

AP - 111

**HYDROCARBON SEEP
INTERIM MEASURES
(SWMU No.12)**

2015

Chavez, Carl J, EMNRD

From: Riege, Ed <Ed.Riege@wnr.com>
Sent: Monday, October 24, 2016 10:55 AM
To: Kieling, John, NMENV
Cc: Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV; VanHorn, Kristen, NMENV; king.laurie@epa.gov; Allen, Ann
Subject: Hydrocarbon Seep Interim Measures Quarterly Status Report
Attachments: 201610231039.pdf

Dear Mr. Kieling,

Attached is the third quarter Hydrocarbon Seep Interim Measures Quarterly Status Report. A hard copy of the report was sent certified to you and also a copy to Carl.

Thanks,

Ed Riege
Remediation Manager

Western Refining
Gallup Refinery
92 Giant Crossing Road
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

Certified Mail # 7014 1820 0001 7489 0235

October 24, 2016

Mr. John E. Kieling, Chief
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg 1
Santa Fe, New Mexico 87505-6303

RE: HYDROCARBON SEEP INTERIM MEASURES QUARTERLY STATUS REPORT
WESTERN REFINING SOUTHWEST, INC. GALLUP REFINERY
EPA ID # NMD000333211

Dear Mr. Kieling:

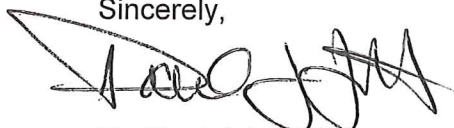
The attached third quarter report was prepared pursuant to Comment 22 in your letter dated April 26, 2016 on the Interim Measures Report Hydrocarbon Seep Area. Comment 22 requests a quarterly status report.

If there are any questions regarding the enclosed Investigation Report, please contact Mr. Ed Riege at (505) 722-0217.

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,



Mr. Daniel J. Statile

VP Refining

Western Refining Southwest, Inc. – Gallup Refinery



Ed Riege

Remediation Manager

Western Refining Southwest, Inc. – Gallup Refinery

cc D. Cobrain NMED HWB without enclosure
 K. Van Horn, NMED HWB without enclosure
 C. Chavez, OCD
 L. King, EPA without enclosure
 A. Allen, Western El Paso

QUARTERLY STATUS REPORT
HYDROCARBON SEEP INTERIM MEASURES
WESTERN REFINING SOUTHWEST, INC – GALLUP REFINERY
Third Quarter 2016

Activities conducted during third quarter

- Source Control – Western continued to remove separate-phase hydrocarbon (SPH) and groundwater from the sumps (S1 - S6). Approximately 4,078 gallons of SPH and 98,018 gallons of groundwater were recovered during the third quarter. We noted an increase in the estimated volume of SPH recovery starting with the third quarter measurements, which corresponds to a change in vacuum truck operators. We are currently working with the new operator to confirm accurate measurements are recorded for both recovered groundwater and SPH. The newly excavated sumps (second quarter 2016) north of (S1-S6) were also pumped throughout the quarter. These sumps were normally pumped twice a week but toward the end of the third quarter pumping decreased due to reduced volumes in the sumps. Approximately 120,000 gallons of groundwater were recovered during the third quarter. A summary table of the volumes is attached.
- Soil Excavation – The soils that were excavated along the drainage pathway to the north of the sumps starting on May 3, 2016 were transported to Waste Management's Painted Desert Landfill. The volume of soils removed was 38.36 tons and the waste manifests are attached.
- Camera Surveys – Western attempted to conduct a camera survey of the sewer lines (water draws) at the petroleum product storage tanks located in the southwestern portion of the main tank farm, just to the east of crude oil tank T-102 and near the Truck Loading Rack. Buildup of sediment restricted access for the camera and precluded successful completion of the planned activities.
- Well Yield Tests – Yield tests were conducted on monitoring wells MKTF-03, MKTF-06, MKTF-08, MKTF-10, MKTF-11, MKTF-12, MKTF-13, and MKTF-14 and the six sumps (S1- S6) to evaluate the potential for automated hydrocarbon recovery. The yield tests on the individual wells indicate likely sustained recovery rates of less than 0.5 gallons per minute (gpm) on most wells with the highest potential yield of approximately 1.0 gpm at MKTF-01, which is located near the sumps. The flow rate of the test pump was not sufficient to fully test the yield of the sumps.

Activities planned for fourth quarter

- Source Control – Western will continue current recovery operations at the sumps using a vacuum truck to pump SPH and groundwater from each of the sumps twice per week. Additional sumps will be installed in the excavation that was completed along the drainage pathway to the north of the original six sumps. The construction will be similar to the original sumps, using 6-inch well screen set to the bottom of the excavation and backfilled with coarse gravel to facilitate recovery of SPH and groundwater.
- Yield Tests – Additional yield tests will be conducted on the sumps using a controllable test pump with higher flow rates. Western will use the results of these additional tests and the earlier yield tests to further evaluate the recovery potential of an automated recovery system.
- Camera Surveys – Cleaning of drain lines and conducting camera surveys is being scheduled. This survey will include 200 feet of underground process sewer line from the fuel

oil loading rack to the manhole leading to the sewer line that was replaced in 2014. Other lines scheduled include underground process sewer lines in the southwest and west sections of the tank farm.

