21-09082017 Lab Sample ID: 600-153598-3

Date Collected: 09/08/17 12:10 Matrix: Solid
Date Received: 09/09/17 09:34 Percent Solids: 91.8

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.2		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	91.8		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: MW43-NFP-25-26-09082017 Lab Sample ID: 600-153598-4

Date Collected: 09/08/17 12:20 Matrix: Solid
Date Received: 09/09/17 09:34 Percent Solids: 89.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000564	U	0.00447	0.000564	mg/Kg	☼	09/09/17 14:00	09/10/17 23:21	1
Ethylbenzene	0.000913	U	0.00447	0.000913	mg/Kg	☼	09/09/17 14:00	09/10/17 23:21	1
Toluene	0.00123	U	0.00447	0.00123	mg/Kg	☼	09/09/17 14:00	09/10/17 23:21	1
Xylenes, Total	0.00101	U	0.00447	0.00101	mg/Kg	☼	09/09/17 14:00	09/10/17 23:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*61 - 130*	*09/09/17 14:00*	*09/10/17 23:21*	*1*
Dibromofluoromethane	*80*		*68 - 140*	*09/09/17 14:00*	*09/10/17 23:21*	*1*
Toluene-d8 (Surr)	*83*		*50 - 130*	*09/09/17 14:00*	*09/10/17 23:21*	*1*
4-Bromofluorobenzene	*103*		*57 - 140*	*09/09/17 14:00*	*09/10/17 23:21*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.0		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	89.0		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: MW43-NFP-41-42-09082017 Lab Sample ID: 600-153598-5

Date Collected: 09/08/17 13:10 Matrix: Solid
Date Received: 09/09/17 09:34 Percent Solids: 89.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000655	U	0.00520	0.000655	mg/Kg	☼	09/09/17 14:00	09/11/17 00:31	1
Ethylbenzene	0.00106	U	0.00520	0.00106	mg/Kg	☼	09/09/17 14:00	09/11/17 00:31	1
Toluene	0.00143	U	0.00520	0.00143	mg/Kg	☼	09/09/17 14:00	09/11/17 00:31	1
Xylenes, Total	0.00117	U	0.00520	0.00117	mg/Kg	☼	09/09/17 14:00	09/11/17 00:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*61 - 130*	*09/09/17 14:00*	*09/11/17 00:31*	*1*
Dibromofluoromethane	*84*		*68 - 140*	*09/09/17 14:00*	*09/11/17 00:31*	*1*
Toluene-d8 (Surr)	*85*		*50 - 130*	*09/09/17 14:00*	*09/11/17 00:31*	*1*
4-Bromofluorobenzene	*104*		*57 - 140*	*09/09/17 14:00*	*09/11/17 00:31*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.9		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	89.1		1.0	1.0	%			09/11/17 16:23	1

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Client Sample ID: MW43-NFP-54-55-09082017

Lab Sample ID: 600-153598-6
Date Collected: 09/08/17 13:30
Matrix: Solid
Date Received: 09/09/17 09:34
Percent Solids: 82.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000583	U	0.00463	0.000583	mg/Kg	☼	09/09/17 14:00	09/11/17 13:12	1
Ethylbenzene	**0.00644**		0.00463	0.000944	mg/Kg	☼	09/09/17 14:00	09/11/17 13:12	1
Toluene	0.00128	U	0.00463	0.00128	mg/Kg	☼	09/09/17 14:00	09/11/17 13:12	1
Xylenes, Total	**0.0139**		0.00463	0.00105	mg/Kg	☼	09/09/17 14:00	09/11/17 13:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*61 - 130*	*09/09/17 14:00*	*09/11/17 13:12*	*1*
Dibromofluoromethane	*76*		*68 - 140*	*09/09/17 14:00*	*09/11/17 13:12*	*1*
Toluene-d8 (Surr)	*81*		*50 - 130*	*09/09/17 14:00*	*09/11/17 13:12*	*1*
4-Bromofluorobenzene	*114*		*57 - 140*	*09/09/17 14:00*	*09/11/17 13:12*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**17.2**		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	**82.8**		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: MD08-NFP-54-55-09082017

Lab Sample ID: 600-153598-7
Date Collected: 09/08/17 13:35
Matrix: Solid
Date Received: 09/09/17 09:34
Percent Solids: 84.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.000979**	**J**	0.00418	0.000527	mg/Kg	☼	09/09/17 14:00	09/11/17 13:36	1
Ethylbenzene	**0.00715**		0.00418	0.000853	mg/Kg	☼	09/09/17 14:00	09/11/17 13:36	1
Toluene	0.00115	U	0.00418	0.00115	mg/Kg	☼	09/09/17 14:00	09/11/17 13:36	1
Xylenes, Total	**0.0174**		0.00418	0.000945	mg/Kg	☼	09/09/17 14:00	09/11/17 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 130*	*09/09/17 14:00*	*09/11/17 13:36*	*1*
Dibromofluoromethane	*78*		*68 - 140*	*09/09/17 14:00*	*09/11/17 13:36*	*1*
Toluene-d8 (Surr)	*82*		*50 - 130*	*09/09/17 14:00*	*09/11/17 13:36*	*1*
4-Bromofluorobenzene	*116*		*57 - 140*	*09/09/17 14:00*	*09/11/17 13:36*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15.5**		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	**84.5**		1.0	1.0	%			09/11/17 16:23	1

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (61-130)	DBFM (68-140)	TOL (50-130)	BFB (57-140)
600-153598-2	MW43-NFP-14-15-09082017	91	83	83	101
600-153598-3	MW43-NFP-20-21-09082017	87	81	83	104
600-153598-4	MW43-NFP-25-26-09082017	88	80	83	103
600-153598-4 MS	MW43-NFP-25-26-09082017	101	89	90	109
600-153598-4 MSD	MW43-NFP-25-26-09082017	101	90	91	112
600-153598-5	MW43-NFP-41-42-09082017	89	84	85	104
600-153598-6	MW43-NFP-54-55-09082017	97	76	81	114
600-153598-7	MD08-NFP-54-55-09082017	100	78	82	116
LCS 600-220962/3	Lab Control Sample	82	89	102	106
LCS 600-220982/3	Lab Control Sample	92	82	94	120
LCSD 600-220962/4	Lab Control Sample Dup	81	85	103	108
LCSD 600-220982/4	Lab Control Sample Dup	92	84	96	122
MB 600-220962/6	Method Blank	97	89	84	95
MB 600-220982/6	Method Blank	108	86	85	111

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (50-134)	DBFM (62-130)	TOL (70-130)	BFB (67-139)
600-153598-1	TB04-NFP-09082017	77	89	107	95
LCS 600-220936/3	Lab Control Sample	80	102	104	91
LCSD 600-220936/4	Lab Control Sample Dup	87	106	106	91
MB 600-220936/5	Method Blank	80	91	112	97

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-220936/5
Matrix: Water
Analysis Batch: 220936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/09/17 14:55	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/09/17 14:55	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/09/17 14:55	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/09/17 14:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*50 - 134*		*09/09/17 14:55*	*1*
Dibromofluoromethane	*91*		*62 - 130*		*09/09/17 14:55*	*1*
Toluene-d8 (Surr)	*112*		*70 - 130*		*09/09/17 14:55*	*1*
4-Bromofluorobenzene	*97*		*67 - 139*		*09/09/17 14:55*	*1*

Lab Sample ID: LCS 600-220936/3
Matrix: Water
Analysis Batch: 220936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0100	0.01067		mg/L		107	70 - 130		
Ethylbenzene			0.0100	0.01090		mg/L		109	70 - 130		
Toluene			0.0100	0.01134		mg/L		113	70 - 130		
Xylenes, Total			0.0200	0.02192		mg/L		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*80*		*50 - 134*
Dibromofluoromethane	*102*		*62 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene	*91*		*67 - 139*

Lab Sample ID: LCSD 600-220936/4
Matrix: Water
Analysis Batch: 220936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0100	0.01107		mg/L		111	70 - 130	4	20
Ethylbenzene			0.0100	0.01161		mg/L		116	70 - 130	6	20
Toluene			0.0100	0.01186		mg/L		119	70 - 130	4	20
Xylenes, Total			0.0200	0.02327		mg/L		116	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*50 - 134*
Dibromofluoromethane	*106*		*62 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene	*91*		*67 - 139*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-220962/6
Matrix: Solid
Analysis Batch: 220962

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/10/17 15:58	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/10/17 15:58	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/10/17 15:58	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/10/17 15:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*61 - 130*		*09/10/17 15:58*	*1*
Dibromofluoromethane	*89*		*68 - 140*		*09/10/17 15:58*	*1*
Toluene-d8 (Surr)	*84*		*50 - 130*		*09/10/17 15:58*	*1*
4-Bromofluorobenzene	*95*		*57 - 140*		*09/10/17 15:58*	*1*

Lab Sample ID: LCS 600-220962/3
Matrix: Solid
Analysis Batch: 220962

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.03737		mg/Kg		75	70 - 131
Ethylbenzene	0.0500	0.04142		mg/Kg		83	66 - 130
Toluene	0.0500	0.04005		mg/Kg		80	67 - 130
Xylenes, Total	0.100	0.08134		mg/Kg		81	63 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*82*		*61 - 130*
Dibromofluoromethane	*89*		*68 - 140*
Toluene-d8 (Surr)	*102*		*50 - 130*
4-Bromofluorobenzene	*106*		*57 - 140*

Lab Sample ID: LCSD 600-220962/4
Matrix: Solid
Analysis Batch: 220962

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.04646		mg/Kg		93	70 - 131	22	30
Ethylbenzene	0.0500	0.04964		mg/Kg		99	66 - 130	18	30
Toluene	0.0500	0.04828		mg/Kg		97	67 - 130	19	30
Xylenes, Total	0.100	0.09824		mg/Kg		98	63 - 130	19	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*81*		*61 - 130*
Dibromofluoromethane	*85*		*68 - 140*
Toluene-d8 (Surr)	*103*		*50 - 130*
4-Bromofluorobenzene	*108*		*57 - 140*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 600-153598-4 MS
Matrix: Solid
Analysis Batch: 220962

Client Sample ID: MW43-NFP-25-26-09082017
Prep Type: Total/NA
Prep Batch: 220967

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.000564	U	0.0509	0.03512	F1	mg/Kg	☼	69	70 - 131
Ethylbenzene	0.000913	U	0.0509	0.02921	F1	mg/Kg	☼	57	66 - 130
Toluene	0.00123	U	0.0509	0.03062	F1	mg/Kg	☼	60	67 - 130
Xylenes, Total	0.00101	U	0.102	0.06095	F1	mg/Kg	☼	60	63 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*61 - 130*
Dibromofluoromethane	*89*		*68 - 140*
Toluene-d8 (Surr)	*90*		*50 - 130*
4-Bromofluorobenzene	*109*		*57 - 140*

Lab Sample ID: 600-153598-4 MSD
Matrix: Solid
Analysis Batch: 220962

Client Sample ID: MW43-NFP-25-26-09082017
Prep Type: Total/NA
Prep Batch: 220967

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.000564	U	0.0535	0.03930		mg/Kg	☼	73	70 - 131	11	30
Ethylbenzene	0.000913	U	0.0535	0.03455	F1	mg/Kg	☼	65	66 - 130	17	30
Toluene	0.00123	U	0.0535	0.03471	F1	mg/Kg	☼	65	67 - 130	13	30
Xylenes, Total	0.00101	U	0.107	0.06824		mg/Kg	☼	64	63 - 130	11	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*61 - 130*
Dibromofluoromethane	*90*		*68 - 140*
Toluene-d8 (Surr)	*91*		*50 - 130*
4-Bromofluorobenzene	*112*		*57 - 140*

Lab Sample ID: MB 600-220982/6
Matrix: Solid
Analysis Batch: 220982

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/11/17 09:53	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/11/17 09:53	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/11/17 09:53	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/11/17 09:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*61 - 130*		*09/11/17 09:53*	*1*
Dibromofluoromethane	*86*		*68 - 140*		*09/11/17 09:53*	*1*
Toluene-d8 (Surr)	*85*		*50 - 130*		*09/11/17 09:53*	*1*
4-Bromofluorobenzene	*111*		*57 - 140*		*09/11/17 09:53*	*1*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-220982/3
Matrix: Solid
Analysis Batch: 220982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.04031		mg/Kg		81	70 - 131		
Ethylbenzene			0.0500	0.03920		mg/Kg		78	66 - 130		
Toluene			0.0500	0.03981		mg/Kg		80	67 - 130		
Xylenes, Total			0.100	0.07846		mg/Kg		78	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*
Dibromofluoromethane	*82*		*68 - 140*
Toluene-d8 (Surr)	*94*		*50 - 130*
4-Bromofluorobenzene	*120*		*57 - 140*

Lab Sample ID: LCSD 600-220982/4
Matrix: Solid
Analysis Batch: 220982

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04557		mg/Kg		91	70 - 131	12	30
Ethylbenzene			0.0500	0.04563		mg/Kg		91	66 - 130	15	30
Toluene			0.0500	0.04532		mg/Kg		91	67 - 130	13	30
Xylenes, Total			0.100	0.09170		mg/Kg		92	63 - 130	16	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*
Dibromofluoromethane	*84*		*68 - 140*
Toluene-d8 (Surr)	*96*		*50 - 130*
4-Bromofluorobenzene	*122*		*57 - 140*

Method: 2540B - Percent Moisture

Lab Sample ID: 600-153598-6 DU
Matrix: Solid
Analysis Batch: 221062

Client Sample ID: MW43-NFP-54-55-09082017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	17.2			15.8		%				8	20
Percent Solids	82.8			84.2		%				2	20

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

GC/MS VOA

Analysis Batch: 220936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153598-1	TB04-NFP-09082017	Total/NA	Water	8260B	
MB 600-220936/5	Method Blank	Total/NA	Water	8260B	
LCS 600-220936/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-220936/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 220962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153598-2	MW43-NFP-14-15-09082017	Total/NA	Solid	8260B	220967
600-153598-3	MW43-NFP-20-21-09082017	Total/NA	Solid	8260B	220967
600-153598-4	MW43-NFP-25-26-09082017	Total/NA	Solid	8260B	220967
600-153598-5	MW43-NFP-41-42-09082017	Total/NA	Solid	8260B	220967
MB 600-220962/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-220962/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-220962/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
600-153598-4 MS	MW43-NFP-25-26-09082017	Total/NA	Solid	8260B	220967
600-153598-4 MSD	MW43-NFP-25-26-09082017	Total/NA	Solid	8260B	220967

Prep Batch: 220967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153598-2	MW43-NFP-14-15-09082017	Total/NA	Solid	5035_ASP	
600-153598-3	MW43-NFP-20-21-09082017	Total/NA	Solid	5035_ASP	
600-153598-4	MW43-NFP-25-26-09082017	Total/NA	Solid	5035_ASP	
600-153598-5	MW43-NFP-41-42-09082017	Total/NA	Solid	5035_ASP	
600-153598-6	MW43-NFP-54-55-09082017	Total/NA	Solid	5035_ASP	
600-153598-7	MD08-NFP-54-55-09082017	Total/NA	Solid	5035_ASP	
600-153598-4 MS	MW43-NFP-25-26-09082017	Total/NA	Solid	5035_ASP	
600-153598-4 MSD	MW43-NFP-25-26-09082017	Total/NA	Solid	5035_ASP	

Analysis Batch: 220982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153598-6	MW43-NFP-54-55-09082017	Total/NA	Solid	8260B	220967
600-153598-7	MD08-NFP-54-55-09082017	Total/NA	Solid	8260B	220967
MB 600-220982/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-220982/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-220982/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

General Chemistry

Analysis Batch: 221062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153598-2	MW43-NFP-14-15-09082017	Total/NA	Solid	2540B	
600-153598-3	MW43-NFP-20-21-09082017	Total/NA	Solid	2540B	
600-153598-4	MW43-NFP-25-26-09082017	Total/NA	Solid	2540B	
600-153598-5	MW43-NFP-41-42-09082017	Total/NA	Solid	2540B	
600-153598-6	MW43-NFP-54-55-09082017	Total/NA	Solid	2540B	
600-153598-7	MD08-NFP-54-55-09082017	Total/NA	Solid	2540B	
600-153598-4 MS	MW43-NFP-25-26-09082017	Total/NA	Solid	2540B	
600-153598-4 MSD	MW43-NFP-25-26-09082017	Total/NA	Solid	2540B	
600-153598-6 DU	MW43-NFP-54-55-09082017	Total/NA	Solid	2540B	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Client Sample ID: TB04-NFP-09082017 — **Lab Sample ID: 600-153598-1**
Date Collected: 09/08/17 10:30 — **Matrix: Water**
Date Received: 09/09/17 09:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	220936	09/09/17 16:59	WS1	TAL HOU

Client Sample ID: MW43-NFP-14-15-09082017 — **Lab Sample ID: 600-153598-2**
Date Collected: 09/08/17 12:00 — **Matrix: Solid**
Date Received: 09/09/17 09:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: MW43-NFP-14-15-09082017 — **Lab Sample ID: 600-153598-2**
Date Collected: 09/08/17 12:00 — **Matrix: Solid**
Date Received: 09/09/17 09:34 — **Percent Solids: 83.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.564 g	5 mL	220967	09/09/17 14:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220962	09/10/17 22:35	WS1	TAL HOU

Client Sample ID: MW43-NFP-20-21-09082017 — **Lab Sample ID: 600-153598-3**
Date Collected: 09/08/17 12:10 — **Matrix: Solid**
Date Received: 09/09/17 09:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: MW43-NFP-20-21-09082017 — **Lab Sample ID: 600-153598-3**
Date Collected: 09/08/17 12:10 — **Matrix: Solid**
Date Received: 09/09/17 09:34 — **Percent Solids: 91.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.549 g	5 mL	220967	09/09/17 14:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220962	09/10/17 22:58	WS1	TAL HOU

Client Sample ID: MW43-NFP-25-26-09082017 — **Lab Sample ID: 600-153598-4**
Date Collected: 09/08/17 12:20 — **Matrix: Solid**
Date Received: 09/09/17 09:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Client Sample ID: MW43-NFP-25-26-09082017 — **Lab Sample ID: 600-153598-4**
Date Collected: 09/08/17 12:20 — **Matrix: Solid**
Date Received: 09/09/17 09:34 — **Percent Solids: 89.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			6.277 g	5 mL	220967	09/09/17 14:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220962	09/10/17 23:21	WS1	TAL HOU

Client Sample ID: MW43-NFP-41-42-09082017 — **Lab Sample ID: 600-153598-5**
Date Collected: 09/08/17 13:10 — **Matrix: Solid**
Date Received: 09/09/17 09:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: MW43-NFP-41-42-09082017 — **Lab Sample ID: 600-153598-5**
Date Collected: 09/08/17 13:10 — **Matrix: Solid**
Date Received: 09/09/17 09:34 — **Percent Solids: 89.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.402 g	5 mL	220967	09/09/17 14:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220962	09/11/17 00:31	WS1	TAL HOU

Client Sample ID: MW43-NFP-54-55-09082017 — **Lab Sample ID: 600-153598-6**
Date Collected: 09/08/17 13:30 — **Matrix: Solid**
Date Received: 09/09/17 09:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: MW43-NFP-54-55-09082017 — **Lab Sample ID: 600-153598-6**
Date Collected: 09/08/17 13:30 — **Matrix: Solid**
Date Received: 09/09/17 09:34 — **Percent Solids: 82.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			6.525 g	5 mL	220967	09/09/17 14:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 13:12	WS1	TAL HOU

Client Sample ID: MD08-NFP-54-55-09082017 — **Lab Sample ID: 600-153598-7**
Date Collected: 09/08/17 13:35 — **Matrix: Solid**
Date Received: 09/09/17 09:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153598-1

