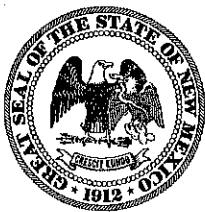


AP - 111

AOC - 35

2019



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

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CERTIFIED MAIL - RETURN RECEIPT REQUESTED



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

September 12, 2019

John Moore
Environmental Superintendent
Western Refining Southwest Inc., Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

**RE: APPROVAL WITH MODIFICATIONS
[REVISED] INVESTIGATION WORK PLAN AREA OF CONCERN 35
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID# NMD000333211
HWB-WRG-18-010**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *[Revised] Investigation Work Plan Area of Concern 35* (Work Plan), dated July 2019, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (Permittee) and hereby issues this Approval with Modifications. The Permittee must address the following comments.

Comment 1

In the responses to NMED's *Disapproval* Comments 1 and 3, the Permittee states, "[n]one required." Although no revision is required to the Work Plan to address these comments, these comments provide NMED's direction and still require the Permittee's compliance and response. The Permittee's response does not clearly express concurrence, but NMED assumes as such. The same comments were previously provided in the NMED's correspondence letters (e.g., Comment 1 in the NMED's *Approval with Modifications Investigation Report OW-14 Source Area*, dated August 19, 2019). Respond to future comments where there is concurrence with an acknowledgement.

Comment 2

In the response to NMED's *Disapproval* Comment 2, the Permittee states, "[t]he discussion in Section 2.1 has been revised to note the lack of documentation on final cleanup actions." Section 2.1 (Main Truck Loading Rack Area) states, "[n]o final documentation of the spill response for the December 2009 release has been located to determine if the spill response was fully completed." The intent of NMED's *Disapproval* Comment 2 was not limited to this specific incident; it was intended to point out the lack of follow up regarding the historic cleanup of releases. No response required.

Comment 3

In Section 2.5 (Prior Investigations) the Permittee states, "[o]n July 8, 2013, one pint of fluorescent FWT red dye was poured into a sump/drain at the second bay from the south end at the truck loading rack. After several minutes the red dye was observed in the sewer box located on the west side of the bundle cleaning pad, confirming the flow of the drain from the truck rack to the north in the main process sewer pipeline. A second pint of the same red dye was added to the same sewer box on the west side of the bundle pad. The excavations at the hydrocarbon seep area (located west of the crude tanks) were inspected each day afterward and on the 8th day, July 16, 2018, red dye as identified in one of the excavations." There appears to be a typographical error, confirm that the dates are accurate in a response letter.

Comment 4

In the response to NMED's *Disapproval* Comment 6, the Permittee states, "[t]he water levels to which NMED refers are the water levels that exist under confined conditions at MKTF-17 and MKTF-18 and are not necessarily reflective of water levels in the upper fill materials... The anticipated well depth of 10 feet at the two new wells is based on the bottom of the fill being at 8 feet bgl in MKTF-17 and 10 feet bgl in MKTF-18..." NMED provided a comment regarding these MKTF wells in the letter dated August 23, 2019 *Second Disapproval Response to Disapproval Work Plan 2015 Annual Groundwater Report Comments*, Comment 10. The comment stated, "[t]he Permittee suggests there are two separate water bearing zones within 20 feet bgs; however, it is likely that the two-separate water bearing zones are hydraulically connected. If the Permittee installs wells that are screened to only ten feet bgs as proposed, the wells may not produce sufficient groundwater. Propose to install replacement wells with comparable depths to the original wells with longer screens that intersect the water table in the revised Work Plan." The saturation observed in the upper fill likely originates from the sandy clay/clayey sand layer beneath the clay layer. According to the boring logs in Appendix A, the clay layer is moist throughout the soil column, suggesting that the layer may not be completely confining but permeable or leaky. Therefore, if the Permittee installs wells that are screened to ten feet bgs as proposed, the wells may not produce sufficient groundwater. Install replacement wells with comparable depths to the original wells, with longer screens that intersect the water table.

Comment 5

In the response to NMED's *Disapproval* Comment 6, the Permittee states, "[t]he text in Section 4.1 is revised to clarify these wells will likely be installed under the Investigation Work Plan for the Up-Gradient MKTF wells, as that work plan has already been approved and field work is scheduled to start on July 30, 2019." NMED approved the *Investigation Work Plan Up-Gradient MKTF Wells* in a letter dated March 7, 2019; however, NMED did not approve the well installation method described in the response letter. Comment 2 in the *Approval with Modifications* states, "Section 4.2.1, Drilling Activities, page 4-3, states that slotted (0.01 inch) PVC well screen will be placed in the borings and will extend for 10 feet, unless a longer screen length is necessary to screen across all saturated and likely transmissive zones while also extending above the static water level in the well. In order to accommodate the decreasing trend of groundwater elevations in recent years, a longer screened interval (e.g., 20-foot screen) may be more appropriate for the proposed wells." Section 4.2.1 reads, "[a]ppropriate actions (e.g., installation of protective surface casing or relocation of borings to a less threatening location) will be taken to minimize any negative impacts from investigative borings. Slotted (0.01 inch) PVC well screen will be placed at the bottom of the borings at the two permanent wells and will extend for a maximum of 10 feet." The Permittee implied that ten feet or longer screens would be installed to intersect the water table but did not indicate that the total depth of the wells would be ten feet below ground surface (bgs) or less. The Permittee's statement was unclear and NMED did not intend to approve the work plan without modification, if the total depth of these wells were proposed to be less than ten feet bgs. The Permittee must not reference this approval to justify the proposed well installation method. Additionally, if these wells were already installed to the depths that only screen across the upper fill and did not produce sufficient water, these wells must be replaced. If these wells have already been installed, provide a status for whether the wells produce sufficient water in the response letter.

Comment 6

In the response to NMED's *Disapproval* Comment 10, the Permittee states, "[n]itrate and nitrite has been added to the listed analyses in Section 4.6." Refer to Comment 9 in the NMED's *Approval with Modifications Response to Disapproval Annual Groundwater Monitoring Report: Gallup Refinery – 2017*, dated August 23, 2019. The Permittee must conduct separate nitrate and nitrite analyses.

Comment 7

In the response to NMED's *Disapproval* Comment 12, the Permittee states, "[a]s noted above, we have added two an [sic] additional boring[s] along the pipeline rack to the south of MKTF-16." Only one proposed soil boring location along the pipeline rack to the south of MKTF-16 is shown on Figure 6 (Proposed Sampling Locations). Provide a revised figure that shows the other location along the pipeline rack to the south of MKTF-16.

Comment 8

In the Executive Summary the Permittee states, “[t]his investigation will focus on identification of potential source areas that have in the past or are continuing to contribute to the observed impacts to groundwater. Twenty-five soil borings are proposed to evaluate the presence of source areas.” In the Introduction the Permittee states, “[t]he purposes of this investigation are to: determine the source of the elevated concentrations of petroleum hydrocarbon constituents (e.g., BTEX) and MTBE detected in groundwater samples collected from the MKTF wells in the area of AOC 35; and evaluate the groundwater quality in the shallow perched zone that has been observed in MKTF-7, - 17 and -18 at the base of the surficial fill material.” The Permittee is also investigating potential migration pathways and will begin to define the extent of contaminant migration from the source areas.

Comment 9

In Section 4.1 (AOC 35 Investigation) the Permittee states, “[t]wo new shallow monitoring wells are proposed; one adjacent to existing monitoring well MKTF-17 and the second near MKTF-18 ... Additional monitoring wells were requested at these locations in comments received from NMED on the 2015 Annual Groundwater Monitoring Report. A separate work plan (Investigation Work Plan Up-Gradient MKTF Wells dated January 2019) also contains provisions for the installation of shallow wells at the same locations. As the Investigation Work Plan Up-Gradient MKTF Wells was approved with modifications on March 7, 2019, it likely these two wells will be installed under the Up-Gradient MKTF Wells Work Plan.” Ensure that the information regarding the wells is reported in both reports for consistency. At some point it may make sense to integrate the groundwater information gathered through individual investigations into an all-inclusive report regarding groundwater conditions at the facility.

Comment 10

In Section 4.2.1 (Drilling Activities) the Permittee states, “[d]ue to physical access limitations (e.g., near the tank water draws) and high traffic concerns in other locations, the soil borings will be completed using hand augers or a geo-probe using a macrocore for shallow intervals, converting to dual tube for deeper intervals. Both soil and groundwater samples can be collected using the dual tube technology.” During a meeting on August 14, 2019 it was discussed that the drilling planned in high traffic areas may be able to be completed during the Facility’s turnaround period. If other methods of drilling and sampling are used because access to the area is not an issue, discuss any changes in the investigation report.

Mr. Moore
September 12, 2019
Page 5

This approval is based on the information presented in the document as it relates to the objectives of the work identified by NMED at the time of review. Approval of this document does not constitute agreement with all information or every statement presented in the document.

If you have any questions regarding this letter, please contact Kristen Van Horn at (505) 476-6046.

Sincerely,



John E. Kielling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
K. Van Horn, NMED HWB
M. Suzuki, NMED HWB
C. Chavez, EMNRD OCD
L. King, EPA Region 6 (6LCRRC)
B. Moore, Marathon

File: WRG 2019 and Reading
HWB-WRG-18-010



**Marathon
Petroleum Company LP**

July 26, 2019

Mr. John E. Kieling, Chief
New Mexico Environmental Department
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87505-6303

**RE: Response to Disapproval
Investigation Work Plan Area of Concern 35
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest, Inc.)
EPA ID# NMD000333211
HWB-WRG-18-010**

Dear Mr. Kieling:

Marathon Petroleum Company LP (dba Western Refining Southwest, Inc.) Gallup Refinery is submitting the enclosed responses to your comments dated January 31, 2019 on the referenced Investigation Work Plan. The Investigation Work Plan has been revised per your comments and enclosed for your review. If there are any questions, please call Brian Moore at 505-726-9745.

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,
Marathon Petroleum Company LP, Gallup Refinery

A handwritten signature in black ink that reads 'Robert S. Hanks'.

Robert S. Hanks
Refinery General Manager

Enclosure

cc K. Van Horn NMED
C. Chavez NMOCD
B. Moore Marathon Gallup Refinery

92 Giant Crossing Road
Jamestown, NM 87347

RESPONSE TO COMMENTS

January 31, 2019 Comments on AOC 35 Investigation Work Plan (August 2018)

NMED Comment 1:

The Permittee is careful to point out several times in the Work Plan that no waste material was historically handled at these units. The facility is not permitted to handle waste materials. These units and others listed in the Permittee's RCRA Permit under corrective action are listed because there is a history of handling material that may contain listed hazardous waste or hazardous constituents which have or may have, during the unit's use, been released to the environment.

MPC Response 1:

None required.

NMED Comment 2:

In the Background, Section 2.1 (Main Truck Loading Rack Area), the Permittee lists two recent releases and states, "[t]here have been documented releases at the loading rack that were discovered at the time of the release and addressed, including notification to the appropriate regulatory agencies." There is a historical lack of follow up regarding cleanup of releases; therefore, it is not always clear if or when releases were fully addressed. For instance, the release notification form for the December 23, 2009 release of ultra-low sulfur diesel from the leaking underground pipe at the west end of the main loading rack indicated that the release affected an adjacent field, stating, "[i]n further cleanup actions, contaminated soils will be excavated, confirmatory environmental samples will be collected and analyzed, and all contaminated materials will be disposed offsite in accordance with applicable regulations." There was no report that provided information on soil disposal or confirmation sampling related to this release. Revise this section to more accurately describe the cleanup or lack thereof of releases.

MPC Response 2:

The discussion in Section 2.1 has been revised to note the lack of documentation on final cleanup actions.

NMED Comment 3:

Section 2.3 (Additive Tank Farm Loading Rack) states that methyl tert butyl ether (MTBE) is not and has not been stored in these tanks. Based on Figure 5 (MTBE Concentration Map March 2015) the greatest concentration of MTBE in groundwater appears to be near the Additive Tank Farm/Loading Rack and the Main Truck Loading Rack. Since MTBE was added to fuel as an anti-knocking agent, it is likely that releases occurred at the Main Truck Loading Rack during fuel transfer. Units where fuel loading or unloading occurs can be a source of contaminants over time because of small releases or steady, but small leakage that can contaminate soils. Releases are not limited to tank leaks that may

contribute to releases to the environment. No revision necessary; however, when planning investigations, the Permittee must take into account that tanks are not the only potential contaminant source.

MPC Response 3:

None required.

NMED Comment 4:

The Permittee must revise the background section of the Work Plan to address the following:

- a) The Permittee must add a discussion regarding the state of the concrete pads at the units. Provide photographs of the concrete pads, as appropriate.
- b) The background section must include information regarding the results of the dye tracer study conducted as part of the Hydrocarbon Seep Interim Measures that included the truck rack.
- c) Additionally, the background section must reference information regarding the Sanitary Lagoon since the Permittee references this Work Plan in the Sanitary Lagoon Investigation Work Plan, dated October 2018 and states that the "Area A" referenced therein will be investigated as part of this Work Plan.
- d) The Permittee proposed to install three groundwater monitoring wells in the *Investigation Work Plan Up-gradient MKTF Wells*, dated August 2018. One of the proposed wells is located at the southern boundary of AOC 35. In the revised Work Plan, reference the work plan to indicate that a related groundwater investigation is concurrently proposed in the vicinity of AOC 35.

MPC Response 4:

Additional discussion has been added in the Background Section (page 2-2) to describe the concrete pads and a new Appendix D has been added for photos, results of the dye tracer study (pages 2-4 and 2-5) are included, and references to the Sanitary Lagoon Investigation Work Plan (page 2-5) and the Up-gradient MKTF Wells Investigation Work Plan (page 2-5) are included.

NMED Comment 5:

In Section 4.1 (AOC 35 Investigation) the Permittee states, "[t]wo new shallow monitoring wells are proposed; one adjacent to existing monitoring well MKTF-17 and the second near MKTF-18." The Permittee includes a similar proposal to install additional wells near MKTF-17 and MKTF-18 in the *Work Plan 2015 Annual Groundwater Report Comments*, dated October 2018; however, the proposed locations are different. Clarify if the

Permittee plans to install two sets of additional borings near the MKTF-17 and MKTF-18 wells or if one set can satisfy the requirements included in NMED's comments regarding the 2015 Groundwater Monitoring Report and for this Work Plan.

MPC Response 5:

There is only one set of wells proposed to address NMED's comments regarding both the 2015 Groundwater Monitoring Report and the AOC 35 Investigation Work Plan ("this Work Plan"). The objective is to drill shallow "twin" wells near existing wells MKTF-17 and MKTF-18, and the exact final location will not be known until the area is cleared of underground utilities. Additional text is added to Section 4.1 to address this question. It is also noted that the original Figure 6 included in the work plan showed some of the wells, including MKTF-17 and MKTF-18, shifted approximately 20 to 30 feet west of their actual location. Figures 2 and 6 are corrected to accurately show the locations of existing MKTF wells in the area of AOC 35.

NMED Comment 6:

In Section 4.1 (AOC 35 Investigation) the Permittee states, "[e]ach well will be screened in the upper-most saturated interval, which based on the borings logs from MKTF-17 and MKTF-18 should be encountered within 8 feet and 10 feet below ground level (bgl), respectively." Section 4.2.1 (Drilling Activities) also states that slotted (0.01 inch) PVC well screen will be placed at the bottom of the borings at the two permanent wells and will extend for a maximum of 10 feet. The 2017 depth-to-water (DTW) measurements indicate that the groundwater depths are deeper than nine feet below ground surface (bgs) in well MKTF-17. The well placed next to MKTF-17 must be installed deeper than ten feet bgs. Revise the Work Plan accordingly. In addition, all proposed wells must be installed to accommodate the decreasing trend in groundwater elevations in recent years (e.g., deeper total depths, longer screened intervals).

MPC Response 6:

The same comment was received from NMED on January 28, 2019 (Comment No. 9) regarding the Investigation Work Plan prepared to address comments on the 2015 Annual Groundwater Monitoring Report. The water levels to which NMED refers are the water levels that exist under confined conditions at MKTF-17 and MKTF-18 and are not necessarily reflective of water levels in the upper fill materials. The two initial wells were drilled through the fill materials and completed in the underlying confined interval with screens set at depths to prevent cross contamination between the fill materials and the silty clayey gravel that occurs at 22 feet bgl in MKTF-17 and the sandy clay/clayey sand that occurs at 23 feet in MKTF-18. The "anticipated" well depth of 10 feet at the two new wells is based on the bottom of the fill being at 8 feet bgl in MKTF-17 and 10 feet bgl in MKTF-18 and is not affected by fluctuating water levels in the lower confined unit (12 feet of confining clay in MKTF-17 and 13 feet in MKTF-18). The screen will be set to encounter the fill down to the top of the underlying clay and upward across and above the water table, while allowing some blank casing to complete the well and isolate from the land surface. The text in Section 4.1 is revised to clarify these wells will likely be installed

under the Investigation Work Plan for the Up-Gradient MKTF wells, as that work plan has already been approved and field work is scheduled to start on July 30, 2019.

NMED Comment 7:

In Section 4.2 (Soil Sample Field Screening and Logging) the Permittee states, "[d]iscrete soil samples will be retained for laboratory analyses from within the following intervals: 0.0-0.5 feet (at soil borings with evidence of impacts near the land surface);" The Permittee must collect surface soil samples even if there is no evidence of impacts. If the surface is covered with gravel, the Permittee must move the gravel and collect a sample from the surface directly below the gravel and note that gravel was removed to collect a surface soil sample.

MPC Response 7:

The text in Section 4.2 is revised to include collection of surface soil samples (0-0.5') for chemical analyses at each soil boring. If gravel or other materials, (e.g., asphalt or concrete) are present, then the materials will be removed before sample collection and this will be documented in the report.

NMED Comment 8:

The Permittee discusses drilling methods in Section 4 (Scope of Services), but does not include methods and procedures used for sample collection. For example, describe how soil samples obtained for laboratory analysis will be collected from the hand auger and from the macrocore or dual tube used for geoprobe sampling. Include this information in the revised Work Plan.

MPC Response 8:

Sample collection is discussed in Section 4.3.1, as part of the sampling handling procedures. The discussion has been revised to specifically address how samples are collected from the hand auger or other sample retrieval devices (e.g., macrocore, dual tube, or split-spoon samplers).

NMED Comment 9:

In Section 4.3 (Groundwater Sample Collection) the Permittee states, "[g]roundwater samples will be collected from the new monitoring wells within 24 hours of the completion of well purging using disposable hailers... Sample collection methods will be documented in the field monitoring reports." Prior to collection of groundwater samples for laboratory analyses, the Permittee must measure DTW and the total depths of each well, and collect field groundwater quality data (e.g., dissolved oxygen, pH, temperature, conductivity, redox potential, turbidity) during well purging. Include descriptions of the field procedures in the revised Work Plan.

MPC Response 9:

Additional text has been added to Section 4.3 and a new Appendix C added to provide more specific details on groundwater sample collection related activities.

NMED Comment 10:

In Section 4.6 (Chemical Analyses), the Permittee states, "[g]roundwater samples will also be analyzed for major anions (e.g., carbonate, bicarbonate, sulfate, fluoride and chloride)." The groundwater samples must also be analyzed for nitrate and nitrite because of potential wastewater discharges at the site. Include the nitrate and nitrite analyses for groundwater samples in the revised Work Plan.

MPC Response 10:

Nitrate and nitrite has been added to the listed analyses in Section 4.6.

NMED Comment 11:

So many of the MKTF wells contain separate phase hydrocarbons (SPH) that the representation of benzene and MTBE concentrations in Figure 4 (Benzene Concentration Map March 2015) and Figure 5 (MTBE Concentration Map March, 2015) may not be accurate. The Permittee recently indicated the SPH in wells has significantly decreased over time. Present concentration maps with updated SPH thickness and groundwater concentrations of benzene and MTBE in the revised Report for comparison.

MPC Response 11:

Updated maps showing SPH thickness and benzene and MTBE concentrations will be included in the Investigation Report.

NMED Comment 12:

In Figure 6 (Proposed Sampling Locations), many of the proposed soil boring locations are placed along an oily water drain line from the laboratory, what appears to be a drain line along the marketing tank farm tanks, and the sanitary sewer line. The Permittee must move some of the proposed borings to locations where transfers of materials occur. While leaks from the sewer system are a concern, releases from the units can occur from other points as well. For instance, at the Retail Tank Farm, the pipe rack to the east of the tanks could be a potential contaminant source, boring SB32/MKTF-16 exhibits a concentration of 19 mg/L of benzene, which appears to be one of the highest concentrations of benzene in groundwater and is located to the east of those racks. Revise the Work Plan to add or adjust proposed boring locations to account for sources other than the sewer system.

MPC Response 12:

Additional soil borings have been added in locations where "transfer of materials occur." The new locations are shown on Figure 6 and discussed in Section 4.1. These include an additional

boring on the southwest corner of the truck loading rack, and additional boring in the center of the area where the additive tanks are located, an additional boring west of the Crude and Ethanol Unloading Facility and two borings along the overhead piperack that goes to the main loading racks. We would note that many of the soil borings that NMED describes as being placed along an oily water drain line from the laboratory are actually also located adjacent to sumps at the truck loading rack. These sumps are considered one of the most likely locations for releases in this area and in fact dye tests have indicated a release at either one of these sumps or the drain line that connects the sumps. Also, NMED refers to MKTF-16 as having high concentrations of benzene and this is correct. We would note that MKTF-16 is actually located in the immediate vicinity of where the sewer pipeline was found to be leaking. As noted above, we have added two an additional boring along the pipeline rack to the south of MKTF-16.

Investigation Work Plan Area of Concern 35



**Marathon
Petroleum Company LP**

Gallup Refinery
Marathon Petroleum Company
Gallup, New Mexico

EPA ID# NMD000333211

AUGUST 2018

(Revised July 2019)

Scott Crouch
Senior Geologist



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Appendix B	Investigation Derived Waste Management Plan
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List of Acronyms

benzene, toluene, ethylbenzene, and xylene (BTEX)
Code of Federal Regulations (CFR)
Contract Laboratory Program (CLP)
data quality objective (DQO)
diesel range organics (DRO)
dilution attenuation factor (DAF)
Environmental Protection Agency (EPA)
investigation derived waste (IDW)
Maximum Contaminant Level (MCL)
mean sea level (msl)
monitoring well (MW)
motor oil range organics (MRO)
methyl tert butyl ether (MTBE)
New Mexico Administrative Code (NMAC)
New Mexico Environment Department (NMED)
New Mexico Oil Conservation Division (NMOCD)
photoionization detector (PID)
polynuclear aromatic hydrocarbon (PAH)
polyvinyl chloride (PVC)
quality assurance/quality control (QA/QC)
Resource Conservation and Recovery Act (RCRA)
separate-phase hydrocarbon (SPH)
semi-volatile organic compound (SVOC)
Solid Waste Management Unit (SWMU)
total petroleum hydrocarbon (TPH)
toxicity characteristic leaching procedure (TCLP)
volatile organic compound (VOC)

Executive Summary

The Gallup Refinery, which is located 17 miles east of Gallup, New Mexico, has been in operation since the 1950s. Pursuant to the terms and conditions of the facility Resource Conservation and Recovery Act (RCRA) Post-Closure Care Permit and 20.4.1.500 New Mexico Administrative Code, this Investigation Work Plan has been prepared for Area of Concern (AOC) 35. AOC 35 includes the main truck loading rack, crude slop and ethanol unloading facility, additive tank farm/loading rack, and the retail tank farm (Tanks 1 – 7, 912, 913, 1001, and 1002).

Groundwater samples collected from wells near the retail tank farm [also known as the marketing tank farm (MKTF)] (e.g., MKTF-07, -08, -09, -10, -16, and -18) have shown impacts from petroleum hydrocarbons, to include such constituents as benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tert butyl ether (MTBE) above screening levels. Similar impacts also extent to the south near the main truck loading racks as shown in groundwater samples collected from this area. This investigation will focus on identification of potential source areas that have in the past or are continuing to contribute to the observed impacts to groundwater. Twenty-five soil borings are proposed to evaluate the presence of source areas. Soil samples will be collected from each boring and a groundwater sample will be collected if groundwater is encountered. In addition, two shallow permanent monitoring wells will be installed to evaluate conditions in the perched groundwater zone previously identified on the western side of the main truck loading rack. The soil and groundwater samples will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), Skinner List metals, iron, and manganese. Groundwater samples will also be analyzed for major anions (e.g., carbonate, bicarbonate, sulfate, fluoride and chloride).

Section 1

Introduction

The Gallup Refinery is located approximately 17 miles east of Gallup, New Mexico along the north side of Interstate Highway I-40 in McKinley County. The physical address is I-40, Exit #39 Jamestown, New Mexico 87347. The Gallup Refinery is located on 810 acres. Figure 1 presents the refinery location and the regional vicinity.

The Gallup Refinery generally processes crude oil from the Four Corners area transported to the facility by pipeline or tanker truck. Various process units are operated at the facility, including crude distillation, reforming, fluidized catalytic cracking, alkylation, sulfur recovery, merox treater, and hydrotreating. Current and past operations have produced gasoline, diesel fuels, jet fuels, kerosene, propane, butane, and residual fuel.

This investigation work plan addresses AOC 35, which includes the main truck loading rack, crude slop and ethanol unloading facility, additive tank farm loading rack, and the retail tank farm (tanks 1 – 7, 912, 913, 1001, and 1002) (Figure 2). The purposes of this investigation are to:

- determine the source of the elevated concentrations of petroleum hydrocarbon constituents (e.g., BTEX) and MTBE detected in groundwater samples collected from the MKTF wells in the area of AOC 35; and
- evaluate the groundwater quality in the shallow perched zone that has been observed in MKTF-7, -17 and -18 at the base of the surficial fill material.

The investigation activities will be conducted in accordance with Section IV.H.5 of the Post-Closure Care Permit.

Section 2 Background

This section presents background information for the area of the refinery property near AOC 35, including a review of historical waste management activities to identify the following:

- Type and characteristics of all waste and all contaminants handled in the subject areas;
- Known and possible sources of contamination;
- History of operations; and
- Prior investigations.

2.1 Main Truck Loading Rack Area

The main truck loading rack is located in the southwestern area of the active portion of the refinery property (Figure 2). The main loading racks cover an area approximately 100 feet by 120 feet and it is used to load refined petroleum products (e.g., gasoline and diesel) into tanker trucks. The loading racks appear to have been in operation in this same location since at least 1962. There is no history of waste materials being handled at the loading racks.

There have been documented releases at the loading rack that were discovered at the time of the release and addressed, including notification to the appropriate regulatory agencies. On December 4, 2007, approximately 6,800 gallons of gasoline was spilled when a truck driver erroneously opened a valve on a tanker truck (Release Notification dated Dec. 7, 2007) and on December 23, 2009, approximately 44 barrels (1,848 gallons) of diesel fuel was spilled from a leaking underground pipeline at the west end of the loading rack (Release Notification dated Dec. 29, 2009). No final documentation of the spill response for the December 2009 release has been located to determine if the spill response was fully completed.

As part of the Interim Measures to address the Hydrocarbon Seep Area, which is located to the northwest of the main loading racks, new monitoring wells were installed near the loading racks. These wells are identified as the MKTF wells. In addition, during the field reconnaissance process to locate potential drilling locations near the main loading racks, an unidentified well was located to the west of the main loading racks and it was subsequently numbered as MKTF-45 (Figure 3). The well is measured as being 30.24 feet deep and has contained separate-phase hydrocarbon (SPH) since it

was first gauged in 2014. It appears the well was installed to help address historic releases near the main loading racks; however, no documentation of this has been found in site records despite repeated attempts to locate any information on the well. Well MKTF-36 was installed immediately down-gradient of the loading racks in November 2014 and SPH was identified while drilling the boring. Fluid level measurements for wells near AOC 35 are provided in Table 1. Boring logs for the nearby wells are provided in Appendix A. Chemical analyses of groundwater samples collected in the area of AOC 35 are summarized in Table 2. Figures 4 and 5 show the distribution of benzene and MTBE in groundwater, which appear to have a source in the vicinity of the main loading racks.

Underground piping near the main loading racks includes a sanitary sewer drain line running east to west to the north of the loading rack (Figure 6). In addition, there are oily water drain lines (process sewer) that run from the lab building to the loading rack and then the line continues to the north after picking up discharge from sumps located at the loading rack. The sumps collect small spills that may occur on the loading rack concrete apron and de minimis volumes of product that drained from loading hoses. The sump is no longer use to collect fluids from loading hoses and would only serve as an emergency drain in the case of a release during loading operations. The concrete pads are cracked, particularly in the areas near the sumps. Photographs are provided in Appendix D.

2.2 Crude Slop and Ethanol Unloading Facility

This facility is located approximately 80 feet northwest of the main loading racks and is used to unload recovered oil and transmix that may be reclaimed from various locations within the refinery. The area is also used to unload ethanol that is delivered to the refinery via truck. It was put into service sometime before the 1990s and is still in operation. The unloading area is approximately 15 feet by 40 feet and includes overhead pipelines and associated connections to support unloading operations. The concrete pad drains to a sump, which is connected to the process sewer (Figure 6). This concrete pad, which appears to be in good condition, was rebuilt approximately 10 years ago and photos are included in Appendix D

2.3 Additive Tank Farm Loading Rack

Petroleum product additives are stored in aboveground tanks at this location (Figure 2). These additive tanks are all small aboveground tanks located approximately 150 feet west of the main loading rack. The additive tanks were installed prior to 1997, but the exact date is uncertain. No wastes are managed and only products (i.e., fuel additives) are managed in this area. Methyl tert butyl ether (MTBE) is not and has not been stored in these tanks.

2.4 Retail Tank Farm

The retail tank farm is located approximately 150 feet northwest of the main loading racks and includes Tanks 1 – 7, 912, 913, 1001, and 1002 (Figure 2). Retail petroleum products (e.g., gasoline, diesel, and biodiesel) are stored in these tanks and MTBE was stored in Tank 6 prior to discontinuation of its use in 2006. Ethanol has been stored in Tank 6 since the use of MTBE was discontinued. The first tanks were constructed in 1963 and have had routine inspections both external and internal since construction. Details of the tanks size, materials, construction dates, etc. are provided in Table 3.

The fuels are delivered to the marketing tanks via pipelines that run primarily aboveground. Ethanol is unloaded at the adjacent ethanol unloading facility and transferred to Tanks 5 and 6 via aboveground lines. The fuels and additives (i.e., ethanol) are subsequently transferred to the main loading racks via aboveground pipelines where they are loaded into tanker trucks.

There have been documented releases at the marketing tank farm primarily from overfilling of the tanks. Two examples include:

- On December 31, 2007, approximately 32 barrels (1,344 gallons) of ethanol was spilled when a pressure gauge on Tank 5 became loose and began leaking (Release Notification dated Jan. 2, 2008); and
- On March 7, 2008, approximately 20 barrels (840 gallons) of diesel fuel was spilled during filling when the transfer pump did not switch off at the preselected level (Release Notification dated March 10, 2008).

2.5 Prior Investigations

The earliest investigation in the area is referenced in *Comprehensive Facility Investigation Work Plan* that was prepared for the NMOCD in June 1997 (Giant Refining Company, 1997). The work plan references “groundwater impact area #4” as being in the vicinity of the truck loading rack. It is stated that the source of the impact is a spill of hydrocarbon that occurred in the early 1980s. The area is further described as having residual hydrocarbons present at low levels and declining through natural biodegradation. No quantitative information could be located to substantiate the description of the conditions provided in the 1997 Work Plan.

As discussed above in Section 2.1, groundwater conditions in the vicinity of AOC 35 were recently investigated as part of the interim measures effort for the Hydrocarbon Seep Area (DiSorbo, 2016). Figure 6 shows the location of numerous monitoring wells (MKTF designation) in and around AOC 35. These wells are primarily screened across the contact of the Chinle Group (Petrified Forest Formation) that forms an aquitard and the overlying alluvial/fluvial deposits (Quaternary Alluvium). Groundwater samples collected from the existing MKTF wells have shown the presence of petroleum hydrocarbons, including constituents such as BTEX and related constituents (e.g., MTBE) at concentrations above screening levels. These analyses are summarized in Table 2. The distribution of these constituents as shown on Figures 3 and 4 indicates a source of groundwater contamination from within AOC 35.

The process sewer drain lines that are present in the area were also evaluated in the past to determine if they could be leaking. On July 8, 2013, one pint of fluorescent FWT red dye was poured into a sump/drain at the second bay from the south end at the truck loading rack. After several minutes the red dye was observed in the sewer box located on the west side of the bundle cleaning pad, confirming the flow of the drain from the truck rack to the north in the main process sewer pipeline. A second pint of the same red dye was added to the same sewer box on the west side of the bundle pad. The excavations at the hydrocarbon seep area (located west of the crude tanks) were inspected each day afterward and on the 8th day, July 16, 2013, red dye was identified in one of the excavations. The dye was not initially identified in the soil borings/temporary wells located south of the hydrocarbon seep and west of the marketing tanks, but only in the area where the seep was identified. During a later fluid gauging event on August 14th, dye was observed in SB-1 and SB-16. The presence of dye in groundwater in the area of the seep was interpreted as indicating a likely release from the sewer system and a possible preferential migration pathway to this area.

Two additional dye tests were conducted in the process sewer system with one pint of a yellow/green dye (Spectroline Oil-Glo 44G Fluorescent yellow/green) introduced into the sewer at the Crude Slop and Ethanol Unloading area (a short distance northwest of the main truck loading racks) on September 23, 2013 and one pint of a red dye (FWT red dye) introduced at the lab sinks on September 24, 2013. On September 25, 2013, green dye was detected in sump 1 at the hydrocarbon seep. A subsequent fluid level gauging event was conducted at the MKTF monitoring wells on September 26, 2013. The red dye was identified in five of the temporary wells [SB01 (MKTF-03), SB02, SB16 (MKTF-10), SB17 (MKTF-11), and SB22 (MKTF-14)], all of which are located just south of the road that runs east-west along the north side of the marketing tanks. The

green/yellow dye appeared to be present in nine wells [SB04, SB05, SB06 (MKTF-05), SB08 (MKTF-06), SB10 (MKTF-07), SB11 (MKTF-08), SB19 (MKTF-12), SB20 (MKTF-13), and SB21], which are all located further south, closer to the Crude Slop and Ethanol Unloading area. Although the dye tests were not conclusive, the separate patterns of the two dyes suggest the possibility of two separate release points from the sewer line.

The investigation being conducted under this Work Plan is referenced in the Investigation Work Plan prepared for the Sanitary Lagoon (DiSorbo 2019a). The sanitary sewer line that discharges into the Sanitary Lagoon crosses through AOC 35 and a number of soil borings are located specifically along the sanitary sewer to assess for any potential leaks. This explained in Sections 2.1 and 4.1.

An additional monitoring well is proposed to the south of the Main Truck Loading Rack and this well will be installed pursuant to the Investigation Work Plan for the Up-Gradient MKTF Wells (DiSorbo, 2019b).

Section 3

Site Conditions

3.1 Surface Conditions

Site topographic features include high ground in the southeast gradually decreasing to a lowland fluvial plain to the northwest. Elevations on the refinery property range from 7,040 feet to 6,860 feet. Surface soils within most of the area of investigation are primarily Rehobeth silty clay loam. Rehobeth soil properties include a pH ranging from 8 to 9 standard units and salinity (naturally occurring and typically measuring up to approximately 8 mmhos/cm).

Regional surface water features include the refinery evaporation ponds and a number of small ponds (one cattle water pond and two small unnamed spring fed ponds). The site is located in the Puerco River Valley, north of the Zuni Uplift with overland flows directed northward to the tributaries of the Puerco River. The Puerco River continues to the west to the confluence with the Little Colorado River. The South Fork of the Puerco River is intermittent and retains flow only during and immediately following precipitation events.

3.2 Subsurface Conditions

The shallow subsurface soils consist of fluvial and alluvial deposits comprised of clay and silt with minor inter-bedded sand layers. Very low permeability bedrock (e.g., claystones and siltstones) underlie the surface soils and effectively form an aquitard. The Chinle Group, which is Upper Triassic, crops out over a large area on the southern margin of the San Juan Basin. The uppermost recognized local Formation is the Petrified Forest Formation and the Sonsela Sandstone Bed is the uppermost recognized regional aquifer. Aquifer test of the Sonsela Bed northeast of Prewitt indicated a transmissivity of greater than 100 ft²/day (Stone and others, 1983). The Sonsela Sandstone's highest point occurs southeast of the site and slopes downward to the northwest as it passes under the refinery. The Sonsela Sandstone forms a water-bearing reservoir with artesian conditions throughout the central and western portions of the refinery property.

The diverse properties and complex, irregular stratigraphy of the surface soils across the site cause a wide range of hydraulic conductivity ranging from less than 10⁻² cm/sec for gravel like sands immediately overlying the Petrified Forest Formation to 10⁻⁸ cm/sec in the clay soils located near the surface (Western, 2009). Generally, shallow groundwater at the refinery follows the upper contact of

the Petrified Forest Formation with prevailing flow from the southeast to the northwest, although localized areas may have varying flow directions (Figure 3). Fluid level measurements for wells in the area of AOC 35 are included in Table 1.

Section 4

Scope of Services

The site investigation of soil and groundwater will be conducted to identify potential sources within the area of AOC 35. Additional shallow monitoring wells will be installed to evaluate a shallow perched zone identified to the west of the main loading rack. The investigation will commence upon approval of this investigation work plan by NMED.

4.1 AOC 35 Investigation

An investigation of soil and groundwater conditions in AOC 35 is proposed to determine the source of BTEX and MTBE that has been detected in groundwater samples collected from monitoring wells in the vicinity of AOC 35. The boring locations identified on Figure 6 were selected based on field reconnaissance to identify visibly stained soils, water drains at aboveground storage tanks, and sumps and related features where fluids are transferred (e.g., loading of petroleum fuels at the loading racks). In addition, borings are located along an underground sanitary sewer pipeline and underground oily water drain lines identified from site records.

All soil borings will be extended to the depth of refusal or to the top of bedrock, whichever occurs first. If saturation is encountered, then a groundwater sample will be collected.

Two new shallow monitoring wells are proposed; one adjacent to existing monitoring well MKTF-17 and the second near MKTF-18. Each well will be screened in the upper-most saturated interval, which based on the borings logs from MKTF-17 and MKTF-18 should be encountered within 8 feet and 10 feet below ground level (bgl), respectively. Additional monitoring wells were requested at these locations in comments received from NMED on the 2015 Annual Groundwater Monitoring Report. A separate work plan (Investigation Work Plan Up-Gradient MKTF Wells dated January 2019) also contains provisions for the installation of shallow wells at the same locations. As the Investigation Work Plan Up-Gradient MKTF Wells was approved with modifications on March 7, 2019, it likely these two wells will be installed under the Up-Gradient MKTF Wells Work Plan. Borings logs for MKTF-17 and MKTF-18 are included in Appendix A.

4.2 Soil Sample Field Screening and Logging

Samples obtained from the soil borings will be screened in the field on 2.0-foot intervals for evidence of contaminants. Field screening results will be recorded on the exploratory boring logs. Field screening results will be used to aid in the possible selection of soil samples for laboratory analysis. The primary screening methods include: (1) visual examination, (2) olfactory examination, and (3) headspace vapor screening for volatile organic compounds.

Visual screening includes examination of soil samples for evidence of staining caused by petroleum-related compounds or other substances that may cause staining of natural soils such as elemental sulfur or cyanide compounds. Headspace vapor screening targets volatile organic compounds and involves placing a soil sample in a plastic sample bag or a foil sealed container allowing space for ambient air. The container will be sealed and then shaken gently to expose the soil to the air trapped in the container. The sealed container will be allowed to rest for a minimum of 5 minutes while vapors equilibrate. Vapors present within the sample bag's headspace will then be measured by inserting the probe of the instrument in a small opening in the bag or through the foil. The maximum value and the ambient air temperature will be recorded on the field boring or test pit log for each sample.

The monitoring instruments will be calibrated each day to the manufacturer's standard for instrument operation. A photoionization detector (PID) equipped with a 10.6 or higher electron volt (eV) lamp or a combustible gas indicator may be used for VOC field screening. Field screening results may be site- and boring-specific and the results may vary with instrument type, the media screened, weather conditions, moisture content, soil type, and type of contaminant, therefore, all conditions capable of influencing the results of field screening will be recorded on the field logs.

Discrete soil samples will be retained for laboratory analyses from within the following intervals:

- 0.0-0.5 feet (at all soil borings);
- 2.0-2.5 feet or the top of native soil if identifiable (at all soil borings);
- > 2.0 feet (from the interval in each soil boring with the greatest apparent degree of contamination, based on field observations and field screening);
- From the bottom of each borehole (all soil borings);
- From the 0.5 foot interval at the top of saturation (applicable only to borings that reach saturation); and

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- Any additional intervals as determined based on field screening results.

The physical characteristics of the samples (such as mineralogy, ASTM soil classification, moisture content, texture, color, presence of stains or odors, and/or field screening results), depth where each sample was obtained, method of sample collection, and other observations will be recorded in the field log by a qualified geologist or engineer. Detailed logs of each boring will be completed in the field by a qualified engineer or geologist. Additional information, such as the presence of water-bearing zones and any unusual or noticeable conditions encountered during drilling, will be recorded on the logs.

Quality Assurance/Quality Control (QA/QC) samples will be collected to monitor the validity of the soil sample collection procedures as follows:

- Field duplicates will be collected at a rate of 10 percent; and
- Equipment blanks will be collected from all sampling apparatus at a frequency of one per day.

4.2.1 Drilling Activities

Due to physical access limitations (e.g., near the tank water draws) and high traffic concerns in other locations, the soil borings will be completed using hand augers or a geo-probe using a macrocore for shallow intervals, converting to dual tube for deeper intervals. Both soil and groundwater samples can be collected using the dual tube technology. The two new permanent wells will be installed using hollow-stem augers. The drilling equipment will be properly decontaminated before drilling each boring. The NMED will be notified as early as practicable if conditions arise or are encountered that do not allow the advancement of borings to the specified depths or at planned sampling locations. Appropriate actions (e.g., installation of protective surface casing or relocation of borings to a less threatening location) will be taken to minimize any negative impacts from investigative borings. Slotted (0.01 inch) PVC well screen will be placed at the bottom of the borings at the two permanent wells and will extend for a maximum of 10 feet. A 10/20 sand filter pack will be installed to a minimum of one foot over the top of the well screen.

4.3 Groundwater Sample Collection

Groundwater samples shall initially be obtained from newly installed monitoring wells between ten and 30 days after completion of well development. Well development and purging prior to sample collection will be in accordance with procedures described in Appendix C. Prior to collection of

groundwater samples for laboratory analyses, the fluid levels and the total depths of each well will be measured.

Groundwater samples will be collected from the new monitoring wells within 24 hours of the completion of well purging using disposal bailers. Alternatively, well sampling may also be conducted in accordance with the NMED's Position Paper *Use of Low-Flow and other Non-Traditional Sampling Techniques for RCRA Compliant Groundwater Monitoring* (October 30, 2001, as updated). Sample collection methods will be documented in the field monitoring reports. The samples will be transferred to the appropriate, clean, laboratory-prepared containers provided by the analytical laboratory. Sample handling and chain-of-custody procedures will be in accordance with the procedures presented below in Section 4.4.1.

Groundwater samples intended for metals analysis will be submitted to the laboratory as both total and dissolved metals samples. QA/QC samples will be collected to monitor the validity of the groundwater sample collection procedures as follows:

- Field duplicate water samples will be obtained at a frequency of ten percent, with a minimum, of one duplicate sample per sampling event;
- Equipment rinsate blanks will be obtained for chemical analysis at the rate of ten percent or a minimum of one rinsate blank per sampling day. Equipment rinsate blanks will be collected at a rate of one per sampling day if disposable sampling equipment is used. Rinsate samples will be generated by rinsing deionized water through unused or decontaminated sampling equipment. The rinsate sample will be placed in the appropriate sample container and submitted with the groundwater samples to the analytical laboratory for the appropriate analyses; and
- Trip blanks will accompany laboratory sample bottles and shipping and storage containers intended for VOC analyses. Trip blanks will consist of a sample of analyte-free deionized water prepared by the laboratory and placed in an appropriate sample container. The trip blank will be prepared by the analytical laboratory prior to the sampling event and will be kept with the shipping containers and placed with other water samples obtained from the site each day. Trip blanks will be analyzed at a frequency of one for each shipping container of groundwater samples to be analyzed for VOCs.

4.3.1 Sample Handling

At a minimum, the following procedures will be used at all times when collecting samples during investigation, corrective action, and monitoring activities:

1. Neoprene, nitrile, or other protective gloves will be worn when collecting samples. New disposable gloves will be used to collect each sample;
2. All samples collected of each medium for chemical analysis will be directly transferred from the sample retrieval device (e.g., macrocore, dual tube, split-spoon, hand auger, etc.) into clean sample containers supplied by the project analytical laboratory with the exception of soil, rock, and sediment samples obtained in Encore® samplers following EPA Method 5035. Sample container volumes and preservation methods will be in accordance with the most recent standard EPA and industry accepted practices for use by accredited analytical laboratories. Sufficient sample volume will be obtained for the laboratory to complete the method-specific QC analyses on a laboratory-batch basis; and
3. Sample labels and documentation will be completed for each sample following procedures discussed below. Immediately after the samples are collected, they will be stored in a cooler with ice or other appropriate storage method until they are delivered to the analytical laboratory. Standard chain-of-custody procedures, as described below, will be followed for all samples collected. All samples will be submitted to the laboratory soon enough to allow the laboratory to conduct the analyses within the method holding times.

Chain-of-custody and shipment procedures will include the following:

1. Chain-of-custody forms will be completed at the end of each sampling day, prior to the transfer of samples off site.
2. Individual sample containers will be packed to prevent breakage and transported in a sealed cooler with ice or other suitable coolant or other EPA or industry-wide accepted method. The drainage hole at the bottom of the cooler will be sealed and secured in case of sample container leakage. Temperature blanks will be included with each shipping container.
3. Each cooler or other container will be delivered directly to the analytical laboratory.
4. Glass bottles will be separated in the shipping container by cushioning material to prevent breakage.

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5. Plastic containers will be protected from possible puncture during shipping using cushioning material.
 6. The chain-of-custody form and sample request form will be shipped inside the sealed storage container to be delivered to the laboratory.
 7. Chain-of-custody seals will be used to seal the sample-shipping container in conformance with EPA protocol.
 8. Signed and dated chain-of-custody seals will be applied to each cooler prior to transport of samples from the site.
 9. Upon receipt of the samples at the laboratory, the custody seals will be broken, the chain-of-custody form will be signed as received by the laboratory, and the conditions of the samples will be recorded on the form. The original chain-of-custody form will remain with the laboratory and copies will be returned to the relinquishing party.
 10. Copies of all chain-of-custody forms generated as part of sampling activities will be maintained on-site.

4.4 Collection and Management of Investigation Derived Waste

Drill cuttings, excess sample material and decontamination fluids, and all other investigation derived waste (IDW) associated with soil borings will be contained and characterized using methods based on the boring location, boring depth, drilling method, and type of contaminants suspected or encountered. All purged groundwater and decontamination water will be characterized prior to disposal unless it is disposed in the refinery wastewater treatment system upstream of the API Separator. An IDW management plan is included as Appendix B.

Field equipment requiring calibration will be calibrated to known standards, in accordance with the manufacturers' recommended schedules and procedures. At a minimum, calibration checks will be conducted daily, or at other intervals approved by the Department, and the instruments will be recalibrated, if necessary. Calibration measurements will be recorded in the daily field logs. If field equipment becomes inoperable, its use will be discontinued until the necessary repairs are made. In the interim, a properly calibrated replacement instrument will be used.

4.5 Documentation of Field Activities

Daily field activities, including observations and field procedures, will be recorded in a field log book. Copies of the completed forms will be maintained in a bound and sequentially numbered field file for reference during field activities. Indelible ink will be used to record all field activities. Photographic

documentation of field activities will be performed, as appropriate. The daily record of field activities will include the following:

1. Site or unit designation;
2. Date;
3. Time of arrival and departure;
4. Field investigation team members including subcontractors and visitors;
5. Weather conditions;
6. Daily activities and times conducted;
7. Observations;
8. Record of samples collected with sample designations and locations specified;
9. Photographic log, as appropriate;
10. Field monitoring data, including health and safety monitoring;
11. Equipment used and calibration records, if appropriate;
12. List of additional data sheets and maps completed;
13. An inventory of the waste generated and the method of storage or disposal; and
14. Signature of personnel completing the field record.

4.6 Chemical Analyses

All samples collected for laboratory analysis will be submitted to an accredited laboratory. The laboratory will use the most recent standard EPA and industry-accepted analytical methods for target analytes as the testing methods for each medium sampled. Chemical analyses will be performed in accordance with the most recent EPA standard analytical methodologies and extraction methods.

Groundwater and soil samples will be analyzed by the following methods:

- SW-846 Method 8260 for volatile organic compounds;
- SW-846 Method 8270 for semi-volatile organic compounds; and
- SW-846 Method 8015B gasoline range (C5-C10), diesel range (>C10-C28), and motor oil range (>C28-C36) organics.

Groundwater and soil samples will also be analyzed for the following Skinner List metals and iron and manganese using the indicated analytical methods shown. The groundwater samples collected for metals analysis will be analyzed for total and dissolved concentrations. Groundwater samples will also be analyzed for major anions (e.g., carbonate, bicarbonate, sulfate, fluoride and chloride).

Inorganic Analytical Methods

Analyte	Analytical Method
Antimony	SW-846 method 6010/6020
Arsenic	SW-846 method 6010/6020
Barium	SW-846 method 6010/6020
Beryllium	SW-846 method 6010/6020
Cadmium	SW-846 method 6010/6020
Chromium	SW-846 method 6010/6020
Cobalt	SW-846 method 6010/6020
Cyanide	SW-846 method 335.4/335.2 mod
Lead	SW-846 method 6010/6020
Mercury	SW-846 method 7470/7471
Nickel	SW-846 method 6010/6020
Selenium	SW-846 method 6010/6020
Silver	SW-846 method 6010/6020
Vanadium	SW-846 method 6010/6020
Zinc	SW-846 method 6010/6020
Iron	SW-846 method 6010/6020
Manganese	SW-846 method 6010/6020
Nitrite	EPA method 300.0
Nitrate	EPA method 300.0

Groundwater field measurements will be obtained for pH, specific conductance, dissolved oxygen concentrations, oxidation-reduction potential, turbidity, and temperature.

4.7 Data Quality Objectives

The Data Quality Objectives (DQOs) were developed to ensure that newly collected data are of sufficient quality and quantity to address the project goals, including Quality Assurance/Quality Control (QA/QC) issues (EPA, 2006). The project goals are established to determine and evaluate the presence, nature, and extent of releases of contaminants at specified SWMUs. The type of data required to meet the project goals includes chemical analyses of soil and groundwater to determine if there has been a release of contaminants.

The quantity of data is location specific and is based on the historical operations at individual locations. Method detection limits should be 20% or less of the applicable background levels, cleanup standards and screening levels.

Additional DQOs include precision, accuracy, representativeness, completeness, and comparability. Precision is a measurement of the reproducibility of measurements under a given set of circumstances and is commonly stated in terms of standard deviation or coefficient of variation (EPA, 1987). Precision is also specific to sampling activities and analytical performance. Sampling precision will be evaluated through the analyses of duplicate field samples and laboratory replicates will be utilized to assess laboratory precision.

Accuracy is a measurement in the bias of a measurement system and may include many sources of potential error, including the sampling process, field contamination, preservation, handling, sample matrix, sample preparation, and analysis techniques (EPA, 1987). An evaluation of the accuracy will be performed by reviewing the results of field/trip blanks, matrix spikes, and laboratory QC samples.

Representativeness is an expression of the degree to which the data accurately and precisely represent the true environmental conditions. Sample locations and the number of samples have been selected to ensure the data is representative of actual environmental conditions. Based on SWMU specific conditions, this may include either biased (i.e., judgmental) locations/depths or unbiased (systematic grid samples) locations. In addition, sample collection techniques (e.g., field monitoring and decontamination of sampling equipment) will be utilized to help ensure representative results.

Completeness is defined as the percentage of measurements taken that are actually valid measurements, considering field QA and laboratory QC problems. EPA Contract Laboratory Program (CLP) data has been found to be 80-85% complete on a nationwide basis and this has been extrapolated to indicate that Level III, IV, and V analytical techniques will generate data that are approximately 80% complete (EPA, 1987). As an overall project goal, the completeness goal is 85%; however, some samples may be critical based on location or field screening results and thus a sample-by-sample evaluation will be performed to determine if the completeness goals have been obtained.

Comparability is a qualitative parameter, which expresses the confidence with which one data set can be compared to another. Industry standard sample collection techniques and routine EPA

analytical methods will be utilized to help ensure data are comparable to historical and future data. Analytical results will be reported in appropriate units for comparison to historical data and cleanup levels.

Section 5

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Tables

Table 1 Fluid Levels

Table 2 Groundwater Analytical Summary

Table 3 Marketing Tanks Records

Table 1
Fluid Level Measurements

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
11/07/13	01/21/14	MKTF-03	03/02/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	6.42	1.17	7.59	6,924.10	6925.04	3 - 18	Chinle/Alluvium Interface
			06/07/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	6.95	1.30	8.25	6,923.44	6924.48	3 - 18	Chinle/Alluvium Interface
			09/26/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	6.35	0.80	7.15	6,924.54	6925.18	3 - 18	Chinle/Alluvium Interface
			11/28/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	7.00	0.95	7.95	6923.74	6924.50	3 - 18	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-04	03/02/17	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.42	22.15	ND	NA	8.31	6,925.26	NA	10 - 22	Chinle/Alluvium Interface
			06/07/17	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.42	22.15	ND	NA	9.28	6,924.29	NA	10 - 22	Chinle/Alluvium Interface
			09/26/17	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.42	22.15	ND	NA	8.80	6,924.77	NA	10 - 22	Chinle/Alluvium Interface
			11/29/17	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.27	22.30	ND	NA	9.30	6,924.27	NA	10 - 22	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-05	03/02/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.33	0.29	13.62	6,928.60	6928.83	4 - 14	Chinle/Alluvium Interface
			06/07/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.79	0.46	14.25	6,927.97	6928.34	4 - 14	Chinle/Alluvium Interface
			09/26/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.01	0.49	13.50	6,928.72	6929.11	4 - 14	Chinle/Alluvium Interface
			11/28/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.98	0.77	14.75	6,927.47	6928.09	4 - 14	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-06	03/15/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	15.95	0.10	16.05	6,930.76	6930.84	8 - 20	Chinle/Alluvium Interface
			06/12/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.60	0.64	17.24	6,929.57	6930.08	8 - 20	Chinle/Alluvium Interface
			09/26/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.01	0.71	16.72	6,930.09	6930.66	8 - 20	Chinle/Alluvium Interface
			11/28/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.55	1.15	17.70	6,929.11	6930.03	8 - 20	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-07	03/15/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	10.63	1.97	12.60	6,934.58	6936.16	4 - 14	Chinle/Alluvium Interface
			06/12/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	10.20	1.30	11.50	6,935.68	6936.72	4 - 14	Chinle/Alluvium Interface
			09/26/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	9.80	1.30	11.10	6,936.08	6937.12	4 - 14	Chinle/Alluvium Interface
			11/28/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	10.40	1.40	11.80	6,935.38	6936.50	4 - 14	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-08	03/15/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	11.99	0.61	12.60	6,934.49	6934.98	8 - 18	Chinle/Alluvium Interface
			06/12/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	11.98	0.42	12.40	6,934.69	6935.03	8 - 18	Chinle/Alluvium Interface
			09/26/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	12.15	0.45	12.60	6,934.49	6934.85	8 - 18	Chinle/Alluvium Interface
			11/28/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	12.68	0.52	13.20	6,933.89	6934.31	8 - 18	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-09	03/15/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.80	22.70	ND	NA	12.64	6,933.86	NA	7 - 19	Chinle/Alluvium Interface
			06/12/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.80	22.70	ND	NA	12.64	6,933.86	NA	7 - 19	Chinle/Alluvium Interface
			09/28/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.80	22.70	ND	NA	12.69	6,933.81	NA	7 - 19	Chinle/Alluvium Interface
			11/29/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.75	22.75	ND	NA	13.15	6,933.35	NA	7 - 19	Chinle/Alluvium Interface
10/31/13	01/21/14	MKTF-10	03/02/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.47	6,929.69	NA	7 - 17	Chinle/Alluvium Interface
			06/07/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.02	6,930.14	NA	7 - 17	Chinle/Alluvium Interface
			09/27/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	6.78	6,930.38	NA	7 - 17	Chinle/Alluvium Interface
			11/29/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.00	6,930.16	NA	7 - 17	Chinle/Alluvium Interface

Table 1
Fluid Level Measurements

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
10/31/13	01/21/14	MKTF-11	03/02/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	6.96	6,924.38	NA	8 - 18	Chinle/Alluvium Interface
			06/07/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	7.39	6,923.95	NA	8 - 18	Chinle/Alluvium Interface
			09/26/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	6.70	6,924.64	NA	8 - 18	Chinle/Alluvium Interface
			11/29/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	8.00	6,923.34	NA	8 - 18	Chinle/Alluvium Interface
11/07/13	01/21/14	MKTF-12	03/15/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	17.75	0.06	17.81	6,924.30	6924.35	12 - 22	Chinle/Alluvium Interface
			06/07/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	18.60	0.19	18.79	6,923.32	6923.47	12 - 22	Chinle/Alluvium Interface
			10/03/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	17.30	0.13	17.43	6,924.68	6924.78	12 - 22	Chinle/Alluvium Interface
			11/27/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	18.43	0.13	18.56	6,923.55	6923.65	12 - 22	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-13	03/15/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	ND	NA	12.60	6,922.58	NA	8 - 18	Chinle/Alluvium Interface
			06/07/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	13.35	0.06	13.41	6,921.77	6921.82	8 - 18	Chinle/Alluvium Interface
			10/03/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	11.91	0.03	11.94	6,923.24	6923.26	8 - 18	Chinle/Alluvium Interface
			11/27/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	13.14	0.01	13.15	6,922.03	6922.04	8 - 18	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-14	03/08/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	5.77	0.98	6.75	6,921.27	6922.05	4 - 14	Chinle/Alluvium Interface
			06/07/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	6.68	0.84	7.52	6,920.50	6921.17	4 - 14	Chinle/Alluvium Interface
			10/03/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	5.70	0.41	6.11	6,921.91	6922.24	4 - 14	Chinle/Alluvium Interface
			11/27/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	6.56	0.37	6.93	6,921.09	6921.39	4 - 14	Chinle/Alluvium Interface
10/29/13	01/21/14	MKTF-15	03/02/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	12.15	6,931.33	NA	9 - 19	Chinle/Alluvium Interface
			06/07/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	11.93	6,931.55	NA	9 - 19	Chinle/Alluvium Interface
			09/26/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	12.00	0.10	12.10	6,931.38	6931.46	9 - 19	Chinle/Alluvium Interface
			11/29/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	12.13	6,931.35	NA	9 - 19	Chinle/Alluvium Interface
11/07/13	01/21/14	MKTF-16	03/14/17	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.48	14.10	ND	NA	7.45	6,943.13	NA	4 - 14	Chinle/Alluvium Interface
			06/07/17	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.48	14.10	ND	NA	7.66	6,942.92	NA	4 - 14	Chinle/Alluvium Interface
			09/26/17	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.48	14.10	ND	NA	8.00	6,942.58	NA	4 - 14	Chinle/Alluvium Interface
			11/28/17	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.48	14.10	ND	NA	8.22	6,942.36	NA	4 - 14	Chinle/Alluvium Interface
11/14/13	01/21/14	MKTF-17	03/08/17	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.65	24.11	ND	NA	8.20	6,937.56	NA	14 - 24	Chinle/Alluvium Interface
			06/14/17	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.65	24.11	ND	NA	9.98	6,935.78	NA	14 - 24	Chinle/Alluvium Interface
			09/26/17	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.65	24.11	ND	NA	9.33	6,936.43	NA	14 - 24	Chinle/Alluvium Interface
			11/30/17	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.11	24.65	ND	NA	13.68	6,932.08	NA	14 - 24	Chinle/Alluvium Interface
11/15/13	01/21/14	MKTF-18	03/01/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	7.81	6,942.84	NA	17 - 27	Chinle/Alluvium Interface
			06/14/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	6.30	6,944.35	NA	17 - 27	Chinle/Alluvium Interface
			09/27/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	6.35	0.02	6.37	6,944.28	6944.30	17 - 27	Chinle/Alluvium Interface
			11/30/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	6.29	0.01	6.30	6,944.35	6944.36	17 - 27	Chinle/Alluvium Interface
11/05/13	04/30/14	MKTF-19	03/08/17	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,927.20	17.47	ND	NA	9.82	6,934.85	NA	10 - 20	Chinle/Alluvium Interface
			06/14/17	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,927.20	17.47	ND	NA	10.58	6,934.09	NA	10 - 20	Chinle/Alluvium Interface
			09/26/17	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,927.20	17.47	ND	NA	11.00	6,933.67	NA	10 - 20	Chinle/Alluvium Interface
			11/30/17	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,926.47	18.20	ND	NA	11.70	6,932.97	NA	10 - 20	Chinle/Alluvium Interface
02/10/14	04/30/14	MKTF-20	03/14/17	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,941.89	9.89	ND	NA	5.70	6,946.08	NA	2 - 10	Chinle/Alluvium Interface
			06/12/17	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,941.89	9.89	ND	NA	5.57	6,946.21	NA	2 - 10	Chinle/Alluvium Interface
			09/26/17	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,941.89	9.89	ND	NA	6.23	6,945.55	NA	2 - 10	Chinle/Alluvium Interface
			11/28/17	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,942.20	9.58	ND	NA	6.53	6,945.25	NA	2 - 10	Chinle/Alluvium Interface

Table 1
Fluid Level Measurements

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
02/10/14	04/30/14	MKTF-21	03/14/17	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,942.68	9.89	ND	NA	5.50	6,947.07	NA	2 - 10	Chinle/Alluvium Interface
			06/21/17	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,942.68	9.89	ND	NA	5.09	6,947.48	NA	2 - 10	Chinle/Alluvium Interface
			09/26/17	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,942.68	9.89	ND	NA	5.69	6,946.88	NA	2 - 10	Chinle/Alluvium Interface
			11/28/17	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,943.76	8.81	ND	NA	6.25	6,946.32	NA	2 - 10	Chinle/Alluvium Interface
03/31/14	04/30/14	MKTF-34	03/01/17	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.67	27.68	ND	NA	16.50	6,928.85	NA	9 - 24	Chinle/Alluvium Interface
			06/14/17	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.67	27.68	ND	NA	17.63	6,927.72	NA	9 - 24	Chinle/Alluvium Interface
			09/26/17	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.67	27.68	ND	NA	17.62	6,927.73	NA	9 - 24	Chinle/Alluvium Interface
			11/30/17	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.65	27.70	ND	NA	18.03	6,927.32	NA	9 - 24	Chinle/Alluvium Interface
11/19/14	12/16/14	MKTF-35	03/01/17	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.20	16.45	ND	NA	6.18	6,945.47	NA	6 - 16	Chinle/Alluvium Interface
			06/14/17	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.20	16.45	ND	NA	7.12	6,944.53	NA	6 - 16	Chinle/Alluvium Interface
			09/27/17	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.20	16.45	ND	NA	7.70	6,943.95	NA	6 - 16	Chinle/Alluvium Interface
			11/30/17	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.20	16.45	ND	NA	8.15	6,943.50	NA	6 - 16	Chinle/Alluvium Interface
11/19/14	12/16/14	MKTF-36	03/01/17	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.67	15.45	ND	NA	5.56	6,944.56	NA	5 15	Chinle/Alluvium Interface
			06/14/17	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.67	15.45	ND	NA	5.40	6,944.72	NA	5 15	Chinle/Alluvium Interface
			09/27/17	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.67	15.45	ND	NA	5.80	6,944.32	NA	5 15	Chinle/Alluvium Interface
			11/30/17	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.67	15.45	ND	NA	6.45	6,943.67	NA	5 15	Chinle/Alluvium Interface
11/18/14	12/16/14	MKTF-37	03/01/17	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.27	24.60	ND	NA	6.90	6,951.97	NA	4 - 24	Chinle/Alluvium Interface
			06/14/17	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.27	24.60	7.20	0.04	7.24	6,951.63	6951.66	4 - 24	Chinle/Alluvium Interface
			09/27/17	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.27	24.60	7.83	0.06	7.89	6,950.98	6951.03	4 - 24	Chinle/Alluvium Interface
			11/30/17	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.27	24.60	8.39	0.02	8.41	6,950.46	6950.48	4 - 24	Chinle/Alluvium Interface
11/20/14	12/16/14	MKTF-38	03/14/17	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.60	20.29	ND	NA	6.41	6,948.48	NA	5 - 20	Chinle/Alluvium Interface
			06/21/17	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.60	20.29	ND	NA	6.40	6,948.49	NA	5 - 20	Chinle/Alluvium Interface
			09/28/17	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.60	20.29	ND	NA	6.32	6,948.57	NA	5 - 20	Chinle/Alluvium Interface
			11/30/17	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.60	20.29	ND	NA	7.83	6,947.06	NA	5 - 20	Chinle/Alluvium Interface
11/14/14	12/16/14	MKTF-39	03/14/17	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.55	15.20	ND	NA	6.44	6,947.31	NA	5 - 15	Chinle/Alluvium Interface
			06/08/17	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.55	15.20	ND	NA	6.25	6,947.50	NA	5 - 15	Chinle/Alluvium Interface
			09/28/17	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.55	15.20	ND	NA	7.32	6,946.43	NA	5 - 15	Chinle/Alluvium Interface
			11/28/17	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.57	15.18	ND	NA	7.55	6,946.20	NA	5 - 15	Chinle/Alluvium Interface
Pre-existing	12/16/14	MKTF-45	03/01/17	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.35	30.24	10.32	0.31	10.63	6,938.96	6939.21	Unknown	Chinle/Alluvium Interface
			06/14/17	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.35	30.24	11.50	0.50	12.00	6,937.59	6937.99	Unknown	Chinle/Alluvium Interface
			10/03/17	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.35	30.24	11.48	0.53	12.01	6,937.58	6938.00	Unknown	Chinle/Alluvium Interface
			11/30/17	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.35	30.24	12.76	0.47	13.23	6,936.36	6936.74	Unknown	Chinle/Alluvium Interface

DEFINITIONS:

DTB - Depth to Bottom

DTW - Depth to Water

ND - Not Dectected

NA - Not Applicable

SPH - Separate Phase Hydrocarbons

Negative number in Stick up Length column indicates well is flush mount and located at or below ground level

Depth to Water Column - if a measurement of 0.00 is indicated - means water level is at top of casing - Full.

Dry indicates no water was detected in the well.

NOTES:

1) Wells surveyed by a licensed professional surveyor-Hammon Enterprises, Inc. (HEI)

Table 1
Fluid Level Measurements

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
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2) "0" indicates no SPH level.

3) *Depth to SPH - Depth to Water Measurement = SPH Column Thickness.*

4) *Corrected Water Table Elevaton applies only if SPH thickness column measurement exists. (0.8 X SPH thickness + Groundwater Elevation)*

5) 10/3/17 - Samples collected after end of third quarter due to rain storms and monitor well accessibility

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (March 2017)			0.00455	1.09	0.015	0.193	0.143
EPA RSL for Tap Water (MAY 2016)			4.6E-04	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-4	11/2/2016	8260B	0.9	0.018	0.64	0.85	2.1
	9/11/2016	8260B	0.9	0.015	0.67	0.76	2.4
	6/9/2016	8260B	0.6	0.015	0.58	0.72	1.8
	2/29/2016	8260B	0.8	0.017	0.73	0.8	2.2
	11/3/2015	8260B	0.4	0.015	0.7	0.78	1.5
	8/18/2015	8260B	0.3	0.011	0.43	0.55	1.4
	6/4/2015	8260B	0.31	0.013	0.45	0.56	1.3
	3/16/2015	8260B	0.22	<0.01	0.26	0.34	1.2
	11/13/2014	8260B	0.18	<0.01	0.28	0.26	1.4
	9/15/2014	8260B	0.15	<0.005	0.14	0.14	1.4
	6/4/2014	8260B	0.67	0.019	0.57	0.68	1.8
	4/11/2014	8260B	1.0	0.025	0.8	1.0	2.4
MKTf-9	11/2/2016	8260B	1.6	0.026	0.21	0.052	0.5
	9/11/2016	8260B	2	0.03	0.22	0.059	0.62
	6/9/2016	8260B	1.4	0.029	0.21	0.056	0.53
	2/29/2016	8260B	1.6	0.029	0.24	0.064	0.69
	11/3/2015	8260B	1.5	0.036	0.23	0.07	0.63
	8/18/2015	8260B	1.2	0.035	0.2	0.063	0.6
	6/4/2015	8260B	0.89	0.025	0.15	0.039	0.43
	3/16/2015	8260B	0.49	0.013	0.08	0.018	0.5
	11/14/2014	8260B	0.81	0.033	0.15	0.11	0.77
	9/18/2014	8260B	0.75	0.027	0.096	0.043	0.76
	6/5/2014	8260B	1.3	0.052	0.2	0.098	1.2
	4/14/2014	8260B	1.1	0.038	0.14	0.075	1.2
MKTf-10	11/2/2016	8260B	17	22	1.7	8	<0.1
	9/11/2016	8260b	16	20	1.6	7.3	<0.1
	6/9/2016	8260B	15	22	1.7	8.9	0.018
	2/29/2016	8260B	11	23	1.7	7.7	<0.1
	11/3/2015	8260B	12	22	1.6	6.8	<0.05
	8/18/2015	8260B	9.2	19	1.5	6.5	<0.5
	6/4/2015	8260B	10	20	1.5	6.5	<0.05
	3/16/2015	8260B	11	21	1.6	6.8	<0.05
	11/14/2014	8260B	11	20	1.7	7.6	<0.02
	9/18/2014	8260B	11	15	0.93	4.0	<0.05
	6/6/2014	8260B	12	14	0.74	3.4	0.019
	4/11/2014	8260B	14	19	1.5	6.9	<0.05
MKTf-11	11/2/2016	8260B	3.9	4.5	0.52	1.6	0.071
	9/11/2016	8260B	4.5	4.8	0.53	1.6	0.081
	6/9/2016	8260B	4.5	5.8	0.57	1.8	0.078
	2/29/2016	8260B	5.1	6.4	0.67	2.2	0.12
	11/3/2015	8260B	11	13	0.96	3.9	0.056
	8/18/2015	8260B	3.7	4.2	0.5	1.5	0.082
	6/4/2015	8260B	12	13	1.2	4.9	0.041
	3/16/2015	8260B	10	11	0.93	3.7	0.048
	11/13/2014	8260B	9.5	8.2	0.77	2.3	0.08
	9/15/2014	8260B	9.5	7.1	0.72	2.0	0.083
	6/5/2014	8260B	12	7.8	0.75	2.2	0.096
	4/11/2014	8260B	15	7.6	0.93	2.2	0.15

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
Well ID	DATE SAMPLED	METHOD	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (March 2017)			0.00455	1.09	0.015	0.193	0.143
EPA RSL for Tap Water (MAY 2016)			4.6E-04	1.1	0.0015	0.19	0.014
MKTf-15	11/2/2016	8260B	20	16	2.1	7.6	0.099
	9/11/2016	8260B	24	16	2.0	7.3	0.096
	6/4/15 , 3/16/15	8260B	SPH DETECTED				
	9/17/2014	8260B	11	7.0	1.4	4.3	0.38
	6/5/2014	8260B	12	8.8	1.3	3.7	0.27
	4/10/2014	8260B	16	2.4	1.2	6.1	0.27
	11/1/2013	8021B	12	12	1.5	4.8	NA
MKTf-16	11/3/2016	8260B	19	0.22	0.88	3.4	0.97
	9/12/2016	8260B	23	0.24	1.3	4.3	1.7
	6/9/2016	8260B	16	0.34	1.1	3.6	1.4
	2/29/2016	8260B	19	0.28	1.0	3.9	1.4
	11/3/2015	8260B	28	0.62	1.7	6.6	1.7
	8/23/2015	8260B	24	0.64	1.4	5.6	2.1
	6/8/2015	8260B	23	1.3	1.4	5.3	2.0
	3/16/2015	8260B	19	0.45	1.4	5.4	1.6
	11/18/2014	8260B	20	1.2	1.3	5.8	1.4
	9/17/2014	8260B	17	1.4	1.2	5.3	2.1
	6/5/2014	8260B	18	3.7	1.7	8.1	2.0
	4/10/2014	8260B	11	7.5	1.1	3.6	0.27
	11/19/2013	8021B	9.9	8.2	1.9	9.8	NA
MKTf-17	11/8/2016	8260B	0.76	0.0019	0.39	0.0043	0.36
	9/13/2016	8260B	1.3	0.0021	0.55	<0.015	0.38
	6/10/2016	8260B	1.9	0.006	0.52	0.24	0.49
	2/26/2016	8260B	0.26	<0.005	0.018	0.023	0.64
	11/3/2015	8260B	0.029	<0.002	0.31	<0.003	0.77
	8/18/2015	8260B	0.036	0.0011	0.3	0.0018	0.64
	6/8/2015	8260B	0.011	<0.001	0.018	<0.0015	0.5
	3/12/2015	8260B	0.0028	<0.001	0.0059	<0.0015	0.59
	11/18/2014	8260B	0.14	<0.001	0.078	<0.0015	0.57
	9/18/2014	8260B	0.55	<0.01	0.24	<0.015	0.69
	6/6/2014	8260B	2.6	<0.01	0.48	0.068	1.1
	4/9/2014	8260B	3.5	<0.01	0.58	0.27	1.3
	11/13/2013	8021B	1.8	1.6	0.71	2.7	NA
MKTf-18	11/8/2016	8260B	0.016	0.0003	0.014	0.0008	0.081
	9/13/2016	8260B	0.016	0.0004	0.015	0.0013	0.074
	6/10/2016	8260B	0.016	0.0005	0.021	0.0025	0.092
	2/26/2016	8260B	0.017	0.0006	0.034	0.0056	0.071
	11/3/2015	8260B	0.019	<0.002	0.041	0.017	0.083
	8/18/2015	8260B	0.032	0.0016	0.054	0.019	0.1
	6/8/2015	8260B	0.05	0.0033	0.049	0.031	0.082
	3/17/2015	8260B	0.058	<0.005	0.017	0.029	0.091
	11/18/2014	8260B	0.096	0.0076	0.09	0.047	0.1
	9/18/2014	8260B	0.12	0.013	0.069	0.042	0.12
	6/6/2014	8260B	0.29	0.014	0.036	0.055	0.14
	4/14/2014	8260B	0.29	0.015	0.058	0.044	0.15
	11/19/2013	8021B	0.33	0.37	0.13	0.47	NA

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (March 2017)			0.00455	1.09	0.015	0.193	0.143
EPA RSL for Tap Water (MAY 2016)			4.6E-04	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-19	11/8/2016	8260B	1.3	0.0068	0.7	1.0	10
	9/13/2016	8260B	1.4	0.0075	0.69	0.92	8.9
	6/10/2016	8260B	1.5	0.0064	0.69	0.66	7.9
	2/25/2016	8260B	1.5	0.005	0.79	0.67	8.6
	11/3/2015	8260B	2.8	0.022	0.76	0.93	8.4
	8/18/2015	8260B	2.4	0.015	0.74	0.45	8.8
	6/8/2015	8260B	1.8	0.013	0.59	0.31	9.1
	3/12/2015	8260B	1.4	<0.01	0.43	0.15	9.7
	11/18/2014	8260B	2.3	<0.05	0.74	0.36	9.7
	9/24/2014	8260B	1.8	<0.05	0.73	0.76	11
	4/9/2014	8260B	1.4	<0.05	0.68	0.61	9.7
	11/5/2013	8021B	0.64	0.14	0.47	1.1	NA
MKTf-20 ¹	11/3/2016	8260B	13.0	0.4	1.1	9.2	0.19
	9/12/2016	8260B	18.0	0.48	1.3	8.8	0.16
	6/9/2016	8260B	11.0	0.39	0.85	7.9	0.16
	3/1/2016	8260B	13.0	0.47	1.1	9.2	0.13
	3/16/2015	8260B	7.0	2.3	0.089	9.6	<0.05
	11/18/2014	8260B	4.4	1.3	0.48	10	0.083
	4/11/2014	8260B	25	17	2.8	14	0.38
MKTf-21 ¹	11/3/2016	8260B	7.6	0.068	0.4	2.3	0.77
	9/12/2016	8260B	9.3	0.059	0.48	2.0	0.68
	6/9/2016	8260B	7.5	0.17	0.25	1.3	0.55
	3/1/2016	8260B	4.6	0.34	0.15	1.3	0.48
	6/10/2015	8260B	6.2	0.48	0.18	0.81	0.82
	3/16/2015	8260B	3.7	0.26	0.013	0.27	0.63
	4/11/2014	8260B	7.2	13	2.1	11	0.58
MKTf-34	11/8/2016	8260B	0.0001	<0.001	0.0002	<0.0015	0.001
	9/13/2016	8260B	<0.001	<0.001	<0.001	<0.0015	0.000
	6/10/2016	8260B	0.0005	<0.001	0.0003	<0.0015	0.001
	2/25/2016	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/3/2015	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/18/2015	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/8/2015	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/12/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/17/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/24/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
MKTf-35	4/9/2014	8260B	<0.002	<0.002	<0.002	<0.003	<0.002
	11/3/2016	8260B	0.065	0.0003	0.0550	0.0100	0.01
	9/13/2016	8260B	0.37	0.0005	0.0250	0.0110	0.012
	6/10/2016	8260B	0.067	0.0003	0.0120	0.0055	0.019
	2/26/2016	8260B	0.046	<0.005	0.0340	0.0045	0.02
	11/3/2015	8260B	0.19	<0.001	0.0390	0.0023	0.048
	8/18/2015	8260B	0.97	<0.005	0.1600	<0.0075	0.061
	6/4/2015	8260B	0.79	0.0023	0.1900	0.0021	0.027
	3/17/2015	8260B	0.47	0.0052	0.3200	0.1700	0.033
	11/21/2014	8260B	0.039	<0.001	0.052	0.073	0.066
MKTf-36	11/8/2016	8260B	8.4	0.021	1.3	0.13	6.0
	9/13/2016	8260B	SPH DETECTED				
	8/18/2015	8260B	9.0	0.033	1.6	0.064	8.0
	6/4/2015	8260B	8.1	0.034	1.6	0.14	8.4
	3/17/2015	8260B	8.3	0.023	1.4	0.078	8.3
	11/21/2014	8260B	8.4	0.032	1.5	0.56	7.2

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (March 2017)			0.00455	1.09	0.015	0.193	0.143
EPA RSL for Tap Water (MAY 2016)			4.6E-04	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-37	11/3/2016	8260B	0.96	0.012	0.014	0.84	0.03
	8/18/2015	8260B	0.76	0.14	0.024	1.6	0.05
	6/4/2015	8260B	1.2	0.058	0.017	0.93	0.054
	3/17/2015	8260B	0.82	0.27	0.029	0.49	0.057
	11/21/2014	8260B	0.14	0.2	0.009	1.3	0.027
MKTf-38	11/1/2016	8260B	0.0004	<0.001	<0.001	<0.0015	0.0010
	9/13/2016	8260B	0.0009	<0.001	<0.001	<0.0015	0.0006
	6/8/2016	8260B	0.0012	<0.001	<0.001	<0.0015	0.0052
	2/29/2016	8260B	0.0003	<0.001	<0.001	<0.0015	0.0006
	11/9/2015	8260B	0.0013	<0.001	<0.001	<0.0015	0.0043
	8/24/2015	8260B	0.0017	<0.001	<0.001	<0.0015	0.0073
	6/10/2015	8260B	0.0054	<0.001	<0.001	<0.0015	0.0076
	3/16/2015	8260B	0.0092	0.0180	<0.001	<0.0015	0.0060
MKTf-39	11/21/2014	8260B	0.0028	<0.001	0.0029	0.0031	0.0074
	11/1/2016	8260B	0.013	<0.005	0.059	<0.0075	<0.005
	9/13/2016	8260B	0.016	<0.005	0.06	<0.0075	<0.005
	6/8/2016	8260B	0.016	<0.001	0.061	7.E-03	4.E-04
	3/3/2016	8260B	0.019	<0.001	0.064	6.9E-04	<0.001
	11/9/2015	8260B	0.021	<0.001	0.064	<0.0015	<0.001
	8/23/2015	8260B	0.023	<0.001	0.06	1.6E-03	<0.001
	6/10/2015	8260B	0.025	<0.002	0.064	<0.003	<0.002
	3/16/2015	8260B	0.016	<0.002	0.039	<0.003	<0.002
	11/18/2014	8260B	0.02	<0.005	0.06	<0.0075	<0.005

DEFINITIONS

NE = Not established

NA = Not analyzed

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250.0	NE	10	600.0
40 CFR 141.62 MCL			NE	NE	NE	4.0	NE	1.0	10	NE
NMED Tap Water (March 2017)			0.0398	0.0398	0.0398	1.18	NE	1.97	31.6	NE
EPA RSL for Tap Water (MAY 2016)			NE	NE	NE	0.8	NE	2	32	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-4	11/2/2016	8015D/300.0	4.1	9.8	<5.0	1	180	<0.5	<0.5	6.1
	9/11/2016	8015D/300.0	5.3	10	<5.0	0.74	220	<1.0	<1.0	4.1
	6/9/2016	8015D/300.0	3.9	9	<5.0	0.79	250	<1.0	<1.0	7.0
	2/29/2016	8015D/300.0	3.6	9.2	<5.0	0.97	250	<1.0	<1.0	3.2
	11/3/2015	8015D/300.0	3.0	8.6	<5.0	0.96	300	<1.0	<1.0	3.0
	8/18/2015	8015D	3.7	6.8	<5.0	0.86	300	<0.1	<0.1	4.2
	6/4/2015	8015D	2.3	6.2	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	1.9	4.8	<5.0	NA	NA	NA	NA	NA
	11/13/2014	8015D/300.0	2.0	4.2	<5.0	<1.0	250	<1.0	<1.0	26
	9/15/2014	8015D	1.5	3.4	<5.0	NA	NA	NA	NA	NA
	6/4/2014	300.0/8015D	2.9	8.2	<5.0	0.7	0.19	<1.0	<1.0	6.8
4/11/2014	8015D	4.5	9.4	<5.0	NA	NA	NA	NA	NA	
MKTf-9	11/2/2016	300.0/8015D	1.6	7.8	<5.0	0.46	150	<0.5	<0.5	71
	9/11/2016	8015D/300.0	2.3	6.7	<5.0	0.26	160	<1.0	<1.0	57
	6/9/2016	300.0/8015D	1.7	7.8	<5.0	0.35	170	<1.0	<1.0	81
	2/29/2016	300.0/8015D	2.5	7.4	<5.0	0.47	170	<1.0	<1.0	70
	11/3/2015	300.0/8015D	5.3	9.8	<5.0	0.46	170	<0.1	<0.1	110
	8/18/2015	8015D/300.0	4.7	7.1	<5.0	0.43	170	<0.1	<0.1	130
	6/4/2015	8015D	1.8	4.1	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	<1.0	3.3	<5.0	NA	NA	NA	NA	NA
	11/14/2014	8015D/300.0	2.1	4.4	<5.0	<1.0	180	<1.0	<1.0	140
	9/18/2014	8015D	1.4	5.6	<5.0	NA	NA	NA	NA	NA
	6/5/2014	8015D/300.0	2.7	6.2	<5.0	0.43	180	<1.0	<1.0	78
4/14/2014	8015D	3.6	5.7	<5.0	NA	NA	NA	NA	NA	
MKTf-10	11/2/2016	300.0/8015D	3.8	100	<5.0	<0.05	230	<0.5	<0.5	<2.5
	9/11/2016	8015D/300.0	6	110	<5.0	<2.0	240	<1.0	<1.0	<2.5
	6/9/2016	300.0/8015D	8	110	<5.0	<2.0	260	<1.0	<1.0	0.4
	2/29/2016	300.0/8015D	14	110	<5.0	<2.0	280	<1.0	<1.0	<2.5
	11/3/2015	300.0/8015D	8	100	<5.0	<2.0	380	<0.5	<0.5	<2.5
	8/18/2015	8015D/300.0	55	130	<5.0	<5.0	390	<0.5	<0.5	<2.5
	6/4/2015	8015D	23	79	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	32	80	<5.0	NA	NA	NA	NA	NA
	11/14/2014	8015D/300.0	74	84	<50	270	260	<2.0	<2.0	<5.0
	9/18/2014	8015D	7.7	88	<5.0	NA	NA	NA	NA	NA
	6/6/2014 ¹	300.0/8015D	5.5	64	<5.0	NA	NA	NA	NA	NA
4/11/2014	8015D	5.9	88	<5.0	NA	NA	NA	NA	NA	
MKTf-11	11/2/2016	300.0/8015D	1.6	27	<5.0	<0.5	900	<0.5	<0.5	2.2
	9/11/2016	8015D/300.0	1.7	29	<5.0	<2.0	880	<1.0	<1.0	2.2
	6/9/2016	300.0/8015D	1.4	39	<5.0	<2.0	1000	<1.0	<1.0	2.2
	2/29/2016	300.0/8015D	1.5	42	<5.0	<0.5	1600	<1.0	<1.0	0.58
	11/3/2015	300.0/8015D	2.9	71	<5.0	<2.0	740	<0.5	<0.5	<2.5
	8/18/2015	8015D/300.0	1.6	36	<5.0	<2.0	1200	<2.0	<0.1	1.2