Western Gallup Refinery

September 2013- October 2016 Pumping Records For Release

Stand Pipes

pumping records provided by CTI (gallons)

DATE	hydrocarbon recovered	water pumped	total fluid pumped			
9/3/2013*	682	3818	4500			
9/3/2013*	367	4133	4500			
9/4/2013	62	3938	4000			
9/6/2013	62	3938	4000			
9/9/2013	30	4470	4500			
9/11/2013	30	4470	4500			
9/13/2013	62	3938	4000			
9/16/2013	135	5140	5275			
9/18/2013	125	4111	4236			
9/24/2013	58	4742	4800			
9/26/2013	16	4220	4236			
10/2/2013	29	4918	4947			
10/8/2013	30	4569	4599			
10/18/2013	109	5059	5168			
10/28/2013	199	5379	5578			
10/29/2013	63	4049	4112			
11/12/2013	205	5275	5480			
11/14/2013	78	5168	5246			
11/18/2013	60	4539	4599			
11/26/2013	80	5168	5248			
12/3/2013	54	5169	5223			
12/6/2013	57	4890	4947			
12/12/2013	54	5169	5223			
12/17/2013	58	4775	4833			
				2013 Totals	hydrocarbon recovered	water pumped
12/24/2013	57	4890	4947			total fluid pumped
1/2/2014	88	4687	4775		2,705	111,045
1/6/2014	56	4947	5003			113,750
1/7/2014	32	3829	3861			
1/9/2014	32	3448	3480			
1/13/2014	29	4688	4717			
1/16/2014	29	4688	4717			
1/22/2014	29	4918	4947			
1/29/2014	30	4449	4479			
1/31/2014	61	4236	4297			
2/4/2014	61	4236	4297			
2/11/2014	60	4539	4599			

Western Gallup Refinery

September 2013- October 2016 Pumping Records For Release

Stand Pipes

pumping records provided by CTI (gallons)

DATE	hydrocarbon recovered	water pumped	total fluid pumped
2/18/2014	57	4890	4947
2/25/2014	57	4890	4947
2/28/2014	63	3924	3987
3/4/2014	31	4327	4358
3/7/2014	29	4804	4833
3/12/2014	29	4804	4833
3/14/2014	30	4449	4479
3/17/2014	32	3829	3861
3/19/2014	32	3448	3480
3/24/2014	32	3703	3735
3/28/2014	32	3703	3735
4/1/2014	32	3703	3735
4/3/2014	32	3320	3352
4/7/2014	15	4220	4235
4/15/2014	30	4205	4235
4/23/2014	31	4327	4358
5/1/2014	31	4327	4358
5/7/2014	31	4081	4112
5/14/2014	30	4205	4235
5/22/2014	31	4081	4112
5/29/2014	31	3994	4025
6/6/2014	31	4081	4112
6/13/2014	32	3829	3861
6/20/2014	32	3955	3987
7/3/2014	31	4081	4112
7/10/2014	30	4205	4235
7/18/2014	30	4205	4235
7/28/2014	30	4205	4235
8/4/2014	30	4205	4235
8/14/2014	32	3955	3987
8/20/2014	31	4081	4112
8/29/2014	32	3955	3987
9/4/2014	32	3703	3735
9/11/2014	32	3576	3608
9/18/2014	32	3320	3352
9/26/2014	32	3448	3480
9/30/2014	32	3576	3608
10/7/2014	32	3320	3352

Western Gallup Refinery

September 2013- October 2016 Pumping Records For Release

Stand Pipes

pumping records provided by CTI (gallons)

DATE	hydrocarbon recovered	water pumped	total fluid pumped
10/14/2014	32	3320	3352
10/21/2014	32	3955	3987
10/30/2014	32	3955	3987
11/7/2014	32	3320	3352
11/12/2014	32	3320	3352
11/18/2014	32	3064	3096
12/4/2014	32	3829	3861
12/9/2014	32	3955	3987
12/15/2014	31	4081	4112
12/24/2014	31	4081	4112

			2014 Totals	hydrocarbon recovered	water pumped	total fluid pumped
12/30/2014	32	3703	3735			
1/8/2015	31	4081	4112	2,108	242,182	244,290
1/21/2015	31	4327	4358			
1/29/2015	32	3448	3480			
2/6/2015	32	3448	3480			
2/11/2015	32	3320	3352			
3/5/2015	29	4688	4717			
3/12/2015	31	4081	4112			
3/16/2015	31	4081	4112			
3/25/2015	32	3703	3735			
3/31/2015	32	3955	3987			
4/13/2015	32	3829	3861			
4/20/2015	32	3703	3735			
4/27/2015	16	4096	4112			
4/30/2015	16	4096	4112			
5/11/2015	16	4220	4236			
5/29/2015	16	3971	3987			
6/8/2015	16	4096	4112			
6/12/2015	16	4096	4112			
6/16/2015	16	4220	4236			
6/24/2015	15	4583	4599			
7/2/2015	16	4096	4112			
7/8/2015	16	3971	3987			
7/15/2015	15	4343	4358			
7/22/2015	16	4220	4236			
7/30/2015	16	3845	3861			

Western Gallup Refinery

September 2013- October 2016 Pumping Records For Release

Stand Pipes

pumping records provided by CTI (gallons)

DATE	hydrocarbon recovered	water pumped	total fluid pumped
8/6/2015	16	4220	4236
8/12/2015	16	3971	3987
8/17/2015	16	4220	4236
8/21/2015	16	3845	3861
8/26/2015	16	4220	4236
9/2/2015	15	4464	4479
9/11/2015	14	5154	5168
9/25/2015	15	4464	4479
10/2/2015	15	4583	4599
10/8/2015	16	4220	4236
10/23/2015	16	4817	4833
10/29/2015	16	4220	4236
11/11/2015	14	4933	4947
11/20/2015	24	5554	5578
11/30/2015	43	4790	4833
12/10/2015	56	5323	5379
12/17/2015	56	4891	4947
12/24/2015	54	5114	5168