Client Sample ID: MD08-NFP-54-55-09082017 **Lab Sample ID: 600-153598-7**
Date Collected: 09/08/17 13:35 **Matrix: Solid**
Date Received: 09/09/17 09:34 **Percent Solids: 84.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			7.08 g	5 mL	220967	09/09/17 14:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 13:36	WS1	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153598-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-21	10-31-17
USDA	Federal		P330-17-00132	04-20-20

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

600-153598 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: L. Hill	Lab PM: Upton, Cathy L	COC No: 600-36947-10949.1
Client Contact: Aleeca Forsberg	Phone: 205-240-3235	E-Mail: cathy.upton@testamericainc.com	Page: Page 1 of 1
Company: CH2M Hill, Inc.			Job #:
Address: 3721 Rutledge Rd. NE Suite B-1	Due Date Requested:		
City: Albuquerque	TAT Requested (days): 10 BD Prelim; 14 BD Level3 Package (3e)		
State, Zip: NM, 87109			
Phone: 281-721-8546(Tel)	PO #: WD293112		
Email: Aleeca.Forsberg@CH2M.com	WO #:		
Project Name: Kinder Morgan Bloomfield, NM NFP	HOUSTON Project #: 60004617		
Site: BTEX Soils	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SOILS: 8260B_5035 - BTEX (SHORT HOLD-48HRs)	SOILS: Percent Moisture	WATERS: 8260B_LL - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	A		
TB04-NFP-09082017	9/8/17	1030	G	Soil	N	N			X		*** 48Hr Holding Time
MW43-NFP-14-15-09082017	9/8/17	1200	G	Soil	N	N	X	X			From Sample Collection
MW43-NFP-20-21-09082017	9/8/17	1210	G	Soil	N	N	X	X			
MW43-NFP-25-26-09082017	9/8/17	1220	G	Soil	N	N	X	X			
MW43-NFP-25-26-09082017MS	9/8/17	1220	G	Soil	N	Y	X	X			
MW43-NFP-25-26-09082017MSD	9/8/17	1220	G	Soil	N	Y	X	X			
MW43-NFP-41-42-09082017	9/8/17	1310	G	Soil	N	N	X	X			
MW43-NFP-54-55-09082017	9/8/17	1330	G	Soil	N	N	X	X			
MD08-NFP-54-55-09082017	9/8/17	1335	G	Soil	N	N	X	X			
			G	Soil							
			G	Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	L. Hill	9/8/17 1700	CH2M		9-9-17 931	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

Loc: 600
153598

Sample Receip

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Date/Time Received: _____

JOB NUMBER: _____ CLIENT: CHZM '17SEP 9 9:34

UNPACKED BY: _____ CARRIER/DRIVER: FE Sad

Custody Seal Present: ☒ YES ☐ NO Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
Blu	Y / N	Y / N	3.1	319	-3	1.8
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☐ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☐ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☐ YES ☐ NO

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☐ YES ☒ NO ☐ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		

COMMENTS: TB has headspace

FedEx
TRK# 0221 7455 1165 3933

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO LKSA

HS-SA-WI-013 Rev. 3; 07/01/2014

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc. Job Number: 600-153598-1

Login Number: 153598 **List Source: TestAmerica Houston**
List Number: 1
Creator: Crafton, Tommie S

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	Refer to Job Narrative for details.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

eurofins | Environment Testing America

ANALYTICAL REPORT

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-153701-1
Client Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17
Revision: 1

For:
CH2M Hill Constructors, Inc.
14701 St. Mary's Lane
Suite 300
Houston, Texas 77079-2923

Attn: Mr. John Ynfante

Steve A Stepanski

Authorized for release by:
12/10/2020 10:05:19 AM
Steve Stepanski, Project Mgmt. Assistant
(713)690-4444
steve.stepanski@Eurofinset.com

Designee for

Cathy Upton, Project Manager I
(713)690-4444
cathy.upton@testamericainc.com

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

Laboratory Job ID: 600-153701-1

Table of Contents

Case Narrative

Client: CH2M Hill Constructors, Inc. Job ID: 600-153701-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Job ID: 600-153701-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-153701-1

Comments
This report was revised to a Level 2 deliverable per client's request.

Receipt
The samples were received on 9/12/2017 10:44 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
2540B	Percent Moisture	SM20	TAL HOU

Protocol References:

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-153701-1	TB05-NFP-09102017	Water	09/10/17 12:00	09/12/17 10:44
600-153701-2	MW44-NFP-14-16-09102017	Solid	09/10/17 11:10	09/12/17 10:44
600-153701-3	MD09-NFP-14-16-09102017	Solid	09/10/17 11:15	09/12/17 10:44
600-153701-4	MW44-NFP-20-21-09102017	Solid	09/10/17 11:30	09/12/17 10:44
600-153701-5	MW44-NFP-31-32-09102017	Solid	09/10/17 11:40	09/12/17 10:44
600-153701-6	MW44-NFP-41-42-09102017	Solid	09/10/17 13:40	09/12/17 10:44
600-153701-7	MW44-NFP-53-54-09102017	Solid	09/10/17 14:00	09/12/17 10:44
600-153701-8	MW44-NFP-62-63-09102017	Solid	09/10/17 14:40	09/12/17 10:44
600-153701-9	MW44-NFP-69-70-09102017	Solid	09/10/17 15:40	09/12/17 10:44
600-153701-10	MW45-NFP-13-14-09112017	Solid	09/11/17 15:15	09/12/17 10:44

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Client Sample ID: TB05-NFP-09102017

Lab Sample ID: 600-153701-1
Matrix: Water
Date Collected: 09/10/17 12:00
Date Received: 09/12/17 10:44

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/12/17 13:53	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/12/17 13:53	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/12/17 13:53	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/12/17 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*50 - 134*		*09/12/17 13:53*	*1*
Dibromofluoromethane	*91*		*62 - 130*		*09/12/17 13:53*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/12/17 13:53*	*1*
4-Bromofluorobenzene	*102*		*67 - 139*		*09/12/17 13:53*	*1*

Client Sample ID: MW44-NFP-14-16-09102017

Lab Sample ID: 600-153701-2
Matrix: Solid
Date Collected: 09/10/17 11:10
Date Received: 09/12/17 10:44
Percent Solids: 94.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00250**	**J**	0.00528	0.000665	mg/Kg	☼	09/12/17 12:21	09/12/17 14:58	1
Ethylbenzene	0.00108	U	0.00528	0.00108	mg/Kg	☼	09/12/17 12:21	09/12/17 14:58	1
Toluene	0.00146	U	0.00528	0.00146	mg/Kg	☼	09/12/17 12:21	09/12/17 14:58	1
Xylenes, Total	0.00119	U	0.00528	0.00119	mg/Kg	☼	09/12/17 12:21	09/12/17 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*61 - 130*	*09/12/17 12:21*	*09/12/17 14:58*	*1*
Dibromofluoromethane	*75*		*68 - 140*	*09/12/17 12:21*	*09/12/17 14:58*	*1*
Toluene-d8 (Surr)	*80*		*50 - 130*	*09/12/17 12:21*	*09/12/17 14:58*	*1*
4-Bromofluorobenzene	*119*		*57 - 140*	*09/12/17 12:21*	*09/12/17 14:58*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**5.2**		1.0	1.0	%			09/12/17 16:31	1
Percent Solids	**94.8**		1.0	1.0	%			09/12/17 16:31	1

Client Sample ID: MD09-NFP-14-16-09102017

Lab Sample ID: 600-153701-3
Matrix: Solid
Date Collected: 09/10/17 11:15
Date Received: 09/12/17 10:44
Percent Solids: 96.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000652	U	0.00518	0.000652	mg/Kg	☼	09/12/17 12:21	09/12/17 15:23	1
Ethylbenzene	0.00106	U	0.00518	0.00106	mg/Kg	☼	09/12/17 12:21	09/12/17 15:23	1
Toluene	0.00143	U	0.00518	0.00143	mg/Kg	☼	09/12/17 12:21	09/12/17 15:23	1
Xylenes, Total	0.00117	U	0.00518	0.00117	mg/Kg	☼	09/12/17 12:21	09/12/17 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*61 - 130*	*09/12/17 12:21*	*09/12/17 15:23*	*1*
Dibromofluoromethane	*75*		*68 - 140*	*09/12/17 12:21*	*09/12/17 15:23*	*1*
Toluene-d8 (Surr)	*83*		*50 - 130*	*09/12/17 12:21*	*09/12/17 15:23*	*1*
4-Bromofluorobenzene	*116*		*57 - 140*	*09/12/17 12:21*	*09/12/17 15:23*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153701-1
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

Client Sample ID: MD09-NFP-14-16-09102017 — Lab Sample ID: 600-153701-3

Date Collected: 09/10/17 11:15 Matrix: Solid
Date Received: 09/12/17 10:44 Percent Solids: 96.5

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.5		1.0	1.0	%			09/12/17 16:28	1
Percent Solids	96.5		1.0	1.0	%			09/12/17 16:28	1

Client Sample ID: MW44-NFP-20-21-09102017 — Lab Sample ID: 600-153701-4

Date Collected: 09/10/17 11:30 Matrix: Solid
Date Received: 09/12/17 10:44 Percent Solids: 99.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000592	U	0.00469	0.000592	mg/Kg	☼	09/12/17 12:21	09/12/17 15:48	1
Ethylbenzene	0.000958	U	0.00469	0.000958	mg/Kg	☼	09/12/17 12:21	09/12/17 15:48	1
Toluene	0.00130	U	0.00469	0.00130	mg/Kg	☼	09/12/17 12:21	09/12/17 15:48	1
Xylenes, Total	0.00106	U	0.00469	0.00106	mg/Kg	☼	09/12/17 12:21	09/12/17 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 130*	*09/12/17 12:21*	*09/12/17 15:48*	*1*
Dibromofluoromethane	*74*		*68 - 140*	*09/12/17 12:21*	*09/12/17 15:48*	*1*
Toluene-d8 (Surr)	*82*		*50 - 130*	*09/12/17 12:21*	*09/12/17 15:48*	*1*
4-Bromofluorobenzene	*114*		*57 - 140*	*09/12/17 12:21*	*09/12/17 15:48*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.9		1.0	1.0	%			09/12/17 16:28	1
Percent Solids	99.1		1.0	1.0	%			09/12/17 16:28	1

Client Sample ID: MW44-NFP-31-32-09102017 — Lab Sample ID: 600-153701-5

Date Collected: 09/10/17 11:40 Matrix: Solid
Date Received: 09/12/17 10:44 Percent Solids: 94.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000671	U	0.00532	0.000671	mg/Kg	☼	09/12/17 12:21	09/12/17 16:13	1
Ethylbenzene	0.00109	U	0.00532	0.00109	mg/Kg	☼	09/12/17 12:21	09/12/17 16:13	1
Toluene	0.00147	U	0.00532	0.00147	mg/Kg	☼	09/12/17 12:21	09/12/17 16:13	1
Xylenes, Total	0.00120	U	0.00532	0.00120	mg/Kg	☼	09/12/17 12:21	09/12/17 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*85*		*61 - 130*	*09/12/17 12:21*	*09/12/17 16:13*	*1*
Dibromofluoromethane	*71*		*68 - 140*	*09/12/17 12:21*	*09/12/17 16:13*	*1*
Toluene-d8 (Surr)	*81*		*50 - 130*	*09/12/17 12:21*	*09/12/17 16:13*	*1*
4-Bromofluorobenzene	*113*		*57 - 140*	*09/12/17 12:21*	*09/12/17 16:13*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.3		1.0	1.0	%			09/12/17 16:28	1
Percent Solids	94.7		1.0	1.0	%			09/12/17 16:28	1

Client Sample Results

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153701-1
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

Client Sample ID: MW44-NFP-41-42-09102017 Lab Sample ID: 600-153701-6

Date Collected: 09/10/17 13:40 **Matrix: Solid**
Date Received: 09/12/17 10:44 **Percent Solids: 98.7**

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000562	U	0.00446	0.000562	mg/Kg	☼	09/12/17 12:21	09/12/17 18:18	1
Ethylbenzene	0.000910	U	0.00446	0.000910	mg/Kg	☼	09/12/17 12:21	09/12/17 18:18	1
Toluene	0.00123	U	0.00446	0.00123	mg/Kg	☼	09/12/17 12:21	09/12/17 18:18	1
Xylenes, Total	0.00101	U	0.00446	0.00101	mg/Kg	☼	09/12/17 12:21	09/12/17 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*61 - 130*	*09/12/17 12:21*	*09/12/17 18:18*	*1*
Dibromofluoromethane	*73*		*68 - 140*	*09/12/17 12:21*	*09/12/17 18:18*	*1*
Toluene-d8 (Surr)	*80*		*50 - 130*	*09/12/17 12:21*	*09/12/17 18:18*	*1*
4-Bromofluorobenzene	*115*		*57 - 140*	*09/12/17 12:21*	*09/12/17 18:18*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.3		1.0	1.0	%			09/12/17 16:28	1
Percent Solids	98.7		1.0	1.0	%			09/12/17 16:28	1

Client Sample ID: MW44-NFP-53-54-09102017 Lab Sample ID: 600-153701-7

Date Collected: 09/10/17 14:00 **Matrix: Solid**
Date Received: 09/12/17 10:44 **Percent Solids: 89.2**

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000654	U	0.00519	0.000654	mg/Kg	☼	09/12/17 12:21	09/13/17 11:31	1
Ethylbenzene	0.00106	U	0.00519	0.00106	mg/Kg	☼	09/12/17 12:21	09/13/17 11:31	1
Toluene	0.00143	U	0.00519	0.00143	mg/Kg	☼	09/12/17 12:21	09/13/17 11:31	1
Xylenes, Total	0.00117	U	0.00519	0.00117	mg/Kg	☼	09/12/17 12:21	09/13/17 11:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*61 - 130*	*09/12/17 12:21*	*09/13/17 11:31*	*1*
Dibromofluoromethane	*72*		*68 - 140*	*09/12/17 12:21*	*09/13/17 11:31*	*1*
Toluene-d8 (Surr)	*82*		*50 - 130*	*09/12/17 12:21*	*09/13/17 11:31*	*1*
4-Bromofluorobenzene	*117*		*57 - 140*	*09/12/17 12:21*	*09/13/17 11:31*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.8		1.0	1.0	%			09/12/17 16:28	1
Percent Solids	89.2		1.0	1.0	%			09/12/17 16:28	1

Client Sample ID: MW44-NFP-62-63-09102017 Lab Sample ID: 600-153701-8

Date Collected: 09/10/17 14:40 **Matrix: Solid**
Date Received: 09/12/17 10:44 **Percent Solids: 91.2**

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000511	U	0.00406	0.000511	mg/Kg	☼	09/12/17 12:21	09/13/17 11:56	1
Ethylbenzene	0.00293	J	0.00406	0.000828	mg/Kg	☼	09/12/17 12:21	09/13/17 11:56	1
Toluene	0.00112	U	0.00406	0.00112	mg/Kg	☼	09/12/17 12:21	09/13/17 11:56	1
Xylenes, Total	0.000917	U	0.00406	0.000917	mg/Kg	☼	09/12/17 12:21	09/13/17 11:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*61 - 130*	*09/12/17 12:21*	*09/13/17 11:56*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Client Sample ID: MW44-NFP-62-63-09102017

Lab Sample ID: 600-153701-8
Date Collected: 09/10/17 14:40
Matrix: Solid
Date Received: 09/12/17 10:44
Percent Solids: 91.2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*75*		*68 - 140*	*09/12/17 12:21*	*09/13/17 11:56*	*1*
Toluene-d8 (Surr)	*86*		*50 - 130*	*09/12/17 12:21*	*09/13/17 11:56*	*1*
4-Bromofluorobenzene	*69*		*57 - 140*	*09/12/17 12:21*	*09/13/17 11:56*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.8		1.0	1.0	%			09/12/17 16:31	1
Percent Solids	91.2		1.0	1.0	%			09/12/17 16:31	1

Client Sample ID: MW44-NFP-69-70-09102017

Lab Sample ID: 600-153701-9
Date Collected: 09/10/17 15:40
Matrix: Solid
Date Received: 09/12/17 10:44
Percent Solids: 90.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000581	U	0.00461	0.000581	mg/Kg	☼	09/12/17 12:21	09/13/17 12:20	1
Ethylbenzene	0.000940	U	0.00461	0.000940	mg/Kg	☼	09/12/17 12:21	09/13/17 12:20	1
Toluene	0.00127	U	0.00461	0.00127	mg/Kg	☼	09/12/17 12:21	09/13/17 12:20	1
Xylenes, Total	0.00104	U	0.00461	0.00104	mg/Kg	☼	09/12/17 12:21	09/13/17 12:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*77*		*61 - 130*	*09/12/17 12:21*	*09/13/17 12:20*	*1*
Dibromofluoromethane	*72*		*68 - 140*	*09/12/17 12:21*	*09/13/17 12:20*	*1*
Toluene-d8 (Surr)	*83*		*50 - 130*	*09/12/17 12:21*	*09/13/17 12:20*	*1*
4-Bromofluorobenzene	*113*		*57 - 140*	*09/12/17 12:21*	*09/13/17 12:20*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10		1.0	1.0	%			09/12/17 16:31	1
Percent Solids	90.0		1.0	1.0	%			09/12/17 16:31	1

Client Sample ID: MW45-NFP-13-14-09112017

Lab Sample ID: 600-153701-10
Date Collected: 09/11/17 15:15
Matrix: Solid
Date Received: 09/12/17 10:44
Percent Solids: 93.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000644	U	0.00511	0.000644	mg/Kg	☼	09/12/17 12:21	09/12/17 13:24	1
Ethylbenzene	0.00104	U	0.00511	0.00104	mg/Kg	☼	09/12/17 12:21	09/12/17 13:24	1
Toluene	0.00141	U	0.00511	0.00141	mg/Kg	☼	09/12/17 12:21	09/12/17 13:24	1
Xylenes, Total	0.00116	U	0.00511	0.00116	mg/Kg	☼	09/12/17 12:21	09/12/17 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*81*		*61 - 130*	*09/12/17 12:21*	*09/12/17 13:24*	*1*
Dibromofluoromethane	*74*		*68 - 140*	*09/12/17 12:21*	*09/12/17 13:24*	*1*
Toluene-d8 (Surr)	*84*		*50 - 130*	*09/12/17 12:21*	*09/12/17 13:24*	*1*
4-Bromofluorobenzene	*112*		*57 - 140*	*09/12/17 12:21*	*09/12/17 13:24*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.6		1.0	1.0	%			09/12/17 16:28	1

Client Sample Results

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153701-1
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

Client Sample ID: MW45-NFP-13-14-09112017 **Lab Sample ID: 600-153701-10**
Date Collected: 09/11/17 15:15 **Matrix: Solid**
Date Received: 09/12/17 10:44 **Percent Solids: 93.4**

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.4		1.0	1.0	%			09/12/17 16:28	1

Definitions/Glossary

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153701-1
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (61-130)	DBFM (68-140)	TOL (50-130)	BFB (57-140)
600-153701-2	MW44-NFP-14-16-09102017	87	75	80	119
600-153701-3	MD09-NFP-14-16-09102017	82	75	83	116
600-153701-4	MW44-NFP-20-21-09102017	86	74	82	114
600-153701-5	MW44-NFP-31-32-09102017	85	71	81	113
600-153701-6	MW44-NFP-41-42-09102017	91	73	80	115
600-153701-7	MW44-NFP-53-54-09102017	79	72	82	117
600-153701-8	MW44-NFP-62-63-09102017	82	75	86	69
600-153701-9	MW44-NFP-69-70-09102017	77	72	83	113
600-153701-10	MW45-NFP-13-14-09112017	81	74	84	112
600-153701-10 MS	MW45-NFP-13-14-09112017	93	83	90	125
600-153701-10 MSD	MW45-NFP-13-14-09112017	79	80	95	108
LCS 600-221092/3	Lab Control Sample	88	84	92	125
LCS 600-221194/3	Lab Control Sample	94	89	97	134
LCSD 600-221092/4	Lab Control Sample Dup	84	83	96	119
LCSD 600-221194/4	Lab Control Sample Dup	78	82	95	131
MB 600-221092/6	Method Blank	89	75	82	112
MB 600-221194/6	Method Blank	85	74	83	110