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250.0	NE	10	600.0
40 CFR 141.62 MCL			NE	NE	NE	4.0	NE	1.0	10	NE
NMED Tap Water (March 2017)			0.0398	0.0398	0.0398	1.18	NE	1.97	31.6	NE
EPA RSL for Tap Water (MAY 2016)			NE	NE	NE	0.8	NE	2	32	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-11	6/4/2015	8015D	2.8	71	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	2.6	55	<5.0	NA	NA	NA	NA	NA
	11/13/2014	8015D/300.0	1.8	35	<5.0	6.5	780	<1.0	<1.0	<5.0
	9/15/2014	8015D	1.8	57	<5.0	NA	NA	NA	NA	NA
	6/5/2014	8015D/300.0	2.6	48	<5.0	7.0	480	<1.0	<1.0	11
	4/11/2014	300.0/8015D	2.7	53	<5.0	NA	NA	NA	NA	NA
MKTf-15	11/2/2016	8015D/300.0	6.2	110	<5.0	<0.05	2800	<2.0	<0.5	<2.5
	9/11/2016	8015D/300.0	17		<5.0	<2.0	3100	<4.0	<4.0	<2.5
	9/17/2014	8015D	17	88	<5.0	NA	NA	NA	NA	NA
	6/5/2014	8015D/300.0	10	57	<5.0	<2.0	5200	<4.0	<4.0	1.2
	4/10/2014	8015D	4.1	71	<5.0	NA	NA	NA	NA	NA
	11/1/2013	8015D	2.4	65	<5.0	NA	NA	NA	NA	NA
MKTf-16	11/3/2016	300.0/8015D	3.3	70	<5.0	1.2	380	<0.5	<0.5	<2.5
	9/12/2016	300.0/8015D	3.5	62	<5.0	1.3	390	<1.0	<1.0	0.36
	6/9/2016	300.0/8015D	3	69	<5.0	NA	NA	NA	NA	NA
	2/29/2016	300.0/8015D	2.6	73	<5.0	1	710	<1.0	<1.0	0.068
	11/3/2015	300.0/8015D	3.1	91	<5.0	0.88	1000	<1.0	<1.0	<2.5
	8/23/2015	8015D/300.0	3.7	83	<5.0	0.66	1700	<1.0	<1.0	<2.5
	6/8/2015	8015D	4.3	69	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	2.9	61	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D/300.0	2.7	53	<5.0	1.5	700	<0.5	<0.5	<2.5
	9/17/2014	8015D	4.6	66	<5.0	NA	NA	NA	NA	NA
	6/5/2014	8015D/300.0	5.7	71	<5.0	1.1	540	<1.0	<1.0	<2.5
	4/10/2014	8015D	3.5	67	<5.0	NA	NA	NA	NA	NA
	11/19/2013	8015D	4.2	68	<5.0	NA	NA	NA	NA	NA
MKTf-17	11/8/2016	300.0/8015D	1.3	4.5	<5.0	0.77	64	<1.0	<1.0	45
	9/13/2016	300.0/8015D	1.6	7.5	<5.0	0.83	70	0.58	0.58	45
	6/10/2016	300.0/8015d	2.1	9.2	<5.0	NA	NA	NA	NA	NA
	2/26/2016	300.0/8015D	<1.0	1.6	<5.0	0.54	76	<1.0	<1.0	180
	11/3/2015	300.0/8015D	1.5	2.5	<5.0	0.61	78	<0.1	<0.1	120
	8/18/2015	8015D/300.0	1.1	1.7	<0.005	0.5	74	<0.1	<0.01	160
	6/8/2015	8015D	1.3	0.77	<5.0	NA	NA	NA	NA	NA
	3/12/2015	8015D	<1.0	0.8	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D/300.0	1.4	1.2	<5.0	0.66	84	<0.1	<0.1	200
	9/18/2014	8015D	1.5	3.3	<5.0	NA	NA	NA	NA	NA
	6/6/2014: 6/16/14	8015D/300.0	4.2	8.3	<5.0	0.61	98	<0.1	<0.1	60
	4/9/2014	8015D	2.6	8.6	<5.0	NA	NA	NA	NA	NA
	11/19/2013	8015D	5.8	17	<5.0	NA	NA	NA	NA	NA
MKTf-18	11/8/2016	300.0/8015D	1.7	0.6	<5.0	0.62	160	<1.0	<1.0	0.23
	9/13/2016	300.0/8015D	2.2	0.56	<5.0	0.67	170	<1.0	<1.0	0.34
	6/10/2016	8015D/300.0	1.9	0.71	<5.0	0.63	180	<1.0	<1.0	0.21
	2/26/2016	300.0/8015D	0.3	0.79	<5.0	0.64	160	<1.0	<1.0	0.26
	11/3/2015	300.0/8015D	2.5	1.3	<5.0	0.61	160	<0.1	<0.1	<0.5
	8/18/2015	8015D/300.0	34	1.3	<5.0	0.55	170	<0.1	<0.1	<0.5
	6/8/2015	8015D	3.3	1.4	<5.0	NA	NA	NA	NA	NA
	3/17/2015	8015D	5.4	1.8	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D/300.0	2.3	1.4	<5.0	0.68	160	<0.5	<0.5	<2.5
	9/18/2014	8015D	3.1	1.4	<5.0	NA	NA	NA	NA	NA
	6/6/2014	8015D/300.0	7.8	2.2	<5.0	0.65	170	<1.0	<1.0	0.95
	4/14/2014	8015D	4.4	2.2	<5.0	NA	NA	NA	NA	NA
	11/19/2013	8015D	11	4	<5.0	NA	NA	NA	NA	NA
MKTf-19	11/8/2016	300.0/8015D	6.7	26	<5.0	0.28	110	<1.0	<1.0	0.89
	9/13/2016	300.0/8015D	7.3	25	<5.0	0.34	130	<1.0	<1.0	0.57
	6/10/2016	8015D/300.0	7.2	21	<5.0	0.17	150	<1.0	<1.0	0.28
	2/25/2016	300.0/8015D	7.8	22	<5.0	0.24	150	<1.0	<1.0	<2.5
	11/3/2015	300.0/8015D	13	34	<5.0	<0.5	130	<0.5	<0.5	<2.5
	8/18/2015	8015D/300.0	27	20	<5.0	0.18	140	<0.1	0.17	<0.5
	6/8/2015	8015D	9.9	19	<5.0	NA	NA	NA	NA	NA
	3/12/2015	8015D	9.3	14	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D/300.0	13	20	<5.0	<0.5	110	<0.5	<0.5	<2.5
	9/24/2014	8015D	61	16	<5.0	NA	NA	NA	NA	NA
	4/9/2014	8015D	17	18	<5.0	NA	NA	NA	NA	NA
	11/5/2013	8015D	7.2	10	<5.0	NA	NA	NA	NA	NA

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
Well ID	DATE SAMPLED	METHOD	DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250.0	NE	10	600.0
40 CFR 141.62 MCL			NE	NE	NE	4.0	NE	1.0	10	NE
NMED Tap Water (March 2017)			0.0398	0.0398	0.0398	1.18	NE	1.97	31.6	NE
EPA RSL for Tap Water (MAY 2016)			NE	NE	NE	0.8	NE	2	32	NE
MKTf-20	11/3/2016	8015D	9.4	65	<5.0	2.6	1500	<0.5	<0.5	13
	9/12/2016	8015D/300.0	8.7	72	<5.0	2.1	370	<1.0	<1.0	1.2
	6/9/2016	8015D/300.0	9	63	<5.0	3.1	450	<1.0	<1.0	10
	3/1/2016	8015D	6.9	73	<5.0	NA	NA	NA	NA	NA
	6/8/2015	8015D	9.9	30	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	4.5	37	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D/300.0	24	45	<5.0	0.87	82	<0.5	<0.5	16
	4/11/2014	8015D	16	120	<5.0	NA	NA	NA	NA	NA
MKTf-21	11/3/2016	8015D/300.0	3.4	34	<5.0	0.91	110	<0.5	<0.5	3.9
	9/12/2016	8015D/300.0	3.9	28	<5.0	<0.5	81	<1.0	<1.0	19
	6/9/2016	8015D	3.9	32	<5.0	NA	NA	NA	NA	NA
	3/1/2016	8015D	3.6	24	<5.0	NA	NA	NA	NA	NA
	6/10/2015	8015D	Not enough water to collect for this set.							
	3/16/2015	8015D	3.8	16	<5.0	NA	NA	NA	NA	NA
	4/11/2014	8015D	27	78	<5.0	NA	NA	NA	NA	NA
MKTf-34	11/8/2016	300.0/8015D	<1.0	<0.05	<5.0	0.46	240	8.3	8.3	180
	9/13/2016	300.0/8015D	<1.0	0.033	<5.0	0.42	300	9.1	9.1	200
	6/10/2016	300.0/8015D	<1.0	<0.05	<5.0	0.52	370	7.7	7.7	130
	2/25/2016	300.0/8015D	<1.0	<0.05	<5.0	0.53	380	18	18	110
	11/3/2015	300.0/8015D	<1.0	<0.05	<5.0	0.46	370	<0.1	8.6	100
	8/18/2015	8015D/300.0	<1.0	<0.05	<5.0	0.44	350	<0.1	8.6	100
	6/8/2015	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	3/12/2015	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	11/17/2014	8015D/300.0	<1.0	<0.05	<5.0	0.54	400	6.6	6.6	73
	9/24/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	4/9/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
MKTf-35	11/3/2016	8015D/300.0	<1.0	1.7	<5.0	0.82	54	<1.0	<1.0	310
	9/13/2016	8015D/300.0	<1.0	2.0	<5.0	0.77	62	<1.0	<1.0	270
	6/10/2016	8015D/300.0	<1.0	1.4	<5.0	0.79	51	<1.0	<1.0	210
	2/26/2016	8015D/300.0	0.94	0.87	<5.0	0.45	65	<1.0	<1.0	99
	11/3/2015	8015D/300.0	2.8	1.5	<5.0	0.79	100	<0.1	<0.1	16
	8/18/2015	8015D/300.0	2.9	4.7	<5.0	0.73	110	<0.1	<0.1	20
	6/4/2015	8015D	2.3	2.9	<5.0	NA	NA	NA	NA	NA
	3/17/2015	8015D	6.0	3.7	<5.0	NA	NA	NA	NA	NA
	11/21/2014	8015D	3.3	1.6	<5.0	NA	NA	NA	NA	NA
MKTf-36	11/8/2016	8015D	11	40	<5.0	0.67	130	<1.0	<1.0	<2.5
	8/18/2015	8015D	14	39	<5.0	0.6	140	<0.5	<0.5	<2.5
	6/4/2015	8015D	13	30	<5.0	NA	NA	NA	NA	NA
	3/17/2015	8015D	10	38	<5.0	NA	NA	NA	NA	NA
	11/21/2014	8015D	6.8	25	<5.0	NA	NA	NA	NA	NA
MKTf-37	11/3/2017	8015D/300.0	9.3	13	<5.0	0.46	120	<1.0	<1.0	56
	6/4/2015	8015D	5.7	12	<5.0	NA	NA	NA	NA	NA
	3/17/2015	8015D	4.5	11	<5.0	NA	NA	NA	NA	NA
	11/21/2014	8015D	<1.0	8.7	<5.0	NA	NA	NA	NA	NA
MKTf-38	11/1/2016	8015D	<1.0	0.065	<5.0	0.82	200	0.14	8.8	320
	9/13/2016	8015D/300.0	<1.0	0.09	<5.0	0.73	260	5	5	330
	6/8/2016	8015D/300.0	<1.0	0.06	<5.0	0.7	270	9.9	9.9	360
	2/29/2016	8015D/300.0	<1.0	0.14	<5.0	0.75	110	7.2	7.2	450
	11/9/2015	8015D	<1.0	0.12	<5.0	0.91	210	<0.1	<0.01	400
	8/24/2015	8015D/300.0	<1.0	0.099	<5.0	0.69	210	<0.1	3.2	390
	6/10/2015	8015D	<1.0	0.2	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	<1.0	0.33	<5.0	NA	NA	NA	NA	NA
	11/21/2014	8015D	3.8	0.12	<5.0	NA	NA	NA	NA	NA

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250.0	NE	10	600.0
40 CFR 141.62 MCL			NE	NE	NE	4.0	NE	1.0	10	NE
NMED Tap Water (March 2017)			0.0398	0.0398	0.0398	1.18	NE	1.97	31.6	NE
EPA RSL for Tap Water (MAY 2016)			NE	NE	NE	0.8	NE	2	32	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-39	11/1/2016	8015D	17	0.36	<5.0	0.97	1300	<0.5	<0.5	<2.5
	9/13/2016	8015D/300.0	10	1.1	<5.0	0.26	1900	<2.0	<2.0	<10
	6/8/2016	8015D/300.0	19	0.67	<5.0	0.54	2300	<2.0	<2.0	0.21
	3/3/2016	8015D/300.0	13	0.46	<5.0	0.71	2900	<4.0	<4.0	4.2
	11/9/2015	8015D	23	0.44	<5.0	<2.0	6400	<2.0	<0.1	<0.5
	8/23/2015	8015D/300.0	13	0.93	<5.0	<0.5	9100	<4.0	<4.0	<2.5
	6/10/2015	8015D	44	0.44	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	6.2	0.21	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D	15	0.39	<5.0	NA	NA	NA	NA	NA

DEFINITIONS

NE = Not established

NA = Not analyzed

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

NOTES

1) No samples collected for General Chemistry - not enough water.

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - TOTAL METALS												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.00492	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	6.3E-04	0.06	6
Well ID	DATE SAMPLED	METHOD													
MKTf-4	11/2/2016	200.7/200.8	0.01	2.8	<0.002	<0.006	<0.006	4.6	0.0006	1.5	0.01	<0.005	<0.0002	0.004	0.006
	9/11/2016	200.7/200.8	0.01	3.4	<0.002	<0.006	<0.006	6.7	0.0030	1.5	0.014	<0.005	<0.0002	0.003	0.007
	6/9/2016	200.7/200.8	0.009	3.1	<0.002	<0.006	<0.006	6.2	0.0019	1.7	0.010	<0.005	<0.0002	0.005	0.016
	2/29/2016	200.7/200.8	0.008	3.0	<0.002	<0.006	<0.006	5.6	0.0036	1.5	0.004	<0.005	<0.0002	0.004	0.022
	11/3/2015	200.7/200.8	0.014	3.4	<0.002	<0.006	<0.006	16	0.0063	1.7	0.016	<0.005	<0.0002	0.002	0.012
	8/18/2015	200.7/200.8	0.0085	3.0	<0.002	<0.006	0.006	17	0.0170	1.9	<0.01	<0.005	<0.0002	0.004	0.025
	6/4/2015	200.7/200.8	0.0082	2.5	<0.002	0.009	<0.006	13	0.0097	1.9	<0.01	<0.005	<0.0002	0.005	0.017
	3/16/2015	200.7/200.8	<0.01	1.8	<0.002	0.009	0.012	11	0.022	2.5	0.016	<0.005	<0.0002	0.017	0.03
	11/13/2014	200.7/200.8	0.0079	1.9	<0.002	0.009	0.015	15	0.023	2.5	<0.05	<0.005	<0.0002	0.013	0.03
	9/15/2014	200.7/200.8	0.0060	2.0	<0.002	0.015	0.021	20	0.036	2.9	0.008	<0.005	<0.0002	0.02	0.044
	6/4/2014	200.7/200.8	0.0061	1.4	<0.002	0.009	0.013	7.9	0.013	2.1	0.013	<0.005	<0.0002	0.009	0.02
MKTf-9	11/2/2016	200.7/200.8	0.0028	0.47	<0.002	<0.006	<0.006	1.7	0.002	3.6	0.006	<0.005	<0.0002	0.007	0.003
	9/11/2016	200.7/200.8	0.0033	0.52	<0.002	<0.006	<0.006	2.3	0.002	3.8	0.007	<0.005	<0.0002	0.006	<0.01
	6/9/2016	200.7/200.8	0.0023	0.49	<0.002	<0.006	<0.006	2.1	0.002	3.6	0.005	<0.005	<0.0002	0.007	<0.01
	2/29/2016	200.7/200.8	0.0020	0.64	<0.002	<0.006	<0.006	4.0	0.004	4.2	0.002	<0.005	<0.0002	0.005	0.012
	11/3/2015	200.7/200.8	0.0045	0.71	<0.002	<0.006	<0.006	8.8	0.011	4.3	<0.05	<0.005	<0.0002	0.005	0.019
	8/18/2015	200.7/200.8	0.0042	0.81	<0.002	<0.006	8.9E-03	7.7	0.015	3.7	<0.005	<0.005	<0.0002	0.005	0.027
	6/4/2015	200.7/200.8	<0.005	0.34	<0.002	<0.006	<0.006	3.1	<0.005	3.0	<0.005	<0.005	<0.0002	0.008	<0.01
	3/16/2015	200.7/200.8	0.0029	0.22	<0.002	<0.002	<0.002	2.0	0.002	2.4	0.005	<0.005	<0.0002	0.014	0.01
	11/14/2014	200.7/200.8	<0.005	0.39	<0.002	<0.006	<0.006	4.5	0.005	2.7	<0.01	<0.005	<0.0002	0.010	0.013
	9/18/2014	200.7/200.8	<0.005	0.33	<0.002	<0.006	<0.006	2.4	<0.001	2.8	<0.005	<0.005	<0.0002	0.012	<0.01
	6/5/2014	200.7/200.8	<0.005	0.58	<0.002	<0.006	<0.006	6.7	0.006	3.8	0.007	<0.005	<0.0002	0.006	0.015
MKTf-10	11/2/2016	200.7/200.8	0.0096	6	<0.002	<0.006	<0.006	10	0.001	5.2	0.0049	<0.005	<0.0002	0.0009	0.0044
	9/11/2016	200.7/200.8	0.0083	11	<0.002	<0.006	<0.006	26	0.002	12	0.0058	<0.005	<0.0002	0.0012	0.0027
	6/9/2016	200.7/200.8	0.0060	13	<0.002	<0.006	<0.006	36	0.002	15	0.0033	<0.005	<0.0002	0.0008	0.0190
	2/29/2016	200.7/200.8	0.0086	16	<0.002	<0.006	<0.006	57	0.003	21	0.0020	<0.005	<0.0002	0.0015	0.0140
	11/3/2015	200.7/200.8	0.0059	14	<0.002	<0.006	<0.006	61	0.025	19	<0.05	<0.005	<0.0002	0.0019	0.0320
	8/18/2015	200.7/200.8	0.0380	15	<0.002	0.013	<0.006	64	0.58	22	<0.05	<0.005	0.0003	0.0630	0.4900
	6/4/2015	200.7/200.8	0.015	19	<0.002	0.077	0.1	120	0.19	24	<0.01	<0.005	<0.0002	0.0140	0.1500
	3/16/2015	200.7/200.8	0.019	22	<0.002	0.036	0.095	100	0.2	27	<0.01	<0.005	<0.0002	0.0190	0.1400
	11/14/2014	200.7/200.8	<0.04	45	<0.004	0.099	0.24	250	0.58	49	<0.04	<0.01	<0.0004	0.0520	0.3100
	9/18/2014	200.7/200.8	<0.005	12	<0.002	<0.006	<0.006	46	0.002	15	0.0032	<0.005	<0.0002	0.0013	<0.01
	6/6/2014	200.7/200.8	<0.005	7.7	<0.002	<0.006	<0.006	25	<0.005	9.5	0.0061	<0.005	<0.0002	<0.005	<0.01

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - TOTAL METALS												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.00492	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	6.3E-04	0.06	6
Well ID	DATE SAMPLED	METHOD													
MKTf-11	11/2/2016	200.7/200.8	0.014	2.7	<0.002	<0.006	<0.006	8.4	0.001	4.0	0.005	<0.005	<0.0002	0.007	0.017
	9/11/2016	200.7/200.8	0.013	2.9	<0.002	<0.006	<0.006	7.1	0.001	4.1	0.005	<0.005	<0.0002	0.007	0.012
	6/9/2016	200.7/200.8	0.012	3.4	<0.002	<0.006	<0.006	8.1	0.001	4.0	0.003	<0.005	<0.0002	0.009	0.016
	2/29/2016	200.7/200.8	0.013	3.9	<0.002	<0.006	<0.006	11	0.003	6.4	0.002	<0.005	<0.0002	0.005	0.018
	11/3/2015	200.7/200.8	0.008	3.8	<0.002	<0.006	<0.006	15	0.003	3.5	0.005	<0.005	<0.0002	0.001	0.017
	8/18/2015	200.7/200.8	0.009	2.4	<0.002	<0.006	<0.006	14	0.007	4.0	0.003	<0.005	<0.0002	0.003	0.024
	6/4/2015	200.7/200.8	0.006	2.7	<0.002	<0.006	<0.006	0.013	0.003	3.0	<0.005	<0.005	<0.0002	<0.0025	0.013
	3/16/2015	200.7/200.8	0.009	1.9	<0.002	<0.006	<0.006	10	0.007	3.1	0.006	<0.005	<0.0002	0.002	0.024
	11/13/2014	200.7/200.8	0.009	1.7	<0.002	<0.006	<0.006	5.8	<0.005	3.4	<0.005	<0.005	<0.0002	<0.005	0.012
	9/15/2014	200.7/200.8	0.007	1.4	<0.002	<0.006	<0.006	8.1	0.006	3.1	0.003	<0.005	<0.0002	0.006	0.021
6/5/2014	200.7/200.8	0.006	1.2	<0.002	6.1E-03	<0.006	8.8	0.010	2.8	0.006	<0.005	<0.0002	<0.005	0.038	
MKTf-15	11/2/2016	200.7/200.8	0.004	22	<0.002	<0.006	<0.006	34	0.006	6.8	6.9E-03	<0.005	<0.0002	<0.0025	0.28
	9/11/2016	200.7/200.8	0.002	23	<0.002	<0.006	<0.006	35	0.006	7.7	5.4E-03	<0.005	<0.0002	<0.0025	0.018
	9/17/2015	200.7/200.8	<0.005	29	<0.002	<0.006	<0.006	18	<0.01	9.8	<0.005	<0.005	<0.0002	<0.01	0.023
	6/5/2014	200.7/200.8	<0.01	25	<0.002	7.4E-03	<0.006	11	0.011	7.9	<0.01	<0.005	<0.0002	<0.005	0.017
MKTf-16	11/3/2016	200.7/200.8	0.015	0.67	<0.002	<0.006	3.8E-03	3.6	0.003	0.86	0.01	<0.005	<0.0002	7.7E-03	0.02
	9/12/2016	200.7/200.8	0.014	0.72	<0.002	<0.006	<0.006	4.6	0.003	0.96	0.014	<0.005	<0.0002	6.7E-03	0.022
	2/29/2016	200.7/200.8	9.2E-03	1.3	<0.002	<0.006	<0.006	6.5	0.003	1.8	4.9E-03	<0.005	<0.0002	6.6E-04	0.034
	11/3/2015	200.7/200.8	0.018	3.0	<0.002	<0.006	<0.006	13	0.003	3.9	0.021	<0.005	<0.0002	5.3E-04	0.023
	8/23/2015	200.7/200.8	0.014	3.9	<0.002	<0.006	<0.006	16	0.001	5.5	<0.02	<0.005	<0.0002	<0.0005	0.01
	6/8/2015	200.7/200.8	9.7E-03	2.2	<0.002	<0.006	9.1E-03	12	<0.0025	3.3	7.2E-03	<0.025	<0.0002	<0.0025	0.023
	3/16/2015	200.7/200.8	<0.01	1.0	<0.002	<0.006	0.023	7.2	<0.01	1.3	<0.02	<0.005	<0.0002	<0.01	0.035
	11/18/2014	200.7/200.8	0.01	1.1	<0.002	<0.006	<0.006	10	0.004	1.3	<0.05	<0.005	<0.0002	1.6E-03	0.05
	9/17/2014	200.7/200.8	0.012	0.8	<0.002	<0.006	<0.006	8.6	0.003	1.2	<0.01	<0.005	<0.0002	<0.001	0.034
	6/5/2014	200.7/200.8	0.023	0.9	<0.002	<0.006	0.008	7.9	<0.005	1.2	0.013	<0.005	<0.0002	0.015	0.089
MKTf-17	11/8/2016	200.7/200.8	6.4E-03	0.6	<0.002	<0.006	<0.006	1.9	0.001	2.8	0.003	<0.005	<0.0002	0.008	0.007
	9/13/2016	200.7/200.8	0.007	0.58	<0.002	<0.006	<0.006	3.3	0.003	2.8	0.004	<0.005	0.000	0.011	0.006
	2/26/2016	200.7/200.8	4.6E-03	0.12	<0.002	<0.006	<0.006	1.0	0.001	2.6	0.001	<0.005	<0.0002	0.018	0.006
	11/3/2015	200.7/200.8	0.02	12	<0.01	<0.006	<0.006	0.7	0.35	3.5	<0.02	<0.005	<0.0002	0.048	0.330
	8/18/2015	200.7/200.8	5.2E-03	0.2	<0.002	<0.006	9.7E-03	1.7	0.004	2.9	<0.005	<0.005	<0.0002	0.018	0.011
	6/8/2015	200.7/200.8	<0.005	0.24	<0.002	<0.006	<0.006	2.6	0.003	3.3	<0.005	<0.005	<0.0002	0.020	0.015
	3/12/2015	200.7/200.8	0.006	0.17	<0.002	<0.006	<0.006	1.8	0.002	3.1	0.002	<0.005	<0.0002	0.022	<0.01
	11/18/2014	200.7/200.8	0.005	0.21	<0.002	<0.006	<0.006	2.0	0.003	3.0	<0.01	<0.005	<0.0002	0.025	0.019
	9/18/2014	200.7/200.8	0.006	0.21	<0.002	<0.006	<0.006	1.8	0.002	3.3	0.002	<0.005	<0.0002	0.022	0.013
	6/16/2014	200.7/200.8	0.006	0.61	<0.002	0.013	0.012	10	0.022	4.1	0.005	<0.005	<0.0002	0.027	0.036

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - TOTAL METALS												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.00492	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	6.3E-04	0.06	6
Well ID	DATE SAMPLED	METHOD													
MKTf-18	11/8/2016	200.7/200.8	0.003	1.7	<0.002	<0.006	<0.006	2.2	0.000	1.8	0.006	<0.005	<0.0002	0.001	<0.01
	9/13/2016	200.7/200.8	0.003	1.8	<0.002	<0.006	<0.006	3.3	0.001	2.0	0.005	<0.005	0.000	0.001	0.004
	6/10/2016	200.7/200.8	0.003	1.9	<0.002	<0.006	<0.006	2.5	0.001	1.9	0.006	<0.005	<0.0002	0.001	<0.01
	2/26/2016	200.7/200.8	0.002	2.3	<0.002	4.3E-03	5.7E-03	6.4	0.006	2.1	0.002	<0.005	<0.0002	0.002	0.020
	11/3/2015	200.7/200.8	0.009	12	<0.002	0.046	0.064	58.0	0.14	11	<0.01	<0.005	<0.001	0.015	0.190
	8/18/2015	200.7/200.8	0.018	24	<0.01	0.26	0.21	110.0	0.37	22	<0.01	<0.005	0.000	0.037	0.540
	6/8/2015	200.7/200.8	<0.005	2.5	<0.002	<0.006	<0.006	5.0	<0.0025	1.8	<0.005	<0.005	<0.0002	<0.0025	<0.01
	3/17/2015	200.7/200.8	0.003	3.5	<0.002	0.012	0.011	14.0	0.021	2.7	<0.01	<0.005	<0.0002	0.003	0.051
	11/18/2014	200.7/200.8	0.002	2.5	<0.002	<0.006	<0.006	4.0	1.6E-03	1.8	<0.01	<0.005	<0.0002	<0.001	0.020
	9/18/2014	200.7/200.8	0.002	2.6	<0.002	<0.006	<0.006	3.2	2.8E-03	2.0	0.003	<0.005	<0.0002	0.002	0.018
	6/6/2014	200.7/200.8	0.013	19	<0.01	0.11	0.12	81	0.29	17	0.013	<0.025	<0.0002	0.022	0.310
MKTf-19	11/8/2016	200.7/200.8	0.013	2.2	<0.002	8.8E-03	0.015	33	0.033	2.6	0.009	<0.005	<0.0002	0.006	0.070
	9/13/2016	200.7/200.8	0.015	2.1	<0.002	5.7E-03	8.3E-03	17	0.023	2.6	0.008	<0.005	0.000	0.004	0.065
	6/10/2016	200.7/200.8	0.016	2.6	<0.002	8.2E-03	0.012	19	0.038	3.3	0.011	<0.005	<0.0002	0.008	0.077
	2/25/2016	200.7/200.8	0.022	2.8	<0.002	0.012	0.018	23	0.069	3.9	0.019	<0.005	<0.001	0.025	0.010
	11/3/2015	200.7/200.8	0.018	2.7	<0.002	<0.006	<0.006	13	0.046	3.4	0.010	<0.005	<0.0002	0.008	0.096
	8/18/2015	200.7/200.8	0.018	4.4	<0.002	0.044	0.06	64	0.14	6.3	0.006	<0.005	<0.0002	0.024	0.220
	6/8/2015	200.7/200.8	0.019	2.5	<0.002	0.024	0.017	28	0.035	4.2	<0.005	<0.005	<0.0002	0.005	0.082
	3/12/2015	200.7/200.8	0.017	2.7	<0.002	0.022	0.026	33	0.052	4.2	<0.01	<0.005	<0.0002	0.007	0.078
	11/18/2014	200.7/200.8	0.022	3.6	<0.002	0.035	0.043	47	0.079	5.6	<0.01	<0.005	<0.0002	0.014	0.110
MKTf-20	11/3/2016	200.7/200.8	0.029	9.3	<0.002	<0.006	0.019	22	9.0E-03	8.9	0.013	<0.005	<0.0002	0.005	0.024
	9/12/2016	200.7/200.8	0.025	5.2	<0.002	<0.006	0.022	17	7.2E-03	4.4	0.009	<0.005	<0.0002	0.004	0.033
	6/9/2016	200.7/200.8	0.038	4.6	<0.002	<0.006	0.09	17	1.9E-02	5.0	0.009	<0.005	0.000	0.020	0.085
	3/16/2015	200.7/200.8	0.025	2.0	<0.002	<0.006	0.016	11	6.6E-03	3.2	0.005	<0.005	<0.0002	0.011	0.030
	11/18/2014	200.7/200.8	0.017	4.5	<0.002	0.022	0.12	45	0.048	4.9	<0.005	<0.005	<0.0002	0.007	0.190
MKTf-21	11/3/2016	200.7/200.8	0.021	4.3	<0.002	<0.006	<0.006	33	3.3E-03	5.1	0.009	<0.005	<0.0002	0.002	0.057
	9/12/2016	200.7/200.8	0.019	2.7	<0.002	<0.006	6.4E-03	24	3.1E-03	4.1	0.009	<0.005	0.000	0.001	0.048
	6/10/2015	200.7/200.8	Not enough water to collect samples												
	3/16/2015	200.7/200.8	0.02	4.9	<0.002	0.029	0.1	55	0.079	6.4	<0.01	<0.005	<0.0002	0.007	0.440

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - TOTAL METALS												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.00492	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	6.3E-04	0.06	6
Well ID	DATE SAMPLED	METHOD													
MKTf-34	11/8/2016	200.7/200.8	2.6E-03	0.085	<0.002	<0.006	<0.006	0.7	8.7E-04	0.017	0.011	<0.005	0.000	0.038	0.007
	9/13/2016	200.7/200.8	4.4E-03	0.12	<0.002	<0.006	<0.006	0.6	8.0E-04	0.014	0.011	<0.005	0.000	0.034	0.008
	6/10/2016	200.7/200.8	4.7E-03	0.15	<0.002	<0.006	<0.006	2.3	2.6E-03	0.054	0.014	<0.005	<0.0002	0.032	0.024
	2/25/2016	200.7/200.8	0.003	0.15	<0.002	<0.006	<0.006	1.6	1.6E-03	0.044	0.007	<0.005	<0.0002	0.032	0.023
	11/3/2015	200.7/200.8	<0.005	0.15	<0.002	<0.006	<0.006	1.0	1.2E-03	0.03	<0.02	<0.005	<0.0002	0.027	0.012
	8/18/2015	200.7/200.8	<0.005	0.17	<0.002	<0.006	<0.006	2.4	2.7E-03	0.074	0.009	<0.005	<0.0002	0.031	0.030
	6/8/2015	200.7/200.8	<0.005	0.2	<0.002	<0.006	<0.006	2.3	<0.0025	0.066	<0.01	<0.005	<0.0002	0.028	0.024
	3/12/2015	200.7/200.8	<0.01	0.25	<0.002	<0.006	<0.006	5.2	4.5E-03	0.15	0.013	<0.005	<0.0002	0.028	0.059
	11/17/2014	200.7/200.8	<0.01	0.17	<0.002	<0.006	<0.006	2.4	1.4E-03	0.075	<0.02	<0.005	<0.0002	0.026	0.037
MKTf-35	11/3/2016	200.7/200.8	3.5E-03	1.2	<0.002	0.011	0.012	22	0.019	5.5	0.002	<0.005	0.000	0.004	0.039
	9/13/2016	200.7/200.8	2.4E-03	2.3	<0.002	4.5E-03	4.4E-03	8.6	0.012	3.8	0.002	<0.005	0.000	0.002	0.017
	6/10/2016	200.7/200.8	9.3E-04	0.89	<0.002	2.3E-03	<0.006	4.5	4.9E-03	3.3	0.001	<0.005	<0.0002	0.002	0.007
	2/26/2016	200.7/200.8	0.002	3.3	<0.002	0.009	<0.006	9.1	0.013	4.1	0.001	<0.005	<0.0002	0.003	0.026
	11/3/2015	200.7/200.8	0.002	2.3	<0.002	<0.006	<0.006	7.5	0.011	4.5	<0.005	<0.005	<0.0002	0.003	0.017
	8/18/2015	200.7/200.8	0.004	8.7	<0.002	0.016	0.020	17	0.034	6.5	<0.005	<0.005	<0.0002	0.005	0.051
	6/4/2015	200.7/200.8	<0.005	5.0	<0.002	0.018	0.013	13	0.023	6.4	<0.005	<0.005	<0.0002	0.004	0.032
	3/17/2015	200.7/200.8	0.004	8.2	<0.002	0.013	0.025	15	0.034	6.3	<0.005	<0.005	<0.0002	0.005	0.062
MKTf-36	11/8/2016	200.7/200.8	0.018	6.6	<0.002	<0.006	0.007	18	0.01	1.9	0.005	<0.005	<0.0002	0.001	0.160
	8/18/2015	200.7/200.8	0.016	5.7	<0.002	<0.006	<0.006	21	0.017	2.7	<0.005	<0.005	<0.0002	0.001	0.018
	6/4/2015	200.7/200.8	0.017	6.8	<0.002	0.010	0.008	22	0.016	2.8	<0.005	<0.005	<0.0002	<0.0025	0.023
	3/17/2015	200.7/200.8	0.016	7	<0.002	<0.006	<0.006	22	0.015	2.8	0.006	<0.005	<0.0002	0.002	0.028
MKTf-37	11/3/2016	200.7/200.8	0.003	0.69	<0.002	<0.006	0.005	2.2	0.005	0.55	0.004	<0.005	<0.0002	0.025	0.015
	8/19/2015	200.7/200.9	0.003	0.24	<0.002	<0.006	0.009	5.7	0.024	1.7	<0.005	<0.005	<0.0002	0.020	0.074
	6/4/2015	200.7/200.8	<0.005	0.23	<0.002	0.006	0.010	4.8	0.036	2.6	<0.005	<0.005	<0.0002	0.024	0.044
	3/17/2015	200.7/200.8	0.003	0.23	<0.002	<0.006	0.012	5.1	0.030	2.9	0.004	<0.005	<0.0002	0.026	0.140

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - TOTAL METALS												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.00492	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	6.3E-04	0.06	6
Well ID	DATE SAMPLED	METHOD													
MKTf-38	11/1/2016	200.7/200.8	0.002	0.12	<0.002	<0.006	<0.006	1.7	0.003	3.3	0.004	<0.005	<0.0002	0.014	0.007
	9/13/2016	200.7/200.8	0.003	0.075	<0.002	<0.006	<0.006	0.61	0.001	3.0	0.005	<0.005	0.000	0.014	0.006
	6/8/2016	200.7/200.8	0.002	0.23	<0.002	<0.006	<0.006	3.0	0.004	3.8	0.005	<0.005	<0.0002	0.014	0.025
	2/29/2016	200.7/200.8	0.002	0.14	<0.002	<0.006	<0.006	2.3	0.004	2.7	0.002	<0.005	<0.0002	0.014	0.014
	11/9/2015	200.7/200.8	0.005	0.93	<0.002	0.010	0.009	11	0.020	4.2	<0.1	<0.005	<0.0002	0.020	0.035
	8/24/2015	200.7/200.8	0.003	0.49	<0.002	0.006	0.008	7.2	0.010	3.9	0.004	<0.005	<0.0002	0.019	0.025
	6/10/2015	200.7/200.8	<0.005	0.43	<0.002	0.006	<0.006	6.4	0.008	3.7	<0.005	<0.005	<0.0002	0.022	0.022
	3/16/2015	200.7/200.8	0.003	0.34	<0.002	<0.006	<0.006	3.5	0.006	3.1	0.006	<0.005	<0.0002	0.029	0.014
MKTf-39	11/1/2016	200.7/200.8	0.004	6.1	<0.002	<0.006	<0.006	8.7	0.005	1.3	0.008	<0.005	<0.0002	<0.0025	0.009
	9/13/2016	200.7/200.8	0.005	9.7	<0.002	<0.006	<0.006	12	0.007	1.8	0.012	<0.005	0.000	0.000	0.014
	6/8/2016	200.7/200.8	0.002	8.5	<0.002	<0.006	<0.006	12	0.012	1.8	0.007	<0.005	0.000	0.001	0.028
	3/3/2016	200.7/200.8	<0.01	11	<0.002	<0.006	<0.006	13	0.01	1.9	0.007	<0.005	<0.0002	0.001	0.011
	11/9/2015	200.7/200.8	0.006	33	<0.002	0.009	0.037	45	0.049	5.2	<0.05	<0.005	0.000	0.004	0.076
	8/23/2015	200.7/200.8	<0.005	49	<0.002	<0.006	0.019	57	0.034	6.8	<0.01	<0.005	0.000	0.004	0.062
	6/10/2015	200.7/200.8	<0.005	58	<0.002	<0.006	<0.06	59	0.031	8	<0.005	<0.005	<0.0002	0.003	0.042
	3/16/2015	200.7/200.8	<0.01	35	<0.01	<0.03	<0.03	50	0.034	8.6	<0.01	<0.025	0.000	0.012	0.059

DEFINITIONS

NE = Not established

NA = Not analyzed

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - DISSOLVED METALS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	NE	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.06	6
Well ID	DATE SAMPLED	METHOD												
MKTf-4	11/2/2016	200.7/200.8	0.010	2.7	<0.002	<0.006	<0.006	1.7	<0.0005	1.4	<0.005	0.011	0.003	0.006
	9/11/2016	200.7/200.8	0.011	2.6	<0.002	<0.006	<0.006	1.2	0.0003	1.4	<0.005	0.014	0.004	0.003
	6/9/2016	200.7/200.8	0.008	2.4	<0.002	<0.006	<0.006	2	<0.0005	1.4	<0.005	0.009	0.005	<0.01
	2/29/2016	200.7/200.8	0.009	2.8	<0.002	<0.006	<0.006	5.6	0.0000	1.5	<0.005	0.006	0.005	0.022
	11/3/2015	200.7/200.8	0.012	3.1	<0.002	<0.006	<0.006	13	<0.0005	1.5	<0.005	<0.02	0.002	<0.01
	8/18/2015	200.7/200.8	<0.01	2.5	<0.002	<0.006	<0.006	8.7	<0.0025	1.6	<0.005	<0.01	0.003	<0.01
	6/4/2015	200.7/200.8	<0.01	2.2	<0.002	<0.006	<0.006	8.6	<0.01	1.6	<0.005	<0.01	<0.01	0.023
	3/16/2015	200.7/200.8	0.010	1.1	<0.002	<0.006	<0.006	2.0	<0.005	1.9	<0.005	<0.05	0.013	0.021
	11/13/2014	200.7/200.8	0.006	1.3	<0.002	<0.006	<0.006	4.7	<0.005	1.8	<0.005	<0.005	0.013	0.010
	9/15/2014	200.7/200.8	<0.01	0.78	<0.002	<0.006	<0.006	3.6	0.0013	1.7	<0.005	<0.01	0.018	<0.01
	6/4/2014	200.7/200.8	0.008	1.9	<0.002	<0.006	<0.006	2.5	<0.005	1.4	<0.005	0.022	<0.01	<0.01
MKTf-9	11/2/2016	200.7/200.8	0.003	0.4	<0.002	<0.006	<0.006	0.92	<0.0005	3.2	<0.005	0.006	0.007	0.270
	9/11/2016	200.7/200.8	0.003	0.52	<0.002	<0.006	<0.006	0.81	0.0002	3.7	<0.005	0.008	0.005	<0.01
	6/9/2016	200.7/200.8	0.003	0.43	<0.002	<0.006	<0.006	1.1	<0.0005	3.5	<0.005	0.005	0.007	<0.01
	2/29/2016	200.7/200.8	0.002	0.55	<0.002	<0.006	<0.006	2.8	0.0002	3.9	<0.005	0.003	0.005	0.009
	11/3/2015	200.7/200.8	<0.005	0.5	<0.002	<0.006	<0.006	3.2	<0.0005	4.2	<0.005	<0.01	0.004	<0.01
	8/18/2015	200.7/200.8	<0.01	0.45	<0.002	<0.006	<0.006	2.4	<0.0025	4.0	<0.005	<0.01	0.004	<0.01
	6/4/2015	200.7/200.8	<0.01	0.31	<0.002	<0.006	<0.006	1.9	<0.01	3.2	<0.005	<0.01	<0.01	0.012
	3/16/2015	200.7/200.8	<0.005	0.19	<0.002	<0.006	<0.006	1.4	<0.001	2.3	<0.005	<0.01	0.012	0.039
	11/14/2014	200.7/200.8	<0.01	0.34	<0.002	<0.006	<0.006	2.4	<0.01	2.8	<0.005	<0.01	<0.01	0.017
	9/18/2014	200.7/200.8	<0.01	0.32	<0.002	<0.006	<0.006	2.2	<0.001	2.6	<0.005	<0.01	0.012	<0.01
	6/5/2014	200.7/200.8	<0.005	0.44	<0.002	<0.006	<0.006	3.4	<0.005	3.6	<0.005	0.014	<0.01	<0.01
MKTf-10	11/2/2016	200.7/200.8	0.008	5.8	<0.002	<0.006	<0.006	9.4	<0.005	5.2	<0.005	0.005	0.001	<0.01
	9/11/2016	200.7/200.8	0.008	11	<0.002	<0.006	<0.006	26	0.0009	12	<0.005	0.007	0.001	0.003
	6/9/2016	200.7/200.8	0.008	13	<0.002	<0.006	<0.006	41	0.0002	16	<0.005	0.004	0.000	0.041
	2/29/2016	200.7/200.8	0.008	14	<0.002	<0.006	<0.006	54	<0.0025	20	<0.005	0.004	0.002	0.017
	11/3/2015	200.7/200.8	0.006	13	<0.002	<0.006	<0.006	50	<0.005	18	<0.005	0.007	<0.0005	<0.01
	8/18/2015	200.7/200.8	0.013	15	<0.002	0.013	<0.006	64	<0.0025	22	<0.005	<0.01	<0.0025	<0.01
	6/4/2015	200.7/200.8	<0.01	12	<0.002	<0.006	<0.006	53	<0.01	18	<0.005	<0.01	<0.01	0.034
	3/16/2015	200.7/200.8	<0.005	12	<0.002	<0.006	<0.006	49	<0.001	17	<0.005	0.007	<0.001	<0.01
	11/14/2014	200.7/200.8	<0.01	17	<0.002	<0.006	<0.006	67	<0.01	24	<0.005	<0.01	<0.01	0.018
	9/18/2014	200.7/200.8	<0.005	11	<0.002	<0.006	<0.006	33	<0.001	14	<0.005	<0.005	<0.001	<0.01
	6/6/2014	200.7/200.8	<0.005	8.1	<0.002	<0.006	<0.006	18	<0.005	9.2	<0.005	0.011	<0.01	<0.01

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - DISSOLVED METALS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	NE	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.06	6
Well ID	DATE SAMPLED	METHOD												
MKTf-11	11/2/2016	200.7/200.8	0.013	2.6	<0.002	<0.006	<0.006	5.4	<0.0005	3.6	<0.005	0.005	0.006	0.004
	9/12/2016	200.7/200.8	0.014	2.5	<0.002	<0.006	<0.06	4.6	<0.0005	3.8	<0.005	0.006	0.004	<0.01
	6/9/2016	200.7/200.8	0.014	2.5	<0.002	<0.006	<0.006	4.3	<0.0005	3.5	<0.005	0.004	0.008	<0.01
	2/29/2016	200.7/200.8	0.015	3.6	<0.002	<0.006	<0.006	8.0	0.0003	5.7	<0.005	0.005	0.005	0.011
	11/3/2015	200.7/200.8	0.008	4.0	<0.002	<0.006	<0.006	12	<0.0005	3.6	<0.005	0.006	<0.0005	<0.01
	8/18/2015	200.7/200.8	<0.01	2.0	<0.002	<0.006	<0.006	4.0	<0.0025	4.0	<0.005	<0.01	0.003	<0.01
	6/4/2015	200.7/200.8	<0.01	2.7	<0.002	<0.006	<0.006	9.9	<0.01	3.0	<0.005	<0.01	<0.01	0.018
	3/16/2015	200.7/200.8	0.009	2.0	<0.002	<0.006	<0.006	4.8	<0.001	2.9	<0.005	0.008	0.001	<0.01
	11/13/2014	200.7/200.8	<0.01	1.5	<0.002	<0.006	<0.006	3.4	<0.001	3.2	<0.005	0.005	0.003	0.019
	9/15/2014	200.7/200.8	0.009	1.1	<0.002	<0.006	<0.006	2.7	<0.001	2.4	<0.005	<0.005	0.004	<0.01
	6/5/2014	200.7/200.8	0.006	1.8	<0.002	6.0E-03	<0.006	11	0.0220	3.6	<0.005	0.010	<0.01	0.036
MKTf-15	11/2/2016	200.7/200.8	0.003	20	<0.002	<0.006	<0.006	26	<0.0025	6.5	<0.005	0.007	<0.0025	0.014
	9/11/2016	200.7/200.8	0.003	23	<0.002	<0.006	<0.006	32	0.0005	7.6	<0.005	0.009	0.000	0.040
	9/17/2014	200.7/200.8	<0.01	27	<0.002	<0.006	<0.006	13	<0.01	9.0	<0.005	<0.01	<0.01	<0.01
	6/5/2014	200.7/200.8	<0.005	25	<0.002	<0.006	<0.006	11	<0.005	7.5	<0.005	<0.01	<0.01	0.011
MKTf-16	11/3/2016	200.7/200.8	0.015	0.69	<0.002	<0.006	<0.006	2.2	0.0004	0.87	<0.005	0.013	0.005	0.004
	9/12/2016	200.7/200.8	0.014	0.67	<0.002	<0.006	<0.006	2.4	0.0003	0.94	<0.005	0.013	0.004	<0.01
	2/29/2016	200.7/200.8	0.010	1.3	<0.002	<0.006	<0.006	5.8	0.0008	1.7	<0.005	0.010	0.000	0.018
	11/3/2015	200.7/200.8	0.016	3.1	<0.002	<0.006	<0.006	13	<0.0005	3.9	<0.005	0.019	<0.0005	<0.01
	8/23/2015	200.7/200.8	0.010	2.7	<0.002	<0.006	<0.006	11	<0.0025	4.1	<0.005	0.010	<0.0025	<0.01
	6/8/2015	200.7/200.8	0.009	2.3	<0.002	<0.006	<0.006	11	<0.005	3.6	<0.005	0.008	<0.005	0.017
	3/16/2015	200.7/200.8	<0.01	0.94	<0.002	<0.006	<0.006	5.6	<0.001	1.2	<0.005	<0.02	<0.001	0.024
	11/18/2014	200.7/200.8	0.011	0.88	<0.002	<0.006	<0.006	7.2	<0.001	1.1	<0.005	<0.01	<0.001	0.019
	9/17/2014	200.7/200.8	0.011	0.81	<0.002	<0.006	<0.006	7.3	<0.001	1.1	<0.005	<0.01	<0.001	0.017
	6/5/2014	200.7/200.8	0.013	0.81	<0.002	<0.006	<0.006	7.9	<0.005	1.3	<0.005	0.017	<0.01	0.022
MKTf-17	11/8/2016	200.7/200.8	0.005	0.52	<0.002	<0.006	<0.006	0.21	<0.0005	2.7	<0.005	0.003	0.007	<0.01
	9/13/2016	200.7/200.8	0.006	0.65	<0.002	<0.006	<0.006	0.23	<0.005	3.0	<0.005	0.005	0.008	<0.01
	2/26/2016	200.7/200.8	0.003	0.095	<0.002	<0.006	<0.006	0.093	0.0001	2.8	<0.005	0.002	0.018	0.020
	11/3/2015	200.7/200.8	0.010	0.19	<0.002	<0.006	<0.006	0.65	<0.0005	3.5	<0.005	0.005	0.013	<0.01
	8/18/2015	200.7/200.8	<0.01	0.097	<0.02	<0.006	<0.006	0.49	<0.0025	2.8	<0.005	<0.01	0.017	<0.01
	6/8/2015	200.7/200.8	<0.005	0.11	<0.002	<0.006	<0.006	0.14	<0.002	3.1	<0.005	<0.005	0.021	<0.01
	3/12/2015	200.7/200.8	0.006	0.13	<0.002	<0.006	<0.006	0.57	<0.001	3.0	<0.005	0.006	0.021	<0.01
	11/18/2014	200.7/200.8	0.005	0.14	<0.002	<0.006	<0.006	0.08	<0.001	2.8	<0.005	<0.01	0.022	0.027
	9/18/2014	200.7/200.8	0.005	0.16	<0.002	<0.006	<0.006	0.27	<0.001	3.1	<0.005	<0.005	0.022	0.018
	6/16/2014	200.7/200.8	0.005	0.24	<0.002	<0.006	<0.006	0.94	<0.005	3.3	<0.005	<0.005	0.022	0.140
MKTf-18	11/8/2016	200.7/200.8	0.003	1.7	<0.002	<0.006	<0.006	0.81	<0.0005	1.9	<0.005	0.005	0.001	<0.01
	9/13/2016	200.7/200.8	0.003	1.8	<0.002	<0.006	<0.006	0.89	<0.0005	2.0	<0.005	0.007	0.001	<0.01
	6/10/2016	200.7/200.8	0.002	1.9	<0.002	<0.006	<0.006	1.5	<0.0005	1.9	<0.005	0.005	0.001	<0.01
	2/26/2016	200.7/200.8	0.002	2.1	<0.002	<0.006	<0.006	2.1	0.0004	1.9	<0.005	0.002	0.001	0.011
	11/3/2015	200.7/200.8	0.003	2.5	<0.002	<0.006	<0.006	4.8	0.0053	1.9	<0.005	<0.01	0.001	<0.01
	8/18/2015	200.7/200.8	<0.01	2.0	<0.002	<0.006	<0.006	1.2	<0.0025	1.7	<0.005	<0.01	<0.0025	<0.01
	6/8/2015	200.7/200.8	<0.005	2.5	<0.002	<0.006	<0.006	3.9	<0.002	1.8	<0.005	<0.005	<0.002	<0.01
	3/17/2015	200.7/200.8	<0.01	2.5	<0.002	<0.006	<0.006	3.8	<0.001	1.8	<0.005	<0.01	<0.001	<0.01
	11/18/2014	200.7/200.8	0.002	2.4	<0.002	<0.006	<0.006	3.4	<0.001	1.7	<0.005	<0.01	<0.001	0.025
	9/18/2014	200.7/200.8	<0.005	2.3	<0.002	<0.006	<0.006	0.3	<0.001	1.7	<0.005	<0.005	0.001	0.012
	6/6/2014	200.7/200.8	<0.005	2.4	<0.002	<0.006	<0.006	4.5	<0.005	2.0	<0.005	0.009	<0.01	<0.01

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - DISSOLVED METALS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	NE	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.06	6
Well ID	DATE SAMPLED	METHOD												
MKTf-19	11/8/2016	200.7/200.8	0.011	1.6	<0.002	<0.006	<0.006	8.5	0.0023	2.2	<0.005	0.008	0.002	0.009
	9/13/2016	200.7/200.8	0.017	1.7	<0.002	<0.006	<0.006	10	0.0023	2.4	<0.005	0.008	0.001	0.004
	6/10/2016	200.7/200.8	0.015	1.6	<0.002	<0.006	<0.006	9.7	0.0022	2.7	<0.005	0.013	0.000	0.006
	2/25/2016	200.7/200.8	0.015	1.7	<0.002	<0.006	<0.006	11	0.0034	3.1	<0.005	0.004	0.001	0.010
	11/3/2015	200.7/200.8	0.018	1.7	<0.002	<0.006	<0.006	13	0.0016	3.4	<0.005	<0.05	<0.0005	<0.01
	8/18/2015	200.7/200.8	0.020	1.7	<0.002	<0.006	<0.006	14	0.0032	3.2	<0.005	<0.01	<0.0025	0.020
	6/8/2015	200.7/200.8	0.019	1.7	<0.002	<0.006	<0.006	12	<0.002	3.3	<0.005	<0.01	<0.002	<0.01
	3/12/2015	200.7/200.8	0.021	1.6	<0.002	<0.006	<0.006	9.5	0.0017	3.1	<0.005	<0.02	<0.001	0.012
	11/18/2014	200.7/200.8	0.022	1.6	<0.002	<0.006	<0.006	11	0.0019	3.0	<0.005	<0.01	<0.001	0.018
MKTf-20	11/3/2016	200.7/200.8	0.029	8.6	<0.002	<0.006	7.3E-03	20	0.0090	8.0	<0.005	0.013	0.005	0.014
	9/12/2016	200.7/200.8	0.027	4.7	<0.002	<0.006	4.6E-03	14	0.0040	3.8	<0.005	0.008	0.003	0.012
	6/9/2016	200.7/200.8	0.034	3.3	<0.002	<0.006	0.022	12	0.0120	3.9	<0.005	0.008	0.018	0.016
	6/8/2015	200.7/200.8	0.012	1.5	<0.002	<0.006	<0.006	3.6	<0.005	2.0	<0.005	<0.005	<0.005	0.045
	3/16/2015	200.7/200.8	0.022	2.0	<0.002	<0.006	<0.006	8.6	0.0013	3.1	<0.005	<0.01	0.009	<0.01
MKTf-21	11/3/2016	200.7/200.8	0.019	4.3	<0.002	<0.006	<0.006	30	0.0010	5.0	<0.005	0.012	0.002	0.017
	9/12/2016	200.7/200.8	0.020	2.5	<0.002	<0.006	<0.006	22	0.0018	3.7	<0.005	0.009	0.001	0.023
	6/10/2015	200.7/200.8	Not enough water to collect samples											
	3/16/2015	200.7/200.8	0.011	1.9	<0.002	<0.006	<0.006	18	0.0120	3.1	<0.005	<0.01	0.001	0.074
MKTf-33	11/1/2016	200.7/200.8	0.001	0.041	<0.002	<0.006	<0.006	<0.02	<0.0005	0.13	<0.005	0.003	0.038	0.017
	9/10/2016	200.7/200.8	0.001	0.043	<0.002	<0.006	<0.006	0.02	0.0002	0.13	<0.005	0.004	0.037	<0.01
	6/10/2016	200.7/200.8	0.002	0.04	<0.002	<0.006	<0.006	0.014	<0.0005	0.031	<0.005	0.004	0.038	0.011
	2/25/2016	200.7/200.8	0.001	0.047	<0.002	<0.006	<0.006	0.045	0.0001	0.16	<0.005	0.002	0.040	0.017
	11/9/2015	200.7/200.8	<0.005	0.062	<0.002	<0.006	<0.006	0.071	0.0006	0.24	<0.005	<0.005	0.040	<0.01
	8/21/2015	200.7/200.8	<0.005	0.054	<0.002	<0.006	<0.006	<0.02	<0.0005	0.28	<0.005	0.002	0.042	<0.01
	6/9/2015	200.7/200.8	<0.005	0.055	<0.002	<0.006	<0.006	<0.02	<0.002	0.14	<0.005	<0.005	0.044	0.028
	3/12/2015	200.7/200.8	<0.01	0.061	<0.002	<0.006	<0.006	0.026	<0.001	0.28	<0.005	<0.01	0.045	0.017
	11/17/2014	200.7/200.8	<0.005	0.064	<0.002	<0.006	<0.006	0.061	<0.001	0.24	<0.005	<0.005	0.045	0.016
MKTf-34	11/8/2016	200.7/200.8	0.003	0.057	<0.002	<0.006	<0.006	<0.02	<0.0005	3.5E-04	<0.005	0.008	0.036	0.003
	9/13/2016	200.7/200.8	0.004	0.11	<0.002	<0.006	<0.006	<0.02	<0.0005	5.3E-04	<0.005	0.016	0.037	0.003
	6/10/2016	200.7/200.8	0.005	0.1	<0.002	<0.006	<0.006	0.041	<0.0025	1.7E-03	<0.005	0.018	0.030	0.004
	2/25/2016	200.7/200.8	0.003	0.13	<0.002	<0.006	<0.006	0.017	0.0001	0.001	<0.005	0.010	0.030	0.012
	1/3/2015	200.7/200.8	<0.005	0.12	<0.002	<0.006	<0.006	<0.02	<0.0005	<0.002	<0.005	<0.02	0.027	<0.01
	8/18/2015	200.7/200.8	<0.01	0.13	<0.002	<0.006	<0.006	<0.02	<0.0025	<0.002	<0.005	<0.01	0.027	<0.01
	6/8/2015	200.7/200.8	<0.005	0.14	<0.002	<0.006	<0.006	0.11	<0.002	5.9E-03	<0.005	<0.01	0.029	0.018
	3/12/2015	200.7/200.8	<0.01	0.12	<0.002	<0.006	<0.006	0.21	<0.001	0.013	<0.005	<0.05	0.025	<0.01
	11/17/2014	200.7/200.8	<0.01	0.15	<0.002	<0.006	<0.006	<0.02	<0.001	4.1E-03	<0.005	<0.02	0.027	0.051

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - DISSOLVED METALS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	NE	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.06	6
Well ID	DATE SAMPLED	METHOD												
MKTf-35	11/3/2016	200.7/200.8	0.001	0.23	<0.002	<0.006	<0.006	3	0.0003	2.9	<0.005	0.001	0.001	<0.01
	9/13/2016	200.7/200.8	0.001	0.17	<0.002	<0.006	<0.006	2.7	<0.0005	3.1	<0.005	0.003	0.001	0.003
	6/10/2016	200.7/200.8	0.001	0.37	<0.002	<0.006	<0.006	2.5	<0.0005	2.7	<0.005	0.002	0.001	<0.01
	2/26/2016	200.7/200.8	0.000	0.43	<0.002	<0.006	<0.006	2.8	0.0004	3.0	<0.005	0.001	0.002	0.010
	11/3/2015	200.7/200.8	<0.005	0.57	<0.002	<0.006	<0.006	2.6	<0.0005	3.0	<0.005	0.004	0.002	<0.01
	8/18/2015	200.7/200.8	<0.01	0.96	<0.002	<0.006	<0.006	2.8	<0.0025	2.9	<0.005	<0.01	<0.0025	<0.01
	6/4/2015	200.7/200.8	<0.005	0.36	<0.002	<0.006	<0.006	2.6	<0.005	3.1	<0.005	<0.005	<0.005	0.017
	3/17/2015	200.7/200.8	<0.01	0.31	<0.002	<0.006	<0.006	3.6	0.0011	3.5	<0.005	<0.01	0.003	<0.01
MKTf-36	11/8/2016	200.7/200.8	0.015	6.0	<0.002	<0.006	<0.006	13	0.0022	1.9	<0.005	0.004	0.000	0.006
	8/18/2015	200.7/200.8	0.018	6.1	<0.002	0.0064	<0.006	18	<0.0025	2.5	<0.005	<0.01	<0.0025	<0.01
	6/4/2015	200.7/200.8	0.016	6.6	<0.002	<0.006	<0.006	18	<0.005	2.4	<0.005	<0.005	<0.005	0.012
	3/17/2015	200.7/200.8	0.015	6.4	<0.002	<0.006	<0.006	19	0.0034	2.6	<0.005	<0.01	<0.001	0.047
MKTf-37	11/3/2016	200.7/200.8	0.004	0.58	<0.002	<0.006	<0.006	0.25	0.0003	0.46	<0.005	0.003	0.036	<0.01
	8/19/2015	200.7/200.9	<0.02	1.19	<0.002	<0.006	<0.006	2.6	0.0047	1.8	<0.005	<0.01	1.019	<0.02
	6/4/2015	200.7/200.8	<0.01	0.19	<0.002	<0.006	<0.006	1.8	<0.01	2.3	<0.005	<0.01	0.023	0.039
	3/17/2015	200.7/200.8	<0.005	0.16	<0.002	<0.006	<0.006	1.1	0.0071	2.7	<0.005	<0.01	0.021	0.029
MKTf-38	11/1/2016	200.7/200.8	0.001	0.044	<0.002	<0.006	<0.006	0.038	<0.0005	3.3	<0.005	0.004	0.013	<0.01
	9/13/2016	200.7/200.8	0.002	0.039	<0.002	<0.006	<0.006	<0.02	<0.0005	3.1	<0.005	0.005	0.013	0.004
	6/8/2016	200.7/200.8	0.001	0.031	<0.002	<0.006	<0.006	0.015	<0.0005	2.8	<0.005	0.006	0.013	0.007
	2/29/2016	200.7/200.8	0.001	0.03	<0.002	<0.006	<0.006	0.07	0.0000	2.3	<0.005	0.003	0.012	0.012
	11/9/2015	200.7/200.8	<0.005	0.066	<0.002	<0.006	<0.006	0.22	0.0010	3.4	<0.005	<0.05	0.019	<0.01
	8/24/2015	200.7/200.8	0.002	0.066	<0.002	<0.006	<0.006	0.094	<0.0005	3.0	<0.005	0.003	0.023	<0.01
	6/10/2015	200.7/200.8	<0.005	0.074	<0.002	<0.006	<0.006	0.31	<0.005	3.1	<0.005	<0.005	0.021	0.021
	3/16/2015	200.7/200.8	<0.01	0.14	<0.002	<0.006	<0.006	0.24	<0.001	3.1	<0.005	<0.01	0.025	0.096
MKTf-39	11/1/2016	200.7/200.8	0.004	6	<0.002	<0.006	<0.006	6.9	0.0005	1.2	<0.005	0.010	0.000	<0.01
	9/13/2016	200.7/200.8	0.005	8.9	<0.002	<0.006	<0.006	9.6	0.0004	1.7	<0.005	0.016	0.000	0.003
	6/8/2016	200.7/200.8	0.002	7.5	<0.002	<0.006	<0.006	8.3	0.0013	1.2	<0.005	0.006	0.000	<0.01
	3/3/2016	200.7/200.8	0.002	11	<0.002	<0.006	<0.006	11	0.0004	1.7	<0.005	0.007	0.000	0.009
	11/9/2015	200.7/200.8	<0.005	30	<0.002	<0.006	<0.006	29	<0.005	3.9	<0.005	<0.02	<0.005	<0.01
	8/23/2015	200.7/200.8	<0.005	44	<0.002	<0.006	<0.006	45	<0.0025	5.8	<0.005	<0.01	<0.0025	0.023
	6/10/2015	200.7/200.8	<0.01	67	<0.002	<0.006	<0.006	60	<0.01	8.8	<0.005	<0.01	<0.01	0.012
	3/16/2015	200.7/200.8	<0.01	21	<0.002	<0.006	<0.006	31	<0.005	7.0	<0.005	0.011	0.010	<0.01

Table 2 Groundwater Analyses Summary														
STANDARDS			PARAMETERS - DISSOLVED METALS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	NE	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.06	6
Well ID	DATE SAMPLED	METHOD												

DEFINITIONS
NE = Not established
NA = Not analyzed
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

NOTES
2) 2009 Method 6010B Total Recoverable Metals Analysis run
3) Water level too shallow to collect samples.
4) Was not sampled in September due to low recharge rate.
5) Quarterly combined with 2013 Annual sampling event.

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS																							
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a) anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2- ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzo furan (mg/L)	1,4- Dichlorob enzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	Pentachloro phenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.005	NE	NE	
40 CFR 141.62 MCL			NE	NE	NE	NE	NE	0.006	NE	NE	NE	NE	0.075	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
NMED Tap Water (March 2017)			0.535	NE	0.00012	NE	NE	0.0556	NE	NE	NE	0.00482	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.0004	0.17	5.76	0.117	NE	
EPA RSL for Tap Water (MAY 2016)			0.53	0.013	0.000012	75	2	0.0056	0.0016	NE	0.2	0.0079	0.00048	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.0002	0.000041	NE	5.8	0.12	0.02
Well ID	DATE SAMPLED	METHOD																								
MKTf-4	11/2/2016	8270C	0.006	<0.01		<0.02		6.8E-03		0.02	0.007	<0.01			0.004	0.008	0.15	0.17	<0.01	<0.01	0.25		0.008	0.003		<0.01
	9/11/2016	8270C	0.005	<0.01		<0.02		3.6E-03		0.017	0.005	0.003			<0.01	0.005	0.14	0.16	<0.01	<0.01	0.22		0.007	0.004		0.003
	6/9/2016	8270C		<0.05		<0.1		0.018		0.018	0.028			<0.05	<0.05	0.13	0.13	<0.05	<0.05	0.18		<0.05	<0.05			
	2/29/2016	8270C		<0.01		<0.02		<0.01		0.026				0.008	0.008	0.17	0.19	<0.01	<0.01	0.33		0.009	<0.01			
	11/3/2015	8270C		<0.01		<0.02		<0.01		0.019				<0.01	<0.01	0.15	0.16	<0.01	<0.01	0.27		<0.01	<0.01			
	8/18/2015	8270C		<0.01		<0.02		<0.01		0.021				<0.01	<0.01	0.15	0.096	<0.01	<0.01	0.26		<0.01	<0.01			
	6/4/2015	8270C		<0.01		<0.02		<0.01		0.015				<0.01	<0.01	0.12	0.076	<0.01	<0.01	0.19		<0.01	<0.01			
	3/16/2015	8270C		<0.01		<0.02		<0.01		0.014				<0.01	<0.01	0.051	0.025	<0.01	<0.01	0.059		<0.01	<0.01			
	11/13/2014	8270C		<0.01		<0.02		<0.01		0.017				<0.01	<0.01	0.061	0.047	<0.01	<0.01	0.08		<0.01	<0.01			
	9/24/2014 ⁱ	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.13	0.16	<0.02	<0.01	0.19		<0.01	<0.01			
	6/4/2014	8270C		<0.01		0.021		<0.01		0.011				<0.01	<0.01	0.11	0.14	<0.02	<0.01	0.24		<0.01	<0.01			
	4/11/2014	8270C		<0.01		<0.02		<0.01		0.017				<0.01	<0.01	0.12	0.16	<0.02	<0.01	0.23		<0.01	<0.01			
MKTf-9	11/2/2016	8270C	0.004	<0.01		<0.02		0.007		0.010	0.007			<0.01	0.006	0.048	<0.01	<0.01	<0.01	0.023	<0.02	0.007	0.003		<0.01	
	9/11/2016	8270C	0.005	<0.01		<0.02		0.004		0.011	0.005			<0.01	0.004	0.064	5.2E-03	<0.01	<0.01	0.023	0.009	0.007	0.012		0.007	
	6/9/2016	8270C	0.003	<0.01		<0.02		0.004		0.009	0.005			<0.01	<0.01	0.046	5.1E-03	<0.01	<0.01	0.018		0.005	0.006			
	2/29/2016	8270C		<0.01		<0.02		<0.01		0.012				<0.01	<0.01	0.069	0.01	<0.01	<0.01	0.032		<0.01	<0.01			
	11/3/2015	8270C		<0.01		<0.02		<0.01		0.013				<0.01	<0.01	0.085	0.011	<0.01	<0.01	0.034		<0.01	<0.01			
	8/18/2015	8270C		<0.10		<0.02		<0.01		0.016				<0.01	<0.01	0.08	<0.01	<0.01	<0.01	0.023		0.011	<0.01			
	6/4/2015	8270C		<0.10		<0.02		<0.01		0.01				<0.01	<0.01	0.036	<0.01	<0.01	<0.01	0.012		<0.01	<0.01			
	3/16/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.027	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/14/2014	8270C		<0.01		<0.02		0.011		<0.01				<0.01	<0.01	0.049	<0.01	<0.01	<0.01	0.021		<0.01	<0.01			
	9/18/2014	8270C		<0.01		<0.02		<0.01		0.01				<0.01	<0.01	0.031	<0.01	<0.02	<0.01	0.018		<0.01	<0.01			
	6/5/2014	8270C		<0.01		<0.02		<0.01		0.01				<0.01	<0.01	0.058	0.014	<0.02	<0.01	0.041		<0.01	<0.01			
	4/14/2014	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.046	0.01	<0.02	<0.01	0.031		<0.01	<0.01			
MKTf-10	11/2/2016	8270C		<0.05		0.056	<0.05	0.034	0.014	<0.05	0.037			0.039	<0.05	0.047	0.07	0.13	0.18	0.15		<0.05	0.079			
	9/11/2016	8270C		0.06		0.05	0.006	0.004		0.004	0.005			0.200	<0.01	0.051	0.077	0.69	1.1	0.15		<0.01	0.26			
	6/9/2016	8270C		<0.05		<0.1		0.018		<0.05	0.025			0.210	<0.05	0.056	0.072	0.82	0.92	0.15		<0.05	0.36			
	2/29/2016	8270C		0.042		<0.02		<0.01		<0.01				0.170	<0.01	0.057	0.08	0.77	1.0	0.2		<0.01	0.67			
	11/3/2015	8270C		0.029		<0.02		<0.01		<0.01				0.093	<0.01	0.06	0.069	0.28	0.42	0.14		<0.01	0.24			
	8/18/2015	8270C		0.06		<0.02		<0.01		<0.01				0.085	<0.01	0.14	0.13	0.45	0.65	0.25		<0.01	0.41			
	6/4/2015	8270C		<0.01		<0.02		<0.01		<0.01				0.100	<0.01	0.066	0.084	0.35	0.54	0.18		<0.01	0.28			
	3/16/2015	8270C		0.067		<0.02		<0.01		<0.01				0.110	<0.01	<0.01	0.088	0.53	0.63	0.17		<0.01	0.42			
	11/14/2014	8270C		0.054		<0.02		0.01		<0.01				0.063	<0.01	0.046	0.051	0.33	0.4	0.099		<0.01	0.29			
	9/18/2014	8270C		0.073		<0.02		<0.01		<0.01				0.090	<0.01	0.036	0.042	0.32	0.38	0.098		<0.01	0.25			
	6/6/2014	8270C		0.075		<0.02		<0.01		<0.01				0.110	<0.01	0.04	0.053	0.49	0.61	0.14		<0.01	0.37			
	4/11/2014	8270C		0.075		<0.023		<0.012		<0.012				0.120	<0.012	0.042	0.056	0.3	0.26	0.14		<0.012	0.061			
MKTf-11	11/2/2016	8270C		0.007		<0.02		0.006	0.003	0.002	0.007		<0.01	0.013	<0.01	0.015	9.5E-03	0.096	0.089	0.034		<0.01	0.04			
	9/11/2016	8270C		0.009		<0.02		0.004		<0.01	0.004		0.003	0.042	<0.01	0.012	0.009	0.13	0.12	0.03		<0.01	0.049			
	6/9/2016	8270C		0.004		<0.02		0.003		<0.01	0.005			0.022	<0.01	0.015	0.01	0.088	0.063	0.033		<0.01	0.045			
	2/29/2016	8270C		0.011		<0.02		<0.01		<0.01				0.018	<0.01	0.014</										

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS																							
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a) anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2- ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzo furan (mg/L)	1,4- Dichlorob enzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	Pentachloro phenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.005	NE	NE	
40 CFR 141.62 MCL			NE	NE	NE	NE	NE	0.006	NE	NE	NE	0.075	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
NMED Tap Water (March 2017)			0.535	NE	0.00012	NE	NE	0.0556	NE	NE	NE	0.00482	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.0004	0.17	5.76	0.117	NE	
EPA RSL for Tap Water (MAY 2016)			0.53	0.013	0.000012	75	2	0.0056	0.0016	NE	0.2	0.0079	0.00048	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.0002	0.000041	NE	5.8	0.12	0.02
Well ID	DATE SAMPLED	METHOD																								
MKTf-15	11/2/2016	8270C		<0.05		0.065		0.035	0.013	<0.05	0.036		<0.05	0.079	<0.05	<0.05	<0.05	0.46	0.55	0.059		<0.05	2			
	9/11/2016	8270C		<0.01		0.011		3.1E-03		0.004	0.005		0.017	0.230	<0.01	0.013	0.014	1.8	2.6	0.053		<0.01	5.8			
	9/17/2014	8270C		<0.01		<0.02		<0.01		<0.01				0.013	<0.01	0.035	0.033	0.024	<0.01	0.048		<0.01	<0.01			
	6/5/2014	8270C		<0.01		0.023		<0.01		<0.01				0.013	<0.01	0.021	0.021	0.028	<0.01	0.05		<0.01	<0.01			
	4/10/2014	8270C		<0.012		<0.025		<0.012		<0.012				0.016	<0.012	0.02	0.021	0.043	<0.012	0.048		<0.012	0.015			
MKTf-16	11/3/2016	8270C		<0.01		0.038		0.007	0.003	<0.01	0.007			0.059	0.004	0.04	0.037	0.026	0.003	0.13		<0.01	0.18			
	9/12/2016	8270C		0.006		0.024		0.004		0.004	0.004			0.084	<0.01	0.046	0.051	0.071	<0.01	0.13		<0.01	0.14			
	6/9/2016	8270C		<0.05		<0.1		0.019		<0.05	0.025			0.083	<0.05	0.035	0.038	0.061	<0.05	0.1		<0.05	0.17			
	2/29/2016	8270C		0.011		<0.02		<0.01		<0.01				0.091	<0.01	0.033	0.042	0.079	<0.01	0.11		<0.01	0.03			
	11/3/2015	8270C		0.02		<0.02		<0.01		<0.01				0.120	<0.01	0.035	0.046	0.081	<0.01	0.13		<0.01	0.057			
	8/23/2015	8270C		0.025		<0.02		<0.01		<0.01				0.130	<0.01	0.044	0.055	0.1	0.015	0.16		<0.01	0.042			
	6/8/2015	8270C		0.021		<0.02		<0.01		<0.01				0.180	<0.01	0.042	0.046	0.12	<0.1	0.14		<0.01	0.048			
	3/16/2015	8270C		0.02		<0.02		<0.01		<0.01				0.190	<0.01	0.045	0.053	0.15	<0.01	0.15		<0.01	0.031			
	11/18/2014	8270C		0.018		<0.02		0.014		<0.01				0.080	<0.01	0.047	0.051	0.14	0.016	0.13		<0.01	0.038			
	9/17/2014	8270C		0.024		<0.02		<0.01		<0.01				0.180	<0.01	0.053	0.062	0.15	0.03	0.18		<0.01	0.031			
	6/16/2014 ¹	8270C		0.011		<0.02		<0.01		<0.01				0.170	<0.01	0.037	0.042	0.22	0.16	0.14		<0.01	0.42			
	4/10/2014	8270C		0.015		<0.02		<0.01		<0.01				0.200	<0.01	0.035	0.044	0.16	0.091	0.13		<0.01	0.09			
MKTf-17	11/8/2016	8270C		<0.01		<0.02		0.007	0.003	<0.01	0.007			<0.01	0.003	0.011	<0.01	<0.01	<0.01	7.7E-03		<0.01	0.0035			
	9/13/2016	8270C		<0.01		<0.02		0.004		<0.01	<0.01			<0.01	<0.01	6.3E-03	<0.01	<0.01	<0.01	6.4E-03		<0.01	0.0029			
	6/10/2016	8270C		<0.01		<0.02		<0.01		<0.01	0.005			0.004	<0.01	0.026	<0.01	<0.01	<0.01	0.062		<0.01	0.0098			
	2/26/2016	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/3/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	8/18/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	6/8/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01		<0.01	<0.01			
	3/12/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01		<0.01	<0.01			
	11/18/2014	8270C		<0.01		<0.02		0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01		<0.01	<0.01			
	9/18/2014	8270C		<0.01		<0.02		<0.01		<0.01				<0.02	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01		<0.01	<0.01			
	6/16/2014	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01		<0.01	0.039			
	4/9/2014	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.024		<0.01	<0.01			
MKTf-18	11/8/2016	8270C	0.006	<0.01		<0.02		0.007	0.003	<0.01	0.007			<0.01	0.007	0.057	0.02	<0.01	<0.01	0.018		0.004	<0.01			
	9/13/2016	8270C	0.004	<0.01		6.4E-03		<0.01		<0.01	<0.01			<0.01	0.006	0.049	0.02	<0.01	<0.01	0.014		0.004	<0.01			
	6/10/2016	8270C	0.006	<0.01		<0.02		<0.01		<0.01	0.005			<0.01	0.004	0.054	0.014	<0.01	<0.01	0.013		0.004	<0.01			
	2/26/2016	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.06	0.017	<0.01	<0.01	0.016		<0.01	<0.01			
	11/3/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.079	0.017	<0.01	<0.01	0.023		<0.01	<0.01			
	8/18/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	0.011	0.14	0.042	<0.01	<0.01	0.042		0.012	<0.01			
	6/8/2015	8270c		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.077	0.013	<0.01	<0.01	0.029		<0.01	<0.01			
	3/17/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.1	0.028	<0.01	<0.01	0.032		<0.01	<0.01			
	11/18/2014	8270C		<0.01		<0.02		0.012		<0.01				<0.02	<0.01	0.11	0.036	<0.01	<0.01	0.055		<0.01	<0.01			
	9/18/201																									

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS																							
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a) anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2- ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzo furan (mg/L)	1,4- Dichlorob enzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	Pentachloro phenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.005	NE	NE	
40 CFR 141.62 MCL			NE	NE	NE	NE	NE	0.006	NE	NE	NE	NE	0.075	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
NMED Tap Water (March 2017)			0.535	NE	0.00012	NE	NE	0.0556	NE	NE	NE	0.00482	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.0004	0.17	5.76	0.117	NE	
EPA RSL for Tap Water (MAY 2016)			0.53	0.013	0.000012	75	2	0.0056	0.0016	NE	0.2	0.0079	0.00048	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.0002	0.000041	NE	5.8	0.12	0.02
Well ID	DATE SAMPLED	METHOD																								
MKTf-20	11/3/2016	8270C		<0.05		0.061		0.035	0.014	<0.05	0.036		<0.05	0.430	<0.05	0.05	0.038	0.16	0.089	0.11	<0.1	<0.05	0.13		<0.05	
	9/12/2016	8270C		<0.1		0.13		0.036		<0.1	0.038		0.029	0.390	<0.1	0.048	0.043	0.19	0.061	0.11	0.025	<0.1	0.061		<0.1	
	6/9/2016	8270C		<0.05		<0.1		0.018		<0.05	0.025				<0.05	0.051	0.029	0.25	0.28	0.077		<0.05	0.24		<0.05	
	3/1/2016	8270C		<0.01		<0.02		<0.01		<0.01				0.280	<0.01	0.036	0.023	0.096	<0.01	0.05		<0.01	0.011		<0.01	
	6/8/2015	8270C		<0.01		<0.02		<0.01		<0.01				0.230	<0.01	0.037	0.036	0.049	0.13	0.056		<0.01	0.05		<0.01	
	3/16/2015	8270C		<0.01		<0.02		<0.01		<0.01				0.320	<0.01	0.045	0.037	0.21	0.36	0.13		<0.01	0.21		0.016	
	11/18/2014	8270C		<0.01		<0.02		0.014		<0.01				0.610	<0.01	0.11	0.066	0.12	0.051	0.1		<0.01	0.037			
	4/11/2014	8270C		0.022		<0.026		<0.013		<0.013				0.130	<0.013	0.088	0.12	0.12	0.076	0.25		<0.013	<0.013			
MKTf-21	11/3/2016	8270c		<0.1		0.11		0.064	0.027	<0.1	0.081		<0.1	0.030	<0.1	<0.1	<0.1	<0.1	0.03	0.049	<0.2	<0.1	0.03			
	9/12/2016	8270C		<0.1		0.063		0.056		<0.1	0.035		0.029	<0.1	<0.1	<0.1	<0.1	<0.1	0.42	<0.1	0.024	<0.1	0.08			
	3/1/2016	8270C		<0.01		0.036		<0.01		<0.01				0.006	<0.01	<0.01	<0.01	<0.01	0.12	<0.01		<0.01	0.037			
	6/10/2015	8270C		<0.01		<0.02		<0.01		<0.01				0.011	<0.01	<0.01	<0.01	<0.01	0.11	<0.01		<0.01	0.035			
	3/16/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	0.069	<0.01	<0.01	<0.01	0.038			
	4/11/2014	8270C		<0.012		<0.025		<0.012		<0.012				0.100	<0.012	0.069	0.11	0.14	0.1	0.27		<0.012	0.013			
MKTf-34	11/8/2016	8270C		<0.01		8.3E-03		0.006		<0.01	0.007			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	9/13/2016	8270C		<0.01		8.4E-03		0.003		<0.01	<0.01			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	6/10/2016	8270C		<0.01		<0.02		0.003		<0.01	0.005			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	2/25/2016	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/3/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	8/18/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	6/8/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	3/12/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/17/2014	8270C		<0.01		<0.02		0.014		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	9/24/2014	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	4/9/2014	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01			
MKTf-35	11/3/2016	8270C		<0.05		0.055		0.034	0.014	<0.05	0.034			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05			
	9/13/2016	8270c		<0.01		0.005		<0.01		<0.01	<0.01			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	6/10/2016	8270C		<0.01		<0.02		0.003		<0.01	0.006			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	2/26/2016	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/3/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	8/18/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	6/4/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	3/17/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/21/2014	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.034	0.045	<0.01	<0.01	0.036		<0.01	<0.01			

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS																							
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a) anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2- ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzo furan (mg/L)	1,4- Dichlorob enzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	Pentachloro phenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.005	NE	NE	
40 CFR 141.62 MCL			NE	NE	NE	NE	NE	0.006	NE	NE	NE	NE	0.075	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
NMED Tap Water (March 2017)			0.535	NE	0.00012	NE	NE	0.0556	NE	NE	NE	0.00482	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.0004	0.17	5.76	0.117	NE	
EPA RSL for Tap Water (MAY 2016)			0.53	0.013	0.000012	75	2	0.0056	0.0016	NE	0.2	0.0079	0.00048	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.0002	0.000041	NE	5.8	0.12	0.02
Well ID	DATE SAMPLED	METHOD																								
MKTf-36	11/8/2016	8270C	0.005	<0.01		<0.02		0.007	0.003	0.006	0.008			<0.01	0.008	0.15	0.23	<0.01	<0.01	0.27		4.4E-03	0.028			
	8/18/2015	8270C		<0.01		<0.02		<0.01		<0.01			<0.01	0.012	0.34	0.51	<0.01	<0.01	0.52		<0.01	0.048				
	6/4/2015	8270C		<0.01		<0.02		<0.01		<0.01			<0.01	0.013	0.33	0.51	<0.01	<0.01	0.49		<0.01	0.056				
	3/17/2015	8270C		<0.01		<0.02		<0.01		<0.01			<0.01	0.010	0.24	0.39	<0.01	<0.01	0.47		<0.01	0.044				
	11/21/2014	8270C		<0.01		<0.02		<0.01		<0.01			<0.01	<0.01	0.16	0.23	<0.01	<0.01	0.28		<0.01	0.015				
MKTf-37	11/3/2016	8270C		<0.01		0.019		0.008		<0.01	0.007		0.003	<0.01	<0.01	0.051	0.064	0.012	3.5E-03	0.2		<0.01	7.4E-03			
	8/19/2015	8270C		<0.01		<0.02		<0.01		<0.01			<0.01	<0.01	0.83	1.4	<0.01	<0.01	2.7		<0.01	<0.01				
	6/4/2015	8270C		<0.01		<0.01		<0.01		<0.01			<0.01	<0.01	0.074	0.11	0.028	<0.01	0.23		<0.01	<0.01				
	3/17/2015	8270C		<0.01		<0.02		<0.01		<0.01			<0.01	<0.01	0.072	0.096	0.033	<0.01	0.16		<0.01	<0.01				
	11/21/2014	8270C		<0.01		<0.02		<0.01		<0.01			<0.01	<0.01	0.05	0.056	<0.01	<0.01	0.27		<0.01	<0.01				
MKTf-38	11/1/2016	8270C		<0.01		8.7E-03		0.006	0.003	<0.01	0.008			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	9/13/2016	8270C		<0.01		0.0046		0.003		<0.01	<0.01			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	6/8/2016	8270C		<0.01		<0.02		0.003		<0.01	0.005			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	2/29/2016	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/9/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	8/24/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	6/10/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	3/16/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/21/2014	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
MKTf-39	11/1/2016	8270C	0.003	<0.01		0.016		0.007		0.016	0.007	0.003		<0.01	<0.01	0.009	0.098	0.039	<0.01	<0.01	0.054		7.4E-03	<0.01	4.8E-03	
	9/13/2016	8270C		<0.01		0.012		0.003		0.016	<0.01	0.003		<0.01	<0.01	0.008	0.077	0.028	<0.01	<0.01	0.044		6.7E-03	<0.01		
	6/8/2016	8270C		<0.05		<0.1		0.019		0.026	0.025		0.014	<0.05	<0.05	0.11	0.042	<0.05	<0.05	0.049		0.013	<0.05			
	3/3/2016	8270C		<0.01		<0.02		<0.01		0.028				<0.01	0.010	0.11	0.037	<0.01	<0.01	0.045		7.9E-04	<0.01			
	11/9/2015	8270C		<0.01		<0.02		<0.01		0.021				<0.01	<0.01	0.089	0.032	<0.01	<0.01	0.062		<0.01	<0.01			
	8/23/2015	8270C		<0.01		<0.02		<0.01		0.025				<0.01	<0.01	0.084	0.021	<0.01	<0.01	0.051		<0.01	<0.01			
	6/10/2015	8270C		<0.01		<0.02		<0.01		0.026				<0.01	0.013	0.14	0.043	<0.01	<0.01	0.064		0.014	<0.01			
	3/16/2015	8270C		<0.01		<0.02		<0.01		0.011				<0.01	<0.01	0.056		<0.01	<0.01	0.02		<0.01	<0.01			
	11/18/2014	8270C		<0.01		<0.02		0.012		0.021				<0.01	<0.01	0.079	<0.01	<0.02	<0.01	<0.01		<0.01	<0.01			

DEFINITIONS
NE = Not established
NA = Not analyzed
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

NOTES

Table 3
Marketing Tanks Records

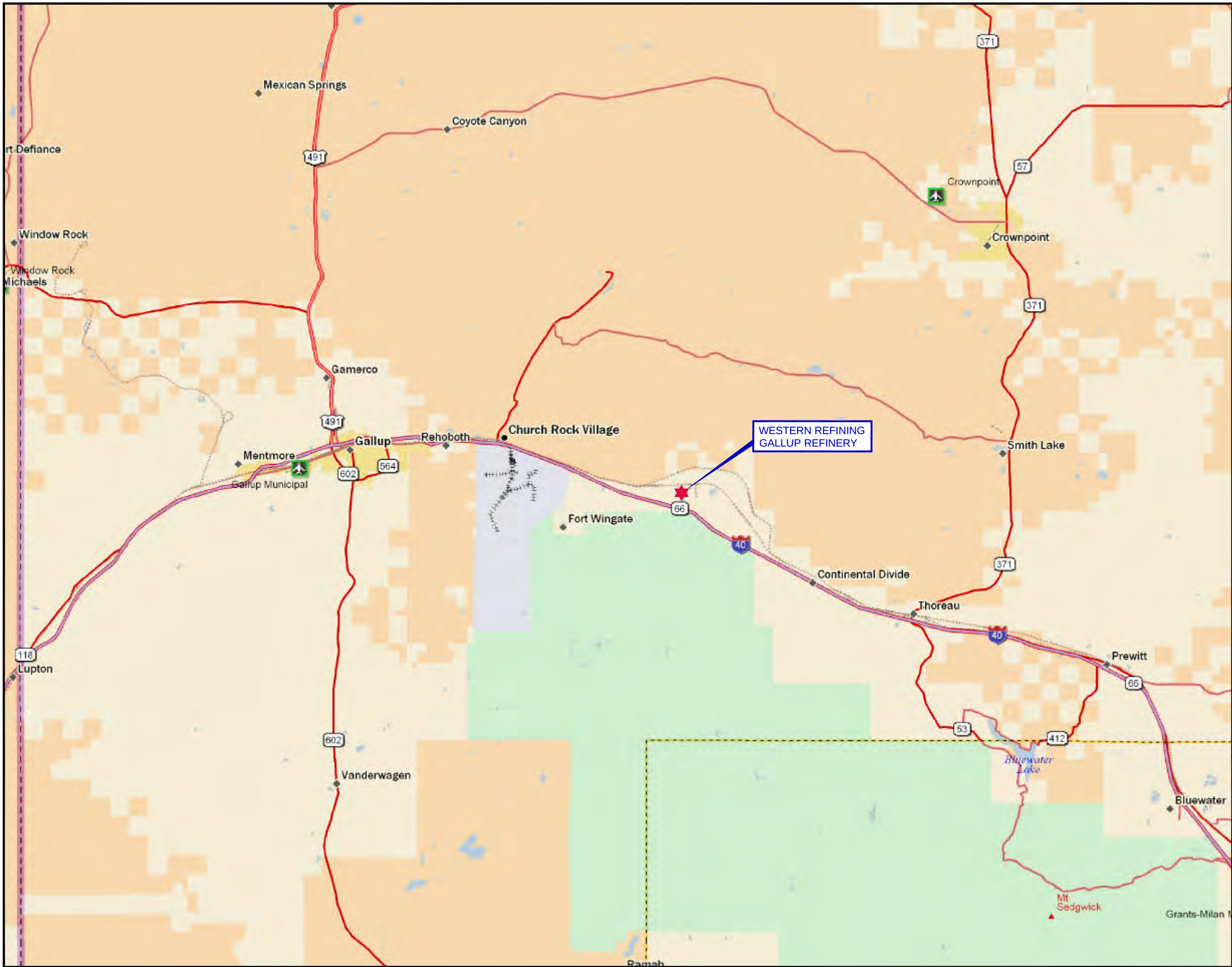
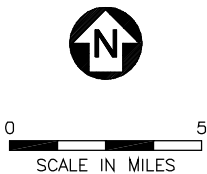
TANK NUMBER	TYPE OF TANK	YEAR BUILT	ROOF TYPE	ACTUAL CAPACITY	TANK DIAMETER	TANK HEIGHT/ LENGTH	PRODUCT
MKT-TK-01	VERT. STEEL	1965	CFRT	3000 bbl	30'-0"	24'-0"	ULSD
MKT-TK-02	VERT. STEEL	1965	IFRT	4000 bbl	30'-0"	32'-0"	83 OCTANE
MKT-TK-03	VERT. STEEL	1965	IFRT	4000 bbl	30'-0"	32'-0"	89 OCTANE
MKT-TK-04	VERT. STEEL	1970	IFRT	3800 bbl	30'-0"	32'-0"	83 OCTANE
MKT-TK-05	VERT. STEEL	1963	CFRT	1800 bbl	25'-0"	28'-0"	ETHANOL
MKT-TK-06	VERT. STEEL	1963	IFRT	1800 bbl	21'-6"	28'-0"	ETHANOL
MKT-TK-07	VERT. STEEL	2011	IFRT	91392 gal	24'-0"	32'-0"	NEW-OUT OF SERVICE
MKT-TK-08	VERT. STEEL	2011	IFRT	91392 gal	24'-0"	32'-0"	ULSD SALES
TK-1001	HORIZONTAL	unknown	FLATHEAD	3,000 gal	5'-4"	18'-0"	DIESEL
TK-1002	HORIZONTAL	unknown	FLATHEAD	3,000 gal	5'-4"	18'-0"	GASOLINE
TK-912	HORIZONTAL	unknown	FLATHEAD	8,000 gal	8'-0"	21'-0"	OUT OF SERVICE
TK-913	HORIZONTAL	unknown	FLATHEAD	8,000 gal	10'-0"	15'-0"	OUT OF SERVICE

CFRT - closed floating roof tank
IFRT - internal floating roof tank
ULSD - ultra low sulfur diesel

bbl - barrel
gal - gallon

Figures

- Figure 1 Site Location Map**
 - Figure 2 AOC 35 Map**
 - Figure 3 Potentiometric Map**
 - Figure 4 Benzene Concentration Map**
 - Figure 5 MTBE Concentration Map**
 - Figure 6 Proposed Sampling Locations**
-
-

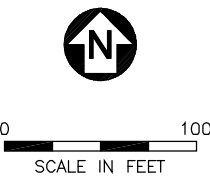


PROJ. NO.: Western Refining | DATE: 07/13/14 | FILE: WestRef-B198

FIGURE 1
SITE LOCATION MAP
GALLUP REFINERY



Aerial Map Source: Google Map, 3/18/2016.