			2015 Totals	hydrocarbon recovered	water pumped	total fluid pumped
12/31/2015	54	5114	5168			
1/7/2016	56	5323	5379	1,071	188,634	189,707
1/19/2016	51	5429	5480			
1/26/2016	56	5003	5059			
2/11/2016	54	5221	5275			
2/17/2016	56	4891	4947			
2/25/2016	56	5323	5379			
3/4/2016	47	5625	5672			
3/11/2016	49	5529	5578			
3/17/2016	59	4658	4717			
3/24/2016	45	5717	5762			
3/31/2016	49	5529	5578			
4/6/2016	38	5966	6004			
4/15/2016	40	5888	5928			
4/20/2016	56	5323	5379			
4/27/2016	43	5804	5847			
5/5/2016	47	5625	5672			
5/9/2016	60	4419	4479			

Western Gallup Refinery

September 2013- October 2016 Pumping Records For Release

Stand Pipes

pumping records provided by CTI (gallons)

DATE	hydrocarbon recovered	water pumped	total fluid pumped
5/10/2016	45	5717	5762
5/17/2016	40	5888	5928
5/19/2016	51	5429	5480
5/24/2016	38	5966	6004
5/25/2016	49	5529	5578
5/27/2016	43	5804	5847
6/1/2016	45	5717	5762
6/3/2016	51	5429	5480
6/7/2016	35	6039	6074
6/9/2016	47	5625	5672
6/13/2016	40	5888	5928
6/16/2016	38	5966	6004
6/20/2016	40	5888	5928
6/23/2016	49	5529	5578
6/27/2016	47	5625	5672
6/30/2016	60	4419	4479
7/6/2016	232	4768	5000
7/8/2016	109	3891	4000
7/11/2016	232	4768	5000
7/19/2016	300	5300	5600
7/21/2016	109	3891	4000
7/25/2016	232	4768	5000
7/28/2016	109	3891	4000
8/2/2016	232	4768	5000
8/9/2016	300	5300	5600
8/15/2016	232	4768	5000
8/18/2016	109	3891	4000
8/23/2016	232	4768	5000
8/25/2016	109	3891	4000
8/29/2016	232	4768	5000
9/1/2016	109	3891	4000
9/7/2016	232	4768	5000
9/9/2016	109	4187	4296
9/12/2016	109	3891	4000
9/15/2016	109	3891	4000
9/19/2016	232	4768	5000
9/27/2016	300	5300	5600

Begin 3rd Qtr

Western Gallup Refinery

September 2013- October 2016 Pumping Records For Release

Stand Pipes

pumping records provided by CTI (gallons)

DATE	hydrocarbon recovered	water pumped	total fluid pumped				
				3rd Qtr 2016 Totals	hydrocarbon recovered	water pumped	total fluid pumped
9/29/2016	109	3891	4000		4,078	98,018	102,096

* two loads were removed on this date

** based on estimates from measurements taken on 10/13/16 and 10/18/16

10/5/2016			5460
10/7/2016			5460
10/10/2016			5460
Totals	11,599	728,482	736,005

SEEP OIL RETENTION DITCH

DATE	LOADS	(water/oil mixture)
4/1/2016	1	5460
4/27/2016	1	5460
4/28/2016	1	5460
5/5/2016	1	5460
5/9/2016	0.75	4200
5/13/2016	1	5460
5/24/2016	1	5460
5/26/2016	0.5	2730
5/27/2016	1	5460
6/1/2016	1	5460
6/2/2016	1	5460
6/6/2016	1	5460
6/8/2016	1	5460
6/9/2016	0.5	2730
6/14/2016	1	5460
6/16/2016	1	5460
6/23/2016	1	5460
6/29/2016	0.5	2730

Western Gallup Refinery

September 2013- October 2016 Pumping Records For Release

Stand Pipes

pumping records provided by CTI (gallons)

DATE	hydrocarbon recovered	water pumped	total fluid pumped			
7/6/2016	1	5460				
7/8/2016	1	5460				
7/13/2016	1	5460				
7/21/2016	1	5460				
7/27/2016	1	5460				
8/3/2016	1	5460				
8/9/2016	2	10920				
8/10/2016	0.5	2730				
8/16/2016	1	5460				
8/17/2016	1	5460				
8/18/2016	0.5	2730				
8/23/2016	2	10920				
8/24/2016	1	5460				
8/26/2016	1	5460				
8/30/2016	1	5460				
9/1/2016	2	10920				
9/8/2016	2	10920				
				3rd Qtr		
				2016		
9/14/2016	2	10920		Totals	LOADS	(water/oil mixture)
					22	120,120

INTERIM MEASURES REPORT HYDROCARBON SEEP AREA



Gallup Refinery
Western Refining Southwest, Inc.
I-40 Exit 39
Jamestown, New Mexico 87347

JULY 2015



DiSorbo
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Gallup Refinery

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List of Acronyms

American Petroleum Institute (API)
benzene, toluene, ethylbenzene, and xylene (BTEX)
diesel range organics (DRO)
Environmental Protection Agency (EPA)
maximum contaminant level (MCL)
monitoring well (MW)
motor oil range organics (MRO)
methyl tert butyl ether (MTBE)
New Mexico Environment Department (NMED)
polyvinyl chloride (PVC)
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 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 a crude oil refinery currently owned and operated by Western Refining Southwest, Inc. (“Western”) and generally processes crude oil from the Four Corners area to produce gasoline, diesel fuels, jet fuels, kerosene, propane, butane, and residual fuel.