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (50-134)	DBFM (62-130)	TOL (70-130)	BFB (67-139)
600-153701-1	TB05-NFP-09102017	91	91	99	102
LCS 600-221116/4	Lab Control Sample	96	93	95	104
LCSD 600-221116/5	Lab Control Sample Dup	97	96	97	107
MB 600-221116/7	Method Blank	93	95	100	101

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-221092/6
Matrix: Solid
Analysis Batch: 221092

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/12/17 10:55	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/12/17 10:55	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/12/17 10:55	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/12/17 10:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*61 - 130*		*09/12/17 10:55*	*1*
Dibromofluoromethane	*75*		*68 - 140*		*09/12/17 10:55*	*1*
Toluene-d8 (Surr)	*82*		*50 - 130*		*09/12/17 10:55*	*1*
4-Bromofluorobenzene	*112*		*57 - 140*		*09/12/17 10:55*	*1*

Lab Sample ID: LCS 600-221092/3
Matrix: Solid
Analysis Batch: 221092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.04720		mg/Kg		94	70 - 131		
Ethylbenzene			0.0500	0.04434		mg/Kg		89	66 - 130		
Toluene			0.0500	0.04421		mg/Kg		88	67 - 130		
Xylenes, Total			0.100	0.08279		mg/Kg		83	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*61 - 130*
Dibromofluoromethane	*84*		*68 - 140*
Toluene-d8 (Surr)	*92*		*50 - 130*
4-Bromofluorobenzene	*125*		*57 - 140*

Lab Sample ID: LCSD 600-221092/4
Matrix: Solid
Analysis Batch: 221092

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04521		mg/Kg		90	70 - 131	4	30
Ethylbenzene			0.0500	0.04380		mg/Kg		88	66 - 130	1	30
Toluene			0.0500	0.04398		mg/Kg		88	67 - 130	1	30
Xylenes, Total			0.100	0.08367		mg/Kg		84	63 - 130	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*84*		*61 - 130*
Dibromofluoromethane	*83*		*68 - 140*
Toluene-d8 (Surr)	*96*		*50 - 130*
4-Bromofluorobenzene	*119*		*57 - 140*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-221116/7
Matrix: Water
Analysis Batch: 221116

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/12/17 13:27	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/12/17 13:27	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/12/17 13:27	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/12/17 13:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*50 - 134*		*09/12/17 13:27*	*1*
Dibromofluoromethane	*95*		*62 - 130*		*09/12/17 13:27*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/12/17 13:27*	*1*
4-Bromofluorobenzene	*101*		*67 - 139*		*09/12/17 13:27*	*1*

Lab Sample ID: LCS 600-221116/4
Matrix: Water
Analysis Batch: 221116

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0100	0.009807		mg/L		98	70 - 130		
Ethylbenzene			0.0100	0.01018		mg/L		102	70 - 130		
Toluene			0.0100	0.009695		mg/L		97	70 - 130		
Xylenes, Total			0.0200	0.01992		mg/L		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*50 - 134*
Dibromofluoromethane	*93*		*62 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene	*104*		*67 - 139*

Lab Sample ID: LCSD 600-221116/5
Matrix: Water
Analysis Batch: 221116

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0100	0.009104		mg/L		91	70 - 130	7	20
Ethylbenzene			0.0100	0.009578		mg/L		96	70 - 130	6	20
Toluene			0.0100	0.009106		mg/L		91	70 - 130	6	20
Xylenes, Total			0.0200	0.01863		mg/L		93	70 - 130	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*50 - 134*
Dibromofluoromethane	*96*		*62 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene	*107*		*67 - 139*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 600-153701-10 MS
Matrix: Solid
Analysis Batch: 221092

Client Sample ID: MW45-NFP-13-14-09112017
Prep Type: Total/NA
Prep Batch: 221140

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.000644	U	0.0467	0.04277		mg/Kg	☼	92	70 - 131
Ethylbenzene	0.00104	U	0.0467	0.03913		mg/Kg	☼	84	66 - 130
Toluene	0.00141	U	0.0467	0.03857		mg/Kg	☼	83	67 - 130
Xylenes, Total	0.00116	U	0.0934	0.07300		mg/Kg	☼	78	63 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*61 - 130*
Dibromofluoromethane	*83*		*68 - 140*
Toluene-d8 (Surr)	*90*		*50 - 130*
4-Bromofluorobenzene	*125*		*57 - 140*

Lab Sample ID: 600-153701-10 MSD
Matrix: Solid
Analysis Batch: 221194

Client Sample ID: MW45-NFP-13-14-09112017
Prep Type: Total/NA
Prep Batch: 221140

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.000644	U	0.0538	0.05342		mg/Kg	☼	99	70 - 131	22	30
Ethylbenzene	0.00104	U	0.0538	0.05169		mg/Kg	☼	96	66 - 130	28	30
Toluene	0.00141	U	0.0538	0.05235		mg/Kg	☼	97	67 - 130	30	30
Xylenes, Total	0.00116	U	0.108	0.09459		mg/Kg	☼	88	63 - 130	26	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*79*		*61 - 130*
Dibromofluoromethane	*80*		*68 - 140*
Toluene-d8 (Surr)	*95*		*50 - 130*
4-Bromofluorobenzene	*108*		*57 - 140*

Lab Sample ID: MB 600-221194/6
Matrix: Solid
Analysis Batch: 221194

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/13/17 10:41	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/13/17 10:41	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/13/17 10:41	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/13/17 10:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*85*		*61 - 130*		*09/13/17 10:41*	*1*
Dibromofluoromethane	*74*		*68 - 140*		*09/13/17 10:41*	*1*
Toluene-d8 (Surr)	*83*		*50 - 130*		*09/13/17 10:41*	*1*
4-Bromofluorobenzene	*110*		*57 - 140*		*09/13/17 10:41*	*1*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-221194/3
Matrix: Solid
Analysis Batch: 221194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.04986		mg/Kg		100	70 - 131		
Ethylbenzene			0.0500	0.04809		mg/Kg		96	66 - 130		
Toluene			0.0500	0.04770		mg/Kg		95	67 - 130		
Xylenes, Total			0.100	0.08913		mg/Kg		89	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*61 - 130*
Dibromofluoromethane	*89*		*68 - 140*
Toluene-d8 (Surr)	*97*		*50 - 130*
4-Bromofluorobenzene	*134*		*57 - 140*

Lab Sample ID: LCSD 600-221194/4
Matrix: Solid
Analysis Batch: 221194

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04811		mg/Kg		96	70 - 131	4	30
Ethylbenzene			0.0500	0.04531		mg/Kg		91	66 - 130	6	30
Toluene			0.0500	0.04599		mg/Kg		92	67 - 130	4	30
Xylenes, Total			0.100	0.08456		mg/Kg		85	63 - 130	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*78*		*61 - 130*
Dibromofluoromethane	*82*		*68 - 140*
Toluene-d8 (Surr)	*95*		*50 - 130*
4-Bromofluorobenzene	*131*		*57 - 140*

Method: 2540B - Percent Moisture

Lab Sample ID: 600-153701-4 DU
Matrix: Solid
Analysis Batch: 221154

Client Sample ID: MW44-NFP-20-21-09102017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	0.9			0.8		%				NC	20
Percent Solids	99.1			99.2		%				0.1	20

Lab Sample ID: 600-153701-9 DU
Matrix: Solid
Analysis Batch: 221154

Client Sample ID: MW44-NFP-69-70-09102017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	10			10.3		%				3	20
Percent Solids	90.0			89.7		%				0.4	20

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

GC/MS VOA

Analysis Batch: 221092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153701-2	MW44-NFP-14-16-09102017	Total/NA	Solid	8260B	221140
600-153701-3	MD09-NFP-14-16-09102017	Total/NA	Solid	8260B	221140
600-153701-4	MW44-NFP-20-21-09102017	Total/NA	Solid	8260B	221140
600-153701-5	MW44-NFP-31-32-09102017	Total/NA	Solid	8260B	221140
600-153701-6	MW44-NFP-41-42-09102017	Total/NA	Solid	8260B	221140
600-153701-10	MW45-NFP-13-14-09112017	Total/NA	Solid	8260B	221140
MB 600-221092/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-221092/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-221092/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
600-153701-10 MS	MW45-NFP-13-14-09112017	Total/NA	Solid	8260B	221140

Analysis Batch: 221116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153701-1	TB05-NFP-09102017	Total/NA	Water	8260B	
MB 600-221116/7	Method Blank	Total/NA	Water	8260B	
LCS 600-221116/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-221116/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Prep Batch: 221140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153701-2	MW44-NFP-14-16-09102017	Total/NA	Solid	5035_ASP	
600-153701-3	MD09-NFP-14-16-09102017	Total/NA	Solid	5035_ASP	
600-153701-4	MW44-NFP-20-21-09102017	Total/NA	Solid	5035_ASP	
600-153701-5	MW44-NFP-31-32-09102017	Total/NA	Solid	5035_ASP	
600-153701-6	MW44-NFP-41-42-09102017	Total/NA	Solid	5035_ASP	
600-153701-7	MW44-NFP-53-54-09102017	Total/NA	Solid	5035_ASP	
600-153701-8	MW44-NFP-62-63-09102017	Total/NA	Solid	5035_ASP	
600-153701-9	MW44-NFP-69-70-09102017	Total/NA	Solid	5035_ASP	
600-153701-10	MW45-NFP-13-14-09112017	Total/NA	Solid	5035_ASP	
600-153701-10 MS	MW45-NFP-13-14-09112017	Total/NA	Solid	5035_ASP	
600-153701-10 MSD	MW45-NFP-13-14-09112017	Total/NA	Solid	5035_ASP	

Analysis Batch: 221194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153701-7	MW44-NFP-53-54-09102017	Total/NA	Solid	8260B	221140
600-153701-8	MW44-NFP-62-63-09102017	Total/NA	Solid	8260B	221140
600-153701-9	MW44-NFP-69-70-09102017	Total/NA	Solid	8260B	221140
MB 600-221194/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-221194/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-221194/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
600-153701-10 MSD	MW45-NFP-13-14-09112017	Total/NA	Solid	8260B	221140

General Chemistry

Analysis Batch: 221154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153701-2	MW44-NFP-14-16-09102017	Total/NA	Solid	2540B	
600-153701-3	MD09-NFP-14-16-09102017	Total/NA	Solid	2540B	
600-153701-4	MW44-NFP-20-21-09102017	Total/NA	Solid	2540B	
600-153701-5	MW44-NFP-31-32-09102017	Total/NA	Solid	2540B	

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

General Chemistry (Continued)

Analysis Batch: 221154 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153701-6	MW44-NFP-41-42-09102017	Total/NA	Solid	2540B	
600-153701-7	MW44-NFP-53-54-09102017	Total/NA	Solid	2540B	
600-153701-8	MW44-NFP-62-63-09102017	Total/NA	Solid	2540B	
600-153701-9	MW44-NFP-69-70-09102017	Total/NA	Solid	2540B	
600-153701-10	MW45-NFP-13-14-09112017	Total/NA	Solid	2540B	
600-153701-10 MS	MW45-NFP-13-14-09112017	Total/NA	Solid	2540B	
600-153701-10 MSD	MW45-NFP-13-14-09112017	Total/NA	Solid	2540B	
600-153701-4 DU	MW44-NFP-20-21-09102017	Total/NA	Solid	2540B	
600-153701-9 DU	MW44-NFP-69-70-09102017	Total/NA	Solid	2540B	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Client Sample ID: TB05-NFP-09102017 — **Lab Sample ID: 600-153701-1**
Date Collected: 09/10/17 12:00 — **Matrix: Water**
Date Received: 09/12/17 10:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	221116	09/12/17 13:53	YX1	TAL HOU

Client Sample ID: MW44-NFP-14-16-09102017 — **Lab Sample ID: 600-153701-2**
Date Collected: 09/10/17 11:10 — **Matrix: Solid**
Date Received: 09/12/17 10:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221154	09/12/17 16:31	B1K	TAL HOU

Client Sample ID: MW44-NFP-14-16-09102017 — **Lab Sample ID: 600-153701-2**
Date Collected: 09/10/17 11:10 — **Matrix: Solid**
Date Received: 09/12/17 10:44 — **Percent Solids: 94.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			4.998 g	5 mL	221140	09/12/17 12:21	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221092	09/12/17 14:58	WS1	TAL HOU

Client Sample ID: MD09-NFP-14-16-09102017 — **Lab Sample ID: 600-153701-3**
Date Collected: 09/10/17 11:15 — **Matrix: Solid**
Date Received: 09/12/17 10:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221154	09/12/17 16:28	B1K	TAL HOU

Client Sample ID: MD09-NFP-14-16-09102017 — **Lab Sample ID: 600-153701-3**
Date Collected: 09/10/17 11:15 — **Matrix: Solid**
Date Received: 09/12/17 10:44 — **Percent Solids: 96.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.004 g	5 mL	221140	09/12/17 12:21	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221092	09/12/17 15:23	WS1	TAL HOU

Client Sample ID: MW44-NFP-20-21-09102017 — **Lab Sample ID: 600-153701-4**
Date Collected: 09/10/17 11:30 — **Matrix: Solid**
Date Received: 09/12/17 10:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221154	09/12/17 16:28	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Client Sample ID: MW44-NFP-20-21-09102017 — **Lab Sample ID: 600-153701-4**
Date Collected: 09/10/17 11:30 — **Matrix: Solid**
Date Received: 09/12/17 10:44 — **Percent Solids: 99.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.374 g	5 mL	221140	09/12/17 12:21	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221092	09/12/17 15:48	WS1	TAL HOU

Client Sample ID: MW44-NFP-31-32-09102017 — **Lab Sample ID: 600-153701-5**
Date Collected: 09/10/17 11:40 — **Matrix: Solid**
Date Received: 09/12/17 10:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221154	09/12/17 16:28	B1K	TAL HOU

Client Sample ID: MW44-NFP-31-32-09102017 — **Lab Sample ID: 600-153701-5**
Date Collected: 09/10/17 11:40 — **Matrix: Solid**
Date Received: 09/12/17 10:44 — **Percent Solids: 94.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			4.962 g	5 mL	221140	09/12/17 12:21	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221092	09/12/17 16:13	WS1	TAL HOU

Client Sample ID: MW44-NFP-41-42-09102017 — **Lab Sample ID: 600-153701-6**
Date Collected: 09/10/17 13:40 — **Matrix: Solid**
Date Received: 09/12/17 10:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221154	09/12/17 16:28	B1K	TAL HOU

Client Sample ID: MW44-NFP-41-42-09102017 — **Lab Sample ID: 600-153701-6**
Date Collected: 09/10/17 13:40 — **Matrix: Solid**
Date Received: 09/12/17 10:44 — **Percent Solids: 98.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.678 g	5 mL	221140	09/12/17 12:21	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221092	09/12/17 18:18	WS1	TAL HOU

Client Sample ID: MW44-NFP-53-54-09102017 — **Lab Sample ID: 600-153701-7**
Date Collected: 09/10/17 14:00 — **Matrix: Solid**
Date Received: 09/12/17 10:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221154	09/12/17 16:28	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Client Sample ID: MW44-NFP-53-54-09102017 — **Lab Sample ID: 600-153701-7**
Date Collected: 09/10/17 14:00 — **Matrix: Solid**
Date Received: 09/12/17 10:44 — **Percent Solids: 89.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.401 g	5 mL	221140	09/12/17 12:21	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221194	09/13/17 11:31	WS1	TAL HOU

Client Sample ID: MW44-NFP-62-63-09102017 — **Lab Sample ID: 600-153701-8**
Date Collected: 09/10/17 14:40 — **Matrix: Solid**
Date Received: 09/12/17 10:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221154	09/12/17 16:31	B1K	TAL HOU

Client Sample ID: MW44-NFP-62-63-09102017 — **Lab Sample ID: 600-153701-8**
Date Collected: 09/10/17 14:40 — **Matrix: Solid**
Date Received: 09/12/17 10:44 — **Percent Solids: 91.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			6.755 g	5 mL	221140	09/12/17 12:21	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221194	09/13/17 11:56	WS1	TAL HOU

Client Sample ID: MW44-NFP-69-70-09102017 — **Lab Sample ID: 600-153701-9**
Date Collected: 09/10/17 15:40 — **Matrix: Solid**
Date Received: 09/12/17 10:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221154	09/12/17 16:31	B1K	TAL HOU

Client Sample ID: MW44-NFP-69-70-09102017 — **Lab Sample ID: 600-153701-9**
Date Collected: 09/10/17 15:40 — **Matrix: Solid**
Date Received: 09/12/17 10:44 — **Percent Solids: 90.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			6.026 g	5 mL	221140	09/12/17 12:21	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221194	09/13/17 12:20	WS1	TAL HOU

Client Sample ID: MW45-NFP-13-14-09112017 — **Lab Sample ID: 600-153701-10**
Date Collected: 09/11/17 15:15 — **Matrix: Solid**
Date Received: 09/12/17 10:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221154	09/12/17 16:28	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

TestAmerica Job ID: 600-153701-1

Client Sample ID: MW45-NFP-13-14-09112017
Date Collected: 09/11/17 15:15
Date Received: 09/12/17 10:44

Lab Sample ID: 600-153701-10
Matrix: Solid
Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.232 g	5 mL	221140	09/12/17 12:21	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221092	09/12/17 13:24	WS1	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153701-1
Project/Site: Kinder Morgan Bloomfield, NM NFP 9/10/17

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-21	10-31-17
USDA	Federal		P330-17-00132	04-20-20

erica Houston
...way Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Luke Hill	Lab PM: Upton, Cathy L	Carrier Tracking No(s):	COC No: 600-36947-10949.1
Client Contact: Aleeca Forsberg	Phone: 205-240-3235	E-Mail: cathy.upton@testamericainc.com		Page: Page 1 of 1
Company: CH2M Hill, Inc.				Job #
Address: 3721 Rutledge Rd. NE Suite B-1	Due Date Requested:			
City: Albuquerque	TAT Requested (days): 10 BD Prelim; 14 BD Level3 Package (3e)			
State, Zip: NM, 87109				
Phone: 281-721-8546(Tel)	PO #: WD293112			
Email: Aleeca.Forsberg@CH2M.com	WO #:			
Project Name: Kinder Morgan Bloomfield, NM NFP	HOUSTON Project #: 60004617			
Site: BTEX Soils	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SOILS: 8260B_5035 - BTEX (SHORT HOLD-48HRs)	SOILS: Percent Moisture	WATERS: 8260B_LL - BTEX	Special Instructions/Note:
Preservation Code:							N	N	A	
TB05-NFP-09102017	9/10/17	1200	G	~~Soil~~ Water	N	N			X	*** 48Hr Holding Time
MW44-NFP-14-16-09102017	9/10/17	1110	G	Soil	N	N	X	X		From Sample Collection
MD09-NFP-14-16-09102017	9/10/17	1115	G	Soil	N	N	X	X		
MW44-NFP-20-21-09102017	9/10/17	1130	G	Soil	N	N	X	X		
MW44-NFP-31-32-09102017	9/10/17	1140	G	Soil	N	N	X	X		
MW44-NFP-41-42-09102017	9/10/17	1340	G	Soil	N	N	X	X		
MW44-NFP-53-54-09102017	9/10/17	1400	G	Soil	N	N	X	X		
MW44-NFP-62-63-09102017	9/10/17	1440	G	Soil	N	N	X	X		
MW44-NFP-69-70-09102017	9/10/17	1540	G	Soil	N	N	X	X		
			G	Soil						
			G	Water						

600-153701 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
L. Hill	9/11/17 1700	CH2M		09-12-17 1044	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.7°C IR#1