- LEGEND**
- AOC 35 LOCATION
 - TEMPORARY WELL LOCATION (PLUGGED)
 - MONITORING WELL LOCATION (PERMANENT WELL)



QUADRANGLE LOCATION



MARATHON PETROLEUM COMPANY
GALLUP REFINERY

PROJ. NO.: Marathon | DATE: 07/23/19 | FILE: Mathon—dB180

FIGURE 2
AOC 35 MAP



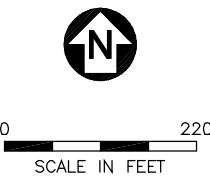
8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759



Aerial Map Source: Google Map, 01/05/2014.

LEGEND

- SB01 TEMPORARY WELL LOCATION (PLUGGED)
- S01 TEMPORARY SUMP
- MONITORING WELL LOCATION (PERMANENT WELL)
- 3.3 BENZENE CONCENTRATION (mg/l)
- SCREENING LEVEL = 0.005 mg/l
- SPH SEPARATE PHASE HYDROCARBON
- ISOCONTOUR OF BENZENE CONCENTRATION (mg/l)



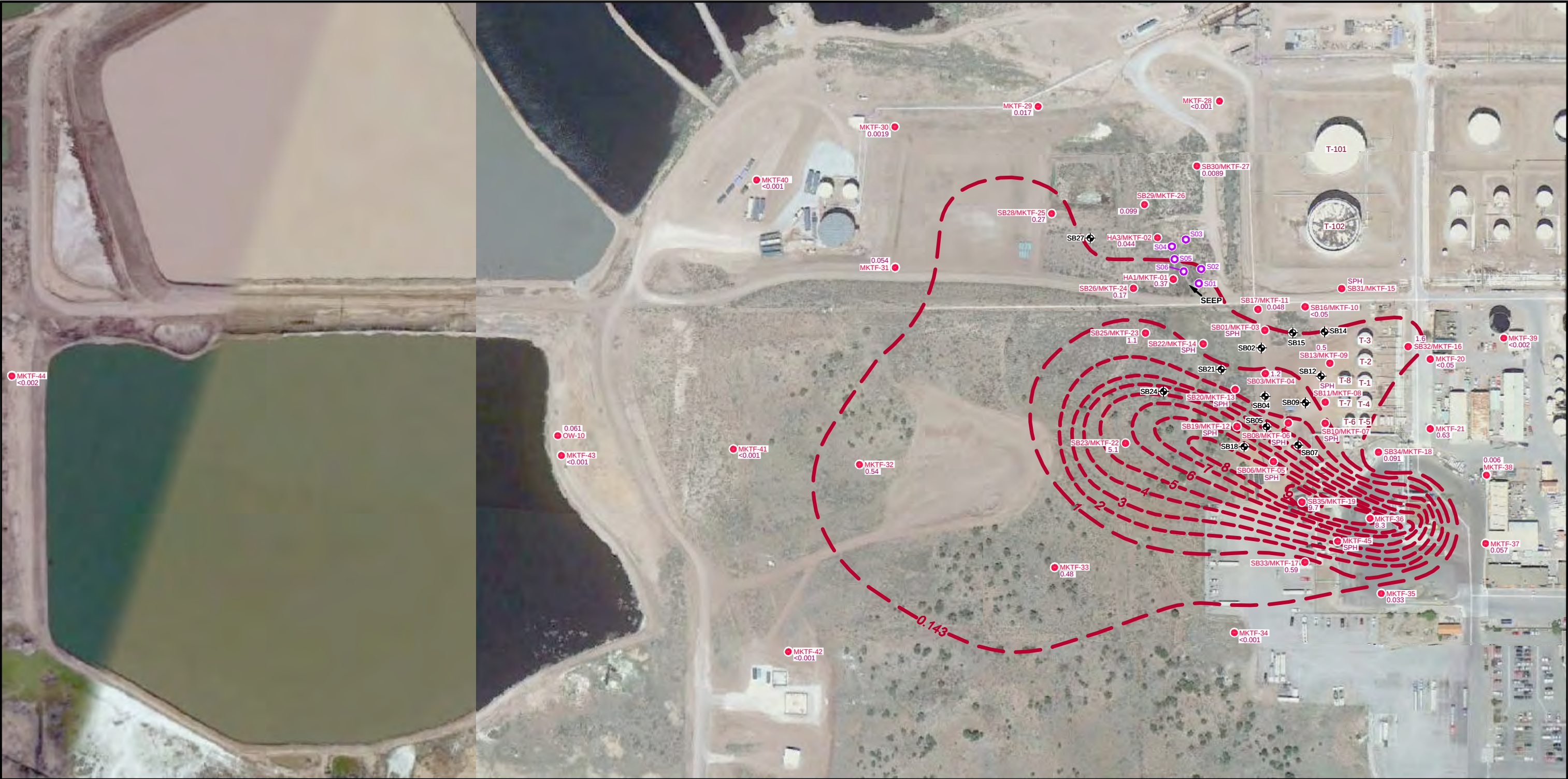
QUADRANGLE LOCATION



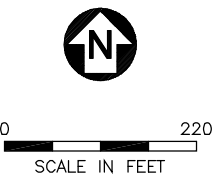
PROJ. NO.: Western Refining | DATE: 06/30/15 | FILE: WestRef-bb41

FIGURE 4
BENZENE
CONCENTRATION MAP
MARCH 2015

DiSorbo
Environmental Consulting Firm
8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759



Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- SB01 TEMPORARY WELL LOCATION (PLUGGED)
 - S01 TEMPORARY SUMP
 - MONITORING WELL LOCATION (PERMANENT WELL)
 - 1.1 MTBE CONCENTRATION (mg/l)
 - SCREENING LEVEL = 0.143 mg/l
 - SPH SEPARATE PHASE HYDROCARBON
 - ISOCONTOUR OF MTBE CONCENTRATION (mg/l)



QUADRANGLE LOCATION

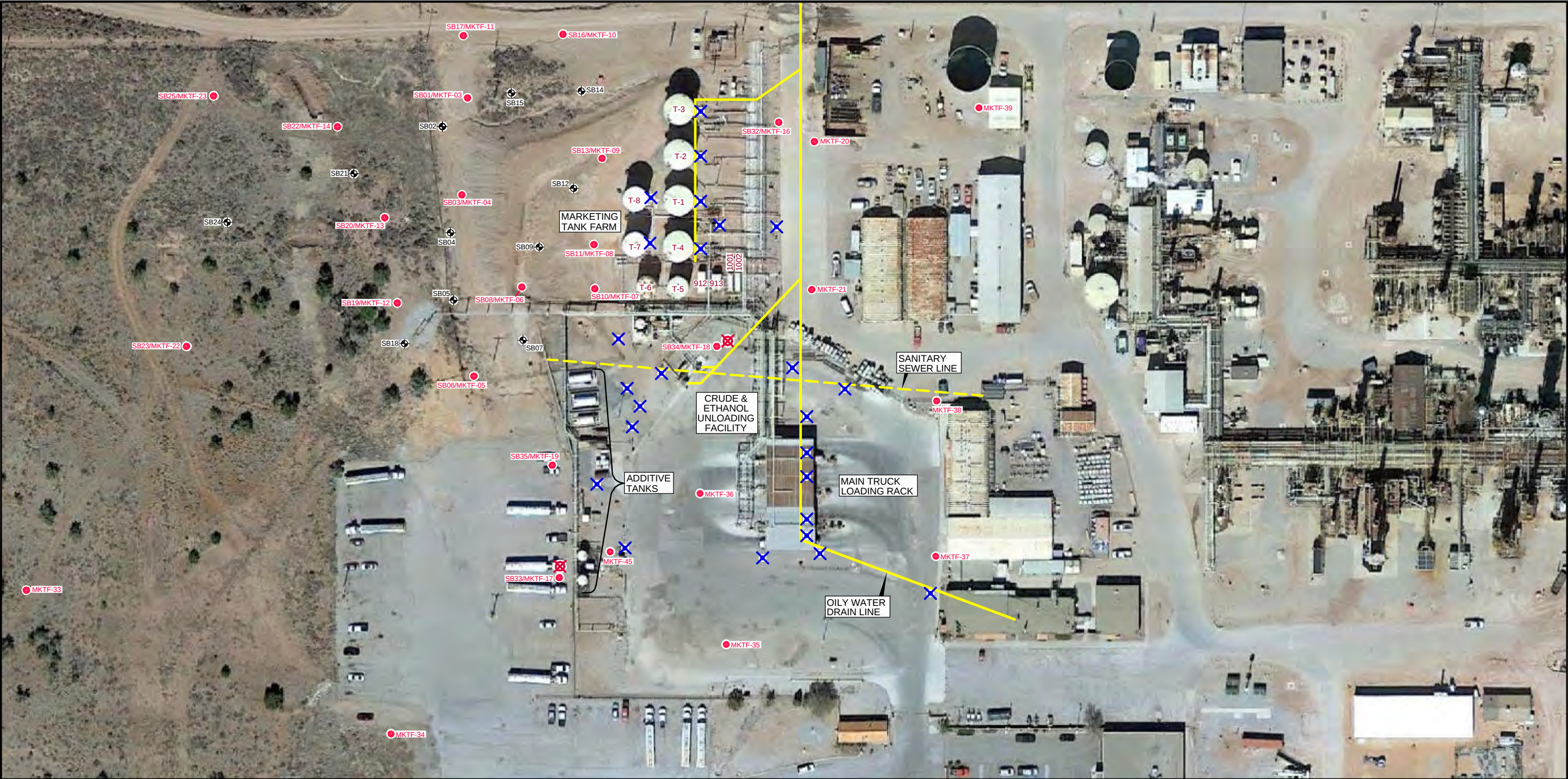


PROJ. NO.: Western Refining | DATE: 06/30/15 | FILE: WestRef-bb42

FIGURE 5
MTBE
CONCENTRATION MAP
MARCH 2015



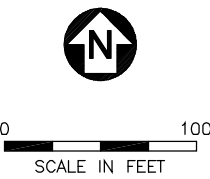
8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759



Aerial Map Source: Google Map, 3/18/2016.

LEGEND

- PROPOSED SOIL BORING LOCATION
- PROPOSED WELL LOCATION
- TEMPORARY WELL LOCATION (PLUGGED)
- MONITORING WELL LOCATION (PERMANENT WELL)



QUADRANGLE LOCATION



MARATHON PETROLEUM COMPANY
GALLUP REFINERY

PROJ. NO.: Marathon | DATE: 07/21/19 | FILE: Mathon-dB181

FIGURE 6
PROPOSED SAMPLING LOCATIONS



8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759

Appendix A

Boring Logs



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.346' W 108°25.782'; Bo

Total Depth: 16' bgl
Ground Water: Saturated @ 5' bgl
Elev., TOC (ft. msl): 6920.67
Elev., PAD (ft. msl): 6918.28
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,864.41 **E** 2,545,561.73

Well No.: MKTF-01
Start Date: 11/14/2013
Finish Date: 11/14/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1				100	Silty Clay (CL) Low plasticity, soft, damp, reddish brown to brown, no odor	
3						
5		5			Silty Clay/Clayey Silt (CL/ML) Low plasticity, very soft, moist to saturated, brown grading to black, gravelly, bio odor, no phase-separated hydrocarbon	
7				100		
9						
11						
13						
15						
17					Total Depth = 16' BGL	
19						

Steel Protective Cover w/ Locking Cap

Concrete Pad - 4'x4'x6"

Bentonite Pellets

4" Sch. 40 PVC Slotted 0.01" Screen

10/20 Sieve Sand Filter Pack

4" Flush Threaded Sch. 40 PVC Cap

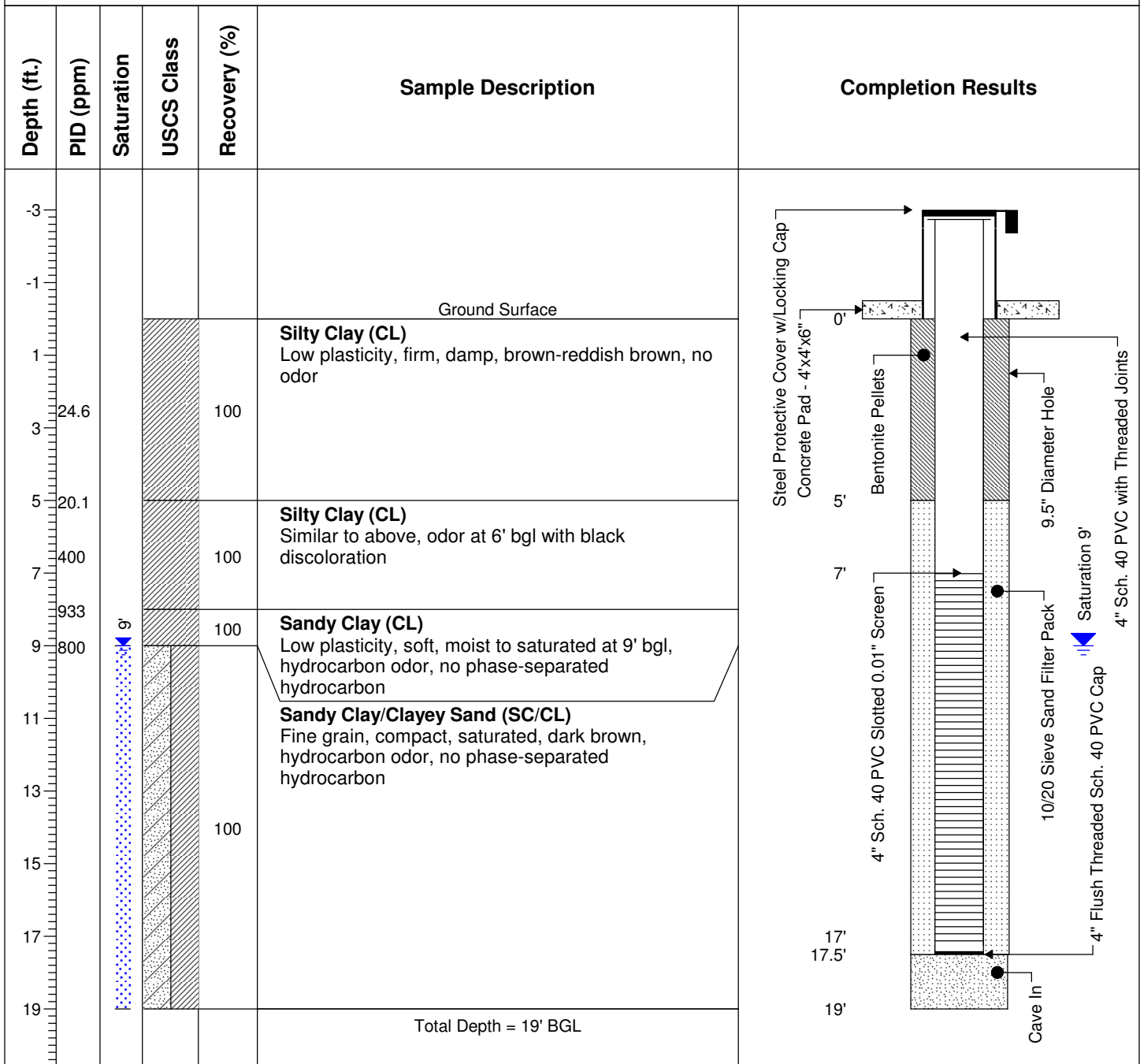
4" Sch. 40 PVC with Threaded Joints

Cave In

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.360' W 108°25.789'; Boring ID HA3

Total Depth: 19' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6917.45
Elev., PAD (ft. msl): 6915.00
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,946.93 **E** 2,545,530.46

Well No.: MKTF-02
Start Date: 11/14/2013
Finish Date: 11/14/2013



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.328' W108°25.743'; Boring ID - SB01

Total Depth: 19' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6931.31
Elev., PAD (ft. msl): 6931.73
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,746.53 **E** 2,545,756.87

Well No.: MKTF-03
Start Date: 11/7/2013
Finish Date: 11/7/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	164			60	Fill (Silt/Sand) Fine grain, loose, dry to damp, brown, no odor	
3	423			40	Silty Clay (CL) Low plasticity, firm, damp, brown/reddish brown, no odor	
5	330			70	Silty Clay (CL) Similar to above, no odor	
7	75			90	Silty Clay (CL) Similar to above, sandy at base from 7.75-8.0' bgl, no odor	
9	326	8		90	Silty Clay (CL) Fine grain sand seams throughout, saturated, phase-separated hydrocarbon, hydrocarbon odor, clear phase-separated hydrocarbon poured out of split spoon	
11	312			90	Silty Clay (CL) Similar to above with sand seams, saturated with phase-separated hydrocarbon, hydrocarbon odor, dark brown	
13	368			80	Gravelly Sand (SW) Fine to medium to coarse grain, loose, saturated with phase-separated hydrocarbon, black, hydrocarbon odor	
15	700			60	Gravelly Sand (SW) Similar to above	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.328' W 108°25.743'; Boring ID - SB01

Total Depth: 19' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6931.31
Elev., PAD (ft. msl): 6931.73
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,746.53 **E** 2,545,756.87

Well No.: MKTF-03
Start Date: 11/7/2013
Finish Date: 11/7/2013

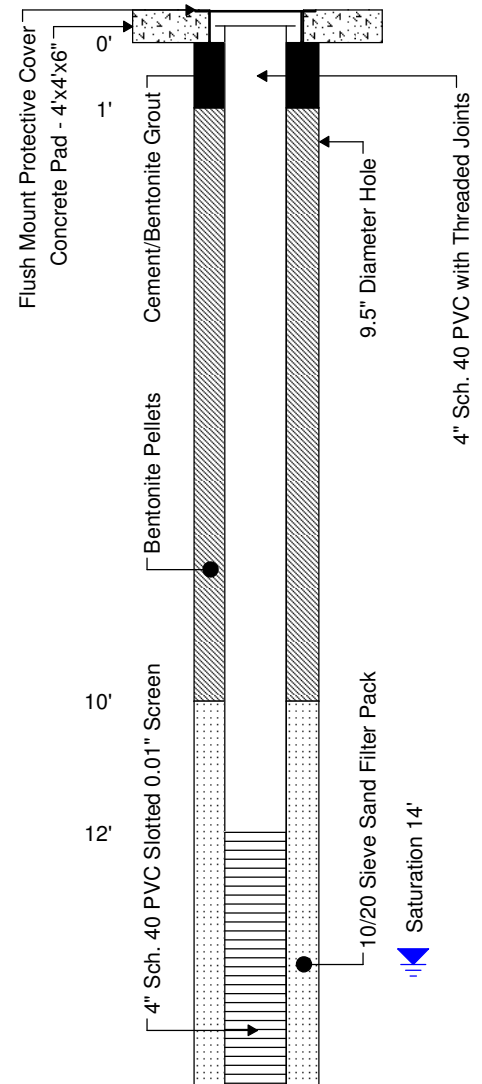
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17				10	Silty Sand/Silty Clay (SM/CL) Low plasticity, firm, moist, brown, faint odor, no phase-separated hydrocarbon	4" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack Cave In 4" Flush Threaded Sch. 40 PVC Cap
19	225			80	Silty Clay (CL) Poor recovery	
					Clay (CH) High plasticity, very dense, damp, light reddish brown, faint odor	
Total Depth = 19' BGL						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.310' W 108°25.742'; Boring ID SB03

Total Depth: 24' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6933.57
Elev., PAD (ft. msl): 6933.90
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,649.46 **E** 2,545,752.83

Well No.: MKTF-04
Start Date: 11/12/2013
Finish Date: 11/12/2013

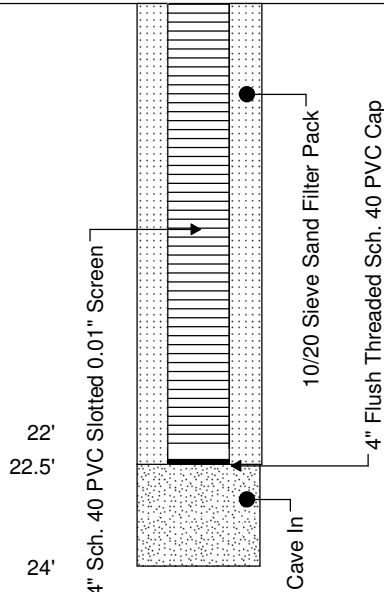
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	10.2			90	Fill (Silt/Gravel) Low plasticity, very dense, dry, light brown, no odor	
3	11.7			80	Fill (Silt/Gravel) Similar to above, black, dense at base, no odor	
5	16			90	Silty Clay (CL) Low plasticity, stiff, damp, reddish brown, no odor, calcareous	
7	26			90	Gravelly Sandy Clay (CL) Low plasticity, loose to firm, damp, brown, no odor	
9	708			70	Silty Clay (CL) Low plasticity, very soft, damp, reddish brown, hydrocarbon odor	
11	369			80	Clay (CH) High plasticity, firm, damp, reddish brown, hydrocarbon odor	
13	660			90	Sandy Clay/Clayey Sand (SC/CL) Low plasticity, fine grain, soft, damp, reddish brown, hydrocarbon odor	
15	85			90	Sandy Clay (SC) Similar to above, saturated sand seams, hydrocarbon odor, brown	



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.310' W 108°25.742'; Boring ID SB03

Total Depth: 24' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6933.57
Elev., PAD (ft. msl): 6933.90
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,649.46 **E** 2,545,752.83

Well No.: MKTF-04
Start Date: 11/12/2013
Finish Date: 11/12/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17	64			70	Sandy Clay (SC) Similar to above, moist to saturated, hydrocarbon odor, brown	 4" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 4" Flush Threaded Sch. 40 PVC Cap Cave In
19	33			90	Sandy Clay (SC) Low plasticity, fine grain, soft, moist to saturated, light reddish brown, hydrocarbon odor, gravelly at base Silty Clay (CL) Low plasticity, stiff, damp, light reddish brown grading to yellowish/greenish gray, becomes more silty at base	
21						
23						
25					Total Depth = 24' BGL	
27						
29						
31						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.282' W 108°25.739'; Boring ID - SB06

Total Depth: 15' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6942.22
Elev., PAD (ft. msl): 6939.49
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,472.30 **E** 2,545,769.95

Well No.: MKTF-05
Start Date: 11/12/2013
Finish Date: 11/12/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3					Ground Surface	
1	52.6			60	Fill (Silty Clay/Gravel) Low plasticity, firm, damp, brown, faint odor	
3	180			100	Silty Clay (CL) Low plasticity, firm, damp, reddish brown, odor, calcareous	
5	224			90	Sandy Clay/Clayey Sand (CL/SC) Low plasticity, fine grain, damp, dark brown, hydrocarbon odor, sand seams present	
7	1202			90	Sandy Clay/Clayey Sand (CL) Similar to above	
9	1228			90	Sandy Silty Clay (CL) Low plasticity, soft, damp, dark brown, hydrocarbon odor	
11	1525			90	Sandy Clay (CL) Similar to above, with moist to saturated sand seams, hydrocarbon odor	
13	377			90	Clayey Sand (SC) Fine grain, loose to compact, saturated, hydrocarbon odor, dark brown	
15					Sandy Clay (CL) Low plasticity, soft to firm, moist, dark brown, hydrocarbon odor	
17					Total Depth = 15' BGL	
19						

WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.295' W 108°25.732'; Boring ID - SB08

Total Depth: 21' bgl
Ground Water: Saturated @ 17.5' bgl
Elev., TOC (ft. msl): 6946.81
Elev., PAD (ft. msl): 6944.24
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,556.28 **E** 2,545,811.85

Well No.: MKTF-06
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3					Ground Surface	
1	15.9			70	Fill (Silt/Silty Clay) Low plasticity, stiff, dry, light brown, no odor	
3	228			60	Fill (Silty Clay/Gravel) Similar to above, dry, no odor	
5	177			60	Fill (Silty Clay) Similar to above, damp, no odor	
7	264			40	Fill (Silty Clay) Low plasticity, soft, damp, brown, gravel and wood debris	
9				--	No recovery	
11	90			10	Fill (Silty Clay/Gravel) Similar to above	
13	660			100	Sandy Silty Clay (CL) Low plasticity, soft, damp to moist at base, brown, hydrocarbon odor	
15						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.295' W 108°25.732'; Boring ID - SB08

Total Depth: 21' bgl
Ground Water: Saturated @ 17.5' bgl
Elev., TOC (ft. msl): 6946.81
Elev., PAD (ft. msl): 6944.24
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,556.28 **E** 2,545,811.85

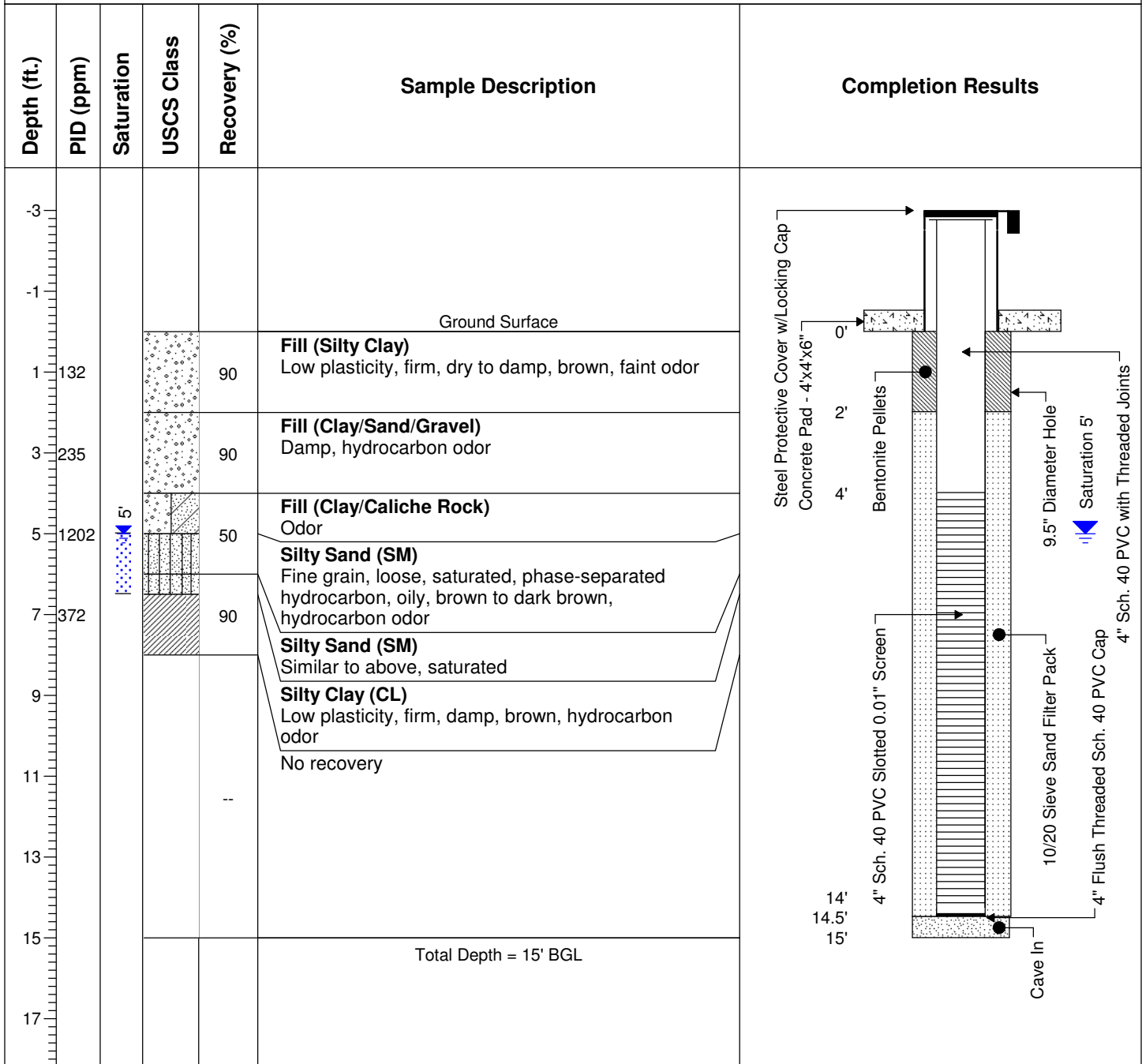
Well No.: MKTF-06
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
1115		17.5'		100	Sandy Silty Clay (CL) Similar to above, moist, oily, hydrocarbon odor	10/20 Sieve Sand Filter Pack 4" Sch. 40 PVC Slotted 0.01" Screen 20' 20.5' 21' Cave In 4" Flush Threaded Sch. 40 PVC Cap Saturation 17.5'
17				100	Gravelly Sandy Clay (CL) Low plasticity, firm, moist, oily, 1" gravel, strong hydrocarbon odor	
19				100	Clayey Gravel Sand (SC) Fine to medium grain, loose, saturated, phase-separated hydrocarbon present, black, hydrocarbon odor	
225				100	Sandy Clay (CL) Low plasticity, firm, moist, black hydrocarbon odor	
21					Total Depth = 21' BGL	
23						
25						
27						
29						
31						
33						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.295' W 108°25.710'; Boring ID - SB10

Total Depth: 15' bgl
Ground Water: Saturated @ 5' bgl
Elev., TOC (ft. msl): 6947.18
Elev., PAD (ft. msl): 6944.40
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,555.11 **E** 2,545,885.42

Well No.: MKTF-07
Start Date: 11/11/2013
Finish Date: 11/11/2013





WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.302' W 108°25.716'; Bo

Total Depth: 20' bgl
Ground Water: Saturated @ 10.5' bgl
Elev., TOC (ft. msl): 6947.09
Elev., PAD (ft. msl): 6944.02
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,598.94 **E** 2,545,885.02

Well No.: MKTF-08
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	85			90	Fill (Silty Clay/Gravel) Low plasticity, firm, dry to damp, odor	
3	273			80	Fill (Silty Clay/Gravel) Similar to above	
5	86			90	Clay (CH) High plasticity, stiff, damp, brown with light brown pockets of silt, odor	
7	308			90	Silty Clay (CL) Low plasticity, soft/crumblly, dry to damp, brown, hydrocarbon odor	
9	1126			80	Silty Clay (CL) Low plasticity, soft, damp, brown, hydrocarbon odor	
11	789	10.5'		80	Silty Clay (CL) Similar to above, moist	
13	558			90	Silty Clay (CL) Medium grain, loose, saturated, phase-separated hydrocarbon, hydrocarbon odor, brown	
15					Sandy Silty Clay (CL) Low plasticity, soft to firm, moist, hydrocarbon odor	
17					Sandy Clay (CL) Low plasticity, soft to compact, saturated, phase-separated hydrocarbon, hydrocarbon odor	
19						
Total Depth = 20' BGL						

Diagram illustrating the well completion details:

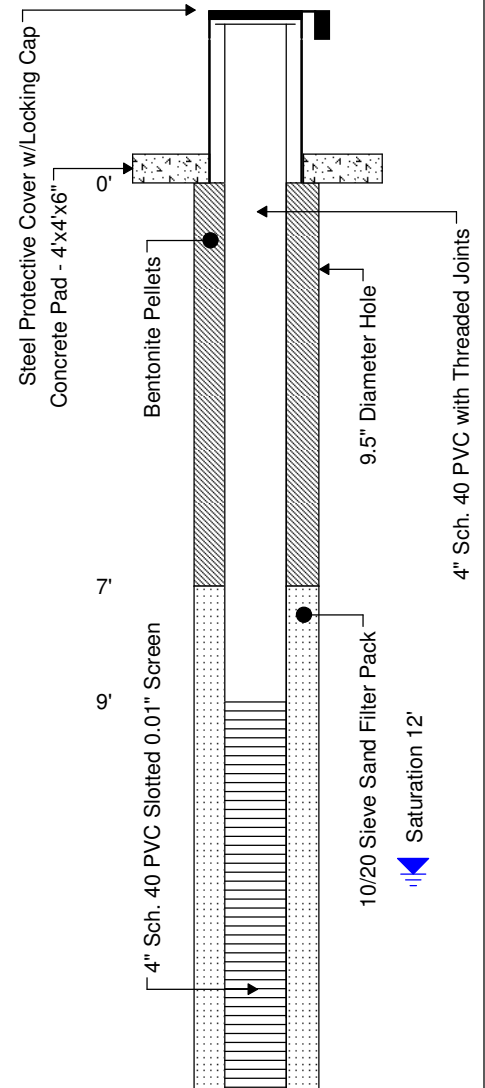
- Steel Protective Cover w/ Locking Cap
- Concrete Pad - 4'x4'x6"
- Bentonite Pellets
- 9.5" Diameter Hole
- 4" Sch. 40 PVC with Threaded Joints
- 4" Sch. 40 PVC Slotted 0.01" Screen
- 10/20 Sieve Sand Filter Pack
- Saturation 10.5'
- 4" Flush Threaded Sch. 40 PVC Cap
- Save In
- 18'
- 18.5'
- 20'

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.316' W 108°25.715'; Boring ID - SB13

Total Depth: 22' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6946.50
Elev., PAD (ft. msl): 6943.57
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,681.33 **E** 2,545,895.93

Well No.: MKTF-09
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1						
					Ground Surface	
1	21.9			90	Fill (Silty Clay) Low plasticity, stiff, dry to damp, no odor, brown	
3	32.7			90	Fill (Silty Clay) Similar to above, gravel	
5	36.1			90	Silty Clay (CL) Low plasticity, soft, damp, brown, faint odor	
7	37			90	Silty Clay (CL) Similar to above	
9	533			90	Silty Clay (CL) Similar to above	
				90	Sandy Clay (CL) Similar to above, increase in sand and moisture	
11	314			90	Sandy Clay (CL) Similar to above, moist, hydrocarbon odor, dark brown	
13	651			90	Sandy Clay/Clayey Sand (CL/SC) Fine to medium grain, compact, moist to saturated, hydrocarbon odor	
15	587				Sandy Clay/Clayey Sand (CL/SC) Similar to above, saturated, sheen observed on split spoon, black, hydrocarbon odor	



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.316' W 108°25.715'; Boring ID - SB13

Total Depth: 22' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6946.50
Elev., PAD (ft. msl): 6943.57
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,681.33 **E** 2,545,895.93

Well No.: MKTF-09
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17				90	Sandy Clay/Clayey Sand (CL/SC) Fine to medium grain, compact, saturated, sheen observed on split spoon, black, hydrocarbon odor	10/20 Sieve Sand Filter Pack 4" Sch. 40 PVC Slotted 0.01" Screen Cave In 4" Flush Threaded Sch. 40 PVC Cap
19					Total Depth = 22' BGL	
21						
23						
25						
27						
29						
31						
33						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.336' W 108°25.724'; Boring ID SB16

Total Depth: 18' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6937.16
Elev., PAD (ft. msl): 6937.51
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,807.47 **E** 2,545,853.54

Well No.: MKTF-10
Start Date: 10/31/2013
Finish Date: 10/31/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	90			90	Fill (Silt/Gravel) Low plasticity, loose, dry, light brown	
3	14			90	Fill (Silty Clay/Gravel) Similar to above	
5	431			90	Silty Clay (CL) Low plasticity, stiff, dry, reddish brown, odor, calcareous	
7	448			60	Sand (SP) Fine grain, loose, dry, reddish brown, odor	
9	654	9		60	Sand (SP) Similar to above, saturated at 9' bgl, phase-separated hydrocarbon, hydrocarbon odor	
11	1559			90	Clayey Sand (SC) Fine grain, soft, saturated, phase-separated hydrocarbon, brown to black, hydrocarbon odor	
13	713			90	Clayey Sand/Sandy Clay (SC/CL) Low plasticity, firm to stiff, moist to saturated, hydrocarbon odor, dark brown	
15				90		
17						
19					Total Depth = 18' BGL	
21						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.336' W 108°25.739'; Boring ID - SB17

Total Depth: 19' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6931.34
Elev., PAD (ft. msl): 6931.61
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,806.93 **E** 2,545,754.77

Well No.: MKTF-11
Start Date: 10/31/2013
Finish Date: 10/31/2013

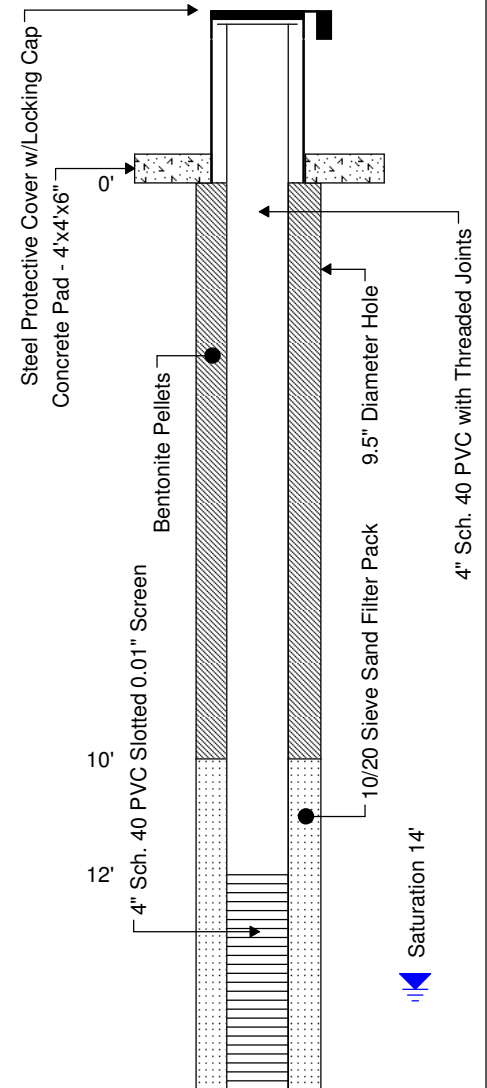
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	14			60	Fill (Silty Clay/Gravel) Low plasticity, stiff, dry, light brown	
3	36			70	Fill (Silty Clay) Similar to above	
5	80			90	Silty Clay (CL) Low plasticity, firm, damp, brown, calcareous	
7	125			80	Silty Clay (CL) Similar to above	
9	1259			80	Silty Clay (CL) Low plasticity, firm, damp, oily, hydrocarbon odor, dark brown	
11	860	12		70	Silty Clay (CL) Similar to above, moist, hydrocarbon odor, oily, phase-separated hydrocarbon	
13	1716			60	Sandy Clay (CL) Low plasticity, soft, moist to saturated, hydrocarbon odor, dark brown	
15	1050			70	Silty Sand (SM) Medium grain, loose, saturated, hydrocarbon odor, dark brown to black	
17				70	Sandy/Silty Clay (CL) Low plasticity, firm, saturated, dark brown to black, hydrocarbon odor	
19					Total Depth = 19' BGL	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.294' W 108°25.754'; Boring ID - SB19

Total Depth: 23' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6942.11
Elev., PAD (ft. msl): 6939.70
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,542.07 **E** 2,545,688.29

Well No.: MKTF-12
Start Date: 11/7/2013
Finish Date: 11/7/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	8.7			90	Silt/Gravel (ML) Low plasticity, soft, dry/damp, no odor, brown	
3	54			80	Silt/Gravel (ML) Similar to above	
5	7			70	Gravel/Silt (GW) 1/2 to 1" gravel, loose, compact, dry, no odor	
7	7.5			70	Clayey Sandy Silt (ML) Very fine grain, compact, dry to damp, brown, no odor	
9	5.5			60	Sandy Clay (CL) Low plasticity, firm, damp, light brown, no odor	
11	5.8			70	Sandy Clay (CL) Similar to above, brown, no odor	
13	10			70	Sandy Clay (CL) Similar to above	
13		14'			Silty Sand (SM) Fine to medium grain, loose, damp, brown, no odor	
15	225			50	Sandy Clay (CL) Low plasticity, firm, moist to saturated in sand seams, hydrocarbon odor, dark brown	



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.294' W 108°25.754'; Boring ID - SB19

Total Depth: 23' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6942.11
Elev., PAD (ft. msl): 6939.70
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,542.07 **E** 2,545,688.29

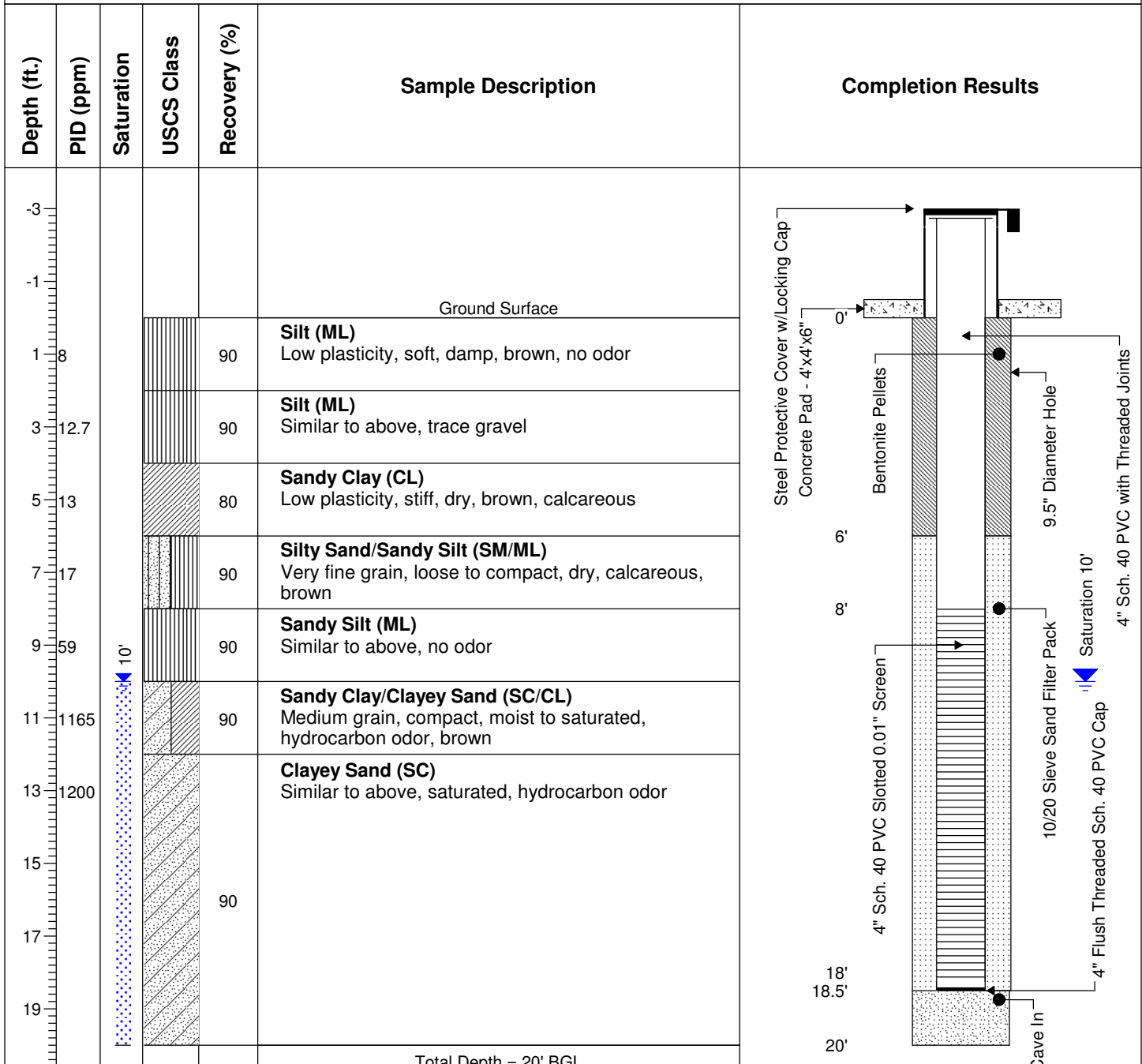
Well No.: MKTF-12
Start Date: 11/7/2013
Finish Date: 11/7/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17	319			70	Sandy Clay (CL) Similar to above, moist, hydrocarbon odor	10/20 Sieve Sand Filter Pack 4" Sch. 40 PVC Slotted 0.01" Screen 4" Flush Threaded Sch. 40 PVC Cap Cave In
19	400			--	Sandy Clay (CL) Similar to above, moist, hydrocarbon odor	
21	532			--	Sandy Clay/Clayey Sand (CL) Very fine grain, compact, moist to saturated, sheen observed in split spoon, hydrocarbon odor	
23					Total Depth = 23' BGL	
25						
27						
29						
31						
33						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.307' W 108°25.755'; Boring ID - SB20

Total Depth: 20' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6935.18
Elev., PAD (ft. msl): 6933.67
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,625.25 **E** 2,545,697.39

Well No.: MKTF-13
Start Date: 11/12/2013
Finish Date: 11/12/2013





WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.323' W 108°25.769'; Bo

Total Depth: 15' bgl
Ground Water: Saturated @ 6' bgl
Elev., TOC (ft. msl): 6928.02
Elev., PAD (ft. msl): 6925.65
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,719.43 **E** 2,545,625.96

Well No.: MKTF-14
Start Date: 11/12/2013
Finish Date: 11/12/2013

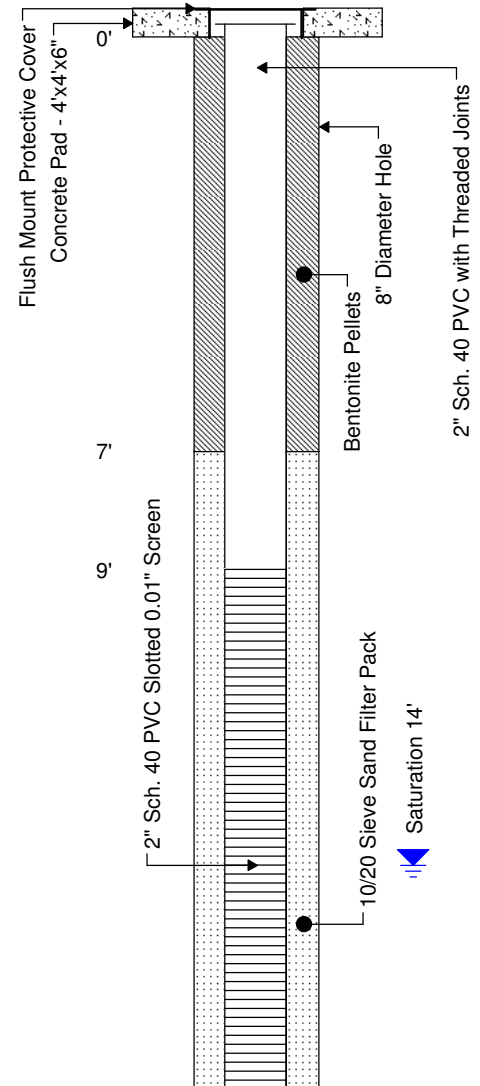
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	18			20	Silty Clay (CL) Low plasticity, soft, damp, brown	
3	308			90	Silty Clay (CL) Similar to above, odor	
5	793	6'		90	Sandy Clay (CL) Low plasticity, firm, moist, oily, brown, trace gravel	
7	504			90	Clayey Sand (SC) Medium grain, loose to compact, saturated, phase-separated hydrocarbon, hydrocarbon odor, black	
9	760			90	Clayey Sand (SC) Similar to above	
11						
13						
15					Total Depth = 15' BGL	
17						
19						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.343' W 108°25.708'; Boring ID - SB31

Total Depth: 22' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6943.48
Elev., PAD (ft. msl): 6943.74
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,845.57 **E** 2,545,934.58

Well No.: MKTF-15
Start Date: 10/29/2013 09:30
Finish Date: 10/29/2013 12:15

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	6.7			0	Fill (Clay and Gravel) No recovery	
3	14.6			90	Fill (Clay and Gravel) Reddish brown	
5				90	Fill (Clay and Gravel) Similar to above, no odor	
7	823			90	Fill (Silty Clay) Reddish brown, hydrocarbon odor	
9	1004			90	Silty Sandy Clay (CL) Low plasticity, firm to soft, damp, reddish brown, hydrocarbon odor	
11	293			70	Silty Sand (SM) Fine grain, compact, damp, light reddish brown, no odor	
13	221			80	Sand (SP) Similar to above, odor, moist to very moist	
15				80	Sand (SP) Fine to medium grain, loose, saturated, brown, hydrocarbon odor, phase-separated hydrocarbon present	
17				60	Sandy Silt (ML) Low plasticity, very soft, damp to moist, brown, hydrocarbon odor	



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.343' W 108°25.708'; Boring ID - SB31

Total Depth: 22' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6943.48
Elev., PAD (ft. msl): 6943.74
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,845.57 **E** 2,545,934.58

Well No.: MKTF-15
Start Date: 10/29/2013 09:30
Finish Date: 10/29/2013 12:15

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
19				90	Sandy Silt/Silty Sand (ML/SM) Fine grain, loose to compact, moist to saturated, hydrocarbon odor, dark brown to black	19' 19.33' 22' 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack Bentonite Pellets 2" Flush Threaded Sch. 40 PVC Cap
					Sandy Silt/Silty Sand (ML/SM) Similar to above, saturated in silty sand lenses, hydrocarbon odor	
21				90	Silty Clay (CL) Low plasticity, firm, damp, brown, faint odor	
					Silty Clay (CL) Similar to above, odor	
23					Total Depth = 22' BGL	
25						
27						
29						
31						
33						
35						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.323' W 108°25.680'; Boring ID - SB32

Total Depth: 16' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6950.58
Elev., PAD (ft. msl): 6951.00
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,718.14 **E** 2,546,068.55

Well No.: MKTF-16
Start Date: 11/7/2013 08:40
Finish Date: 11/7/2013 11:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	Flush Mount Protective Cover Concrete Pad - 4'x4'x6" Bentonite Pellets 2" Flush Threaded Sch. 40 PVC Cap 10/20 Sieve Sand Filter Pack 8" Diameter Hole 2" Sch. 40 PVC with Threaded Joints Saturation 9'
1				0	Fill (Clay/Gravel) No recovery	
3	469			10	Fill (Clay/Gravel) Similar to above	
5				0	Fill (Clay/Gravel) Similar to above	
7				0	Fill (Clay/Gravel) Similar to above	
9	1445	9'		90	Fill (Clay/Gravel) Saturated at 9' bgl, black discoloration, hydrocarbon odor	
11	1255			90	Gravelly Sand (SW) High plasticity, firm, damp, dark brown, hydrocarbon odor	
13	1412			40	Clayey Sand (SC) Similar to above, hydrocarbon odor	
15	439			80	Clayey Sand (SC) Moderate plasticity, firm, damp, brown, hydrocarbon odor	
17					Total Depth = 16' BGL	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.248' W 108°25.724'; Boring ID - SB33

Total Depth: 25' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6945.76
Elev., PAD (ft. msl): 6945.79
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,268.93 **E** 2,545,850.73

Well No.: MKTF-17
Start Date: 11/14/2013 13:00
Finish Date: 11/14/2013 15:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	Flush Mount Protective Cover Concrete Pad - 4'x4'x6" 8" Diameter Hole Bentonite Pellets 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 2" Sch. 40 PVC with Threaded Joints
1				10	Fill (Asphalt/Base/Clay) Low plasticity, soft, damp, brown	
3	150			10	Fill (Clay) Similar to above	
5	157			90	Fill (Sand/Gravel/Clay) Moist to very moist, reddish brown, no odor	
7	92.1			20	Fill (Sand/Gravel/Clay) Similar to above, saturated, odor	
9	65.9			90	Clay (CH) High plasticity, firm, damp, faint odor, brown	
11	17			60	Clay (CH) Similar to above	
13	55			70	Clay (CH) High plasticity, soft, damp, dark brown and black, odor	
15	17.5			60	Clay (CH) Similar to above, faint odor	
17	11.3			10	Clay (CH) Similar to above, trace fine grain sand	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.248' W 108°25.724'; Boring ID - SB33

Total Depth: 25' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6945.76
Elev., PAD (ft. msl): 6945.79
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,268.93 **E** 2,545,850.73

Well No.: MKTF-17
Start Date: 11/14/2013 13:00
Finish Date: 11/14/2013 15:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17.2		20'		10	Clay (CH) High plasticity, soft, damp, brown	24' 24.33' 25' 10/20 Sieve Sand Filter Pack 2" Sch. 40 PVC Slotted 0.01" Screen 2" Flush Threaded Sch. 40 PVC Cap Saturation 20'
20				70	Sandy Clay (CH) Moderate plasticity, soft, very moist to saturated in sand seams	
22				80	Silty Clayey Gravel (GM) Compact to loose, medium grain sand to 1/4" gravel - angular, saturated, brown	
24				90	Clay (CH) Moderate plasticity, firm to stiff, damp, greenish gray	
Total Depth = 25' BGL						
26						
28						
30						
32						
34						
36						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.692'; Boring ID - SB34

Total Depth: 27' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6950.65
Elev., PAD (ft. msl): 6950.97
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,497.53 **E** 2,546,006.29

Well No.: MKTF-18
Start Date: 11/15/2013 10:00
Finish Date: 11/15/2013 15:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1				--	Fill (Gravel and Silty Clay)	
3	1009			20	Fill (Gravel and Silty Clay) Similar to above, strong hydrocarbon odor, damp	
5	693			60	Fill (Gravel and Silty Clay) Similar to above	
7	1108			70	Fill (Silty Clay) Low plasticity, firm, damp, brown, gravel present, strong hydrocarbon odor	
9	901			90	Fill (Clay/Sand/Gravel) Similar to above, saturated, odor, sheen observed	
11	803			60	Clay (CH) High plasticity, stiff, damp, brown, hydrocarbon odor	
13	254			70	Clay (CH) Similar to above, very fine grain, sand in partings	
15	200			30	Clay (CH) Similar to above	
17				--	No recovery	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.692'; Boring ID - SB34

Total Depth: 27' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6950.65
Elev., PAD (ft. msl): 6950.97
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,497.53 **E** 2,546,006.29

Well No.: MKTF-18
Start Date: 11/15/2013 10:00
Finish Date: 11/15/2013 15:00

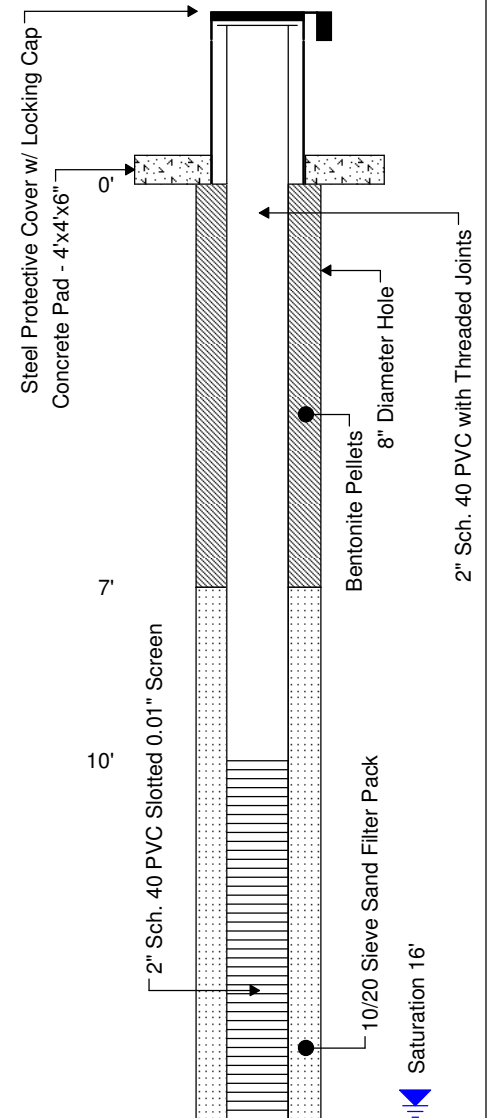
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
112				30	Clay (CH) High plasticity, firm, damp, brown, faint odor	2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack Saturation 23' 2" Flush Threaded Sch. 40 PVC Cap 27' 27.5'
20				20	Clay (CH) Similar to above	
55						
22						
323				80	Clay (CH) Similar to above	
24					Sandy Clay/Clayey Sand (SC/CL) Fine grain, compact, very moist to saturated, brown, hydrocarbon present	
					Clayey Sand (SC) Similar to above, saturated	
26				90	Sandy Clay (CL) Low plasticity, firm, damp, hydrocarbon odor, greenish gray	
					Total Depth = 27' BGL	
28						
30						
32						
34						
36						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): --
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): --
Site Coordinates:
N **W**

Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1				-	Fill (Asphate/Base/Clay) Odor	
3	1178			50	Fill (Silty Clay/Sandy Gravel) Brown, strong hydrocarbon odor	
5	1232			90	Fill (Silty Clay/Sandy Gravel) Similar to above, gray discoloration, strong hydrocarbon odor	
7	120			80	Clay (CH) High plasticity, stiff, damp, brown, odor, calcareous, sampling tube is oily	
9	375			70	Clay (CH) Similar to above, odor, oily	
11	601			70	Silty Sandy Clay (CL) Moderate plasticity, firm, damp, brown, hydrocarbon odor, sampling tube is oily	
13	1279			70	Sandy Clay (CL) Low plasticity, soft, damp to moist in sand seams, brown, strong hydrocarbon odor	
15	249			90	Sandy Clay (CL) Similar to above, hydrocarbon odor, tube is oily	
16'						



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): --
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): --
Site Coordinates:
N **W**

Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

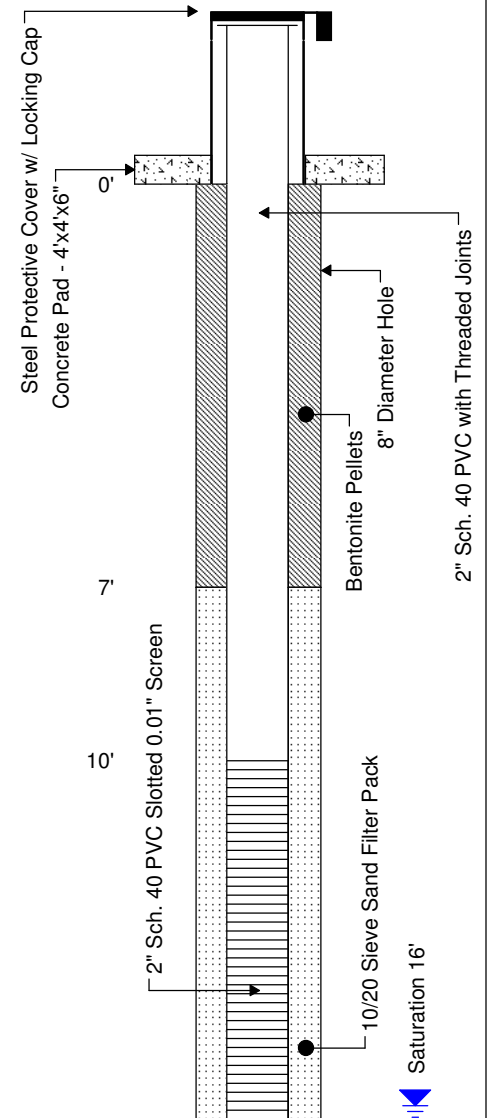
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
18				90	Silty Sand (SM) Fine grain, loose, saturated, oily/phase-separated hydrocarbon, hydrocarbon odor, clay at base	20' 20.33' 20.5' 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 2" Flush Threaded Sch. 40 PVC Cap
20				90	Silty Sand (SM) Similar to above	
					Total Depth = 20' BGL	
22						
24						
26						
28						
30						
32						
34						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): 6944.67
Elev., PAD (ft. msl): 6944.89
Elev., GL (ft. msl): 6944.34
Site Coordinates:
N 1633381.19 **E** 2545842.82

Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1						
1					Ground Surface	
1				-	Fill (Asphalt/Base/Clay) Odor	
3	1178			50	Fill (Silty Clay/Sandy Gravel) Brown, strong hydrocarbon odor	
5	1232			90	Fill (Silty Clay/Sandy Gravel) Similar to above, gray discoloration, strong hydrocarbon odor	
7	120			80	Clay (CH) High plasticity, stiff, damp, brown, odor, calcareous, sampling tube is oily	
9	375			70	Clay (CH) Similar to above, odor, oily	
11	601			70	Silty Sandy Clay (CL) Moderate plasticity, firm, damp, brown, hydrocarbon odor, sampling tube is oily	
13	1279			70	Sandy Clay (CL) Low plasticity, soft, damp to moist in sand seams, brown, strong hydrocarbon odor	
15	249			90	Sandy Clay (CL) Similar to above, hydrocarbon odor, tube is oily	
16'						



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): 6944.67
Elev., PAD (ft. msl): 6944.89
Elev., GL (ft. msl): 6944.34
Site Coordinates:
N 1633381.19 **E** 2545842.82

Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
18				90	Silty Sand (SM) Fine grain, loose, saturated, oily/phase-separated hydrocarbon, hydrocarbon odor, clay at base	20' 20.33' 20.5' 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 2" Flush Threaded Sch. 40 PVC Cap
20				90	Silty Sand (SM) Similar to above	
					Total Depth = 20' BGL	
22						
24						
26						
28						
30						
32						
34						

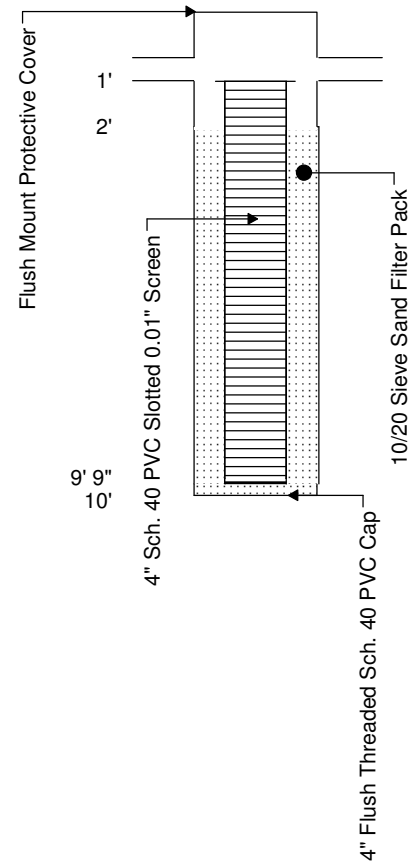
WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Not Applicable
Driller: Western Refining Southwest, Inc.
Drilling Rig: Not Applicable
Drilling Method: Not Applicable
Sampling Method: Not Applicable
Comments: N 35°29.319' W 108°25.674'; Boring ID: Sump-N

Total Depth: 10' bgl
Ground Water: 7.86' ft. BTOC
Elev., TOC (ft. msl): 6951.78
Elev., PAD (ft. msl): 6951.89
Elev., GL (ft. msl): 6951.17
Site Coordinates:
N 1633698.28 **E** 2546111.23

Well No.: MKTF-20
Start Date: 2/10/2014
Finish Date: 2/10/2014

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1						
1					Ground Surface	
3					Fill Material	
5						
7						
9						
11					Total Depth = 10' BGL	
13						
15						
17						
19						



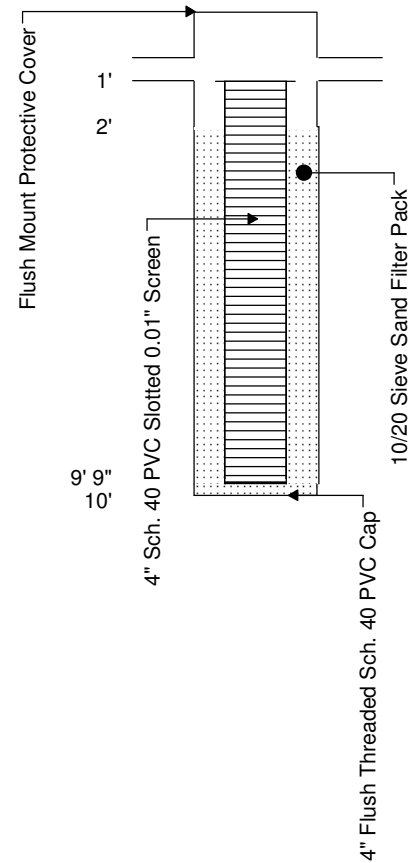
WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Not Applicable
Driller: Western Refining Southwest, Inc.
Drilling Rig: Not Applicable
Drilling Method: Not Applicable
Sampling Method: Not Applicable
Comments: N 35°29.295' W 108°25.675'; Boring ID: Sump-S

Total Depth: 10' bgl
Ground Water: 7.60' ft. BTOC
Elev., TOC (ft. msl): 6952.57
Elev., PAD (ft. msl): 6952.68
Elev., GL (ft. msl): 6952.00
Site Coordinates:
N 1633570.30 **E** 2546110.00

Well No.: MKTF-21
Start Date: 2/10/2014
Finish Date: 2/10/2014

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1						
1					Ground Surface	
3					Fill Material	
5						
7						
9						
11					Total Depth = 10' BGL	
13						
15						
17						
19						



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.802'; Boring ID - SB23

Total Depth: 32' bgl
Ground Water: Saturated @ 26' bgl
Elev., TOC (ft. msl): 6942.31
Elev., PAD (ft. msl): 6939.76
Elev., GL (ft. msl): 6938.57
Site Coordinates:
N 1633501.64 **E** 2545478.20

Well No.: MKTF-22
Start Date: 11/8/2013 12:15
Finish Date: 11/8/2013 15:30

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						Steel Protective Cover w/Locking Cap Concrete Pad 4'x4x6" 8" Diameter Hole 2" Sch. 40 PVC with Threaded Joints Bentonite Pellets
-1					Ground Surface	
1	3.4			10	Clayey Silt (ML) Low plasticity, very fine grain, compact to loose, damp, tan, no odor	
3	8.9			20	Clayey Silt (ML) Similar to above	
5	7.0			20	Clayey Silt (ML) Similar to above	
7	7.9			50	Clayey Silt (ML) Similar to above, light brown, no odor	
9	6.4			40	Clayey Silt (ML) Low plasticity, stiff, damp, light brown, no odor	
11	13.7			50	Clayey Silt (ML) Similar to above	
13	12.7			10	Clayey Silt (ML) Similar to above, very stiff	
15	10.1			70	Clayey Silt (ML) Very fine grain, stiff, damp, brown, no odor, becomes sandy at base	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.802'; Boring ID - SB23

Total Depth: 32' bgl
Ground Water: Saturated @ 26' bgl
Elev., TOC (ft. msl): 6942.31
Elev., PAD (ft. msl): 6939.76
Elev., GL (ft. msl): 6938.57
Site Coordinates:
N 1633501.64 **E** 2545478.20

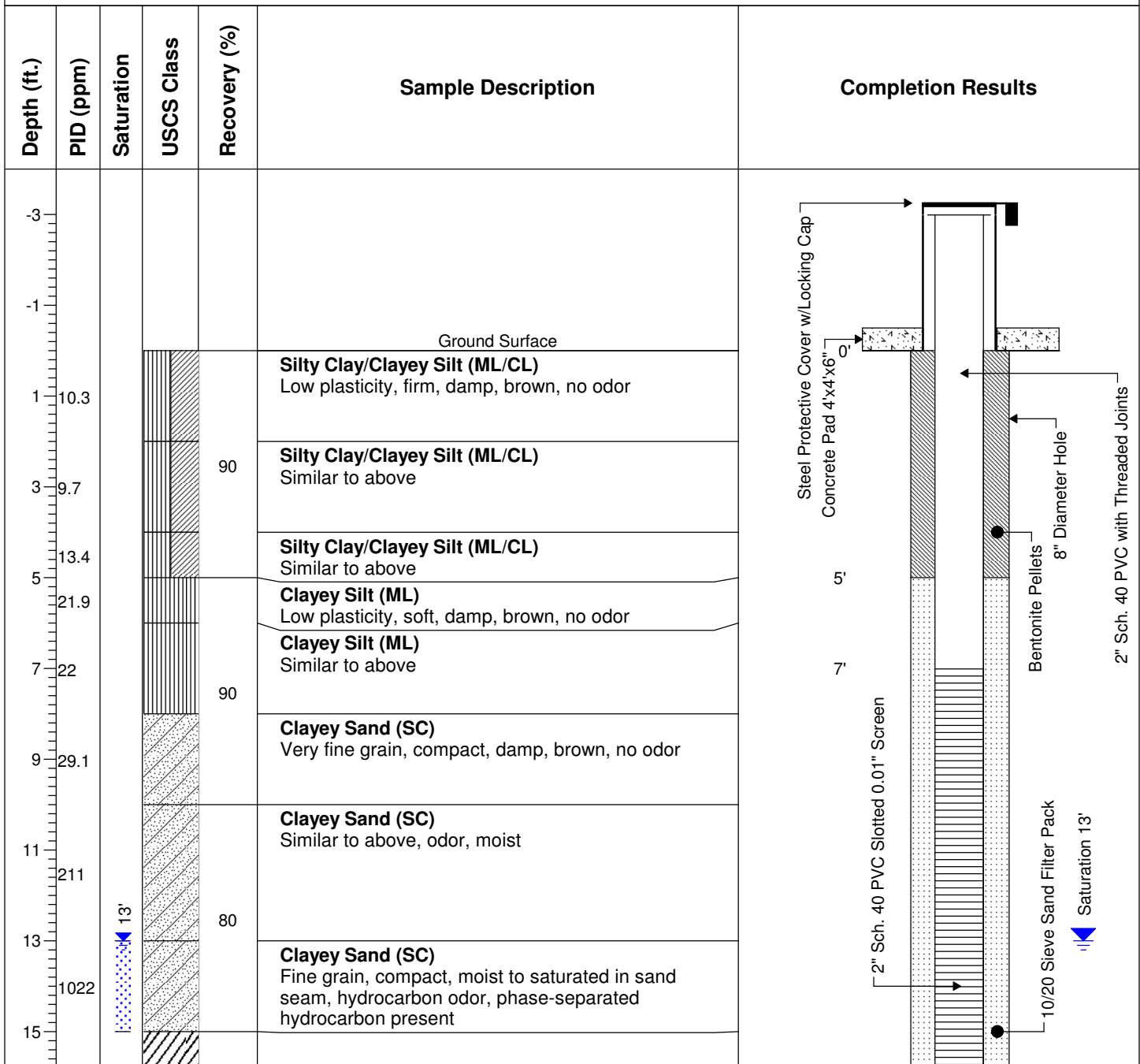
Well No.: MKTF-22
Start Date: 11/8/2013 12:15
Finish Date: 11/8/2013 15:30

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17	13.2			10	Silty Clay/Clayey Silt (CL) Similar to above, increase in clay, damper, no odor	
19	17.2			90	Silty Clay (CL) Low plasticity, firm, damp, brown, no odor	
21	14.1			90	Sandy Clay (CL) Low plasticity, soft, damp, brown, no odor	
23	43.1			90	Sandy Clay (CL) Similar to above, damp, faint odor	
25	73.1			90	Sandy Clay (CL) Similar to above, very moist in sand seams, hydrocarbon odor	
27		26'		90	Silty Sand (SM) Fine to medium grain, loose, saturated, brownish gray, hydrocarbon odor	
29				90	Clayey Silt (ML) Very fine grain, soft, moist, dark brown, hydrocarbon odor	
31				90	Sand (SP) Fine to medium grain, loose, saturated, brown, odor	
33				90	Silty Clay (CL) Low to moderate plasticity, firm, damp, brown and light olive/gray, no odor at base	
					Silty Clay (CL) Low plasticity, firm, damp, greenish gray, no odor	
Total Depth = 32' BGL						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.327' W 108°25.795'; Boring ID - SB25

Total Depth: 20' bgl
Ground Water: Saturated @ 13' bgl
Elev., TOC (ft. msl): 6929.98
Elev., PAD (ft. msl): 6927.23
Elev., GL (ft. msl): 6925.79
Site Coordinates:
N 1633750.93 **E** 2545503.70

Well No.: MKTF-23
Start Date: 11/4/2013 14:00
Finish Date: 11/4/2013 16:00



WELL INSTALLATION

Well No.: MKTF-23

Start Date: 11/4/2013 14:00

Finish Date: 11/4/2013 16:00

Client: Western Refining Southwest, Inc.

Site: Gallup Refinery - Seep West of Tank 102

Job No.: UEC01809

Geologist: Tracy Payne

Driller: Enviro-Drill, Inc.