On June 26, 2013, Western provided initial notification of the discovery of an apparent seep of hydrocarbons to the land surface to the New Mexico Oil Conservation Division (“NMOCD”) with copy to the New Mexico Environment Department Hazardous Waste Bureau (“NMED HWB”). The area identified as the “Hydrocarbon Seep” is located on the western portion of the refinery to the west southwest of crude oil storage tank T-102. This Interim Measures Report presents information on the initial spill response actions and subsequent interim measures that have been conducted to address the seep of hydrocarbons discovered to the west of tank T-102. The interim measures conducted to-date include: (1) source identification, (2) source control measures, and (3) characterization of groundwater impacts.

Source identification included such activities as: 14 soil excavations, distillation analyses of two hydrocarbon samples, laboratory analysis of groundwater samples and one product sample, dye tracer tests on the process sewer system, and completion of soil borings as temporary well completions using a hand auger and hollow-stem drilling rig. A hole was identified in the refinery’s wastewater pipeline (Solid Waste Management Unit No. 12 – Wastewater Collection System) near the bundle cleaning pad. A leaking transmix transfer line was also identified in this area. An additional source is likely present further to the south near the main truck loading racks and evaluation of this area is on-going.

Source control has focused on recovery of separate-phase hydrocarbon (SPH) and groundwater from six temporary sumps, which were installed in the soil excavations, and recovery of primarily SPH from individual monitoring wells. From June 26, 2013 through June 30, 2015, 5,364 gallons of SPH and 456,356 gallons of groundwater have been recovered.

Characterization of the impacts to groundwater is an on-going activity to help ensure the interim measures are implemented on a timely basis to minimize any additional impacts to currently unaffected groundwater. There have been four field events conducted in a phased approach from July 2013 to November 2014. This included the installation of 44 permanent monitoring wells (MKTF1 through MKTF-44) and an additional 14 temporary wells, which were plugged after groundwater samples were collected for chemical analysis. A groundwater sampling program was initiated in March 2014 to include quarterly sample collection at all new wells for a period of one year with samples analyzed for volatile organic compounds (VOCs), semi-volatile compounds (SVOCs), total petroleum hydrocarbons (TPH) including gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO), total metals, dissolved metals, and major cations and anions.

Interim measures are on-going to recover SPH and identify any additional potential sources. Evaluations of the feasibility of recovery of SPH and impacted groundwater are underway to support future remedy selection.

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 is a crude oil refinery currently owned and operated by Western Refining Southwest, Inc. ("Western"), formerly known as Giant Industries Arizona, Inc. and formerly doing business as Giant Refining Company Ciniza Refinery, an Arizona corporation. 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, isomerization, sulfur recovery, merox treater, and hydrotreating. Current and past operations have produced gasoline, diesel fuels, jet fuels, kerosene, propane, butane, and residual fuel.

On June 26, 2013, Western provided initial notification of the discovery of an apparent seep of hydrocarbons to the land surface to the NMOCD with copy to the NMED HWB. The area identified as the "Hydrocarbon Seep" is located approximately 280 feet west southwest of crude oil storage tank T-102. The seep location is identified on Figure 2. Subsequent to the discovery of the hydrocarbon seep, Western implemented initial spill response actions. The initial spill response actions and subsequent interim measures are described in Section 2. Section 3 explains the planned future interim measures.

Section 2

Interim Measures

This section presents information on the initial spill response actions and subsequent interim measures that have been conducted to address the seep of hydrocarbons discovered in June 2013 to the west of tank T-102. These activities focused on: (1) source identification, (2) source control measures, and (3) characterization of groundwater impacts.

Source Identification

Initial efforts to identify the source of the hydrocarbons included the following actions:

1. Completion of 14 soil excavations with a backhoe;
2. Distillation analyses of two hydrocarbon samples collected near the seep (Seep 1 and Seep 2);
3. Dye tracer tests on the process sewer system;
4. Completion of five hand-auger borings (HA-1 through HA-5) to the west and northwest of the seep location with temporary well completions;
5. Installation of 22 soil borings with temporary well completions to the southeast of the seep location; and
6. Collection and laboratory analysis of one product sample and six groundwater samples from temporary well completions.

Fourteen soil excavations were completed in the area of the seep to help identify the presence of hydrocarbons in the shallow subsurface as shown on Figure 2. The excavations confirmed the presence of hydrocarbons throughout the immediate area of the seep and to the east and south of the seep. As discussed further below, six of the excavations were found to have sufficient hydrocarbons to warrant completion as temporary recovery sumps. The excavated soils were characterized and disposed off-site at an approved disposal facility.

The results of two distillation analyses of hydrocarbon samples obtained from the seep are plotted on the enclosed graph (Figure 3) and the laboratory reports are also provided in Appendix D. The graph indicates that the hydrocarbon recovered at the location of the seep (identified on the graph as Seep Sample 1 and Seep Sample 2 and in the lab report as underground petroleum sample

deposit #1 and #2) has a mixture of gasoline through light gas-oil range hydrocarbons, with a majority of the sample consisting of diesel range hydrocarbons. The distillation analysis of a crude sample collected from Tank T-101 in November 2011 is also plotted on Figure 3 and there is a clear distinction between the material found at the seep location and the crude oil processed at the refinery. The distillation results eliminate Tanks T-101 and T-102 (crude oil storage tanks) as a source of the release.