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information

Client Contact: Aleeca Forsberg
Company: CH2M Hill, Inc.
Address: 3721 Rutledge Rd. NE Suite B-1
City: Albuquerque
State, Zip: NM, 87109
Phone: 281-721-8546(Tel)
Email: Aleeca.Forsberg@CH2M.com
Project Name: Kinder Morgan Bloomfield, NM NFP
Site: BTEX Soils

Sampler: Luke Hill
Phone: 205-240-3235
Due Date Requested:
TAT Requested (days): 10 BD Prelim; 14 BD Level3 Package (3e)
PO #: WD293112
WO #:
HOUSTON Project #: 60004617
SSOW#:

Lab PM: Upton, Cathy L
E-Mail: cathy.upton@testamericainc.com
Carrier Tracking No(s):

COC No: 600-36947-10949.1
Page: Page 1 of 1
Job #:

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SOILS 8260B_5035 - BTEX (SHORT HOLD-48HRs)	Percent Moisture	WATERS 8260B_LL - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	A		
MW45-NFP-13-14-09112017	9/11/17	1515	G	Soil	N	N	X	X			*** 48Hr Holding Time
MW45-NFP-13-14-09112017 MS	9/11/17	1515	G	Soil	N	Y	X	X			From Sample Collection
MW45-NFP-13-14-09112017 MSD	9/11/17	1515	G	Soil	N	Y	X	X			
			G	Soil							
			G	Soil							
			G	Soil							
			G	Soil							
			G	Soil							
			G	Soil							
			G	Soil							
			G	Water							

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☒ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For* ____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)
Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
L. Hill [signature]	9/11/17 1700	CH2M	[signature]	9-12-17 1044	TA

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 3.1°C 1R5.1G

TestAmerica Houston

Loc: 600
153701

Sample R cklist

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Date/Time Received: '17 SEP 12 10:44

JOB NUMBER: _____

CLIENT: CH2M

UNPACKED BY: _____

CARRIER/DRIVER: FE

Custody Seal Present: ☒ YES ☐ NO

Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
BLU	Y / N	Y / N	3.7	849	-.3	3.4
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☐ YES ☐ NO

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☒ YES ☐ NO ☐ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	☒	☐

COMMENTS:

11247

FedEx
TRK# 0221 7455 1165 3944

TUE – 12 SEP 10:30A
PRIORITY OVERNIGHT

XH LKSA

77040
TX-US IAH

HS-SA-WI-013

Rev. 3; 07/01/2014

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc. Job Number: 600-153701-1

Login Number: 153701 **List Source: TestAmerica Houston**
List Number: 1
Creator: Crafton, Tommie S

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

eurofins | Environment Testing America

ANALYTICAL REPORT

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-153854-1
Client Project/Site: Kinder Morgan Bloomfield, NM NFP
Revision: 1

For:
CH2M Hill Constructors, Inc.
14701 St. Mary's Lane
Suite 300
Houston, Texas 77079-2923

Attn: Mr. John Ynfante

Steve A Stepanski

Authorized for release by:
12/10/2020 10:06:49 AM
Steve Stepanski, Project Mgmt. Assistant
(713)690-4444
steve.stepanski@Eurofinset.com

Designee for

Cathy Upton, Project Manager I
(713)690-4444
cathy.upton@testamericainc.com

Table of Contents

Case Narrative

Client: CH2M Hill Constructors, Inc. Job ID: 600-153854-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Job ID: 600-153854-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-153854-1

Comments
This report was revised to a Level 2 deliverable per client's request.

Receipt
The samples were received on 9/13/2017 11:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.9º C.

GC/MS VOA
Method(s) 8260B: All analytes were reported as Estimated (E) values in sample(s) MW45-NFP-35-36-09122017 (600-153854-9) as the result was above the Upper Calibration Level. The sample(s) was re-analyzed from the medium level (methanol) vial, but was not reported due to the result being below the RL at this dilution. The nature of prep method 5035A negates the ability to run the samples at an intermediate dilution to achieve a result within the calibration range, so the "E" value is the best analytical result achievable.

Method(s) 8260B: The following volatile sample was analyzed with significant headspace in the sample Container(s): TB06-NFP-09122017 (600-153854-1). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Method(s) 8260B: The following samples required a medium level dilution to bring the concentration of target analytes within the calibration range: MW45-NFP-39-40-09122017 (600-153854-5), MW45-NFP-48-49-09122017 (600-153854-6), MW45-NFP-59-60-09122017 (600-153854-7) and MW45-NFP-69-70-09122017 (600-153854-8). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
2540B	Percent Moisture	SM20	TAL HOU

Protocol References:

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-153854-1	TB06-NFP-09122017	Water	09/12/17 08:00	09/13/17 11:45
600-153854-2	MW45-NFP-23-24-09122017	Solid	09/12/17 08:30	09/13/17 11:45
600-153854-3	MD10-NFP-23-24-09122017	Solid	09/12/17 08:35	09/13/17 11:45
600-153854-4	MW45-NFP-31-32-09122017	Solid	09/12/17 09:00	09/13/17 11:45
600-153854-5	MW45-NFP-39-40-09122017	Solid	09/12/17 09:10	09/13/17 11:45
600-153854-6	MW45-NFP-48-49-09122017	Solid	09/12/17 09:20	09/13/17 11:45
600-153854-7	MW45-NFP-59-60-09122017	Solid	09/12/17 09:50	09/13/17 11:45
600-153854-8	MW45-NFP-69-70-09122017	Solid	09/12/17 10:15	09/13/17 11:45
600-153854-9	MW45-NFP-35-36-09122017	Solid	09/12/17 10:45	09/13/17 11:45

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Client Sample ID: TB06-NFP-09122017

Lab Sample ID: 600-153854-1
Matrix: Water
Date Collected: 09/12/17 08:00
Date Received: 09/13/17 11:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/14/17 13:41	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/14/17 13:41	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/14/17 13:41	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/14/17 13:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*50 - 134*		*09/14/17 13:41*	*1*
Dibromofluoromethane	*102*		*62 - 130*		*09/14/17 13:41*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/14/17 13:41*	*1*
4-Bromofluorobenzene	*104*		*67 - 139*		*09/14/17 13:41*	*1*

Client Sample ID: MW45-NFP-23-24-09122017

Lab Sample ID: 600-153854-2
Matrix: Solid
Date Collected: 09/12/17 08:30
Percent Solids: 97.1
Date Received: 09/13/17 11:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00110**	**J**	0.00489	0.000616	mg/Kg	☼	09/13/17 21:09	09/15/17 14:05	1
Ethylbenzene	0.000997	U	0.00489	0.000997	mg/Kg	☼	09/13/17 21:09	09/15/17 14:05	1
Toluene	0.00135	U	0.00489	0.00135	mg/Kg	☼	09/13/17 21:09	09/15/17 14:05	1
Xylenes, Total	**0.00235**	**J**	0.00489	0.00110	mg/Kg	☼	09/13/17 21:09	09/15/17 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*61 - 130*	*09/13/17 21:09*	*09/15/17 14:05*	*1*
Dibromofluoromethane	*95*		*68 - 140*	*09/13/17 21:09*	*09/15/17 14:05*	*1*
Toluene-d8 (Surr)	*89*		*50 - 130*	*09/13/17 21:09*	*09/15/17 14:05*	*1*
4-Bromofluorobenzene	*110*		*57 - 140*	*09/13/17 21:09*	*09/15/17 14:05*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**2.9**		1.0	1.0	%			09/14/17 16:02	1
Percent Solids	**97.1**		1.0	1.0	%			09/14/17 16:02	1

Client Sample ID: MD10-NFP-23-24-09122017

Lab Sample ID: 600-153854-3
Matrix: Solid
Date Collected: 09/12/17 08:35
Percent Solids: 97.5
Date Received: 09/13/17 11:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000655	U	0.00520	0.000655	mg/Kg	☼	09/13/17 21:09	09/15/17 14:30	1
Ethylbenzene	0.00106	U	0.00520	0.00106	mg/Kg	☼	09/13/17 21:09	09/15/17 14:30	1
Toluene	0.00143	U	0.00520	0.00143	mg/Kg	☼	09/13/17 21:09	09/15/17 14:30	1
Xylenes, Total	0.00117	U	0.00520	0.00117	mg/Kg	☼	09/13/17 21:09	09/15/17 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*61 - 130*	*09/13/17 21:09*	*09/15/17 14:30*	*1*
Dibromofluoromethane	*95*		*68 - 140*	*09/13/17 21:09*	*09/15/17 14:30*	*1*
Toluene-d8 (Surr)	*87*		*50 - 130*	*09/13/17 21:09*	*09/15/17 14:30*	*1*
4-Bromofluorobenzene	*106*		*57 - 140*	*09/13/17 21:09*	*09/15/17 14:30*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Client Sample ID: MD10-NFP-23-24-09122017

Lab Sample ID: 600-153854-3
Date Collected: 09/12/17 08:35
Matrix: Solid
Date Received: 09/13/17 11:45
Percent Solids: 97.5

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.5		1.0	1.0	%			09/14/17 16:02	1
Percent Solids	97.5		1.0	1.0	%			09/14/17 16:02	1

Client Sample ID: MW45-NFP-31-32-09122017

Lab Sample ID: 600-153854-4
Date Collected: 09/12/17 09:00
Matrix: Solid
Date Received: 09/13/17 11:45
Percent Solids: 81.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.102		0.00436	0.000549	mg/Kg	☼	09/13/17 21:09	09/14/17 18:14	1
Ethylbenzene	0.101		0.00436	0.000889	mg/Kg	☼	09/13/17 21:09	09/14/17 18:14	1
Toluene	0.00120	U	0.00436	0.00120	mg/Kg	☼	09/13/17 21:09	09/14/17 18:14	1
Xylenes, Total	0.00316	J	0.00436	0.000985	mg/Kg	☼	09/13/17 21:09	09/14/17 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*61 - 130*	*09/13/17 21:09*	*09/14/17 18:14*	*1*
Dibromofluoromethane	*97*		*68 - 140*	*09/13/17 21:09*	*09/14/17 18:14*	*1*
Toluene-d8 (Surr)	*92*		*50 - 130*	*09/13/17 21:09*	*09/14/17 18:14*	*1*
4-Bromofluorobenzene	*113*		*57 - 140*	*09/13/17 21:09*	*09/14/17 18:14*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18.4		1.0	1.0	%			09/14/17 15:57	1
Percent Solids	81.6		1.0	1.0	%			09/14/17 15:57	1

Client Sample ID: MW45-NFP-39-40-09122017

Lab Sample ID: 600-153854-5
Date Collected: 09/12/17 09:10
Matrix: Solid
Date Received: 09/13/17 11:45
Percent Solids: 86.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.22		0.742	0.0935	mg/Kg	☼	09/13/17 21:09	09/15/17 18:27	1
Ethylbenzene	4.82		0.742	0.151	mg/Kg	☼	09/13/17 21:09	09/15/17 18:27	1
Toluene	4.87		0.742	0.205	mg/Kg	☼	09/13/17 21:09	09/15/17 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*61 - 130*	*09/13/17 21:09*	*09/15/17 18:27*	*1*
Dibromofluoromethane	*86*		*68 - 140*	*09/13/17 21:09*	*09/15/17 18:27*	*1*
Toluene-d8 (Surr)	*99*		*50 - 130*	*09/13/17 21:09*	*09/15/17 18:27*	*1*
4-Bromofluorobenzene	*116*		*57 - 140*	*09/13/17 21:09*	*09/15/17 18:27*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	54.8		3.71	0.839	mg/Kg	☼	09/13/17 21:09	09/15/17 18:50	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*61 - 130*	*09/13/17 21:09*	*09/15/17 18:50*	*5*
Dibromofluoromethane	*91*		*68 - 140*	*09/13/17 21:09*	*09/15/17 18:50*	*5*
Toluene-d8 (Surr)	*95*		*50 - 130*	*09/13/17 21:09*	*09/15/17 18:50*	*5*
4-Bromofluorobenzene	*104*		*57 - 140*	*09/13/17 21:09*	*09/15/17 18:50*	*5*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Client Sample ID: MW45-NFP-39-40-09122017

Lab Sample ID: 600-153854-5
Date Collected: 09/12/17 09:10
Matrix: Solid
Date Received: 09/13/17 11:45
Percent Solids: 86.6

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.4		1.0	1.0	%			09/14/17 16:02	1
Percent Solids	86.6		1.0	1.0	%			09/14/17 16:02	1

Client Sample ID: MW45-NFP-48-49-09122017

Lab Sample ID: 600-153854-6
Date Collected: 09/12/17 09:20
Matrix: Solid
Date Received: 09/13/17 11:45
Percent Solids: 96.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	25.1		4.53	0.570	mg/Kg	☼	09/13/17 21:09	09/15/17 20:21	10
Ethylbenzene	29.5		4.53	0.923	mg/Kg	☼	09/13/17 21:09	09/15/17 20:21	10
Toluene	45.9		4.53	1.25	mg/Kg	☼	09/13/17 21:09	09/15/17 20:21	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 130*	*09/13/17 21:09*	*09/15/17 20:21*	*10*
Dibromofluoromethane	*89*		*68 - 140*	*09/13/17 21:09*	*09/15/17 20:21*	*10*
Toluene-d8 (Surr)	*91*		*50 - 130*	*09/13/17 21:09*	*09/15/17 20:21*	*10*
4-Bromofluorobenzene	*114*		*57 - 140*	*09/13/17 21:09*	*09/15/17 20:21*	*10*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	317		45.3	10.2	mg/Kg	☼	09/13/17 21:09	09/15/17 20:44	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 130*	*09/13/17 21:09*	*09/15/17 20:44*	*100*
Dibromofluoromethane	*81*		*68 - 140*	*09/13/17 21:09*	*09/15/17 20:44*	*100*
Toluene-d8 (Surr)	*97*		*50 - 130*	*09/13/17 21:09*	*09/15/17 20:44*	*100*
4-Bromofluorobenzene	*104*		*57 - 140*	*09/13/17 21:09*	*09/15/17 20:44*	*100*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.6		1.0	1.0	%			09/14/17 15:57	1
Percent Solids	96.4		1.0	1.0	%			09/14/17 15:57	1

Client Sample ID: MW45-NFP-59-60-09122017

Lab Sample ID: 600-153854-7
Date Collected: 09/12/17 09:50
Matrix: Solid
Date Received: 09/13/17 11:45
Percent Solids: 83.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	20.1		2.92	0.368	mg/Kg	☼	09/13/17 21:09	09/15/17 19:13	5
Ethylbenzene	5.51		2.92	0.595	mg/Kg	☼	09/13/17 21:09	09/15/17 19:13	5
Toluene	4.92		2.92	0.805	mg/Kg	☼	09/13/17 21:09	09/15/17 19:13	5
Xylenes, Total	77.1		2.92	0.659	mg/Kg	☼	09/13/17 21:09	09/15/17 19:13	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*61 - 130*	*09/13/17 21:09*	*09/15/17 19:13*	*5*
Dibromofluoromethane	*85*		*68 - 140*	*09/13/17 21:09*	*09/15/17 19:13*	*5*
Toluene-d8 (Surr)	*98*		*50 - 130*	*09/13/17 21:09*	*09/15/17 19:13*	*5*
4-Bromofluorobenzene	*121*		*57 - 140*	*09/13/17 21:09*	*09/15/17 19:13*	*5*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Client Sample ID: MW45-NFP-59-60-09122017

Lab Sample ID: 600-153854-7
Date Collected: 09/12/17 09:50
Matrix: Solid
Date Received: 09/13/17 11:45
Percent Solids: 83.3

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16.7		1.0	1.0	%			09/14/17 15:57	1
Percent Solids	83.3		1.0	1.0	%			09/14/17 15:57	1

Client Sample ID: MW45-NFP-69-70-09122017

Lab Sample ID: 600-153854-8
Date Collected: 09/12/17 10:15
Matrix: Solid
Date Received: 09/13/17 11:45
Percent Solids: 90.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	21.6		2.27	0.286	mg/Kg	☼	09/13/17 21:09	09/15/17 19:36	5
Ethylbenzene	16.0		2.27	0.463	mg/Kg	☼	09/13/17 21:09	09/15/17 19:36	5
Toluene	20.7		2.27	0.626	mg/Kg	☼	09/13/17 21:09	09/15/17 19:36	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*	*09/13/17 21:09*	*09/15/17 19:36*	*5*
Dibromofluoromethane	*89*		*68 - 140*	*09/13/17 21:09*	*09/15/17 19:36*	*5*
Toluene-d8 (Surr)	*95*		*50 - 130*	*09/13/17 21:09*	*09/15/17 19:36*	*5*
4-Bromofluorobenzene	*122*		*57 - 140*	*09/13/17 21:09*	*09/15/17 19:36*	*5*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	155		22.7	5.13	mg/Kg	☼	09/13/17 21:09	09/15/17 19:58	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*61 - 130*	*09/13/17 21:09*	*09/15/17 19:58*	*50*
Dibromofluoromethane	*85*		*68 - 140*	*09/13/17 21:09*	*09/15/17 19:58*	*50*
Toluene-d8 (Surr)	*100*		*50 - 130*	*09/13/17 21:09*	*09/15/17 19:58*	*50*
4-Bromofluorobenzene	*118*		*57 - 140*	*09/13/17 21:09*	*09/15/17 19:58*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10		1.0	1.0	%			09/14/17 15:57	1
Percent Solids	90.0		1.0	1.0	%			09/14/17 15:57	1

Client Sample ID: MW45-NFP-35-36-09122017

Lab Sample ID: 600-153854-9
Date Collected: 09/12/17 10:45
Matrix: Solid
Date Received: 09/13/17 11:45
Percent Solids: 85.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.224	E	0.00395	0.000498	mg/Kg	☼	09/13/17 21:09	09/19/17 19:17	1
Ethylbenzene	0.440	E	0.00395	0.000806	mg/Kg	☼	09/13/17 21:09	09/19/17 19:17	1
Toluene	0.498	E	0.00395	0.00109	mg/Kg	☼	09/13/17 21:09	09/19/17 19:17	1
Xylenes, Total	4.02		0.00395	0.000893	mg/Kg	☼	09/13/17 21:09	09/19/17 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*61 - 130*	*09/13/17 21:09*	*09/19/17 19:17*	*1*
Dibromofluoromethane	*98*		*68 - 140*	*09/13/17 21:09*	*09/19/17 19:17*	*1*
Toluene-d8 (Surr)	*88*		*50 - 130*	*09/13/17 21:09*	*09/19/17 19:17*	*1*
4-Bromofluorobenzene	*91*		*57 - 140*	*09/13/17 21:09*	*09/19/17 19:17*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Client Sample ID: MW45-NFP-35-36-09122017
Date Collected: 09/12/17 10:45
Date Received: 09/13/17 11:45

Lab Sample ID: 600-153854-9
Matrix: Solid
Percent Solids: 85.6

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14.4		1.0	1.0	%			09/14/17 15:57	1
Percent Solids	85.6		1.0	1.0	%			09/14/17 15:57	1

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (61-130)	DBFM (68-140)	TOL (50-130)	BFB (57-140)
600-153854-2	MW45-NFP-23-24-09122017	106	95	89	110
600-153854-3	MD10-NFP-23-24-09122017	104	95	87	106
600-153854-4	MW45-NFP-31-32-09122017	103	97	92	113
600-153854-5 - DL	MW45-NFP-39-40-09122017	94	91	95	104
600-153854-5	MW45-NFP-39-40-09122017	93	86	99	116
600-153854-6	MW45-NFP-48-49-09122017	86	89	91	114
600-153854-6 - DL	MW45-NFP-48-49-09122017	86	81	97	104
600-153854-7	MW45-NFP-59-60-09122017	91	85	98	121
600-153854-8	MW45-NFP-69-70-09122017	92	89	95	122
600-153854-8 - DL	MW45-NFP-69-70-09122017	87	85	100	118
600-153854-9	MW45-NFP-35-36-09122017	107	98	88	91
LCS 600-221289/3	Lab Control Sample	96	97	100	128
LCS 600-221380/3	Lab Control Sample	109	106	100	122
LCS 600-221428/1-A	Lab Control Sample	86	86	93	107
LCS 600-221605/3	Lab Control Sample	104	109	105	122
LCSD 600-221289/4	Lab Control Sample Dup	83	91	99	120
LCSD 600-221380/4	Lab Control Sample Dup	104	106	103	124
LCSD 600-221428/2-A	Lab Control Sample Dup	85	85	92	101
LCSD 600-221605/4	Lab Control Sample Dup	106	108	105	126
MB 600-221289/6	Method Blank	96	88	85	103
MB 600-221380/6	Method Blank	108	97	90	102
MB 600-221428/3-A	Method Blank	86	82	99	102
MB 600-221605/6	Method Blank	103	95	92	110