Drilling Rig: CME 75

Drilling Method: Hollow Stem Augers

Sampling Method: Five-Foot Core Barrel

Comments: N 35°29.327' W 108°25.795'; Boring ID - SB25

Total Depth: 20' bgl

Ground Water: Saturated @ 13' bgl

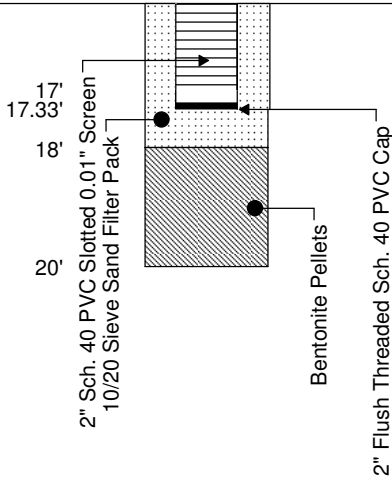
Elev., TOC (ft. msl): 6929.98

Elev., PAD (ft. msl): 6927.23

Elev., GL (ft. msl): 6925.79

Site Coordinates:

N 1633750.93 **E** 2545503.70

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
32.6					Clay (CH) High plasticity, stiff, damp, brown, no odor	 17' 17.33' 18' 20' 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack Bentonite Pellets 2" Flush Threaded Sch. 40 PVC Cap
28.9				90		
19					Sandy Clay (CL) Moderate plasticity, firm, damp, brown and gray, no odor	
22.7						
21					Total Depth = 20' BGL	
23						
25						
27						
29						
31						
33						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.342' W 108°25.800'; Boring ID - SB26

Total Depth: 30' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6928.72
Elev., PAD (ft. msl): 6926.07
Elev., GL (ft. msl): 6924.62
Site Coordinates:
N 1633853.19 **E** 2545468.48

Well No.: MKTF-24
Start Date: 10/29/2013 13:15
Finish Date: 10/29/2013 16:15

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						Steel Protective Cover w/Locking Cap Concrete Pad 4'x4'x6" 8" Diameter Hole 2" Sch. 40 PVC with Threaded Joints Bentonite Pellets
-1					Ground Surface	
1	14.1			90	Silt/Silty Sand (ML/SM) Very fine to fine grain, loose, dry, brown	
3	11.2			10	Silty Sand (SM) Fine grain, compact/very dense, damp, brown	
5	12.5			90	Silty Sandy Clay (CL) Low plasticity, very dense, damp, brown	
7	11.8			90	Silty Sandy Clay (CL) Similar to above	
9	14.8			60	Silty Sandy Clay (CL) Similar to above	
11	12.5			90	Silty Sandy Clay (CL) Similar to above	
13	12.8			90	Silty Sandy Clay (CL) Similar to above	
15	13.4			90	Clay (CH) High plasticity, firm, damp, brown, trace silt, no odor	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.342' W 108°25.800'; Boring ID - SB26

Total Depth: 30' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6928.72
Elev., PAD (ft. msl): 6926.07
Elev., GL (ft. msl): 6924.62
Site Coordinates:
N 1633853.19 **E** 2545468.48

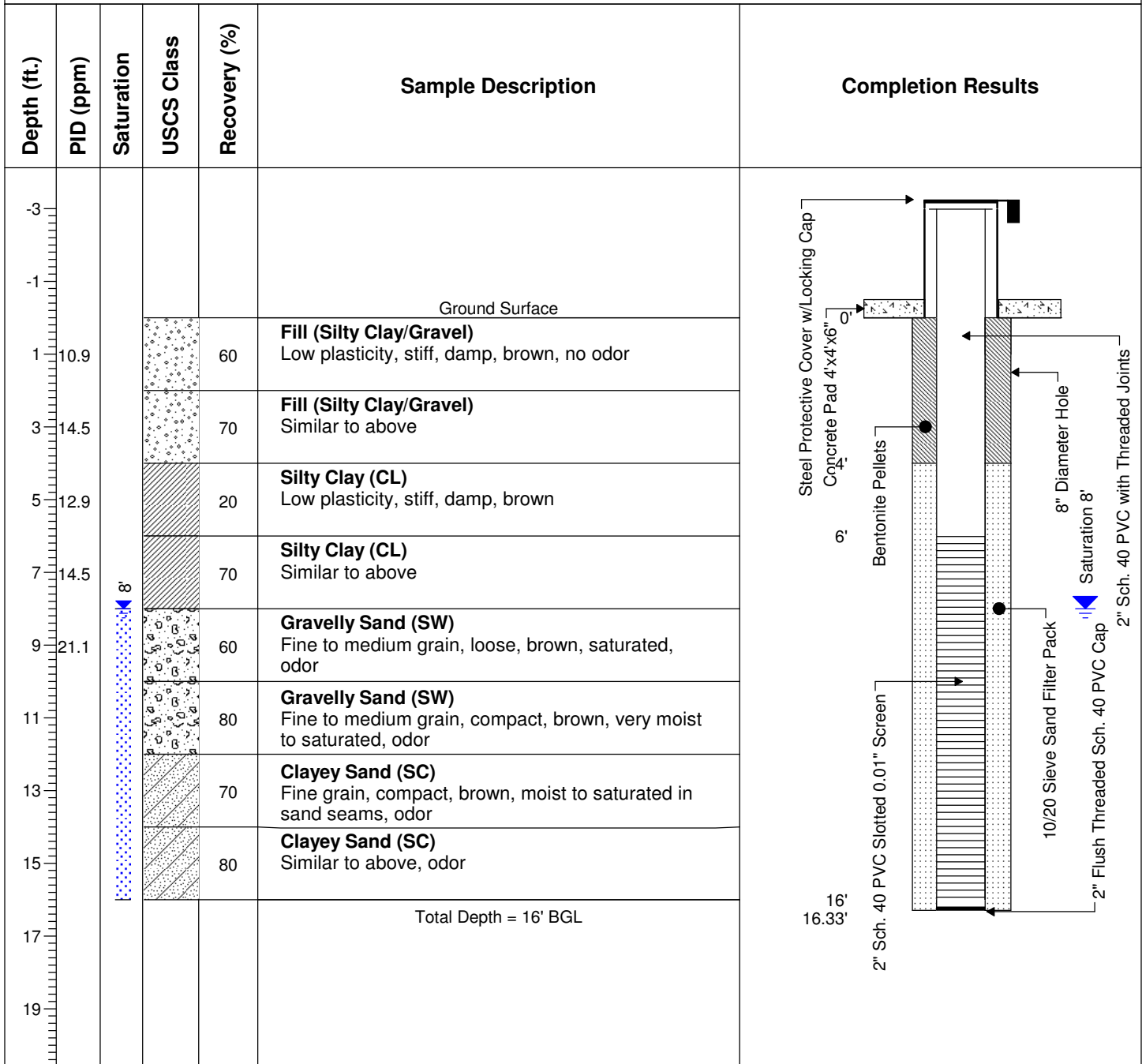
Well No.: MKTF-24
Start Date: 10/29/2013 13:15
Finish Date: 10/29/2013 16:15

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17	16.8			70	Silty Sandy Clay (CL) Low plasticity, firm, damp, brown, no odor	16' 18' 20' Saturation 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 2" Flush Threaded Sch. 40 PVC Cap Cave In 28' 28.33' 30'
19	33.7			90	Sandy Clay (CL) Low plasticity, soft, damp, brown, no odor	
21	40.8			90	Sandy Clay/Clayey Sand (CL/SC) Fine grain, compact to soft, moist to saturated, brown, no odor	
23				90	Sandy Clay/Clayey Sand (CL/SC) Similar to above, moist to saturated, no odor	
25				90	Sandy Clay/Clayey Sand (CL/SC) Similar to above, moist to saturated, no odor	
27				90	Sandy Clay/Clayey Sand (CL/SC) Similar to above, moist to saturated, greenish gray sand at base	
29				90	Silt/Siltstone (ML) Low plasticity, very dense, dry, crumbly, brown/reddish brown, no odor	
31					Total Depth = 30' BGL	
33						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.372' W 108°25.840'; Boring ID - SB28

Total Depth: 16' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6916.19
Elev., PAD (ft. msl): 6913.35
Elev., GL (ft. msl): 6911.79
Site Coordinates:
N 1634015.86 **E** 2545275.68

Well No.: MKTF-25
Start Date: 10/30/2013 14:45
Finish Date: 10/30/2013 16:30

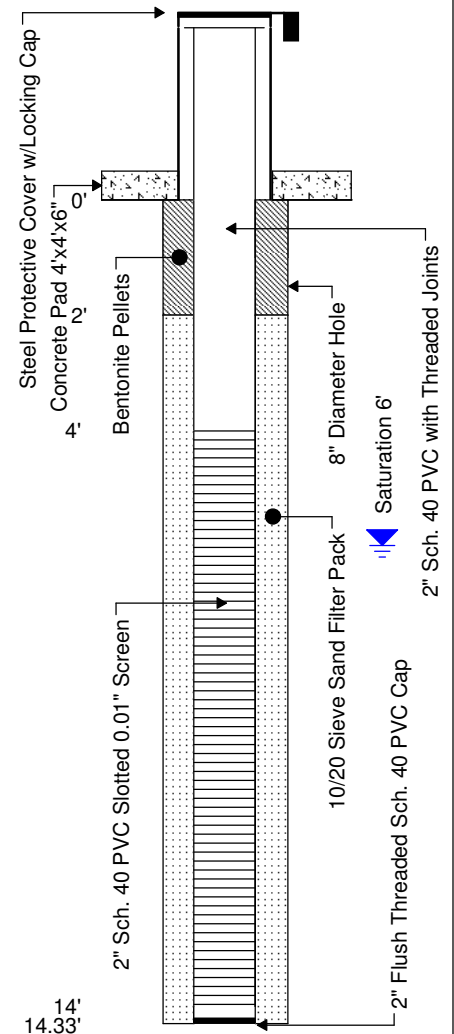


Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.373' W 108°25.796'; Boring ID - SB29

Total Depth: 14' bgl
Ground Water: Saturated @ 6' bgl
Elev., TOC (ft. msl): 6915.31
Elev., PAD (ft. msl): 6912.55
Elev., GL (ft. msl): 6911.35
Site Coordinates:
N 1634033.63 **E** 2545492.39

Well No.: MKTF-26
Start Date: 10/30/2013 10:40
Finish Date: 10/30/2013 12:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	17.5			80	Silty Clay (CL) Low plasticity, soft, damp, brown, no odor, trace small gravel	
3	9.4			60	Silty Clay (CL) Similar to above	
5	4.8			60	Silty Clay (CL) Similar to above	
7	34.8	6		90	Sandy Clay/Clayey Sand (SC/CL) Very fine grain, compact/soft, brown, moist, faint odor, saturated at base	
9				70	Sandy Clay (SC) Low plasticity, stiff, damp, brown, no odor	
11				60	Silt/Siltstone (ML) Low plasticity, very dense, dry, reddish brown, very fine grain sand in fissures, no odor	
13				60	Silt/Siltstone (ML) Similar to above	
15					Total Depth = 14' BGL	

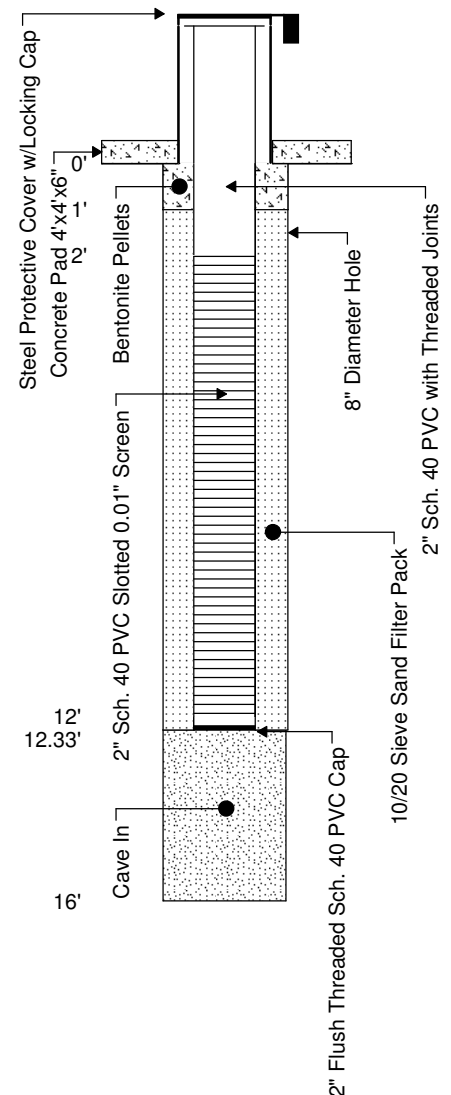


Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.387' W 108°25.771'; Boring ID - SB30

Total Depth: 16' bgl
Ground Water: Not Encountered
Elev., TOC (ft. msl): 6917.90
Elev., PAD (ft. msl): 6915.36
Elev., GL (ft. msl): 6914.18
Site Coordinates:
N 1634115.56 **E** 2545620.98

Well No.: MKTF-27
Start Date: 10/30/2013 09:00
Finish Date: 10/30/2013 10:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	3.3			90	Silty Clay (CL) Low plasticity, firm, damp, brown, occasional gravel	
3	4.1			80	Silty Clay (CL) Similar to above	
5	2.4			90	Silty Clay (CL) Similar to above	
7	4.1			90	Silty Clay (CL) Low to moderate plasticity, firm to soft, damp, brown, no odor, calcareous organics present	
9	3.3			80	Silt/Siltstone (ML) Low plasticity, very dense, dry, reddish brown with greenish gray very fine grain sand in fissures, no odor	
11	3.7			80	Silt/Siltstone (ML) Similar to above	
13	4.5			80	Silt/Siltstone (ML) Similar to above	
15	3.9			80	Silt/Siltstone (ML) Similar to above	
17					Total Depth = 16' BGL	
19						



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.412' W 108°25.763', Air Temp: 48°F

Total Depth: 30' bgl
Ground Water: Not Encountered
Elev., TOC (ft. msl): 6921.52
Elev., PAD (ft. msl): 6918.67
Elev., GL (ft. msl): 6917.51
Site Coordinates:
N 1634263.44 **E** 2545650.04

Well No.: MKTF-28
Start Date: 4/2/2014 11:30
Finish Date: 4/2/2014 14:25

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	2.6			90	Fill (Silty Clay) Low plasticity, soft, damp, brown, no odor, sandy at base, moist	Steel Protective Cover w/Locking Cap Concrete Pad - 4'x4'x6" Bentonite Pellets 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 8" Diameter Hole 2" Sch. 40 PVC with Threaded Joints 2" Flush Threaded Sch. 40 PVC Cap Bentonite Pellets
3	5.0					
5	3.6					
7	7.6			60	Silty Clay (CL) Similar to above, damp to moist at 7.5' bgl	
9	8.2					
11	8.1			60	Silty Clay (CL) Low plasticity, stiff, damp to dry, crumbly, brown, no odor	Steel Protective Cover w/Locking Cap Concrete Pad - 4'x4'x6" Bentonite Pellets 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 8" Diameter Hole 2" Sch. 40 PVC with Threaded Joints 2" Flush Threaded Sch. 40 PVC Cap Bentonite Pellets
13	7.5					
15	9.1					
17	5.5			60	Silty Clay (CL) Similar to above	
19	7.8					
21	3.5			60	Silty Clay (CL) Similar to above	

WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.412' W 108°25.763', Air Temp: 48°F

Total Depth: 30' bgl
Ground Water: Not Encountered
Elev., TOC (ft. msl): 6921.52
Elev., PAD (ft. msl): 6918.67
Elev., GL (ft. msl): 6917.51
Site Coordinates:
N 1634263.44 **E** 2545650.04

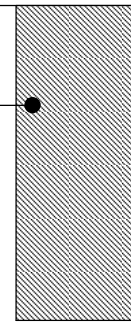
Well No.: MKTF-28
Start Date: 4/2/2014 11:30
Finish Date: 4/2/2014 14:25

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
24	4.3				Clay (CH) High plasticity, very stiff, reddish brown and gray, no odor, crumbly	
26	4.1			60	Clay (CH) Similar to above	
28	3.3					
30					Total Depth = 30' BGL	
32						
34						
36						
38						
40						
42						
44						
46						
48						

Completion Results

Bentonite Pellets

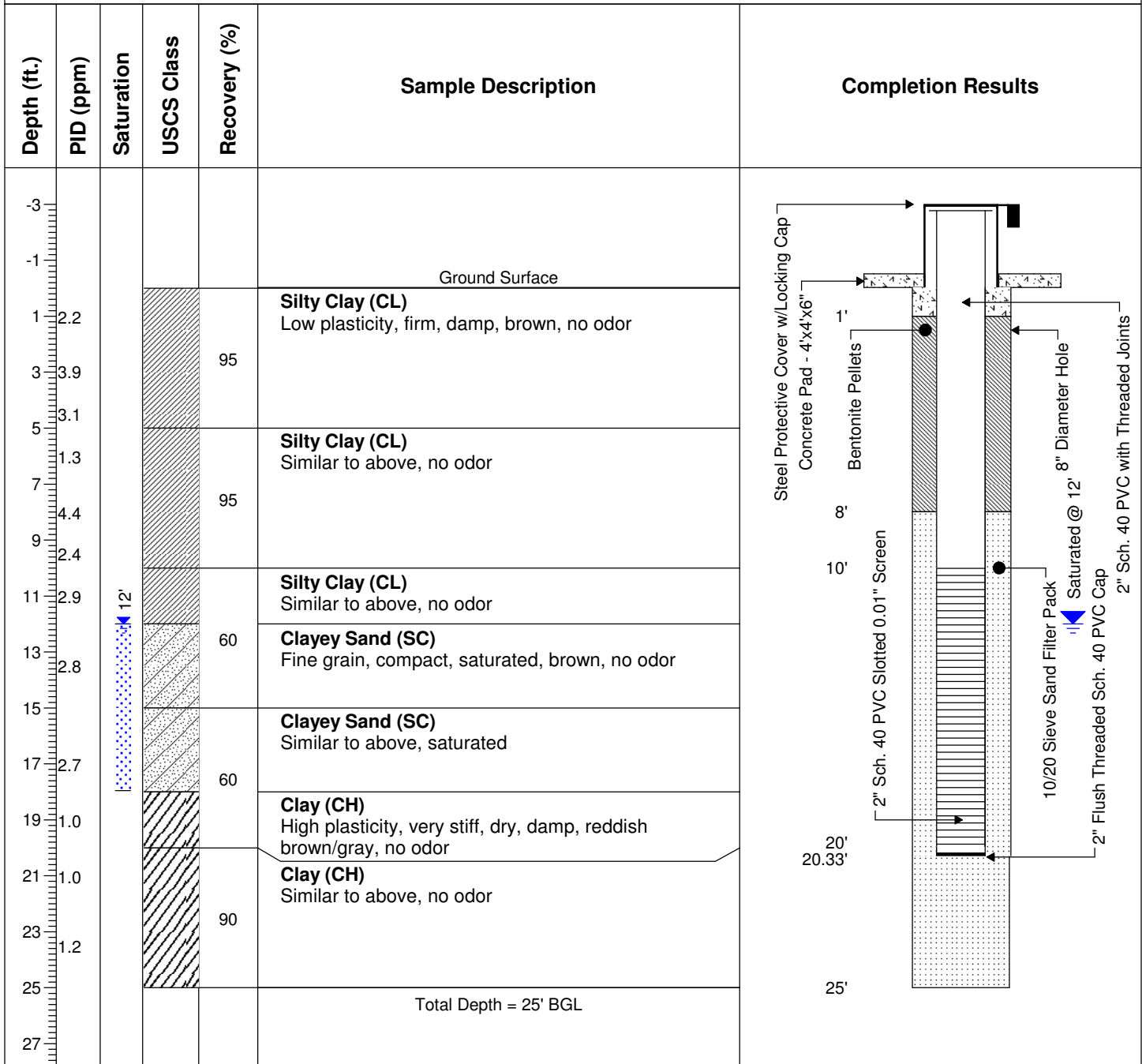
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Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.406' W 108°25.846', Air Temp: 41 °F

Total Depth: 25' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6901.62
Elev., PAD (ft. msl): 6898.83
Elev., GL (ft. msl): 6897.67
Site Coordinates:
N 1634249.76 **E** 2545258.34

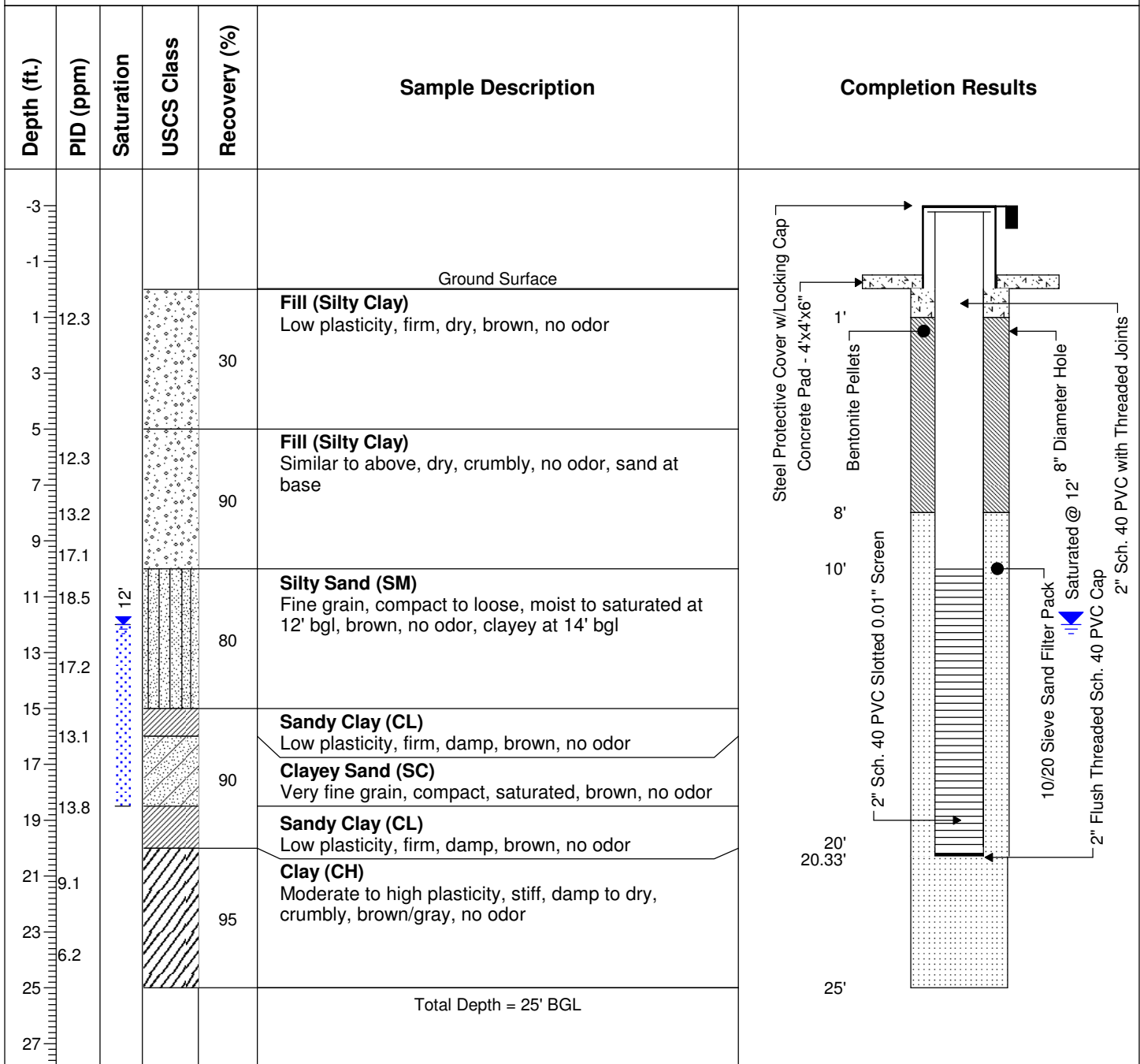
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Start Date: 4/2/2014 08:30
Finish Date: 4/2/2014 11:15



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.405' W 108°25.910', Air Temp: 58°F

Total Depth: 25' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6900.80
Elev., PAD (ft. msl): 6898.10
Elev., GL (ft. msl): 6896.68
Site Coordinates:
N 1634225.67 **E** 2544937.91

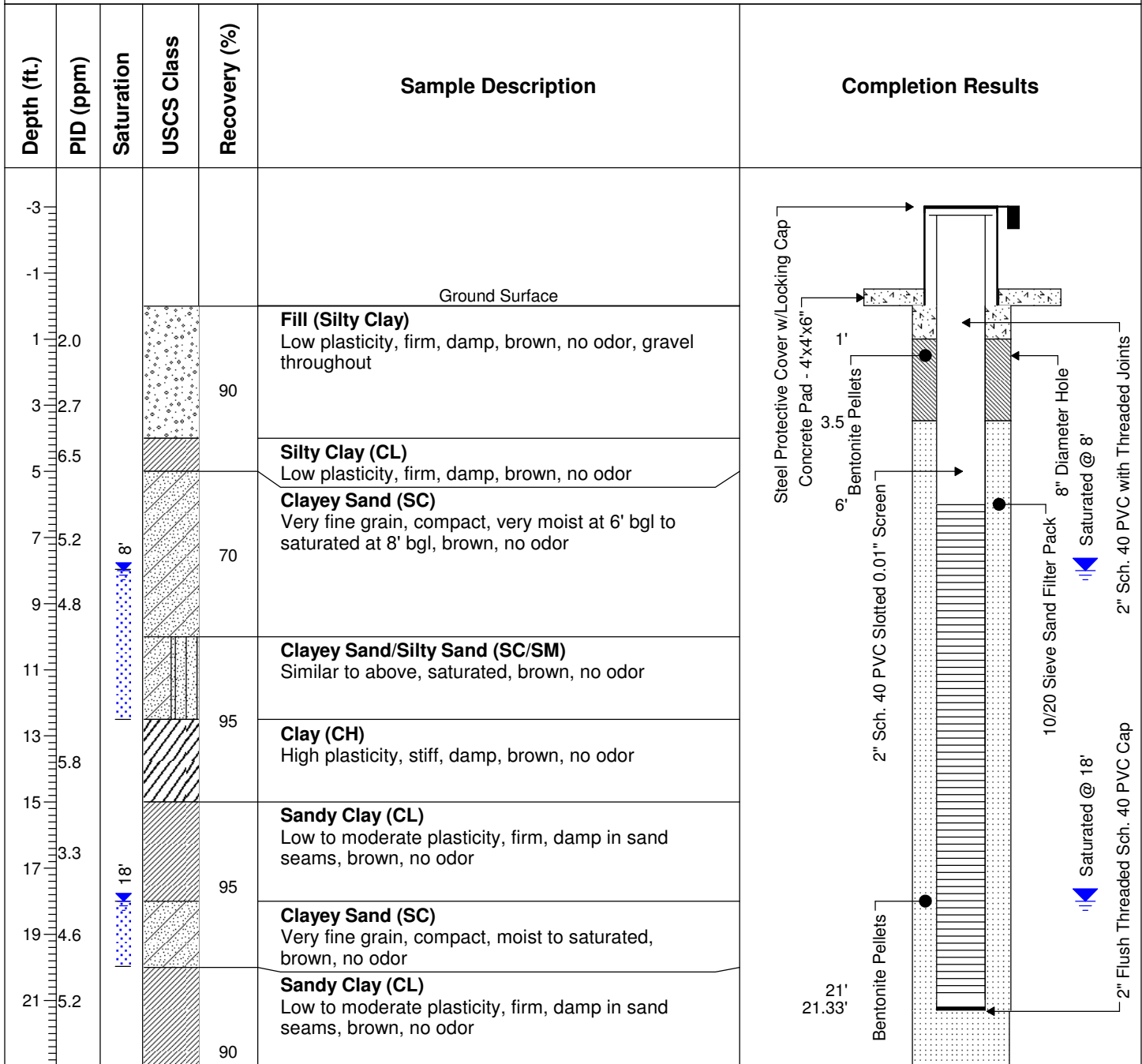
Well No.: MKTF-30
Start Date: 4/1/2014 13:00
Finish Date: 4/1/2014 15:00



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.350' W 108°25.909', Air Temp: 48°F; Boring ID - SB20

Total Depth: 30' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6906.87
Elev., PAD (ft. msl): 6904.26
Elev., GL (ft. msl): 6903.11
Site Coordinates:
N 1633898.83 **E** 2544938.99

Well No.: MKTF-31
Start Date: 4/1/2014 08:20
Finish Date: 4/1/2014 12:00



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.350' W 108°25.909', Air Temp: 48°F; Boring ID - SB20

Total Depth: 30' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6906.87
Elev., PAD (ft. msl): 6904.26
Elev., GL (ft. msl): 6903.11
Site Coordinates:
N 1633898.83 **E** 2544938.99

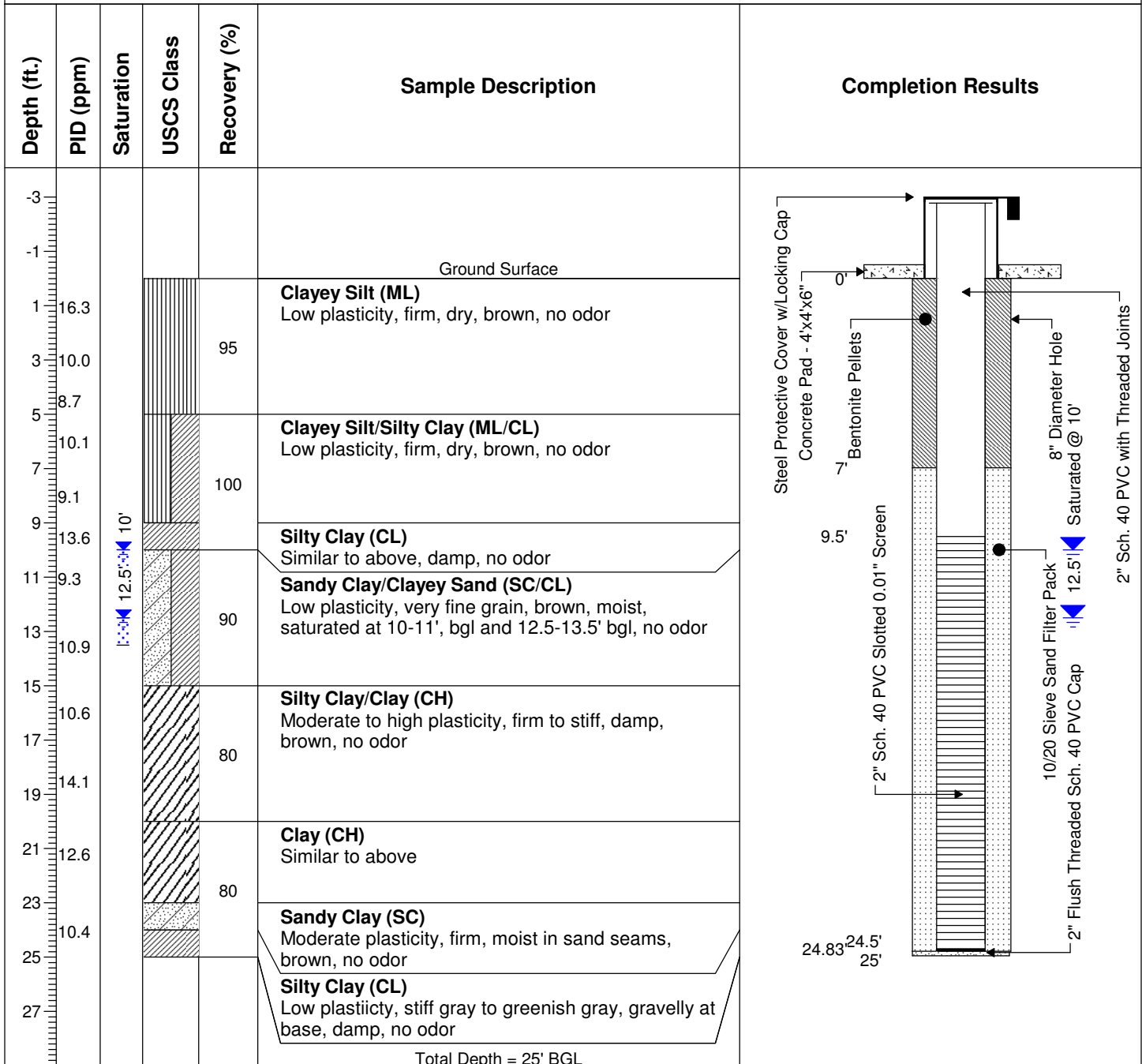
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Start Date: 4/1/2014 08:20
Finish Date: 4/1/2014 12:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
24	7.2					
26	2.5			90	Clay (CH) Moderate plasticity, firm, dry to damp, crumbly, reddish brown, no odor	
28	2.3					
30					Total Depth = 30' BGL	30' 10/20 Sieve Sand Filter Pack
32						
34						
36						
38						
40						
42						
44						
46						
48						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.275' W 108°25.928', Air Temp: 58°F

Total Depth: 25' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6911.11
Elev., PAD (ft. msl): 6908.44
Elev., GL (ft. msl): 6907.16
Site Coordinates:
N 1633443.56 **E** 2544840.32

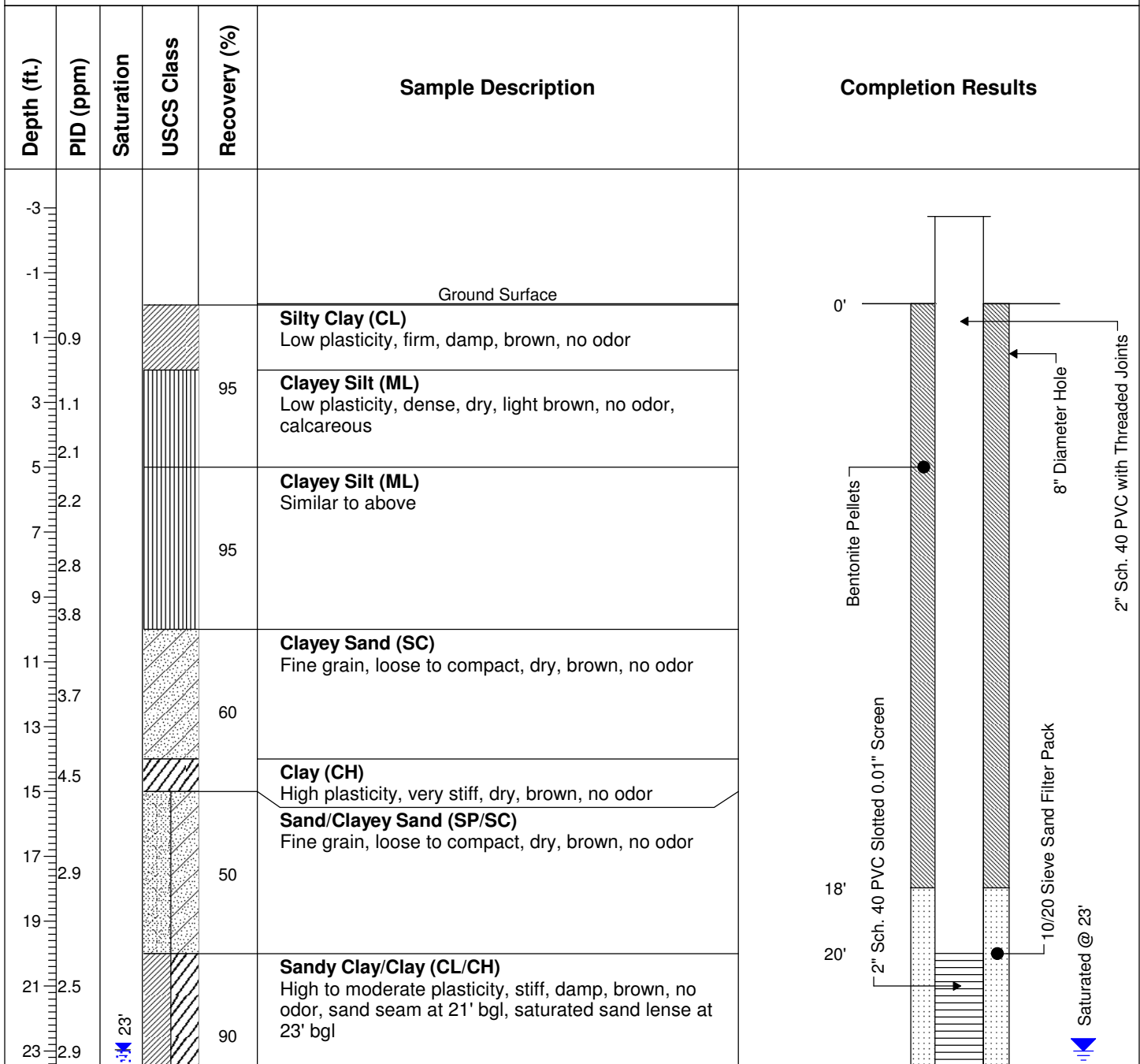
Well No.: MKTF-32
Start Date: 3/31/2014 14:40
Finish Date: 3/31/2014 16:30



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.246' W 108°25.830', Air Temp: 30°F

Total Depth: 35' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6939.75
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): 6936.59
Site Coordinates:
N 1633261.99 **E** 2545318.27

Well No.: MKTF-33
Start Date: 4/3/2014 08:40
Finish Date: 4/3/2014 12:00

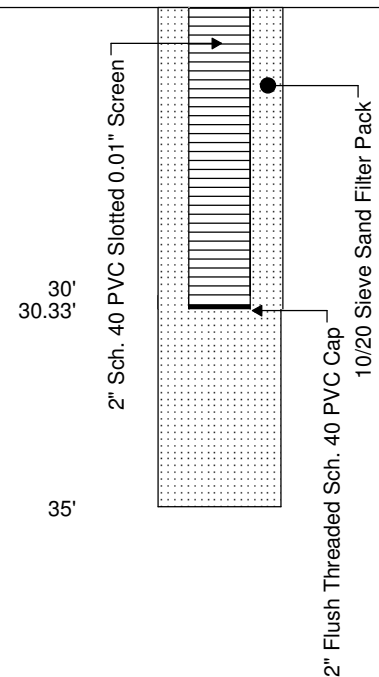


Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.246' W 108°25.830', Air Temp: 30°F

Total Depth: 35' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6939.75
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): 6936.59
Site Coordinates:
N 1633261.99 **E** 2545318.27

Well No.: MKTF-33
Start Date: 4/3/2014 08:40
Finish Date: 4/3/2014 12:00

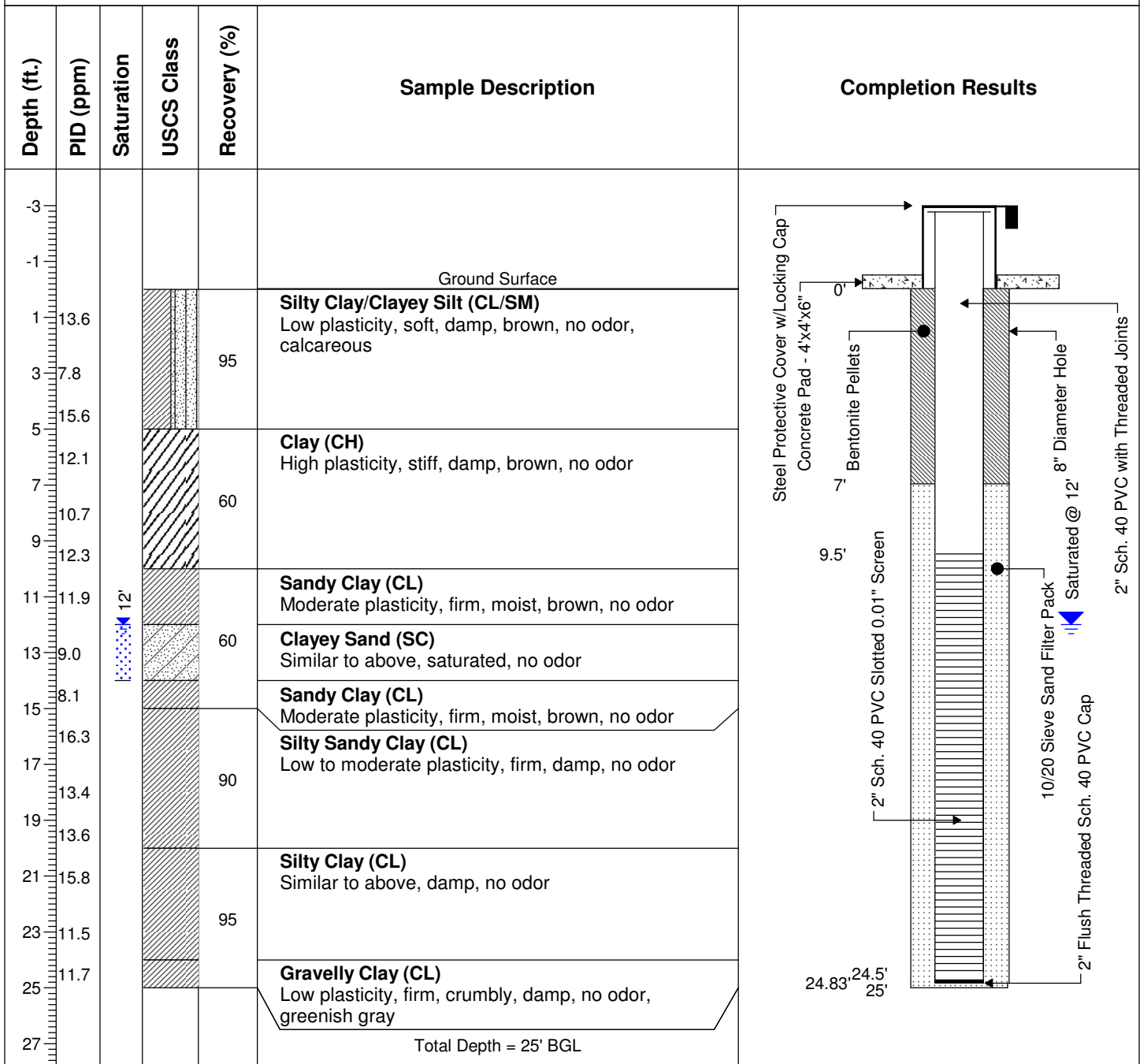
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
25	3.4					
27	1.6			90	Clayey Sand/Sandy Clay (SC/CL) Moderate plasticity, firm, moist to saturated throughout interval, brown, interbedded sand/clay, no odor	
29	2.5					
31				95	Clay (CH) High plasticity, very stiff, brown, damp, no odor	
33						
35					Total Depth = 35' BGL	
37						
39						
41						
43						
45						
47						
49						



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.224' W 108°25.757', Air Temp: 49-51 °F

Total Depth: 25' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6945.35
Elev., PAD (ft. msl): 6942.42
Elev., GL (ft. msl): 6943.52
Site Coordinates:
N 1633118.42 **E** 2545681.30

Well No.: MKTF-34
Start Date: 3/31/2014 11:00
Finish Date: 3/31/2014 13:45



Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 18'
Ground Water : 10'
Start Date : 11/19/2014
Finish Date : 11/19/2014

MKTF-35

(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6951.65
Elev., PAD (ft. msl) : 6951.90
Elev., GL (ft. msl) : 6951.25
Site Coordinates :
N : 1633204.45
E : 2546011.60

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results
							DESCRIPTION	
-2								
-1								
0					100		ASPHALT/BASE,	Flush Mount Completion 2'x2'x6"
1	4.5			CL	100		SILTY CLAY, low, very stiff, damp, brown,	
2								Bentonite Pellets
3	46.6			CL	20		SILTY CLAY, SIMILAR TO ABOVE (STA), odor, gravel present,	2" Sch 40 PVC Casing Threaded Joints
4								
5	95			CL/SP	90		SILTY CLAY/SAND/GRAVEL, low, damp, reddish brown, odor, very coarse grain sand, 1/4" to 1" gravel, odor,	
6								
7	64			CL	80		SILTY CLAY, low, firm, damp, reddish brown, odor, occasional gravel,	
8								
9	78			CL/SP	90		SILTY CLAY/SAND/GRAVEL, SIMILAR TO 4-6', damp to moist, odor,	
10		▼						
11	1790			CL/SP	90		SILTY CLAY/SAND/GRAVEL, SIMILAR TO ABOVE (STA), saturated, hydrocarbon (hc) odor,	10/20 Sieve Sand Filter Pack
12				CL	90		SILTY CLAY, low, stiff, damp, reddish brown, light grey clay @ base, hc odor,	2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
13	2400			CL/SC	90		SILTY CLAY/SANDY CLAY, low, firm to stiff, damp, grey, hc odor, sand/silt varies across interval,	
14								
15	745			CL	50		SANDY GRAVELLY CLAY, STA, damp, grey, brown @ base, hc odor,	
16								
17	37			CL	90		CLAY, mod, very stiff, damp, brown and grey, faint odor.	2" Flush Threaded Sch 40 PVC Cap
18								
19								

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Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 16'
Ground Water : 10'
Start Date : 11/19/2014
Finish Date : 11/19/2014

MKTF-36

(Sheet 1 of 1)

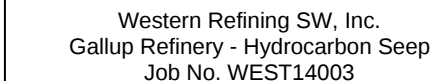
Elev., TOC (ft.msl) : 6950.12
Elev., PAD (ft. msl) : 6950.67
Elev., GL (ft. msl) : 6949.87
Site Coordinates :
N : 1633349.47
E : 2545982.58

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	DESCRIPTION	Completion Results MKTF-36
-2									
-1									
0					100			ASPHALT/BASE,	
1	812			CL	90			SANDY CLAY, low, stiff, dry, tan, no odor, gravel throughout,	
2								SILTY CLAY, low, very stiff, dry, brown, hydrocarbon (hc) odor,	
3	276			CL	60				
4								SILTY CLAY, SIMILAR TO ABOVE (STA), trace sand/gravel, hc odor,	
5	1700			CL	60				
6								SILTY CLAY/SAND/GRAVEL, low, firm, damp, tan, very coarse sand, 1/4" to 1" gravel, hc odor, moist to very moist in seams,	
7	2411			CL/SP	90				
8								SILTY CLAY/SAND/GRAVEL, STA, moist, fluid in top of sampling spoon, strong hc odor, trace phase separated hydrocarbon (psh),	
9	2278			CL/SP	90				
10		▼						SILTY CLAY/SAND/GRAVEL, STA, saturated, psh,	
11	1879			CL/SP	90				
12								SILTY CLAY/SAND/GRAVEL, STA, saturated, psh,	
13	405			CL/SP	90				
14				CL	90			SILTY CLAY, low, stiff, damp, brown, hc odor,	
15	450			CL	90			SILTY CLAY, STA, damp, hc odor.	
16									

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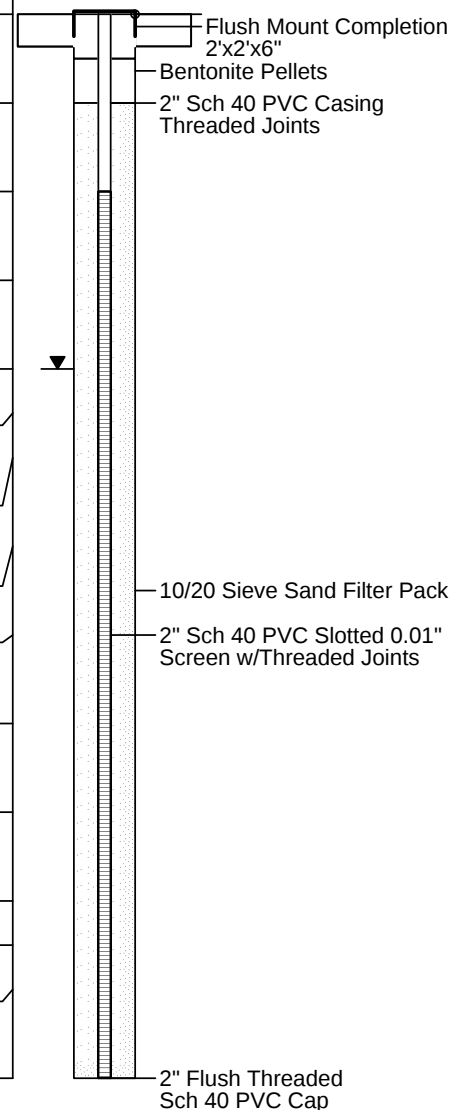
Geologist	: Tracy Payne
Driller	: C. Ortiz
Drilling Rig	: CME 75
Drilling Method	: Hollow Stem Auger 7.5"
Sampling Method	: Split Spoon 2" Dia, 2' Long
Comments	:
Total Depth	: 24'
Ground Water	: 8'
Start Date	: 11/18/2014
Finish Date	: 11/18/2014

(Sheet 1 of 1)

Elev., TOC (ft.msl)	: 6958.87
Elev., PAD (ft. msl)	: 6959.07
Elev., GL (ft. msl)	: 6958.62
Site Coordinates	:
N	: 1633291.89
E	: 2546216.67

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation
							DESCRIPTION
-2							
-1							
0							
1	69				40		ASPHALT/GRAVEL BASE, CLAY, very stiff, brown, damp, faint odor,
2							
3	367			CL	50		SILTY CLAY, low, very stiff, brown, damp, odor, gravel present,
4							
5	355			CL/SP	60		SILTY CLAY/SAND/GRAVELLY, low to firm, damp, brown with sand/gravel, odor,
6							
7	1790			CL/SP	80		SILTY CLAY/SAND/GRAVELLY, SIMILAR TO ABOVE (STA), odor,
8		▼					
9	2140			CL	90		SILTY CLAY, low, soft, moist to very moist, brown, strong odor,
10				SW/GW	90		SANDY GRAVEL/GRAVELLY SAND, coarse to very coarse grain, compact, very moist, odor, tan,
11	404			CL/SP	90		SILTY CLAY/SAND/GRAVEL, low to firm, damp, brown with coarse sand & gravel, odor,
12							
13	454			CL	20		SANDY CLAY, low, soft, damp, odor, light grey, gravel @ base,
14							
15	660			CL	50		SANDY CLAY, low, very stiff, damp, odor, light grey,
16							
17	340			CL	30		SANDY CLAY, STA,
18							
19	344			CL	30		SANDY CLAY, STA,
20							
21	421			CL	60		SANDY CLAY, STA,
22				SH	60		SHALE, CLAYEY, light purple, damp, very stiff, odor,
23	375			SH	30		SHALE, STA,
24							
25							

MKTF-37



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02-27-2015 C:\Users\cholmes\Documents\M-Tech\samples\WEST14003\MKTF-37.bor

Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 20.25'
Ground Water : 8'
Start Date : 11/20/2014
Finish Date : 11/20/2014

MKTF-38

(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6954.89
Elev., PAD (ft. msl) : 6955.17
Elev., GL (ft. msl) : 6954.54
Site Coordinates :
N : 1633451.01
E : 2546222.09

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results
							DESCRIPTION	MKTF-38
-2								
-1								
0					100		ASPHALT/BASE,	
1	217			CL/SP	90		SILTY CLAY/SAND/GRAVEL, low, firm, damp, brown, coarse grain sand, 1/4" to 1" gravel, odor,	Flush Mount Completion 2"x2"x6"
2								Bentonite Pellets
3	70			CL/SP	90		SILTY CLAY/SAND/GRAVEL, SIMILAR TO ABOVE (STA), odor,	2" Sch 40 PVC Casing Threaded Joints
4								
5	42			CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, odor,	
6								
7	20			CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, odor,	
8		▼						▼
9	9			CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, decrease in clay content, very moist to saturated, odor,	
10								
11	7			GW	90		SANDY GRAVEL, compact, brown, saturated, faint odor, very coarse grain sand, 1/4" to 1.5" gravel,	
12				CL	90			
				GW	90		SANDY CLAY, low, firm to soft, moist, brown,	10/20 Sieve Sand Filter Pack
13	8			GW	10		SANDY GRAVEL, STA (10-11), saturated,	2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
14							SANDY GRAVEL, STA, saturated,	
15	6			GW	10		SANDY GRAVEL, STA, saturated,	
16								
17	4			CL	50		SANDY CLAY, low, firm, damp to moist, greyish brown, faint odor,	
18								
19	5			CL	60		SANDY CLAY, STA,	
20								2" Flush Threaded Sch 40 PVC Cap
21								

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Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 16'
Ground Water : 12'
Start Date : 11/14/2014
Finish Date : 11/14/2014

MKTF-39

(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6953.75
Elev., PAD (ft. msl) : 6953.97
Elev., GL (ft. msl) : 6953.12
Site Coordinates :
N : 1633729.23
E : 2546265.99

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results MKTF-39
							DESCRIPTION	
-2								
-1								
0								
1	2.1			ML	100		GRAVEL/CLAYEY SILT, FILL, brown, damp, faint odor,	Flush Mount Completion 2"x2"x6"
2								Bentonite Pellets
3	29.4			CL	100		GRAVEL/SILTY CLAY, FILL, mod, stiff, damp, brown, no odor,	2" Sch 40 PVC Casing Threaded Joints
4								
5	6.5			CL	90		SANDY SILTY CLAY, FILL, low, soft, damp, brown, pea sized gravel, no odor, damp,	
6								
7	4.5			SW	90		SILTY GRAVELLY SAND, FILL, loose, medium sand to 1.5" gravel, brown, no odor, damp,	
8								
9	400			CL/SC	90		SANDY CLAY/CLAYEY SAND, coarse, compact, damp to moist, brown, hydrocarbon (hc) odor, gravelly,	10/20 Sieve Sand Filter Pack
10								2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
11	569			CL	90		SANDY CLAY/CLAYEY SAND, SIMILAR TO ABOVE (STA), moist/oily, hc odor, gravelly,	
12	-	▼		GP	90		SANDY GRAVEL, loose, brown, saturated, hc odor, very coarse sand to 3/4" gravel,	▼
13	51			CL	90		SILTY CLAY, low, very stiff, dry to damp, grey, faint odor @ base,	
14								
15	18			CL	90		SILTY CLAY, STA.	2" Flush Threaded Sch 40 PVC Cap
16								

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Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 22'
Ground Water : 10'
Start Date : 11/13/2014
Finish Date : 11/13/2014

MKTF-40

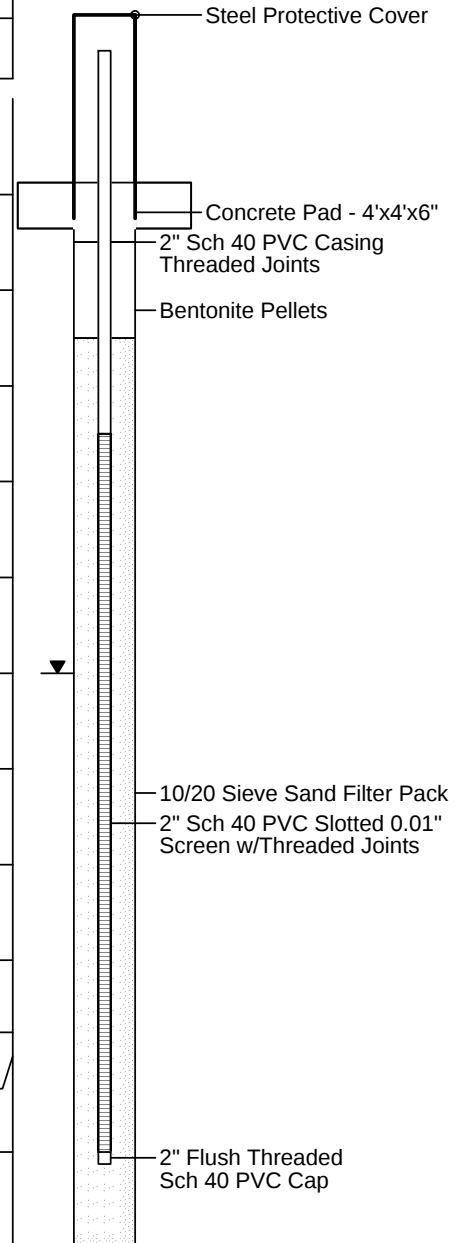
(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6894.33
Elev., PAD (ft. msl) : 6891.35
Elev., GL (ft. msl) : 6890.48
Site Coordinates :
N : 1634085.50
E : 2544637.81

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	DESCRIPTION
-2								
-1								
0								
1	0.8			CL	100			CLAY, mod, stiff, damp, brown, no odor, gravel,
2								
3	0.1			CL	90			CLAY, SIMILAR TO ABOVE (STA), gravel,
4								
5	0.7			CL	80			CLAY, STA,
6								
7	1.8			CL	90			SANDY CLAY, low, firm to soft, damp, brown, no odor, moist 7-8' ,
8								
9	2.0			CL	70			SANDY CLAY, STA, damp to moist,
10		▼						
11	0.6			CL/SC	90			SANDY CLAY/CLAYEY SAND, STA, moist to saturated in clayey sand seams, no odor,
12								
13	1.5			CL	20			SANDY SILTY CLAY, low, stiff, damp, brown, no odor, moist to saturated in sand seams,
14								
15	2.2			CL/SC	80			SANDY CLAY/CLAYEY SAND, low, firm to soft, moist to saturated in clayey sand seams,
16								
17	2.2			CL/SC	80			SANDY CLAY/CLAYEY SAND, STA, moist to saturated,
18				CL	90			SILTY CLAY, low, very stiff, damp, reddish brown and grey, no odor,
19	2.5			CL	80			SILTY CLAY, STA,
20								
21	2.6			CL	50			SILTY CLAY, STA,
22								
23								

Completion Results

MKTF-40



Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 37.25'
Ground Water : 34'
Start Date : 11/13/2014
Finish Date : 11/14/2014

MKTF-41

(Sheet 1 of 2)

Elev., TOC (ft.msl) : 6893.64
Elev., PAD (ft. msl) : 6891.11
Elev., GL (ft. msl) : 6889.80
Site Coordinates :
N : 1633499.80
E : 2544567.57

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	DESCRIPTION	Completion Results
-2									MKTF-41
-1									Steel Protective Cover
0									Concrete Pad - 4'x4'x6"
1	2.6			CL	80			SANDY SILTY CLAY, low, stiff, dry, brown, no odor, fine grained sand, occasional gravel,	
2									
3	2.3			CL	70			SANDY SILTY CLAY, SIMILAR TO ABOVE (STA), no odor,	
4									
5	1.2			CL	40			SANDY SILTY CLAY, STA, no odor,	
6									
7	2.4			CL/ML	50			SILTY CLAY/CLAYEY SILT, low, firm, dry, brown, no odor,	
8									
9	3.9			CL	60			SANDY CLAY, low, very stiff, dry, brown, no odor,	2" Sch 40 PVC Casing Threaded Joints
10									Grout
11	4.8			CL	30			SANDY CLAY, STA, damp,	
12									
13	3.5			CL	40			SANDY CLAY, STA,	
14									
15	1.2			CL	10			SANDY CLAY, STA,	
16									
17	3.9			CL	50			SILTY CLAY, low, very stiff, dry/damp, light reddish brown with grey @ base, no odor,	
18									
19	4.0			CL				SILTY CLAY, STA, reddish brown and light grey,	Bentonite Pellets

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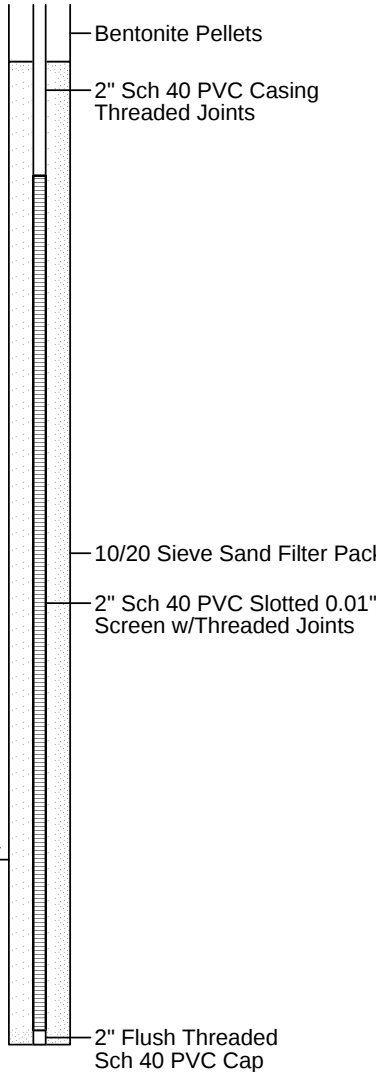
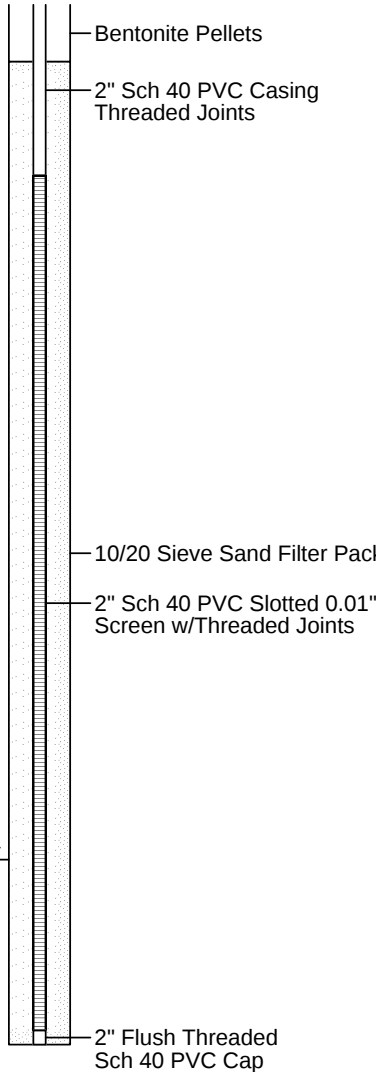
Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 37.25'
Ground Water : 34'
Start Date : 11/13/2014
Finish Date : 11/14/2014

MKTF-41

(Sheet 2 of 2)

Elev., TOC (ft.msl) : 6893.64
Elev., PAD (ft. msl) : 6891.11
Elev., GL (ft. msl) : 6889.80
Site Coordinates :
N : 1633499.80
E : 2544567.57

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	DESCRIPTION	Completion Results MKTF-41
19	4.0			CL	80				
20								SILTY CLAY, STA, light reddish brown,	
21	3.9			CL	50				
22								SILTY CLAY, STA, light reddish brown and trace grey,	
23	3.6			CL	40				
24								SILTY CLAY, STA, light reddish brown,	
25	3.3			CL	50				
26								SILTY CLAY, STA,	
27	2.1			CL	10				
28								SILTY CLAY, STA,	
29	2.8			CL	20				
30								SILTY CLAY, STA, moist @ top of sample,	
31	2.6			CL	40				
32								SILTY CLAY, STA, calcareous,	
33	3.1			CL	50				
34		▼						SILTY CLAY, STA, gravelly, moist to saturated, no odor, shale @ base,	
35	2.9			CL	50				
36								SHALE, dark grey, dense to very dense,	
37	-			SH	10				
38									
39									
40									

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Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 30.25'
Ground Water :
Start Date : 11/12/2014
Finish Date : 11/12/2014

MKTF-42

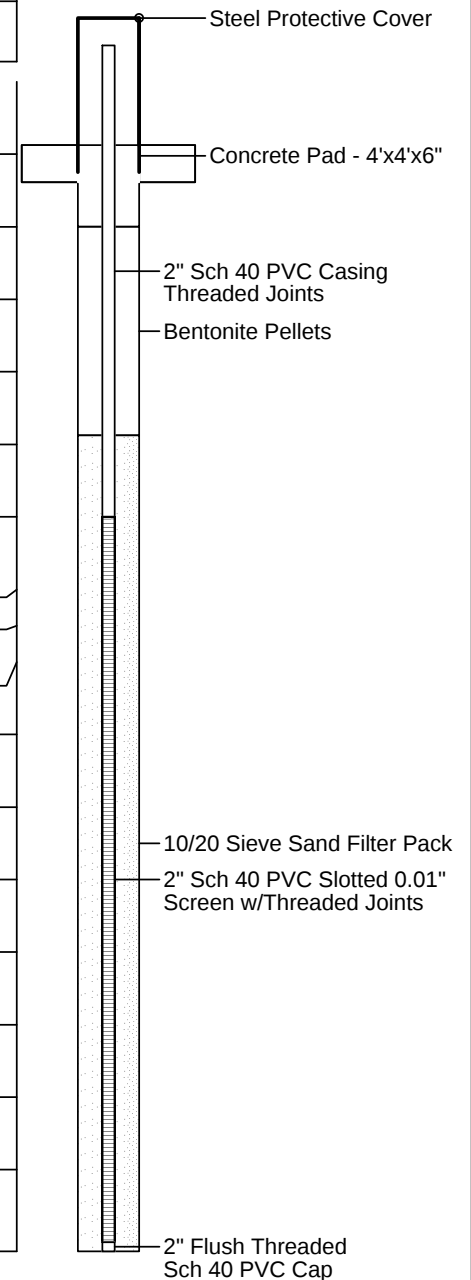
(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6892.95
Elev., PAD (ft. msl) : 6890.42
Elev., GL (ft. msl) : 6888.75
Site Coordinates :
N : 1633078.09
E : 2544678.55

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
							Water Level Depth to water - 18.79 fbtoc 11-18-14 (not known to be static)
-2							
-1							
0							
1	1.7			CL	100		SILTY CLAY, low, firm, dry, light brown, no odor,
2							
3	2.8			CL	90		SILTY CLAY, low, very stiff, dry, light brown, calcareous, no odor, crumbly,
4							
5	3.8			CL	60		SILTY CLAY, SIMILAR TO ABOVE (STA),
6							
7	2.4			CL	60		SILTY CLAY, STA,
8							
9	4.1			CL	30		SILTY CLAY, STA,
10							
11	2.8			CL	50		SANDY CLAY, low, stiff, dry, light reddish brown with medium grained sand and interbedded sandstone less than 1/2" thick,
12							
13	3.9			CL	80		SANDY CLAY, STA,
14				CL	80		SILTY CLAY, low, very stiff, damp/dry, light reddish brown, no odor, calcareous,
15	2.5			CL	60		SILTY CLAY, STA, increase in moisture,
16							
17	2.3			CL	50		SILTY CLAY, STA, trace sand, standstone seam @ 17.5', very dense,
18							
19	2.4			CL	80		SILTY CLAY, STA, odor, extremely calcareous (50%),
20							
21	1.5			CL	80		SILTY CLAY, STA, calcareous,
22							
23	2.5			CL	10		SILTY CLAY, low, stiff, damp, reddish brown, no odor,
24							
25	1.4			CL	60		SILTY CLAY, STA,
26							
27	1.5			CL	60		SILTY CLAY, STA, trace grey,
28							
29	1.2			CL	50		SILTY CLAY, STA, grey and reddish brown.
30							
31							

Completion Results

MKTF-42



1010 Travis Street
Houston, Texas 77002
713-955-1230

DiSorbo Consulting, LLC

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 28'
Ground Water :
Start Date : 11/11/2014
Finish Date : 11/11/2014

MKTF-43

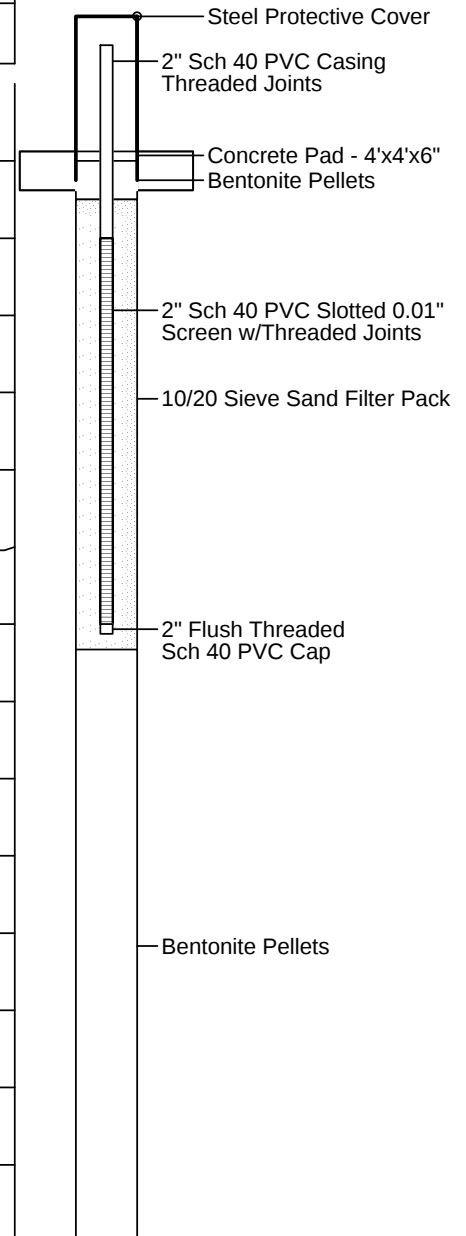
(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6876.90
Elev., PAD (ft. msl) : 6874.12
Elev., GL (ft. msl) : 6873.22
Site Coordinates :
N : 1633490.97
E : 2544190.23

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
							Water Level Depth to water - 6.95 ftboc 11-18-14 (not known to be static)
-2							
-1							
0							
1	3.6			CH	100		CLAY, high, stiff, damp, brown, no odor,
2							
3	4.6			CH	50		CLAY, SIMILAR TO ABOVE (STA), moist in seams,
4							
5	4.2			CH	90		CLAY, STA, moist in seams,
6							
7	4.6			CH	90		CLAY, STA, reddish brown,
8							
9	4.0			CL	90		SILTY CLAY, low, soft, damp, reddish brown, crumbly, no odor, trace grey clay @ 9.5',
10							
11	3.3			CL	80		SILTY CLAY, STA, stiff,
12							
13	3.8			CL	60		SILTY CLAY, STA, very stiff,
14							
15	3.8			CL	80		SILTY CLAY, STA, very stiff, calcareous,
16							
17	2.9			CL	80		SILTY CLAY, STA,
18							
19	3.1			CL	50		SILTY CLAY, STA,
20							
21	3.1			CL	60		SILTY CLAY, STA,
22							
23	3.2			CL	10		SILTY CLAY, STA,
24							
25	3.3			CL	30		SILTY CLAY, STA, sandstone seam 24.50',
26							
27	3.2			CL	30		SILTY CLAY, STA.
28							
29							

Completion Results

MKTF-43



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Houston, Texas 77002
713-955-1230

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8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 50'
Ground Water :
Start Date : 11/11/2014
Finish Date : 11/12/2014

MKTF-44

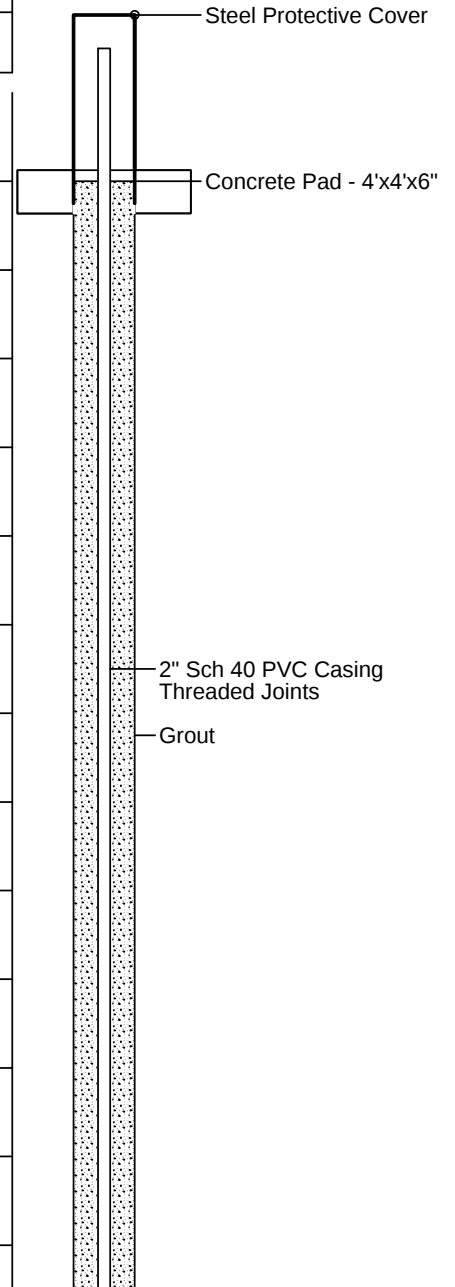
(Sheet 1 of 2)

Elev., TOC (ft.msl) : 6869.95
Elev., PAD (ft. msl) : 6867.41
Elev., GL (ft. msl) : 6866.06
Site Coordinates :
N : 1633681.48
E : 2542981.45

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Water Level Depth to water - 48.80 fbtoc 11-17-14 (not known to be static)
						DESCRIPTION
-2						
-1						
0						
1	6.3			CH	100	CLAY, high, very stiff, damp, brown, no odor,
2						
3	8.3			CH	80	CLAY, SIMILAR TO ABOVE (STA),
4						
5	8.2			CH	70	CLAY, STA,
6						
7	8.6			CH	90	CLAY, STA,
8						
9	8.2			CH	80	CLAY, STA,
10						
11	7.9			CH	90	CLAY, STA, trace silt,
12						
13	7.8			CH	90	CLAY, high, very stiff, damp, brown, no odor,
14						
15	6.5			CH	10	CLAY, STA,
16						
17	7.1			CH	80	CLAY, STA,
18						
19	7.6			CL	70	SANDY SILTY CLAY, low, stiff, damp, light brown, no odor, gravel @ base, soft/crumbly 19-19.5' with lesser amount of clay,
20						
21	5.5			CL	80	SILTY CLAY, STA with sand seams/sandstone fro 20.5-22, dry, crumbly,
22						
23	6.4			CL	80	SANDY SILTY CLAY, low, stiff, dry to damp, light brown, no odor,
24						
25	4.8			CL		GRAVELLY CLAY, STA, with gravel,

Completion Results

MKTF-44



Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 50'
Ground Water :
Start Date : 11/11/2014
Finish Date : 11/12/2014

MKTF-44

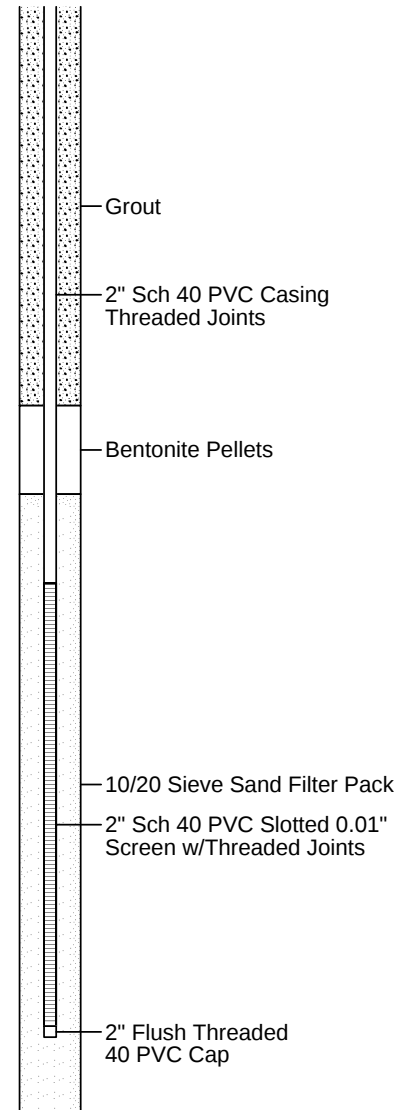
(Sheet 2 of 2)

Elev., TOC (ft.msl) : 6869.95
Elev., PAD (ft. msl) : 6867.41
Elev., GL (ft. msl) : 6866.06
Site Coordinates :
N : 1633681.48
E : 2542981.45

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Water Level Depth to water - 48.80 fbtoc 11-17-14 (not known to be static)
						DESCRIPTION
25	4.8			CL	70	
26						
27	3.8			CL	50	GRAVELLY CLAY, STA, very stiff,
28						
29	4.8			CL	50	SILTY CLAY, low, very stiff, damp/dry, reddish brown, no odor, calcareous,
30						
31	4.6			CL	90	SILTY CLAY, low, firm/crumbly, damp to dry, reddish brown, no odor, calcareous,
32						
33	4.3			CL	80	SILTY CLAY, STA, stiff to very stiff,
34						
35	3.6			CL	80	SILTY CLAY, STA,
36						
37	1.9			CL	10	SILTY CLAY, STA,
38						
39	4.4			CL	20	SILTY CLAY, STA,
40						
41	3.8			CL	80	SILTY CLAY, STA,
42						
43	3.8			CL	20	SILTY CLAY, low, very stiff, crumbly, damp to dry, reddish brown, no odor,
44						
45	3.9			CL	60	SILTY CLAY, STA,
46						
47	3.8			CL	40	SILTY CLAY, STA,
48						
49	3.7			CL	20	SILTY CLAY, STA,
50						
51						
52						

Completion Results

MKTF-44



1010 Travis Street
Houston, Texas 77002
713-955-1230

DiSorbo Consulting, LLC

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

Appendix B

Investigation Derived Waste Management Plan

Investigation Derived Waste (IDW) Management Plan

All IDW will be properly characterized and disposed of in accordance with all federal, State, and local rules and regulations for storage, labeling, handling, transport, and disposal of waste. The IDW may be characterized for disposal based on the known or suspected contaminants potentially present in the waste.

A dedicated decontamination area will be setup prior to any sample collection activities. The decontamination pad will be constructed so as to capture and contain all decontamination fluids (e.g., wash water and rinse water) and foreign materials washed off the sampling equipment. The fluids will be pumped directly into suitable storage containers (e.g., labeled 55-gallon drums), which will be located at satellite accumulation areas until the fluids are disposed in the refinery wastewater treatment system upstream of the API separator. The solids captured in the decontamination pad will be shoveled into 55-gallon drums and stored at the designated satellite accumulation area pending proper waste characterization for off-site disposal.

Drill cuttings generated during installation of soil borings will be placed directly into 55-gallon drums and staged in the satellite accumulation area pending results of the waste characterization sampling. The portion of soil cores, which are not retained for analytical testing, will be placed into the same 55-gallon drums used to store the associated drill cuttings.

The solids (e.g., drill cuttings and used soil cores) will be characterized by testing to determine if there are any hazardous characteristics in accordance with 40 Code of Federal Regulations (CFR) Part 261. This includes tests for ignitability, corrosivity, reactivity, and toxicity. If the materials are not characteristically hazardous, then further testing will be performed pursuant to the requirements of the facility to which the materials will be transported. Depending upon the results of analyses for individual investigation soil samples, additional analyses may include VOCs, TPH and polynuclear aromatic hydrocarbons (PAHs).

Appendix C

Well Development and Purging Procedures

Well Development

All monitoring wells will be developed to create an effective filter pack around the well screen, correct damage to the formation caused by drilling, remove fine particles from the formation near the borehole, and assist in restoring the natural water quality of the aquifer in the vicinity of the well. Newly installed monitoring wells will not be developed for at least 48 hours after the surface pad and outer protective casing are installed. This will allow sufficient time for the well materials to cure before the development procedures are initiated. A new monitoring well will be developed until the column of water in the well is free of visible sediment, and the pH, temperature, turbidity, and specific conductivity have stabilized. In most cases, the above requirements can be satisfied. However, in some cases, the pH, temperature, and specific conductivity may stabilize but the water remains turbid. In this case, continuous flushing may be necessary to complete the well development. If the well is pumped dry, the water level will be allowed to sufficiently recover before the next development period is initiated. The common methods used for developing wells include:

- (1) pumping and over-pumping;
- (2) backwashing;
- (3) surging (with a surge block);
- (4) bailing;
- (5) jetting; and
- (6) airlift pumping.

These development procedures will be used, either individually or in combination, to achieve the most effective well development. However, the most favorable well development methods include pumping, over-pumping, bailing, surging, or a combination of these methods. Well development methods and equipment that alter the chemical composition of the groundwater will not be used.

Development methods that involve adding water or other fluids to the well or borehole, or that use air to accomplish well development will be avoided, if possible. Approval will be obtained from the NMED prior to introducing air, water, or other fluids into the well for the purpose of well development. If water is introduced to a borehole during well drilling and completion, then the same or greater volume of water will be removed from the well during development. In addition, the volume of water withdrawn from a well during development will be recorded, and best efforts will be used to avoid pumping wells dry during development activities.

Well Purging

All zones in each monitoring well will be purged by removing groundwater prior to sampling and in order to ensure that formation water is being sampled. Purge volumes will be determined by monitoring, at a minimum, groundwater pH, specific conductance, dissolved oxygen concentrations, turbidity, redox potential, and temperature during purging of volumes and at measurement intervals of not less than $\frac{1}{4}$ the pre-purge well volume. The groundwater quality parameters and fluid levels will be measured using a YSI Professional Plus Multiparameter Meter, YSI Water Quality Sonde, Hach Portable Turbidimeter, and a Geotech Interface Meter. The volume of groundwater purged, the instruments used, and the readings obtained at each interval will be recorded on the field monitoring log. In general, water samples may be obtained from the well after the measured parameters of the purge water have stabilized to within ten percent for three consecutive measurements. Well purging

may also be conducted in accordance with the NMED's Position Paper "Use of Low-Flow and other Non-Traditional Sampling Techniques for RCRA Compliant Groundwater Monitoring" (October 30, 2001). If necessary, a written request for a variance from the described methods of well purging for individual wells may be submitted to NMED no later than 90 days prior to scheduled sampling activities.

Appendix D

Photos



Photo #1 – Looking north across east end of apron surrounding Truck Loading Rack.



Photo #2 – Looking west across south end of apron surrounding Truck Loading Rack.



Photo #3 – Looking north across northeastern portion of apron surrounding Truck Loading Rack.



Photo #4 – Looking south-southeast across east side of apron surrounding Truck Loading Rack.



Photo #5 – Looking north at Ethanol and Crude Oil Unloading Rack.



Photo #6 – Looking southwest at Ethanol and Crude Oil Unloading Rack



Photo #7 – Looking southwest at loading bay 4 on north end of Truck Loading Rack.



Photo 7a – Closeup view of sump in loading bay 4.



Photo 8 – Looking west at loading bays 3 and 5



Photo 8a – Looking west at bays 3 and 5



Photo 9 – Looking west at loading bay 2.



Photo 9a – Close up view of sump in loading bay 2.



Photo 10 – Looking west at loading bay 1 on south end of Truck Loading Rack.



Photo 10a – Closeup view of drain in loading bay 1.



MICHELLE LUJAN GRISHAM
Governor

HOWIE C. MORALES
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



JAMES C. KENNEY
Cabinet Secretary Designate

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 31, 2019

John Moore
Environmental Superintendent
Western Refining Southwest Inc., Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

**RE: DISAPPROVAL
INVESTIGATION WORK PLAN AREA OF CONCERN 35
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID# NMD000333211
HWB-WRG-18-010**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Investigation Work Plan Area of Concern 35* (Work Plan), dated August 2018, submitted on behalf of Western Refining Southwest Inc., Gallup Refinery (Permittee) and hereby issues this Disapproval with the following comments.

The Work Plan was submitted based on the updated schedule agreed to in the RCRA Permit Table E-2 (Corrective Action Submittal Schedule). The required submittal date was August 30, 2018. The Work Plan was received September 19, 2018. AOC 35 includes the main truck loading rack, crude slop and ethanol unloading facility, additive tank farm/loading rack, and the retail tank farm (Tanks 1 through 7, 912, 913, 1001, and 1002).

Comment 1

The Permittee is careful to point out several times in the Work Plan that no waste material was historically handled at these units. The facility is not permitted to handle waste materials. These units and others listed in the Permittee's RCRA Permit under corrective action are listed because there is a history of handling material that may contain listed hazardous waste or hazardous constituents which have or may have, during the unit's use, been released to the environment.

Comment 2

In the Background, Section 2.1 (Main Truck Loading Rack Area), the Permittee lists two recent releases and states, “[t]here have been documented releases at the loading rack that were discovered at the time of the release and addressed, including notification to the appropriate regulatory agencies.” There is a historical lack of follow up regarding cleanup of releases; therefore, it is not always clear if or when releases were fully addressed. For instance, the release notification form for the December 23, 2009 release of ultra-low sulfur diesel from the leaking underground pipe at the west end of the main loading rack indicated that the release affected an adjacent field, stating, “[i]n further cleanup actions, contaminated soils will be excavated, confirmatory environmental samples will be collected and analyzed, and all contaminated materials will be disposed off [sic] in accordance with applicable regulations.” There was no report that provided information on soil disposal or confirmation sampling related to this release. Revise this section to more accurately describe the cleanup or lack thereof of releases.

Comment 3

Section 2.3 (Additive Tank Farm Loading Rack) states that methyl tert butyl ether (MTBE) is not and has not been stored in these tanks. Based on Figure 5 (MTBE Concentration Map March 2015) the greatest concentration of MTBE in groundwater appears to be near the Additive Tank Farm/Loading Rack and the Main Truck Loading Rack. Since MTBE was added to fuel as an anti-knocking agent, it is likely that releases occurred at the Main Truck Loading Rack during fuel transfer. Units where fuel loading or unloading occurs can be a source of contaminants over time because of small releases or steady, but small leakage that can contaminate soils. Releases are not limited to tank leaks that may contribute to releases to the environment. No revision necessary; however, when planning investigations, the Permittee must take into account that tanks are not the only potential contaminant source.

Comment 4

The Permittee must revise the background section of the Work Plan to address the following:

- a) The Permittee must add a discussion regarding the state of the concrete pads at the units. Provide photographs of the concrete pads, as appropriate.
- b) The background section must include information regarding the results of the dye tracer study conducted as part of the Hydrocarbon Seep Interim Measures that included the truck rack.
- c) Additionally, the background section must reference information regarding the Sanitary Lagoon since the Permittee references this Work Plan in the Sanitary Lagoon Investigation Work Plan, dated October 2018 and states that the “Area A” referenced therein will be investigated as part of this Work Plan.
- d) The Permittee proposed to install three groundwater monitoring wells in the *Investigation Work Plan Up-gradient MKTF Wells*, dated August 2018. One of the proposed wells is located at the southern boundary of AOC 35. In the revised Work Plan, reference the

work plan to indicate that a related groundwater investigation is concurrently proposed in the vicinity of AOC 35.

Comment 5

In Section 4.1 (AOC 35 Investigation) the Permittee states, “[t]wo new shallow monitoring wells are proposed; one adjacent to existing monitoring well MKTF-17 and the second near MKTF-18.” The Permittee includes a similar proposal to install additional wells near MKTF-17 and MKTF-18 in the *Work Plan 2015 Annual Groundwater Report Comments*, dated October 2018; however, the proposed locations are different. Clarify if the Permittee plans to install two sets of additional borings near the MKTF-17 and MKTF-18 wells or if one set can satisfy the requirements included in NMED’s comments regarding the 2015 Groundwater Monitoring Report and for this Work Plan.