Two initial dye tests were conducted in the process sewer system in July and August 2013. A dye was introduced into the sewer due east of the seep location near the bundle cleaning pad and a second dye was placed in the sewer to the southeast of the marketing tanks at the main truck loading rack. In both instances, it took approximately eight days for the dye to be detected in the area of the seep. The dyes initially were not identified in the soil borings/temporary wells located further south, but only in the area where the seep was originally 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 indicated 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 a yellow/green dye introduced into the sewer at the transmix unloading area (a short distance northwest of the main truck loading racks) on September 23, 2013 and a red dye introduced at the lab sinks on September 24, 2013. A subsequent fluid level gauging event was conducted at the temporary monitoring wells on September 26, 2013 (Table 1). The red dye was identified in five of the temporary wells (SB01, SB02, SB16, SB17, and SB22), 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, SB08, SB10, SB11, SB19, SB20, and SB21), which are all located further south. 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 lines. The red dye appears to have exited the sewer line from a hole identified near the bundle cleaning pad (see discussion below). The source location of the yellow/green dye is not currently known.

The enclosed map (Figure 2) shows the locations of the five hand auger locations and 22 soil borings, which were completed as temporary monitoring wells to allow gauging of fluid levels and collection of groundwater samples for analysis. The boring logs are provided in Appendix A. As many of the borings/temporary wells indicate the presence of SPH, groundwater samples were only collected for analysis from HA1, HA2, HA3, HA4, SB-18, and SB-19. The groundwater samples were

analyzed for total petroleum hydrocarbons (TPH) (gasoline range, diesel range, and oil range) by EPA method 8015D. The results are summarized in Table 2. Gasoline range and diesel range organics were detected in all groundwater samples, with gasoline range being the dominant fraction in three of the four hand auger locations. The fourth hand auger location (HA-4) shows equal concentrations of gasoline range and diesel range organics, as does SB-18. A higher concentration of diesel range organics as compared to gasoline range organics was detected in SB-19.

Based on the results of the dye tests and the location of the observed hydrocarbon impacts, Western investigated the sewer lines to the east. A camera survey was conducted on multiple segments of the sewer line in the western portion of the refinery on August 27 and 28, 2013. Based on this visual inspection, a hole in the sewer line was identified approximately 20 feet south of the sewer box on the west side of the bundle cleaning pad. The location of the identified release point in the sewer line is shown on Figure 2.

On August 19, 2013 an operator walking the aboveground pipeline rack looking for possible leaks observed hydrocarbon on the land surface in the secondary containment east of tank T-3. The location of the leak, which is just west of the above ground pipeline rack that runs north to south along the east side of the marketing tank farm, is shown on Figure 2. Once the release was discovered a small earthen berm was built approximately 10 ft to the west of the release, which held approximately 1.5 barrels of hydrocarbon. A sandpiper was then set up in the bermed area that pumped the hydrocarbon to the process sewer. Operations were then able to isolate the underground pipeline that was leaking. It was identified as a transmix/slop 6 to 8 inch line that is only used during the unloading of transmix trucks at the truck rack, thus it would only have been an intermittent source. Trucks are unloaded at the rack and this line transports the transmix/slop to T-231. The line was taken out of service, cleaned and blanked off. The line was replaced with an aboveground pipeline.

Based on the initial source identification efforts, two potential sources were identified that could have resulted in the discharge of petroleum hydrocarbons at the land surface, as discovered on June 26, 2013. The hole in the sewer line on the west side of the bundle cleaning pad and the leak in the transmix/slop oil transfer line are within approximately 70 feet of each other and are hydraulically up-gradient of the seep area. Dye tests confirm the potential for materials released from the hole in the sewer line near the bundle cleaning pad to migrate to the area of the seep. Subsequent chemical analyses of groundwater samples collected from wells further to the west for VOCs by EPA

method 8260 revealed the presence of chlorinated solvents, which would not have been sourced from the transmix line.

As additional wells were installed to characterize the extent of the impacted groundwater, which is discussed below, the impacts were found to extend further to the south. The distribution of the constituents in groundwater confirmed the dye tests, which indicated an additional potential source to the south of the hole in the sewer line that was identified near the Bundle Cleaning Pad. The distribution of impacts to groundwater indicates an additional source at or near the main truck loading racks.

Source Control Measures

Six of the fourteen soil excavations completed near the hydrocarbon seep were initially left open to facilitate recovery of hydrocarbons and groundwater. Subsequently, a six-inch PVC screen was placed into each of these six excavations and they were backfilled with coarse gravel to create temporary sumps to allow for safe, continued recovery of liquids. These locations are designated as S-1 through S-6 and are shown on Figure 2. The groundwater and any hydrocarbons that enter the sumps are removed with a vacuum truck and placed into the wastewater treatment system up-stream of the API Separator. The volume of total liquids (groundwater and hydrocarbons) recovered from June 26, 2013 through June 12, 2015 is estimated to be 461,699 gallons (Table 3). The volume of hydrocarbon recovered during this same time period is estimated at 5,343 gallons. The initial material recovered was estimated to be 50% water and 50% hydrocarbon; however, the percentage of hydrocarbon reduced significantly over the first couple of weeks and has declined to less than 1%.

Beginning in August 2014, product recovery from individual monitoring wells was initiated. This involved recovery of total fluids (water and hydrocarbon) without accurate measurements from individual wells. Later the recovery process was modified to more accurately record recovery of product from the individual wells. Through June 30, 2015, 21 gallons of SPH has been recovered. The individual well recovery volumes are provided in Table 4.

As discussed above, a camera survey indicated a potential hole in the wastewater collection pipeline approximately 20 feet south of a surface drain located just west of the bundle cleaning pad (Figure 2). The wastewater pipeline was excavated and the source of the release was confirmed to be the wastewater pipeline (see enclosed photos of excavated section of steel pipeline in Appendix B). The wastewater collection pipeline upstream of the corroded portion of the pipeline was plugged off at the sewer box located west of the I/E shop on October 28, 2013 to facilitate replacement of the

corroded section. Additional excavation of the wastewater pipeline was extended approximately 140 feet south of the Bundle Cleaning Pad. The overall excavation was approximately 180 feet long, 20 feet wide and up to 12 feet deep and is depicted in Figure 4. The corroded section of pipeline was replaced and the impacted soils, which were characterized as non-hazardous, were disposed off-site. Two new permanent monitoring wells (MKTF-20 and MKTF-21) were installed in the backfill materials that were placed along the new section of the wastewater pipeline.