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (50-134)	DBFM (62-130)	TOL (70-130)	BFB (67-139)
600-153854-1	TB06-NFP-09122017	108	102	102	104
LCS 600-221323/4	Lab Control Sample	100	107	100	112
LCSD 600-221323/5	Lab Control Sample Dup	100	105	99	110
MB 600-221323/6	Method Blank	107	102	102	104

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-221289/6
Matrix: Solid
Analysis Batch: 221289

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/14/17 09:53	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/14/17 09:53	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/14/17 09:53	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/14/17 09:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*61 - 130*		*09/14/17 09:53*	*1*
Dibromofluoromethane	*88*		*68 - 140*		*09/14/17 09:53*	*1*
Toluene-d8 (Surr)	*85*		*50 - 130*		*09/14/17 09:53*	*1*
4-Bromofluorobenzene	*103*		*57 - 140*		*09/14/17 09:53*	*1*

Lab Sample ID: LCS 600-221289/3
Matrix: Solid
Analysis Batch: 221289

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.05328		mg/Kg		107	70 - 131		
Ethylbenzene			0.0500	0.05043		mg/Kg		101	66 - 130		
Toluene			0.0500	0.05004		mg/Kg		100	67 - 130		
Xylenes, Total			0.100	0.09284		mg/Kg		93	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*61 - 130*
Dibromofluoromethane	*97*		*68 - 140*
Toluene-d8 (Surr)	*100*		*50 - 130*
4-Bromofluorobenzene	*128*		*57 - 140*

Lab Sample ID: LCSD 600-221289/4
Matrix: Solid
Analysis Batch: 221289

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04789		mg/Kg		96	70 - 131	11	30
Ethylbenzene			0.0500	0.04472		mg/Kg		89	66 - 130	12	30
Toluene			0.0500	0.04554		mg/Kg		91	67 - 130	9	30
Xylenes, Total			0.100	0.08361		mg/Kg		84	63 - 130	10	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*61 - 130*
Dibromofluoromethane	*91*		*68 - 140*
Toluene-d8 (Surr)	*99*		*50 - 130*
4-Bromofluorobenzene	*120*		*57 - 140*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-221323/6
Matrix: Water
Analysis Batch: 221323

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/14/17 12:48	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/14/17 12:48	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/14/17 12:48	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/14/17 12:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*50 - 134*		*09/14/17 12:48*	*1*
Dibromofluoromethane	*102*		*62 - 130*		*09/14/17 12:48*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/14/17 12:48*	*1*
4-Bromofluorobenzene	*104*		*67 - 139*		*09/14/17 12:48*	*1*

Lab Sample ID: LCS 600-221323/4
Matrix: Water
Analysis Batch: 221323

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0100	0.01002		mg/L		100	70 - 130		
Ethylbenzene			0.0100	0.01010		mg/L		101	70 - 130		
Toluene			0.0100	0.009527		mg/L		95	70 - 130		
Xylenes, Total			0.0200	0.01989		mg/L		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*50 - 134*
Dibromofluoromethane	*107*		*62 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene	*112*		*67 - 139*

Lab Sample ID: LCSD 600-221323/5
Matrix: Water
Analysis Batch: 221323

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0100	0.009934		mg/L		99	70 - 130	1	20
Ethylbenzene			0.0100	0.01004		mg/L		100	70 - 130	1	20
Toluene			0.0100	0.009387		mg/L		94	70 - 130	1	20
Xylenes, Total			0.0200	0.01971		mg/L		99	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*50 - 134*
Dibromofluoromethane	*105*		*62 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene	*110*		*67 - 139*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-221380/6
Matrix: Solid
Analysis Batch: 221380

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/15/17 09:58	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/15/17 09:58	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/15/17 09:58	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/15/17 09:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*61 - 130*		*09/15/17 09:58*	*1*
Dibromofluoromethane	*97*		*68 - 140*		*09/15/17 09:58*	*1*
Toluene-d8 (Surr)	*90*		*50 - 130*		*09/15/17 09:58*	*1*
4-Bromofluorobenzene	*102*		*57 - 140*		*09/15/17 09:58*	*1*

Lab Sample ID: LCS 600-221380/3
Matrix: Solid
Analysis Batch: 221380

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.04960		mg/Kg		99	70 - 131		
Ethylbenzene			0.0500	0.04443		mg/Kg		89	66 - 130		
Toluene			0.0500	0.04474		mg/Kg		89	67 - 130		
Xylenes, Total			0.100	0.08148		mg/Kg		81	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*61 - 130*
Dibromofluoromethane	*106*		*68 - 140*
Toluene-d8 (Surr)	*100*		*50 - 130*
4-Bromofluorobenzene	*122*		*57 - 140*

Lab Sample ID: LCSD 600-221380/4
Matrix: Solid
Analysis Batch: 221380

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.05068		mg/Kg		101	70 - 131	2	30
Ethylbenzene			0.0500	0.04485		mg/Kg		90	66 - 130	1	30
Toluene			0.0500	0.04569		mg/Kg		91	67 - 130	2	30
Xylenes, Total			0.100	0.08399		mg/Kg		84	63 - 130	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*61 - 130*
Dibromofluoromethane	*106*		*68 - 140*
Toluene-d8 (Surr)	*103*		*50 - 130*
4-Bromofluorobenzene	*124*		*57 - 140*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-221428/3-A
Matrix: Solid
Analysis Batch: 221430

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221428

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0788	U	0.625	0.0788	mg/Kg		09/15/17 11:30	09/15/17 16:32	1
Ethylbenzene	0.128	U	0.625	0.128	mg/Kg		09/15/17 11:30	09/15/17 16:32	1
Toluene	0.173	U	0.625	0.173	mg/Kg		09/15/17 11:30	09/15/17 16:32	1
Xylenes, Total	0.141	U	0.625	0.141	mg/Kg		09/15/17 11:30	09/15/17 16:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 130*	*09/15/17 11:30*	*09/15/17 16:32*	*1*
Dibromofluoromethane	*82*		*68 - 140*	*09/15/17 11:30*	*09/15/17 16:32*	*1*
Toluene-d8 (Surr)	*99*		*50 - 130*	*09/15/17 11:30*	*09/15/17 16:32*	*1*
4-Bromofluorobenzene	*102*		*57 - 140*	*09/15/17 11:30*	*09/15/17 16:32*	*1*

Lab Sample ID: LCS 600-221428/1-A
Matrix: Solid
Analysis Batch: 221430

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221428

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.25	6.418		mg/Kg		103	70 - 131
Ethylbenzene	6.25	6.366		mg/Kg		102	66 - 130
Toluene	6.25	6.548		mg/Kg		105	67 - 130
Xylenes, Total	12.5	12.95		mg/Kg		104	63 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 130*
Dibromofluoromethane	*86*		*68 - 140*
Toluene-d8 (Surr)	*93*		*50 - 130*
4-Bromofluorobenzene	*107*		*57 - 140*

Lab Sample ID: LCSD 600-221428/2-A
Matrix: Solid
Analysis Batch: 221430

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 221428

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	6.25	5.952		mg/Kg		95	70 - 131	8	30
Ethylbenzene	6.25	5.781		mg/Kg		92	66 - 130	10	30
Toluene	6.25	5.847		mg/Kg		94	67 - 130	11	30
Xylenes, Total	12.5	11.70		mg/Kg		94	63 - 130	10	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*61 - 130*
Dibromofluoromethane	*85*		*68 - 140*
Toluene-d8 (Surr)	*92*		*50 - 130*
4-Bromofluorobenzene	*101*		*57 - 140*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-221605/6
Matrix: Solid
Analysis Batch: 221605

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/19/17 11:02	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/19/17 11:02	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/19/17 11:02	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/19/17 11:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*61 - 130*		*09/19/17 11:02*	*1*
Dibromofluoromethane	*95*		*68 - 140*		*09/19/17 11:02*	*1*
Toluene-d8 (Surr)	*92*		*50 - 130*		*09/19/17 11:02*	*1*
4-Bromofluorobenzene	*110*		*57 - 140*		*09/19/17 11:02*	*1*

Lab Sample ID: LCS 600-221605/3
Matrix: Solid
Analysis Batch: 221605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.05180		mg/Kg		104	70 - 131		
Ethylbenzene			0.0500	0.04818		mg/Kg		96	66 - 130		
Toluene			0.0500	0.04833		mg/Kg		97	67 - 130		
Xylenes, Total			0.100	0.08881		mg/Kg		89	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*61 - 130*
Dibromofluoromethane	*109*		*68 - 140*
Toluene-d8 (Surr)	*105*		*50 - 130*
4-Bromofluorobenzene	*122*		*57 - 140*

Lab Sample ID: LCSD 600-221605/4
Matrix: Solid
Analysis Batch: 221605

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04991		mg/Kg		100	70 - 131	4	30
Ethylbenzene			0.0500	0.04535		mg/Kg		91	66 - 130	6	30
Toluene			0.0500	0.04602		mg/Kg		92	67 - 130	5	30
Xylenes, Total			0.100	0.08443		mg/Kg		84	63 - 130	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*61 - 130*
Dibromofluoromethane	*108*		*68 - 140*
Toluene-d8 (Surr)	*105*		*50 - 130*
4-Bromofluorobenzene	*126*		*57 - 140*

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

GC/MS VOA

Analysis Batch: 221289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153854-4	MW45-NFP-31-32-09122017	Total/NA	Solid	8260B	221316
MB 600-221289/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-221289/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-221289/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 221316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153854-2	MW45-NFP-23-24-09122017	Total/NA	Solid	5035_ASP	
600-153854-3	MD10-NFP-23-24-09122017	Total/NA	Solid	5035_ASP	
600-153854-4	MW45-NFP-31-32-09122017	Total/NA	Solid	5035_ASP	
600-153854-9	MW45-NFP-35-36-09122017	Total/NA	Solid	5035_ASP	

Analysis Batch: 221323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153854-1	TB06-NFP-09122017	Total/NA	Water	8260B	
MB 600-221323/6	Method Blank	Total/NA	Water	8260B	
LCS 600-221323/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-221323/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 221380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153854-2	MW45-NFP-23-24-09122017	Total/NA	Solid	8260B	221316
600-153854-3	MD10-NFP-23-24-09122017	Total/NA	Solid	8260B	221316
MB 600-221380/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-221380/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-221380/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 221424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153854-5	MW45-NFP-39-40-09122017	Total/NA	Solid	5035	
600-153854-5 - DL	MW45-NFP-39-40-09122017	Total/NA	Solid	5035	
600-153854-6	MW45-NFP-48-49-09122017	Total/NA	Solid	5035	
600-153854-6 - DL	MW45-NFP-48-49-09122017	Total/NA	Solid	5035	
600-153854-7	MW45-NFP-59-60-09122017	Total/NA	Solid	5035	
600-153854-8	MW45-NFP-69-70-09122017	Total/NA	Solid	5035	
600-153854-8 - DL	MW45-NFP-69-70-09122017	Total/NA	Solid	5035	

Prep Batch: 221428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-221428/3-A	Method Blank	Total/NA	Solid	5030B	
LCS 600-221428/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 600-221428/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

Analysis Batch: 221430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153854-5	MW45-NFP-39-40-09122017	Total/NA	Solid	8260B	221424
600-153854-5 - DL	MW45-NFP-39-40-09122017	Total/NA	Solid	8260B	221424
600-153854-6	MW45-NFP-48-49-09122017	Total/NA	Solid	8260B	221424
600-153854-6 - DL	MW45-NFP-48-49-09122017	Total/NA	Solid	8260B	221424
600-153854-7	MW45-NFP-59-60-09122017	Total/NA	Solid	8260B	221424
600-153854-8	MW45-NFP-69-70-09122017	Total/NA	Solid	8260B	221424

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

GC/MS VOA (Continued)

Analysis Batch: 221430 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153854-8 - DL	MW45-NFP-69-70-09122017	Total/NA	Solid	8260B	221424
MB 600-221428/3-A	Method Blank	Total/NA	Solid	8260B	221428
LCS 600-221428/1-A	Lab Control Sample	Total/NA	Solid	8260B	221428
LCSD 600-221428/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	221428

Analysis Batch: 221605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153854-9	MW45-NFP-35-36-09122017	Total/NA	Solid	8260B	221316
MB 600-221605/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-221605/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-221605/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

General Chemistry

Analysis Batch: 221355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153854-2	MW45-NFP-23-24-09122017	Total/NA	Solid	2540B	
600-153854-3	MD10-NFP-23-24-09122017	Total/NA	Solid	2540B	
600-153854-4	MW45-NFP-31-32-09122017	Total/NA	Solid	2540B	
600-153854-5	MW45-NFP-39-40-09122017	Total/NA	Solid	2540B	
600-153854-6	MW45-NFP-48-49-09122017	Total/NA	Solid	2540B	
600-153854-7	MW45-NFP-59-60-09122017	Total/NA	Solid	2540B	
600-153854-8	MW45-NFP-69-70-09122017	Total/NA	Solid	2540B	
600-153854-9	MW45-NFP-35-36-09122017	Total/NA	Solid	2540B	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Client Sample ID: TB06-NFP-09122017 — **Lab Sample ID: 600-153854-1**
Date Collected: 09/12/17 08:00 — **Matrix: Water**
Date Received: 09/13/17 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	221323	09/14/17 13:41	YX1	TAL HOU

Client Sample ID: MW45-NFP-23-24-09122017 — **Lab Sample ID: 600-153854-2**
Date Collected: 09/12/17 08:30 — **Matrix: Solid**
Date Received: 09/13/17 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 16:02	B1K	TAL HOU

Client Sample ID: MW45-NFP-23-24-09122017 — **Lab Sample ID: 600-153854-2**
Date Collected: 09/12/17 08:30 — **Matrix: Solid**
Date Received: 09/13/17 11:45 — **Percent Solids: 97.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.272 g	5 mL	221316	09/13/17 21:09	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221380	09/15/17 14:05	WS1	TAL HOU

Client Sample ID: MD10-NFP-23-24-09122017 — **Lab Sample ID: 600-153854-3**
Date Collected: 09/12/17 08:35 — **Matrix: Solid**
Date Received: 09/13/17 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 16:02	B1K	TAL HOU

Client Sample ID: MD10-NFP-23-24-09122017 — **Lab Sample ID: 600-153854-3**
Date Collected: 09/12/17 08:35 — **Matrix: Solid**
Date Received: 09/13/17 11:45 — **Percent Solids: 97.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			4.935 g	5 mL	221316	09/13/17 21:09	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221380	09/15/17 14:30	WS1	TAL HOU

Client Sample ID: MW45-NFP-31-32-09122017 — **Lab Sample ID: 600-153854-4**
Date Collected: 09/12/17 09:00 — **Matrix: Solid**
Date Received: 09/13/17 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 15:57	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Client Sample ID: MW45-NFP-31-32-09122017 — **Lab Sample ID: 600-153854-4**
Date Collected: 09/12/17 09:00 — **Matrix: Solid**
Date Received: 09/13/17 11:45 — **Percent Solids: 81.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			7.03 g	5 mL	221316	09/13/17 21:09	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221289	09/14/17 18:14	WS1	TAL HOU

Client Sample ID: MW45-NFP-39-40-09122017 — **Lab Sample ID: 600-153854-5**
Date Collected: 09/12/17 09:10 — **Matrix: Solid**
Date Received: 09/13/17 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 16:02	B1K	TAL HOU

Client Sample ID: MW45-NFP-39-40-09122017 — **Lab Sample ID: 600-153854-5**
Date Collected: 09/12/17 09:10 — **Matrix: Solid**
Date Received: 09/13/17 11:45 — **Percent Solids: 86.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3.889 g	10 mL	221424	09/13/17 21:09	KLV	TAL HOU
Total/NA	Analysis	8260B		1	100 uL	5 mL	221430	09/15/17 18:27	KLV	TAL HOU
Total/NA	Prep	5035	DL		3.889 g	10 mL	221424	09/13/17 21:09	KLV	TAL HOU
Total/NA	Analysis	8260B	DL	5	100 uL	5 mL	221430	09/15/17 18:50	KLV	TAL HOU

Client Sample ID: MW45-NFP-48-49-09122017 — **Lab Sample ID: 600-153854-6**
Date Collected: 09/12/17 09:20 — **Matrix: Solid**
Date Received: 09/13/17 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 15:57	B1K	TAL HOU

Client Sample ID: MW45-NFP-48-49-09122017 — **Lab Sample ID: 600-153854-6**
Date Collected: 09/12/17 09:20 — **Matrix: Solid**
Date Received: 09/13/17 11:45 — **Percent Solids: 96.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.733 g	10 mL	221424	09/13/17 21:09	KLV	TAL HOU
Total/NA	Analysis	8260B		10	100 uL	5 mL	221430	09/15/17 20:21	KLV	TAL HOU
Total/NA	Prep	5035	DL		5.733 g	10 mL	221424	09/13/17 21:09	KLV	TAL HOU
Total/NA	Analysis	8260B	DL	100	100 uL	5 mL	221430	09/15/17 20:44	KLV	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Client Sample ID: MW45-NFP-59-60-09122017 — **Lab Sample ID: 600-153854-7**
Date Collected: 09/12/17 09:50 — **Matrix: Solid**
Date Received: 09/13/17 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 15:57	B1K	TAL HOU

Client Sample ID: MW45-NFP-59-60-09122017 — **Lab Sample ID: 600-153854-7**
Date Collected: 09/12/17 09:50 — **Matrix: Solid**
Date Received: 09/13/17 11:45 — **Percent Solids: 83.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.143 g	10 mL	221424	09/13/17 21:09	KLV	TAL HOU
Total/NA	Analysis	8260B		5	100 uL	5 mL	221430	09/15/17 19:13	KLV	TAL HOU

Client Sample ID: MW45-NFP-69-70-09122017 — **Lab Sample ID: 600-153854-8**
Date Collected: 09/12/17 10:15 — **Matrix: Solid**
Date Received: 09/13/17 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 15:57	B1K	TAL HOU

Client Sample ID: MW45-NFP-69-70-09122017 — **Lab Sample ID: 600-153854-8**
Date Collected: 09/12/17 10:15 — **Matrix: Solid**
Date Received: 09/13/17 11:45 — **Percent Solids: 90.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.118 g	10 mL	221424	09/13/17 21:09	KLV	TAL HOU
Total/NA	Analysis	8260B		5	100 uL	5 mL	221430	09/15/17 19:36	KLV	TAL HOU
Total/NA	Prep	5035	DL		6.118 g	10 mL	221424	09/13/17 21:09	KLV	TAL HOU
Total/NA	Analysis	8260B	DL	50	100 uL	5 mL	221430	09/15/17 19:58	KLV	TAL HOU

Client Sample ID: MW45-NFP-35-36-09122017 — **Lab Sample ID: 600-153854-9**
Date Collected: 09/12/17 10:45 — **Matrix: Solid**
Date Received: 09/13/17 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 15:57	B1K	TAL HOU

Client Sample ID: MW45-NFP-35-36-09122017 — **Lab Sample ID: 600-153854-9**
Date Collected: 09/12/17 10:45 — **Matrix: Solid**
Date Received: 09/13/17 11:45 — **Percent Solids: 85.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			7.391 g	5 mL	221316	09/13/17 21:09	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221605	09/19/17 19:17	WS1	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153854-1