Comment 6

In Section 4.1 (AOC 35 Investigation) the Permittee states, “[e]ach well will be screened in the upper-most saturated interval, which based on the borings logs from MKTF-17 and MKTF-18 should be encountered within 8 feet and 10 feet below ground level (bgl), respectively.” Section 4.2.1 (Drilling Activities) also states that slotted (0.01 inch) PVC well screen will be placed at the bottom of the borings at the two permanent wells and will extend for a maximum of 10 feet. The 2017 depth-to-water (DTW) measurements indicate that the groundwater depths are deeper than nine feet below ground surface (bgs) in well MKTF-17. The well placed next to MKTF-17 must be installed deeper than ten feet bgs. Revise the Work Plan accordingly. In addition, all proposed wells must be installed to accommodate the decreasing trend in groundwater elevations in recent years (e.g., deeper total depths, longer screened intervals).

Comment 7

In Section 4.2 (Soil Sample Field Screening and Logging) the Permittee states, “[d]iscrete soil samples will be retained for laboratory analyses from within the following intervals: 0.0-0.5 feet (at soil borings with evidence of impacts near the land surface);” The Permittee must collect surface soil samples even if there is no evidence of impacts. If the surface is covered with gravel, the Permittee must move the gravel and collect a sample from the surface directly below the gravel and note that gravel was removed to collect a surface soil sample.

Comment 8

The Permittee discusses drilling methods in Section 4 (Scope of Services), but does not include methods and procedures used for sample collection. For example, describe how soil samples obtained for laboratory analysis will be collected from the hand auger and from the macrocore or dual tube used for geoprobe sampling. Include this information in the revised Work Plan.

Comment 9

In Section 4.3 (Groundwater Sample Collection) the Permittee states, “[g]roundwater samples will be collected from the new monitoring wells within 24 hours of the completion of well purging using disposal bailers... Sample collection methods will be documented in the field monitoring reports.” Prior to collection of groundwater samples for laboratory analyses, the Permittee must measure DTW and the total depths of each well, and collect field groundwater

quality data (e.g., dissolved oxygen, pH, temperature, conductivity, redox potential, turbidity) during well purging. Include descriptions of the field procedures in the revised Work Plan.

Comment 10

In Section 4.6 (Chemical Analyses), the Permittee states, “[g]roundwater samples will also be analyzed for major anions (e.g., carbonate, bicarbonate, sulfate, fluoride and chloride).” The groundwater samples must also be analyzed for nitrate and nitrite because of potential wastewater discharges at the site. Include the nitrate and nitrite analyses for groundwater samples in the revised Work Plan.

Comment 11

So many of the MKTF wells contain separate phase hydrocarbons (SPH) that the representation of benzene and MTBE concentrations in Figure 4 (Benzene Concentration Map March 2015) and Figure 5 (MTBE Concentration Map March 2015) may not be accurate. The Permittee recently indicated the SPH in wells has significantly decreased over time. Present concentration maps with updated SPH thickness and groundwater concentrations of benzene and MTBE in the revised Report for comparison.

Comment 12

In Figure 6 (Proposed Sampling Locations), many of the proposed soil boring locations are placed along an oily water drain line from the laboratory, what appears to be a drain line along the marketing tank farm tanks, and the sanitary sewer line. The Permittee must move some of the proposed borings to locations where transfers of materials occur. While leaks from the sewer system are a concern, releases from the units can occur from other points as well. For instance, at the Retail Tank Farm, the pipe rack to the east of the tanks could be a potential contaminant source, boring SB32/MKTF-16 exhibits a concentration of 19 mg/L of benzene, which appears to be one of the highest concentrations of benzene in groundwater and is located to the east of those racks. Revise the Work Plan to add or adjust proposed boring locations to account for sources other than the sewer system.

The Permittee must address all comments in this Disapproval letter and submit a revised Work Plan. Provide NMED with two hard copies with labeled electronic versions of the revised Work Plan. Include a red-line strikeout version, in electronic format, showing where all the revisions to the Work Plan have been made. The revised Work Plan must be accompanied with a response letter that details where all the revisions to the Work Plan have been made, cross-referencing NMED's numbered comments. The revised Work Plan must be submitted to NMED by no later than **July 27, 2019**.

Mr. Moore
January 31, 2019
Page 5

If you have any questions regarding this letter, please contact Kristen Van Horn at (505) 476-6046.

Sincerely,



John E. Kielling
Chief
Hazardous Waste Bureau

cc: D. Cobrainm NMED HWB
K. Van Horn, NMED HWB
M. Suzuki, NMED HWB
C. Chavez, EMNRD OCD
B. Moore, Marathon
L. King, EPA

File: WRG 2019 and Reading
HWB-WRG-18-010

Andeavor
I-40 Exit 39
Jamestown, NM 87347

505 722 3833
andeavor.com



Hand delivered – September 19, 2018

New Mexico Environment Department (NMED)
Hazardous Waste Bureau
Attn: Mr. John E. Kielling, Chief
2905 Rodeo Park Drive East, Bldg 1
Santa Fe, NM 87505-6303

RE: INVESTIGATIVE WORK PLAN FOR AOC 35
WESTERN REFINING SOUTHWEST INC, GALLUP REFINERY
EPA ID# NMD000333211

Dear Sir:

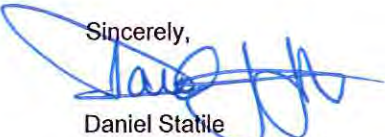
Pursuant to the terms and conditions of the Western Refining Southwest, Inc., Gallup Refinery's ("Gallup Refinery") Resource Conservation and Recovery Act (RCRA) Post-Closure Care Permit and 20.4.1.500 New Mexico Administrative Code, this Investigation Work Plan has been prepared for Area of Concern (AOC) 35. AOC 35 includes the main truck loading rack, crude slop and ethanol unloading facility, additive tank farm/loading rack, and the retail tank farm (Tanks 1 – 7, 912, 913, 1001, and 1002). Gallup Refinery is submitting two hard copies and an electronic format via CD. Also, the New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division (OCD) has been provided a copy of this information for their consideration.

If you have any questions about the information being provided herein, please do not hesitate to contact Brian Moore by telephone at (505) 726-9745 or by email at Brian.Moore@andeavor.com.

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,



Daniel Statile
Vice President Refining
Western Refining Southwest, Inc. – Gallup Refinery

Enclosure

cc: C. Chavez (OCD via electronic submittal)

INVESTIGATION WORK PLAN AREA OF CONCERN 35



Gallup Refinery
Western Refining Southwest, Inc.
Gallup, New Mexico

EPA ID# NMD000333211

AUGUST 2018

A handwritten signature in black ink, appearing to read 'Scott Crouch', written over a horizontal line.

Scott Crouch
Senior Geologist



DiSorbo
Environmental Consulting Firm

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Suite 300
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Austin, TX 78759
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Appendix B Investigation Derived Waste Management Plan

List of Acronyms

benzene, toluene, ethylbenzene, and xylene (BTEX)
Code of Federal Regulations (CFR)
Contract Laboratory Program (CLP)
data quality objective (DQO)
diesel range organics (DRO)
dilution attenuation factor (DAF)
Environmental Protection Agency (EPA)
investigation derived waste (IDW)
Maximum Contaminant Level (MCL)
mean sea level (msl)
monitoring well (MW)
motor oil range organics (MRO)
methyl tert butyl ether (MTBE)
New Mexico Administrative Code (NMAC)
New Mexico Environment Department (NMED)
New Mexico Oil Conservation Division (NMOCD)
photoionization detector (PID)
polynuclear aromatic hydrocarbon (PAH)
polyvinyl chloride (PVC)
quality assurance/quality control (QA/QC)
Resource Conservation and Recovery Act (RCRA)
separate-phase hydrocarbon (SPH)
semi-volatile organic compound (SVOC)
Solid Waste Management Unit (SWMU)
total petroleum hydrocarbon (TPH)
toxicity characteristic leaching procedure (TCLP)
volatile organic compound (VOC)

Executive Summary

The Gallup Refinery, which is located 17 miles east of Gallup, New Mexico, has been in operation since the 1950s. Pursuant to the terms and conditions of the facility Resource Conservation and Recovery Act (RCRA) Post-Closure Care Permit and 20.4.1.500 New Mexico Administrative Code, this Investigation Work Plan has been prepared for Area of Concern (AOC) 35. AOC 35 includes the main truck loading rack, crude slop and ethanol unloading facility, additive tank farm/loading rack, and the retail tank farm (Tanks 1 – 7, 912, 913, 1001, and 1002).

Groundwater samples collected from wells near the retail tank farm [also known as the marketing tank farm (MKTF)] (e.g., MKTF-07, -08, -09, -10, -16, and -18) have shown impacts from petroleum hydrocarbons, to include such constituents as benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tert butyl ether (MTBE) above screening levels. Similar impacts also extent to the south near the main truck loading racks as shown in groundwater samples collected from this area. This investigation will focus on identification of potential source areas that have in the past or are continuing to contribute to the observed impacts to groundwater. Twenty soil borings are proposed to evaluate the presence of source areas. Soil samples will be collected from each boring and a groundwater sample will be collected if groundwater is encountered. In addition, two shallow permanent monitoring wells will be installed to evaluate conditions in the perched groundwater zone previously identified on the western side of the main truck loading rack. The soil and groundwater samples will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), Skinner List metals, iron, and manganese. Groundwater samples will also be analyzed for major anions (e.g., carbonate, bicarbonate, sulfate, fluoride and chloride).

Section 1

Introduction

The Gallup Refinery is located approximately 17 miles east of Gallup, New Mexico along the north side of Interstate Highway I-40 in McKinley County. The physical address is I-40, Exit #39 Jamestown, New Mexico 87347. The Gallup Refinery is located on 810 acres. Figure 1 presents the refinery location and the regional vicinity.

The Gallup Refinery generally processes crude oil from the Four Corners area transported to the facility by pipeline or tanker truck. Various process units are operated at the facility, including crude distillation, reforming, fluidized catalytic cracking, alkylation, sulfur recovery, merox treater, and hydrotreating. Current and past operations have produced gasoline, diesel fuels, jet fuels, kerosene, propane, butane, and residual fuel.

This investigation work plan addresses AOC 35, which includes the main truck loading rack, crude slop and ethanol unloading facility, additive tank farm loading rack, and the retail tank farm (tanks 1 – 7, 912, 913, 1001, and 1002) (Figure 2). The purposes of this investigation are to:

- determine the source of the elevated concentrations of petroleum hydrocarbon constituents (e.g., BTEX) and MTBE detected in groundwater samples collected from the MKTF wells in the area of AOC 35; and
- evaluate the groundwater quality in the shallow perched zone that has been observed in MKTF-7, -17 and -18 at the base of the surficial fill material.

The investigation activities will be conducted in accordance with Section IV.H.5 of the Post-Closure Care Permit.

Section 2 Background

This section presents background information for the area of the refinery property near AOC 35, including a review of historical waste management activities to identify the following:

- Type and characteristics of all waste and all contaminants handled in the subject areas;
- Known and possible sources of contamination;
- History of operations; and
- Prior investigations.

2.1 Main Truck Loading Rack Area

The main truck loading rack is located in the southwestern area of the active portion of the refinery property (Figure 2). The main loading racks cover an area approximately 100 feet by 120 feet and it is used to load refined petroleum products (e.g., gasoline and diesel) into tanker trucks. The loading racks appear to have been in operation in this same location since at least 1962. There is no history of waste materials being handled at the loading racks.

There have been documented releases at the loading rack that were discovered at the time of the release and addressed, including notification to the appropriate regulatory agencies. On December 4, 2007, approximately 6,800 gallons of gasoline was spilled when a truck driver erroneously opened a valve on a tanker truck (Release Notification dated Dec. 7, 2007) and on December 23, 2009, approximately 44 barrels (1,848 gallons) of diesel fuel was spilled from a leaking underground pipeline at the west end of the loading rack (Release Notification dated Dec. 29, 2009).

As part of the Interim Measures to address the Hydrocarbon Seep Area, which is located to the northwest of the main loading racks, new monitoring wells were installed near the loading racks. These wells are identified as the MKTF wells. In addition, during the field reconnaissance process to locate potential drilling locations near the main loading racks, an unidentified well was located to the west of the main loading racks and it was subsequently numbered as MKTF-45 (Figure 3). The well is measured as being 30.24 feet deep and has contained separate-phase hydrocarbon (SPH) since it was first gauged in 2014. It appears the well was installed to help address historic releases near the main loading racks; however, no documentation of this has been found in site records despite

repeated attempts to locate any information on the well. Well MKTF-36 was installed immediately down-gradient of the loading racks in November 2014 and SPH was identified while drilling the boring. Fluid level measurements for wells near AOC 35 are provided in Table 1. Boring logs for the nearby wells are provided in Appendix A. Chemical analyses of groundwater samples collected in the area of AOC 35 are summarized in Table 2. Figures 4 and 5 show the distribution of benzene and MTBE in groundwater, which appear to have a source in the vicinity of the main loading racks.

Underground piping near the main loading racks includes a sanitary sewer drain line running east to west to the north of the loading rack (Figure 6). In addition, there are oily water drain lines (process sewer) that run from the lab building to the loading rack and then the line continues to the north after picking up discharge from sumps located at the loading rack. The sumps collect small spills that may occur on the loading rack concrete apron and de minimis volumes of product that drained from loading hoses. The sump is no longer use to collect fluids from loading hoses and would only serve as an emergency drain in the case of a release during loading operations.

2.2 Crude Slop and Ethanol Unloading Facility

This facility is located approximately 80 feet northwest of the main loading racks and is used to unload recovered oil and transmix that may be reclaimed from various locations within the refinery. The area is also used to unload ethanol that is delivered to the refinery via truck. It was put into service sometime before the 1990s and is still in operation. The unloading area is approximately 15 feet by 40 feet and includes overhead pipelines and associated connections to support unloading operations. The pad drains to a sump, which is connected to the process sewer (Figure 6).

2.3 Additive Tank Farm Loading Rack

Petroleum product additives are stored in aboveground tanks at this location (Figure 2). These additive tanks are all small aboveground tanks located approximately 150 feet west of the main loading rack. The additive tanks were installed prior to 1997, but the exact date is uncertain. No wastes are managed and only products (i.e., fuel additives) are managed in this area. Methyl tert butyl ether (MTBE) is not and has not been stored in these tanks.

2.4 Retail Tank Farm

The retail tank farm is located approximately 150 feet northwest of the main loading racks and includes Tanks 1 – 7, 912, 913, 1001, and 1002 (Figure 2). Retail petroleum products (e.g.,

gasoline, diesel, and biodiesel) are stored in these tanks and MTBE was stored in Tank 6 prior to discontinuation of its use in 2006. Ethanol has been stored in Tank 6 since the use of MTBE was discontinued. The first tanks were constructed in 1963 and have had routine inspections both external and internal since construction. Details of the tanks size, materials, construction dates, etc. are provided in Table 3.

The fuels are delivered to the marketing tanks via pipelines that run primarily aboveground. Ethanol is unloaded at the adjacent ethanol unloading facility and transferred to Tanks 5 and 6 via aboveground lines. The fuels and additives (i.e., ethanol) are subsequently transferred to the main loading racks via aboveground pipelines where they are loaded into tanker trucks.

There have been documented releases at the marketing tank farm primarily from overfilling of the tanks. Two examples include:

- On December 31, 2007, approximately 32 barrels (1,344 gallons) of ethanol was spilled when a pressure gauge on Tank 5 became loose and began leaking (Release Notification dated Jan. 2, 2008); and
- On March 7, 2008, approximately 20 barrels (840 gallons) of diesel fuel was spilled during filling when the transfer pump did not switch off at the preselected level (Release Notification dated March 10, 2008).

2.5 Prior Investigations

The earliest investigation in the area is referenced in *Comprehensive Facility Investigation Work Plan* that was prepared for the NMOCD in June 1997 (Giant Refining Company, 1997). The work plan references “groundwater impact area #4” as being in the vicinity of the truck loading rack. It is stated that the source of the impact is a spill of hydrocarbon that occurred in the early 1980s. The area is further described as having residual hydrocarbons present at low levels and declining through natural biodegradation. No quantitative information could be located to substantiate the description of the conditions provided in the 1997 Work Plan.

As discussed above in Section 2.1, groundwater conditions in the vicinity of AOC 35 were recently investigated as part of the interim measures effort for the Hydrocarbon Seep Area (DiSorbo, 2016). Figure 6 shows the location of numerous monitoring wells (MKTF designation) in and around AOC 35. These wells are primarily screened across the contact of the Chinle Group (Petrified Forest

Formation) that forms an aquitard and the overlying alluvial/fluvial deposits (Quaternary Alluvium). Groundwater samples collected from the existing MKTF wells have shown the presence of petroleum hydrocarbons, including constituents such as BTEX and related constituents (e.g., MTBE) at concentrations above screening levels. These analyses are summarized in Table 2. The distribution of these constituents as shown on Figures 3 and 4 indicates a source of groundwater contamination from within AOC 35.

Section 3

Site Conditions

3.1 Surface Conditions

Site topographic features include high ground in the southeast gradually decreasing to a lowland fluvial plain to the northwest. Elevations on the refinery property range from 7,040 feet to 6,860 feet. Surface soils within most of the area of investigation are primarily Rehobeth silty clay loam. Rehobeth soil properties include a pH ranging from 8 to 9 standard units and salinity (naturally occurring and typically measuring up to approximately 8 mmhos/cm).

Regional surface water features include the refinery evaporation ponds and a number of small ponds (one cattle water pond and two small unnamed spring fed ponds). The site is located in the Puerco River Valley, north of the Zuni Uplift with overland flows directed northward to the tributaries of the Puerco River. The Puerco River continues to the west to the confluence with the Little Colorado River. The South Fork of the Puerco River is intermittent and retains flow only during and immediately following precipitation events.

3.2 Subsurface Conditions

The shallow subsurface soils consist of fluvial and alluvial deposits comprised of clay and silt with minor inter-bedded sand layers. Very low permeability bedrock (e.g., claystones and siltstones) underlie the surface soils and effectively form an aquitard. The Chinle Group, which is Upper Triassic, crops out over a large area on the southern margin of the San Juan Basin. The uppermost recognized local Formation is the Petrified Forest Formation and the Sonsela Sandstone Bed is the uppermost recognized regional aquifer. Aquifer test of the Sonsela Bed northeast of Prewitt indicated a transmissivity of greater than 100 ft²/day (Stone and others, 1983). The Sonsela Sandstone's highest point occurs southeast of the site and slopes downward to the northwest as it passes under the refinery. The Sonsela Sandstone forms a water-bearing reservoir with artesian conditions throughout the central and western portions of the refinery property.

The diverse properties and complex, irregular stratigraphy of the surface soils across the site cause a wide range of hydraulic conductivity ranging from less than 10⁻² cm/sec for gravel like sands immediately overlying the Petrified Forest Formation to 10⁻⁸ cm/sec in the clay soils located near the surface (Western, 2009). Generally, shallow groundwater at the refinery follows the upper contact of

the Petrified Forest Formation with prevailing flow from the southeast to the northwest, although localized areas may have varying flow directions (Figure 3). Fluid level measurements for wells in the area of AOC 35 are included in Table 1.

Section 4

Scope of Services

The site investigation of soil and groundwater will be conducted to identify potential sources within the area of AOC 35. Additional shallow monitoring wells will be installed to evaluate a shallow perched zone identified to the west of the main loading rack. The investigation will commence upon approval of this investigation work plan by NMED.

4.1 AOC 35 Investigation

An investigation of soil and groundwater conditions in AOC 35 is proposed to determine the source of BTEX and MTBE that has been detected in groundwater samples collected from monitoring wells in the vicinity of AOC 35. The boring locations identified on Figure 6 were selected based on field reconnaissance to identify visibly stained soils, water drains at aboveground storage tanks, and sumps and related features. In addition, borings are located along an underground sanitary sewer pipeline and underground oily water drain lines identified from site records.

All soil borings will be extended to the depth of refusal or to the top of bedrock, whichever occurs first. If saturation is encountered, then a groundwater sample will be collected.

Two new shallow monitoring wells are proposed; one adjacent to existing monitoring well MKTF-17 and the second near MKTF-18. Each well will be screened in the upper-most saturated interval, which based on the borings logs from MKTF-17 and MKTF-18 should be encountered within 8 feet and 10 feet below ground level (bgl), respectively. Borings logs for MKTF-17 and MKTF-18 are included in Appendix A.

4.2 Soil Sample Field Screening and Logging

Samples obtained from the soil borings will be screened in the field on 2.0 foot intervals for evidence of contaminants. Field screening results will be recorded on the exploratory boring logs. Field screening results will be used to aid in the possible selection of soil samples for laboratory analysis. The primary screening methods include: (1) visual examination, (2) olfactory examination, and (3) headspace vapor screening for volatile organic compounds.

Visual screening includes examination of soil samples for evidence of staining caused by petroleum-related compounds or other substances that may cause staining of natural soils such as elemental

sulfur or cyanide compounds. Headspace vapor screening targets volatile organic compounds and involves placing a soil sample in a plastic sample bag or a foil sealed container allowing space for ambient air. The container will be sealed and then shaken gently to expose the soil to the air trapped in the container. The sealed container will be allowed to rest for a minimum of 5 minutes while vapors equilibrate. Vapors present within the sample bag's headspace will then be measured by inserting the probe of the instrument in a small opening in the bag or through the foil. The maximum value and the ambient air temperature will be recorded on the field boring or test pit log for each sample.

The monitoring instruments will be calibrated each day to the manufacturer's standard for instrument operation. A photoionization detector (PID) equipped with a 10.6 or higher electron volt (eV) lamp or a combustible gas indicator may be used for VOC field screening. Field screening results may be site- and boring-specific and the results may vary with instrument type, the media screened, weather conditions, moisture content, soil type, and type of contaminant, therefore, all conditions capable of influencing the results of field screening will be recorded on the field logs.

Discrete soil samples will be retained for laboratory analyses from within the following intervals:

- 0.0-0.5 feet (at soil borings with evidence of impacts near the land surface);
- 2.0-2.5 feet or the top of native soil if identifiable (at all soil borings);
- > 2.0 feet (from the interval in each soil boring with the greatest apparent degree of contamination, based on field observations and field screening);
- From the bottom of each borehole (all soil borings);
- From the 0.5 foot interval at the top of saturation (applicable only to borings that reach saturation); and
- Any additional intervals as determined based on field screening results.

The physical characteristics of the samples (such as mineralogy, ASTM soil classification, moisture content, texture, color, presence of stains or odors, and/or field screening results), depth where each sample was obtained, method of sample collection, and other observations will be recorded in the field log by a qualified geologist or engineer. Detailed logs of each boring will be completed in the field by a qualified engineer or geologist. Additional information, such as the presence of water-bearing zones and any unusual or noticeable conditions encountered during drilling, will be recorded on the logs.

Quality Assurance/Quality Control (QA/QC) samples will be collected to monitor the validity of the soil sample collection procedures as follows:

- Field duplicates will be collected at a rate of 10 percent; and
- Equipment blanks will be collected from all sampling apparatus at a frequency of one per day.

4.2.1 Drilling Activities

Due to physical access limitations (e.g., near the tank water draws) and high traffic concerns in other locations, the soil borings will be completed using hand augers or a geo-probe using a macrocore for shallow intervals, converting to dual tube for deeper intervals. Both soil and groundwater samples can be collected using the dual tube technology. The two new permanent wells will be installed using hollow-stem augers. The drilling equipment will be properly decontaminated before drilling each boring. The NMED will be notified as early as practicable if conditions arise or are encountered that do not allow the advancement of borings to the specified depths or at planned sampling locations. Appropriate actions (e.g., installation of protective surface casing or relocation of borings to a less threatening location) will be taken to minimize any negative impacts from investigative borings. Slotted (0.01 inch) PVC well screen will be placed at the bottom of the borings at the two permanent wells and will extend for a maximum of 10 feet. A 10/20 sand filter pack will be installed to a minimum of one foot over the top of the well screen.

4.3 Groundwater Sample Collection

Groundwater samples will be collected from the new monitoring wells within 24 hours of the completion of well purging using disposal bailers. Alternatively, well sampling may also be conducted in accordance with the NMED's Position Paper *Use of Low-Flow and other Non-Traditional Sampling Techniques for RCRA Compliant Groundwater Monitoring* (October 30, 2001, as updated). Sample collection methods will be documented in the field monitoring reports. The samples will be transferred to the appropriate, clean, laboratory-prepared containers provided by the analytical laboratory. Sample handling and chain-of-custody procedures will be in accordance with the procedures presented below in Section 4.4.1.

Groundwater samples intended for metals analysis will be submitted to the laboratory as both total and dissolved metals samples. QA/QC samples will be collected to monitor the validity of the groundwater sample collection procedures as follows:

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- Field duplicate water samples will be obtained at a frequency of ten percent, with a minimum, of one duplicate sample per sampling event;
 - Equipment rinsate blanks will be obtained for chemical analysis at the rate of ten percent or a minimum of one rinsate blank per sampling day. Equipment rinsate blanks will be collected at a rate of one per sampling day if disposable sampling equipment is used. Rinsate samples will be generated by rinsing deionized water through unused or decontaminated sampling equipment. The rinsate sample will be placed in the appropriate sample container and submitted with the groundwater samples to the analytical laboratory for the appropriate analyses; and
 - Trip blanks will accompany laboratory sample bottles and shipping and storage containers intended for VOC analyses. Trip blanks will consist of a sample of analyte-free deionized water prepared by the laboratory and placed in an appropriate sample container. The trip blank will be prepared by the analytical laboratory prior to the sampling event and will be kept with the shipping containers and placed with other water samples obtained from the site each day. Trip blanks will be analyzed at a frequency of one for each shipping container of groundwater samples to be analyzed for VOCs.

4.3.1 Sample Handling

At a minimum, the following procedures will be used at all times when collecting samples during investigation, corrective action, and monitoring activities:

1. Neoprene, nitrile, or other protective gloves will be worn when collecting samples. New disposable gloves will be used to collect each sample;
2. All samples collected of each medium for chemical analysis will be transferred into clean sample containers supplied by the project analytical laboratory with the exception of soil, rock, and sediment samples obtained in Encore® samplers. Sample container volumes and preservation methods will be in accordance with the most recent standard EPA and industry accepted practices for use by accredited analytical laboratories. Sufficient sample volume will be obtained for the laboratory to complete the method-specific QC analyses on a laboratory-batch basis; and
3. Sample labels and documentation will be completed for each sample following procedures discussed below. Immediately after the samples are collected, they will be stored in a cooler with ice or other appropriate storage method until they are delivered to the analytical laboratory. Standard chain-of-custody procedures, as described below, will

be followed for all samples collected. All samples will be submitted to the laboratory soon enough to allow the laboratory to conduct the analyses within the method holding times.

Chain-of-custody and shipment procedures will include the following:

1. Chain-of-custody forms will be completed at the end of each sampling day, prior to the transfer of samples off site.
2. Individual sample containers will be packed to prevent breakage and transported in a sealed cooler with ice or other suitable coolant or other EPA or industry-wide accepted method. The drainage hole at the bottom of the cooler will be sealed and secured in case of sample container leakage. Temperature blanks will be included with each shipping container.
3. Each cooler or other container will be delivered directly to the analytical laboratory.
4. Glass bottles will be separated in the shipping container by cushioning material to prevent breakage.
5. Plastic containers will be protected from possible puncture during shipping using cushioning material.
6. The chain-of-custody form and sample request form will be shipped inside the sealed storage container to be delivered to the laboratory.
7. Chain-of-custody seals will be used to seal the sample-shipping container in conformance with EPA protocol.
8. Signed and dated chain-of-custody seals will be applied to each cooler prior to transport of samples from the site.
9. Upon receipt of the samples at the laboratory, the custody seals will be broken, the chain-of-custody form will be signed as received by the laboratory, and the conditions of the samples will be recorded on the form. The original chain-of-custody form will remain with the laboratory and copies will be returned to the relinquishing party.
10. Copies of all chain-of-custody forms generated as part of sampling activities will be maintained on-site.

4.4 Collection and Management of Investigation Derived Waste

Drill cuttings, excess sample material and decontamination fluids, and all other investigation derived waste (IDW) associated with soil borings will be contained and characterized using methods based on

the boring location, boring depth, drilling method, and type of contaminants suspected or encountered. All purged groundwater and decontamination water will be characterized prior to disposal unless it is disposed in the refinery wastewater treatment system upstream of the API Separator. An IDW management plan is included as Appendix B.

Field equipment requiring calibration will be calibrated to known standards, in accordance with the manufacturers' recommended schedules and procedures. At a minimum, calibration checks will be conducted daily, or at other intervals approved by the Department, and the instruments will be recalibrated, if necessary. Calibration measurements will be recorded in the daily field logs. If field equipment becomes inoperable, its use will be discontinued until the necessary repairs are made. In the interim, a properly calibrated replacement instrument will be used.

4.5 Documentation of Field Activities

Daily field activities, including observations and field procedures, will be recorded in a field log book. Copies of the completed forms will be maintained in a bound and sequentially numbered field file for reference during field activities. Indelible ink will be used to record all field activities. Photographic documentation of field activities will be performed, as appropriate. The daily record of field activities will include the following:

1. Site or unit designation;
2. Date;
3. Time of arrival and departure;
4. Field investigation team members including subcontractors and visitors;
5. Weather conditions;
6. Daily activities and times conducted;
7. Observations;
8. Record of samples collected with sample designations and locations specified;
9. Photographic log, as appropriate;
10. Field monitoring data, including health and safety monitoring;
11. Equipment used and calibration records, if appropriate;
12. List of additional data sheets and maps completed;
13. An inventory of the waste generated and the method of storage or disposal; and
14. Signature of personnel completing the field record.

4.6 Chemical Analyses

All samples collected for laboratory analysis will be submitted to an accredited laboratory. The laboratory will use the most recent standard EPA and industry-accepted analytical methods for target analytes as the testing methods for each medium sampled. Chemical analyses will be performed in accordance with the most recent EPA standard analytical methodologies and extraction methods.

Groundwater and soil samples will be analyzed by the following methods:

- SW-846 Method 8260 for volatile organic compounds;
- SW-846 Method 8270 for semi-volatile organic compounds; and
- SW-846 Method 8015B gasoline range (C5-C10), diesel range (>C10-C28), and motor oil range (>C28-C36) organics.

Groundwater and soil samples will also be analyzed for the following Skinner List metals and iron and manganese using the indicated analytical methods shown. The groundwater samples collected for metals analysis will be analyzed for total and dissolved concentrations. Groundwater samples will also be analyzed for major anions (e.g., carbonate, bicarbonate, sulfate, fluoride and chloride).

Inorganic Analytical Methods

Analyte	Analytical Method
Antimony	SW-846 method 6010/6020
Arsenic	SW-846 method 6010/6020
Barium	SW-846 method 6010/6020
Beryllium	SW-846 method 6010/6020
Cadmium	SW-846 method 6010/6020
Chromium	SW-846 method 6010/6020
Cobalt	SW-846 method 6010/6020
Cyanide	SW-846 method 335.4/335.2 mod
Lead	SW-846 method 6010/6020
Mercury	SW-846 method 7470/7471
Nickel	SW-846 method 6010/6020
Selenium	SW-846 method 6010/6020
Silver	SW-846 method 6010/6020
Vanadium	SW-846 method 6010/6020

Zinc	SW-846 method 6010/6020
Iron	SW-846 method 6010/6020
Manganese	SW-846 method 6010/6020

Groundwater field measurements will be obtained for pH, specific conductance, dissolved oxygen concentrations, oxidation-reduction potential, and temperature.

4.7 Data Quality Objectives

The Data Quality Objectives (DQOs) were developed to ensure that newly collected data are of sufficient quality and quantity to address the project goals, including Quality Assurance/Quality Control (QA/QC) issues (EPA, 2006). The project goals are established to determine and evaluate the presence, nature, and extent of releases of contaminants at specified SWMUs. The type of data required to meet the project goals includes chemical analyses of soil and groundwater to determine if there has been a release of contaminants.

The quantity of data is location specific and is based on the historical operations at individual locations. Method detection limits should be 20% or less of the applicable background levels, cleanup standards and screening levels.

Additional DQOs include precision, accuracy, representativeness, completeness, and comparability. Precision is a measurement of the reproducibility of measurements under a given set of circumstances and is commonly stated in terms of standard deviation or coefficient of variation (EPA, 1987). Precision is also specific to sampling activities and analytical performance. Sampling precision will be evaluated through the analyses of duplicate field samples and laboratory replicates will be utilized to assess laboratory precision.

Accuracy is a measurement in the bias of a measurement system and may include many sources of potential error, including the sampling process, field contamination, preservation, handling, sample matrix, sample preparation, and analysis techniques (EPA, 1987). An evaluation of the accuracy will be performed by reviewing the results of field/trip blanks, matrix spikes, and laboratory QC samples.

Representativeness is an expression of the degree to which the data accurately and precisely represent the true environmental conditions. Sample locations and the number of samples have been selected to ensure the data is representative of actual environmental conditions. Based on SWMU specific conditions, this may include either biased (i.e., judgmental) locations/depths or

unbiased (systematic grid samples) locations. In addition, sample collection techniques (e.g., field monitoring and decontamination of sampling equipment) will be utilized to help ensure representative results.

Completeness is defined as the percentage of measurements taken that are actually valid measurements, considering field QA and laboratory QC problems. EPA Contract Laboratory Program (CLP) data has been found to be 80-85% complete on a nationwide basis and this has been extrapolated to indicate that Level III, IV, and V analytical techniques will generate data that are approximately 80% complete (EPA, 1987). As an overall project goal, the completeness goal is 85%; however, some samples may be critical based on location or field screening results and thus a sample-by-sample evaluation will be performed to determine if the completeness goals have been obtained.

Comparability is a qualitative parameter, which expresses the confidence with which one data set can be compared to another. Industry standard sample collection techniques and routine EPA analytical methods will be utilized to help ensure data are comparable to historical and future data. Analytical results will be reported in appropriate units for comparison to historical data and cleanup levels.

Section 5

References

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Tables

Table 1 Fluid Levels

Table 2 Groundwater Analytical Summary

Table 3 Marketing Tanks Records

Table 1
Fluid Level Measurements

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
11/07/13	01/21/14	MKTF-03	03/02/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	6.42	1.17	7.59	6,924.10	6925.04	3 - 18	Chinle/Alluvium Interface
			06/07/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	6.95	1.30	8.25	6,923.44	6924.48	3 - 18	Chinle/Alluvium Interface
			09/26/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	6.35	0.80	7.15	6,924.54	6925.18	3 - 18	Chinle/Alluvium Interface
			11/28/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	7.00	0.95	7.95	6923.74	6924.50	3 - 18	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-04	03/02/17	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.42	22.15	ND	NA	8.31	6,925.26	NA	10 - 22	Chinle/Alluvium Interface
			06/07/17	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.42	22.15	ND	NA	9.28	6,924.29	NA	10 - 22	Chinle/Alluvium Interface
			09/26/17	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.42	22.15	ND	NA	8.80	6,924.77	NA	10 - 22	Chinle/Alluvium Interface
			11/29/17	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.27	22.30	ND	NA	9.30	6,924.27	NA	10 - 22	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-05	03/02/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.33	0.29	13.62	6,928.60	6928.83	4 - 14	Chinle/Alluvium Interface
			06/07/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.79	0.46	14.25	6,927.97	6928.34	4 - 14	Chinle/Alluvium Interface
			09/26/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.01	0.49	13.50	6,928.72	6929.11	4 - 14	Chinle/Alluvium Interface
			11/28/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.98	0.77	14.75	6,927.47	6928.09	4 - 14	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-06	03/15/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	15.95	0.10	16.05	6,930.76	6930.84	8 - 20	Chinle/Alluvium Interface
			06/12/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.60	0.64	17.24	6,929.57	6930.08	8 - 20	Chinle/Alluvium Interface
			09/26/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.01	0.71	16.72	6,930.09	6930.66	8 - 20	Chinle/Alluvium Interface
			11/28/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.55	1.15	17.70	6,929.11	6930.03	8 - 20	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-07	03/15/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	10.63	1.97	12.60	6,934.58	6936.16	4 - 14	Chinle/Alluvium Interface
			06/12/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	10.20	1.30	11.50	6,935.68	6936.72	4 - 14	Chinle/Alluvium Interface
			09/26/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	9.80	1.30	11.10	6,936.08	6937.12	4 - 14	Chinle/Alluvium Interface
			11/28/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	10.40	1.40	11.80	6,935.38	6936.50	4 - 14	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-08	03/15/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	11.99	0.61	12.60	6,934.49	6934.98	8 - 18	Chinle/Alluvium Interface
			06/12/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	11.98	0.42	12.40	6,934.69	6935.03	8 - 18	Chinle/Alluvium Interface
			09/26/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	12.15	0.45	12.60	6,934.49	6934.85	8 - 18	Chinle/Alluvium Interface
			11/28/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	12.68	0.52	13.20	6,933.89	6934.31	8 - 18	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-09	03/15/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.80	22.70	ND	NA	12.64	6,933.86	NA	7 - 19	Chinle/Alluvium Interface
			06/12/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.80	22.70	ND	NA	12.64	6,933.86	NA	7 - 19	Chinle/Alluvium Interface
			09/28/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.80	22.70	ND	NA	12.69	6,933.81	NA	7 - 19	Chinle/Alluvium Interface
			11/29/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.75	22.75	ND	NA	13.15	6,933.35	NA	7 - 19	Chinle/Alluvium Interface
10/31/13	01/21/14	MKTF-10	03/02/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.47	6,929.69	NA	7 - 17	Chinle/Alluvium Interface
			06/07/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.02	6,930.14	NA	7 - 17	Chinle/Alluvium Interface
			09/27/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	6.78	6,930.38	NA	7 - 17	Chinle/Alluvium Interface
			11/29/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.00	6,930.16	NA	7 - 17	Chinle/Alluvium Interface

Table 1
Fluid Level Measurements

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
10/31/13	01/21/14	MKTF-11	03/02/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	6.96	6,924.38	NA	8 - 18	Chinle/Alluvium Interface
			06/07/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	7.39	6,923.95	NA	8 - 18	Chinle/Alluvium Interface
			09/26/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	6.70	6,924.64	NA	8 - 18	Chinle/Alluvium Interface
			11/29/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	8.00	6,923.34	NA	8 - 18	Chinle/Alluvium Interface
11/07/13	01/21/14	MKTF-12	03/15/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	17.75	0.06	17.81	6,924.30	6924.35	12 - 22	Chinle/Alluvium Interface
			06/07/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	18.60	0.19	18.79	6,923.32	6923.47	12 - 22	Chinle/Alluvium Interface
			10/03/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	17.30	0.13	17.43	6,924.68	6924.78	12 - 22	Chinle/Alluvium Interface
			11/27/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	18.43	0.13	18.56	6,923.55	6923.65	12 - 22	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-13	03/15/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	ND	NA	12.60	6,922.58	NA	8 - 18	Chinle/Alluvium Interface
			06/07/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	13.35	0.06	13.41	6,921.77	6921.82	8 - 18	Chinle/Alluvium Interface
			10/03/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	11.91	0.03	11.94	6,923.24	6923.26	8 - 18	Chinle/Alluvium Interface
			11/27/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	13.14	0.01	13.15	6,922.03	6922.04	8 - 18	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-14	03/08/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	5.77	0.98	6.75	6,921.27	6922.05	4 - 14	Chinle/Alluvium Interface
			06/07/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	6.68	0.84	7.52	6,920.50	6921.17	4 - 14	Chinle/Alluvium Interface
			10/03/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	5.70	0.41	6.11	6,921.91	6922.24	4 - 14	Chinle/Alluvium Interface
			11/27/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	6.56	0.37	6.93	6,921.09	6921.39	4 - 14	Chinle/Alluvium Interface
10/29/13	01/21/14	MKTF-15	03/02/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	12.15	6,931.33	NA	9 - 19	Chinle/Alluvium Interface
			06/07/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	11.93	6,931.55	NA	9 - 19	Chinle/Alluvium Interface
			09/26/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	12.00	0.10	12.10	6,931.38	6931.46	9 - 19	Chinle/Alluvium Interface
			11/29/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	12.13	6,931.35	NA	9 - 19	Chinle/Alluvium Interface
11/07/13	01/21/14	MKTF-16	03/14/17	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.48	14.10	ND	NA	7.45	6,943.13	NA	4 - 14	Chinle/Alluvium Interface
			06/07/17	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.48	14.10	ND	NA	7.66	6,942.92	NA	4 - 14	Chinle/Alluvium Interface
			09/26/17	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.48	14.10	ND	NA	8.00	6,942.58	NA	4 - 14	Chinle/Alluvium Interface
			11/28/17	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.48	14.10	ND	NA	8.22	6,942.36	NA	4 - 14	Chinle/Alluvium Interface
11/14/13	01/21/14	MKTF-17	03/08/17	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.65	24.11	ND	NA	8.20	6,937.56	NA	14 - 24	Chinle/Alluvium Interface
			06/14/17	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.65	24.11	ND	NA	9.98	6,935.78	NA	14 - 24	Chinle/Alluvium Interface
			09/26/17	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.65	24.11	ND	NA	9.33	6,936.43	NA	14 - 24	Chinle/Alluvium Interface
			11/30/17	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.11	24.65	ND	NA	13.68	6,932.08	NA	14 - 24	Chinle/Alluvium Interface
11/15/13	01/21/14	MKTF-18	03/01/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	7.81	6,942.84	NA	17 - 27	Chinle/Alluvium Interface
			06/14/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	6.30	6,944.35	NA	17 - 27	Chinle/Alluvium Interface
			09/27/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	6.35	0.02	6.37	6,944.28	6944.30	17 - 27	Chinle/Alluvium Interface
			11/30/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	6.29	0.01	6.30	6,944.35	6944.36	17 - 27	Chinle/Alluvium Interface
11/05/13	04/30/14	MKTF-19	03/08/17	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,927.20	17.47	ND	NA	9.82	6,934.85	NA	10 - 20	Chinle/Alluvium Interface
			06/14/17	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,927.20	17.47	ND	NA	10.58	6,934.09	NA	10 - 20	Chinle/Alluvium Interface
			09/26/17	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,927.20	17.47	ND	NA	11.00	6,933.67	NA	10 - 20	Chinle/Alluvium Interface
			11/30/17	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,926.47	18.20	ND	NA	11.70	6,932.97	NA	10 - 20	Chinle/Alluvium Interface
02/10/14	04/30/14	MKTF-20	03/14/17	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,941.89	9.89	ND	NA	5.70	6,946.08	NA	2 - 10	Chinle/Alluvium Interface
			06/12/17	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,941.89	9.89	ND	NA	5.57	6,946.21	NA	2 - 10	Chinle/Alluvium Interface
			09/26/17	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,941.89	9.89	ND	NA	6.23	6,945.55	NA	2 - 10	Chinle/Alluvium Interface
			11/28/17	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,942.20	9.58	ND	NA	6.53	6,945.25	NA	2 - 10	Chinle/Alluvium Interface

Table 1
Fluid Level Measurements

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
02/10/14	04/30/14	MKTF-21	03/14/17	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,942.68	9.89	ND	NA	5.50	6,947.07	NA	2 - 10	Chinle/Alluvium Interface
			06/21/17	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,942.68	9.89	ND	NA	5.09	6,947.48	NA	2 - 10	Chinle/Alluvium Interface
			09/26/17	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,942.68	9.89	ND	NA	5.69	6,946.88	NA	2 - 10	Chinle/Alluvium Interface
			11/28/17	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,943.76	8.81	ND	NA	6.25	6,946.32	NA	2 - 10	Chinle/Alluvium Interface
03/31/14	04/30/14	MKTF-34	03/01/17	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.67	27.68	ND	NA	16.50	6,928.85	NA	9 - 24	Chinle/Alluvium Interface
			06/14/17	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.67	27.68	ND	NA	17.63	6,927.72	NA	9 - 24	Chinle/Alluvium Interface
			09/26/17	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.67	27.68	ND	NA	17.62	6,927.73	NA	9 - 24	Chinle/Alluvium Interface
			11/30/17	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.65	27.70	ND	NA	18.03	6,927.32	NA	9 - 24	Chinle/Alluvium Interface
11/19/14	12/16/14	MKTF-35	03/01/17	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.20	16.45	ND	NA	6.18	6,945.47	NA	6 - 16	Chinle/Alluvium Interface
			06/14/17	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.20	16.45	ND	NA	7.12	6,944.53	NA	6 - 16	Chinle/Alluvium Interface
			09/27/17	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.20	16.45	ND	NA	7.70	6,943.95	NA	6 - 16	Chinle/Alluvium Interface
			11/30/17	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.20	16.45	ND	NA	8.15	6,943.50	NA	6 - 16	Chinle/Alluvium Interface
11/19/14	12/16/14	MKTF-36	03/01/17	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.67	15.45	ND	NA	5.56	6,944.56	NA	5 15	Chinle/Alluvium Interface
			06/14/17	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.67	15.45	ND	NA	5.40	6,944.72	NA	5 15	Chinle/Alluvium Interface
			09/27/17	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.67	15.45	ND	NA	5.80	6,944.32	NA	5 15	Chinle/Alluvium Interface
			11/30/17	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.67	15.45	ND	NA	6.45	6,943.67	NA	5 15	Chinle/Alluvium Interface
11/18/14	12/16/14	MKTF-37	03/01/17	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.27	24.60	ND	NA	6.90	6,951.97	NA	4 - 24	Chinle/Alluvium Interface
			06/14/17	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.27	24.60	7.20	0.04	7.24	6,951.63	6951.66	4 - 24	Chinle/Alluvium Interface
			09/27/17	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.27	24.60	7.83	0.06	7.89	6,950.98	6951.03	4 - 24	Chinle/Alluvium Interface
			11/30/17	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.27	24.60	8.39	0.02	8.41	6,950.46	6950.48	4 - 24	Chinle/Alluvium Interface
11/20/14	12/16/14	MKTF-38	03/14/17	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.60	20.29	ND	NA	6.41	6,948.48	NA	5 - 20	Chinle/Alluvium Interface
			06/21/17	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.60	20.29	ND	NA	6.40	6,948.49	NA	5 - 20	Chinle/Alluvium Interface
			09/28/17	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.60	20.29	ND	NA	6.32	6,948.57	NA	5 - 20	Chinle/Alluvium Interface
			11/30/17	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.60	20.29	ND	NA	7.83	6,947.06	NA	5 - 20	Chinle/Alluvium Interface
11/14/14	12/16/14	MKTF-39	03/14/17	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.55	15.20	ND	NA	6.44	6,947.31	NA	5 - 15	Chinle/Alluvium Interface
			06/08/17	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.55	15.20	ND	NA	6.25	6,947.50	NA	5 - 15	Chinle/Alluvium Interface
			09/28/17	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.55	15.20	ND	NA	7.32	6,946.43	NA	5 - 15	Chinle/Alluvium Interface
			11/28/17	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.57	15.18	ND	NA	7.55	6,946.20	NA	5 - 15	Chinle/Alluvium Interface
Pre-existing	12/16/14	MKTF-45	03/01/17	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.35	30.24	10.32	0.31	10.63	6,938.96	6939.21	Unknown	Chinle/Alluvium Interface
			06/14/17	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.35	30.24	11.50	0.50	12.00	6,937.59	6937.99	Unknown	Chinle/Alluvium Interface
			10/03/17	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.35	30.24	11.48	0.53	12.01	6,937.58	6938.00	Unknown	Chinle/Alluvium Interface
			11/30/17	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.35	30.24	12.76	0.47	13.23	6,936.36	6936.74	Unknown	Chinle/Alluvium Interface

DEFINITIONS:

DTB - Depth to Bottom

DTW - Depth to Water

ND - Not Dectected

NA - Not Applicable

SPH - Separate Phase Hydrocarbons

Negative number in Stick up Length column indicates well is flush mount and located at or below ground level

Depth to Water Column - if a measurement of 0.00 is indicated - means water level is at top of casing - Full.

Dry indicates no water was detected in the well.

NOTES:

1) Wells surveyed by a licensed professional surveyor-Hammon Enterprises, Inc. (HEI)

Table 1
Fluid Level Measurements

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
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2) "0" indicates no SPH level.

3) *Depth to SPH - Depth to Water Measurement = SPH Column Thickness.*

4) *Corrected Water Table Elevaton applies only if SPH thickness column measurement exists. (0.8 X SPH thickness + Groundwater Elevation)*

5) 10/3/17 - Samples collected after end of third quarter due to rain storms and monitor well accessibility

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (March 2017)			0.00455	1.09	0.015	0.193	0.143
EPA RSL for Tap Water (MAY 2016)			4.6E-04	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-4	11/2/2016	8260B	0.9	0.018	0.64	0.85	2.1
	9/11/2016	8260B	0.9	0.015	0.67	0.76	2.4
	6/9/2016	8260B	0.6	0.015	0.58	0.72	1.8
	2/29/2016	8260B	0.8	0.017	0.73	0.8	2.2
	11/3/2015	8260B	0.4	0.015	0.7	0.78	1.5
	8/18/2015	8260B	0.3	0.011	0.43	0.55	1.4
	6/4/2015	8260B	0.31	0.013	0.45	0.56	1.3
	3/16/2015	8260B	0.22	<0.01	0.26	0.34	1.2
	11/13/2014	8260B	0.18	<0.01	0.28	0.26	1.4
	9/15/2014	8260B	0.15	<0.005	0.14	0.14	1.4
	6/4/2014	8260B	0.67	0.019	0.57	0.68	1.8
	4/11/2014	8260B	1.0	0.025	0.8	1.0	2.4
MKTf-9	11/2/2016	8260B	1.6	0.026	0.21	0.052	0.5
	9/11/2016	8260B	2	0.03	0.22	0.059	0.62
	6/9/2016	8260B	1.4	0.029	0.21	0.056	0.53
	2/29/2016	8260B	1.6	0.029	0.24	0.064	0.69
	11/3/2015	8260B	1.5	0.036	0.23	0.07	0.63
	8/18/2015	8260B	1.2	0.035	0.2	0.063	0.6
	6/4/2015	8260B	0.89	0.025	0.15	0.039	0.43
	3/16/2015	8260B	0.49	0.013	0.08	0.018	0.5
	11/14/2014	8260B	0.81	0.033	0.15	0.11	0.77
	9/18/2014	8260B	0.75	0.027	0.096	0.043	0.76
	6/5/2014	8260B	1.3	0.052	0.2	0.098	1.2
	4/14/2014	8260B	1.1	0.038	0.14	0.075	1.2
MKTf-10	11/2/2016	8260B	17	22	1.7	8	<0.1
	9/11/2016	8260b	16	20	1.6	7.3	<0.1
	6/9/2016	8260B	15	22	1.7	8.9	0.018
	2/29/2016	8260B	11	23	1.7	7.7	<0.1
	11/3/2015	8260B	12	22	1.6	6.8	<0.05
	8/18/2015	8260B	9.2	19	1.5	6.5	<0.5
	6/4/2015	8260B	10	20	1.5	6.5	<0.05
	3/16/2015	8260B	11	21	1.6	6.8	<0.05
	11/14/2014	8260B	11	20	1.7	7.6	<0.02
	9/18/2014	8260B	11	15	0.93	4.0	<0.05
	6/6/2014	8260B	12	14	0.74	3.4	0.019
	4/11/2014	8260B	14	19	1.5	6.9	<0.05
MKTf-11	11/2/2016	8260B	3.9	4.5	0.52	1.6	0.071
	9/11/2016	8260B	4.5	4.8	0.53	1.6	0.081
	6/9/2016	8260B	4.5	5.8	0.57	1.8	0.078
	2/29/2016	8260B	5.1	6.4	0.67	2.2	0.12
	11/3/2015	8260B	11	13	0.96	3.9	0.056
	8/18/2015	8260B	3.7	4.2	0.5	1.5	0.082
	6/4/2015	8260B	12	13	1.2	4.9	0.041
	3/16/2015	8260B	10	11	0.93	3.7	0.048
	11/13/2014	8260B	9.5	8.2	0.77	2.3	0.08
	9/15/2014	8260B	9.5	7.1	0.72	2.0	0.083
	6/5/2014	8260B	12	7.8	0.75	2.2	0.096
	4/11/2014	8260B	15	7.6	0.93	2.2	0.15

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
Well ID	DATE SAMPLED	METHOD	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (March 2017)			0.00455	1.09	0.015	0.193	0.143
EPA RSL for Tap Water (MAY 2016)			4.6E-04	1.1	0.0015	0.19	0.014
MKTf-15	11/2/2016	8260B	20	16	2.1	7.6	0.099
	9/11/2016	8260B	24	16	2.0	7.3	0.096
	6/4/15 , 3/16/15	8260B	SPH DETECTED				
	9/17/2014	8260B	11	7.0	1.4	4.3	0.38
	6/5/2014	8260B	12	8.8	1.3	3.7	0.27
	4/10/2014	8260B	16	2.4	1.2	6.1	0.27
	11/1/2013	8021B	12	12	1.5	4.8	NA
MKTf-16	11/3/2016	8260B	19	0.22	0.88	3.4	0.97
	9/12/2016	8260B	23	0.24	1.3	4.3	1.7
	6/9/2016	8260B	16	0.34	1.1	3.6	1.4
	2/29/2016	8260B	19	0.28	1.0	3.9	1.4
	11/3/2015	8260B	28	0.62	1.7	6.6	1.7
	8/23/2015	8260B	24	0.64	1.4	5.6	2.1
	6/8/2015	8260B	23	1.3	1.4	5.3	2.0
	3/16/2015	8260B	19	0.45	1.4	5.4	1.6
	11/18/2014	8260B	20	1.2	1.3	5.8	1.4
	9/17/2014	8260B	17	1.4	1.2	5.3	2.1
	6/5/2014	8260B	18	3.7	1.7	8.1	2.0
	4/10/2014	8260B	11	7.5	1.1	3.6	0.27
	11/19/2013	8021B	9.9	8.2	1.9	9.8	NA
MKTf-17	11/8/2016	8260B	0.76	0.0019	0.39	0.0043	0.36
	9/13/2016	8260B	1.3	0.0021	0.55	<0.015	0.38
	6/10/2016	8260B	1.9	0.006	0.52	0.24	0.49
	2/26/2016	8260B	0.26	<0.005	0.018	0.023	0.64
	11/3/2015	8260B	0.029	<0.002	0.31	<0.003	0.77
	8/18/2015	8260B	0.036	0.0011	0.3	0.0018	0.64
	6/8/2015	8260B	0.011	<0.001	0.018	<0.0015	0.5
	3/12/2015	8260B	0.0028	<0.001	0.0059	<0.0015	0.59
	11/18/2014	8260B	0.14	<0.001	0.078	<0.0015	0.57
	9/18/2014	8260B	0.55	<0.01	0.24	<0.015	0.69
	6/6/2014	8260B	2.6	<0.01	0.48	0.068	1.1
	4/9/2014	8260B	3.5	<0.01	0.58	0.27	1.3
	11/13/2013	8021B	1.8	1.6	0.71	2.7	NA
MKTf-18	11/8/2016	8260B	0.016	0.0003	0.014	0.0008	0.081
	9/13/2016	8260B	0.016	0.0004	0.015	0.0013	0.074
	6/10/2016	8260B	0.016	0.0005	0.021	0.0025	0.092
	2/26/2016	8260B	0.017	0.0006	0.034	0.0056	0.071
	11/3/2015	8260B	0.019	<0.002	0.041	0.017	0.083
	8/18/2015	8260B	0.032	0.0016	0.054	0.019	0.1
	6/8/2015	8260B	0.05	0.0033	0.049	0.031	0.082
	3/17/2015	8260B	0.058	<0.005	0.017	0.029	0.091
	11/18/2014	8260B	0.096	0.0076	0.09	0.047	0.1
	9/18/2014	8260B	0.12	0.013	0.069	0.042	0.12
	6/6/2014	8260B	0.29	0.014	0.036	0.055	0.14
	4/14/2014	8260B	0.29	0.015	0.058	0.044	0.15
	11/19/2013	8021B	0.33	0.37	0.13	0.47	NA

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (March 2017)			0.00455	1.09	0.015	0.193	0.143
EPA RSL for Tap Water (MAY 2016)			4.6E-04	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-19	11/8/2016	8260B	1.3	0.0068	0.7	1.0	10
	9/13/2016	8260B	1.4	0.0075	0.69	0.92	8.9
	6/10/2016	8260B	1.5	0.0064	0.69	0.66	7.9
	2/25/2016	8260B	1.5	0.005	0.79	0.67	8.6
	11/3/2015	8260B	2.8	0.022	0.76	0.93	8.4
	8/18/2015	8260B	2.4	0.015	0.74	0.45	8.8
	6/8/2015	8260B	1.8	0.013	0.59	0.31	9.1
	3/12/2015	8260B	1.4	<0.01	0.43	0.15	9.7
	11/18/2014	8260B	2.3	<0.05	0.74	0.36	9.7
	9/24/2014	8260B	1.8	<0.05	0.73	0.76	11
	4/9/2014	8260B	1.4	<0.05	0.68	0.61	9.7
	11/5/2013	8021B	0.64	0.14	0.47	1.1	NA
MKTf-20 ¹	11/3/2016	8260B	13.0	0.4	1.1	9.2	0.19
	9/12/2016	8260B	18.0	0.48	1.3	8.8	0.16
	6/9/2016	8260B	11.0	0.39	0.85	7.9	0.16
	3/1/2016	8260B	13.0	0.47	1.1	9.2	0.13
	3/16/2015	8260B	7.0	2.3	0.089	9.6	<0.05
	11/18/2014	8260B	4.4	1.3	0.48	10	0.083
	4/11/2014	8260B	25	17	2.8	14	0.38
MKTf-21 ¹	11/3/2016	8260B	7.6	0.068	0.4	2.3	0.77
	9/12/2016	8260B	9.3	0.059	0.48	2.0	0.68
	6/9/2016	8260B	7.5	0.17	0.25	1.3	0.55
	3/1/2016	8260B	4.6	0.34	0.15	1.3	0.48
	6/10/2015	8260B	6.2	0.48	0.18	0.81	0.82
	3/16/2015	8260B	3.7	0.26	0.013	0.27	0.63
	4/11/2014	8260B	7.2	13	2.1	11	0.58
MKTf-34	11/8/2016	8260B	0.0001	<0.001	0.0002	<0.0015	0.001
	9/13/2016	8260B	<0.001	<0.001	<0.001	<0.0015	0.000
	6/10/2016	8260B	0.0005	<0.001	0.0003	<0.0015	0.001
	2/25/2016	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/3/2015	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/18/2015	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/8/2015	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/12/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/17/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/24/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
MKTf-35	4/9/2014	8260B	<0.002	<0.002	<0.002	<0.003	<0.002
	11/3/2016	8260B	0.065	0.0003	0.0550	0.0100	0.01
	9/13/2016	8260B	0.37	0.0005	0.0250	0.0110	0.012
	6/10/2016	8260B	0.067	0.0003	0.0120	0.0055	0.019
	2/26/2016	8260B	0.046	<0.005	0.0340	0.0045	0.02
	11/3/2015	8260B	0.19	<0.001	0.0390	0.0023	0.048
	8/18/2015	8260B	0.97	<0.005	0.1600	<0.0075	0.061
	6/4/2015	8260B	0.79	0.0023	0.1900	0.0021	0.027
	3/17/2015	8260B	0.47	0.0052	0.3200	0.1700	0.033
MKTf-36	11/21/2014	8260B	0.039	<0.001	0.052	0.073	0.066
	11/8/2016	8260B	8.4	0.021	1.3	0.13	6.0
	9/13/2016	8260B	SPH DETECTED				
	8/18/2015	8260B	9.0	0.033	1.6	0.064	8.0
	6/4/2015	8260B	8.1	0.034	1.6	0.14	8.4
	3/17/2015	8260B	8.3	0.023	1.4	0.078	8.3
	11/21/2014	8260B	8.4	0.032	1.5	0.56	7.2

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (March 2017)			0.00455	1.09	0.015	0.193	0.143
EPA RSL for Tap Water (MAY 2016)			4.6E-04	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-37	11/3/2016	8260B	0.96	0.012	0.014	0.84	0.03
	8/18/2015	8260B	0.76	0.14	0.024	1.6	0.05
	6/4/2015	8260B	1.2	0.058	0.017	0.93	0.054
	3/17/2015	8260B	0.82	0.27	0.029	0.49	0.057
	11/21/2014	8260B	0.14	0.2	0.009	1.3	0.027
MKTf-38	11/1/2016	8260B	0.0004	<0.001	<0.001	<0.0015	0.0010
	9/13/2016	8260B	0.0009	<0.001	<0.001	<0.0015	0.0006
	6/8/2016	8260B	0.0012	<0.001	<0.001	<0.0015	0.0052
	2/29/2016	8260B	0.0003	<0.001	<0.001	<0.0015	0.0006
	11/9/2015	8260B	0.0013	<0.001	<0.001	<0.0015	0.0043
	8/24/2015	8260B	0.0017	<0.001	<0.001	<0.0015	0.0073
	6/10/2015	8260B	0.0054	<0.001	<0.001	<0.0015	0.0076
	3/16/2015	8260B	0.0092	0.0180	<0.001	<0.0015	0.0060
	11/21/2014	8260B	0.0028	<0.001	0.0029	0.0031	0.0074
MKTf-39	11/1/2016	8260B	0.013	<0.005	0.059	<0.0075	<0.005
	9/13/2016	8260B	0.016	<0.005	0.06	<0.0075	<0.005
	6/8/2016	8260B	0.016	<0.001	0.061	7.E-03	4.E-04
	3/3/2016	8260B	0.019	<0.001	0.064	6.9E-04	<0.001
	11/9/2015	8260B	0.021	<0.001	0.064	<0.0015	<0.001
	8/23/2015	8260B	0.023	<0.001	0.06	1.6E-03	<0.001
	6/10/2015	8260B	0.025	<0.002	0.064	<0.003	<0.002
	3/16/2015	8260B	0.016	<0.002	0.039	<0.003	<0.002
	11/18/2014	8260B	0.02	<0.005	0.06	<0.0075	<0.005

DEFINITIONS

NE = Not established

NA = Not analyzed

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250.0	NE	10	600.0
40 CFR 141.62 MCL			NE	NE	NE	4.0	NE	1.0	10	NE
NMED Tap Water (March 2017)			0.0398	0.0398	0.0398	1.18	NE	1.97	31.6	NE
EPA RSL for Tap Water (MAY 2016)			NE	NE	NE	0.8	NE	2	32	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-4	11/2/2016	8015D/300.0	4.1	9.8	<5.0	1	180	<0.5	<0.5	6.1
	9/11/2016	8015D/300.0	5.3	10	<5.0	0.74	220	<1.0	<1.0	4.1
	6/9/2016	8015D/300.0	3.9	9	<5.0	0.79	250	<1.0	<1.0	7.0
	2/29/2016	8015D/300.0	3.6	9.2	<5.0	0.97	250	<1.0	<1.0	3.2
	11/3/2015	8015D/300.0	3.0	8.6	<5.0	0.96	300	<1.0	<1.0	3.0
	8/18/2015	8015D	3.7	6.8	<5.0	0.86	300	<0.1	<0.1	4.2
	6/4/2015	8015D	2.3	6.2	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	1.9	4.8	<5.0	NA	NA	NA	NA	NA
	11/13/2014	8015D/300.0	2.0	4.2	<5.0	<1.0	250	<1.0	<1.0	26
	9/15/2014	8015D	1.5	3.4	<5.0	NA	NA	NA	NA	NA
	6/4/2014	300.0/8015D	2.9	8.2	<5.0	0.7	0.19	<1.0	<1.0	6.8
	4/11/2014	8015D	4.5	9.4	<5.0	NA	NA	NA	NA	NA
MKTf-9	11/2/2016	300.0/8015D	1.6	7.8	<5.0	0.46	150	<0.5	<0.5	71
	9/11/2016	8015D/300.0	2.3	6.7	<5.0	0.26	160	<1.0	<1.0	57
	6/9/2016	300.0/8015D	1.7	7.8	<5.0	0.35	170	<1.0	<1.0	81
	2/29/2016	300.0/8015D	2.5	7.4	<5.0	0.47	170	<1.0	<1.0	70
	11/3/2015	300.0/8015D	5.3	9.8	<5.0	0.46	170	<0.1	<0.1	110
	8/18/2015	8015D/300.0	4.7	7.1	<5.0	0.43	170	<0.1	<0.1	130
	6/4/2015	8015D	1.8	4.1	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	<1.0	3.3	<5.0	NA	NA	NA	NA	NA
	11/14/2014	8015D/300.0	2.1	4.4	<5.0	<1.0	180	<1.0	<1.0	140
	9/18/2014	8015D	1.4	5.6	<5.0	NA	NA	NA	NA	NA
	6/5/2014	8015D/300.0	2.7	6.2	<5.0	0.43	180	<1.0	<1.0	78
	4/14/2014	8015D	3.6	5.7	<5.0	NA	NA	NA	NA	NA
MKTf-10	11/2/2016	300.0/8015D	3.8	100	<5.0	<0.05	230	<0.5	<0.5	<2.5
	9/11/2016	8015D/300.0	6	110	<5.0	<2.0	240	<1.0	<1.0	<2.5
	6/9/2016	300.0/8015D	8	110	<5.0	<2.0	260	<1.0	<1.0	0.4
	2/29/2016	300.0/8015D	14	110	<5.0	<2.0	280	<1.0	<1.0	<2.5
	11/3/2015	300.0/8015D	8	100	<5.0	<2.0	380	<0.5	<0.5	<2.5
	8/18/2015	8015D/300.0	55	130	<5.0	<5.0	390	<0.5	<0.5	<2.5
	6/4/2015	8015D	23	79	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	32	80	<5.0	NA	NA	NA	NA	NA
	11/14/2014	8015D/300.0	74	84	<5.0	270	260	<2.0	<2.0	<5.0
	9/18/2014	8015D	7.7	88	<5.0	NA	NA	NA	NA	NA
	6/6/2014 ¹	300.0/8015D	5.5	64	<5.0	NA	NA	NA	NA	NA
	4/11/2014	8015D	5.9	88	<5.0	NA	NA	NA	NA	NA
MKTf-11	11/2/2016	300.0/8015D	1.6	27	<5.0	<0.5	900	<0.5	<0.5	2.2
	9/11/2016	8015D/300.0	1.7	29	<5.0	<2.0	880	<1.0	<1.0	2.2
	6/9/2016	300.0/8015D	1.4	39	<5.0	<2.0	1000	<1.0	<1.0	2.2
	2/29/2016	300.0/8015D	1.5	42	<5.0	<0.5	1600	<1.0	<1.0	0.58
	11/3/2015	300.0/8015D	2.9	71	<5.0	<2.0	740	<0.5	<0.5	<2.5
	8/18/2015	8015D/300.0	1.6	36	<5.0	<2.0	1200	<2.0	<0.1	1.2

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250.0	NE	10	600.0
40 CFR 141.62 MCL			NE	NE	NE	4.0	NE	1.0	10	NE
NMED Tap Water (March 2017)			0.0398	0.0398	0.0398	1.18	NE	1.97	31.6	NE
EPA RSL for Tap Water (MAY 2016)			NE	NE	NE	0.8	NE	2	32	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-11	6/4/2015	8015D	2.8	71	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	2.6	55	<5.0	NA	NA	NA	NA	NA
	11/13/2014	8015D/300.0	1.8	35	<5.0	6.5	780	<1.0	<1.0	<5.0
	9/15/2014	8015D	1.8	57	<5.0	NA	NA	NA	NA	NA
	6/5/2014	8015D/300.0	2.6	48	<5.0	7.0	480	<1.0	<1.0	11
	4/11/2014	300.0/8015D	2.7	53	<5.0	NA	NA	NA	NA	NA
MKTf-15	11/2/2016	8015D/300.0	6.2	110	<5.0	<0.05	2800	<2.0	<0.5	<2.5
	9/11/2016	8015D/300.0	17		<5.0	<2.0	3100	<4.0	<4.0	<2.5
	9/17/2014	8015D	17	88	<5.0	NA	NA	NA	NA	NA
	6/5/2014	8015D/300.0	10	57	<5.0	<2.0	5200	<4.0	<4.0	1.2
	4/10/2014	8015D	4.1	71	<5.0	NA	NA	NA	NA	NA
	11/1/2013	8015D	2.4	65	<5.0	NA	NA	NA	NA	NA
MKTf-16	11/3/2016	300.0/8015D	3.3	70	<5.0	1.2	380	<0.5	<0.5	<2.5
	9/12/2016	300.0/8015D	3.5	62	<5.0	1.3	390	<1.0	<1.0	0.36
	6/9/2016	300.0/8015D	3	69	<5.0	NA	NA	NA	NA	NA
	2/29/2016	300.0/8015D	2.6	73	<5.0	1	710	<1.0	<1.0	0.068
	11/3/2015	300.0/8015D	3.1	91	<5.0	0.88	1000	<1.0	<1.0	<2.5
	8/23/2015	8015D/300.0	3.7	83	<5.0	0.66	1700	<1.0	<1.0	<2.5
	6/8/2015	8015D	4.3	69	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	2.9	61	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D/300.0	2.7	53	<5.0	1.5	700	<0.5	<0.5	<2.5
	9/17/2014	8015D	4.6	66	<5.0	NA	NA	NA	NA	NA
	6/5/2014	8015D/300.0	5.7	71	<5.0	1.1	540	<1.0	<1.0	<2.5
	4/10/2014	8015D	3.5	67	<5.0	NA	NA	NA	NA	NA
	11/19/2013	8015D	4.2	68	<5.0	NA	NA	NA	NA	NA
MKTf-17	11/8/2016	300.0/8015D	1.3	4.5	<5.0	0.77	64	<1.0	<1.0	45
	9/13/2016	300.0/8015D	1.6	7.5	<5.0	0.83	70	0.58	0.58	45
	6/10/2016	300.0/8015d	2.1	9.2	<5.0	NA	NA	NA	NA	NA
	2/26/2016	300.0/8015D	<1.0	1.6	<5.0	0.54	76	<1.0	<1.0	180
	11/3/2015	300.0/8015D	1.5	2.5	<5.0	0.61	78	<0.1	<0.1	120
	8/18/2015	8015D/300.0	1.1	1.7	<0.005	0.5	74	<0.1	<0.01	160
	6/8/2015	8015D	1.3	0.77	<5.0	NA	NA	NA	NA	NA
	3/12/2015	8015D	<1.0	0.8	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D/300.0	1.4	1.2	<5.0	0.66	84	<0.1	<0.1	200
	9/18/2014	8015D	1.5	3.3	<5.0	NA	NA	NA	NA	NA
	6/6/2014: 6/16/14	8015D/300.0	4.2	8.3	<5.0	0.61	98	<0.1	<0.1	60
	4/9/2014	8015D	2.6	8.6	<5.0	NA	NA	NA	NA	NA
	11/19/2013	8015D	5.8	17	<5.0	NA	NA	NA	NA	NA
MKTf-18	11/8/2016	300.0/8015D	1.7	0.6	<5.0	0.62	160	<1.0	<1.0	0.23
	9/13/2016	300.0/8015D	2.2	0.56	<5.0	0.67	170	<1.0	<1.0	0.34
	6/10/2016	8015D/300.0	1.9	0.71	<5.0	0.63	180	<1.0	<1.0	0.21
	2/26/2016	300.0/8015D	0.3	0.79	<5.0	0.64	160	<1.0	<1.0	0.26
	11/3/2015	300.0/8015D	2.5	1.3	<5.0	0.61	160	<0.1	<0.1	<0.5
	8/18/2015	8015D/300.0	34	1.3	<5.0	0.55	170	<0.1	<0.1	<0.5
	6/8/2015	8015D	3.3	1.4	<5.0	NA	NA	NA	NA	NA
	3/17/2015	8015D	5.4	1.8	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D/300.0	2.3	1.4	<5.0	0.68	160	<0.5	<0.5	<2.5
	9/18/2014	8015D	3.1	1.4	<5.0	NA	NA	NA	NA	NA
	6/6/2014	8015D/300.0	7.8	2.2	<5.0	0.65	170	<1.0	<1.0	0.95
	4/14/2014	8015D	4.4	2.2	<5.0	NA	NA	NA	NA	NA
	11/19/2013	8015D	11	4	<5.0	NA	NA	NA	NA	NA
MKTf-19	11/8/2016	300.0/8015D	6.7	26	<5.0	0.28	110	<1.0	<1.0	0.89
	9/13/2016	300.0/8015D	7.3	25	<5.0	0.34	130	<1.0	<1.0	0.57
	6/10/2016	8015D/300.0	7.2	21	<5.0	0.17	150	<1.0	<1.0	0.28
	2/25/2016	300.0/8015D	7.8	22	<5.0	0.24	150	<1.0	<1.0	<2.5
	11/3/2015	300.0/8015D	13	34	<5.0	<0.5	130	<0.5	<0.5	<2.5
	8/18/2015	8015D/300.0	27	20	<5.0	0.18	140	<0.1	0.17	<0.5
	6/8/2015	8015D	9.9	19	<5.0	NA	NA	NA	NA	NA
	3/12/2015	8015D	9.3	14	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D/300.0	13	20	<5.0	<0.5	110	<0.5	<0.5	<2.5
	9/24/2014	8015D	61	16	<5.0	NA	NA	NA	NA	NA
	4/9/2014	8015D	17	18	<5.0	NA	NA	NA	NA	NA
	11/5/2013	8015D	7.2	10	<5.0	NA	NA	NA	NA	NA

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
Well ID	DATE SAMPLED	METHOD	DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250.0	NE	10	600.0
40 CFR 141.62 MCL			NE	NE	NE	4.0	NE	1.0	10	NE
NMED Tap Water (March 2017)			0.0398	0.0398	0.0398	1.18	NE	1.97	31.6	NE
EPA RSL for Tap Water (MAY 2016)			NE	NE	NE	0.8	NE	2	32	NE
MKTf-20	11/3/2016	8015D	9.4	65	<5.0	2.6	1500	<0.5	<0.5	13
	9/12/2016	8015D/300.0	8.7	72	<5.0	2.1	370	<1.0	<1.0	1.2
	6/9/2016	8015D/300.0	9	63	<5.0	3.1	450	<1.0	<1.0	10
	3/1/2016	8015D	6.9	73	<5.0	NA	NA	NA	NA	NA
	6/8/2015	8015D	9.9	30	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	4.5	37	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D/300.0	24	45	<5.0	0.87	82	<0.5	<0.5	16
	4/11/2014	8015D	16	120	<5.0	NA	NA	NA	NA	NA
MKTf-21	11/3/2016	8015D/300.0	3.4	34	<5.0	0.91	110	<0.5	<0.5	3.9
	9/12/2016	8015D/300.0	3.9	28	<5.0	<0.5	81	<1.0	<1.0	19
	6/9/2016	8015D	3.9	32	<5.0	NA	NA	NA	NA	NA
	3/1/2016	8015D	3.6	24	<5.0	NA	NA	NA	NA	NA
	6/10/2015	8015D	Not enough water to collect for this set.							
	3/16/2015	8015D	3.8	16	<5.0	NA	NA	NA	NA	NA
	4/11/2014	8015D	27	78	<5.0	NA	NA	NA	NA	NA
MKTf-34	11/8/2016	300.0/8015D	<1.0	<0.05	<5.0	0.46	240	8.3	8.3	180
	9/13/2016	300.0/8015D	<1.0	0.033	<5.0	0.42	300	9.1	9.1	200
	6/10/2016	300.0/8015D	<1.0	<0.05	<5.0	0.52	370	7.7	7.7	130
	2/25/2016	300.0/8015D	<1.0	<0.05	<5.0	0.53	380	18	18	110
	11/3/2015	300.0/8015D	<1.0	<0.05	<5.0	0.46	370	<0.1	8.6	100
	8/18/2015	8015D/300.0	<1.0	<0.05	<5.0	0.44	350	<0.1	8.6	100
	6/8/2015	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	3/12/2015	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	11/17/2014	8015D/300.0	<1.0	<0.05	<5.0	0.54	400	6.6	6.6	73
	9/24/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	4/9/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
MKTf-35	11/3/2016	8015D/300.0	<1.0	1.7	<5.0	0.82	54	<1.0	<1.0	310
	9/13/2016	8015D/300.0	<1.0	2.0	<5.0	0.77	62	<1.0	<1.0	270
	6/10/2016	8015D/300.0	<1.0	1.4	<5.0	0.79	51	<1.0	<1.0	210
	2/26/2016	8015D/300.0	0.94	0.87	<5.0	0.45	65	<1.0	<1.0	99
	11/3/2015	8015D/300.0	2.8	1.5	<5.0	0.79	100	<0.1	<0.1	16
	8/18/2015	8015D/300.0	2.9	4.7	<5.0	0.73	110	<0.1	<0.1	20
	6/4/2015	8015D	2.3	2.9	<5.0	NA	NA	NA	NA	NA
	3/17/2015	8015D	6.0	3.7	<5.0	NA	NA	NA	NA	NA
	11/21/2014	8015D	3.3	1.6	<5.0	NA	NA	NA	NA	NA
MKTf-36	11/8/2016	8015D	11	40	<5.0	0.67	130	<1.0	<1.0	<2.5
	8/18/2015	8015D	14	39	<5.0	0.6	140	<0.5	<0.5	<2.5
	6/4/2015	8015D	13	30	<5.0	NA	NA	NA	NA	NA
	3/17/2015	8015D	10	38	<5.0	NA	NA	NA	NA	NA
	11/21/2014	8015D	6.8	25	<5.0	NA	NA	NA	NA	NA
MKTf-37	11/3/2017	8015D/300.0	9.3	13	<5.0	0.46	120	<1.0	<1.0	56
	6/4/2015	8015D	5.7	12	<5.0	NA	NA	NA	NA	NA
	3/17/2015	8015D	4.5	11	<5.0	NA	NA	NA	NA	NA
	11/21/2014	8015D	<1.0	8.7	<5.0	NA	NA	NA	NA	NA
MKTf-38	11/1/2016	8015D	<1.0	0.065	<5.0	0.82	200	0.14	8.8	320
	9/13/2016	8015D/300.0	<1.0	0.09	<5.0	0.73	260	5	5	330
	6/8/2016	8015D/300.0	<1.0	0.06	<5.0	0.7	270	9.9	9.9	360
	2/29/2016	8015D/300.0	<1.0	0.14	<5.0	0.75	110	7.2	7.2	450
	11/9/2015	8015D	<1.0	0.12	<5.0	0.91	210	<0.1	<0.01	400
	8/24/2015	8015D/300.0	<1.0	0.099	<5.0	0.69	210	<0.1	3.2	390
	6/10/2015	8015D	<1.0	0.2	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	<1.0	0.33	<5.0	NA	NA	NA	NA	NA
	11/21/2014	8015D	3.8	0.12	<5.0	NA	NA	NA	NA	NA

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250.0	NE	10	600.0
40 CFR 141.62 MCL			NE	NE	NE	4.0	NE	1.0	10	NE
NMED Tap Water (March 2017)			0.0398	0.0398	0.0398	1.18	NE	1.97	31.6	NE
EPA RSL for Tap Water (MAY 2016)			NE	NE	NE	0.8	NE	2	32	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-39	11/1/2016	8015D	17	0.36	<5.0	0.97	1300	<0.5	<0.5	<2.5
	9/13/2016	8015D/300.0	10	1.1	<5.0	0.26	1900	<2.0	<2.0	<10
	6/8/2016	8015D/300.0	19	0.67	<5.0	0.54	2300	<2.0	<2.0	0.21
	3/3/2016	8015D/300.0	13	0.46	<5.0	0.71	2900	<4.0	<4.0	4.2
	11/9/2015	8015D	23	0.44	<5.0	<2.0	6400	<2.0	<0.1	<0.5
	8/23/2015	8015D/300.0	13	0.93	<5.0	<0.5	9100	<4.0	<4.0	<2.5
	6/10/2015	8015D	44	0.44	<5.0	NA	NA	NA	NA	NA
	3/16/2015	8015D	6.2	0.21	<5.0	NA	NA	NA	NA	NA
	11/18/2014	8015D	15	0.39	<5.0	NA	NA	NA	NA	NA

DEFINITIONS

NE = Not established

NA = Not analyzed

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

NOTES

1) No samples collected for General Chemistry - not enough water.