Soil samples were collected from the bottom of the excavation near the bundle cleaning pad and waste characterization samples of all excavated materials were collected and sent to Hall Environmental Laboratories for analysis. A total volume of 278 cubic yards of non-hazardous soil was disposed off-site at the Gandy Marley, Inc. landfill in Chavez County, New Mexico.

The associated laboratory analytical reports are enclosed in Appendix D and are listed below.

- Lab report #1306C03 - waste characterization soil sample of material excavated for sump installation west of Tank 101 and 102
- Lab report #1307524 - waste characterization soil sample of material excavated for sump installation west of Tank 101 and 102
- Lab report #1309D69 - waste characterization soil sample of material excavated for sump installation west of Tank 101 and 102
- Lab report #1311343 - four soil samples that were collected from the intersection of the sidewall and floors on all four sides of the excavation to the west of the bundle cleaning pad
- Lab report #1311380 - waste characterization soil sample from materials excavated near bundle pad
- Lab report #1406C66 - twelve waste characterization soil samples collected from materials excavated near bundle pad

Characterization of Impacted Groundwater

To determine what additional interim measures could be necessary to control the impacts to groundwater, Western installed temporary and permanent monitoring wells to characterize the groundwater impacts. This began with the installation of five hand-augered soil borings (HA1 through HA5) in July 2013, which were completed as temporary wells. Also in July 2013, 22 soil borings (SB01 – SB22) were completed with a drilling rig and temporary well completions were installed in each. An initial round of groundwater samples were collected from four of the five HA

locations (HA5 was destroyed shortly after installation) on July 17, 2013 and soil borings SB-18 and SB-19 on July 25, 2013. Many of the SB temporary wells contained SPH and thus water samples were not collected for analysis. The water samples were analyzed for TPH to obtain an initial characterization of the nature of the hydrocarbons observed throughout the area. The results are included in Table 2 and are discussed above as part of the source identification.

A number of the temporary wells were drilled in locations making them subject to damage due to normal refinery operations in this area. The temporary wells were reviewed to select wells to be plugged vs. recompleted as permanent monitoring wells based on location relative to plant operations, thickness of transmissive sediments (e.g., sand vs. silty clay), measured thickness of SPH, and position of surrounding wells. Ten of the 22 SB temporary wells (SB02, SB04, SB05, SB07, SB09, SB12, SB14, SB15, SB18, and SB21) were plugged and two of the four hand-auger borings (HA2 and HA4) were plugged in November 2013. Prior to plugging these temporary wells, groundwater samples were collected on October 28, 2013 at SB07, SB12, SB14, and SB15 and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and TPH. The remaining 12 temporary wells were recompleted as permanent monitoring wells and two of the hand-auger locations were completed as permanent monitoring wells (MKTF-01/HA1, MKTF-02/HA3, MKTF-03/SB01, MKTF-04/SB03, MKTF-05/SB06, MKTF-06/SB08, MKTF-07/SB10, MKTF-08/SB11, MKTF-09/SB13, MKTF-10/SB16, MKTF-11/SB17, MKTF-12/SB19, MKTF-13/SB20, and MKTF-14/SB22). The permanent wells were designated as “MKTF” wells due to the initial concentration of wells in the area of the Marketing Tank Farm. The well survey information is provided in Appendix C.

Also during the November 2013 field campaign, 13 additional temporary wells (SB23 – SB35) were drilled to further define the lateral extent of the impacted groundwater. Due to their location and concerns over the potential for damage to the wells, four of the wells (MKTF-15/SB31, MKTF16/SB32, MKTF17/SB33, and MKTF18/SB34) were completed as permanent flush-mount wells in November 2013. Temporary wells SB23, SB24, SB25, SB26, SB27, SB28, and SB29 were drilled down-gradient of the previously installed wells. Wells SB30 and SB31 were drilled cross-gradient to the north. Well SB32 was drilled immediately down-gradient of the leaking sewer line. Well SB33 was drilled south of the main body of the plume and immediately down-gradient of the additive tank farm. Well SB34 was drilled down-gradient and to the south of the section of the sewer line that was replaced and also immediately adjacent to the Transmix/Slop Oil Loading Rack. Well SB35 was drilled down-gradient of the additive tank farm and main truck loading racks. Groundwater samples were collected from all 13 new wells in November 2013 and analyzed for

BTEX, TPH, and methyl tert butyl ether (MTBE). The analytical results for groundwater samples collected in October and November 2013 are summarized in Table 2 and the analytical reports are provided in Appendix D. The well locations are shown on Figure 2, with their temporary (SB) well designation numbers.

The next field event occurred in March and April 2014. Previously installed temporary wells SB23, SB25, SB26, SB28, SB29, SB30, and SB35 were completed as permanent monitoring wells MKTF19/SB35, MKTF22/SB23, MKTF23/SB25, MKTF24/SB26, MKTF25/SB28, MKTF26/SB29, and MKTF27/SB30. Temporary wells SB24 and SB27 were plugged after groundwater samples were collected and analyzed for VOCs, SVOCs, TPH, dissolved and total metals, and major cations and anions. Seven new permanent monitoring wells (MKTF-28, MKTF-29, MKTF-30, MKTF-31, MKTF-32, MKTF-33, and MKTF-34) were installed primarily in down-gradient locations. Groundwater samples were collected in April 2014 from all MKTF wells that did not contain SPH (MKTF-01 through MKTF-34, excluding MKTF-01, MKTF-03, MKTF-05, MKTF-06, MKTF-07, MKTF-08, MKTF-12, MKTF-13, MKTF-14, and MKTF-23) and MKTF-28, which was dry. This groundwater sampling event initiated quarterly groundwater sampling for the MKTF wells. The water samples were analyzed for TPH, VOCs, and SVOCs and the results for detected constituents are summarized in Table 2.