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153854-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-21	10-31-17
USDA	Federal		P330-17-00132	04-20-20

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Luke Hill	Lab PM: Upton, Cathy L	Carrier Tracking No(s):	COC No: 600-36947-10949.1
Client Contact: Aleeca Forsberg	Phone: 205-240-3235	E-Mail: cathy.upton@testamericainc.com		Page: Page 1 of 1
Company: CH2M Hill, Inc.				Job #:
Address: 3721 Rutledge Rd. NE Suite B-1	Due Date Requested:			
City: Albuquerque	TAT Requested (days): 10 BD Prelim; 14 BD Level3 Package (3e)			
State, Zip: NM, 87109				
Phone: 281-721-8546(Tel)	PO #: WD293112			
Email: Aleeca Forsberg@CH2M.com	WO #:			
Project Name: Kinder Morgan Bloomfield, NM NFP	HOUSTON Project #: 60004617			
Site: BTEX Soils	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SOILS: 8260B_5035 - BTEX (SHORT HOLD-48HRs)	SOILS: Percent Moisture	WATERS: 8260B_LL - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:		N	N	N	N	A		
TB06-NFP-09122017	9/12/17	0800	G	Soil	N	N			X		*** 48Hr Holding Time From Sample Collection
MW45-NFP-23-24-09122017	9/12/17	0830	G	Soil	N	N	X	X			
MD10-NFP-23-24-09122017	9/12/17	0835	G	Soil	N	N	X	X			
MW45-NFP-31-32-09122017	9/12/17	0900	G	Soil	N	N	X	X			
MW45-NFP-39-40-09122017	9/12/17	0910	G	Soil	N	N	X	X			
MW45-NFP-48-49-09122017	9/12/17	0920	G	Soil	N	N	X	X			
MW45-NFP-59-60-09122017	9/12/17	0950	G	Soil	N	N	X	X			
MW45-NFP-69-70-09122017	9/12/17	1015	G	Soil	N	N	X	X			
MW45-NFP-35-36-09122017	9/12/17	1045	G	Soil	N	N	X	X			
			G	Soil							
			G	Water							

600-153854 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
L. Hill	9/12/17 1700	CH2M	Jacquelyn Tall HA	9/13/17 11:45	TAH
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

Loc: 600
153854

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receipt Checklist

Date/Time Received: '17 SEP 13 11:45

JOB NUMBER: _____ CLIENT: CH2M Hill

UNPACKED BY: JRT CARRIER/DRIVER: FedEx

Custody Seal Present: ☑ YES ☐ NO Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
BBW	(Y) / N	(Y) / N	1.2	549	-0.3	0.9
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☑ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☑ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☐ YES ☐ NO

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☐ YES ☑ NO ☐ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X	

COMMENTS:

All trip blank VOAs have headspace

9/13/17

Therm ID: 549
Therm CF: -0.3
Corrected Temp: 0.9

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc. Job Number: 600-153854-1

Login Number: 153854 **List Source: TestAmerica Houston**
List Number: 1
Creator: Kovitch, Christina M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.9°C IR 549
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

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ANALYTICAL REPORT

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-153884-1
Client Project/Site: Kinder Morgan Bloomfield, NM NFP
Revision: 1

For:
CH2M Hill Constructors, Inc.
14701 St. Mary's Lane
Suite 300
Houston, Texas 77079-2923

Attn: Mr. John Ynfante

Steve A Stepanski

Authorized for release by:
12/10/2020 10:09:34 AM
Steve Stepanski, Project Mgmt. Assistant
(713)690-4444
steve.stepanski@Eurofinset.com

Designee for

Cathy Upton, Project Manager I
(713)690-4444
cathy.upton@testamericainc.com

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory Job ID: 600-153884-1

Table of Contents

Case Narrative

Client: CH2M Hill Constructors, Inc. Job ID: 600-153884-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Job ID: 600-153884-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-153884-1

Comments
This report was revised to a Level 2 deliverable per client's request.

Receipt
The samples were received on 9/14/2017 11:18 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.4º C.

GC/MS VOA
Method(s) 8260B: The following volatile sample was analyzed with significant headspace in the sample Container(s): TB07-NFP-09132017 (600-153884-1). Significant headspace is defined as a bubble greater than 6 mm in diameter.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
2540B	Percent Moisture	SM20	TAL HOU

Protocol References:

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-153884-1	TB07-NFP-09132017	Water	09/13/17 08:00	09/14/17 11:18
600-153884-2	MW41-NFP-12-14-09132017	Solid	09/13/17 11:10	09/14/17 11:18
600-153884-3	MD06-NFP-12-14-09132017	Solid	09/13/17 11:15	09/14/17 11:18
600-153884-4	MW41-NFP-20-22-09132017	Solid	09/13/17 11:20	09/14/17 11:18
600-153884-5	MW41-NFP-35-36-09132017	Solid	09/13/17 12:50	09/14/17 11:18
600-153884-6	MW41-NFP-40-41-09132017	Solid	09/13/17 13:05	09/14/17 11:18
600-153884-7	MW41-NFP-50-51-09132017	Solid	09/13/17 13:20	09/14/17 11:18
600-153884-8	MW41-NFP-60-61-09132017	Solid	09/13/17 13:45	09/14/17 11:18
600-153884-9	MW41-NFP-64-65-09132017	Solid	09/13/17 13:55	09/14/17 11:18

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Client Sample ID: TB07-NFP-09132017

Lab Sample ID: 600-153884-1
Date Collected: 09/13/17 08:00
Matrix: Water
Date Received: 09/14/17 11:18

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/14/17 15:48	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/14/17 15:48	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/14/17 15:48	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/14/17 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*50 - 134*		*09/14/17 15:48*	*1*
Dibromofluoromethane	*101*		*62 - 130*		*09/14/17 15:48*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/14/17 15:48*	*1*
4-Bromofluorobenzene	*103*		*67 - 139*		*09/14/17 15:48*	*1*

Client Sample ID: MW41-NFP-12-14-09132017

Lab Sample ID: 600-153884-2
Date Collected: 09/13/17 11:10
Matrix: Solid
Date Received: 09/14/17 11:18
Percent Solids: 94.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000662	U	0.00525	0.000662	mg/Kg	☼	09/14/17 14:57	09/18/17 12:03	1
Ethylbenzene	0.00107	U	0.00525	0.00107	mg/Kg	☼	09/14/17 14:57	09/18/17 12:03	1
Toluene	0.00145	U	0.00525	0.00145	mg/Kg	☼	09/14/17 14:57	09/18/17 12:03	1
Xylenes, Total	0.00119	U	0.00525	0.00119	mg/Kg	☼	09/14/17 14:57	09/18/17 12:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*61 - 130*	*09/14/17 14:57*	*09/18/17 12:03*	*1*
Dibromofluoromethane	*100*		*68 - 140*	*09/14/17 14:57*	*09/18/17 12:03*	*1*
Toluene-d8 (Surr)	*95*		*50 - 130*	*09/14/17 14:57*	*09/18/17 12:03*	*1*
4-Bromofluorobenzene	*105*		*57 - 140*	*09/14/17 14:57*	*09/18/17 12:03*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**5.6**		1.0	1.0	%			09/14/17 16:02	1
Percent Solids	**94.4**		1.0	1.0	%			09/14/17 16:02	1

Client Sample ID: MD06-NFP-12-14-09132017

Lab Sample ID: 600-153884-3
Date Collected: 09/13/17 11:15
Matrix: Solid
Date Received: 09/14/17 11:18
Percent Solids: 94.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000673	U	0.00534	0.000673	mg/Kg	☼	09/14/17 14:57	09/18/17 12:28	1
Ethylbenzene	0.00109	U	0.00534	0.00109	mg/Kg	☼	09/14/17 14:57	09/18/17 12:28	1
Toluene	0.00147	U	0.00534	0.00147	mg/Kg	☼	09/14/17 14:57	09/18/17 12:28	1
Xylenes, Total	0.00121	U	0.00534	0.00121	mg/Kg	☼	09/14/17 14:57	09/18/17 12:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*61 - 130*	*09/14/17 14:57*	*09/18/17 12:28*	*1*
Dibromofluoromethane	*100*		*68 - 140*	*09/14/17 14:57*	*09/18/17 12:28*	*1*
Toluene-d8 (Surr)	*95*		*50 - 130*	*09/14/17 14:57*	*09/18/17 12:28*	*1*
4-Bromofluorobenzene	*105*		*57 - 140*	*09/14/17 14:57*	*09/18/17 12:28*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Client Sample ID: MD06-NFP-12-14-09132017

Lab Sample ID: 600-153884-3
Date Collected: 09/13/17 11:15
Matrix: Solid
Date Received: 09/14/17 11:18
Percent Solids: 94.2

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.8		1.0	1.0	%			09/14/17 15:57	1
Percent Solids	94.2		1.0	1.0	%			09/14/17 15:57	1

Client Sample ID: MW41-NFP-20-22-09132017

Lab Sample ID: 600-153884-4
Date Collected: 09/13/17 11:20
Matrix: Solid
Date Received: 09/14/17 11:18
Percent Solids: 98.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000649	U	0.00515	0.000649	mg/Kg	☼	09/14/17 14:57	09/18/17 12:53	1
Ethylbenzene	0.00105	U	0.00515	0.00105	mg/Kg	☼	09/14/17 14:57	09/18/17 12:53	1
Toluene	0.00142	U	0.00515	0.00142	mg/Kg	☼	09/14/17 14:57	09/18/17 12:53	1
Xylenes, Total	0.00116	U	0.00515	0.00116	mg/Kg	☼	09/14/17 14:57	09/18/17 12:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*61 - 130*	*09/14/17 14:57*	*09/18/17 12:53*	*1*
Dibromofluoromethane	*101*		*68 - 140*	*09/14/17 14:57*	*09/18/17 12:53*	*1*
Toluene-d8 (Surr)	*94*		*50 - 130*	*09/14/17 14:57*	*09/18/17 12:53*	*1*
4-Bromofluorobenzene	*106*		*57 - 140*	*09/14/17 14:57*	*09/18/17 12:53*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.0		1.0	1.0	%			09/14/17 16:02	1
Percent Solids	98.0		1.0	1.0	%			09/14/17 16:02	1

Client Sample ID: MW41-NFP-35-36-09132017

Lab Sample ID: 600-153884-5
Date Collected: 09/13/17 12:50
Matrix: Solid
Date Received: 09/14/17 11:18
Percent Solids: 97.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000583	U	0.00462	0.000583	mg/Kg	☼	09/14/17 14:57	09/18/17 10:49	1
Ethylbenzene	0.000943	U	0.00462	0.000943	mg/Kg	☼	09/14/17 14:57	09/18/17 10:49	1
Toluene	0.00128	U	0.00462	0.00128	mg/Kg	☼	09/14/17 14:57	09/18/17 10:49	1
Xylenes, Total	0.00105	U	0.00462	0.00105	mg/Kg	☼	09/14/17 14:57	09/18/17 10:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 130*	*09/14/17 14:57*	*09/18/17 10:49*	*1*
Dibromofluoromethane	*101*		*68 - 140*	*09/14/17 14:57*	*09/18/17 10:49*	*1*
Toluene-d8 (Surr)	*98*		*50 - 130*	*09/14/17 14:57*	*09/18/17 10:49*	*1*
4-Bromofluorobenzene	*107*		*57 - 140*	*09/14/17 14:57*	*09/18/17 10:49*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.2		1.0	1.0	%			09/14/17 15:57	1
Percent Solids	97.8		1.0	1.0	%			09/14/17 15:57	1

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Client Sample ID: MW41-NFP-40-41-09132017

Lab Sample ID: 600-153884-6
Date Collected: 09/13/17 13:05
Matrix: Solid
Date Received: 09/14/17 11:18
Percent Solids: 92.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000660	U	0.00524	0.000660	mg/Kg	☼	09/14/17 14:57	09/18/17 13:17	1
Ethylbenzene	0.00107	U	0.00524	0.00107	mg/Kg	☼	09/14/17 14:57	09/18/17 13:17	1
Toluene	0.00145	U	0.00524	0.00145	mg/Kg	☼	09/14/17 14:57	09/18/17 13:17	1
Xylenes, Total	0.00118	U	0.00524	0.00118	mg/Kg	☼	09/14/17 14:57	09/18/17 13:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*61 - 130*	*09/14/17 14:57*	*09/18/17 13:17*	*1*
Dibromofluoromethane	*99*		*68 - 140*	*09/14/17 14:57*	*09/18/17 13:17*	*1*
Toluene-d8 (Surr)	*94*		*50 - 130*	*09/14/17 14:57*	*09/18/17 13:17*	*1*
4-Bromofluorobenzene	*105*		*57 - 140*	*09/14/17 14:57*	*09/18/17 13:17*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**7.2**		1.0	1.0	%			09/14/17 16:02	1
Percent Solids	**92.8**		1.0	1.0	%			09/14/17 16:02	1

Client Sample ID: MW41-NFP-50-51-09132017

Lab Sample ID: 600-153884-7
Date Collected: 09/13/17 13:20
Matrix: Solid
Date Received: 09/14/17 11:18
Percent Solids: 92.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000808	U	0.00642	0.000808	mg/Kg	☼	09/14/17 14:57	09/18/17 13:42	1
Ethylbenzene	0.00131	U	0.00642	0.00131	mg/Kg	☼	09/14/17 14:57	09/18/17 13:42	1
Toluene	0.00177	U	0.00642	0.00177	mg/Kg	☼	09/14/17 14:57	09/18/17 13:42	1
Xylenes, Total	0.00145	U	0.00642	0.00145	mg/Kg	☼	09/14/17 14:57	09/18/17 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 130*	*09/14/17 14:57*	*09/18/17 13:42*	*1*
Dibromofluoromethane	*98*		*68 - 140*	*09/14/17 14:57*	*09/18/17 13:42*	*1*
Toluene-d8 (Surr)	*92*		*50 - 130*	*09/14/17 14:57*	*09/18/17 13:42*	*1*
4-Bromofluorobenzene	*108*		*57 - 140*	*09/14/17 14:57*	*09/18/17 13:42*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**7.6**		1.0	1.0	%			09/14/17 15:57	1
Percent Solids	**92.4**		1.0	1.0	%			09/14/17 15:57	1

Client Sample ID: MW41-NFP-60-61-09132017

Lab Sample ID: 600-153884-8
Date Collected: 09/13/17 13:45
Matrix: Solid
Date Received: 09/14/17 11:18
Percent Solids: 88.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000573	U	0.00455	0.000573	mg/Kg	☼	09/14/17 14:57	09/18/17 14:07	1
Ethylbenzene	0.000928	U	0.00455	0.000928	mg/Kg	☼	09/14/17 14:57	09/18/17 14:07	1
Toluene	0.00126	U	0.00455	0.00126	mg/Kg	☼	09/14/17 14:57	09/18/17 14:07	1
Xylenes, Total	0.00103	U	0.00455	0.00103	mg/Kg	☼	09/14/17 14:57	09/18/17 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*61 - 130*	*09/14/17 14:57*	*09/18/17 14:07*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153884-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Client Sample ID: MW41-NFP-60-61-09132017 Lab Sample ID: 600-153884-8

Date Collected: 09/13/17 13:45 **Matrix: Solid**
Date Received: 09/14/17 11:18 **Percent Solids: 88.7**

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	*100*		*68 - 140*	*09/14/17 14:57*	*09/18/17 14:07*	*1*
Toluene-d8 (Surr)	*91*		*50 - 130*	*09/14/17 14:57*	*09/18/17 14:07*	*1*
4-Bromofluorobenzene	*103*		*57 - 140*	*09/14/17 14:57*	*09/18/17 14:07*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**11.3**		1.0	1.0	%			09/14/17 15:57	1
Percent Solids	**88.7**		1.0	1.0	%			09/14/17 15:57	1

Client Sample ID: MW41-NFP-64-65-09132017 Lab Sample ID: 600-153884-9

Date Collected: 09/13/17 13:55 **Matrix: Solid**
Date Received: 09/14/17 11:18 **Percent Solids: 89.9**

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000631	U	0.00500	0.000631	mg/Kg	☼	09/14/17 14:57	09/18/17 14:31	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg	☼	09/14/17 14:57	09/18/17 14:31	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg	☼	09/14/17 14:57	09/18/17 14:31	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg	☼	09/14/17 14:57	09/18/17 14:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*104*		*61 - 130*	*09/14/17 14:57*	*09/18/17 14:31*	*1*
Dibromofluoromethane	*100*		*68 - 140*	*09/14/17 14:57*	*09/18/17 14:31*	*1*
Toluene-d8 (Surr)	*93*		*50 - 130*	*09/14/17 14:57*	*09/18/17 14:31*	*1*
4-Bromofluorobenzene	*109*		*57 - 140*	*09/14/17 14:57*	*09/18/17 14:31*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**10.1**		1.0	1.0	%			09/14/17 15:57	1
Percent Solids	**89.9**		1.0	1.0	%			09/14/17 15:57	1

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (61-130)	DBFM (68-140)	TOL (50-130)	BFB (57-140)
600-153884-2	MW41-NFP-12-14-09132017	106	100	95	105
600-153884-3	MD06-NFP-12-14-09132017	101	100	95	105
600-153884-4	MW41-NFP-20-22-09132017	103	101	94	106
600-153884-5	MW41-NFP-35-36-09132017	100	101	98	107
600-153884-5 MS	MW41-NFP-35-36-09132017	101	109	108	120
600-153884-5 MSD	MW41-NFP-35-36-09132017	105	110	106	119
600-153884-6	MW41-NFP-40-41-09132017	103	99	94	105
600-153884-7	MW41-NFP-50-51-09132017	100	98	92	108
600-153884-8	MW41-NFP-60-61-09132017	104	100	91	103
600-153884-9	MW41-NFP-64-65-09132017	104	100	93	109
LCS 600-221519/3	Lab Control Sample	111	114	108	123
LCSD 600-221519/4	Lab Control Sample Dup	106	112	109	125
MB 600-221519/6	Method Blank	109	101	96	106

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (50-134)	DBFM (62-130)	TOL (70-130)	BFB (67-139)
600-153884-1	TB07-NFP-09132017	101	101	101	103
LCS 600-221323/4	Lab Control Sample	100	107	100	112
LCSD 600-221323/5	Lab Control Sample Dup	100	105	99	110
MB 600-221323/6	Method Blank	107	102	102	104

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-221323/6
Matrix: Water
Analysis Batch: 221323

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/14/17 12:48	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/14/17 12:48	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/14/17 12:48	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/14/17 12:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*50 - 134*		*09/14/17 12:48*	*1*
Dibromofluoromethane	*102*		*62 - 130*		*09/14/17 12:48*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/14/17 12:48*	*1*
4-Bromofluorobenzene	*104*		*67 - 139*		*09/14/17 12:48*	*1*

Lab Sample ID: LCS 600-221323/4
Matrix: Water
Analysis Batch: 221323

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0100	0.01002		mg/L		100	70 - 130		
Ethylbenzene			0.0100	0.01010		mg/L		101	70 - 130		
Toluene			0.0100	0.009527		mg/L		95	70 - 130		
Xylenes, Total			0.0200	0.01989		mg/L		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*50 - 134*
Dibromofluoromethane	*107*		*62 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene	*112*		*67 - 139*

Lab Sample ID: LCSD 600-221323/5
Matrix: Water
Analysis Batch: 221323

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0100	0.009934		mg/L		99	70 - 130	1	20
Ethylbenzene			0.0100	0.01004		mg/L		100	70 - 130	1	20
Toluene			0.0100	0.009387		mg/L		94	70 - 130	1	20
Xylenes, Total			0.0200	0.01971		mg/L		99	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*50 - 134*
Dibromofluoromethane	*105*		*62 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene	*110*		*67 - 139*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 600-153884-5 MS
Matrix: Solid
Analysis Batch: 221519