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - TOTAL METALS												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.00492	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	6.3E-04	0.06	6
Well ID	DATE SAMPLED	METHOD													
MKTf-4	11/2/2016	200.7/200.8	0.01	2.8	<0.002	<0.006	<0.006	4.6	0.0006	1.5	0.01	<0.005	<0.0002	0.004	0.006
	9/11/2016	200.7/200.8	0.01	3.4	<0.002	<0.006	<0.006	6.7	0.0030	1.5	0.014	<0.005	<0.0002	0.003	0.007
	6/9/2016	200.7/200.8	0.009	3.1	<0.002	<0.006	<0.006	6.2	0.0019	1.7	0.010	<0.005	<0.0002	0.005	0.016
	2/29/2016	200.7/200.8	0.008	3.0	<0.002	<0.006	<0.006	5.6	0.0036	1.5	0.004	<0.005	<0.0002	0.004	0.022
	11/3/2015	200.7/200.8	0.014	3.4	<0.002	<0.006	<0.006	16	0.0063	1.7	0.016	<0.005	<0.0002	0.002	0.012
	8/18/2015	200.7/200.8	0.0085	3.0	<0.002	<0.006	0.006	17	0.0170	1.9	<0.01	<0.005	<0.0002	0.004	0.025
	6/4/2015	200.7/200.8	0.0082	2.5	<0.002	0.009	<0.006	13	0.0097	1.9	<0.01	<0.005	<0.0002	0.005	0.017
	3/16/2015	200.7/200.8	<0.01	1.8	<0.002	0.009	0.012	11	0.022	2.5	0.016	<0.005	<0.0002	0.017	0.03
	11/13/2014	200.7/200.8	0.0079	1.9	<0.002	0.009	0.015	15	0.023	2.5	<0.05	<0.005	<0.0002	0.013	0.03
	9/15/2014	200.7/200.8	0.0060	2.0	<0.002	0.015	0.021	20	0.036	2.9	0.008	<0.005	<0.0002	0.02	0.044
	6/4/2014	200.7/200.8	0.0061	1.4	<0.002	0.009	0.013	7.9	0.013	2.1	0.013	<0.005	<0.0002	0.009	0.02
MKTf-9	11/2/2016	200.7/200.8	0.0028	0.47	<0.002	<0.006	<0.006	1.7	0.002	3.6	0.006	<0.005	<0.0002	0.007	0.003
	9/11/2016	200.7/200.8	0.0033	0.52	<0.002	<0.006	<0.006	2.3	0.002	3.8	0.007	<0.005	<0.0002	0.006	<0.01
	6/9/2016	200.7/200.8	0.0023	0.49	<0.002	<0.006	<0.006	2.1	0.002	3.6	0.005	<0.005	<0.0002	0.007	<0.01
	2/29/2016	200.7/200.8	0.0020	0.64	<0.002	<0.006	<0.006	4.0	0.004	4.2	0.002	<0.005	<0.0002	0.005	0.012
	11/3/2015	200.7/200.8	0.0045	0.71	<0.002	<0.006	<0.006	8.8	0.011	4.3	<0.05	<0.005	<0.0002	0.005	0.019
	8/18/2015	200.7/200.8	0.0042	0.81	<0.002	<0.006	8.9E-03	7.7	0.015	3.7	<0.005	<0.005	<0.0002	0.005	0.027
	6/4/2015	200.7/200.8	<0.005	0.34	<0.002	<0.006	<0.006	3.1	<0.005	3.0	<0.005	<0.005	<0.0002	0.008	<0.01
	3/16/2015	200.7/200.8	0.0029	0.22	<0.002	<0.002	<0.002	2.0	0.002	2.4	0.005	<0.005	<0.0002	0.014	0.01
	11/14/2014	200.7/200.8	<0.005	0.39	<0.002	<0.006	<0.006	4.5	0.005	2.7	<0.01	<0.005	<0.0002	0.010	0.013
	9/18/2014	200.7/200.8	<0.005	0.33	<0.002	<0.006	<0.006	2.4	<0.001	2.8	<0.005	<0.005	<0.0002	0.012	<0.01
	6/5/2014	200.7/200.8	<0.005	0.58	<0.002	<0.006	<0.006	6.7	0.006	3.8	0.007	<0.005	<0.0002	0.006	0.015
MKTf-10	11/2/2016	200.7/200.8	0.0096	6	<0.002	<0.006	<0.006	10	0.001	5.2	0.0049	<0.005	<0.0002	0.0009	0.0044
	9/11/2016	200.7/200.8	0.0083	11	<0.002	<0.006	<0.006	26	0.002	12	0.0058	<0.005	<0.0002	0.0012	0.0027
	6/9/2016	200.7/200.8	0.0060	13	<0.002	<0.006	<0.006	36	0.002	15	0.0033	<0.005	<0.0002	0.0008	0.0190
	2/29/2016	200.7/200.8	0.0086	16	<0.002	<0.006	<0.006	57	0.003	21	0.0020	<0.005	<0.0002	0.0015	0.0140
	11/3/2015	200.7/200.8	0.0059	14	<0.002	<0.006	<0.006	61	0.025	19	<0.05	<0.005	<0.0002	0.0019	0.0320
	8/18/2015	200.7/200.8	0.0380	15	<0.002	0.013	<0.006	64	0.58	22	<0.05	<0.005	0.0003	0.0630	0.4900
	6/4/2015	200.7/200.8	0.015	19	<0.002	0.077	0.1	120	0.19	24	<0.01	<0.005	<0.0002	0.0140	0.1500
	3/16/2015	200.7/200.8	0.019	22	<0.002	0.036	0.095	100	0.2	27	<0.01	<0.005	<0.0002	0.0190	0.1400
	11/14/2014	200.7/200.8	<0.04	45	<0.004	0.099	0.24	250	0.58	49	<0.04	<0.01	<0.0004	0.0520	0.3100
	9/18/2014	200.7/200.8	<0.005	12	<0.002	<0.006	<0.006	46	0.002	15	0.0032	<0.005	<0.0002	0.0013	<0.01
	6/6/2014	200.7/200.8	<0.005	7.7	<0.002	<0.006	<0.006	25	<0.005	9.5	0.0061	<0.005	<0.0002	<0.005	<0.01

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - TOTAL METALS												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.00492	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	6.3E-04	0.06	6
Well ID	DATE SAMPLED	METHOD													
MKTf-11	11/2/2016	200.7/200.8	0.014	2.7	<0.002	<0.006	<0.006	8.4	0.001	4.0	0.005	<0.005	<0.0002	0.007	0.017
	9/11/2016	200.7/200.8	0.013	2.9	<0.002	<0.006	<0.006	7.1	0.001	4.1	0.005	<0.005	<0.0002	0.007	0.012
	6/9/2016	200.7/200.8	0.012	3.4	<0.002	<0.006	<0.006	8.1	0.001	4.0	0.003	<0.005	<0.0002	0.009	0.016
	2/29/2016	200.7/200.8	0.013	3.9	<0.002	<0.006	<0.006	11	0.003	6.4	0.002	<0.005	<0.0002	0.005	0.018
	11/3/2015	200.7/200.8	0.008	3.8	<0.002	<0.006	<0.006	15	0.003	3.5	0.005	<0.005	<0.0002	0.001	0.017
	8/18/2015	200.7/200.8	0.009	2.4	<0.002	<0.006	<0.006	14	0.007	4.0	0.003	<0.005	<0.0002	0.003	0.024
	6/4/2015	200.7/200.8	0.006	2.7	<0.002	<0.006	<0.006	0.013	0.003	3.0	<0.005	<0.005	<0.0002	<0.0025	0.013
	3/16/2015	200.7/200.8	0.009	1.9	<0.002	<0.006	<0.006	10	0.007	3.1	0.006	<0.005	<0.0002	0.002	0.024
	11/13/2014	200.7/200.8	0.009	1.7	<0.002	<0.006	<0.006	5.8	<0.005	3.4	<0.005	<0.005	<0.0002	<0.005	0.012
	9/15/2014	200.7/200.8	0.007	1.4	<0.002	<0.006	<0.006	8.1	0.006	3.1	0.003	<0.005	<0.0002	0.006	0.021
6/5/2014	200.7/200.8	0.006	1.2	<0.002	6.1E-03	<0.006	8.8	0.010	2.8	0.006	<0.005	<0.0002	<0.005	0.038	
MKTf-15	11/2/2016	200.7/200.8	0.004	22	<0.002	<0.006	<0.006	34	0.006	6.8	6.9E-03	<0.005	<0.0002	<0.0025	0.28
	9/11/2016	200.7/200.8	0.002	23	<0.002	<0.006	<0.006	35	0.006	7.7	5.4E-03	<0.005	<0.0002	<0.0025	0.018
	9/17/2015	200.7/200.8	<0.005	29	<0.002	<0.006	<0.006	18	<0.01	9.8	<0.005	<0.005	<0.0002	<0.01	0.023
	6/5/2014	200.7/200.8	<0.01	25	<0.002	7.4E-03	<0.006	11	0.011	7.9	<0.01	<0.005	<0.0002	<0.005	0.017
MKTf-16	11/3/2016	200.7/200.8	0.015	0.67	<0.002	<0.006	3.8E-03	3.6	0.003	0.86	0.01	<0.005	<0.0002	7.7E-03	0.02
	9/12/2016	200.7/200.8	0.014	0.72	<0.002	<0.006	<0.006	4.6	0.003	0.96	0.014	<0.005	<0.0002	6.7E-03	0.022
	2/29/2016	200.7/200.8	9.2E-03	1.3	<0.002	<0.006	<0.006	6.5	0.003	1.8	4.9E-03	<0.005	<0.0002	6.6E-04	0.034
	11/3/2015	200.7/200.8	0.018	3.0	<0.002	<0.006	<0.006	13	0.003	3.9	0.021	<0.005	<0.0002	5.3E-04	0.023
	8/23/2015	200.7/200.8	0.014	3.9	<0.002	<0.006	<0.006	16	0.001	5.5	<0.02	<0.005	<0.0002	<0.0005	0.01
	6/8/2015	200.7/200.8	9.7E-03	2.2	<0.002	<0.006	9.1E-03	12	<0.0025	3.3	7.2E-03	<0.025	<0.0002	<0.0025	0.023
	3/16/2015	200.7/200.8	<0.01	1.0	<0.002	<0.006	0.023	7.2	<0.01	1.3	<0.02	<0.005	<0.0002	<0.01	0.035
	11/18/2014	200.7/200.8	0.01	1.1	<0.002	<0.006	<0.006	10	0.004	1.3	<0.05	<0.005	<0.0002	1.6E-03	0.05
	9/17/2014	200.7/200.8	0.012	0.8	<0.002	<0.006	<0.006	8.6	0.003	1.2	<0.01	<0.005	<0.0002	<0.001	0.034
	6/5/2014	200.7/200.8	0.023	0.9	<0.002	<0.006	0.008	7.9	<0.005	1.2	0.013	<0.005	<0.0002	0.015	0.089
MKTf-17	11/8/2016	200.7/200.8	6.4E-03	0.6	<0.002	<0.006	<0.006	1.9	0.001	2.8	0.003	<0.005	<0.0002	0.008	0.007
	9/13/2016	200.7/200.8	0.007	0.58	<0.002	<0.006	<0.006	3.3	0.003	2.8	0.004	<0.005	0.000	0.011	0.006
	2/26/2016	200.7/200.8	4.6E-03	0.12	<0.002	<0.006	<0.006	1.0	0.001	2.6	0.001	<0.005	<0.0002	0.018	0.006
	11/3/2015	200.7/200.8	0.02	12	<0.01	<0.006	<0.006	0.7	0.35	3.5	<0.02	<0.005	<0.0002	0.048	0.330
	8/18/2015	200.7/200.8	5.2E-03	0.2	<0.002	<0.006	9.7E-03	1.7	0.004	2.9	<0.005	<0.005	<0.0002	0.018	0.011
	6/8/2015	200.7/200.8	<0.005	0.24	<0.002	<0.006	<0.006	2.6	0.003	3.3	<0.005	<0.005	<0.0002	0.020	0.015
	3/12/2015	200.7/200.8	0.006	0.17	<0.002	<0.006	<0.006	1.8	0.002	3.1	0.002	<0.005	<0.0002	0.022	<0.01
	11/18/2014	200.7/200.8	0.005	0.21	<0.002	<0.006	<0.006	2.0	0.003	3.0	<0.01	<0.005	<0.0002	0.025	0.019
	9/18/2014	200.7/200.8	0.006	0.21	<0.002	<0.006	<0.006	1.8	0.002	3.3	0.002	<0.005	<0.0002	0.022	0.013
	6/16/2014	200.7/200.8	0.006	0.61	<0.002	0.013	0.012	10	0.022	4.1	0.005	<0.005	<0.0002	0.027	0.036

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - TOTAL METALS												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.00492	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	6.3E-04	0.06	6
Well ID	DATE SAMPLED	METHOD													
MKTf-18	11/8/2016	200.7/200.8	0.003	1.7	<0.002	<0.006	<0.006	2.2	0.000	1.8	0.006	<0.005	<0.0002	0.001	<0.01
	9/13/2016	200.7/200.8	0.003	1.8	<0.002	<0.006	<0.006	3.3	0.001	2.0	0.005	<0.005	0.000	0.001	0.004
	6/10/2016	200.7/200.8	0.003	1.9	<0.002	<0.006	<0.006	2.5	0.001	1.9	0.006	<0.005	<0.0002	0.001	<0.01
	2/26/2016	200.7/200.8	0.002	2.3	<0.002	4.3E-03	5.7E-03	6.4	0.006	2.1	0.002	<0.005	<0.0002	0.002	0.020
	11/3/2015	200.7/200.8	0.009	12	<0.002	0.046	0.064	58.0	0.14	11	<0.01	<0.005	<0.001	0.015	0.190
	8/18/2015	200.7/200.8	0.018	24	<0.01	0.26	0.21	110.0	0.37	22	<0.01	<0.005	0.000	0.037	0.540
	6/8/2015	200.7/200.8	<0.005	2.5	<0.002	<0.006	<0.006	5.0	<0.0025	1.8	<0.005	<0.005	<0.0002	<0.0025	<0.01
	3/17/2015	200.7/200.8	0.003	3.5	<0.002	0.012	0.011	14.0	0.021	2.7	<0.01	<0.005	<0.0002	0.003	0.051
	11/18/2014	200.7/200.8	0.002	2.5	<0.002	<0.006	<0.006	4.0	1.6E-03	1.8	<0.01	<0.005	<0.0002	<0.001	0.020
	9/18/2014	200.7/200.8	0.002	2.6	<0.002	<0.006	<0.006	3.2	2.8E-03	2.0	0.003	<0.005	<0.0002	0.002	0.018
	6/6/2014	200.7/200.8	0.013	19	<0.01	0.11	0.12	81	0.29	17	0.013	<0.025	<0.0002	0.022	0.310
MKTf-19	11/8/2016	200.7/200.8	0.013	2.2	<0.002	8.8E-03	0.015	33	0.033	2.6	0.009	<0.005	<0.0002	0.006	0.070
	9/13/2016	200.7/200.8	0.015	2.1	<0.002	5.7E-03	8.3E-03	17	0.023	2.6	0.008	<0.005	0.000	0.004	0.065
	6/10/2016	200.7/200.8	0.016	2.6	<0.002	8.2E-03	0.012	19	0.038	3.3	0.011	<0.005	<0.0002	0.008	0.077
	2/25/2016	200.7/200.8	0.022	2.8	<0.002	0.012	0.018	23	0.069	3.9	0.019	<0.005	<0.001	0.025	0.010
	11/3/2015	200.7/200.8	0.018	2.7	<0.002	<0.006	<0.006	13	0.046	3.4	0.010	<0.005	<0.0002	0.008	0.096
	8/18/2015	200.7/200.8	0.018	4.4	<0.002	0.044	0.06	64	0.14	6.3	0.006	<0.005	<0.0002	0.024	0.220
	6/8/2015	200.7/200.8	0.019	2.5	<0.002	0.024	0.017	28	0.035	4.2	<0.005	<0.005	<0.0002	0.005	0.082
	3/12/2015	200.7/200.8	0.017	2.7	<0.002	0.022	0.026	33	0.052	4.2	<0.01	<0.005	<0.0002	0.007	0.078
	11/18/2014	200.7/200.8	0.022	3.6	<0.002	0.035	0.043	47	0.079	5.6	<0.01	<0.005	<0.0002	0.014	0.110
MKTf-20	11/3/2016	200.7/200.8	0.029	9.3	<0.002	<0.006	0.019	22	9.0E-03	8.9	0.013	<0.005	<0.0002	0.005	0.024
	9/12/2016	200.7/200.8	0.025	5.2	<0.002	<0.006	0.022	17	7.2E-03	4.4	0.009	<0.005	<0.0002	0.004	0.033
	6/9/2016	200.7/200.8	0.038	4.6	<0.002	<0.006	0.09	17	1.9E-02	5.0	0.009	<0.005	0.000	0.020	0.085
	3/16/2015	200.7/200.8	0.025	2.0	<0.002	<0.006	0.016	11	6.6E-03	3.2	0.005	<0.005	<0.0002	0.011	0.030
	11/18/2014	200.7/200.8	0.017	4.5	<0.002	0.022	0.12	45	0.048	4.9	<0.005	<0.005	<0.0002	0.007	0.190
MKTf-21	11/3/2016	200.7/200.8	0.021	4.3	<0.002	<0.006	<0.006	33	3.3E-03	5.1	0.009	<0.005	<0.0002	0.002	0.057
	9/12/2016	200.7/200.8	0.019	2.7	<0.002	<0.006	6.4E-03	24	3.1E-03	4.1	0.009	<0.005	0.000	0.001	0.048
	6/10/2015	200.7/200.8	Not enough water to collect samples												
	3/16/2015	200.7/200.8	0.02	4.9	<0.002	0.029	0.1	55	0.079	6.4	<0.01	<0.005	<0.0002	0.007	0.440

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - TOTAL METALS												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.00492	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	6.3E-04	0.06	6
Well ID	DATE SAMPLED	METHOD													
MKTf-34	11/8/2016	200.7/200.8	2.6E-03	0.085	<0.002	<0.006	<0.006	0.7	8.7E-04	0.017	0.011	<0.005	0.000	0.038	0.007
	9/13/2016	200.7/200.8	4.4E-03	0.12	<0.002	<0.006	<0.006	0.6	8.0E-04	0.014	0.011	<0.005	0.000	0.034	0.008
	6/10/2016	200.7/200.8	4.7E-03	0.15	<0.002	<0.006	<0.006	2.3	2.6E-03	0.054	0.014	<0.005	<0.0002	0.032	0.024
	2/25/2016	200.7/200.8	0.003	0.15	<0.002	<0.006	<0.006	1.6	1.6E-03	0.044	0.007	<0.005	<0.0002	0.032	0.023
	11/3/2015	200.7/200.8	<0.005	0.15	<0.002	<0.006	<0.006	1.0	1.2E-03	0.03	<0.02	<0.005	<0.0002	0.027	0.012
	8/18/2015	200.7/200.8	<0.005	0.17	<0.002	<0.006	<0.006	2.4	2.7E-03	0.074	0.009	<0.005	<0.0002	0.031	0.030
	6/8/2015	200.7/200.8	<0.005	0.2	<0.002	<0.006	<0.006	2.3	<0.0025	0.066	<0.01	<0.005	<0.0002	0.028	0.024
	3/12/2015	200.7/200.8	<0.01	0.25	<0.002	<0.006	<0.006	5.2	4.5E-03	0.15	0.013	<0.005	<0.0002	0.028	0.059
	11/17/2014	200.7/200.8	<0.01	0.17	<0.002	<0.006	<0.006	2.4	1.4E-03	0.075	<0.02	<0.005	<0.0002	0.026	0.037
MKTf-35	11/3/2016	200.7/200.8	3.5E-03	1.2	<0.002	0.011	0.012	22	0.019	5.5	0.002	<0.005	0.000	0.004	0.039
	9/13/2016	200.7/200.8	2.4E-03	2.3	<0.002	4.5E-03	4.4E-03	8.6	0.012	3.8	0.002	<0.005	0.000	0.002	0.017
	6/10/2016	200.7/200.8	9.3E-04	0.89	<0.002	2.3E-03	<0.006	4.5	4.9E-03	3.3	0.001	<0.005	<0.0002	0.002	0.007
	2/26/2016	200.7/200.8	0.002	3.3	<0.002	0.009	<0.006	9.1	0.013	4.1	0.001	<0.005	<0.0002	0.003	0.026
	11/3/2015	200.7/200.8	0.002	2.3	<0.002	<0.006	<0.006	7.5	0.011	4.5	<0.005	<0.005	<0.0002	0.003	0.017
	8/18/2015	200.7/200.8	0.004	8.7	<0.002	0.016	0.020	17	0.034	6.5	<0.005	<0.005	<0.0002	0.005	0.051
	6/4/2015	200.7/200.8	<0.005	5.0	<0.002	0.018	0.013	13	0.023	6.4	<0.005	<0.005	<0.0002	0.004	0.032
	3/17/2015	200.7/200.8	0.004	8.2	<0.002	0.013	0.025	15	0.034	6.3	<0.005	<0.005	<0.0002	0.005	0.062
MKTf-36	11/8/2016	200.7/200.8	0.018	6.6	<0.002	<0.006	0.007	18	0.01	1.9	0.005	<0.005	<0.0002	0.001	0.160
	8/18/2015	200.7/200.8	0.016	5.7	<0.002	<0.006	<0.006	21	0.017	2.7	<0.005	<0.005	<0.0002	0.001	0.018
	6/4/2015	200.7/200.8	0.017	6.8	<0.002	0.010	0.008	22	0.016	2.8	<0.005	<0.005	<0.0002	<0.0025	0.023
	3/17/2015	200.7/200.8	0.016	7	<0.002	<0.006	<0.006	22	0.015	2.8	0.006	<0.005	<0.0002	0.002	0.028
MKTf-37	11/3/2016	200.7/200.8	0.003	0.69	<0.002	<0.006	0.005	2.2	0.005	0.55	0.004	<0.005	<0.0002	0.025	0.015
	8/19/2015	200.7/200.9	0.003	0.24	<0.002	<0.006	0.009	5.7	0.024	1.7	<0.005	<0.005	<0.0002	0.020	0.074
	6/4/2015	200.7/200.8	<0.005	0.23	<0.002	0.006	0.010	4.8	0.036	2.6	<0.005	<0.005	<0.0002	0.024	0.044
	3/17/2015	200.7/200.8	0.003	0.23	<0.002	<0.006	0.012	5.1	0.030	2.9	0.004	<0.005	<0.0002	0.026	0.140

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - TOTAL METALS												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.00492	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	6.3E-04	0.06	6
Well ID	DATE SAMPLED	METHOD													
MKTf-38	11/1/2016	200.7/200.8	0.002	0.12	<0.002	<0.006	<0.006	1.7	0.003	3.3	0.004	<0.005	<0.0002	0.014	0.007
	9/13/2016	200.7/200.8	0.003	0.075	<0.002	<0.006	<0.006	0.61	0.001	3.0	0.005	<0.005	0.000	0.014	0.006
	6/8/2016	200.7/200.8	0.002	0.23	<0.002	<0.006	<0.006	3.0	0.004	3.8	0.005	<0.005	<0.0002	0.014	0.025
	2/29/2016	200.7/200.8	0.002	0.14	<0.002	<0.006	<0.006	2.3	0.004	2.7	0.002	<0.005	<0.0002	0.014	0.014
	11/9/2015	200.7/200.8	0.005	0.93	<0.002	0.010	0.009	11	0.020	4.2	<0.1	<0.005	<0.0002	0.020	0.035
	8/24/2015	200.7/200.8	0.003	0.49	<0.002	0.006	0.008	7.2	0.010	3.9	0.004	<0.005	<0.0002	0.019	0.025
	6/10/2015	200.7/200.8	<0.005	0.43	<0.002	0.006	<0.006	6.4	0.008	3.7	<0.005	<0.005	<0.0002	0.022	0.022
	3/16/2015	200.7/200.8	0.003	0.34	<0.002	<0.006	<0.006	3.5	0.006	3.1	0.006	<0.005	<0.0002	0.029	0.014
MKTf-39	11/1/2016	200.7/200.8	0.004	6.1	<0.002	<0.006	<0.006	8.7	0.005	1.3	0.008	<0.005	<0.0002	<0.0025	0.009
	9/13/2016	200.7/200.8	0.005	9.7	<0.002	<0.006	<0.006	12	0.007	1.8	0.012	<0.005	0.000	0.000	0.014
	6/8/2016	200.7/200.8	0.002	8.5	<0.002	<0.006	<0.006	12	0.012	1.8	0.007	<0.005	0.000	0.001	0.028
	3/3/2016	200.7/200.8	<0.01	11	<0.002	<0.006	<0.006	13	0.01	1.9	0.007	<0.005	<0.0002	0.001	0.011
	11/9/2015	200.7/200.8	0.006	33	<0.002	0.009	0.037	45	0.049	5.2	<0.05	<0.005	0.000	0.004	0.076
	8/23/2015	200.7/200.8	<0.005	49	<0.002	<0.006	0.019	57	0.034	6.8	<0.01	<0.005	0.000	0.004	0.062
	6/10/2015	200.7/200.8	<0.005	58	<0.002	<0.006	<0.06	59	0.031	8	<0.005	<0.005	<0.0002	0.003	0.042
	3/16/2015	200.7/200.8	<0.01	35	<0.01	<0.03	<0.03	50	0.034	8.6	<0.01	<0.025	0.000	0.012	0.059

DEFINITIONS

NE = Not established

NA = Not analyzed

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - DISSOLVED METALS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	NE	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.06	6
Well ID	DATE SAMPLED	METHOD												
MKTf-4	11/2/2016	200.7/200.8	0.010	2.7	<0.002	<0.006	<0.006	1.7	<0.0005	1.4	<0.005	0.011	0.003	0.006
	9/11/2016	200.7/200.8	0.011	2.6	<0.002	<0.006	<0.006	1.2	0.0003	1.4	<0.005	0.014	0.004	0.003
	6/9/2016	200.7/200.8	0.008	2.4	<0.002	<0.006	<0.006	2	<0.0005	1.4	<0.005	0.009	0.005	<0.01
	2/29/2016	200.7/200.8	0.009	2.8	<0.002	<0.006	<0.006	5.6	0.0000	1.5	<0.005	0.006	0.005	0.022
	11/3/2015	200.7/200.8	0.012	3.1	<0.002	<0.006	<0.006	13	<0.0005	1.5	<0.005	<0.02	0.002	<0.01
	8/18/2015	200.7/200.8	<0.01	2.5	<0.002	<0.006	<0.006	8.7	<0.0025	1.6	<0.005	<0.01	0.003	<0.01
	6/4/2015	200.7/200.8	<0.01	2.2	<0.002	<0.006	<0.006	8.6	<0.01	1.6	<0.005	<0.01	<0.01	0.023
	3/16/2015	200.7/200.8	0.010	1.1	<0.002	<0.006	<0.006	2.0	<0.005	1.9	<0.005	<0.05	0.013	0.021
	11/13/2014	200.7/200.8	0.006	1.3	<0.002	<0.006	<0.006	4.7	<0.005	1.8	<0.005	<0.005	0.013	0.010
	9/15/2014	200.7/200.8	<0.01	0.78	<0.002	<0.006	<0.006	3.6	0.0013	1.7	<0.005	<0.01	0.018	<0.01
	6/4/2014	200.7/200.8	0.008	1.9	<0.002	<0.006	<0.006	2.5	<0.005	1.4	<0.005	0.022	<0.01	<0.01
MKTf-9	11/2/2016	200.7/200.8	0.003	0.4	<0.002	<0.006	<0.006	0.92	<0.0005	3.2	<0.005	0.006	0.007	0.270
	9/11/2016	200.7/200.8	0.003	0.52	<0.002	<0.006	<0.006	0.81	0.0002	3.7	<0.005	0.008	0.005	<0.01
	6/9/2016	200.7/200.8	0.003	0.43	<0.002	<0.006	<0.006	1.1	<0.0005	3.5	<0.005	0.005	0.007	<0.01
	2/29/2016	200.7/200.8	0.002	0.55	<0.002	<0.006	<0.006	2.8	0.0002	3.9	<0.005	0.003	0.005	0.009
	11/3/2015	200.7/200.8	<0.005	0.5	<0.002	<0.006	<0.006	3.2	<0.0005	4.2	<0.005	<0.01	0.004	<0.01
	8/18/2015	200.7/200.8	<0.01	0.45	<0.002	<0.006	<0.006	2.4	<0.0025	4.0	<0.005	<0.01	0.004	<0.01
	6/4/2015	200.7/200.8	<0.01	0.31	<0.002	<0.006	<0.006	1.9	<0.01	3.2	<0.005	<0.01	<0.01	0.012
	3/16/2015	200.7/200.8	<0.005	0.19	<0.002	<0.006	<0.006	1.4	<0.001	2.3	<0.005	<0.01	0.012	0.039
	11/14/2014	200.7/200.8	<0.01	0.34	<0.002	<0.006	<0.006	2.4	<0.01	2.8	<0.005	<0.01	<0.01	0.017
	9/18/2014	200.7/200.8	<0.01	0.32	<0.002	<0.006	<0.006	2.2	<0.001	2.6	<0.005	<0.01	0.012	<0.01
	6/5/2014	200.7/200.8	<0.005	0.44	<0.002	<0.006	<0.006	3.4	<0.005	3.6	<0.005	0.014	<0.01	<0.01
MKTf-10	11/2/2016	200.7/200.8	0.008	5.8	<0.002	<0.006	<0.006	9.4	<0.005	5.2	<0.005	0.005	0.001	<0.01
	9/11/2016	200.7/200.8	0.008	11	<0.002	<0.006	<0.006	26	0.0009	12	<0.005	0.007	0.001	0.003
	6/9/2016	200.7/200.8	0.008	13	<0.002	<0.006	<0.006	41	0.0002	16	<0.005	0.004	0.000	0.041
	2/29/2016	200.7/200.8	0.008	14	<0.002	<0.006	<0.006	54	<0.0025	20	<0.005	0.004	0.002	0.017
	11/3/2015	200.7/200.8	0.006	13	<0.002	<0.006	<0.006	50	<0.005	18	<0.005	0.007	<0.0005	<0.01
	8/18/2015	200.7/200.8	0.013	15	<0.002	0.013	<0.006	64	<0.0025	22	<0.005	<0.01	<0.0025	<0.01
	6/4/2015	200.7/200.8	<0.01	12	<0.002	<0.006	<0.006	53	<0.01	18	<0.005	<0.01	<0.01	0.034
	3/16/2015	200.7/200.8	<0.005	12	<0.002	<0.006	<0.006	49	<0.001	17	<0.005	0.007	<0.001	<0.01
	11/14/2014	200.7/200.8	<0.01	17	<0.002	<0.006	<0.006	67	<0.01	24	<0.005	<0.01	<0.01	0.018
	9/18/2014	200.7/200.8	<0.005	11	<0.002	<0.006	<0.006	33	<0.001	14	<0.005	<0.005	<0.001	<0.01
	6/6/2014	200.7/200.8	<0.005	8.1	<0.002	<0.006	<0.006	18	<0.005	9.2	<0.005	0.011	<0.01	<0.01

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - DISSOLVED METALS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	NE	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.06	6
Well ID	DATE SAMPLED	METHOD												
MKTf-11	11/2/2016	200.7/200.8	0.013	2.6	<0.002	<0.006	<0.006	5.4	<0.0005	3.6	<0.005	0.005	0.006	0.004
	9/12/2016	200.7/200.8	0.014	2.5	<0.002	<0.006	<0.06	4.6	<0.0005	3.8	<0.005	0.006	0.004	<0.01
	6/9/2016	200.7/200.8	0.014	2.5	<0.002	<0.006	<0.006	4.3	<0.0005	3.5	<0.005	0.004	0.008	<0.01
	2/29/2016	200.7/200.8	0.015	3.6	<0.002	<0.006	<0.006	8.0	0.0003	5.7	<0.005	0.005	0.005	0.011
	11/3/2015	200.7/200.8	0.008	4.0	<0.002	<0.006	<0.006	12	<0.0005	3.6	<0.005	0.006	<0.0005	<0.01
	8/18/2015	200.7/200.8	<0.01	2.0	<0.002	<0.006	<0.006	4.0	<0.0025	4.0	<0.005	<0.01	0.003	<0.01
	6/4/2015	200.7/200.8	<0.01	2.7	<0.002	<0.006	<0.006	9.9	<0.01	3.0	<0.005	<0.01	<0.01	0.018
	3/16/2015	200.7/200.8	0.009	2.0	<0.002	<0.006	<0.006	4.8	<0.001	2.9	<0.005	0.008	0.001	<0.01
	11/13/2014	200.7/200.8	<0.01	1.5	<0.002	<0.006	<0.006	3.4	<0.001	3.2	<0.005	0.005	0.003	0.019
	9/15/2014	200.7/200.8	0.009	1.1	<0.002	<0.006	<0.006	2.7	<0.001	2.4	<0.005	<0.005	0.004	<0.01
	6/5/2014	200.7/200.8	0.006	1.8	<0.002	6.0E-03	<0.006	11	0.0220	3.6	<0.005	0.010	<0.01	0.036
MKTf-15	11/2/2016	200.7/200.8	0.003	20	<0.002	<0.006	<0.006	26	<0.0025	6.5	<0.005	0.007	<0.0025	0.014
	9/11/2016	200.7/200.8	0.003	23	<0.002	<0.006	<0.006	32	0.0005	7.6	<0.005	0.009	0.000	0.040
	9/17/2014	200.7/200.8	<0.01	27	<0.002	<0.006	<0.006	13	<0.01	9.0	<0.005	<0.01	<0.01	<0.01
	6/5/2014	200.7/200.8	<0.005	25	<0.002	<0.006	<0.006	11	<0.005	7.5	<0.005	<0.01	<0.01	0.011
MKTf-16	11/3/2016	200.7/200.8	0.015	0.69	<0.002	<0.006	<0.006	2.2	0.0004	0.87	<0.005	0.013	0.005	0.004
	9/12/2016	200.7/200.8	0.014	0.67	<0.002	<0.006	<0.006	2.4	0.0003	0.94	<0.005	0.013	0.004	<0.01
	2/29/2016	200.7/200.8	0.010	1.3	<0.002	<0.006	<0.006	5.8	0.0008	1.7	<0.005	0.010	0.000	0.018
	11/3/2015	200.7/200.8	0.016	3.1	<0.002	<0.006	<0.006	13	<0.0005	3.9	<0.005	0.019	<0.0005	<0.01
	8/23/2015	200.7/200.8	0.010	2.7	<0.002	<0.006	<0.006	11	<0.0025	4.1	<0.005	0.010	<0.0025	<0.01
	6/8/2015	200.7/200.8	0.009	2.3	<0.002	<0.006	<0.006	11	<0.005	3.6	<0.005	0.008	<0.005	0.017
	3/16/2015	200.7/200.8	<0.01	0.94	<0.002	<0.006	<0.006	5.6	<0.001	1.2	<0.005	<0.02	<0.001	0.024
	11/18/2014	200.7/200.8	0.011	0.88	<0.002	<0.006	<0.006	7.2	<0.001	1.1	<0.005	<0.01	<0.001	0.019
	9/17/2014	200.7/200.8	0.011	0.81	<0.002	<0.006	<0.006	7.3	<0.001	1.1	<0.005	<0.01	<0.001	0.017
	6/5/2014	200.7/200.8	0.013	0.81	<0.002	<0.006	<0.006	7.9	<0.005	1.3	<0.005	0.017	<0.01	0.022
MKTf-17	11/8/2016	200.7/200.8	0.005	0.52	<0.002	<0.006	<0.006	0.21	<0.0005	2.7	<0.005	0.003	0.007	<0.01
	9/13/2016	200.7/200.8	0.006	0.65	<0.002	<0.006	<0.006	0.23	<0.005	3.0	<0.005	0.005	0.008	<0.01
	2/26/2016	200.7/200.8	0.003	0.095	<0.002	<0.006	<0.006	0.093	0.0001	2.8	<0.005	0.002	0.018	0.020
	11/3/2015	200.7/200.8	0.010	0.19	<0.002	<0.006	<0.006	0.65	<0.0005	3.5	<0.005	0.005	0.013	<0.01
	8/18/2015	200.7/200.8	<0.01	0.097	<0.02	<0.006	<0.006	0.49	<0.0025	2.8	<0.005	<0.01	0.017	<0.01
	6/8/2015	200.7/200.8	<0.005	0.11	<0.002	<0.006	<0.006	0.14	<0.002	3.1	<0.005	<0.005	0.021	<0.01
	3/12/2015	200.7/200.8	0.006	0.13	<0.002	<0.006	<0.006	0.57	<0.001	3.0	<0.005	0.006	0.021	<0.01
	11/18/2014	200.7/200.8	0.005	0.14	<0.002	<0.006	<0.006	0.08	<0.001	2.8	<0.005	<0.01	0.022	0.027
	9/18/2014	200.7/200.8	0.005	0.16	<0.002	<0.006	<0.006	0.27	<0.001	3.1	<0.005	<0.005	0.022	0.018
	6/16/2014	200.7/200.8	0.005	0.24	<0.002	<0.006	<0.006	0.94	<0.005	3.3	<0.005	<0.005	0.022	0.140
MKTf-18	11/8/2016	200.7/200.8	0.003	1.7	<0.002	<0.006	<0.006	0.81	<0.0005	1.9	<0.005	0.005	0.001	<0.01
	9/13/2016	200.7/200.8	0.003	1.8	<0.002	<0.006	<0.006	0.89	<0.0005	2.0	<0.005	0.007	0.001	<0.01
	6/10/2016	200.7/200.8	0.002	1.9	<0.002	<0.006	<0.006	1.5	<0.0005	1.9	<0.005	0.005	0.001	<0.01
	2/26/2016	200.7/200.8	0.002	2.1	<0.002	<0.006	<0.006	2.1	0.0004	1.9	<0.005	0.002	0.001	0.011
	11/3/2015	200.7/200.8	0.003	2.5	<0.002	<0.006	<0.006	4.8	0.0053	1.9	<0.005	<0.01	0.001	<0.01
	8/18/2015	200.7/200.8	<0.01	2.0	<0.002	<0.006	<0.006	1.2	<0.0025	1.7	<0.005	<0.01	<0.0025	<0.01
	6/8/2015	200.7/200.8	<0.005	2.5	<0.002	<0.006	<0.006	3.9	<0.002	1.8	<0.005	<0.005	<0.002	<0.01
	3/17/2015	200.7/200.8	<0.01	2.5	<0.002	<0.006	<0.006	3.8	<0.001	1.8	<0.005	<0.01	<0.001	<0.01
	11/18/2014	200.7/200.8	0.002	2.4	<0.002	<0.006	<0.006	3.4	<0.001	1.7	<0.005	<0.01	<0.001	0.025
	9/18/2014	200.7/200.8	<0.005	2.3	<0.002	<0.006	<0.006	0.3	<0.001	1.7	<0.005	<0.005	0.001	0.012
	6/6/2014	200.7/200.8	<0.005	2.4	<0.002	<0.006	<0.006	4.5	<0.005	2.0	<0.005	0.009	<0.01	<0.01

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - DISSOLVED METALS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	NE	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.06	6
Well ID	DATE SAMPLED	METHOD												
MKTf-19	11/8/2016	200.7/200.8	0.011	1.6	<0.002	<0.006	<0.006	8.5	0.0023	2.2	<0.005	0.008	0.002	0.009
	9/13/2016	200.7/200.8	0.017	1.7	<0.002	<0.006	<0.006	10	0.0023	2.4	<0.005	0.008	0.001	0.004
	6/10/2016	200.7/200.8	0.015	1.6	<0.002	<0.006	<0.006	9.7	0.0022	2.7	<0.005	0.013	0.000	0.006
	2/25/2016	200.7/200.8	0.015	1.7	<0.002	<0.006	<0.006	11	0.0034	3.1	<0.005	0.004	0.001	0.010
	11/3/2015	200.7/200.8	0.018	1.7	<0.002	<0.006	<0.006	13	0.0016	3.4	<0.005	<0.05	<0.0005	<0.01
	8/18/2015	200.7/200.8	0.020	1.7	<0.002	<0.006	<0.006	14	0.0032	3.2	<0.005	<0.01	<0.0025	0.020
	6/8/2015	200.7/200.8	0.019	1.7	<0.002	<0.006	<0.006	12	<0.002	3.3	<0.005	<0.01	<0.002	<0.01
	3/12/2015	200.7/200.8	0.021	1.6	<0.002	<0.006	<0.006	9.5	0.0017	3.1	<0.005	<0.02	<0.001	0.012
	11/18/2014	200.7/200.8	0.022	1.6	<0.002	<0.006	<0.006	11	0.0019	3.0	<0.005	<0.01	<0.001	0.018
MKTf-20	11/3/2016	200.7/200.8	0.029	8.6	<0.002	<0.006	7.3E-03	20	0.0090	8.0	<0.005	0.013	0.005	0.014
	9/12/2016	200.7/200.8	0.027	4.7	<0.002	<0.006	4.6E-03	14	0.0040	3.8	<0.005	0.008	0.003	0.012
	6/9/2016	200.7/200.8	0.034	3.3	<0.002	<0.006	0.022	12	0.0120	3.9	<0.005	0.008	0.018	0.016
	6/8/2015	200.7/200.8	0.012	1.5	<0.002	<0.006	<0.006	3.6	<0.005	2.0	<0.005	<0.005	<0.005	0.045
	3/16/2015	200.7/200.8	0.022	2.0	<0.002	<0.006	<0.006	8.6	0.0013	3.1	<0.005	<0.01	0.009	<0.01
MKTf-21	11/3/2016	200.7/200.8	0.019	4.3	<0.002	<0.006	<0.006	30	0.0010	5.0	<0.005	0.012	0.002	0.017
	9/12/2016	200.7/200.8	0.020	2.5	<0.002	<0.006	<0.006	22	0.0018	3.7	<0.005	0.009	0.001	0.023
	6/10/2015	200.7/200.8	Not enough water to collect samples											
	3/16/2015	200.7/200.8	0.011	1.9	<0.002	<0.006	<0.006	18	0.0120	3.1	<0.005	<0.01	0.001	0.074
MKTf-33	11/1/2016	200.7/200.8	0.001	0.041	<0.002	<0.006	<0.006	<0.02	<0.0005	0.13	<0.005	0.003	0.038	0.017
	9/10/2016	200.7/200.8	0.001	0.043	<0.002	<0.006	<0.006	0.02	0.0002	0.13	<0.005	0.004	0.037	<0.01
	6/10/2016	200.7/200.8	0.002	0.04	<0.002	<0.006	<0.006	0.014	<0.0005	0.031	<0.005	0.004	0.038	0.011
	2/25/2016	200.7/200.8	0.001	0.047	<0.002	<0.006	<0.006	0.045	0.0001	0.16	<0.005	0.002	0.040	0.017
	11/9/2015	200.7/200.8	<0.005	0.062	<0.002	<0.006	<0.006	0.071	0.0006	0.24	<0.005	<0.005	0.040	<0.01
	8/21/2015	200.7/200.8	<0.005	0.054	<0.002	<0.006	<0.006	<0.02	<0.0005	0.28	<0.005	0.002	0.042	<0.01
	6/9/2015	200.7/200.8	<0.005	0.055	<0.002	<0.006	<0.006	<0.02	<0.002	0.14	<0.005	<0.005	0.044	0.028
	3/12/2015	200.7/200.8	<0.01	0.061	<0.002	<0.006	<0.006	0.026	<0.001	0.28	<0.005	<0.01	0.045	0.017
	11/17/2014	200.7/200.8	<0.005	0.064	<0.002	<0.006	<0.006	0.061	<0.001	0.24	<0.005	<0.005	0.045	0.016
MKTf-34	11/8/2016	200.7/200.8	0.003	0.057	<0.002	<0.006	<0.006	<0.02	<0.0005	3.5E-04	<0.005	0.008	0.036	0.003
	9/13/2016	200.7/200.8	0.004	0.11	<0.002	<0.006	<0.006	<0.02	<0.0005	5.3E-04	<0.005	0.016	0.037	0.003
	6/10/2016	200.7/200.8	0.005	0.1	<0.002	<0.006	<0.006	0.041	<0.0025	1.7E-03	<0.005	0.018	0.030	0.004
	2/25/2016	200.7/200.8	0.003	0.13	<0.002	<0.006	<0.006	0.017	0.0001	0.001	<0.005	0.010	0.030	0.012
	1/3/2015	200.7/200.8	<0.005	0.12	<0.002	<0.006	<0.006	<0.02	<0.0005	<0.002	<0.005	<0.02	0.027	<0.01
	8/18/2015	200.7/200.8	<0.01	0.13	<0.002	<0.006	<0.006	<0.02	<0.0025	<0.002	<0.005	<0.01	0.027	<0.01
	6/8/2015	200.7/200.8	<0.005	0.14	<0.002	<0.006	<0.006	0.11	<0.002	5.9E-03	<0.005	<0.01	0.029	0.018
	3/12/2015	200.7/200.8	<0.01	0.12	<0.002	<0.006	<0.006	0.21	<0.001	0.013	<0.005	<0.05	0.025	<0.01
	11/17/2014	200.7/200.8	<0.01	0.15	<0.002	<0.006	<0.006	<0.02	<0.001	4.1E-03	<0.005	<0.02	0.027	0.051

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS - DISSOLVED METALS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	NE	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.06	6
Well ID	DATE SAMPLED	METHOD												
MKTf-35	11/3/2016	200.7/200.8	0.001	0.23	<0.002	<0.006	<0.006	3	0.0003	2.9	<0.005	0.001	0.001	<0.01
	9/13/2016	200.7/200.8	0.001	0.17	<0.002	<0.006	<0.006	2.7	<0.0005	3.1	<0.005	0.003	0.001	0.003
	6/10/2016	200.7/200.8	0.001	0.37	<0.002	<0.006	<0.006	2.5	<0.0005	2.7	<0.005	0.002	0.001	<0.01
	2/26/2016	200.7/200.8	0.000	0.43	<0.002	<0.006	<0.006	2.8	0.0004	3.0	<0.005	0.001	0.002	0.010
	11/3/2015	200.7/200.8	<0.005	0.57	<0.002	<0.006	<0.006	2.6	<0.0005	3.0	<0.005	0.004	0.002	<0.01
	8/18/2015	200.7/200.8	<0.01	0.96	<0.002	<0.006	<0.006	2.8	<0.0025	2.9	<0.005	<0.01	<0.0025	<0.01
	6/4/2015	200.7/200.8	<0.005	0.36	<0.002	<0.006	<0.006	2.6	<0.005	3.1	<0.005	<0.005	<0.005	0.017
	3/17/2015	200.7/200.8	<0.01	0.31	<0.002	<0.006	<0.006	3.6	0.0011	3.5	<0.005	<0.01	0.003	<0.01
MKTf-36	11/8/2016	200.7/200.8	0.015	6.0	<0.002	<0.006	<0.006	13	0.0022	1.9	<0.005	0.004	0.000	0.006
	8/18/2015	200.7/200.8	0.018	6.1	<0.002	0.0064	<0.006	18	<0.0025	2.5	<0.005	<0.01	<0.0025	<0.01
	6/4/2015	200.7/200.8	0.016	6.6	<0.002	<0.006	<0.006	18	<0.005	2.4	<0.005	<0.005	<0.005	0.012
	3/17/2015	200.7/200.8	0.015	6.4	<0.002	<0.006	<0.006	19	0.0034	2.6	<0.005	<0.01	<0.001	0.047
MKTf-37	11/3/2016	200.7/200.8	0.004	0.58	<0.002	<0.006	<0.006	0.25	0.0003	0.46	<0.005	0.003	0.036	<0.01
	8/19/2015	200.7/200.9	<0.02	1.19	<0.002	<0.006	<0.006	2.6	0.0047	1.8	<0.005	<0.01	1.019	<0.02
	6/4/2015	200.7/200.8	<0.01	0.19	<0.002	<0.006	<0.006	1.8	<0.01	2.3	<0.005	<0.01	0.023	0.039
	3/17/2015	200.7/200.8	<0.005	0.16	<0.002	<0.006	<0.006	1.1	0.0071	2.7	<0.005	<0.01	0.021	0.029
MKTf-38	11/1/2016	200.7/200.8	0.001	0.044	<0.002	<0.006	<0.006	0.038	<0.0005	3.3	<0.005	0.004	0.013	<0.01
	9/13/2016	200.7/200.8	0.002	0.039	<0.002	<0.006	<0.006	<0.02	<0.0005	3.1	<0.005	0.005	0.013	0.004
	6/8/2016	200.7/200.8	0.001	0.031	<0.002	<0.006	<0.006	0.015	<0.0005	2.8	<0.005	0.006	0.013	0.007
	2/29/2016	200.7/200.8	0.001	0.03	<0.002	<0.006	<0.006	0.07	0.0000	2.3	<0.005	0.003	0.012	0.012
	11/9/2015	200.7/200.8	<0.005	0.066	<0.002	<0.006	<0.006	0.22	0.0010	3.4	<0.005	<0.05	0.019	<0.01
	8/24/2015	200.7/200.8	0.002	0.066	<0.002	<0.006	<0.006	0.094	<0.0005	3.0	<0.005	0.003	0.023	<0.01
	6/10/2015	200.7/200.8	<0.005	0.074	<0.002	<0.006	<0.006	0.31	<0.005	3.1	<0.005	<0.005	0.021	0.021
	3/16/2015	200.7/200.8	<0.01	0.14	<0.002	<0.006	<0.006	0.24	<0.001	3.1	<0.005	<0.01	0.025	0.096
MKTf-39	11/1/2016	200.7/200.8	0.004	6	<0.002	<0.006	<0.006	6.9	0.0005	1.2	<0.005	0.010	0.000	<0.01
	9/13/2016	200.7/200.8	0.005	8.9	<0.002	<0.006	<0.006	9.6	0.0004	1.7	<0.005	0.016	0.000	0.003
	6/8/2016	200.7/200.8	0.002	7.5	<0.002	<0.006	<0.006	8.3	0.0013	1.2	<0.005	0.006	0.000	<0.01
	3/3/2016	200.7/200.8	0.002	11	<0.002	<0.006	<0.006	11	0.0004	1.7	<0.005	0.007	0.000	0.009
	11/9/2015	200.7/200.8	<0.005	30	<0.002	<0.006	<0.006	29	<0.005	3.9	<0.005	<0.02	<0.005	<0.01
	8/23/2015	200.7/200.8	<0.005	44	<0.002	<0.006	<0.006	45	<0.0025	5.8	<0.005	<0.01	<0.0025	0.023
	6/10/2015	200.7/200.8	<0.01	67	<0.002	<0.006	<0.006	60	<0.01	8.8	<0.005	<0.01	<0.01	0.012
	3/16/2015	200.7/200.8	<0.01	21	<0.002	<0.006	<0.006	31	<0.005	7.0	<0.005	0.011	0.010	<0.01

Table 2 Groundwater Analyses Summary														
STANDARDS			PARAMETERS - DISSOLVED METALS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1.0	0.01	0.05	1.0	1.0	0.05	0.2	0.05	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	NE	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (March 2017)			8.55E-04	3.28	0.00624	0.0057	0.79	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL for Tap Water (MAY 2016)			5.2E-05	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.06	6
Well ID	DATE SAMPLED	METHOD												

DEFINITIONS
NE = Not established
NA = Not analyzed
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

NOTES
2) 2009 Method 6010B Total Recoverable Metals Analysis run
3) Water level too shallow to collect samples.
4) Was not sampled in September due to low recharge rate.
5) Quarterly combined with 2013 Annual sampling event.

8.17.4 MKTF WELLS
Semi-Volatile Organic Compound Analytical Result Summary

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS																							
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a) anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2- ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzo furan (mg/L)	1,4- Dichlorob enzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	Pentachloro phenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.005	NE	NE	
40 CFR 141.62 MCL			NE	NE	NE	NE	NE	0.006	NE	NE	NE	NE	0.075	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
NMED Tap Water (March 2017)			0.535	NE	0.00012	NE	NE	0.0556	NE	NE	NE	0.00482	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.0004	0.17	5.76	0.117	NE	
EPA RSL for Tap Water (MAY 2016)			0.53	0.013	0.000012	75	2	0.0056	0.0016	NE	0.2	0.0079	0.00048	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.0002	0.000041	NE	5.8	0.12	0.02
Well ID	DATE SAMPLED	METHOD																								
MKTF-4	11/2/2016	8270C	0.006	<0.01		<0.02		6.8E-03		0.02	0.007	<0.01			0.004	0.008	0.15	0.17	<0.01	<0.01	0.25		0.008	0.003		<0.01
	9/11/2016	8270C	0.005	<0.01		<0.02		3.6E-03		0.017	0.005	0.003			<0.01	0.005	0.14	0.16	<0.01	<0.01	0.22		0.007	0.004		0.003
	6/9/2016	8270C		<0.05		<0.1		0.018		0.018	0.028			<0.05	<0.05	0.13	0.13	<0.05	<0.05	0.18		<0.05	<0.05			
	2/29/2016	8270C		<0.01		<0.02		<0.01		0.026				0.008	0.008	0.17	0.19	<0.01	<0.01	0.33		0.009	<0.01			
	11/3/2015	8270C		<0.01		<0.02		<0.01		0.019				<0.01	<0.01	0.15	0.16	<0.01	<0.01	0.27		<0.01	<0.01			
	8/18/2015	8270C		<0.01		<0.02		<0.01		0.021				<0.01	<0.01	0.15	0.096	<0.01	<0.01	0.26		<0.01	<0.01			
	6/4/2015	8270C		<0.01		<0.02		<0.01		0.015				<0.01	<0.01	0.12	0.076	<0.01	<0.01	0.19		<0.01	<0.01			
	3/16/2015	8270C		<0.01		<0.02		<0.01		0.014				<0.01	<0.01	0.051	0.025	<0.01	<0.01	0.059		<0.01	<0.01			
	11/13/2014	8270C		<0.01		<0.02		<0.01		0.017				<0.01	<0.01	0.061	0.047	<0.01	<0.01	0.08		<0.01	<0.01			
	9/24/2014 ¹	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.13	0.16	<0.02	<0.01	0.19		<0.01	<0.01			
	6/4/2014	8270C		<0.01		0.021		<0.01		0.011				<0.01	<0.01	0.11	0.14	<0.02	<0.01	0.24		<0.01	<0.01			
	4/11/2014	8270C		<0.01		<0.02		<0.01		0.017				<0.01	<0.01	0.12	0.16	<0.02	<0.01	0.23		<0.01	<0.01			
MKTF-9	11/2/2016	8270C	0.004	<0.01		<0.02		0.007		0.010	0.007			<0.01	0.006	0.048	<0.01	<0.01	<0.01	0.023	<0.02	0.007	0.003		<0.01	
	9/11/2016	8270C	0.005	<0.01		<0.02		0.004		0.011	0.005			<0.01	0.004	0.064	5.2E-03	<0.01	<0.01	0.023	0.009	0.007	0.012		0.007	
	6/9/2016	8270C	0.003	<0.01		<0.02		0.004		0.009	0.005			<0.01	<0.01	0.046	5.1E-03	<0.01	<0.01	0.018		0.005	0.006			
	2/29/2016	8270C		<0.01		<0.02		<0.01		0.012				<0.01	<0.01	0.069	0.01	<0.01	<0.01	0.032		<0.01	<0.01			
	11/3/2015	8270C		<0.01		<0.02		<0.01		0.013				<0.01	<0.01	0.085	0.011	<0.01	<0.01	0.034		<0.01	<0.01			
	8/18/2015	8270C		<0.10		<0.02		<0.01		0.016				<0.01	<0.01	0.08	<0.01	<0.01	<0.01	0.023		0.011	<0.01			
	6/4/2015	8270C		<0.10		<0.02		<0.01		0.01				<0.01	<0.01	0.036	<0.01	<0.01	<0.01	0.012		<0.01	<0.01			
	3/16/2015	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.027	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/14/2014	8270C		<0.01		<0.02		0.011		<0.01				<0.01	<0.01	0.049	<0.01	<0.01	<0.01	0.021		<0.01	<0.01			
	9/18/2014	8270C		<0.01		<0.02		<0.01		0.01				<0.01	<0.01	0.031	<0.01	<0.02	<0.01	0.018		<0.01	<0.01			
	6/5/2014	8270C		<0.01		<0.02		<0.01		0.01				<0.01	<0.01	0.058	0.014	<0.02	<0.01	0.041		<0.01	<0.01			
	4/14/2014	8270C		<0.01		<0.02		<0.01		<0.01				<0.01	<0.01	0.046	0.01	<0.02	<0.01	0.031		<0.01	<0.01			
MKTF-10	11/2/2016	8270C		<0.05		0.056	<0.05	0.034	0.014	<0.05	0.037			0.039	<0.05	0.047	0.07	0.13	0.18	0.15		<0.05	0.079			
	9/11/2016	8270C		0.06		0.05	0.006	0.004		0.004	0.005			0.200	<0.01	0.051	0.077	0.69	1.1	0.15		<0.01	0.26			
	6/9/2016	8270C		<0.05		<0.1		0.018		<0.05	0.025			0.210	<0.05	0.056	0.072	0.82	0.92	0.15		<0.05	0.36			
	2/29/2016	8270C		0.042		<0.02		<0.01		<0.01				0.170	<0.01	0.057	0.08	0.77	1.0	0.2		<0.01	0.67			
	11/3/2015	8270C		0.029		<0.02		<0.01		<0.01				0.093	<0.01	0.06	0.069	0.28	0.42	0.14		<0.01	0.24			
	8/18/2015	8270C		0.06		<0.02		<0.01		<0.01				0.085	<0.01	0.14	0.13	0.45	0.65	0.25		<0.01	0.41			
	6/4/2015	8270C		<0.01		<0.02		<0.01		<0.01				0.100	<0.01	0.066	0.084	0.35	0.54	0.18		<0.01	0.28			
	3/16/2015	8270C		0.067		<0.02		<0.01		<0.01				0.110	<0.01	<0.01	0.088	0.53	0.63	0.17		<0.01	0.42			
	11/14/2014	8270C		0.054		<0.02		0.01		<0.01				0.063	<0.01	0.046	0.051	0.33	0.4	0.099		<0.01	0.29			
	9/18/2014	8270C		0.073		<0.02		<0.01		<0.01				0.090	<0.01	0.036	0.042	0.32	0.38	0.098		<0.01	0.25			
	6/6/2014	8270C		0.075		<0.02		<0.01		<0.01				0.110	<0.01	0.04	0.053	0.49	0.61	0.14		<0.01	0.37			
	4/11/2014	8270C		0.075		<0.023		<0.012		<0.012				0.120	<0.012	0.042	0.056	0.3	0.26	0.14		<0.012	0.061			
MKTF-11	11/2/2016	8270C		0.007		<0.02		0.006	0.003	0.002	0.007			<0.01	0.013	<0.01	0.015	9.5E-03	0.096	0.089	0.034		<0.01	0.04		
	9/11/2016	8270C		0.009		<0.02		0.004		<0.01	0.004			0.003	0.042	<0.01	0.012	0.009	0.13	0.12	0.03		<0.01	0.049		
	6/9/2016	8270C		0.004		<0.02		0.003		<0.01	0.005				0.022	<0.01	0.015	0.01	0.088	0.063	0.033		<0.01	0.045		
	2/29/2016	8270C		0.011		<0.02		<0.01		<0.01		</														

8.17.4 MKTF WELLS
Semi-Volatile Organic Compound Analytical Result Summary

STANDARDS			Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a) anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2- ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzo furan (mg/L)	1,4- Dichlorob enzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	Pentachloro phenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.005	NE	NE
40 CFR 141.62 MCL			NE	NE	NE	NE	NE	0.006	NE	NE	NE	NE	0.075	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
NMED Tap Water (March 2017)			0.535	NE	0.00012	NE	NE	0.0556	NE	NE	NE	NE	0.00482	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.0004	0.17	5.76	0.117	NE
EPA RSL for Tap Water (MAY 2016)			0.53	0.013	0.000012	75	2	0.0056	0.0016	NE	0.2	0.0079	0.00048	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.0002	0.000041	NE	5.8	0.12	0.02
Well ID	DATE SAMPLED	METHOD																								
MKTF-15	11/2/2016	8270C		<0.05		0.065		0.035	0.013	<0.05	0.036			<0.05	0.079	<0.05	<0.05	<0.05	0.46	0.55	0.059		<0.05	2		
	9/11/2016	8270C		<0.01		0.011		3.1E-03		0.004	0.005			0.017	0.230	<0.01	0.013	0.014	1.8	2.6	0.053		<0.01	5.8		
	9/17/2014	8270C		<0.01		<0.02		<0.01		<0.01					0.013	<0.01	0.035	0.033	0.024	<0.01	0.048		<0.01	<0.01		
	6/5/2014	8270C		<0.01		0.023		<0.01		<0.01					0.013	<0.01	0.021	0.021	0.028	<0.01	0.05		<0.01	<0.01		
	4/10/2014	8270C		<0.012		<0.025		<0.012		<0.012					0.016	<0.012	0.02	0.021	0.043	<0.012	0.048		<0.012	0.015		
MKTF-16	11/3/2016	8270C		<0.01		0.038		0.007	0.003	<0.01	0.007				0.059	0.004	0.04	0.037	0.026	0.003	0.13		<0.01	0.18		
	9/12/2016	8270C		0.006		0.024		0.004		0.004	0.004				0.084	<0.01	0.046	0.051	0.071	<0.01	0.13		<0.01	0.14		
	6/9/2016	8270C		<0.05		<0.1		0.019		<0.05	0.025				0.083	<0.05	0.035	0.038	0.061	<0.05	0.1		<0.05	0.17		
	2/29/2016	8270C		0.011		<0.02		<0.01		<0.01					0.091	<0.01	0.033	0.042	0.079	<0.01	0.11		<0.01	0.03		
	11/3/2015	8270C		0.02		<0.02		<0.01		<0.01					0.120	<0.01	0.035	0.046	0.081	<0.01	0.13		<0.01	0.057		
	8/23/2015	8270C		0.025		<0.02		<0.01		<0.01					0.130	<0.01	0.044	0.055	0.1	0.015	0.16		<0.01	0.042		
	6/8/2015	8270C		0.021		<0.02		<0.01		<0.01					0.180	<0.01	0.042	0.046	0.12	<0.1	0.14		<0.01	0.048		
	3/16/2015	8270C		0.02		<0.02		<0.01		<0.01					0.190	<0.01	0.045	0.053	0.15	<0.01	0.15		<0.01	0.031		
	11/18/2014	8270C		0.018		<0.02		0.014		<0.01					0.080	<0.01	0.047	0.051	0.14	0.016	0.13		<0.01	0.038		
	9/17/2014	8270C		0.024		<0.02		<0.01		<0.01					0.180	<0.01	0.053	0.062	0.15	0.03	0.18		<0.01	0.031		
	6/16/2014 ¹	8270C		0.011		<0.02		<0.01		<0.01					0.170	<0.01	0.037	0.042	0.22	0.16	0.14		<0.01	0.42		
	4/10/2014	8270C		0.015		<0.02		<0.01		<0.01					0.200	<0.01	0.035	0.044	0.16	0.091	0.13		<0.01	0.09		
MKTF-17	11/8/2016	8270C		<0.01		<0.02		0.007	0.003	<0.01	0.007				<0.01	0.003	0.011	<0.01	<0.01	<0.01	<0.01	7.7E-03		<0.01	0.0035	
	9/13/2016	8270C		<0.01		<0.02		0.004		<0.01	<0.01				<0.01	<0.01	6.3E-03	<0.01	<0.01	<0.01	<0.01	6.4E-03		<0.01	0.0029	
	6/10/2016	8270C		<0.01		<0.02		<0.01		<0.01	0.005				0.004	<0.01	0.026	<0.01	<0.01	<0.01	<0.01	0.062		<0.01	0.0098	
	2/26/2016	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	
	11/3/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	
	8/18/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01		<0.01	<0.01	
	6/8/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01		<0.01	<0.01	
	3/12/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01		<0.01	<0.01	
	11/18/2014	8270C		<0.01		<0.02		0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01		<0.01	<0.01	
	9/18/2014	8270C		<0.01		<0.02		<0.01		<0.01					<0.02	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01		<0.01	<0.01	
6/16/2014	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01		<0.01	0.039		
4/9/2014	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.024		<0.01	<0.01			
MKTF-18	11/8/2016	8270C	0.006	<0.01		<0.02		0.007	0.003	<0.01	0.007				<0.01	0.007	0.057	0.02	<0.01	<0.01	0.018		0.004	<0.01		
	9/13/2016	8270C	0.004	<0.01		6.4E-03		<0.01		<0.01	<0.01				<0.01	0.006	0.049	0.02	<0.01	<0.01	0.014		0.004	<0.01		
	6/10/2016	8270C	0.006	<0.01		<0.02		<0.01		<0.01	0.005				<0.01	0.004	0.054	0.014	<0.01	<0.01	0.013		0.004	<0.01		
	2/26/2016	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	0.06	0.017	<0.01	<0.01	0.016		<0.01	<0.01		
	11/3/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	0.079	0.017	<0.01	<0.01	0.023		<0.01	<0.01		
	8/18/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	0.011	0.14	0.042	<0.01	<0.01	0.042		0.012	<0.01		
	6/8/2015	8270c		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	0.077	0.013	<0.01	<0.01	0.029		<0.01	<0.01		
	3/17/2015	8270C		<0.01		<0.02		<0.01		<0.01																

8.17.4 MKTF WELLS
Semi-Volatile Organic Compound Analytical Result Summary

STANDARDS			Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a) anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2- ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzo furan (mg/L)	1,4- Dichlorob enzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	Pentachloro phenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.005	NE	NE
40 CFR 141.62 MCL			NE	NE	NE	NE	NE	0.006	NE	NE	NE	NE	0.075	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
NMED Tap Water (March 2017)			0.535	NE	0.00012	NE	NE	0.0556	NE	NE	NE	NE	0.00482	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.0004	0.17	5.76	0.117	NE
EPA RSL for Tap Water (MAY 2016)			0.53	0.013	0.000012	75	2	0.0056	0.0016	NE	0.2	0.0079	0.00048	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.0002	0.000041	NE	5.8	0.12	0.02
Well ID	DATE SAMPLED	METHOD																								
MKTF-20	11/3/2016	8270C		<0.05		0.061		0.035	0.014	<0.05	0.036			<0.05	0.430	<0.05	0.05	0.038	0.16	0.089	0.11	<0.1	<0.05	0.13		<0.05
	9/12/2016	8270C		<0.1		0.13		0.036		<0.1	0.038			0.029	0.390	<0.1	0.048	0.043	0.19	0.061	0.11	0.025	<0.1	0.061		<0.1
	6/9/2016	8270C		<0.05		<0.1		0.018		<0.05	0.025				0.230	<0.05	0.051	0.029	0.25	0.28	0.077		<0.05	0.24		<0.05
	3/1/2016	8270C		<0.01		<0.02		<0.01		<0.01					0.280	<0.01	0.036	0.023	0.096	<0.01	0.05		<0.01	0.011		<0.01
	6/8/2015	8270C		<0.01		<0.02		<0.01		<0.01					0.230	<0.01	0.037	0.036	0.049	0.13	0.056		<0.01	0.05		<0.01
	3/16/2015	8270C		<0.01		<0.02		<0.01		<0.01					0.320	<0.01	0.045	0.037	0.21	0.36	0.13		<0.01	0.21		0.016
	11/18/2014	8270C		<0.01		<0.02		0.014		<0.01					0.610	<0.01	0.11	0.066	0.12	0.051	0.1		<0.01	0.037		
	4/11/2014	8270C		0.022		<0.026		<0.013		<0.013					0.130	<0.013	0.088	0.12	0.12	0.076	0.25		<0.013	<0.013		
MKTF-21	11/3/2016	8270c		<0.1		0.11		0.064	0.027	<0.1	0.081			<0.1	0.030	<0.1	<0.1	<0.1	<0.1	0.03	0.049	<0.2	<0.1	0.03		
	9/12/2016	8270C		<0.1		0.063		0.056		<0.1	0.035			0.029	<0.1	<0.1	<0.1	<0.1	<0.1	0.42	<0.1	0.024	<0.1	0.08		
	3/1/2016	8270C		<0.01		0.036		<0.01		<0.01					0.006	<0.01	<0.01	<0.01	<0.01	0.12	<0.01		<0.01	0.037		
	6/10/2015	8270C		<0.01		<0.02		<0.01		<0.01					0.011	<0.01	<0.01	<0.01	<0.01	0.11	<0.01		<0.01	0.035		
	3/16/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	0.069	<0.01		<0.01	0.038		
	4/11/2014	8270C		<0.012		<0.025		<0.012		<0.012					0.100	<0.012	0.069	0.11	0.14	0.1	0.27		<0.012	0.013		
MKTF-34	11/8/2016	8270C		<0.01		8.3E-03		0.006		<0.01	0.007				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	9/13/2016	8270C		<0.01		8.4E-03		0.003		<0.01	<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	6/10/2016	8270C		<0.01		<0.02		0.003		<0.01	0.005				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	2/25/2016	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	11/3/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	8/18/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	6/8/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	3/12/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	11/17/2014	8270C		<0.01		<0.02		0.014		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	9/24/2014	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	4/9/2014	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.025	<0.01	<0.01		<0.01	<0.01		
MKTF-35	11/3/2016	8270C		<0.05		0.055		0.034	0.014	<0.05	0.034				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05		
	9/13/2016	8270c		<0.01		0.005		<0.01		<0.01	<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	6/10/2016	8270C		<0.01		<0.02		0.003		<0.01	0.006				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	2/26/2016	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	11/3/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	8/18/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	6/4/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	3/17/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01		
	11/21/2014	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	0.034	0.045	<0.01	<0.01	0.036		<0.01	<0.01		

8.17.4 MKTF WELLS
Semi-Volatile Organic Compound Analytical Result Summary

STANDARDS			Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a) anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2- ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzo furan (mg/L)	1,4- Dichlorob enzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	Pentachloro phenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)	
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.005	NE	NE	
40 CFR 141.62 MCL			NE	NE	NE	NE	NE	0.006	NE	NE	NE	NE	0.075	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
NMED Tap Water (March 2017)			0.535	NE	0.00012	NE	NE	0.0556	NE	NE	NE	NE	0.00482	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.0004	0.17	5.76	0.117	NE	
EPA RSL for Tap Water (MAY 2016)			0.53	0.013	0.000012	75	2	0.0056	0.0016	NE	0.2	0.0079	0.00048	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.0002	0.000041	NE	5.8	0.12	0.02	
Well ID	DATE SAMPLED	METHOD																									
MKTF-36	11/8/2016	8270C	0.005	<0.01		<0.02		0.007	0.003	0.006	0.008				<0.01	0.008	0.15	0.23	<0.01	<0.01	0.27		4.4E-03	0.028			
	8/18/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	0.012	0.34	0.51	<0.01	<0.01	0.52		<0.01	0.048			
	6/4/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	0.013	0.33	0.51	<0.01	<0.01	0.49		<0.01	0.056			
	3/17/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	0.010	0.24	0.39	<0.01	<0.01	0.47		<0.01	0.044			
	11/21/2014	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	0.16	0.23	<0.01	<0.01	0.28		<0.01	0.015			
MKTF-37	11/3/2016	8270C		<0.01		0.019		0.008		<0.01	0.007		0.003		<0.01	<0.01	0.051	0.064	0.012	3.5E-03	0.2		<0.01	7.4E-03			
	8/19/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	0.83	1.4	<0.01	<0.01	2.7		<0.01	<0.01			
	6/4/2015	8270C		<0.01		<0.01		<0.01		<0.01					<0.01	<0.01	0.074	0.11	0.028	<0.01	0.23		<0.01	<0.01			
	3/17/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	0.072	0.096	0.033	<0.01	0.16		<0.01	<0.01			
	11/21/2014	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	0.05	0.056	<0.01	<0.01	0.27		<0.01	<0.01			
MKTF-38	11/1/2016	8270C		<0.01		8.7E-03		0.006	0.003	<0.01	0.008				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	9/13/2016	8270C		<0.01		0.0046		0.003		<0.01	<0.01				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	6/8/2016	8270C		<0.01		<0.02		0.003		<0.01	0.005				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	2/29/2016	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/9/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	8/24/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	6/10/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	3/16/2015	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
	11/21/2014	8270C		<0.01		<0.02		<0.01		<0.01					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01			
MKTF-39	11/1/2016	8270C	0.003	<0.01		0.016		0.007		0.016	0.007	0.003		<0.01	<0.01	0.009	0.098	0.039	<0.01	<0.01	0.054		7.4E-03	<0.01	4.8E-03		
	9/13/2016	8270C		<0.01		0.012		0.003		0.016	<0.01	0.003		<0.01	<0.01	0.008	0.077	0.028	<0.01	<0.01	0.044		6.7E-03	<0.01			
	6/8/2016	8270C		<0.05		<0.1		0.019		0.026	0.025		0.014		<0.05	<0.05	0.11	0.042	<0.05	<0.05	0.049		0.013	<0.05			
	3/3/2016	8270C		<0.01		<0.02		<0.01		0.028					<0.01	0.010	0.11	0.037	<0.01	<0.01	0.045		7.9E-04	<0.01			
	11/9/2015	8270C		<0.01		<0.02		<0.01		0.021					<0.01	<0.01	0.089	0.032	<0.01	<0.01	0.062		<0.01	<0.01			
	8/23/2015	8270C		<0.01		<0.02		<0.01		0.025					<0.01	<0.01	0.084	0.021	<0.01	<0.01	0.051		<0.01	<0.01			
	6/10/2015	8270C		<0.01		<0.02		<0.01		0.026					<0.01	0.013	0.14	0.043	<0.01	<0.01	0.064		0.014	<0.01			
	3/16/2015	8270C		<0.01		<0.02		<0.01		0.011					<0.01	<0.01	0.056	<0.01	<0.01	<0.01	0.02		<0.01	<0.01			
	11/18/2014	8270C		<0.01		<0.02		0.012		0.021					<0.01	<0.01	0.079	<0.01	<0.02	<0.01	<0.01		<0.01	<0.01			

DEFINITIONS
NE = Not established
NA = Not analyzed
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

NOTES

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS																																		
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2-Dibro moethane (EDB) (mg/L)	Naphtha-lene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Bromo methane (mg/L)	(Methyl ethyl ketone) 2-Butanone (mg/L)	Chloro benzene (mg/L)	Chloroethane (mg/L)	Chloro-form (mg/L)	Chloro-methane (mg/L)	cis-1,2-DCE (mg/L)	1,4-Dichloro benzene (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)	1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4-Isopropyl toluene (mg/L)	4-Methyl-2-pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4-Trichlororobenzene (mg/L)	1,1,1-Trichloro ethane (mg/L)	1,1,2-Trichloro ethane (mg/L)	Trichloro ethene (TCE) (mg/L)	Vinyl Chloride (mg/L)
WQCC 20NMAC 6.2-3103			NE	NE	0.01	0.0001	NE	NE	NE	NE	NE	NE	NE	0.1	NE	0.005	NE	0.025	0.005	NE	NE	NE	NE	NE	0.1	NE	NE	NE	NE	NE	NE	0.02	NE	0.06	0.01	NE	0.001
40 CFR 141.62 MCL			NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	NE	NE	0.08	NE	0.07	0.075	NE	0.007	0.005	NE	NE	NE	NE	0.005	NE	NE	NE	NE	0.1	NE	0.005	0.07	0.2	0.005	0.005	0.002
NMED Tap Water (March 2017)			NE	NE	0.00171	0.0000747	0.00165	NE	NE	14.1	0.00754	5.56	0.0776	NE	0.00229	0.0203	0.0365	0.00482	0.00171	0.284	0.00438	NE	0.447	NE	1.24	0.106	NE	NE	NE	1.21	NE	NE	0.00398	8.0	0.000415	0.00282	0.000201
EPA RSL for Tap Water (MAY 2016)			0.015	0.12	0.017	0.0000075	1.7E-04	1.1E-03	0.036	14	0.0075	5.6	0.078	NE	0.00022	0.19	3.6E-02	4.8E-04	2.8E-03	0.28	0.001	0.038	NE	NE	6.3	0.011	1.0	0.66	2.0	1.2	0.69	0.011	0.0012	8.0	0.00028	0.00049	0.000019
Well ID	DATE SAMPLED	METHOD																																			
MKTF-4	11/2/2016	82608	0.37	0.063	0.002	<0.005	0.3	0.19	0.16	<0.05		<0.05					0.006		0.010	0.014		<0.05	0.024	0.004			0.006	0.043	0.005	0.002		<0.01		<0.005	<0.005	<0.005	<0.005
	9/11/2016	82608	0.43	0.069	0.003	<0.005	0.39	0.22	0.22	<0.05		<0.05					0.010		0.006	0.012		0.024	0.003	<0.05			0.006	0.054	0.004	0.001		<0.005		<0.005	<0.005	<0.005	
	6/9/2016	82608	0.37	0.057	<0.01		0.28	0.17	0.14	<0.1		<0.1					0.008		0.012	0.021			0.021	0.004			0.009	0.045	0.005	<0.01		<0.01		<0.01	<0.01	<0.01	
	2/29/2016	82608	0.37	0.058	0.002		0.34	0.18	0.18	0.027		0.011					0.006		0.006	0.014			0.025	0.004			0.006	0.052	0.004	0.007		<0.005		<0.005	<0.005	<0.005	
	11/3/2015	82608	0.43	0.053	<0.01		0.34	0.21	0.18	<0.1		<0.1					<0.01		<0.01	0.02			0.033	<0.01			<0.03	0.067	<0.01			<0.01		<0.01	<0.01	<0.01	
	8/18/2015	82608	0.27	0.026	<0.005		0.24	0.14	0.085	<0.05		<0.05					0.013		0.008	0.016			0.016	<0.005			<0.015	0.021	<0.005			<0.005		<0.005	<0.005	<0.005	
	6/4/2015	82608	0.27	0.023	<0.01		0.22	0.14	0.086	<0.1		<0.1					<0.01		0.021	0.022			0.021	<0.01			<0.03	0.037	<0.01			<0.01		<0.01	<0.01	<0.01	
	3/16/2015	82608	0.2	0.024	<0.01		0.17	0.096	0.089	<0.1		<0.1					<0.1		0.019	0.032			0.01	<0.01			<0.03	0.021	<0.01			<0.01		<0.01	<0.01	<0.01	
	11/13/2014	82608	0.2	0.019	<0.01		0.13	0.095	0.08	<0.1		<0.1					0.014		0.037	0.059			0.016	<0.1			<0.03	0.029	<0.01			<0.01		<0.01	<0.01	<0.01	
	9/15/2014	82608	0.096	0.012	<0.005		0.092	0.041	0.033	<0.05		<0.05					0.014		0.037	0.074			0.011	<0.005			<0.015	0.019	<0.005			<0.005		<0.005	<0.005	5.1E-03	<0.005
	6/4/2014	82608	0.27	0.049	<0.01		0.31	0.13	0.17	<0.1		<0.1					<0.01		0.011	0.021			0.02	<0.01			<0.03	0.046	<0.01			<0.01		<0.01	<0.01	<0.01	<0.01
	4/11/2014	82608	0.51	0.094	<0.02		0.43	0.18	0.28	<0.2		<0.2					<0.02		<0.02	0.028			0.028	<0.02			<0.06	0.077	<0.02			<0.02		<0.02	<0.02	<0.02	<0.02
MKTF-9	11/2/2016	82608	0.043	<0.01	<0.01	<0.01	0.029	0.064	5.6E-03	<0.1		<0.1					0.027		0.028	0.025			0.014	0.003			0.007	0.023	0.005			0.005		0.042	<0.01	3.6E-03	<0.01
	9/11/2016	82608	0.053	<0.01	<0.01	<0.01	0.039	0.076	7.5E-03	<0.1		<0.01					0.032		0.022	0.024			0.016	<0.01			0.005	0.027	0.003			0.004		0.037	<0.01	4.5E-03	<0.01
	6/9/2016	82608	0.058	0.00075	<0.001	<0.001	0.035	0.083	0.011	0.013		5.6E-03					0.03		0.032	0.032			0.016	0.002			0.007	0.029	0.004			0.007		0.04	<0.001	6.2E-03	<0.001
	2/29/2016	82608	0.065	<0.01	<0.01	<0.01	0.041	0.082	0.014	0.01		<0.1					0.027		0.029	0.036			0.018	0.002			0.007	0.032	0.004			0.005		0.046	<0.01	4.4E-03	<0.01
	11/3/2015	82608	0.073	<0.001	<0.001		0.041	0.081	0.014	<0.01		<0.01					0.03		0.027	0.033			0.019	0.003			0.009	0.038	0.006			0.007		0.048	<0.001	6.1E-03	<0.001
	8/18/2015	82608	0.05	<0.005	<0.005		0.029	0.08	<0.02	<0.05		<0.05					0.027		0.026	0.036			0.017	<0.005			<0.015	0.029	0.005			0.006		0.052	<0.005	5.9E-03	<0.005
	6/4/2015	82608	0.033	<0.005	<0.005		0.015	0.051	<0.02	<0.05		<0.05					0.03		0.028	0.055			0.015	<0.005			<0.015	0.022	<0.005			0.008		0.067	<0.005	7.6E-03	<0.005
	3/16/2015	82608	0.018	<0.005	<0.005		0.011	0.03	<0.02	<0.05		<0.05					0.036		0.034	0.074			7.4E-03	<0.005			<0.015	0.013	<0.005			0.007		0.13	<0.005	0.009	<0.005
	11/14/2014	82608	0.087	<0.01	<0.01		0.043	0.11	<0.04	<0.1		<0.1					0.024		0.035	0.068			0.014	<0.01			<0.03	0.03	<0.01			<0.01		0.096	<0.01	0.011	<0.01
	9/18/2014	82608	0.038	<0.01	<0.01		0.03	0.042	<0.04	<0.1		<0.1					0.021		0.028	0.065			<0.01	<0.01			<0.03	0.014	<0.01			<0.01		0.11	<0.01	<0.01	<0.01
	6/5/2014	82608	0.083	<0.01	<0.1		0.068	0.089	<0.04	<0.1		<0.1					0.014		0.026	0.041			0.017	<0.01			<0.03	0.033	<0.01			<0.01		0.065	<0.01	<0.01	<0.01
	4/14/2014	82608	0.074	<0.005	<0.005		0.044	0.062	<0.02	<0.05		<0.05					0.012		0.024	0.046			0.013	<0.005			<0.015	0.026	<0.005			<0.005		0.072	<0.005	8.9E-03	<0.005

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS																																		
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2-Dibromo ethane (EDB) (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Bromo methane (mg/L)	(Methyl ethyl ketone) 2-Butanone (mg/L)	Chloro benzene (mg/L)	Chloroethane (mg/L)	Chloroform (mg/L)	Chloromethane (mg/L)	cis-1,2-DCE (mg/L)	1,4-Dichloro benzene (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)	1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4-Isopropyl toluene (mg/L)	4-Methyl-2-pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4-Trichlorobenzene (mg/L)	1,1,1-Trichloro ethane (mg/L)	1,1,2-Trichloro ethane (mg/L)	Trichloro ethene (TCE) (mg/L)	Vinyl Chloride (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	0.01	0.0001	NE	NE	NE	NE	NE	NE	NE	0.1	NE	0.005	NE	0.025	0.005	NE	NE	NE	NE	NE	0.1	NE	NE	NE	NE	NE	0.02	NE	0.06	0.01	NE	0.001	
40 CFR 141.62 MCL			NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	NE	NE	0.08	NE	0.07	0.075	NE	0.007	0.005	NE	NE	NE	NE	0.005	NE	NE	NE	NE	NE	0.005	0.07	0.2	0.005	0.005	0.002	
NMED Tap Water (March 2017)			NE	NE	0.00171	0.0000747	0.00165	NE	NE	14.1	0.00754	5.56	0.0776	NE	0.00229	0.0203	0.0365	0.00482	0.00171	0.284	0.00438	NE	0.447	NE	1.24	0.106	NE	NE	NE	1.21	NE	NE	0.00398	8.0	0.000415	0.00282	0.000201
EPA RSL for Tap Water (MAY 2016)			0.015	0.12	0.017	0.0000075	1.7E-04	1.1E-03	0.036	14	0.0075	5.6	0.078	NE	0.00022	0.19	3.6E-02	4.8E-04	2.8E-03	0.28	0.001	0.038	NE	NE	6.3	0.011	1.0	0.66	2.0	1.2	0.69	0.011	0.0012	8.0	0.00028	0.00049	0.000019
Well ID	DATE SAMPLED	METHOD																																			
MKTf-17	11/8/2016	82608	0.002	<0.005	<0.005	<0.005	0.021	0.01	0.003	<0.05	<0.015	<0.05				<0.005		<0.005	<0.005			0.02	0.002			0.003	0.032	0.004	<0.005		<0.005		<0.005	<0.005	<0.005	<0.005	
	9/13/2016	82608	0.012	<0.01	<0.01	<0.01	0.014	0.013	<0.04	<0.1	9.3E-03	<0.1				<0.01		<0.01	<0.01			0.033	0.003			0.004	0.050	0.005	3.10E-03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	6/10/2016	82608	0.23	0.005	<0.001	<0.001	0.094	0.035	0.007	0.04		6.4E-03				<0.001		<0.001	<0.001			0.023	0.002			0.002	0.043	0.003		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
	2/26/2016	82608	0.002	<0.005	<0.005	<0.005	2.5E-03	<0.02	<0.02	<0.05		<0.05				<0.005		<0.005	<0.005			<0.005	0.001			<0.015	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
	11/3/2015	82608	<0.02	<0.002	<0.002		<0.004	<0.008	<0.008	<0.02		<0.02				<0.002		<0.002	<0.002			0.022	0.002			<0.006	0.041	0.005		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
	8/18/2015	82608	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01		<0.01				<0.001		<0.001	<0.001			0.019	0.002			<0.003	0.034	0.003		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
	6/8/2015	82608	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01		<0.01				<0.001		<0.001	<0.001			1.1E-03	<0.001			<0.003	0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
	3/12/2015	82608	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01		<0.01				<0.001		<0.001	<0.001			<0.001	0.001			<0.003	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
	11/18/2014	82608	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01		<0.01				<0.001		<0.001	<0.001			9.1E-03	0.003			<0.003	0.013	0.002		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
	9/18/2014	82608	<0.01	<0.01	<0.01		<0.02	<0.04	<0.04	<0.1		<0.1				<0.01		<0.01	<0.01			0.029	<0.01			<0.03	0.066	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
6/6/2014	82608	0.064	<0.01	<0.01		<0.02	<0.04	<0.04	<0.1		<0.1				<0.01		<0.01	<0.01			0.03	<0.01			<0.03	0.06	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
4/9/2014	82608	0.074	<0.01	<0.01		0.032	<0.04	<0.04	<0.1		<0.1				<0.01		<0.01	<0.01			0.037	<0.01			<0.03	0.096	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
MKTf-18	11/8/2016	82608	0.001	<0.001	0.000	<0.001	0.024	0.11	0.034	5.5E-03		<0.01				0.0029	0.0005	<0.001	0.0006			0.002	0.001			0.001	0.003	0.002			0.000	<0.002		<0.002	<0.002	<0.002	<0.002
	9/13/2016	82608	0.001	0.000	<0.001	<0.001	0.022	0.079	0.027	<0.01		<0.01				0.0027		<0.001	0.0006			0.002	0.001			0.001	0.003	0.002		0.000	<0.002		<0.001	<0.001	<0.001	<0.001	
	6/10/2016	82608	0.004	0.000	<0.001	<0.001	0.025	0.082	0.025	9.8E-03		4.4E-03				0.0036		0.0008	0.0007			0.004	0.001			0.002	0.005	0.002		0.000	<0.001	<0.001	<0.001	<0.001	<0.001		
	2/26/2016	82608	0.014	0.001	<0.001	<0.001	0.035	0.14	0.04	3.2E-03		0.0042				0.0008		0.0008	0.0004			0.006	0.002			0.003	0.007	0.003		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
	11/3/2015	82608	0.051	0.007	<0.002		0.042	0.11	0.027	<0.02		<0.02				0.0046		<0.002	<0.002			0.007	0.003			<0.006	0.011	0.004		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
	8/18/2015	82608	0.047	0.009	<0.001		0.053	0.16	0.051	<0.01		<0.01				0.0056		<0.001	<0.001			0.008	0.002			0.004	0.012	0.004		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
	6/8/2015	82608	0.051	0.012	<0.001		0.043	0.099	0.026	<0.01		<0.01				0.0045		<0.001	<0.001			0.006	0.002			<0.003	0.007	0.002		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
	3/17/2015	82608	0.065	0.019	<0.005		0.036	0.088	0.025	<0.05		<0.05				0.0056		<0.005	<0.005			<0.005	<0.005			<0.015	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
	11/18/2014	82608	0.096	0.023	<0.005		0.088	0.2	0.082	<0.05		<0.05				0.0056		<0.005	<0.005																		