Quarterly groundwater samples were collected from the existing MKTF wells in June 2014 (second Quarter event) and September 2014 (third Quarter event). The samples were analyzed for VOCs, SVOCs, TPH, dissolved metals, total metals, and major cations and anions. The results are included in Table 2 and laboratory analytical reports provided in Appendix D.

The last major field event was conducted in November 2014 with the installation of 10 permanent monitoring wells (MKTF-35 through MKTF-44). Two wells (MKTF-35 and MKTF-36) were installed near the main truck loading racks to evaluate this area as a potential source. Three wells (MKTF-37 through MKTF-39) were installed in anticipated up-gradient locations to the east of the main truck loading racks and east of the area where recent repairs were completed on the wastewater pipeline. Five additional wells (MKTF-40 through MKTF-44) were installed west of the main truck loading racks to delineate the down-gradient extent of the plume. During the work near the main truck loading racks, an existing monitoring well was identified at the far western edge of the asphalt apron at the loading rack and it was designated as MKTF-45. Groundwater samples were collected for analysis at all of the 10 new wells except MKTF-40, which did not contain sufficient volume of water to support sample collection. The third quarter 2014 groundwater samples were also collected during the

month of November and the analytical results for detected constituents included in Table 2. The laboratory analytical reports are included in Appendix D.

Quarterly groundwater samples were collected from MKTF wells in March 2015 (first 2015 Quarter event) and June 2015 (second 2015 Quarter event). The samples were analyzed for VOCs, SVOCs, TPH, dissolved metals, total metals, and major cations and anions. The results for detected constituents are included in Table 2 and laboratory analytical reports provided in Appendix D. Not all analytical results were available for the June 2015 sampling event at the time this report was due; however, all available results are included.

Potentiometric surface maps for April 2014 (Figure 5) and March 2015 (Figure 6) indicate the shallow groundwater flow direction mirrors the surface topography. The predominant flow direction is to the west-northwest. There is a southwesterly flow direction away from the area of the main truck loading racks that transitions back to the northwest as you move off the topographic high present near the main truck loading racks and additive tank farm.

Three geologic cross sections were prepared (A-A', B-B' and C-C') and are presented on Figures 7, 8, and 9. The presence of a clayey sand/sandy clay interval is present in many of the borings and appears to provide a potential pathway for contaminant migration. Based on well development and sampling efforts, many of the wells do not produce significant volumes of water with the exception of wells located near the sanitary lagoon.

A series of maps (Figures 10 through 15) depicting the extent of dissolved-phase impacts for some of the more prevalent constituents (benzene, 1,1-dichloroethane, dissolved iron, MTBE, naphthalene, and 1,2,4-trimethylbenzene) are included. Figure 16 shows the thickness of SPH as measured in March 2015. The groundwater data collected to-date in the general area of the hydrocarbon seep indicates the presence of petroleum hydrocarbons extending from the leaking sewer line (identified near the bundle cleaning pad) down-gradient to the west to near wastewater tanks T-27 and T-28. A second source of petroleum hydrocarbons and MTBE appears to be located at or near the main truck loading racks. Chlorinated solvents are also present in shallow groundwater and extend from the leaking sewer line near the bundle cleaning pad down-gradient primarily towards evaporation ponds #3, #4, and #5.

Section 3

Future Interim Measures

Western plans to continue recovery at the six temporary sump locations. As the percentage of hydrocarbon has declined to less than one percent of the total fluid volume recovered, future efforts may be focused on recovery of the floating SPH layer and not total fluids recovery from the sumps.

Recovery efforts from individual monitoring wells that consistently contain SPH will also be continued. The recovery efforts at the individual wells are being performed to gather information on the ability of the individual wells to recover SPH in addition to pursuing the overall goal of product recovery. This information may be used to evaluate other potential interim measures.

Western continues to evaluate other potential sources in the area that could be contributing to groundwater impacts. The area near the main truck loading racks has been identified as a potential source and efforts are on-going to identify the actual release point.

Tables

Table 1	Fluid Level Measurements – Hydrocarbon Seep Area
Table 2	Chemical Analyses
Table 3	Temporary Sump Recovery Volumes
Table 4	Monitoring Well Recovery Volumes

Table 1
Fluid Level Measurements - Hydrocarbon Seep Area
Western Refining Southwest, Inc. - Gallup Refinery