Client Sample ID: MW41-NFP-35-36-09132017
Prep Type: Total/NA
Prep Batch: 221410

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.000583	U	0.0450	0.04308		mg/Kg	☼	96	70 - 131
Ethylbenzene	0.000943	U	0.0450	0.04196		mg/Kg	☼	93	66 - 130
Toluene	0.00128	U	0.0450	0.04114		mg/Kg	☼	91	67 - 130
Xylenes, Total	0.00105	U	0.0899	0.07796		mg/Kg	☼	87	63 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*61 - 130*
Dibromofluoromethane	*109*		*68 - 140*
Toluene-d8 (Surr)	*108*		*50 - 130*
4-Bromofluorobenzene	*120*		*57 - 140*

Lab Sample ID: 600-153884-5 MSD
Matrix: Solid
Analysis Batch: 221519

Client Sample ID: MW41-NFP-35-36-09132017
Prep Type: Total/NA
Prep Batch: 221410

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.000583	U	0.0477	0.04459		mg/Kg	☼	93	70 - 131	3	30
Ethylbenzene	0.000943	U	0.0477	0.04187		mg/Kg	☼	88	66 - 130	0	30
Toluene	0.00128	U	0.0477	0.04136		mg/Kg	☼	87	67 - 130	1	30
Xylenes, Total	0.00105	U	0.0955	0.07862		mg/Kg	☼	82	63 - 130	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*61 - 130*
Dibromofluoromethane	*110*		*68 - 140*
Toluene-d8 (Surr)	*106*		*50 - 130*
4-Bromofluorobenzene	*119*		*57 - 140*

Lab Sample ID: MB 600-221519/6
Matrix: Solid
Analysis Batch: 221519

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/18/17 10:24	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/18/17 10:24	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/18/17 10:24	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/18/17 10:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*61 - 130*		*09/18/17 10:24*	*1*
Dibromofluoromethane	*101*		*68 - 140*		*09/18/17 10:24*	*1*
Toluene-d8 (Surr)	*96*		*50 - 130*		*09/18/17 10:24*	*1*
4-Bromofluorobenzene	*106*		*57 - 140*		*09/18/17 10:24*	*1*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-221519/3
Matrix: Solid
Analysis Batch: 221519

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.04815		mg/Kg		96	70 - 131		
Ethylbenzene			0.0500	0.04567		mg/Kg		91	66 - 130		
Toluene			0.0500	0.04526		mg/Kg		91	67 - 130		
Xylenes, Total			0.100	0.08407		mg/Kg		84	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*61 - 130*
Dibromofluoromethane	*114*		*68 - 140*
Toluene-d8 (Surr)	*108*		*50 - 130*
4-Bromofluorobenzene	*123*		*57 - 140*

Lab Sample ID: LCSD 600-221519/4
Matrix: Solid
Analysis Batch: 221519

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04706		mg/Kg		94	70 - 131	2	30
Ethylbenzene			0.0500	0.04405		mg/Kg		88	66 - 130	4	30
Toluene			0.0500	0.04418		mg/Kg		88	67 - 130	2	30
Xylenes, Total			0.100	0.08092		mg/Kg		81	63 - 130	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*61 - 130*
Dibromofluoromethane	*112*		*68 - 140*
Toluene-d8 (Surr)	*109*		*50 - 130*
4-Bromofluorobenzene	*125*		*57 - 140*

Method: 2540B - Percent Moisture

Lab Sample ID: 600-153884-6 DU
Matrix: Solid
Analysis Batch: 221355

Client Sample ID: MW41-NFP-40-41-09132017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	7.2			5.8	F3	%				22	20
Percent Solids	92.8			94.2		%				2	20

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

GC/MS VOA

Analysis Batch: 221323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153884-1	TB07-NFP-09132017	Total/NA	Water	8260B	
MB 600-221323/6	Method Blank	Total/NA	Water	8260B	
LCS 600-221323/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-221323/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Prep Batch: 221410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153884-2	MW41-NFP-12-14-09132017	Total/NA	Solid	5035_ASP	
600-153884-3	MD06-NFP-12-14-09132017	Total/NA	Solid	5035_ASP	
600-153884-4	MW41-NFP-20-22-09132017	Total/NA	Solid	5035_ASP	
600-153884-5	MW41-NFP-35-36-09132017	Total/NA	Solid	5035_ASP	
600-153884-6	MW41-NFP-40-41-09132017	Total/NA	Solid	5035_ASP	
600-153884-7	MW41-NFP-50-51-09132017	Total/NA	Solid	5035_ASP	
600-153884-8	MW41-NFP-60-61-09132017	Total/NA	Solid	5035_ASP	
600-153884-9	MW41-NFP-64-65-09132017	Total/NA	Solid	5035_ASP	
600-153884-5 MS	MW41-NFP-35-36-09132017	Total/NA	Solid	5035_ASP	
600-153884-5 MSD	MW41-NFP-35-36-09132017	Total/NA	Solid	5035_ASP	

Analysis Batch: 221519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153884-2	MW41-NFP-12-14-09132017	Total/NA	Solid	8260B	221410
600-153884-3	MD06-NFP-12-14-09132017	Total/NA	Solid	8260B	221410
600-153884-4	MW41-NFP-20-22-09132017	Total/NA	Solid	8260B	221410
600-153884-5	MW41-NFP-35-36-09132017	Total/NA	Solid	8260B	221410
600-153884-6	MW41-NFP-40-41-09132017	Total/NA	Solid	8260B	221410
600-153884-7	MW41-NFP-50-51-09132017	Total/NA	Solid	8260B	221410
600-153884-8	MW41-NFP-60-61-09132017	Total/NA	Solid	8260B	221410
600-153884-9	MW41-NFP-64-65-09132017	Total/NA	Solid	8260B	221410
MB 600-221519/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-221519/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-221519/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
600-153884-5 MS	MW41-NFP-35-36-09132017	Total/NA	Solid	8260B	221410
600-153884-5 MSD	MW41-NFP-35-36-09132017	Total/NA	Solid	8260B	221410

General Chemistry

Analysis Batch: 221355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153884-2	MW41-NFP-12-14-09132017	Total/NA	Solid	2540B	
600-153884-3	MD06-NFP-12-14-09132017	Total/NA	Solid	2540B	
600-153884-4	MW41-NFP-20-22-09132017	Total/NA	Solid	2540B	
600-153884-5	MW41-NFP-35-36-09132017	Total/NA	Solid	2540B	
600-153884-6	MW41-NFP-40-41-09132017	Total/NA	Solid	2540B	
600-153884-7	MW41-NFP-50-51-09132017	Total/NA	Solid	2540B	
600-153884-8	MW41-NFP-60-61-09132017	Total/NA	Solid	2540B	
600-153884-9	MW41-NFP-64-65-09132017	Total/NA	Solid	2540B	
600-153884-5 MS	MW41-NFP-35-36-09132017	Total/NA	Solid	2540B	
600-153884-5 MSD	MW41-NFP-35-36-09132017	Total/NA	Solid	2540B	
600-153884-6 DU	MW41-NFP-40-41-09132017	Total/NA	Solid	2540B	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Client Sample ID: TB07-NFP-09132017 — Lab Sample ID: 600-153884-1

Date Collected: 09/13/17 08:00 — **Matrix: Water**
Date Received: 09/14/17 11:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	221323	09/14/17 15:48	YX1	TAL HOU

Client Sample ID: MW41-NFP-12-14-09132017 — Lab Sample ID: 600-153884-2

Date Collected: 09/13/17 11:10 — **Matrix: Solid**
Date Received: 09/14/17 11:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 16:02	B1K	TAL HOU

Client Sample ID: MW41-NFP-12-14-09132017 — Lab Sample ID: 600-153884-2

Date Collected: 09/13/17 11:10 — **Matrix: Solid**
Date Received: 09/14/17 11:18 — **Percent Solids: 94.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.043 g	5 mL	221410	09/14/17 14:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221519	09/18/17 12:03	WS1	TAL HOU

Client Sample ID: MD06-NFP-12-14-09132017 — Lab Sample ID: 600-153884-3

Date Collected: 09/13/17 11:15 — **Matrix: Solid**
Date Received: 09/14/17 11:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 15:57	B1K	TAL HOU

Client Sample ID: MD06-NFP-12-14-09132017 — Lab Sample ID: 600-153884-3

Date Collected: 09/13/17 11:15 — **Matrix: Solid**
Date Received: 09/14/17 11:18 — **Percent Solids: 94.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			4.968 g	5 mL	221410	09/14/17 14:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221519	09/18/17 12:28	WS1	TAL HOU

Client Sample ID: MW41-NFP-20-22-09132017 — Lab Sample ID: 600-153884-4

Date Collected: 09/13/17 11:20 — **Matrix: Solid**
Date Received: 09/14/17 11:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 16:02	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Client Sample ID: MW41-NFP-20-22-09132017 — **Lab Sample ID: 600-153884-4**
Date Collected: 09/13/17 11:20 — **Matrix: Solid**
Date Received: 09/14/17 11:18 — **Percent Solids: 98.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			4.953 g	5 mL	221410	09/14/17 14:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221519	09/18/17 12:53	WS1	TAL HOU

Client Sample ID: MW41-NFP-35-36-09132017 — **Lab Sample ID: 600-153884-5**
Date Collected: 09/13/17 12:50 — **Matrix: Solid**
Date Received: 09/14/17 11:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 15:57	B1K	TAL HOU

Client Sample ID: MW41-NFP-35-36-09132017 — **Lab Sample ID: 600-153884-5**
Date Collected: 09/13/17 12:50 — **Matrix: Solid**
Date Received: 09/14/17 11:18 — **Percent Solids: 97.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.528 g	5 mL	221410	09/14/17 14:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221519	09/18/17 10:49	WS1	TAL HOU

Client Sample ID: MW41-NFP-40-41-09132017 — **Lab Sample ID: 600-153884-6**
Date Collected: 09/13/17 13:05 — **Matrix: Solid**
Date Received: 09/14/17 11:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 16:02	B1K	TAL HOU

Client Sample ID: MW41-NFP-40-41-09132017 — **Lab Sample ID: 600-153884-6**
Date Collected: 09/13/17 13:05 — **Matrix: Solid**
Date Received: 09/14/17 11:18 — **Percent Solids: 92.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.143 g	5 mL	221410	09/14/17 14:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221519	09/18/17 13:17	WS1	TAL HOU

Client Sample ID: MW41-NFP-50-51-09132017 — **Lab Sample ID: 600-153884-7**
Date Collected: 09/13/17 13:20 — **Matrix: Solid**
Date Received: 09/14/17 11:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 15:57	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153884-1

Client Sample ID: MW41-NFP-50-51-09132017 — Lab Sample ID: 600-153884-7

Date Collected: 09/13/17 13:20 — **Matrix: Solid**
Date Received: 09/14/17 11:18 — **Percent Solids: 92.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			4.219 g	5 mL	221410	09/14/17 14:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221519	09/18/17 13:42	WS1	TAL HOU

Client Sample ID: MW41-NFP-60-61-09132017 — Lab Sample ID: 600-153884-8

Date Collected: 09/13/17 13:45 — **Matrix: Solid**
Date Received: 09/14/17 11:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 15:57	B1K	TAL HOU

Client Sample ID: MW41-NFP-60-61-09132017 — Lab Sample ID: 600-153884-8

Date Collected: 09/13/17 13:45 — **Matrix: Solid**
Date Received: 09/14/17 11:18 — **Percent Solids: 88.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			6.191 g	5 mL	221410	09/14/17 14:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221519	09/18/17 14:07	WS1	TAL HOU

Client Sample ID: MW41-NFP-64-65-09132017 — Lab Sample ID: 600-153884-9

Date Collected: 09/13/17 13:55 — **Matrix: Solid**
Date Received: 09/14/17 11:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221355	09/14/17 15:57	B1K	TAL HOU

Client Sample ID: MW41-NFP-64-65-09132017 — Lab Sample ID: 600-153884-9

Date Collected: 09/13/17 13:55 — **Matrix: Solid**
Date Received: 09/14/17 11:18 — **Percent Solids: 89.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.555 g	5 mL	221410	09/14/17 14:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221519	09/18/17 14:31	WS1	TAL HOU

Laboratory References:
TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153884-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-21	10-31-17
USDA	Federal		P330-17-00132	04-20-20

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: L. Hill	Lab PM: Upton, Cathy L	Carrier Tracking No(s):	COC No: 600-36947-10949.1
Client Contact: Aleeca Forsberg	Phone: 205-240-3235	E-Mail: cathy.upton@testamericainc.com		Page: Page 1 of 1
Company: CH2M Hill, Inc.				Job #:
Address: 3721 Rutledge Rd. NE Suite B-1	Due Date Requested:			
City: Albuquerque	TAT Requested (days): 10 BD Prelim; 14 BD Level3 Package (3e)			
State, Zip: NM, 87109				
Phone: 281-721-8546(Tel)	PO #: WD293112			
Email: Aleeca.Forsberg@CH2M.com	WO #:			
Project Name: Kinder Morgan Bloomfield, NM NFP	HOUSTON Project #: 60004617			
Site: BTEX Soils	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SOILS: 8260B_5035 - BTEX (SHORT HOLD-48HRs)	SOILS: Percent Moisture	WATERS: 8260B_LL - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	A		*** 48Hr Holding Time From Sample Collection
TB07-NFP-09132017	9/13/17	0800	G	~~Soil~~ Water	N	N			X		
MW41-NFP-12-14-09132017	9/13/17	1110	G	Soil	N	N	X	X			
MD06-NFP-12-14-09132017	9/13/17	1115	G	Soil	N	N	X	X			
MW41-NFP-20-22-09132017	9/13/17	1120	G	Soil	N	N	X	X			
MW41-NFP-35-36-09132017	9/13/17	1250	G	Soil	N	N	X	X			
MW41-NFP-35-36-09132017 MS	9/13/17	1250	G	Soil	N	Y	X	X			
MW41-NFP-35-36-09132017 MSD	9/13/17	1250	G	Soil	N	Y	X	X			
MW41-NFP-40-41-09132017	9/13/17	1305	G	Soil	N	N	X	X			
MW41-NFP-50-51-09132017	9/13/17	1320	G	Soil	N	N	X	X			
MW41-NFP-60-61-09132017	9/13/17	1345	G	Soil	N	N	X	X			
MW41-NFP-64-65-09132017	9/13/17	1355	G	Water	N	N	X	X			

600-153884 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
L. Hill	9/13/17 1700	CH2M		9/14/17 11:10	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

Loc: 600
153884

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receipt Chec

'17 SEP 14 11:18

Date/Time Received: _____

JOB NUMBER: _____

CLIENT: CH2M Hill

UNPACKED BY: _____

CARRIER/DRIVER: Fed-Ex

Custody Seal Present: ☒ YES ☐ NO

Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
BW	Y / N	Y / N	5.7	549	~~0.3~~	5.4
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				JCH
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☐ YES ☐ NO

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☒ YES ☐ NO ☐ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	☒	☐

COMMENTS:

9/14/17

HS-SA-WI-013

Rev. 3; 07/01/2014

12/10/2020 (Rev. 1)

FedEx
TRK# 0221 7455 1165 4002

THU – 14 SEP 10:30A
PRIORITY OVERNIGHT

XH LKSA

77040
TX – US IAH

Uncorrected temp 5.7 °C
Thermometer ID 549

CF -0.3 Initials JC/X

PT-WI-SR-001 effective 7/26/13

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc. Job Number: 600-153884-1

Login Number: 153884 **List Source: TestAmerica Houston**
List Number: 1
Creator: Crafton, Tommie S

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

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ANALYTICAL REPORT

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-153982-1
Client Project/Site: Kinder Morgan Bloomfield, NM NFP
Revision: 1

For:
CH2M Hill Constructors, Inc.
14701 St. Mary's Lane
Suite 300
Houston, Texas 77079-2923

Attn: Mr. John Ynfante

Steve A Stepanski

Authorized for release by:
12/10/2020 10:16:14 AM
Steve Stepanski, Project Mgmt. Assistant
(713)690-4444
steve.stepanski@Eurofinset.com

Designee for

Cathy Upton, Project Manager I
(713)690-4444
cathy.upton@testamericainc.com

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory Job ID: 600-153982-1

Table of Contents

Case Narrative

Client: CH2M Hill Constructors, Inc. Job ID: 600-153982-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Job ID: 600-153982-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-153982-1

Comments
This report was revised to a Level 2 deliverable per client's request.

Receipt
The samples were received on 9/16/2017 8:49 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
2540B	Percent Moisture	SM20	TAL HOU

Protocol References:

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-153982-1	TB08-NFP-09152017	Water	09/15/17 08:00	09/16/17 08:49
600-153982-2	MW42-NFP-13-15-09152017	Solid	09/15/17 09:00	09/16/17 08:49
600-153982-3	MW42-NFP-20-21-09152017	Solid	09/15/17 09:05	09/16/17 08:49
600-153982-4	MD07-NFP-20-21-09152017	Solid	09/15/17 09:10	09/16/17 08:49
600-153982-5	MW42-NFP-30-31-09152017	Solid	09/15/17 09:15	09/16/17 08:49
600-153982-6	MW42-NFP-40-41-09152017	Solid	09/15/17 10:45	09/16/17 08:49

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Client Sample ID: TB08-NFP-09152017

Lab Sample ID: 600-153982-1
Date Collected: 09/15/17 08:00
Matrix: Water
Date Received: 09/16/17 08:49

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/18/17 13:01	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/18/17 13:01	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/18/17 13:01	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/18/17 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*50 - 134*		*09/18/17 13:01*	*1*
Dibromofluoromethane	*102*		*62 - 130*		*09/18/17 13:01*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/18/17 13:01*	*1*
4-Bromofluorobenzene	*104*		*67 - 139*		*09/18/17 13:01*	*1*

Client Sample ID: MW42-NFP-13-15-09152017

Lab Sample ID: 600-153982-2
Date Collected: 09/15/17 09:00
Matrix: Solid
Date Received: 09/16/17 08:49
Percent Solids: 92.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000663	U	0.00526	0.000663	mg/Kg	☼	09/16/17 12:00	09/19/17 18:03	1
Ethylbenzene	0.00107	U	0.00526	0.00107	mg/Kg	☼	09/16/17 12:00	09/19/17 18:03	1
Toluene	0.00145	U	0.00526	0.00145	mg/Kg	☼	09/16/17 12:00	09/19/17 18:03	1
Xylenes, Total	0.00119	U	0.00526	0.00119	mg/Kg	☼	09/16/17 12:00	09/19/17 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*61 - 130*	*09/16/17 12:00*	*09/19/17 18:03*	*1*
Dibromofluoromethane	*93*		*68 - 140*	*09/16/17 12:00*	*09/19/17 18:03*	*1*
Toluene-d8 (Surr)	*85*		*50 - 130*	*09/16/17 12:00*	*09/19/17 18:03*	*1*
4-Bromofluorobenzene	*111*		*57 - 140*	*09/16/17 12:00*	*09/19/17 18:03*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.1		1.0	1.0	%			09/18/17 16:34	1
Percent Solids	92.9		1.0	1.0	%			09/18/17 16:34	1

Client Sample ID: MW42-NFP-20-21-09152017

Lab Sample ID: 600-153982-3
Date Collected: 09/15/17 09:05
Matrix: Solid
Date Received: 09/16/17 08:49
Percent Solids: 98.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000658	U	0.00522	0.000658	mg/Kg	☼	09/16/17 12:00	09/19/17 18:28	1
Ethylbenzene	0.00106	U	0.00522	0.00106	mg/Kg	☼	09/16/17 12:00	09/19/17 18:28	1
Toluene	0.00144	U	0.00522	0.00144	mg/Kg	☼	09/16/17 12:00	09/19/17 18:28	1
Xylenes, Total	0.00118	U	0.00522	0.00118	mg/Kg	☼	09/16/17 12:00	09/19/17 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*61 - 130*	*09/16/17 12:00*	*09/19/17 18:28*	*1*
Dibromofluoromethane	*89*		*68 - 140*	*09/16/17 12:00*	*09/19/17 18:28*	*1*
Toluene-d8 (Surr)	*84*		*50 - 130*	*09/16/17 12:00*	*09/19/17 18:28*	*1*
4-Bromofluorobenzene	*107*		*57 - 140*	*09/16/17 12:00*	*09/19/17 18:28*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Client Sample ID: MW42-NFP-20-21-09152017