Table 2
Groundwater Analyses Summary

STANDARDS			PARAMETERS																																			
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2-Dibro moethane (EDB) (mg/L)	Naphtha- lene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Bromo ethane (mg/L)	(Methyl ethyl ketone) 2-Butanone (mg/L)	Chloro benzene (mg/L)	Chloroethane (mg/L)	Chloro- form (mg/L)	Chloro- methane (mg/L)	cis-1,2-DCE (mg/L)	1,4- Dichloro benzene (mg/L)	1,1-Dichloro ethane (mg/L)	1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4- Isopropyl toluene (mg/L)	4-Methyl-2- pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4- Trichlororobe nzene (mg/L)	1,1,1- Trichloro ethane (mg/L)	1,1,2- Trichloro ethane (mg/L)	Trichloro ethene (TCE) (mg/L)	Vinyl Chloride (mg/L)		
WQCC 20NMAC 6.2.3103			NE	NE	0.01	0.0001	NE	NE	NE	NE	NE	NE	NE	0.1	NE	0.005	NE	0.025	0.005	NE	NE	NE	NE	NE	0.1	NE	NE	NE	NE	NE	0.02	NE	0.06	0.01	NE	0.001		
40 CFR 141.62 MCL			NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	NE	NE	0.08	NE	0.07	0.075	NE	0.007	0.005	NE	NE	NE	NE	0.005	NE	NE	NE	0.1	NE	0.005	0.07	0.2	0.005	0.005	0.002		
NMED Tap Water (March 2017)			NE	NE	0.00171	0.0000747	0.00165	NE	NE	14.1	0.00754	5.56	0.0776	NE	0.00229	0.0203	0.0365	0.00482	0.00171	0.284	0.00438	NE	0.447	NE	1.24	0.106	NE	NE	NE	1.21	NE	NE	0.00398	8.0	0.000415	0.00282	0.000201	
EPA RSL for Tap Water (MAY 2016)			0.015	0.12	0.017	0.0000075	1.7E-04	1.1E-03	0.036	14	0.0075	5.6	0.078	NE	0.00022	0.19	3.6E-02	4.8E-04	2.8E-03	0.28	0.001	0.038	NE	NE	6.3	0.011	1.0	0.66	2.0	1.2	0.69	0.011	0.0012	8.0	0.00028	0.00049	0.000019	
Well ID	DATE SAMPLED	METHOD																																				
MKTf-37	11/3/2016	8260B	0.47	0.07	9.3E-03	<0.01	0.38	0.066	0.081	<0.1		0.035				<0.01	0.0071	0.0260	0.1100			0.073	0.006			0.027	0.078	0.011			<0.01		8.1E-03	<0.01	0.2	<0.01		
	8/19/2015	8260B	0.88	0.27	0.013	<0.02	1.5	0.15	0.3	<0.1		<0.1			<0.01		0.0180	0.1000			0.200	0.017			0.110	0.180	0.035			<0.02		1.013	<0.02	1.27	<0.02			
	6/4/2015	8260B	0.95	0.33	0.011	<0.01	0.72	0.15	0.27	<0.01		<0.1			<0.01		0.0150	0.1000			0.150	0.021			0.140	0.190	0.045			<0.01		0.019	<0.01	0.17	<0.01			
	3/17/2015	8260B	0.24	0.11	9.1E-03	<0.001	0.088	0.03	0.038	<0.01		<0.01			<0.001		0.0180	0.0810			0.047	0.005			0.020	0.056	0.007			<0.001		8.7E-03	2.2E-03	0.12	<0.001			
	11/21/2014	8260B	0.51	0.14	0.017	0.0015	0.35	0.047	0.084	<0.01		<0.01			<0.001		0.0340	0.2100			0.078	0.005			0.026	0.082	0.011			<0.001		<0.001	1.7E-03	0.3	<0.001			
MKTf-38	11/1/2016	8260B	0.0001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01		1.3E-04	0.0024	0.0004	0.0029	0.0005			<0.001	<0.001			<0.003	0.000	<0.001			0.000	2.0E-04	<0.001	<0.001	2.2E-04	<0.001			
	9/13/2016	8260B	<0.001	<0.001	<0.001	<0.001	<0.002	0.0008	0.0006	<0.01	0.001	<0.01			0.0018	0.0021	0.0005	<0.001	<0.001	<0.001			<0.001	<0.001			<0.003	<0.001	<0.001			0.000	<0.001	<0.001	0.0002	<0.001		
	6/8/2016	8260B	<0.001	<0.001	<0.001	<0.001	<0.002	0.0052	0.0043	<0.01		<0.01			0.0023		0.0022	0.0004	<0.001	<0.001			<0.001	<0.001			<0.003	<0.001	<0.001			0.001	<0.001	<0.001	2.3E-04	6.7E-04		
	2/29/2016	8260B	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01		<0.01			0.0013	0.0007	0.0001	<0.001	<0.001	<0.001			<0.001	<0.001			<0.003	<0.001	<0.001			0.001	<0.001	<0.001	<0.001	3.7E-04		
	11/9/2015	8260B	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01		<0.01			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001			<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.001		
	8/24/2015	8260B	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01		<0.01			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001			<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.001		
	6/10/2015	8260B	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01		<0.01			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001			<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.001		
	3/16/2015	8260B	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01		<0.01			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001			<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.001		
	11/21/2014	8260B	0.0046	0.0015	<0.001		0.0055	0.0088	0.0098	<0.01		<0.01			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	0.001			<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	1.1E-03	<0.001		
	MKTf-39	11/1/2016	8260B	0.024	<0.005	<0.005	<0.005	0.086	0.15	0.049	<0.05	<0.015	<0.05		<0.005		<0.005		<0.005	<0.005			0.023	0.005			<0.015	0.008	0.028	0.012		0.001	<0.005		<0.005	<0.005	<0.005	<0.001
		9/13/2016	8260B	0.039	<0.005	<0.005	<0.005	0.08	0.16	0.056	<0.05	0.005	<0.05		<0.005		0.0014		<0.005	<0.005			0.025	0.008			<0.015	0.010	0.031	0.016		0.001	<0.005		<0.005	<0.005	<0.005	0.003
6/8/2016		8260B	0.082	0.0002	<0.001	<0.001	0.097	0.19	0.075	<0.01		<0.01			<0.001		0.0009		0.0010	0.0005			0.024	0.008			<0.003	0.010	0.033	0.015		<0.001	<0.001		<0.001	<0.001	<0.001	0.002
3/3/2016		8260B	0.066	<0.001	<0.001	<0.001	73	0.14	0.053	<0.01		<0.01			1.7E-04	0.0008			0.0011	0.0003			0.024	0.007			0.000	0.007	0.030	0.013		0.000	<0.001		<0.001	<0.001	<0.001	0.002
11/9/2015		8260B	0.085	<0.001	<0.001		0.11	0.18	0.063	<0.01		<0.01			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			0.024	0.008			<0.003	0.007	0.027	0.012		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
8/23/2015		8260B	0.098	<0.001	<0.001		0.1	0.11	0.04	<0.01		<0.01			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			0.020	0.007			<0.003	0.004	0.023	0.010		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
6/10/2015		8260B	0.12	<0.002	<0.002		0.096	0.13	0.066	<0.02		<0.02			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			0.020	0.008			<0.006	0.007	0.028	0.012		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
3/16/2015		8260B	0.064	<0.002	<0.002		0.044	0.091	0.013	<0.02		<0.02			2.2E-03		<0.002		<0.002	<0.002			0.011	0.005			0.006	<0.006	0.014	0.006		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
11/18/2014	8260B	0.043	<0.005	<0.005		0.12	0.17	0.13	<0.05		<0.05			<0.005		<0.005		<0.005	<0.005			0.015	<0.005			<0.015	0.019	0.006			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		

DEFINITIONS
NE = Not established
NA = Not analyzed
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

Table 3
Marketing Tanks Records

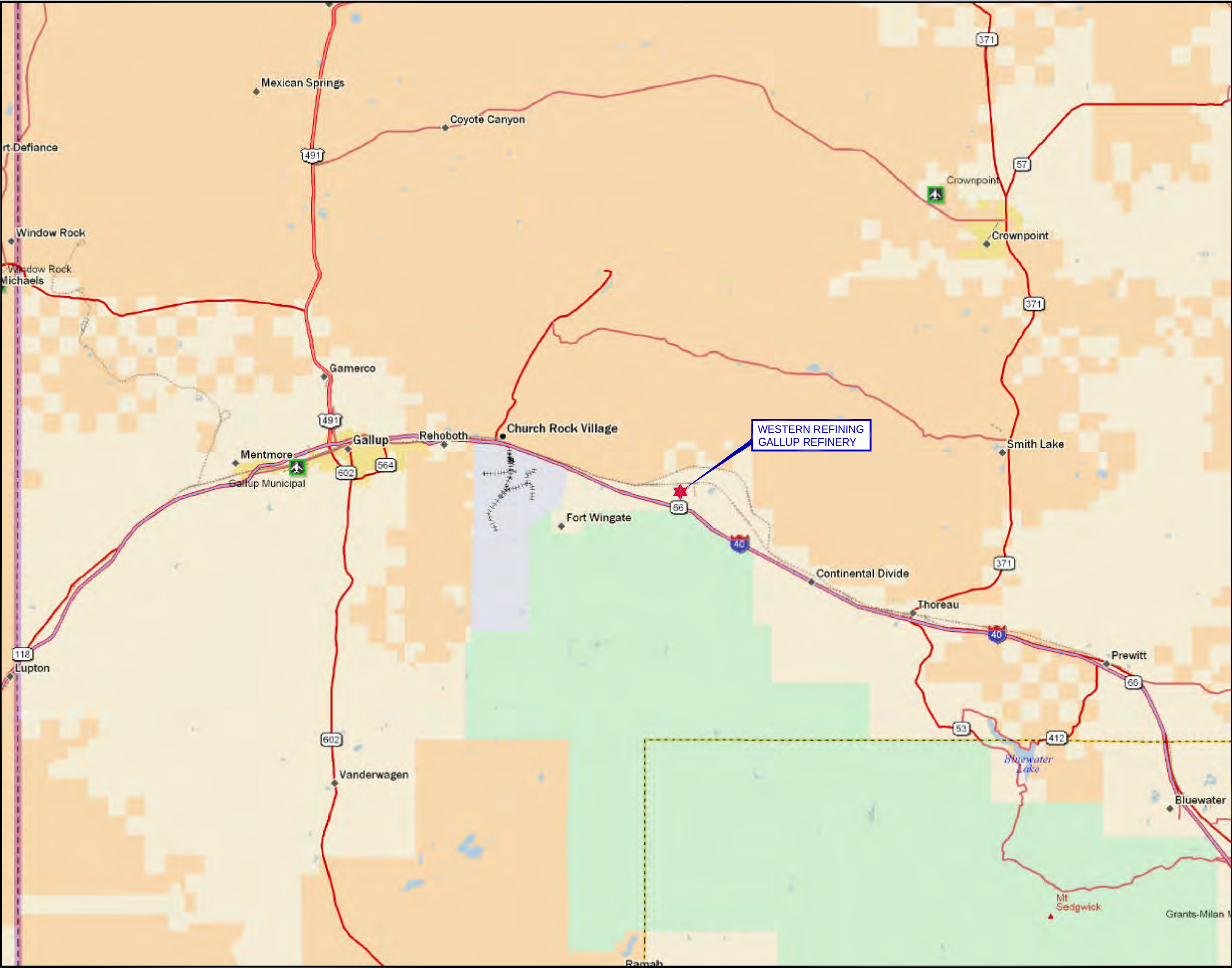
TANK NUMBER	TYPE OF TANK	YEAR BUILT	ROOF TYPE	ACTUAL CAPACITY	TANK DIAMETER	TANK HEIGHT/ LENGTH	PRODUCT
MKT-TK-01	VERT. STEEL	1965	CFRT	3000 bbl	30'-0"	24'-0"	ULSD
MKT-TK-02	VERT. STEEL	1965	IFRT	4000 bbl	30'-0"	32'-0"	83 OCTANE
MKT-TK-03	VERT. STEEL	1965	IFRT	4000 bbl	30'-0"	32'-0"	89 OCTANE
MKT-TK-04	VERT. STEEL	1970	IFRT	3800 bbl	30'-0"	32'-0"	83 OCTANE
MKT-TK-05	VERT. STEEL	1963	CFRT	1800 bbl	25'-0"	28'-0"	ETHANOL
MKT-TK-06	VERT. STEEL	1963	IFRT	1800 bbl	21'-6"	28'-0"	ETHANOL
MKT-TK-07	VERT. STEEL	2011	IFRT	91392 gal	24'-0"	32'-0"	NEW-OUT OF SERVICE
MKT-TK-08	VERT. STEEL	2011	IFRT	91392 gal	24'-0"	32'-0"	ULSD SALES
TK-1001	HORIZONTAL	unknown	FLATHEAD	3,000 gal	5'-4"	18'-0"	DIESEL
TK-1002	HORIZONTAL	unknown	FLATHEAD	3,000 gal	5'-4"	18'-0"	GASOLINE
TK-912	HORIZONTAL	unknown	FLATHEAD	8,000 gal	8'-0"	21'-0"	OUT OF SERVICE
TK-913	HORIZONTAL	unknown	FLATHEAD	8,000 gal	10'-0"	15'-0"	OUT OF SERVICE

CFRT - closed floating roof tank
IFRT - internal floating roof tank
ULSD - ultra low sulfur diesel

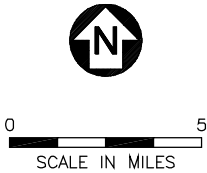
bbl - barrel
gal - gallon

Figures

- Figure 1 Site Location Map**
 - Figure 2 AOC 35 Map**
 - Figure 3 Potentiometric Map**
 - Figure 4 Benzene Concentration Map**
 - Figure 5 MTBE Concentration Map**
 - Figure 6 Proposed Sampling Locations**
-
-



Map Source: DeLorme Street Atlas USA 2007 Plus.



PROJ. NO.: Western Refining | DATE: 07/13/14 | FILE: WestRef-B198

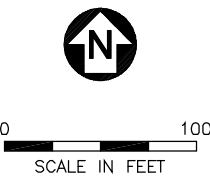
FIGURE 1
SITE LOCATION MAP
GALLUP REFINERY



8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759



Aerial Map Source: Google Map, 3/18/2016.



- LEGEND**
- AOC 35 LOCATION
 - TEMPORARY WELL LOCATION (PLUGGED)
 - MONITORING WELL LOCATION (PERMANENT WELL)



QUADRANGLE LOCATION

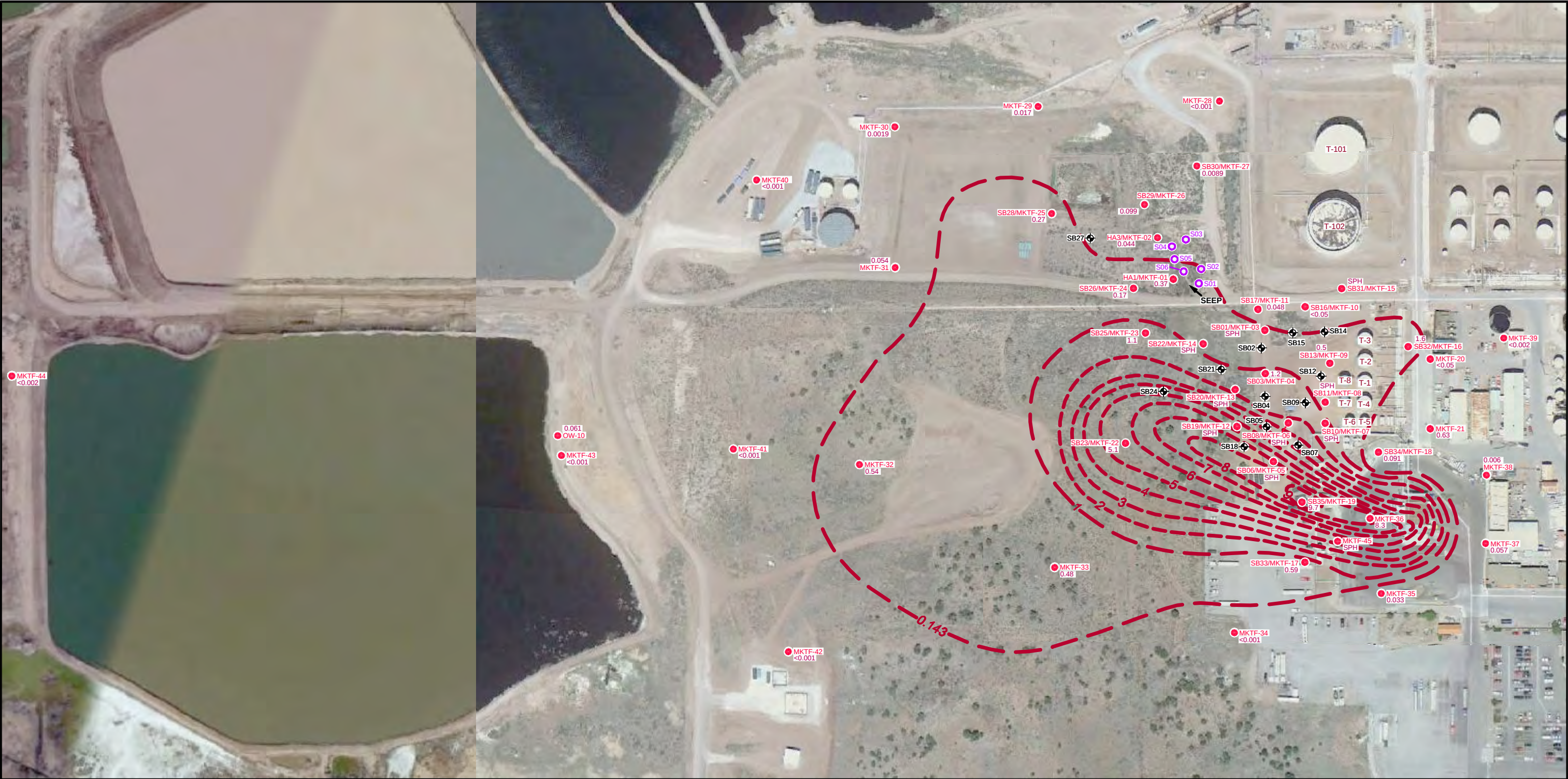


PROJ. NO.: Western Refining | DATE: 08/25/18 | FILE: WestRef-dB180

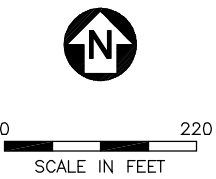
FIGURE 2
AOC 35 MAP

DiSorbo
Environmental Consulting Firm

8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759



Aerial Map Source: Google Map, 01/05/2014.



- LEGEND**
- SB01 TEMPORARY WELL LOCATION (PLUGGED)
 - S01 TEMPORARY SUMP
 - MONITORING WELL LOCATION (PERMANENT WELL)
 - 1.1 MTBE CONCENTRATION (mg/l)
 - SCREENING LEVEL = 0.143 mg/l
 - SPH SEPARATE PHASE HYDROCARBON
 - ISOCONTOUR OF MTBE CONCENTRATION (mg/l)



QUADRANGLE LOCATION

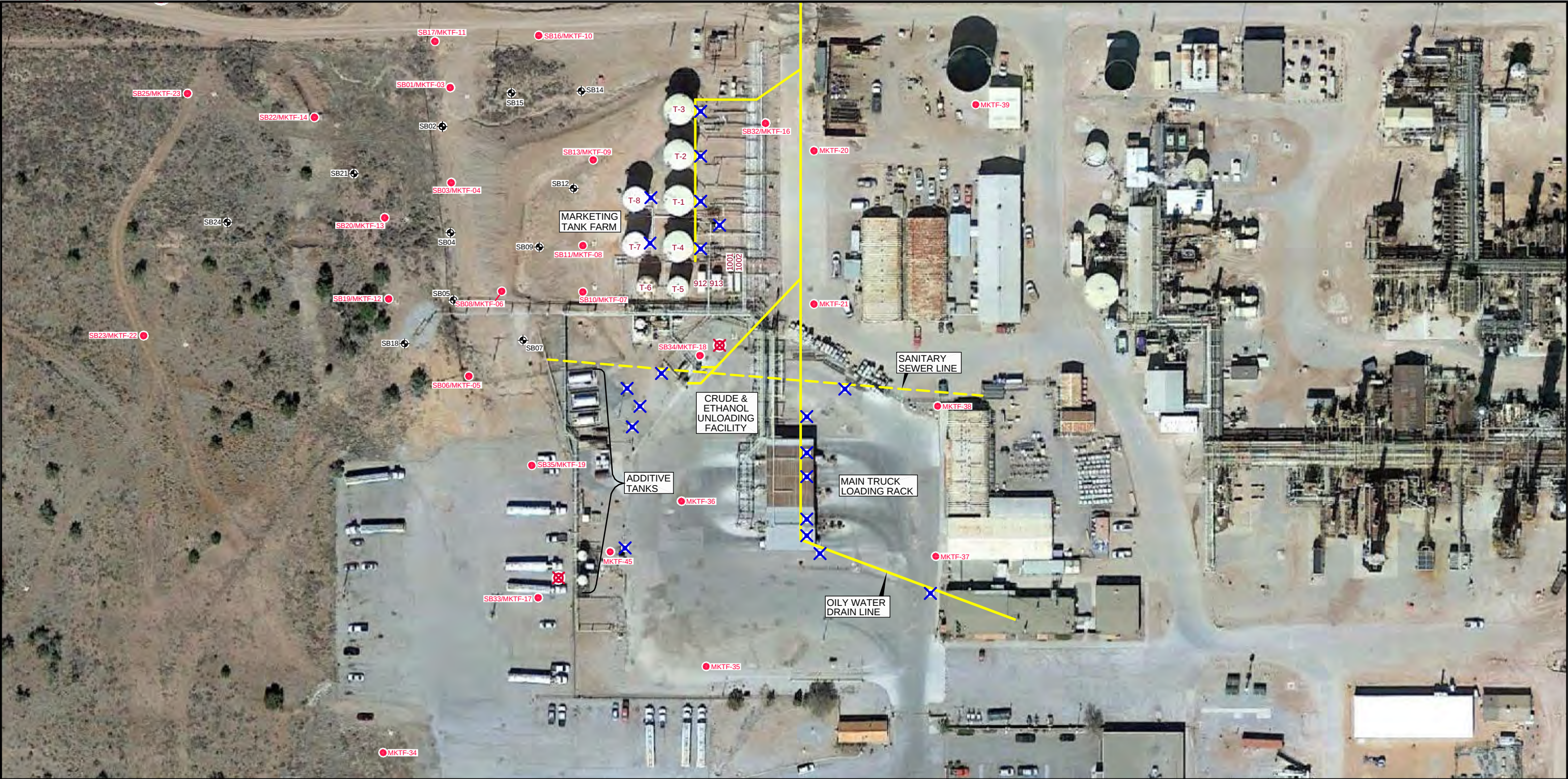


PROJ. NO.: Western Refining | DATE: 06/30/15 | FILE: WestRef-bb42

FIGURE 5
MTBE
CONCENTRATION MAP
MARCH 2015



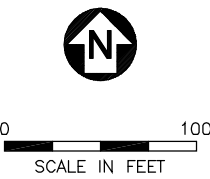
8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759



Aerial Map Source: Google Map, 3/18/2016.

LEGEND

-  PROPOSED SOIL BORING LOCATION
-  PROPOSED WELL LOCATION
-  SB01 TEMPORARY WELL LOCATION (PLUGGED)
-  MKTf-34 MONITORING WELL LOCATION (PERMANENT WELL)



QUADRANGLE LOCATION



PROJ. NO.: Western Refining | DATE: 08/26/18 | FILE: WestRef-dB181

FIGURE 6
PROPOSED SAMPLING LOCATIONS



8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759

Appendix A

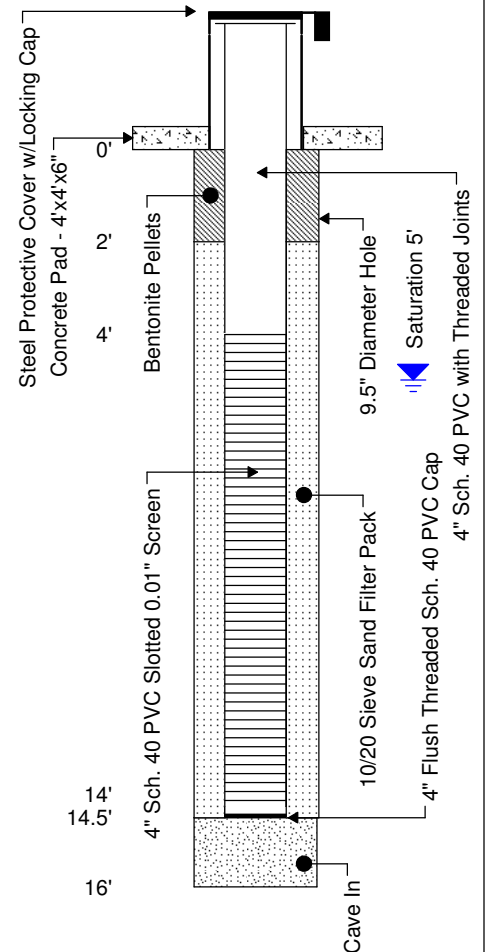
Boring Logs

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.346' W 108°25.782'; Boring ID - HA1

Total Depth: 16' bgl
Ground Water: Saturated @ 5' bgl
Elev., TOC (ft. msl): 6920.67
Elev., PAD (ft. msl): 6918.28
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,864.41 **E** 2,545,561.73

Well No.: MKTF-01
Start Date: 11/14/2013
Finish Date: 11/14/2013

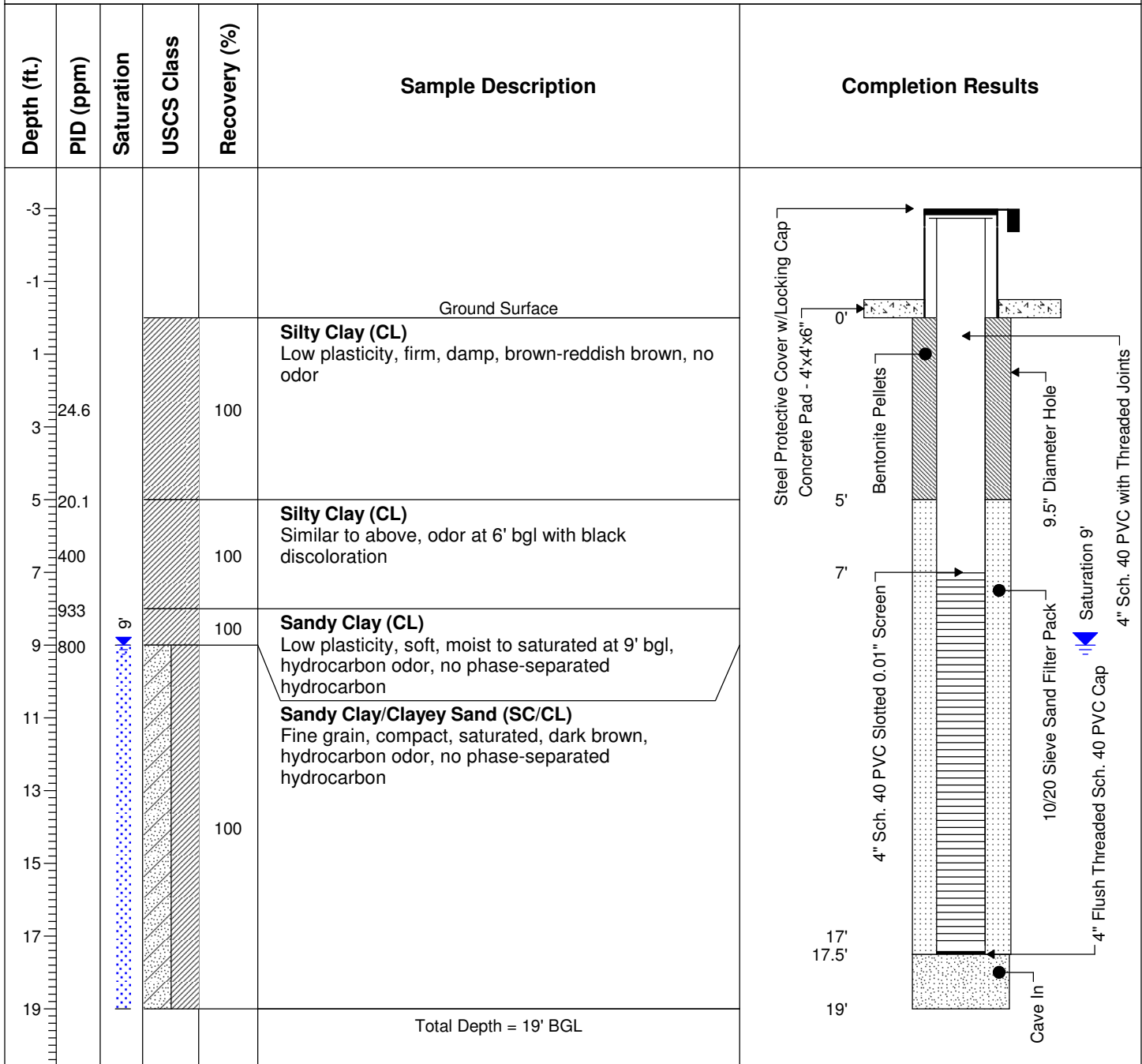
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1						
1					Ground Surface	
3				100	Silty Clay (CL) Low plasticity, soft, damp, reddish brown to brown, no odor	
5		5'				
7				100	Silty Clay/Clayey Silt (CL/ML) Low plasticity, very soft, moist to saturated, brown grading to black, gravelly, bio odor, no phase-separated hydrocarbon	
9						
11						
13						
15						
17					Total Depth = 16' BGL	
19						



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.360' W 108°25.789'; Boring ID HA3

Total Depth: 19' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6917.45
Elev., PAD (ft. msl): 6915.00
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,946.93 **E** 2,545,530.46

Well No.: MKTF-02
Start Date: 11/14/2013
Finish Date: 11/14/2013



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.328' W108°25.743'; Boring ID - SB01

Total Depth: 19' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6931.31
Elev., PAD (ft. msl): 6931.73
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,746.53 **E** 2,545,756.87

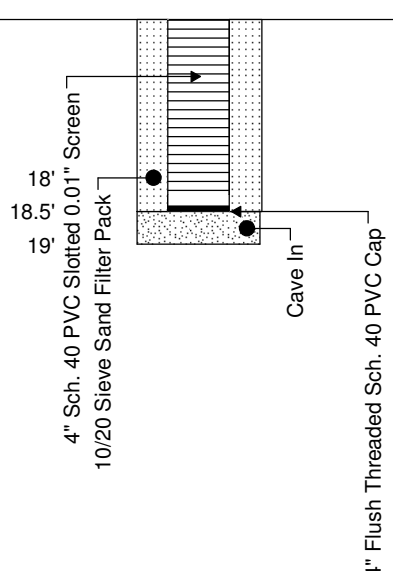
Well No.: MKTF-03
Start Date: 11/7/2013
Finish Date: 11/7/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	164			60	Fill (Silt/Sand) Fine grain, loose, dry to damp, brown, no odor	
3	423			40	Silty Clay (CL) Low plasticity, firm, damp, brown/reddish brown, no odor	
5	330			70	Silty Clay (CL) Similar to above, no odor	
7	75			90	Silty Clay (CL) Similar to above, sandy at base from 7.75-8.0' bgl, no odor	
9	326	8		90	Silty Clay (CL) Fine grain sand seams throughout, saturated, phase-separated hydrocarbon, hydrocarbon odor, clear phase-separated hydrocarbon poured out of split spoon	
11	312			90	Silty Clay (CL) Similar to above with sand seams, saturated with phase-separated hydrocarbon, hydrocarbon odor, dark brown	
13	368			80	Gravelly Sand (SW) Fine to medium to coarse grain, loose, saturated with phase-separated hydrocarbon, black, hydrocarbon odor	
15	700			60	Gravelly Sand (SW) Similar to above	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.328' W 108°25.743'; Boring ID - SB01

Total Depth: 19' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6931.31
Elev., PAD (ft. msl): 6931.73
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,746.53 **E** 2,545,756.87

Well No.: MKTF-03
Start Date: 11/7/2013
Finish Date: 11/7/2013

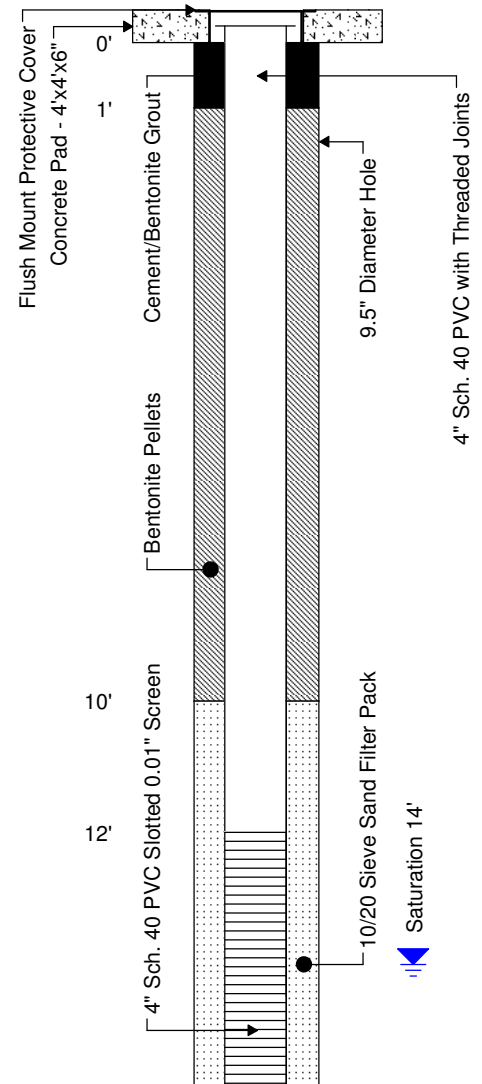
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17				10	Silty Sand/Silty Clay (SM/CL) Low plasticity, firm, moist, brown, faint odor, no phase-separated hydrocarbon	 4" Sch. 40 PVC Slotted 0.01" Screen 18' 18.5' 19' 10/20 Sieve Sand Filter Pack Cave In 4" Flush Threaded Sch. 40 PVC Cap
19	225			80	Silty Clay (CL) Poor recovery Clay (CH) High plasticity, very dense, damp, light reddish brown, faint odor	
21					Total Depth = 19' BGL	
23						
25						
27						
29						
31						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.310' W 108°25.742'; Boring ID SB03

Total Depth: 24' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6933.57
Elev., PAD (ft. msl): 6933.90
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,649.46 **E** 2,545,752.83

Well No.: MKTF-04
Start Date: 11/12/2013
Finish Date: 11/12/2013

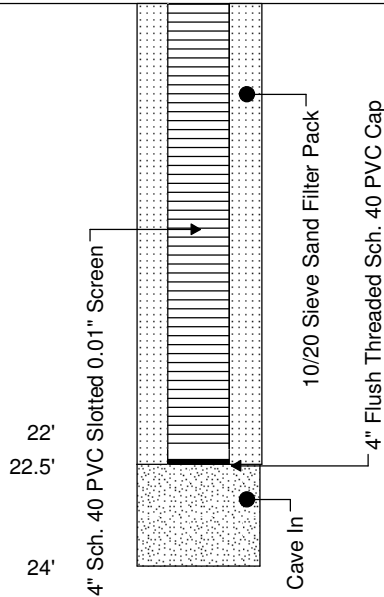
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	10.2			90	Fill (Silt/Gravel) Low plasticity, very dense, dry, light brown, no odor	
3	11.7			80	Fill (Silt/Gravel) Similar to above, black, dense at base, no odor	
5	16			90	Silty Clay (CL) Low plasticity, stiff, damp, reddish brown, no odor, calcareous	
7	26			90	Gravelly Sandy Clay (CL) Low plasticity, loose to firm, damp, brown, no odor	
9	708			70	Silty Clay (CL) Low plasticity, very soft, damp, reddish brown, hydrocarbon odor	
11	369			80	Clay (CH) High plasticity, firm, damp, reddish brown, hydrocarbon odor	
13	660			90	Sandy Clay/Clayey Sand (SC/CL) Low plasticity, fine grain, soft, damp, reddish brown, hydrocarbon odor	
15	85			90	Sandy Clay (SC) Similar to above, saturated sand seams, hydrocarbon odor, brown	



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.310' W 108°25.742'; Boring ID SB03

Total Depth: 24' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6933.57
Elev., PAD (ft. msl): 6933.90
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,649.46 **E** 2,545,752.83

Well No.: MKTF-04
Start Date: 11/12/2013
Finish Date: 11/12/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17	64			70	Sandy Clay (SC) Similar to above, moist to saturated, hydrocarbon odor, brown	 4" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 4" Flush Threaded Sch. 40 PVC Cap Cave In
19	33			90	Sandy Clay (SC) Low plasticity, fine grain, soft, moist to saturated, light reddish brown, hydrocarbon odor, gravelly at base Silty Clay (CL) Low plasticity, stiff, damp, light reddish brown grading to yellowish/greenish gray, becomes more silty at base	
21						
23						
25					Total Depth = 24' BGL	
27						
29						
31						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.282' W 108°25.739'; Boring ID - SB06

Total Depth: 15' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6942.22
Elev., PAD (ft. msl): 6939.49
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,472.30 **E** 2,545,769.95

Well No.: MKTF-05
Start Date: 11/12/2013
Finish Date: 11/12/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3					Ground Surface	
1	52.6		Fill (Silty Clay/Gravel)	60	Low plasticity, firm, damp, brown, faint odor	
3	180		Silty Clay (CL)	100	Low plasticity, firm, damp, reddish brown, odor, calcareous	
5	224		Sandy Clay/Clayey Sand (CL/SC)	90	Low plasticity, fine grain, damp, dark brown, hydrocarbon odor, sand seams present	
7	1202		Sandy Clay/Clayey Sand (CL)	90	Similar to above	
9	1228		Sandy Silty Clay (CL)	90	Low plasticity, soft, damp, dark brown, hydrocarbon odor	
11	1525		Sandy Clay (CL)	90	Similar to above, with moist to saturated sand seams, hydrocarbon odor	
13	377		Clayey Sand (SC)	90	Fine grain, loose to compact, saturated, hydrocarbon odor, dark brown	
15			Sandy Clay (CL)		Low plasticity, soft to firm, moist, dark brown, hydrocarbon odor	
17					Total Depth = 15' BGL	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.295' W 108°25.732'; Boring ID - SB08

Total Depth: 21' bgl
Ground Water: Saturated @ 17.5' bgl
Elev., TOC (ft. msl): 6946.81
Elev., PAD (ft. msl): 6944.24
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,556.28 **E** 2,545,811.85

Well No.: MKTF-06
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3					Ground Surface	Steel Protective Cover w/ Locking Cap Concrete Pad - 4'x4'x6" Bentonite Pellets 9.5" Diameter Hole 4" Sch. 40 PVC with Threaded Joints 10/20 Sieve Sand Filter Pack 4" Sch. 40 PVC Slotted 0.01" Screen
1	15.9			70	Fill (Silt/Silty Clay) Low plasticity, stiff, dry, light brown, no odor	
3	228			60	Fill (Silty Clay/Gravel) Similar to above, dry, no odor	
5	177			60	Fill (Silty Clay) Similar to above, damp, no odor	
7	264			40	Fill (Silty Clay) Low plasticity, soft, damp, brown, gravel and wood debris	
9				--	No recovery	
11	90			10	Fill (Silty Clay/Gravel) Similar to above	
13	660			100	Sandy Silty Clay (CL) Low plasticity, soft, damp to moist at base, brown, hydrocarbon odor	
15						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.295' W 108°25.732'; Boring ID - SB08

Total Depth: 21' bgl
Ground Water: Saturated @ 17.5' bgl
Elev., TOC (ft. msl): 6946.81
Elev., PAD (ft. msl): 6944.24
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,556.28 **E** 2,545,811.85

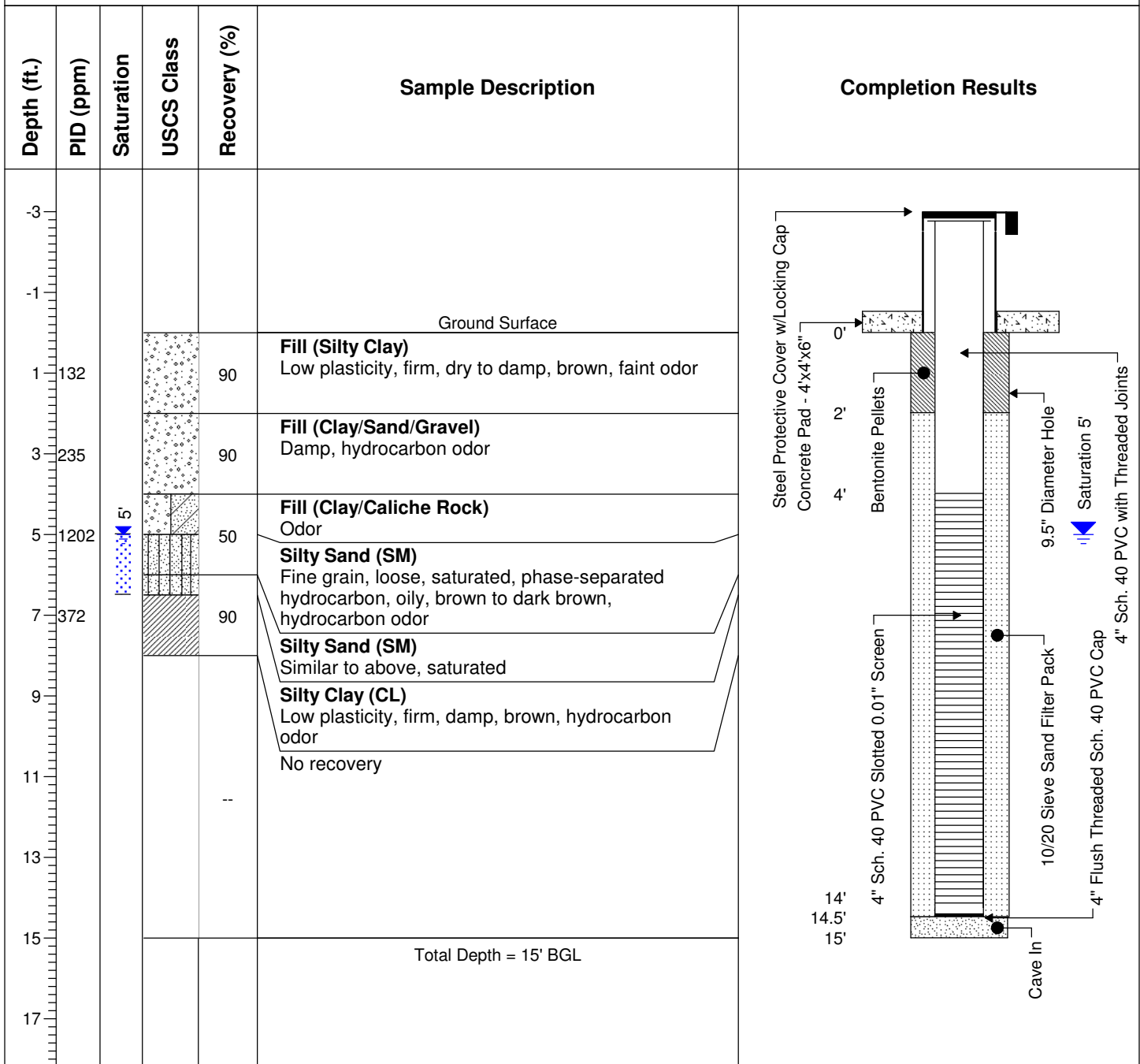
Well No.: MKTF-06
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
1115		17.5'		100	Sandy Silty Clay (CL) Similar to above, moist, oily, hydrocarbon odor	20' 20.5' 21' 10/20 Sieve Sand Filter Pack 4" Sch. 40 PVC Slotted 0.01" Screen Cave In 4" Flush Threaded Sch. 40 PVC Cap Saturation 17.5'
17				100	Gravelly Sandy Clay (CL) Low plasticity, firm, moist, oily, 1" gravel, strong hydrocarbon odor	
19				100	Clayey Gravel Sand (SC) Fine to medium grain, loose, saturated, phase-separated hydrocarbon present, black, hydrocarbon odor	
225				100	Sandy Clay (CL) Low plasticity, firm, moist, black hydrocarbon odor	
21					Total Depth = 21' BGL	
23						
25						
27						
29						
31						
33						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.295' W 108°25.710'; Boring ID - SB10

Total Depth: 15' bgl
Ground Water: Saturated @ 5' bgl
Elev., TOC (ft. msl): 6947.18
Elev., PAD (ft. msl): 6944.40
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,555.11 **E** 2,545,885.42

Well No.: MKTF-07
Start Date: 11/11/2013
Finish Date: 11/11/2013





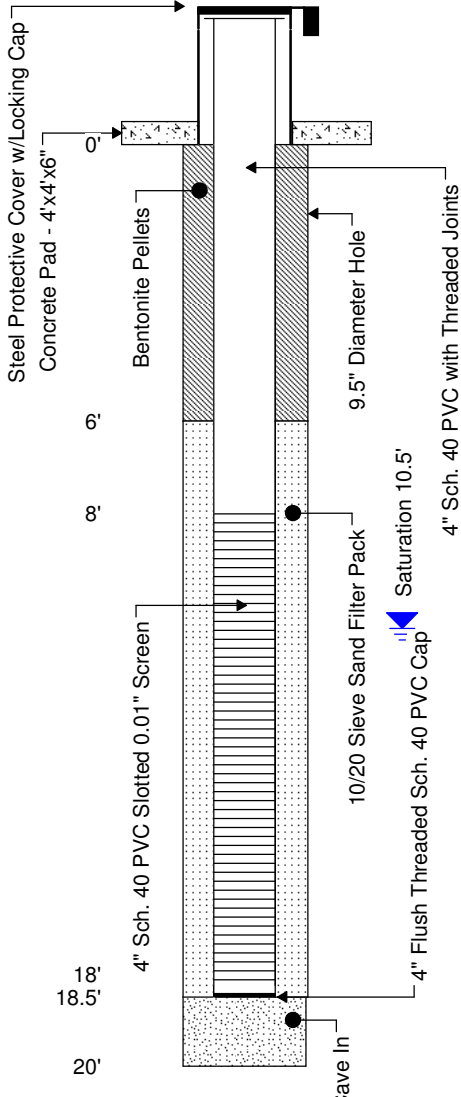
WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.302' W 108°25.716'; Bo

Total Depth: 20' bgl
Ground Water: Saturated @ 10.5' bgl
Elev., TOC (ft. msl): 6947.09
Elev., PAD (ft. msl): 6944.02
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,598.94 **E** 2,545,885.02

Well No.: MKTF-08
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	85			90	Fill (Silty Clay/Gravel) Low plasticity, firm, dry to damp, odor	
3	273			80	Fill (Silty Clay/Gravel) Similar to above	
5	86			90	Clay (CH) High plasticity, stiff, damp, brown with light brown pockets of silt, odor	
7	308			90	Silty Clay (CL) Low plasticity, soft/crumbly, dry to damp, brown, hydrocarbon odor	
9	1126			80	Silty Clay (CL) Low plasticity, soft, damp, brown, hydrocarbon odor	
11	789	10.5'		80	Silty Clay (CL) Similar to above, moist	
13	558			90	Silty Clay (CL) Medium grain, loose, saturated, phase-separated hydrocarbon, hydrocarbon odor, brown	
15					Sandy Silty Clay (CL) Low plasticity, soft to firm, moist, hydrocarbon odor	
17					Sandy Clay (CL) Low plasticity, soft to compact, saturated, phase-separated hydrocarbon, hydrocarbon odor	
19						
Total Depth = 20' BGL						



Steel Protective Cover w/ Locking Cap

Concrete Pad - 4'x4'x6"

Bentonite Pellets

9.5" Diameter Hole

4" Sch. 40 PVC with Threaded Joints

10/20 Sieve Sand Filter Pack

Saturation 10.5'

4" Flush Threaded Sch. 40 PVC Cap

4" Sch. 40 PVC Slotted 0.01" Screen

18.5'

18'

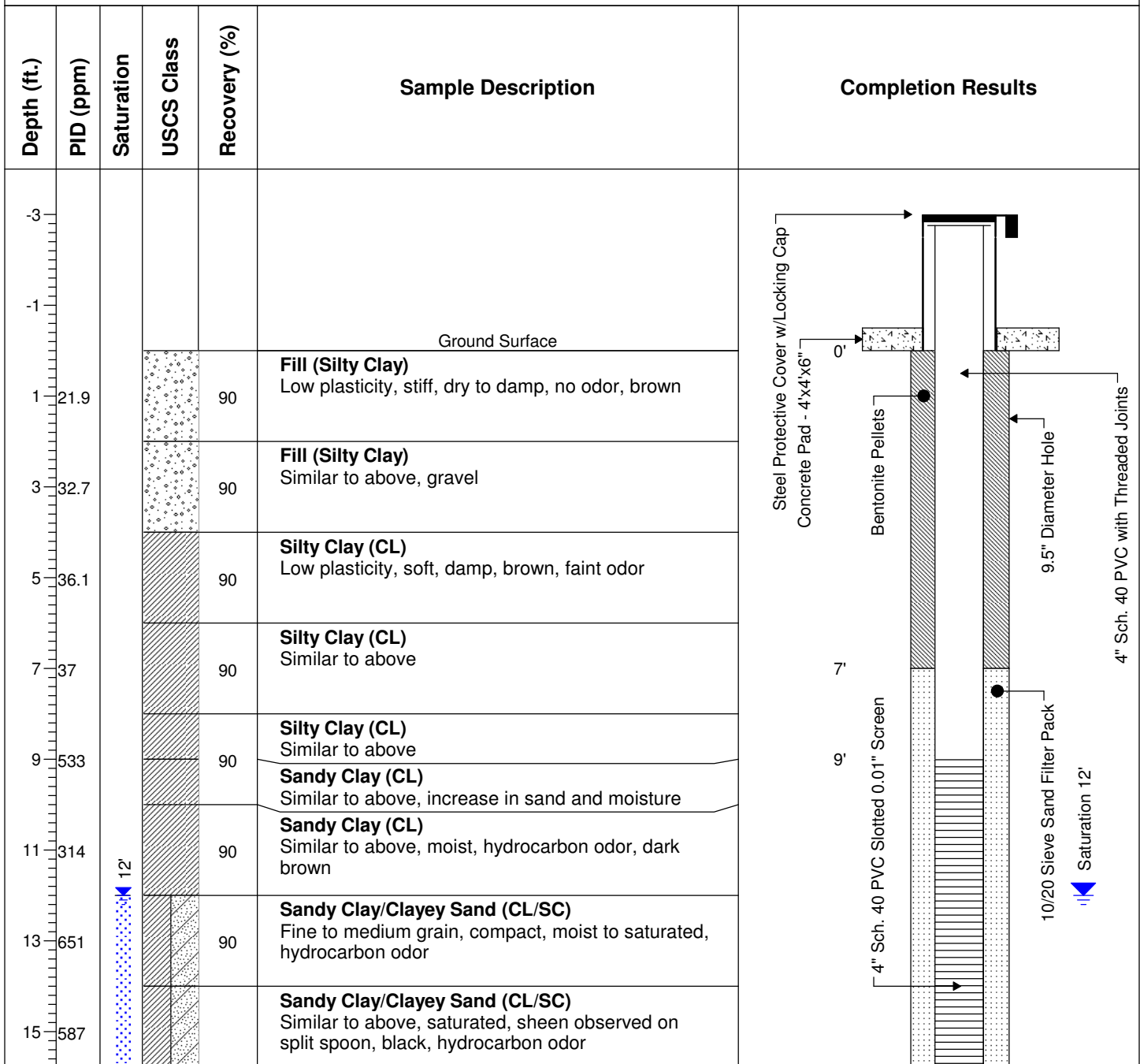
20'

Save In

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.316' W 108°25.715'; Boring ID - SB13

Total Depth: 22' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6946.50
Elev., PAD (ft. msl): 6943.57
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,681.33 **E** 2,545,895.93

Well No.: MKTF-09
Start Date: 11/11/2013
Finish Date: 11/11/2013



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.316' W 108°25.715'; Boring ID - SB13

Total Depth: 22' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6946.50
Elev., PAD (ft. msl): 6943.57
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,681.33 **E** 2,545,895.93

Well No.: MKTF-09
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17				90	Sandy Clay/Clayey Sand (CL/SC) Fine to medium grain, compact, saturated, sheen observed on split spoon, black, hydrocarbon odor	10/20 Sieve Sand Filter Pack 4" Sch. 40 PVC Slotted 0.01" Screen Cave In 4" Flush Threaded Sch. 40 PVC Cap
19					Total Depth = 22' BGL	
21						
23						
25						
27						
29						
31						
33						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.336' W 108°25.724'; Boring ID SB16

Total Depth: 18' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6937.16
Elev., PAD (ft. msl): 6937.51
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,807.47 **E** 2,545,853.54

Well No.: MKTF-10
Start Date: 10/31/2013
Finish Date: 10/31/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	90			90	Fill (Silt/Gravel) Low plasticity, loose, dry, light brown	
3	14			90	Fill (Silty Clay/Gravel) Similar to above	
5	431			90	Silty Clay (CL) Low plasticity, stiff, dry, reddish brown, odor, calcareous	
7	448			60	Sand (SP) Fine grain, loose, dry, reddish brown, odor	
9	654	9		60	Sand (SP) Similar to above, saturated at 9' bgl, phase-separated hydrocarbon, hydrocarbon odor	
11	1559			90	Clayey Sand (SC) Fine grain, soft, saturated, phase-separated hydrocarbon, brown to black, hydrocarbon odor	
13	713			90	Clayey Sand/Sandy Clay (SC/CL) Low plasticity, firm to stiff, moist to saturated, hydrocarbon odor, dark brown	
15				90		
17						
19					Total Depth = 18' BGL	
21						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.336' W 108°25.739'; Boring ID - SB17

Total Depth: 19' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6931.34
Elev., PAD (ft. msl): 6931.61
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,806.93 **E** 2,545,754.77

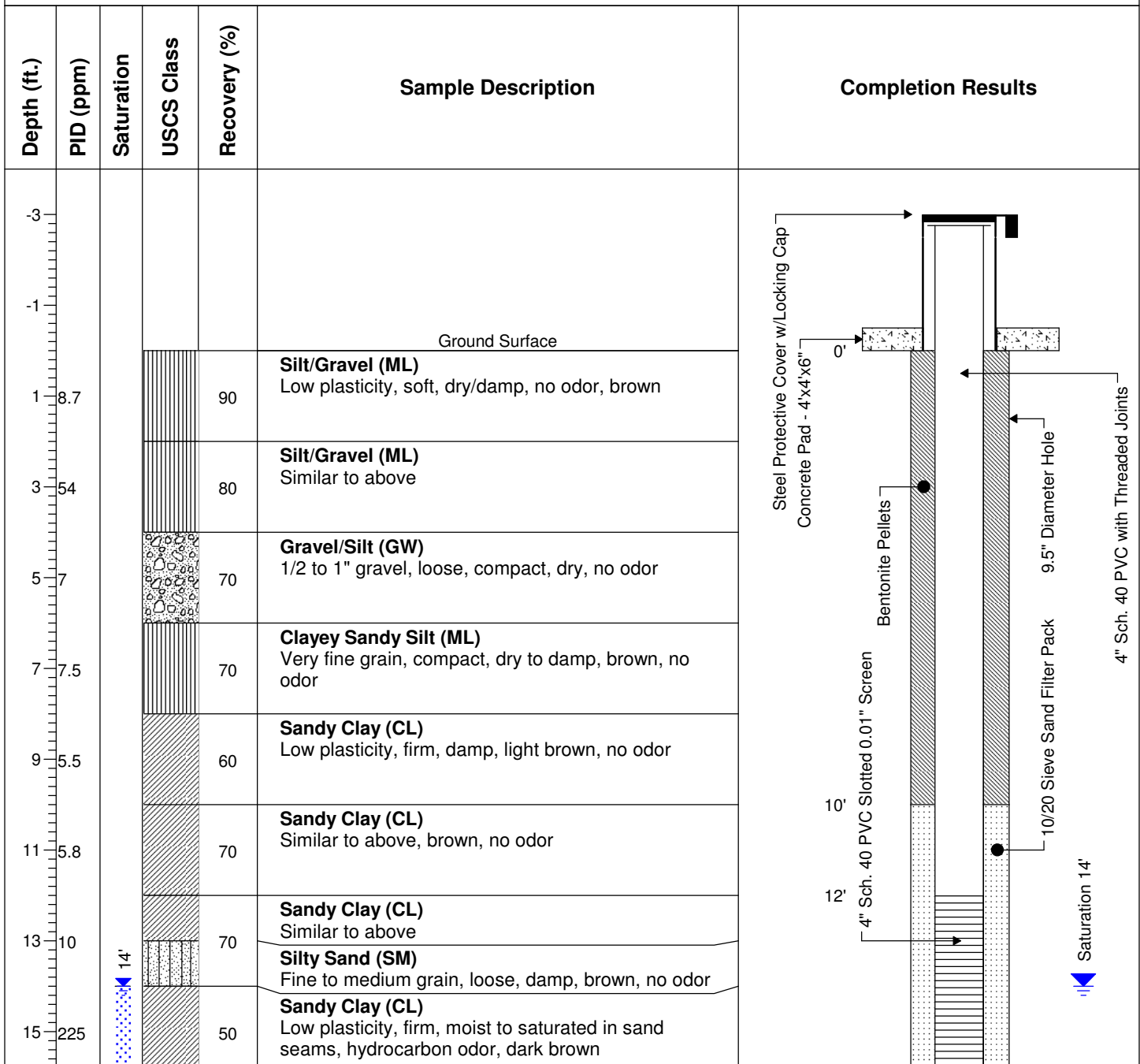
Well No.: MKTF-11
Start Date: 10/31/2013
Finish Date: 10/31/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	14			60	Fill (Silty Clay/Gravel) Low plasticity, stiff, dry, light brown	
3	36			70	Fill (Silty Clay) Similar to above	
5	80			90	Silty Clay (CL) Low plasticity, firm, damp, brown, calcareous	
7	125			80	Silty Clay (CL) Similar to above	
9	1259			80	Silty Clay (CL) Low plasticity, firm, damp, oily, hydrocarbon odor, dark brown	
11	860	12		70	Silty Clay (CL) Similar to above, moist, hydrocarbon odor, oily, phase-separated hydrocarbon	
13	1716			60	Sandy Clay (CL) Low plasticity, soft, moist to saturated, hydrocarbon odor, dark brown	
15	1050			70	Silty Sand (SM) Medium grain, loose, saturated, hydrocarbon odor, dark brown to black	
17				70	Sandy/Silty Clay (CL) Low plasticity, firm, saturated, dark brown to black, hydrocarbon odor	
19					Total Depth = 19' BGL	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.294' W 108°25.754'; Boring ID - SB19

Total Depth: 23' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6942.11
Elev., PAD (ft. msl): 6939.70
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,542.07 **E** 2,545,688.29

Well No.: MKTF-12
Start Date: 11/7/2013
Finish Date: 11/7/2013



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.294' W 108°25.754'; Boring ID - SB19

Total Depth: 23' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6942.11
Elev., PAD (ft. msl): 6939.70
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,542.07 **E** 2,545,688.29

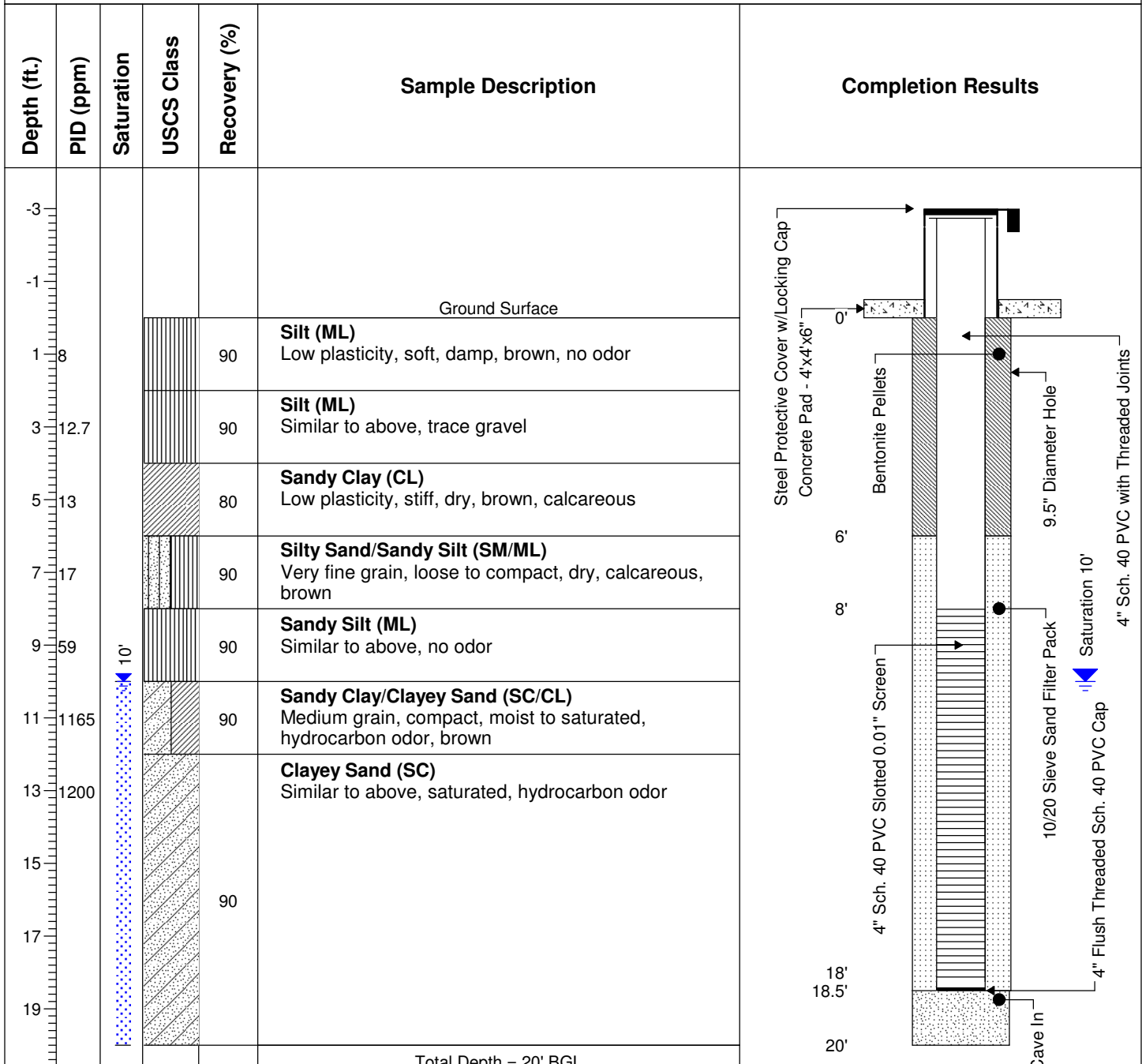
Well No.: MKTF-12
Start Date: 11/7/2013
Finish Date: 11/7/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17	319			70	Sandy Clay (CL) Similar to above, moist, hydrocarbon odor	10/20 Sieve Sand Filter Pack 4" Sch. 40 PVC Slotted 0.01" Screen 4" Flush Threaded Sch. 40 PVC Cap Cave In
19	400			--	Sandy Clay (CL) Similar to above, moist, hydrocarbon odor	
21	532			--	Sandy Clay/Clayey Sand (CL) Very fine grain, compact, moist to saturated, sheen observed in split spoon, hydrocarbon odor	
23					Total Depth = 23' BGL	
25						
27						
29						
31						
33						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.307' W 108°25.755'; Boring ID - SB20

Total Depth: 20' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6935.18
Elev., PAD (ft. msl): 6933.67
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,625.25 **E** 2,545,697.39

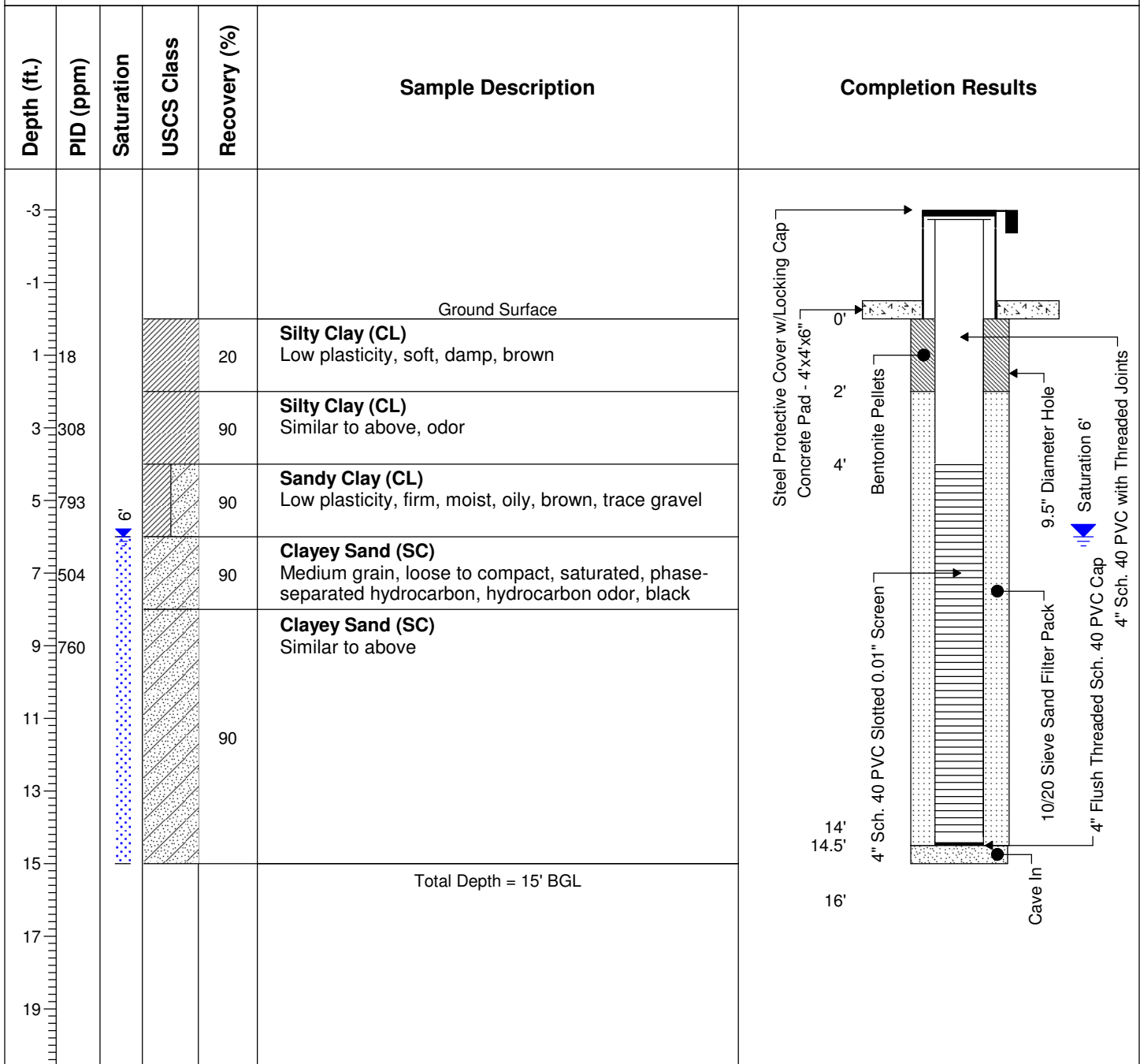
Well No.: MKTF-13
Start Date: 11/12/2013
Finish Date: 11/12/2013



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.323' W 108°25.769'; Boring ID SB22

Total Depth: 15' bgl
Ground Water: Saturated @ 6' bgl
Elev., TOC (ft. msl): 6928.02
Elev., PAD (ft. msl): 6925.65
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,719.43 **E** 2,545,625.96

Well No.: MKTF-14
Start Date: 11/12/2013
Finish Date: 11/12/2013

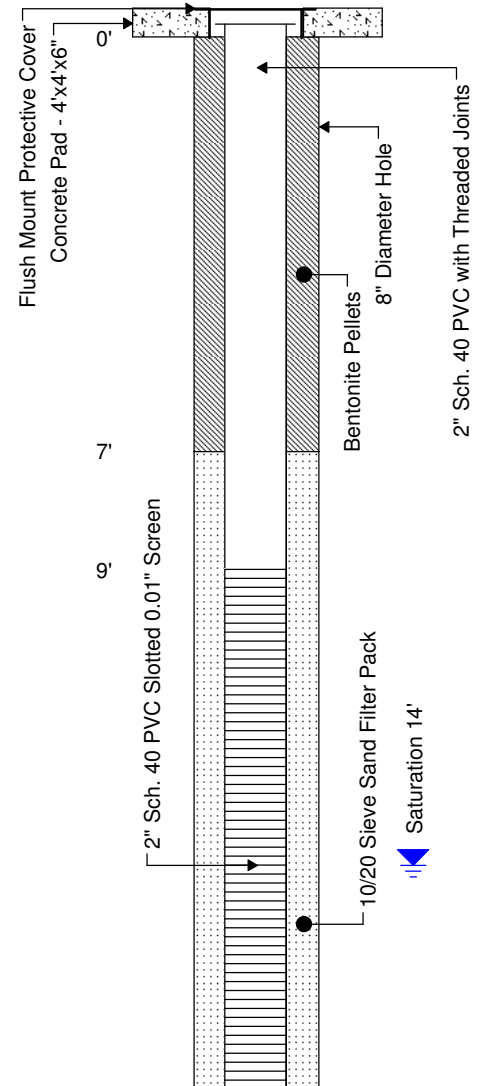


Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.343' W 108°25.708'; Boring ID - SB31

Total Depth: 22' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6943.48
Elev., PAD (ft. msl): 6943.74
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,845.57 **E** 2,545,934.58

Well No.: MKTF-15
Start Date: 10/29/2013 09:30
Finish Date: 10/29/2013 12:15

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	6.7			0	Fill (Clay and Gravel) No recovery	
3	14.6			90	Fill (Clay and Gravel) Reddish brown	
5				90	Fill (Clay and Gravel) Similar to above, no odor	
7	823			90	Fill (Silty Clay) Reddish brown, hydrocarbon odor	
9	1004			90	Silty Sandy Clay (CL) Low plasticity, firm to soft, damp, reddish brown, hydrocarbon odor	
11	293			70	Silty Sand (SM) Fine grain, compact, damp, light reddish brown, no odor	
13	221			80	Sand (SP) Similar to above, odor, moist to very moist	
15				80	Sand (SP) Fine to medium grain, loose, saturated, brown, hydrocarbon odor, phase-separated hydrocarbon present	
17				60	Sandy Silt (ML) Low plasticity, very soft, damp to moist, brown, hydrocarbon odor	



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.343' W 108°25.708'; Boring ID - SB31

Total Depth: 22' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6943.48
Elev., PAD (ft. msl): 6943.74
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,845.57 **E** 2,545,934.58

Well No.: MKTF-15
Start Date: 10/29/2013 09:30
Finish Date: 10/29/2013 12:15

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
19				90	Sandy Silt/Silty Sand (ML/SM) Fine grain, loose to compact, moist to saturated, hydrocarbon odor, dark brown to black	19' 19.33' 22' 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack Bentonite Pellets 2" Flush Threaded Sch. 40 PVC Cap
					Sandy Silt/Silty Sand (ML/SM) Similar to above, saturated in silty sand lenses, hydrocarbon odor	
21				90	Silty Clay (CL) Low plasticity, firm, damp, brown, faint odor	
					Silty Clay (CL) Similar to above, odor	
23					Total Depth = 22' BGL	
25						
27						
29						
31						
33						
35						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.323' W 108°25.680'; Boring ID - SB32

Total Depth: 16' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6950.58
Elev., PAD (ft. msl): 6951.00
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,718.14 **E** 2,546,068.55

Well No.: MKTF-16
Start Date: 11/7/2013 08:40
Finish Date: 11/7/2013 11:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	Flush Mount Protective Cover Concrete Pad - 4'x4'x6" Bentonite Pellets 2" Flush Threaded Sch. 40 PVC Cap 10/20 Sieve Sand Filter Pack 8" Diameter Hole Saturation 9' 2" Sch. 40 PVC with Threaded Joints
1				0	Fill (Clay/Gravel) No recovery	
3	469			10	Fill (Clay/Gravel) Similar to above	
5				0	Fill (Clay/Gravel) Similar to above	
7				0	Fill (Clay/Gravel) Similar to above	
9	1445	9'		90	Fill (Clay/Gravel) Saturated at 9' bgl, black discoloration, hydrocarbon odor	
11	1255			90	Gravelly Sand (SW) High plasticity, firm, damp, dark brown, hydrocarbon odor	
13	1412			40	Clayey Sand (SC) Similar to above, hydrocarbon odor	
15	439			80	Clayey Sand (SC) Moderate plasticity, firm, damp, brown, hydrocarbon odor	
17					Total Depth = 16' BGL	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.248' W 108°25.724'; Boring ID - SB33

Total Depth: 25' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6945.76
Elev., PAD (ft. msl): 6945.79
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,268.93 **E** 2,545,850.73

Well No.: MKTF-17
Start Date: 11/14/2013 13:00
Finish Date: 11/14/2013 15:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1				10	Fill (Asphalt/Base/Clay) Low plasticity, soft, damp, brown	
3	150			10	Fill (Clay) Similar to above	
5	157			90	Fill (Sand/Gravel/Clay) Moist to very moist, reddish brown, no odor	
7	92.1			20	Fill (Sand/Gravel/Clay) Similar to above, saturated, odor	
9	65.9			90	Clay (CH) High plasticity, firm, damp, faint odor, brown	
11	17			60	Clay (CH) Similar to above	
13	55			70	Clay (CH) High plasticity, soft, damp, dark brown and black, odor	
15	17.5			60	Clay (CH) Similar to above, faint odor	
17	11.3			10	Clay (CH) Similar to above, trace fine grain sand	

WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.248' W 108°25.724'; Boring ID - SB33

Total Depth: 25' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6945.76
Elev., PAD (ft. msl): 6945.79
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,268.93 **E** 2,545,850.73

Well No.: MKTF-17
Start Date: 11/14/2013 13:00
Finish Date: 11/14/2013 15:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17.2		20'		10	Clay (CH) High plasticity, soft, damp, brown	24' 24.33' 25' 10/20 Sieve Sand Filter Pack 2" Sch. 40 PVC Slotted 0.01" Screen 2" Flush Threaded Sch. 40 PVC Cap Saturation 20'
20				70	Sandy Clay (CH) Moderate plasticity, soft, very moist to saturated in sand seams	
22				80	Silty Clayey Gravel (GM) Compact to loose, medium grain sand to 1/4" gravel - angular, saturated, brown	
24				90	Clay (CH) Moderate plasticity, firm to stiff, damp, greenish gray	
Total Depth = 25' BGL						
26						
28						
30						
32						
34						
36						

WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.692'; Boring ID - SB34

Total Depth: 27' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6950.65
Elev., PAD (ft. msl): 6950.97
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,497.53 **E** 2,546,006.29

Well No.: MKTF-18
Start Date: 11/15/2013 10:00
Finish Date: 11/15/2013 15:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1			Fill (Gravel and Silty Clay)	--		
3	1009		Fill (Gravel and Silty Clay)	20	Similar to above, strong hydrocarbon odor, damp	
5	693		Fill (Gravel and Silty Clay)	60	Similar to above	
7	1108		Fill (Silty Clay)	70	Low plasticity, firm, damp, brown, gravel present, strong hydrocarbon odor	
9	901		Fill (Clay/Sand/Gravel)	90	Similar to above, saturated, odor, sheen observed	
11	803		Clay (CH)	60	High plasticity, stiff, damp, brown, hydrocarbon odor	
13	254		Clay (CH)	70	Similar to above, very fine grain, sand in partings	
15	200		Clay (CH)	30	Similar to above	
17				--	No recovery	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.692'; Boring ID - SB34

Total Depth: 27' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6950.65
Elev., PAD (ft. msl): 6950.97
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,497.53 **E** 2,546,006.29

Well No.: MKTF-18
Start Date: 11/15/2013 10:00
Finish Date: 11/15/2013 15:00

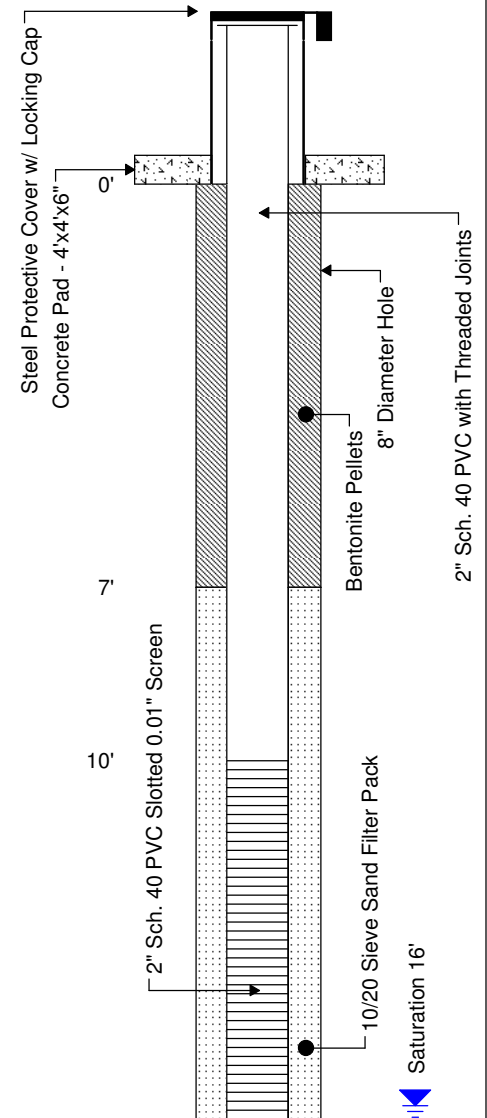
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
112				30	Clay (CH) High plasticity, firm, damp, brown, faint odor	2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack Saturation 23' 2" Flush Threaded Sch. 40 PVC Cap 27' 27.5'
20				20	Clay (CH) Similar to above	
55						
22						
323				80	Clay (CH) Similar to above	
24					Sandy Clay/Clayey Sand (SC/CL) Fine grain, compact, very moist to saturated, brown, hydrocarbon present	
					Clayey Sand (SC) Similar to above, saturated	
26				90	Sandy Clay (CL) Low plasticity, firm, damp, hydrocarbon odor, greenish gray	
					Total Depth = 27' BGL	
28						
30						
32						
34						
36						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): --
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): --
Site Coordinates:
N **W**

Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1				-	Fill (Asphate/Base/Clay) Odor	
3	1178			50	Fill (Silty Clay/Sandy Gravel) Brown, strong hydrocarbon odor	
5	1232			90	Fill (Silty Clay/Sandy Gravel) Similar to above, gray discoloration, strong hydrocarbon odor	
7	120			80	Clay (CH) High plasticity, stiff, damp, brown, odor, calcareous, sampling tube is oily	
9	375			70	Clay (CH) Similar to above, odor, oily	
11	601			70	Silty Sandy Clay (CL) Moderate plasticity, firm, damp, brown, hydrocarbon odor, sampling tube is oily	
13	1279			70	Sandy Clay (CL) Low plasticity, soft, damp to moist in sand seams, brown, strong hydrocarbon odor	
15	249			90	Sandy Clay (CL) Similar to above, hydrocarbon odor, tube is oily	
16'						



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): --
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): --
Site Coordinates:
N **W**

Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

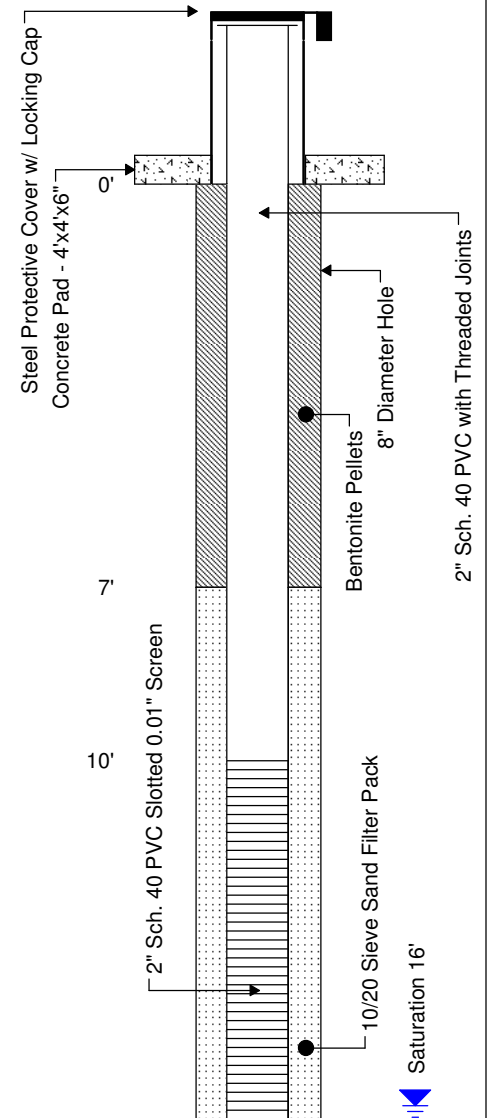
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
18				90	Silty Sand (SM) Fine grain, loose, saturated, oily/phase-separated hydrocarbon, hydrocarbon odor, clay at base	20' 20.33' 20.5' 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 2" Flush Threaded Sch. 40 PVC Cap
20				90	Silty Sand (SM) Similar to above	
					Total Depth = 20' BGL	
22						
24						
26						
28						
30						
32						
34						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): 6944.67
Elev., PAD (ft. msl): 6944.89
Elev., GL (ft. msl): 6944.34
Site Coordinates:
N 1633381.19 **E** 2545842.82

Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1				-	Fill (Asphalt/Base/Clay) Odor	
3	1178			50	Fill (Silty Clay/Sandy Gravel) Brown, strong hydrocarbon odor	
5	1232			90	Fill (Silty Clay/Sandy Gravel) Similar to above, gray discoloration, strong hydrocarbon odor	
7	120			80	Clay (CH) High plasticity, stiff, damp, brown, odor, calcareous, sampling tube is oily	
9	375			70	Clay (CH) Similar to above, odor, oily	
11	601			70	Silty Sandy Clay (CL) Moderate plasticity, firm, damp, brown, hydrocarbon odor, sampling tube is oily	
13	1279			70	Sandy Clay (CL) Low plasticity, soft, damp to moist in sand seams, brown, strong hydrocarbon odor	
15	249			90	Sandy Clay (CL) Similar to above, hydrocarbon odor, tube is oily	
16'						



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): 6944.67
Elev., PAD (ft. msl): 6944.89
Elev., GL (ft. msl): 6944.34
Site Coordinates:
N 1633381.19 **E** 2545842.82

Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
18				90	Silty Sand (SM) Fine grain, loose, saturated, oily/phase-separated hydrocarbon, hydrocarbon odor, clay at base	20' 20.33' 20.5' 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 2" Flush Threaded Sch. 40 PVC Cap
20				90	Silty Sand (SM) Similar to above	
					Total Depth = 20' BGL	
22						
24						
26						
28						
30						
32						
34						

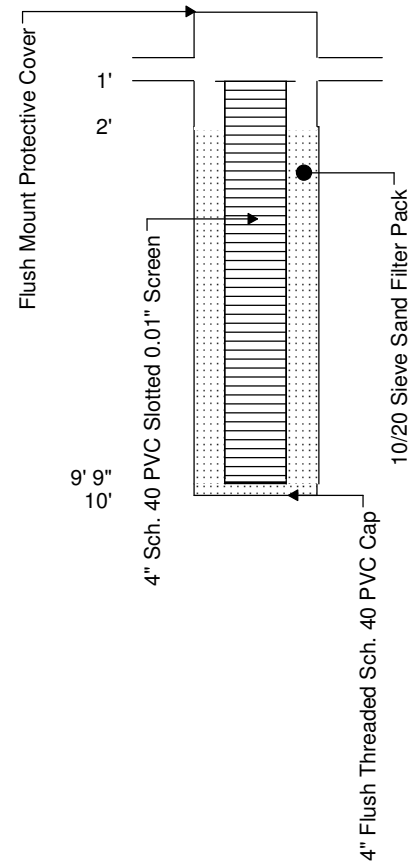
WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Not Applicable
Driller: Western Refining Southwest, Inc.
Drilling Rig: Not Applicable
Drilling Method: Not Applicable
Sampling Method: Not Applicable
Comments: N 35°29.319' W 108°25.674'; Boring ID: Sump-N

Total Depth: 10' bgl
Ground Water: 7.86' ft. BTOC
Elev., TOC (ft. msl): 6951.78
Elev., PAD (ft. msl): 6951.89
Elev., GL (ft. msl): 6951.17
Site Coordinates:
N 1633698.28 **E** 2546111.23

Well No.: MKTF-20
Start Date: 2/10/2014
Finish Date: 2/10/2014

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1						
1					Ground Surface	
3					Fill Material	
5						
7						
9						
11					Total Depth = 10' BGL	
13						
15						
17						
19						



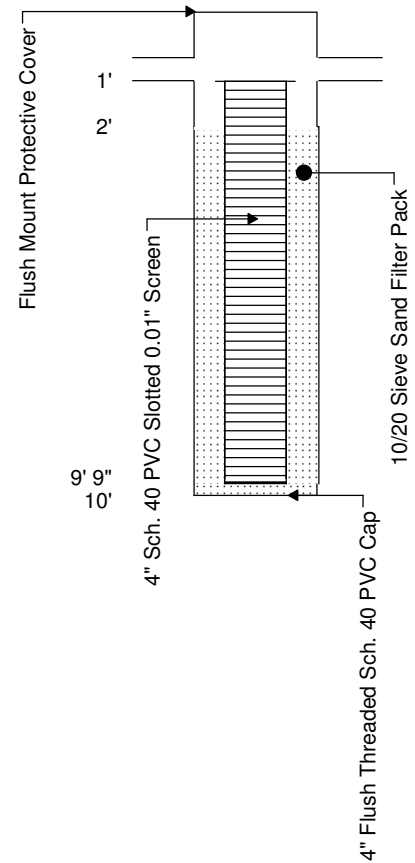
WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Not Applicable
Driller: Western Refining Southwest, Inc.
Drilling Rig: Not Applicable
Drilling Method: Not Applicable
Sampling Method: Not Applicable
Comments: N 35°29.295' W 108°25.675'; Boring ID: Sump-S

Total Depth: 10' bgl
Ground Water: 7.60' ft. BTOC
Elev., TOC (ft. msl): 6952.57
Elev., PAD (ft. msl): 6952.68
Elev., GL (ft. msl): 6952.00
Site Coordinates:
N 1633570.30 **E** 2546110.00

Well No.: MKTF-21
Start Date: 2/10/2014
Finish Date: 2/10/2014

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1						
1					Ground Surface	
3					Fill Material	
5						
7						
9						
11					Total Depth = 10' BGL	
13						
15						
17						
19						



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.802'; Boring ID - SB23

Total Depth: 32' bgl
Ground Water: Saturated @ 26' bgl
Elev., TOC (ft. msl): 6942.31
Elev., PAD (ft. msl): 6939.76
Elev., GL (ft. msl): 6938.57
Site Coordinates:
N 1633501.64 **E** 2545478.20

Well No.: MKTF-22
Start Date: 11/8/2013 12:15
Finish Date: 11/8/2013 15:30

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	3.4			10	Clayey Silt (ML) Low plasticity, very fine grain, compact to loose, damp, tan, no odor	
3	8.9			20	Clayey Silt (ML) Similar to above	
5	7.0			20	Clayey Silt (ML) Similar to above	
7	7.9			50	Clayey Silt (ML) Similar to above, light brown, no odor	
9	6.4			40	Clayey Silt (ML) Low plasticity, stiff, damp, light brown, no odor	
11	13.7			50	Clayey Silt (ML) Similar to above	
13	12.7			10	Clayey Silt (ML) Similar to above, very stiff	
15	10.1			70	Clayey Silt (ML) Very fine grain, stiff, damp, brown, no odor, becomes sandy at base	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.802'; Boring ID - SB23

Total Depth: 32' bgl
Ground Water: Saturated @ 26' bgl
Elev., TOC (ft. msl): 6942.31
Elev., PAD (ft. msl): 6939.76
Elev., GL (ft. msl): 6938.57
Site Coordinates:
N 1633501.64 **E** 2545478.20

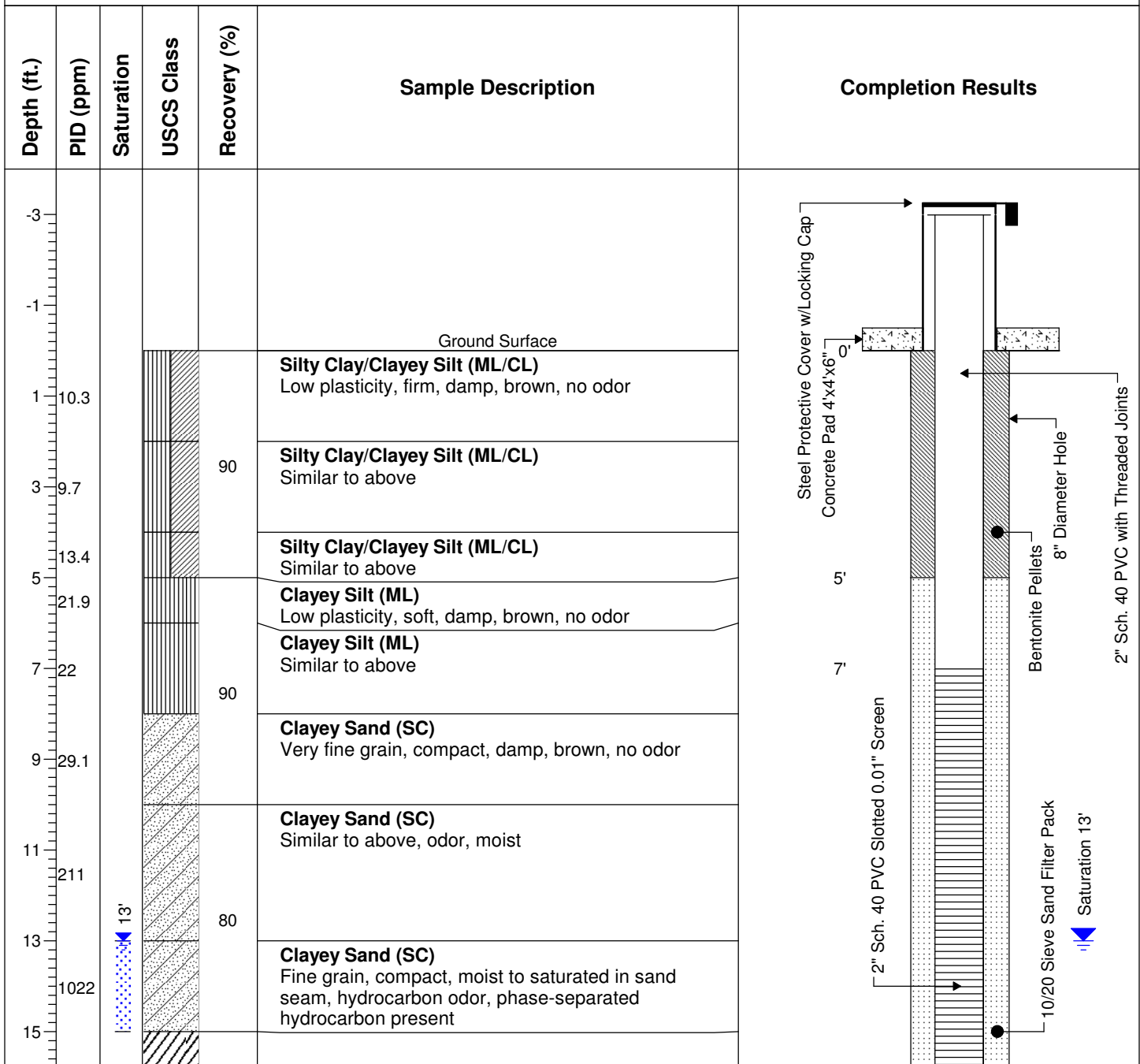
Well No.: MKTF-22
Start Date: 11/8/2013 12:15
Finish Date: 11/8/2013 15:30

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17	13.2			10	Silty Clay/Clayey Silt (CL) Similar to above, increase in clay, damper, no odor	
19	17.2			90	Silty Clay (CL) Low plasticity, firm, damp, brown, no odor	
21	14.1			90	Sandy Clay (CL) Low plasticity, soft, damp, brown, no odor	
23	43.1			90	Sandy Clay (CL) Similar to above, damp, faint odor	
25	73.1			90	Sandy Clay (CL) Similar to above, very moist in sand seams, hydrocarbon odor	
27		26'		90	Silty Sand (SM) Fine to medium grain, loose, saturated, brownish gray, hydrocarbon odor	
29				90	Clayey Silt (ML) Very fine grain, soft, moist, dark brown, hydrocarbon odor	
31				90	Sand (SP) Fine to medium grain, loose, saturated, brown, odor	
33				90	Silty Clay (CL) Low to moderate plasticity, firm, damp, brown and light olive/gray, no odor at base	
					Silty Clay (CL) Low plasticity, firm, damp, greenish gray, no odor	
Total Depth = 32' BGL						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.327' W 108°25.795'; Boring ID - SB25

Total Depth: 20' bgl
Ground Water: Saturated @ 13' bgl
Elev., TOC (ft. msl): 6929.98
Elev., PAD (ft. msl): 6927.23
Elev., GL (ft. msl): 6925.79
Site Coordinates:
N 1633750.93 **E** 2545503.70

Well No.: MKTF-23
Start Date: 11/4/2013 14:00
Finish Date: 11/4/2013 16:00



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.327' W 108°25.795'; Boring ID - SB25

Total Depth: 20' bgl
Ground Water: Saturated @ 13' bgl
Elev., TOC (ft. msl): 6929.98
Elev., PAD (ft. msl): 6927.23
Elev., GL (ft. msl): 6925.79
Site Coordinates:
N 1633750.93 **E** 2545503.70

Well No.: MKTF-23
Start Date: 11/4/2013 14:00
Finish Date: 11/4/2013 16:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
32.6					Clay (CH) High plasticity, stiff, damp, brown, no odor	
17				90		
28.9					Sandy Clay (CL) Moderate plasticity, firm, damp, brown and gray, no odor	
19						
22.7						
21					Total Depth = 20' BGL	
23						
25						
27						
29						
31						
33						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.342' W 108°25.800'; Boring ID - SB26

Total Depth: 30' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6928.72
Elev., PAD (ft. msl): 6926.07
Elev., GL (ft. msl): 6924.62
Site Coordinates:
N 1633853.19 **E** 2545468.48

Well No.: MKTF-24
Start Date: 10/29/2013 13:15
Finish Date: 10/29/2013 16:15

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3					Ground Surface	Steel Protective Cover w/Locking Cap Concrete Pad 4'x4'x6" 8" Diameter Hole 2" Sch. 40 PVC with Threaded Joints Bentonite Pellets
1	14.1			90	Silt/Silty Sand (ML/SM) Very fine to fine grain, loose, dry, brown	
3	11.2			10	Silty Sand (SM) Fine grain, compact/very dense, damp, brown	
5	12.5			90	Silty Sandy Clay (CL) Low plasticity, very dense, damp, brown	
7	11.8			90	Silty Sandy Clay (CL) Similar to above	
9	14.8			60	Silty Sandy Clay (CL) Similar to above	
11	12.5			90	Silty Sandy Clay (CL) Similar to above	
13	12.8			90	Silty Sandy Clay (CL) Similar to above	
15	13.4			90	Clay (CH) High plasticity, firm, damp, brown, trace silt, no odor	

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.342' W 108°25.800'; Boring ID - SB26

Total Depth: 30' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6928.72
Elev., PAD (ft. msl): 6926.07
Elev., GL (ft. msl): 6924.62
Site Coordinates:
N 1633853.19 **E** 2545468.48

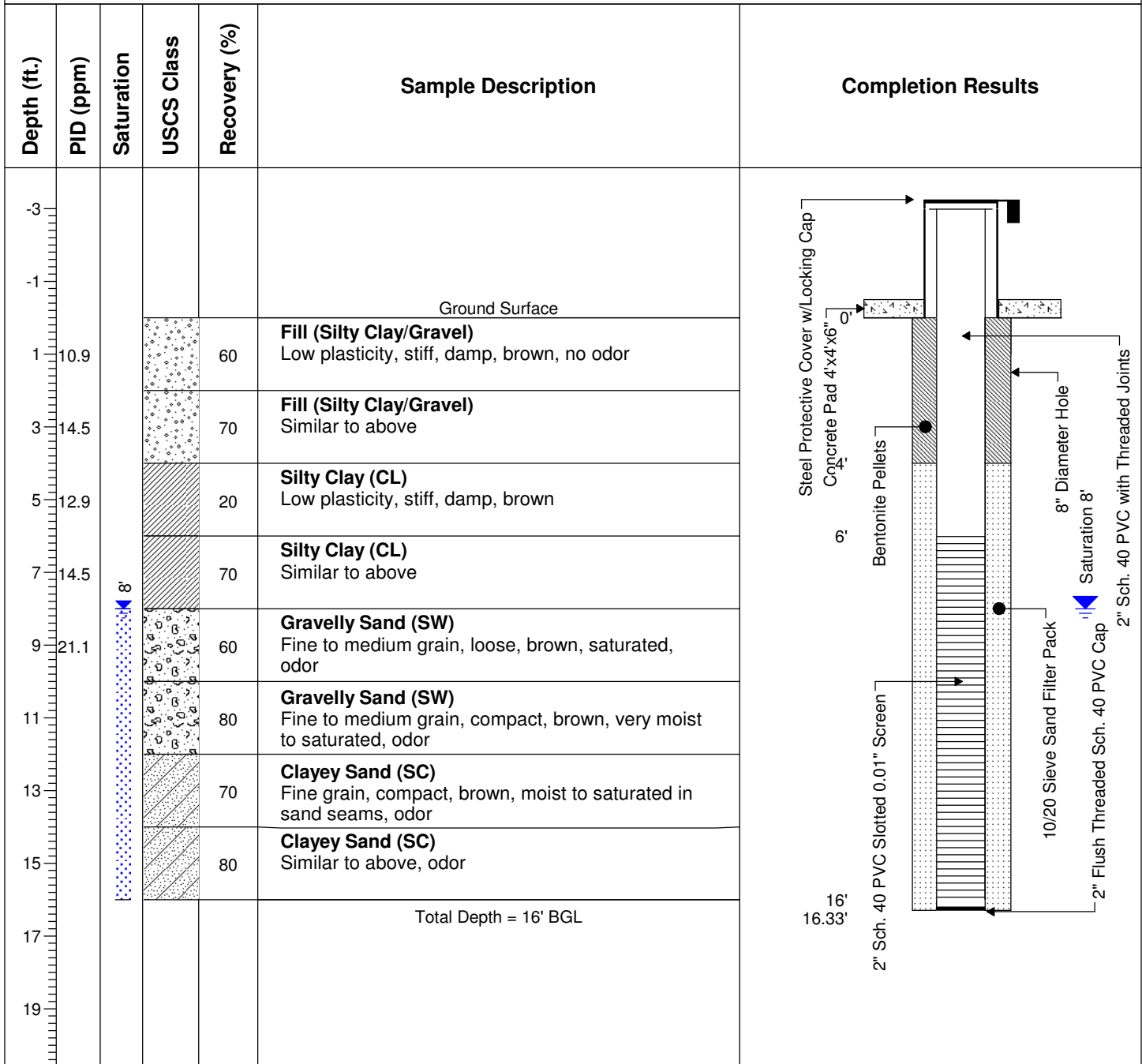
Well No.: MKTF-24
Start Date: 10/29/2013 13:15
Finish Date: 10/29/2013 16:15

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17	16.8			70	Silty Sandy Clay (CL) Low plasticity, firm, damp, brown, no odor	16' 18' 20' Saturation 2" Sch. 40 PVC Slotted 0.01" Screen 10/20 Sieve Sand Filter Pack 2" Flush Threaded Sch. 40 PVC Cap Cave In
19	33.7			90	Sandy Clay (CL) Low plasticity, soft, damp, brown, no odor	
21	40.8			90	Sandy Clay/Clayey Sand (CL/SC) Fine grain, compact to soft, moist to saturated, brown, no odor	
23				90	Sandy Clay/Clayey Sand (CL/SC) Similar to above, moist to saturated, no odor	
25				90	Sandy Clay/Clayey Sand (CL/SC) Similar to above, moist to saturated, no odor	
27				90	Sandy Clay/Clayey Sand (CL/SC) Similar to above, moist to saturated, greenish gray sand at base	
29				90	Silt/Siltstone (ML) Low plasticity, very dense, dry, crumbly, brown/reddish brown, no odor	
31					Total Depth = 30' BGL	
33						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.372' W 108°25.840'; Boring ID - SB28

Total Depth: 16' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6916.19
Elev., PAD (ft. msl): 6913.35
Elev., GL (ft. msl): 6911.79
Site Coordinates:
N 1634015.86 **E** 2545275.68

Well No.: MKTF-25
Start Date: 10/30/2013 14:45
Finish Date: 10/30/2013 16:30

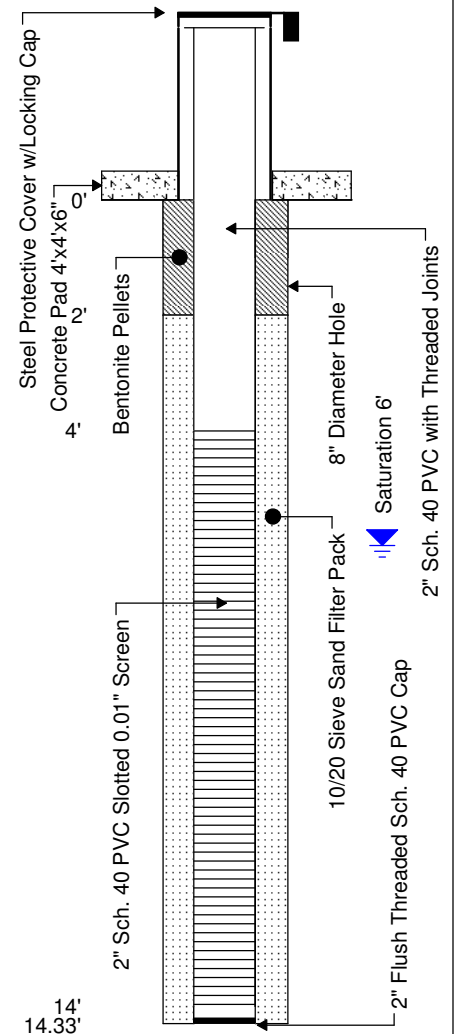


Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.373' W 108°25.796'; Boring ID - SB29

Total Depth: 14' bgl
Ground Water: Saturated @ 6' bgl
Elev., TOC (ft. msl): 6915.31
Elev., PAD (ft. msl): 6912.55
Elev., GL (ft. msl): 6911.35
Site Coordinates:
N 1634033.63 **E** 2545492.39

Well No.: MKTF-26
Start Date: 10/30/2013 10:40
Finish Date: 10/30/2013 12:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	17.5			80	Silty Clay (CL) Low plasticity, soft, damp, brown, no odor, trace small gravel	
3	9.4			60	Silty Clay (CL) Similar to above	
5	4.8			60	Silty Clay (CL) Similar to above	
7	34.8	6		90	Sandy Clay/Clayey Sand (SC/CL) Very fine grain, compact/soft, brown, moist, faint odor, saturated at base	
9				70	Sandy Clay (SC) Low plasticity, stiff, damp, brown, no odor	
11				60	Silt/Siltstone (ML) Low plasticity, very dense, dry, reddish brown, very fine grain sand in fissures, no odor	
13				60	Silt/Siltstone (ML) Similar to above	
15					Total Depth = 14' BGL	

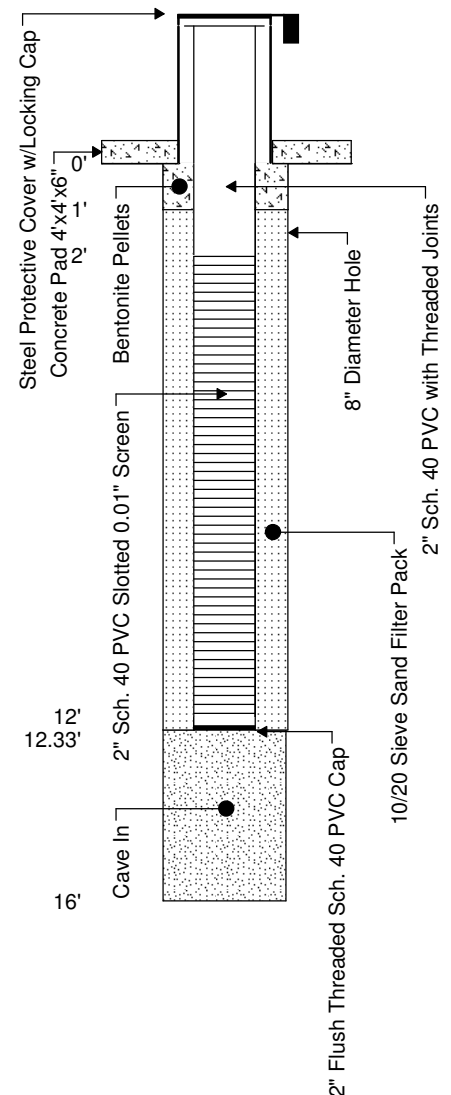


Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.387' W 108°25.771'; Boring ID - SB30

Total Depth: 16' bgl
Ground Water: Not Encountered
Elev., TOC (ft. msl): 6917.90
Elev., PAD (ft. msl): 6915.36
Elev., GL (ft. msl): 6914.18
Site Coordinates:
N 1634115.56 **E** 2545620.98

Well No.: MKTF-27
Start Date: 10/30/2013 09:00
Finish Date: 10/30/2013 10:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	3.3			90	Silty Clay (CL) Low plasticity, firm, damp, brown, occasional gravel	
3	4.1			80	Silty Clay (CL) Similar to above	
5	2.4			90	Silty Clay (CL) Similar to above	
7	4.1			90	Silty Clay (CL) Low to moderate plasticity, firm to soft, damp, brown, no odor, calcareous organics present	
9	3.3			80	Silt/Siltstone (ML) Low plasticity, very dense, dry, reddish brown with greenish gray very fine grain sand in fissures, no odor	
11	3.7			80	Silt/Siltstone (ML) Similar to above	
13	4.5			80	Silt/Siltstone (ML) Similar to above	
15	3.9			80	Silt/Siltstone (ML) Similar to above	
17					Total Depth = 16' BGL	
19						



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.412' W 108°25.763', Air Temp: 48°F

Total Depth: 30' bgl
Ground Water: Not Encountered
Elev., TOC (ft. msl): 6921.52
Elev., PAD (ft. msl): 6918.67
Elev., GL (ft. msl): 6917.51
Site Coordinates:
N 1634263.44 **E** 2545650.04

Well No.: MKTF-28
Start Date: 4/2/2014 11:30
Finish Date: 4/2/2014 14:25

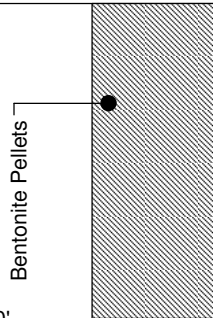
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	2.6			90	Fill (Silty Clay) Low plasticity, soft, damp, brown, no odor, sandy at base, moist	
3	5.0					
5	3.6					
7	7.6			60	Silty Clay (CL) Similar to above, damp to moist at 7.5' bgl	
9	8.2					
11	8.1			60	Silty Clay (CL) Low plasticity, stiff, damp to dry, crumbly, brown, no odor	
13	7.5					
15	9.1					
17	5.5			60	Silty Clay (CL) Similar to above	
19	7.8					
21	3.5			60	Silty Clay (CL) Similar to above	

WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.412' W 108°25.763', Air Temp: 48°F

Total Depth: 30' bgl
Ground Water: Not Encountered
Elev., TOC (ft. msl): 6921.52
Elev., PAD (ft. msl): 6918.67
Elev., GL (ft. msl): 6917.51
Site Coordinates:
N 1634263.44 **E** 2545650.04

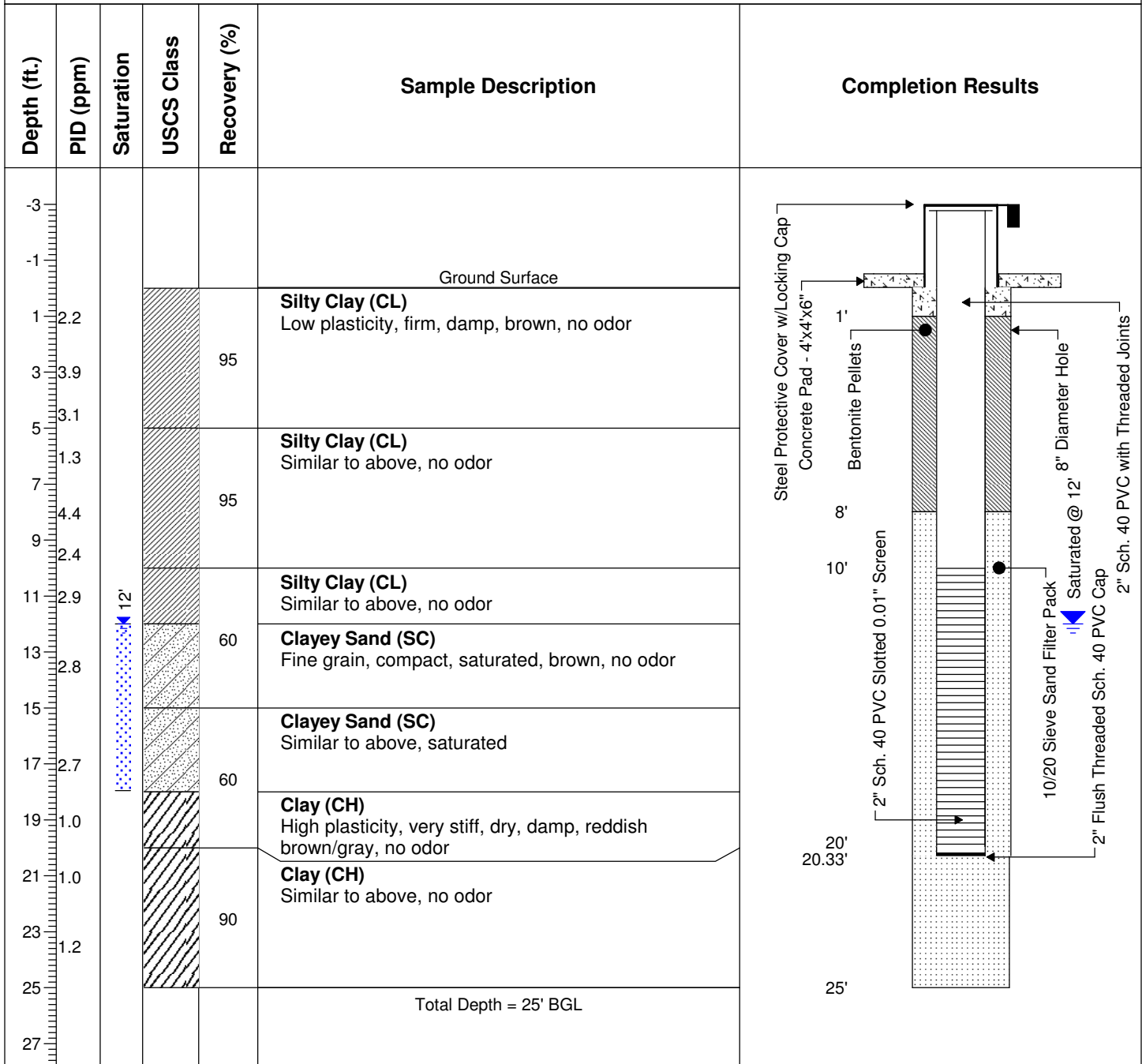
Well No.: MKTF-28
Start Date: 4/2/2014 11:30
Finish Date: 4/2/2014 14:25

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
24	4.3				Clay (CH) High plasticity, very stiff, reddish brown and gray, no odor, crumbly	
26	4.1			60	Clay (CH) Similar to above	
28	3.3					
30					Total Depth = 30' BGL	
32						
34						
36						
38						
40						
42						
44						
46						
48						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.406' W 108°25.846', Air Temp: 41 °F

Total Depth: 25' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6901.62
Elev., PAD (ft. msl): 6898.83
Elev., GL (ft. msl): 6897.67
Site Coordinates:
N 1634249.76 **E** 2545258.34

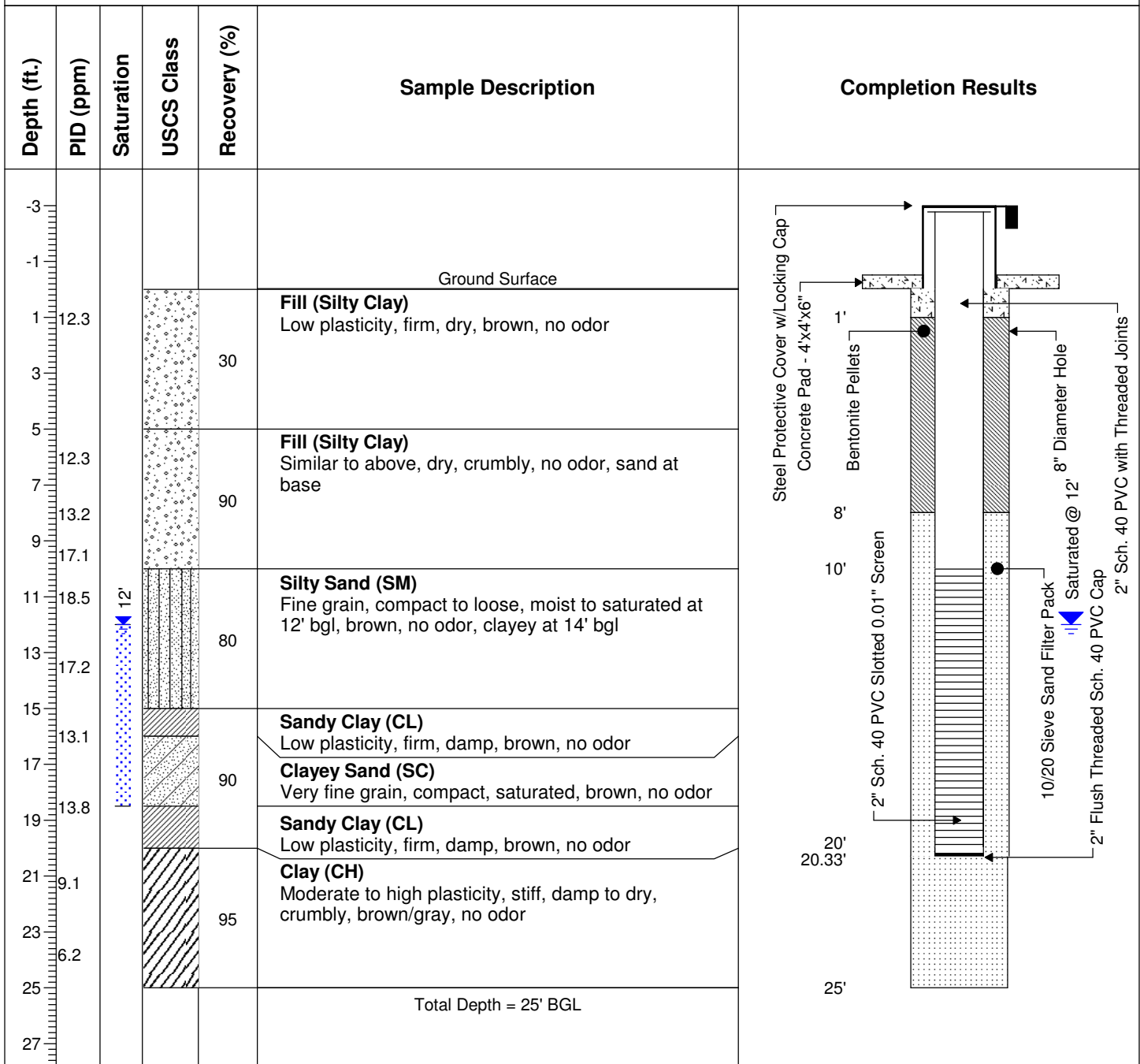
Well No.: MKTF-29
Start Date: 4/2/2014 08:30
Finish Date: 4/2/2014 11:15



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.405' W 108°25.910', Air Temp: 58°F

Total Depth: 25' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6900.80
Elev., PAD (ft. msl): 6898.10
Elev., GL (ft. msl): 6896.68
Site Coordinates:
N 1634225.67 **E** 2544937.91

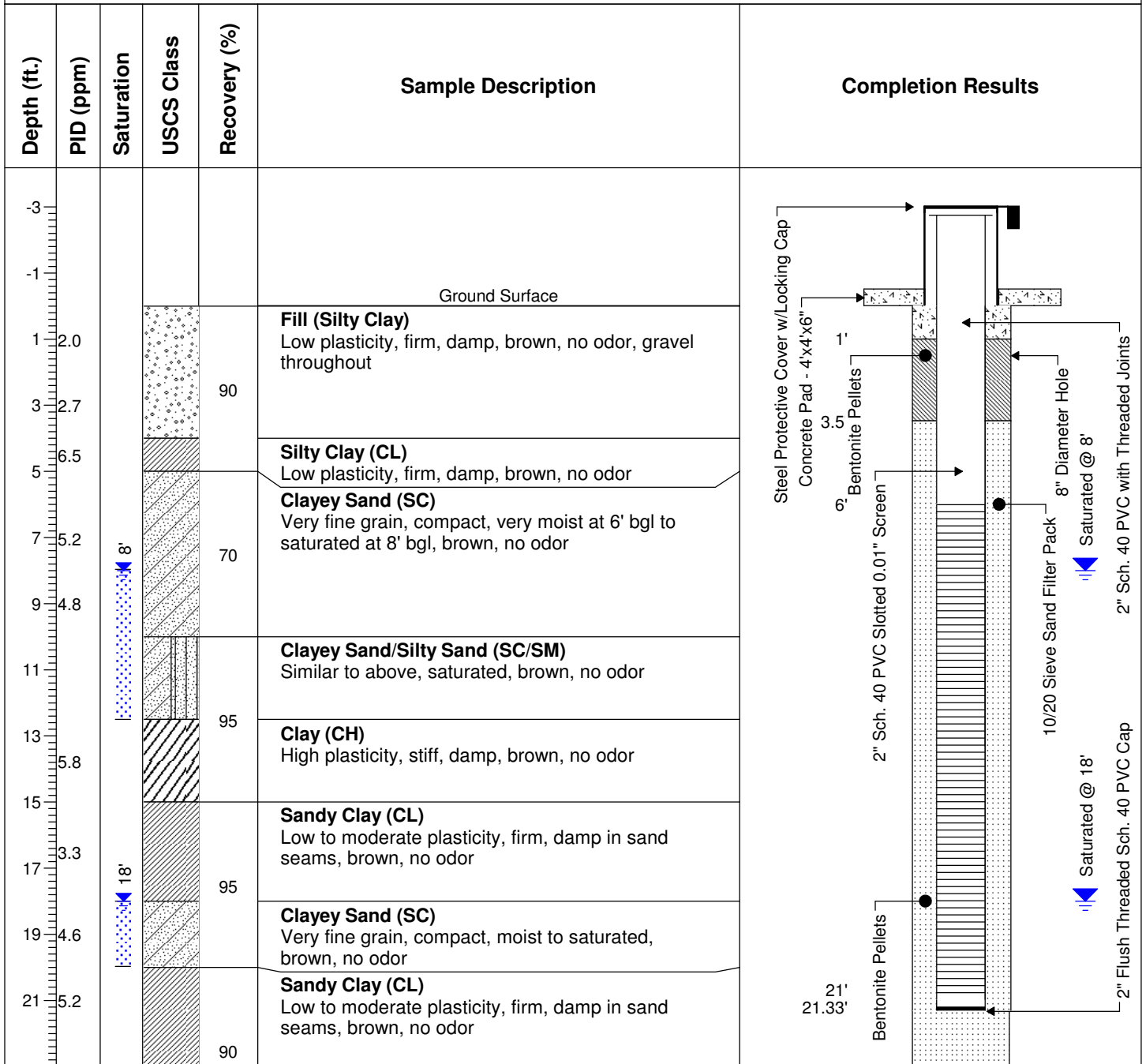
Well No.: MKTF-30
Start Date: 4/1/2014 13:00
Finish Date: 4/1/2014 15:00



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.350' W 108°25.909', Air Temp: 48°F; Boring ID - SB20

Total Depth: 30' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6906.87
Elev., PAD (ft. msl): 6904.26
Elev., GL (ft. msl): 6903.11
Site Coordinates:
N 1633898.83 **E** 2544938.99

Well No.: MKTF-31
Start Date: 4/1/2014 08:20
Finish Date: 4/1/2014 12:00



WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.350' W 108°25.909', Air Temp: 48°F; Boring ID - SB20

Total Depth: 30' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6906.87
Elev., PAD (ft. msl): 6904.26
Elev., GL (ft. msl): 6903.11
Site Coordinates:
N 1633898.83 **E** 2544938.99

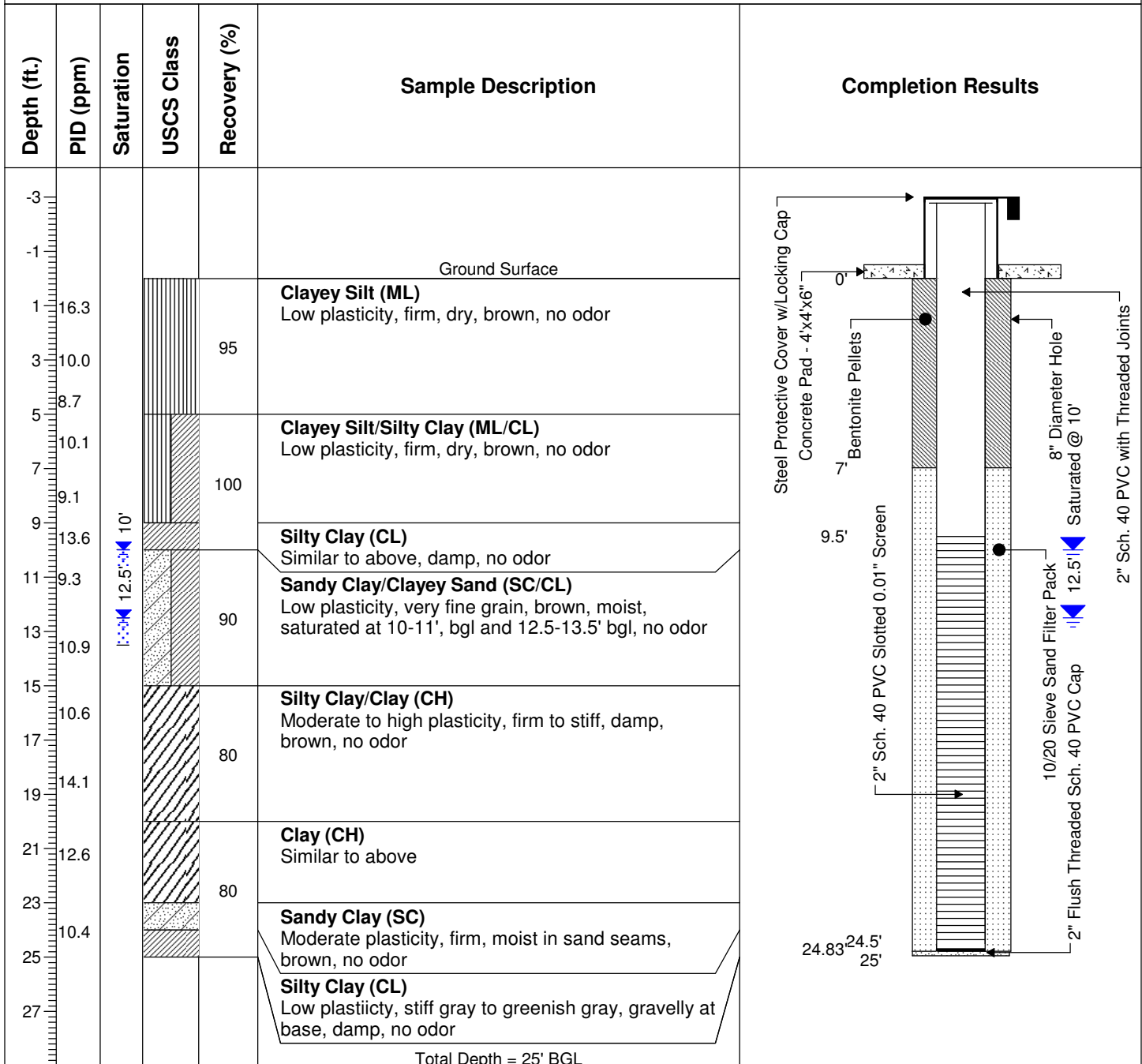
Well No.: MKTF-31
Start Date: 4/1/2014 08:20
Finish Date: 4/1/2014 12:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
24	7.2					
26	2.5			90	Clay (CH) Moderate plasticity, firm, dry to damp, crumbly, reddish brown, no odor	
28	2.3					
30					Total Depth = 30' BGL	30' 10/20 Sieve Sand Filter Pack
32						
34						
36						
38						
40						
42						
44						
46						
48						

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.275' W 108°25.928', Air Temp: 58°F

Total Depth: 25' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6911.11
Elev., PAD (ft. msl): 6908.44
Elev., GL (ft. msl): 6907.16
Site Coordinates:
N 1633443.56 **E** 2544840.32

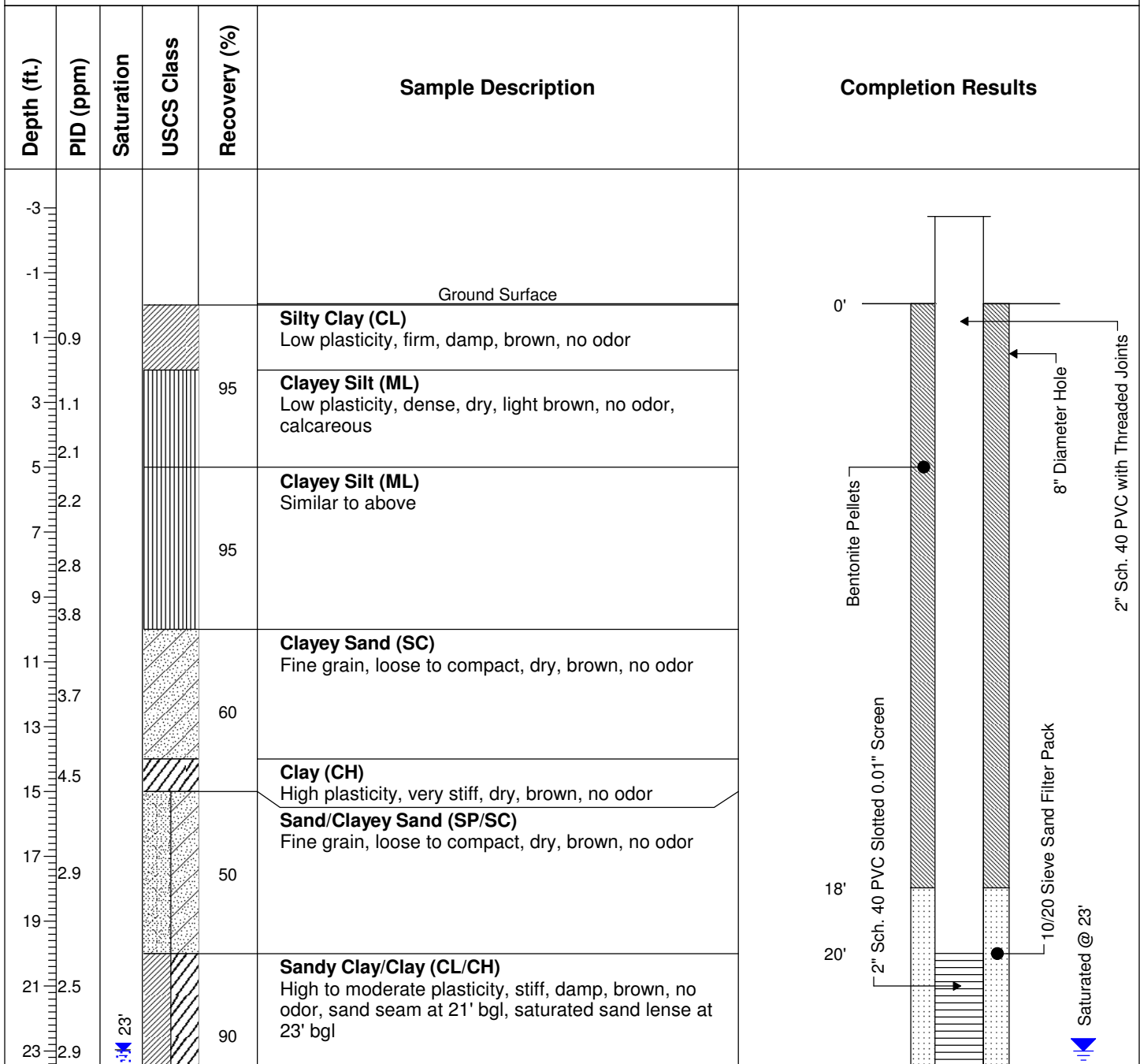
Well No.: MKTF-32
Start Date: 3/31/2014 14:40
Finish Date: 3/31/2014 16:30



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.246' W 108°25.830', Air Temp: 30°F

Total Depth: 35' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6939.75
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): 6936.59
Site Coordinates:
N 1633261.99 **E** 2545318.27

Well No.: MKTF-33
Start Date: 4/3/2014 08:40
Finish Date: 4/3/2014 12:00

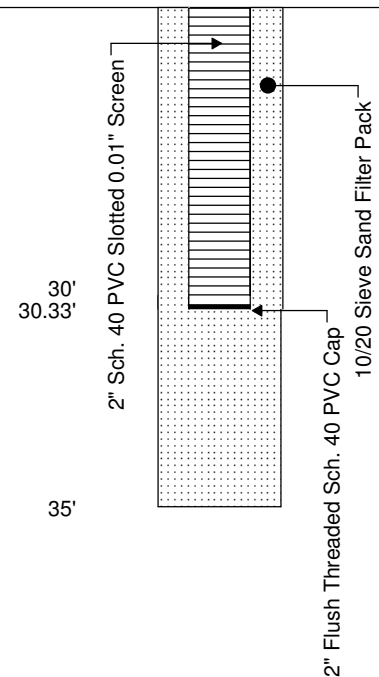


Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.246' W 108°25.830', Air Temp: 30°F

Total Depth: 35' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6939.75
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): 6936.59
Site Coordinates:
N 1633261.99 **E** 2545318.27

Well No.: MKTF-33
Start Date: 4/3/2014 08:40
Finish Date: 4/3/2014 12:00

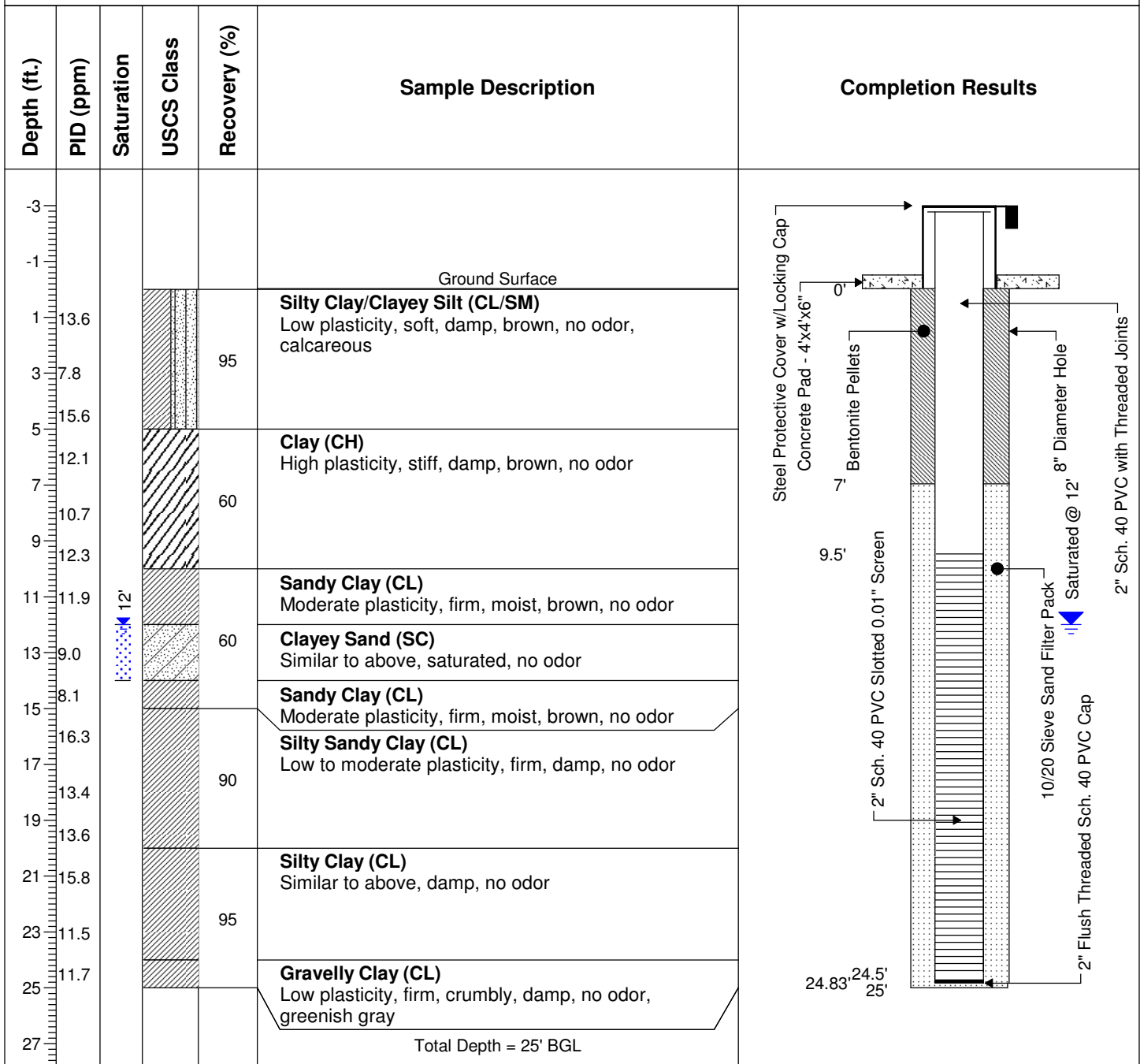
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
25	3.4					
27	1.6			90	Clayey Sand/Sandy Clay (SC/CL) Moderate plasticity, firm, moist to saturated throughout interval, brown, interbedded sand/clay, no odor	
29	2.5					
31				95	Clay (CH) High plasticity, very stiff, brown, damp, no odor	
33						
35					Total Depth = 35' BGL	
37						
39						
41						
43						
45						
47						
49						



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.224' W 108°25.757', Air Temp: 49-51 °F

Total Depth: 25' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6945.35
Elev., PAD (ft. msl): 6942.42
Elev., GL (ft. msl): 6943.52
Site Coordinates:
N 1633118.42 **E** 2545681.30

Well No.: MKTF-34
Start Date: 3/31/2014 11:00
Finish Date: 3/31/2014 13:45



Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 18'
Ground Water : 10'
Start Date : 11/19/2014
Finish Date : 11/19/2014

MKTF-35

(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6951.65
Elev., PAD (ft. msl) : 6951.90
Elev., GL (ft. msl) : 6951.25
Site Coordinates :
N : 1633204.45
E : 2546011.60

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results MKTF-35
							DESCRIPTION	
-2								
-1								
0					100		ASPHALT/BASE,	Flush Mount Completion 2'x2'x6"
1	4.5			CL	100		SILTY CLAY, low, very stiff, damp, brown,	
2								Bentonite Pellets
3	46.6			CL	20		SILTY CLAY, SIMILAR TO ABOVE (STA), odor, gravel present,	2" Sch 40 PVC Casing Threaded Joints
4								
5	95			CL/SP	90		SILTY CLAY/SAND/GRAVEL, low, damp, reddish brown, odor, very coarse grain sand, 1/4" to 1" gravel, odor,	
6								
7	64			CL	80		SILTY CLAY, low, firm, damp, reddish brown, odor, occasional gravel,	
8								
9	78			CL/SP	90		SILTY CLAY/SAND/GRAVEL, SIMILAR TO 4-6', damp to moist, odor,	
10		▼						▼
11	1790			CL/SP	90		SILTY CLAY/SAND/GRAVEL, SIMILAR TO ABOVE (STA), saturated, hydrocarbon (hc) odor,	10/20 Sieve Sand Filter Pack
12				CL	90		SILTY CLAY, low, stiff, damp, reddish brown, light grey clay @ base, hc odor,	2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
13	2400			CL/SC	90		SILTY CLAY/SANDY CLAY, low, firm to stiff, damp, grey, hc odor, sand/silt varies across interval,	
14								
15	745			CL	50		SANDY GRAVELLY CLAY, STA, damp, grey, brown @ base, hc odor,	
16								
17	37			CL	90		CLAY, mod, very stiff, damp, brown and grey, faint odor.	2" Flush Threaded Sch 40 PVC Cap
18								
19								

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Austin, Texas 78759
512-693-4190

Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 16'
Ground Water : 10'
Start Date : 11/19/2014
Finish Date : 11/19/2014

MKTF-36

(Sheet 1 of 1)

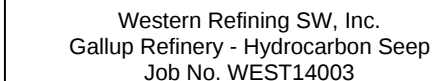
Elev., TOC (ft.msl) : 6950.12
Elev., PAD (ft. msl) : 6950.67
Elev., GL (ft. msl) : 6949.87
Site Coordinates :
N : 1633349.47
E : 2545982.58

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results MKTF-36
							DESCRIPTION	
-2								
-1								
0					100		ASPHALT/BASE,	Flush Mount Completion 2'x2'x6"
1	812			CL	90		SANDY CLAY, low, stiff, dry, tan, no odor, gravel throughout,	Bentonite Pellets
2								
3	276			CL	60		SILTY CLAY, low, very stiff, dry, brown, hydrocarbon (hc) odor,	2" Sch 40 PVC Casing Threaded Joints
4								
5	1700			CL	60		SILTY CLAY, SIMILAR TO ABOVE (STA), trace sand/gravel, hc odor,	
6								
7	2411			CL/SP	90		SILTY CLAY/SAND/GRAVEL, low, firm, damp, tan, very coarse sand, 1/4" to 1" gravel, hc odor, moist to very moist in seams,	
8								
9	2278			CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, moist, fluid in top of sampling spoon, strong hc odor, trace phase separated hydrocarbon (psh),	
10		▼					SILTY CLAY/SAND/GRAVEL, STA, saturated, psh,	10/20 Sieve Sand Filter Pack 2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
11	1879			CL/SP	90			
12				CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, saturated, psh,	
13	405			CL	90		SILTY CLAY, low, stiff, damp, brown, hc odor,	
14							SILTY CLAY, STA, damp, hc odor.	
15	450			CL	90			2" Flush Threaded Sch 40 PVC Cap
16								

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Geologist	: Tracy Payne
Driller	: C. Ortiz
Drilling Rig	: CME 75
Drilling Method	: Hollow Stem Auger 7.5"
Sampling Method	: Split Spoon 2" Dia, 2' Long
Comments	:
Total Depth	: 24'
Ground Water	: 8'
Start Date	: 11/18/2014
Finish Date	: 11/18/2014

(Sheet 1 of 1)

Elev., TOC (ft.msl)	: 6958.87
Elev., PAD (ft. msl)	: 6959.07
Elev., GL (ft. msl)	: 6958.62
Site Coordinates	:
N	: 1633291.89
E	: 2546216.67

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results MKTF-37
							DESCRIPTION	
-2								
-1								
0								
1	69				40		ASPHALT/GRAVEL BASE, CLAY, very stiff, brown, damp, faint odor,	Flush Mount Completion 2'x2'x6"
2								Bentonite Pellets
3	367			CL	50		SILTY CLAY, low, very stiff, brown, damp, odor, gravel present,	2" Sch 40 PVC Casing Threaded Joints
4								
5	355			CL/SP	60		SILTY CLAY/SAND/GRAVELLY, low to firm, damp, brown with sand/gravel, odor,	
6								
7	1790			CL/SP	80		SILTY CLAY/SAND/GRAVELLY, SIMILAR TO ABOVE (STA), odor,	
8		▼						
9	2140			CL	90		SILTY CLAY, low, soft, moist to very moist, brown, strong odor,	
10				SW/GW	90		SANDY GRAVEL/GRAVELLY SAND, coarse to very coarse grain, compact, very moist, odor, tan,	
11	404			CL/SP	90		SILTY CLAY/SAND/GRAVEL, low to firm, damp, brown with coarse sand & gravel, odor,	
12								
13	454			CL	20		SANDY CLAY, low, soft, damp, odor, light grey, gravel @ base,	10/20 Sieve Sand Filter Pack
14								
15	660			CL	50		SANDY CLAY, low, very stiff, damp, odor, light grey,	2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
16								
17	340			CL	30		SANDY CLAY, STA,	
18								
19	344			CL	30		SANDY CLAY, STA,	
20								
21	421			CL	60		SANDY CLAY, STA,	
22				SH	60		SHALE, CLAYEY, light purple, damp, very stiff, odor,	
23	375			SH	30		SHALE, STA,	
24								2" Flush Threaded Sch 40 PVC Cap
25								

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Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 20.25'
Ground Water : 8'
Start Date : 11/20/2014
Finish Date : 11/20/2014

MKTF-38

(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6954.89
Elev., PAD (ft. msl) : 6955.17
Elev., GL (ft. msl) : 6954.54
Site Coordinates :
N : 1633451.01
E : 2546222.09

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results
DESCRIPTION							MKTF-38	
-2								
-1								
0					100		ASPHALT/BASE,	Flush Mount Completion 2"x2"x6"
1	217			CL/SP	90		SILTY CLAY/SAND/GRAVEL, low, firm, damp, brown, coarse grain sand, 1/4" to 1" gravel, odor,	Bentonite Pellets
2								2" Sch 40 PVC Casing Threaded Joints
3	70			CL/SP	90		SILTY CLAY/SAND/GRAVEL, SIMILAR TO ABOVE (STA), odor,	
4								
5	42			CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, odor,	
6								
7	20			CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, odor,	
8		▼						▼
9	9			CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, decrease in clay content, very moist to saturated, odor,	
10								
11	7			GW	90		SANDY GRAVEL, compact, brown, saturated, faint odor, very coarse grain sand, 1/4" to 1.5" gravel,	
12				CL	90			
				GW	90		SANDY CLAY, low, firm to soft, moist, brown,	10/20 Sieve Sand Filter Pack
13	8			GW	10		SANDY GRAVEL, STA (10-11), saturated,	2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
14							SANDY GRAVEL, STA, saturated,	
15	6			GW	10		SANDY GRAVEL, STA, saturated,	
16								
17	4			CL	50		SANDY CLAY, low, firm, damp to moist, greyish brown, faint odor,	
18								
19	5			CL	60		SANDY CLAY, STA,	
20								2" Flush Threaded Sch 40 PVC Cap
21								

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Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 16'
Ground Water : 12'
Start Date : 11/14/2014
Finish Date : 11/14/2014

MKTF-39

(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6953.75
Elev., PAD (ft. msl) : 6953.97
Elev., GL (ft. msl) : 6953.12
Site Coordinates :
N : 1633729.23
E : 2546265.99

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	DESCRIPTION	Completion Results MKTF-39
-2									
-1									
0									
1	2.1			ML	100			GRAVEL/CLAYEY SILT, FILL, brown, damp, faint odor,	
2								GRAVEL/SILTY CLAY, FILL, mod, stiff, damp, brown, no odor,	
3	29.4			CL	100			SANDY SILTY CLAY, FILL, low, soft, damp, brown, pea sized gravel, no odor, damp,	
4									
5	6.5			CL	90			SILTY GRAVELLY SAND, FILL, loose, medium sand to 1.5" gravel, brown, no odor, damp,	
6									
7	4.5			SW	90			SANDY CLAY/CLAYEY SAND, coarse, compact, damp to moist, brown, hydrocarbon (hc) odor, gravelly,	
8									
9	400			CL/SC	90			SANDY CLAY/CLAYEY SAND, SIMILAR TO ABOVE (STA), moist/oily, hc odor, gravelly,	
10									
11	569			CL	90			SANDY GRAVEL, loose, brown, saturated, hc odor, very coarse sand to 3/4" gravel,	
12	-			GP	90			SILTY CLAY, low, very stiff, dry to damp, grey, faint odor @ base,	
13	51			CL	90			SILTY CLAY, STA.	
14									
15	18			CL	90				
16									

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DiSorbo Consulting, LLC

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Austin, Texas 78759
512-693-4190

Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 22'
Ground Water : 10'
Start Date : 11/13/2014
Finish Date : 11/13/2014

MKTF-40

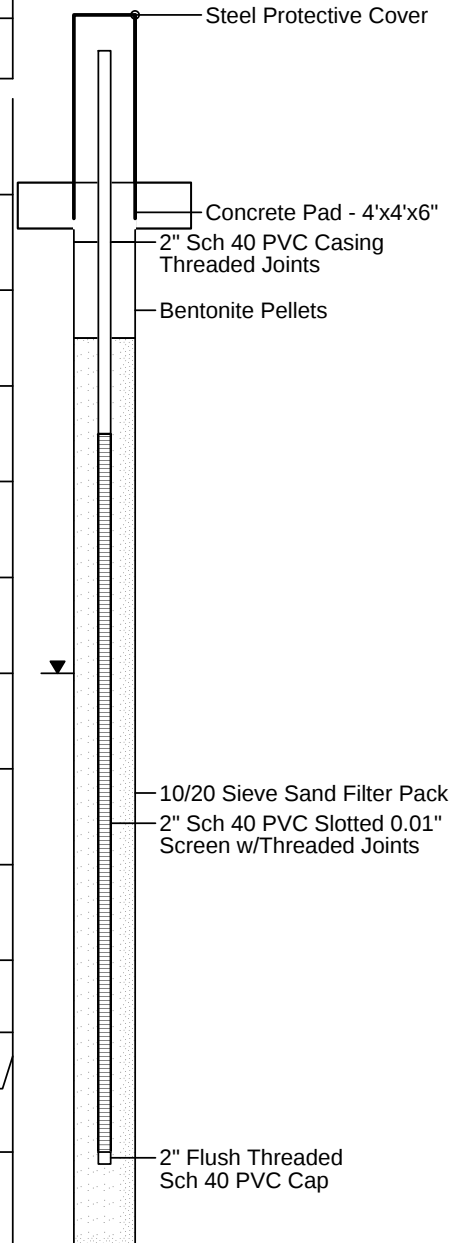
(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6894.33
Elev., PAD (ft. msl) : 6891.35
Elev., GL (ft. msl) : 6890.48
Site Coordinates :
N : 1634085.50
E : 2544637.81

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	DESCRIPTION
-2								
-1								
0								
1	0.8			CL	100			CLAY, mod, stiff, damp, brown, no odor, gravel,
2								
3	0.1			CL	90			CLAY, SIMILAR TO ABOVE (STA), gravel,
4								
5	0.7			CL	80			CLAY, STA,
6								
7	1.8			CL	90			SANDY CLAY, low, firm to soft, damp, brown, no odor, moist 7-8' ,
8								
9	2.0			CL	70			SANDY CLAY, STA, damp to moist,
10		▼						
11	0.6			CL/SC	90			SANDY CLAY/CLAYEY SAND, STA, moist to saturated in clayey sand seams, no odor,
12								
13	1.5			CL	20			SANDY SILTY CLAY, low, stiff, damp, brown, no odor, moist to saturated in sand seams,
14								
15	2.2			CL/SC	80			SANDY CLAY/CLAYEY SAND, low, firm to soft, moist to saturated in clayey sand seams,
16								
17	2.2			CL/SC	80			SANDY CLAY/CLAYEY SAND, STA, moist to saturated,
18				CL	90			SILTY CLAY, low, very stiff, damp, reddish brown and grey, no odor,
19	2.5			CL	80			SILTY CLAY, STA,
20								
21	2.6			CL	50			SILTY CLAY, STA,
22								
23								

Completion Results

MKTF-40



1010 Travis Street
Houston, Texas 77002
713-955-1230

DiSorbo Consulting, LLC

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 37.25'
Ground Water : 34'
Start Date : 11/13/2014
Finish Date : 11/14/2014

MKTF-41

(Sheet 1 of 2)

Elev., TOC (ft.msl) : 6893.64
Elev., PAD (ft. msl) : 6891.11
Elev., GL (ft. msl) : 6889.80
Site Coordinates :
N : 1633499.80
E : 2544567.57

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results
							DESCRIPTION	
-2								
-1								
0								
1	2.6			CL	80		SANDY SILTY CLAY, low, stiff, dry, brown, no odor, fine grained sand, occasional gravel,	
2								
3	2.3			CL	70		SANDY SILTY CLAY, SIMILAR TO ABOVE (STA), no odor,	
4								
5	1.2			CL	40		SANDY SILTY CLAY, STA, no odor,	
6								
7	2.4			CL/ML	50		SILTY CLAY/CLAYEY SILT, low, firm, dry, brown, no odor,	
8								
9	3.9			CL	60		SANDY CLAY, low, very stiff, dry, brown, no odor,	
10								
11	4.8			CL	30		SANDY CLAY, STA, damp,	
12								
13	3.5			CL	40		SANDY CLAY, STA,	
14								
15	1.2			CL	10		SANDY CLAY, STA,	
16								
17	3.9			CL	50		SILTY CLAY, low, very stiff, dry/damp, light reddish brown with grey @ base, no odor,	
18								
19	4.0			CL			SILTY CLAY, STA, reddish brown and light grey,	

MKTF-41

Steel Protective Cover

Concrete Pad - 4'x4'x6"

2" Sch 40 PVC Casing Threaded Joints

Grout

Bentonite Pellets

Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 37.25'
Ground Water : 34'
Start Date : 11/13/2014
Finish Date : 11/14/2014

MKTF-41

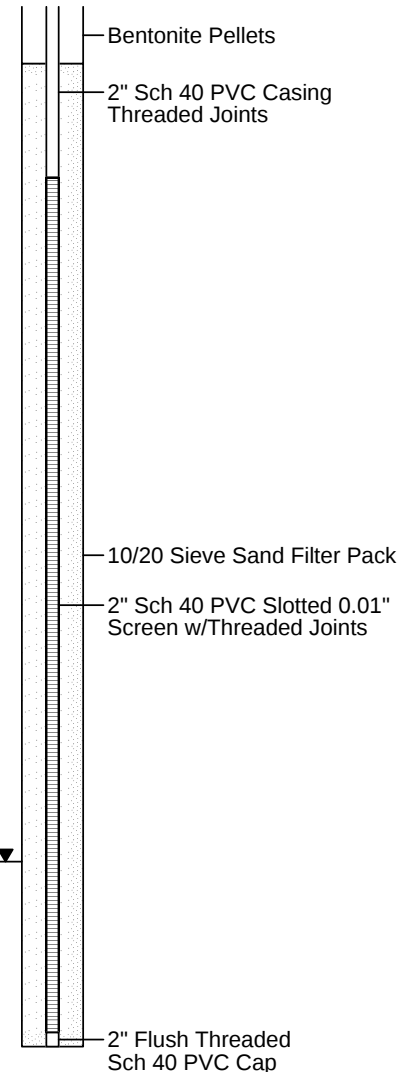
(Sheet 2 of 2)

Elev., TOC (ft.msl) : 6893.64
Elev., PAD (ft. msl) : 6891.11
Elev., GL (ft. msl) : 6889.80
Site Coordinates :
N : 1633499.80
E : 2544567.57

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
19	4.0			CL	80		
20							SILTY CLAY, STA, light reddish brown,
21	3.9			CL	50		
22							SILTY CLAY, STA, light reddish brown and trace grey,
23	3.6			CL	40		
24							SILTY CLAY, STA, light reddish brown,
25	3.3			CL	50		
26							SILTY CLAY, STA,
27	2.1			CL	10		
28							SILTY CLAY, STA,
29	2.8			CL	20		
30							SILTY CLAY, STA, moist @ top of sample,
31	2.6			CL	40		
32							SILTY CLAY, STA, calcareous,
33	3.1			CL	50		
34		▼					SILTY CLAY, STA, gravelly, moist to saturated, no odor, shale @ base,
35	2.9			CL	50		
36							SHALE, dark grey, dense to very dense,
37	-			SH	10		
38							
39							
40							

Completion Results

MKTF-41



1010 Travis Street
Houston, Texas 77002
713-955-1230

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8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 30.25'
Ground Water :
Start Date : 11/12/2014
Finish Date : 11/12/2014

MKTF-42

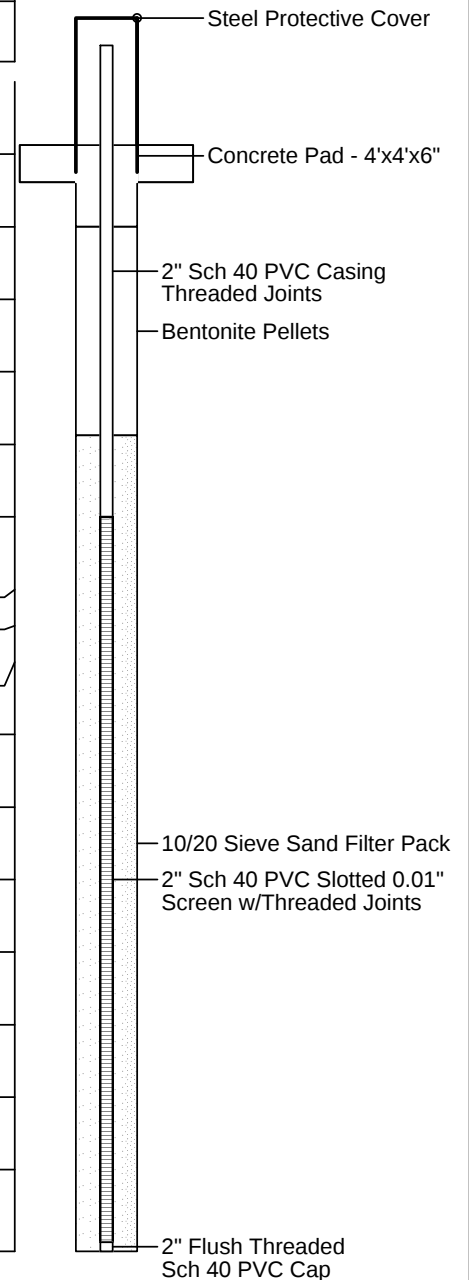
(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6892.95
Elev., PAD (ft. msl) : 6890.42
Elev., GL (ft. msl) : 6888.75
Site Coordinates :
N : 1633078.09
E : 2544678.55

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
							Water Level Depth to water - 18.79 fbtoc 11-18-14 (not known to be static)
-2							
-1							
0							
1	1.7			CL	100		SILTY CLAY, low, firm, dry, light brown, no odor,
2							
3	2.8			CL	90		SILTY CLAY, low, very stiff, dry, light brown, calcareous, no odor, crumbly,
4							
5	3.8			CL	60		SILTY CLAY, SIMILAR TO ABOVE (STA),
6							
7	2.4			CL	60		SILTY CLAY, STA,
8							
9	4.1			CL	30		SILTY CLAY, STA,
10							
11	2.8			CL	50		SANDY CLAY, low, stiff, dry, light reddish brown with medium grained sand and interbedded sandstone less than 1/2" thick,
12							
13	3.9			CL	80		SANDY CLAY, STA,
14				CL	80		SILTY CLAY, low, very stiff, damp/dry, light reddish brown, no odor, calcareous,
15	2.5			CL	60		SILTY CLAY, STA, increase in moisture,
16							
17	2.3			CL	50		SILTY CLAY, STA, trace sand, standstone seam @ 17.5', very dense,
18							
19	2.4			CL	80		SILTY CLAY, STA, odor, extremely calcareous (50%),
20							
21	1.5			CL	80		SILTY CLAY, STA, calcareous,
22							
23	2.5			CL	10		SILTY CLAY, low, stiff, damp, reddish brown, no odor,
24							
25	1.4			CL	60		SILTY CLAY, STA,
26							
27	1.5			CL	60		SILTY CLAY, STA, trace grey,
28							
29	1.2			CL	50		SILTY CLAY, STA, grey and reddish brown.
30							
31							

Completion Results

MKTF-42



1010 Travis Street
Houston, Texas 77002
713-955-1230

DiSorbo Consulting, LLC

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Austin, Texas 78759
512-693-4190

Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 28'
Ground Water :
Start Date : 11/11/2014
Finish Date : 11/11/2014

MKTF-43

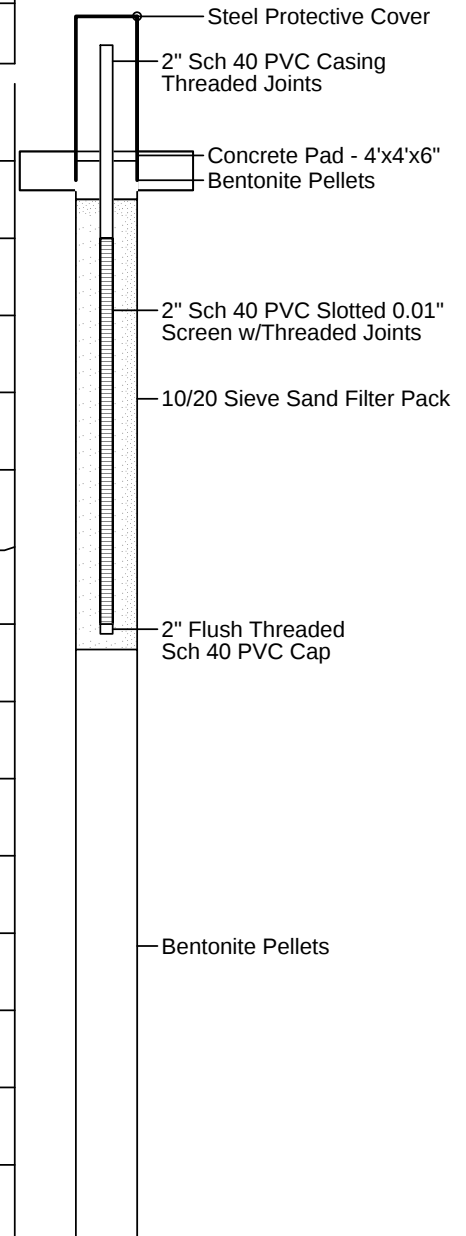
(Sheet 1 of 1)

Elev., TOC (ft.msl) : 6876.90
Elev., PAD (ft. msl) : 6874.12
Elev., GL (ft. msl) : 6873.22
Site Coordinates :
N : 1633490.97
E : 2544190.23

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
							Water Level Depth to water - 6.95 ftboc 11-18-14 (not known to be static)
-2							
-1							
0							
1	3.6			CH	100		CLAY, high, stiff, damp, brown, no odor,
2							
3	4.6			CH	50		CLAY, SIMILAR TO ABOVE (STA), moist in seams,
4							
5	4.2			CH	90		CLAY, STA, moist in seams,
6							
7	4.6			CH	90		CLAY, STA, reddish brown,
8							
9	4.0			CL	90		SILTY CLAY, low, soft, damp, reddish brown, crumbly, no odor, trace grey clay @ 9.5',
10							
11	3.3			CL	80		SILTY CLAY, STA, stiff,
12							
13	3.8			CL	60		SILTY CLAY, STA, very stiff,
14							
15	3.8			CL	80		SILTY CLAY, STA, very stiff, calcareous,
16							
17	2.9			CL	80		SILTY CLAY, STA,
18							
19	3.1			CL	50		SILTY CLAY, STA,
20							
21	3.1			CL	60		SILTY CLAY, STA,
22							
23	3.2			CL	10		SILTY CLAY, STA,
24							
25	3.3			CL	30		SILTY CLAY, STA, sandstone seam 24.50',
26							
27	3.2			CL	30		SILTY CLAY, STA.
28							
29							

Completion Results

MKTF-43



Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 50'
Ground Water :
Start Date : 11/11/2014
Finish Date : 11/12/2014

MKTF-44

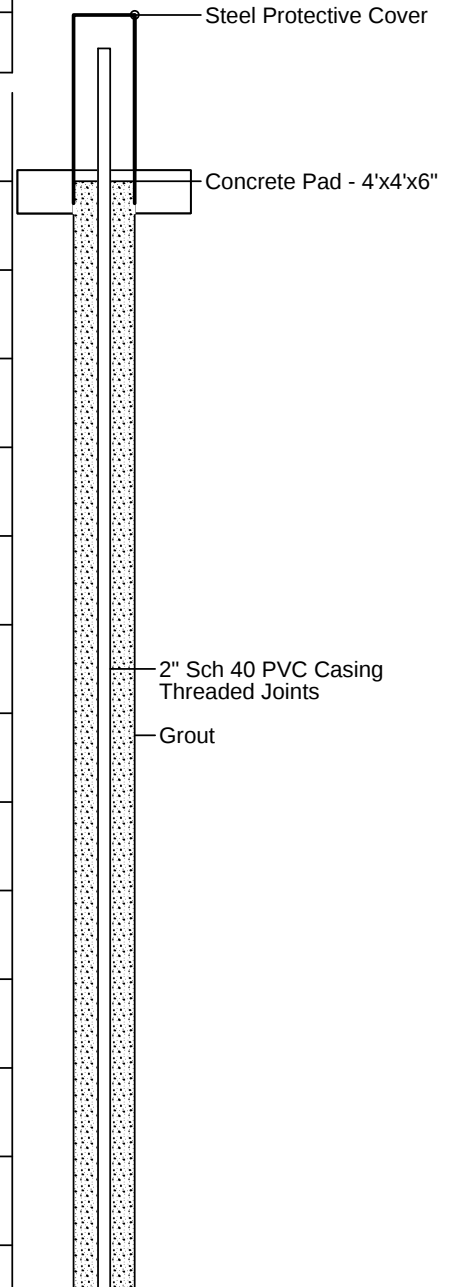
(Sheet 1 of 2)

Elev., TOC (ft.msl) : 6869.95
Elev., PAD (ft. msl) : 6867.41
Elev., GL (ft. msl) : 6866.06
Site Coordinates :
N : 1633681.48
E : 2542981.45

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Water Level Depth to water - 48.80 fbtoc 11-17-14 (not known to be static)
						DESCRIPTION
-2						
-1						
0						
1	6.3			CH	100	CLAY, high, very stiff, damp, brown, no odor,
2						
3	8.3			CH	80	CLAY, SIMILAR TO ABOVE (STA),
4						
5	8.2			CH	70	CLAY, STA,
6						
7	8.6			CH	90	CLAY, STA,
8						
9	8.2			CH	80	CLAY, STA,
10						
11	7.9			CH	90	CLAY, STA, trace silt,
12						
13	7.8			CH	90	CLAY, high, very stiff, damp, brown, no odor,
14						
15	6.5			CH	10	CLAY, STA,
16						
17	7.1			CH	80	CLAY, STA,
18						
19	7.6			CL	70	SANDY SILTY CLAY, low, stiff, damp, light brown, no odor, gravel @ base, soft/crumbly 19-19.5' with lesser amount of clay,
20						
21	5.5			CL	80	SILTY CLAY, STA with sand seams/sandstone fro 20.5-22, dry, crumbly,
22						
23	6.4			CL	80	SANDY SILTY CLAY, low, stiff, dry to damp, light brown, no odor,
24						
25	4.8			CL		GRAVELLY CLAY, STA, with gravel,

Completion Results

MKTF-44



Western Refining SW, Inc.
Gallup Refinery - Hydrocarbon Seep
Job No. WEST14003

Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 50'
Ground Water :
Start Date : 11/11/2014
Finish Date : 11/12/2014

MKTF-44

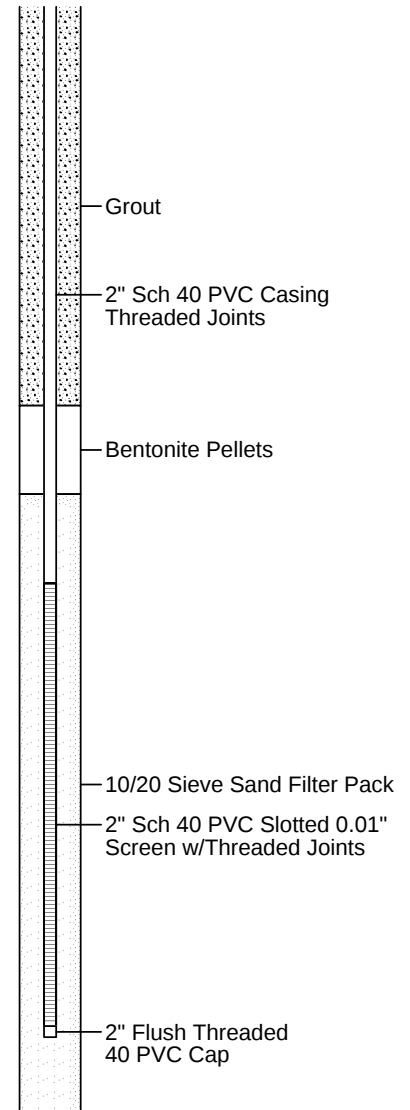
(Sheet 2 of 2)

Elev., TOC (ft.msl) : 6869.95
Elev., PAD (ft. msl) : 6867.41
Elev., GL (ft. msl) : 6866.06
Site Coordinates :
N : 1633681.48
E : 2542981.45

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Water Level
						DESCRIPTION
25	4.8			CL	70	
26						
27	3.8			CL	50	GRAVELLY CLAY, STA, very stiff,
28						
29	4.8			CL	50	SILTY CLAY, low, very stiff, damp/dry, reddish brown, no odor, calcareous,
30						
31	4.6			CL	90	SILTY CLAY, low, firm/crumbly, damp to dry, reddish brown, no odor, calcareous,
32						
33	4.3			CL	80	SILTY CLAY, STA, stiff to very stiff,
34						
35	3.6			CL	80	SILTY CLAY, STA,
36						
37	1.9			CL	10	SILTY CLAY, STA,
38						
39	4.4			CL	20	SILTY CLAY, STA,
40						
41	3.8			CL	80	SILTY CLAY, STA,
42						
43	3.8			CL	20	SILTY CLAY, low, very stiff, crumbly, damp to dry, reddish brown, no odor,
44						
45	3.9			CL	60	SILTY CLAY, STA,
46						
47	3.8			CL	40	SILTY CLAY, STA,
48						
49	3.7			CL	20	SILTY CLAY, STA,
50						
51						
52						

Completion Results

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Appendix B

Investigation Derived Waste Management Plan

Investigation Derived Waste (IDW) Management Plan

All IDW will be properly characterized and disposed of in accordance with all federal, State, and local rules and regulations for storage, labeling, handling, transport, and disposal of waste. The IDW may be characterized for disposal based on the known or suspected contaminants potentially present in the waste.

A dedicated decontamination area will be setup prior to any sample collection activities. The decontamination pad will be constructed so as to capture and contain all decontamination fluids (e.g., wash water and rinse water) and foreign materials washed off the sampling equipment. The fluids will be pumped directly into suitable storage containers (e.g., labeled 55-gallon drums), which will be located at satellite accumulation areas until the fluids are disposed in the refinery wastewater treatment system upstream of the API separator. The solids captured in the decontamination pad will be shoveled into 55-gallon drums and stored at the designated satellite accumulation area pending proper waste characterization for off-site disposal.

Drill cuttings generated during installation of soil borings will be placed directly into 55-gallon drums and staged in the satellite accumulation area pending results of the waste characterization sampling. The portion of soil cores, which are not retained for analytical testing, will be placed into the same 55-gallon drums used to store the associated drill cuttings.

The solids (e.g., drill cuttings and used soil cores) will be characterized by testing to determine if there are any hazardous characteristics in accordance with 40 Code of Federal Regulations (CFR) Part 261. This includes tests for ignitability, corrosivity, reactivity, and toxicity. If the materials are not characteristically hazardous, then further testing will be performed pursuant to the requirements of the facility to which the materials will be transported. Depending upon the results of analyses for individual investigation soil samples, additional analyses may include VOCs, TPH and polynuclear aromatic hydrocarbons (PAHs).