Lab Sample ID: 600-153982-3
Date Collected: 09/15/17 09:05
Matrix: Solid
Date Received: 09/16/17 08:49
Percent Solids: 98.3

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.7		1.0	1.0	%			09/18/17 16:34	1
Percent Solids	98.3		1.0	1.0	%			09/18/17 16:34	1

Client Sample ID: MD07-NFP-20-21-09152017

Lab Sample ID: 600-153982-4
Date Collected: 09/15/17 09:10
Matrix: Solid
Date Received: 09/16/17 08:49
Percent Solids: 98.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000653	U	0.00519	0.000653	mg/Kg	☼	09/16/17 12:00	09/19/17 18:52	1
Ethylbenzene	0.00106	U	0.00519	0.00106	mg/Kg	☼	09/16/17 12:00	09/19/17 18:52	1
Toluene	0.00143	U	0.00519	0.00143	mg/Kg	☼	09/16/17 12:00	09/19/17 18:52	1
Xylenes, Total	0.00117	U	0.00519	0.00117	mg/Kg	☼	09/16/17 12:00	09/19/17 18:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*61 - 130*	*09/16/17 12:00*	*09/19/17 18:52*	*1*
Dibromofluoromethane	*90*		*68 - 140*	*09/16/17 12:00*	*09/19/17 18:52*	*1*
Toluene-d8 (Surr)	*84*		*50 - 130*	*09/16/17 12:00*	*09/19/17 18:52*	*1*
4-Bromofluorobenzene	*109*		*57 - 140*	*09/16/17 12:00*	*09/19/17 18:52*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.8		1.0	1.0	%			09/18/17 16:34	1
Percent Solids	98.2		1.0	1.0	%			09/18/17 16:34	1

Client Sample ID: MW42-NFP-30-31-09152017

Lab Sample ID: 600-153982-5
Date Collected: 09/15/17 09:15
Matrix: Solid
Date Received: 09/16/17 08:49
Percent Solids: 93.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000666	U	0.00529	0.000666	mg/Kg	☼	09/16/17 12:00	09/20/17 13:31	1
Ethylbenzene	0.00108	U	0.00529	0.00108	mg/Kg	☼	09/16/17 12:00	09/20/17 13:31	1
Toluene	0.00146	U	0.00529	0.00146	mg/Kg	☼	09/16/17 12:00	09/20/17 13:31	1
Xylenes, Total	0.00119	U	0.00529	0.00119	mg/Kg	☼	09/16/17 12:00	09/20/17 13:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 130*	*09/16/17 12:00*	*09/20/17 13:31*	*1*
Dibromofluoromethane	*92*		*68 - 140*	*09/16/17 12:00*	*09/20/17 13:31*	*1*
Toluene-d8 (Surr)	*85*		*50 - 130*	*09/16/17 12:00*	*09/20/17 13:31*	*1*
4-Bromofluorobenzene	*96*		*57 - 140*	*09/16/17 12:00*	*09/20/17 13:31*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.6		1.0	1.0	%			09/18/17 16:34	1
Percent Solids	93.4		1.0	1.0	%			09/18/17 16:34	1

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Client Sample ID: MW42-NFP-40-41-09152017
Date Collected: 09/15/17 10:45
Date Received: 09/16/17 08:49

Lab Sample ID: 600-153982-6
Matrix: Solid
Percent Solids: 85.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000645	U	0.00512	0.000645	mg/Kg	☼	09/16/17 12:00	09/20/17 13:55	1
Ethylbenzene	0.00104	U	0.00512	0.00104	mg/Kg	☼	09/16/17 12:00	09/20/17 13:55	1
Toluene	0.00141	U	0.00512	0.00141	mg/Kg	☼	09/16/17 12:00	09/20/17 13:55	1
Xylenes, Total	0.00116	U	0.00512	0.00116	mg/Kg	☼	09/16/17 12:00	09/20/17 13:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*61 - 130*	*09/16/17 12:00*	*09/20/17 13:55*	*1*
Dibromofluoromethane	*89*		*68 - 140*	*09/16/17 12:00*	*09/20/17 13:55*	*1*
Toluene-d8 (Surr)	*84*		*50 - 130*	*09/16/17 12:00*	*09/20/17 13:55*	*1*
4-Bromofluorobenzene	*96*		*57 - 140*	*09/16/17 12:00*	*09/20/17 13:55*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**14.3**		1.0	1.0	%			09/18/17 16:34	1
Percent Solids	**85.7**		1.0	1.0	%			09/18/17 16:34	1

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (61-130)	DBFM (68-140)	TOL (50-130)	BFB (57-140)
600-153982-2	MW42-NFP-13-15-09152017	101	93	85	111
600-153982-3	MW42-NFP-20-21-09152017	104	89	84	107
600-153982-4	MD07-NFP-20-21-09152017	99	90	84	109
600-153982-5	MW42-NFP-30-31-09152017	100	92	85	96
600-153982-6	MW42-NFP-40-41-09152017	97	89	84	96
LCS 600-221605/3	Lab Control Sample	104	109	105	122
LCS 600-221694/10	Lab Control Sample	92	96	93	106
LCSD 600-221605/4	Lab Control Sample Dup	106	108	105	126
LCSD 600-221694/1011	Lab Control Sample Dup	88	90	89	99
MB 600-221605/6	Method Blank	103	95	92	110
MB 600-221694/13	Method Blank	84	86	87	97

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (50-134)	DBFM (62-130)	TOL (70-130)	BFB (67-139)
600-153982-1	TB08-NFP-09152017	111	102	99	104
LCS 600-221538/4	Lab Control Sample	97	105	99	111
LCSD 600-221538/5	Lab Control Sample Dup	98	102	96	106
MB 600-221538/7	Method Blank	107	103	100	104

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-221538/7
Matrix: Water
Analysis Batch: 221538

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			09/18/17 12:34	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			09/18/17 12:34	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			09/18/17 12:34	1
Xylenes, Total	0.000366	U	0.00200	0.000366	mg/L			09/18/17 12:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*50 - 134*		*09/18/17 12:34*	*1*
Dibromofluoromethane	*103*		*62 - 130*		*09/18/17 12:34*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/18/17 12:34*	*1*
4-Bromofluorobenzene	*104*		*67 - 139*		*09/18/17 12:34*	*1*

Lab Sample ID: LCS 600-221538/4
Matrix: Water
Analysis Batch: 221538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0100	0.009712		mg/L		97	70 - 130		
Ethylbenzene			0.0100	0.01001		mg/L		100	70 - 130		
Toluene			0.0100	0.009407		mg/L		94	70 - 130		
Xylenes, Total			0.0200	0.01984		mg/L		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*50 - 134*
Dibromofluoromethane	*105*		*62 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene	*111*		*67 - 139*

Lab Sample ID: LCSD 600-221538/5
Matrix: Water
Analysis Batch: 221538

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0100	0.009712		mg/L		97	70 - 130	0	20
Ethylbenzene			0.0100	0.009818		mg/L		98	70 - 130	2	20
Toluene			0.0100	0.009223		mg/L		92	70 - 130	2	20
Xylenes, Total			0.0200	0.01957		mg/L		98	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*50 - 134*
Dibromofluoromethane	*102*		*62 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene	*106*		*67 - 139*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-221605/6
Matrix: Solid
Analysis Batch: 221605

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/19/17 11:02	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/19/17 11:02	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/19/17 11:02	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/19/17 11:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*61 - 130*		*09/19/17 11:02*	*1*
Dibromofluoromethane	*95*		*68 - 140*		*09/19/17 11:02*	*1*
Toluene-d8 (Surr)	*92*		*50 - 130*		*09/19/17 11:02*	*1*
4-Bromofluorobenzene	*110*		*57 - 140*		*09/19/17 11:02*	*1*

Lab Sample ID: LCS 600-221605/3
Matrix: Solid
Analysis Batch: 221605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.05180		mg/Kg		104	70 - 131		
Ethylbenzene			0.0500	0.04818		mg/Kg		96	66 - 130		
Toluene			0.0500	0.04833		mg/Kg		97	67 - 130		
Xylenes, Total			0.100	0.08881		mg/Kg		89	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*61 - 130*
Dibromofluoromethane	*109*		*68 - 140*
Toluene-d8 (Surr)	*105*		*50 - 130*
4-Bromofluorobenzene	*122*		*57 - 140*

Lab Sample ID: LCSD 600-221605/4
Matrix: Solid
Analysis Batch: 221605

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04991		mg/Kg		100	70 - 131	4	30
Ethylbenzene			0.0500	0.04535		mg/Kg		91	66 - 130	6	30
Toluene			0.0500	0.04602		mg/Kg		92	67 - 130	5	30
Xylenes, Total			0.100	0.08443		mg/Kg		84	63 - 130	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*61 - 130*
Dibromofluoromethane	*108*		*68 - 140*
Toluene-d8 (Surr)	*105*		*50 - 130*
4-Bromofluorobenzene	*126*		*57 - 140*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-221694/13
Matrix: Solid
Analysis Batch: 221694

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			09/20/17 13:03	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			09/20/17 13:03	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			09/20/17 13:03	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			09/20/17 13:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*61 - 130*		*09/20/17 13:03*	*1*
Dibromofluoromethane	*86*		*68 - 140*		*09/20/17 13:03*	*1*
Toluene-d8 (Surr)	*87*		*50 - 130*		*09/20/17 13:03*	*1*
4-Bromofluorobenzene	*97*		*57 - 140*		*09/20/17 13:03*	*1*

Lab Sample ID: LCS 600-221694/10
Matrix: Solid
Analysis Batch: 221694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.04780		mg/Kg		96	70 - 131		
Ethylbenzene			0.0500	0.04740		mg/Kg		95	66 - 130		
Toluene			0.0500	0.04650		mg/Kg		93	67 - 130		
Xylenes, Total			0.100	0.09419		mg/Kg		94	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*
Dibromofluoromethane	*96*		*68 - 140*
Toluene-d8 (Surr)	*93*		*50 - 130*
4-Bromofluorobenzene	*106*		*57 - 140*

Lab Sample ID: LCSD 600-221694/1011
Matrix: Solid
Analysis Batch: 221694

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04896		mg/Kg		98	70 - 131	2	30
Ethylbenzene			0.0500	0.04998		mg/Kg		100	66 - 130	5	30
Toluene			0.0500	0.04777		mg/Kg		96	67 - 130	3	30
Xylenes, Total			0.100	0.09896		mg/Kg		99	63 - 130	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*61 - 130*
Dibromofluoromethane	*90*		*68 - 140*
Toluene-d8 (Surr)	*89*		*50 - 130*
4-Bromofluorobenzene	*99*		*57 - 140*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Method: 2540B - Percent Moisture

Lab Sample ID: 600-153982-3 DU
Matrix: Solid
Analysis Batch: 221580

Client Sample ID: MW42-NFP-20-21-09152017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	1.7			1.7		%				0.2	20
Percent Solids	98.3			98.3		%				0	20

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

GC/MS VOA

Analysis Batch: 221538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153982-1	TB08-NFP-09152017	Total/NA	Water	8260B	
MB 600-221538/7	Method Blank	Total/NA	Water	8260B	
LCS 600-221538/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-221538/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 221605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153982-2	MW42-NFP-13-15-09152017	Total/NA	Solid	8260B	221636
600-153982-3	MW42-NFP-20-21-09152017	Total/NA	Solid	8260B	221636
600-153982-4	MD07-NFP-20-21-09152017	Total/NA	Solid	8260B	221636
MB 600-221605/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-221605/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-221605/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 221636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153982-2	MW42-NFP-13-15-09152017	Total/NA	Solid	5035_ASP	
600-153982-3	MW42-NFP-20-21-09152017	Total/NA	Solid	5035_ASP	
600-153982-4	MD07-NFP-20-21-09152017	Total/NA	Solid	5035_ASP	
600-153982-5	MW42-NFP-30-31-09152017	Total/NA	Solid	5035_ASP	
600-153982-6	MW42-NFP-40-41-09152017	Total/NA	Solid	5035_ASP	

Analysis Batch: 221694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153982-5	MW42-NFP-30-31-09152017	Total/NA	Solid	8260B	221636
600-153982-6	MW42-NFP-40-41-09152017	Total/NA	Solid	8260B	221636
MB 600-221694/13	Method Blank	Total/NA	Solid	8260B	
LCS 600-221694/10	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-221694/1011	Lab Control Sample Dup	Total/NA	Solid	8260B	

General Chemistry

Analysis Batch: 221580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153982-2	MW42-NFP-13-15-09152017	Total/NA	Solid	2540B	
600-153982-3	MW42-NFP-20-21-09152017	Total/NA	Solid	2540B	
600-153982-4	MD07-NFP-20-21-09152017	Total/NA	Solid	2540B	
600-153982-5	MW42-NFP-30-31-09152017	Total/NA	Solid	2540B	
600-153982-6	MW42-NFP-40-41-09152017	Total/NA	Solid	2540B	
600-153982-3 DU	MW42-NFP-20-21-09152017	Total/NA	Solid	2540B	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Client Sample ID: TB08-NFP-09152017 — **Lab Sample ID: 600-153982-1**
Date Collected: 09/15/17 08:00 — **Matrix: Water**
Date Received: 09/16/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	221538	09/18/17 13:01	YX1	TAL HOU

Client Sample ID: MW42-NFP-13-15-09152017 — **Lab Sample ID: 600-153982-2**
Date Collected: 09/15/17 09:00 — **Matrix: Solid**
Date Received: 09/16/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221580	09/18/17 16:34	B1K	TAL HOU

Client Sample ID: MW42-NFP-13-15-09152017 — **Lab Sample ID: 600-153982-2**
Date Collected: 09/15/17 09:00 — **Matrix: Solid**
Date Received: 09/16/17 08:49 — **Percent Solids: 92.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.116 g	5 mL	221636	09/16/17 12:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221605	09/19/17 18:03	WS1	TAL HOU

Client Sample ID: MW42-NFP-20-21-09152017 — **Lab Sample ID: 600-153982-3**
Date Collected: 09/15/17 09:05 — **Matrix: Solid**
Date Received: 09/16/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221580	09/18/17 16:34	B1K	TAL HOU

Client Sample ID: MW42-NFP-20-21-09152017 — **Lab Sample ID: 600-153982-3**
Date Collected: 09/15/17 09:05 — **Matrix: Solid**
Date Received: 09/16/17 08:49 — **Percent Solids: 98.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			4.873 g	5 mL	221636	09/16/17 12:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221605	09/19/17 18:28	WS1	TAL HOU

Client Sample ID: MD07-NFP-20-21-09152017 — **Lab Sample ID: 600-153982-4**
Date Collected: 09/15/17 09:10 — **Matrix: Solid**
Date Received: 09/16/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221580	09/18/17 16:34	B1K	TAL HOU

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Kinder Morgan Bloomfield, NM NFP

TestAmerica Job ID: 600-153982-1

Client Sample ID: MD07-NFP-20-21-09152017 — **Lab Sample ID: 600-153982-4**
Date Collected: 09/15/17 09:10 — **Matrix: Solid**
Date Received: 09/16/17 08:49 — **Percent Solids: 98.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			4.908 g	5 mL	221636	09/16/17 12:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221605	09/19/17 18:52	WS1	TAL HOU

Client Sample ID: MW42-NFP-30-31-09152017 — **Lab Sample ID: 600-153982-5**
Date Collected: 09/15/17 09:15 — **Matrix: Solid**
Date Received: 09/16/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221580	09/18/17 16:34	B1K	TAL HOU

Client Sample ID: MW42-NFP-30-31-09152017 — **Lab Sample ID: 600-153982-5**
Date Collected: 09/15/17 09:15 — **Matrix: Solid**
Date Received: 09/16/17 08:49 — **Percent Solids: 93.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.063 g	5 mL	221636	09/16/17 12:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221694	09/20/17 13:31	WS1	TAL HOU

Client Sample ID: MW42-NFP-40-41-09152017 — **Lab Sample ID: 600-153982-6**
Date Collected: 09/15/17 10:45 — **Matrix: Solid**
Date Received: 09/16/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1			221580	09/18/17 16:34	B1K	TAL HOU

Client Sample ID: MW42-NFP-40-41-09152017 — **Lab Sample ID: 600-153982-6**
Date Collected: 09/15/17 10:45 — **Matrix: Solid**
Date Received: 09/16/17 08:49 — **Percent Solids: 85.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035_ASP			5.704 g	5 mL	221636	09/16/17 12:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	221694	09/20/17 13:55	WS1	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: CH2M Hill Constructors, Inc. TestAmerica Job ID: 600-153982-1
Project/Site: Kinder Morgan Bloomfield, NM NFP

Laboratory: TestAmerica Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-21	10-31-17
USDA	Federal		P330-17-00132	04-20-20

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica

Client Information	Sampler: Luke Hill	Lab PM: Upton, Cathy L	Carrier Tracking No(s):	COC No: 600-36947-10949.1
Client Contact: Aleeca Forsberg	Phone: 205-240-3235	E-Mail: cathy.upton@testamericainc.com		Page: Page 1 of 1
Company: CH2M Hill, Inc.				Job #:
Address: 3721 Rutledge Rd. NE Suite B-1	Due Date Requested:			
City: Albuquerque	TAT Requested (days): 10 BD Prelim; 14 BD Level3 Package (3e)			
State, Zip: NM, 87109				
Phone: 281-721-8546(Tel)	PO #: WD293112			
Email: Aleeca.Forsberg@CH2M.com	WO #:			
Project Name: Kinder Morgan Bloomfield, NM NFP	HOUSTON Project #: 60004617			
Site: BTEX Soils	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SOILS: 8260B_5035 - BTEX (SHORT HOLD-48HRs)	SOILS: Percent Moisture	WATERS: 8260B_LL - BTEX
			Preservation Code:		X	X	N	N	A
TB08-NFP-09152017	9/15/17	0800	G	Soil Water	N	N			X
MW42-NFP-13-15-09152017	9/15/17	0900	G	Soil	N	N	X	X	
MW42-NFP-20-21-09152017	9/15/17	0905	G	Soil	N	N	X	X	
MD07-NFP-20-21-09152017	9/15/17	0910	G	Soil	N	N	X	X	
MW42-NFP-30-31-09152017	9/15/17	0915	G	Soil	N	N	X	X	
MW42-NFP-40-41-09152017	9/15/17	1045	G	Soil	N	N	X	X	
			G	Soil					
			G	Soil					
			G	Soil					
			G	Soil					
			G	Water					

600-153982 Chain of Custody

Special Instructions/Note:
*** 48Hr Holding Time From Sample Collection

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
L Hill	9/15/17 1700	CH2M		9-16-17 849	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

Loc: 600

Sample R 153982 cklist

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Date/Time Received: _____

JOB NUMBER: _____ CLIENT: CARM 17SEP16 8:49

UNPACKED BY: _____ CARRIER/DRIVER: FE Sed

Custody Seal Present: ☒ YES ☐ NO Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
RW	Y / N	Y / N	2.4	549	-.3	2.1
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☐ YES ☐ NO

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☐ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		

COMMENTS:

HS-SA-WI-013 Rev. 3; 07/01/2014

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc. Job Number: 600-153982-1

Login Number: 153982 **List Source: TestAmerica Houston**
List Number: 1
Creator: Crafton, Tommie S

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 29497

CONDITIONS

Operator:	OGRID:
El Paso Natural Gas Company, L.L.C 1001 Louisiana Street Houston, TX 77002	7046
	Action Number: 29497
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Accepted for the record. See app ID 94607 for most updated status.	10/26/2022