Well ID	Soil Boring ID	Date	Top of Casing (ft msl)	Specific Gravity	Depth to HC (ft btoc)	Depth to GW (ft btoc)	Apparent Hydrocarbon Thickness (feet)	Corrected Groundwater Elevation (feet MSL)	Comments
MKTf-01	HA1	07/11/13	6920.67	0.7970	ND	6.60	0.00	6914.07	
		07/12/13	6920.67	0.7970	ND	6.60	0.00	6914.07	
		07/17/13	6920.67	0.7970	ND	6.80	0.00	6913.87	
		08/14/13	6920.67	0.7970	ND	9.19	0.00	6911.48	
		09/25/13	6920.67	0.7970	5.44	6.36	0.92	6915.04	
		11/20/13	6920.67	0.7970	ND	6.64	0.00	6914.03	
		01/13/14	6920.67	0.7970	7.90	8.34	0.44	6912.68	
		02/12/14	6920.67	0.7970	6.73	6.74	0.01	6913.94	
		03/11/14	6920.67	0.7970	6.10	6.38	0.28	6914.51	
		04/08/14	6920.67	0.7970	7.05	7.25	0.20	6913.58	
		09/15/14	6920.67	0.7970	6.94	6.98	0.04	6913.72	
		03/11/15	6920.67	0.7970	ND	5.85	0.00	6914.82	
		06/09/15	6920.67	0.7970	ND	7.15	0.00	6913.52	
NA	HA2	07/12/13	NS	0.7970	ND	5.51	0.00	NA	
		07/17/13	NS	0.7970	ND	5.82	0.00	NA	
		08/14/13	NS	0.7970	ND	5.31	0.00	NA	
		09/25/13	NS	0.7970	ND	4.80	0.00	NA	Clear - slight odor detected
									Plugged Nov. 2013
MKTf-02	HA3	07/12/13	6917.45	0.7970	ND	6.40	0.00	6911.05	
		07/17/13	6917.45	0.7970	ND	6.68	0.00	6910.77	
		08/14/13	6917.45	0.7970	ND	4.28	0.00	6913.17	
		09/25/13	6917.45	0.7970	ND	4.01	0.00	6913.44	Clear - slight odor detected
		11/20/13	6917.45	0.7970	ND	8.40	0.00	6909.05	
		01/13/14	6917.45	0.7970	ND	7.49	0.00	6909.96	
		02/12/14	6917.45	0.7970	ND	7.48	0.00	6909.97	
		03/11/14	6917.45	0.7970	ND	7.03	0.00	6910.42	
		04/08/14	6917.45	0.7970	ND	7.75	0.00	6909.70	
		09/15/14	6917.45	0.7970	ND	8.41	0.00	6909.04	
		03/11/15	6917.45	0.7970	ND	6.88	0.00	6910.57	
		06/09/15	6917.45	0.7970	ND	7.55	0.00	6909.90	
NA	HA4	07/12/13	NS	0.7970	ND	6.41	0.00	NA	
		07/17/13	NS	0.7970	ND	6.78	0.00	NA	
		08/14/13	NS	0.7970	ND	4.94	0.00	NA	
		09/26/13	NS	0.7970	ND	4.50	0.00	NA	Clear - slight odor detected
									Plugged Nov. 2013
NA	HA5	07/12/13	NS	0.7970	ND	5.50	0.00	NA	
									destroyed after installation

Table 1
Fluid Level Measurements - Hydrocarbon Seep Area
Western Refining Southwest, Inc. - Gallup Refinery

Well ID	Soil Boring ID	Date	Top of Casing (ft msl)	Specific Gravity	Depth to HC (ft btoc)	Depth to GW (ft btoc)	Apparent Hydrocarbon Thickness (feet)	Corrected Groundwater Elevation (feet MSL)	Comments
MKTf-03	SB01	07/17/13	6931.31	0.7970	11.50	16.74	5.24	6918.75	
		07/25/13	6931.31	0.7970	10.85	16.55	5.70	6919.30	
		08/14/13	6931.31	0.7970	9.88	9.91	0.03	6921.42	Has reddish tint - trace of dye?
		09/26/13	6931.31	0.7970	9.51	15.19	5.68	6920.65	Red - dye - odor
		11/20/13	6931.31	0.7970	7.11	10.39	3.28	6923.53	
		01/13/14	6931.31	0.7970	8.10	9.40	1.30	6922.95	
		02/13/14	6931.31	0.7970	ND	8.33	0.00	6922.98	
		03/11/14	6931.31	0.7970	8.15	9.07	0.92	6922.97	
		04/08/14	6931.31	0.7970	8.59	9.21	0.62	6922.59	
		09/15/14	6931.31	0.7970	9.06	9.16	0.10	6922.23	
		03/17/15	6931.31	0.7970	8.46	9.26	0.80	6922.69	
		06/04/15	6931.31	0.7970	8.70	9.32	0.62	6922.48	
NA	SB02	07/17/13	227.85	0.7970	10.26	10.58	0.32	NA	
		07/25/13	227.85	0.7970	9.68	9.97	0.29	NA	
		08/14/13	227.85	0.7970	8.74	9.12	0.38	NA	
		09/26/13	227.85	0.7970	8.25	8.45	0.20	NA	red/orange tint - traces of dye
									Plugged Nov. 2013
MKTf-04	SB03	07/17/13	6933.57	0.7970	ND	11.40	0.00	6922.17	
		07/25/13	6933.57	0.7970	ND	12.84	0.00	6920.73	
		08/14/13	6933.57	0.7970	ND	12.01	0.00	6921.56	
		09/26/13	6933.57	0.7970	ND	11.49	0.00	6922.08	Clear - slight odor
		11/20/13	6933.57	0.7970	ND	9.55	0.00	6924.02	
		01/15/14	6933.57	0.7970	ND	10.28	0.00	6923.29	
		02/13/14	6933.57	0.7970	ND	10.68	0.00	6922.89	
		03/11/14	6933.57	0.7970	ND	10.20	0.00	6923.37	
		04/11/14	6933.57	0.7970	ND	10.57	0.00	6923.00	
		09/15/14	6933.57	0.7970	ND	11.09	0.00	6922.48	
		03/16/15	6933.57	0.7970	ND	10.25	0.00	6923.32	
		06/04/15	6933.57	0.7970	ND	11.00	0.00	6922.57	
NA	SB04	07/17/13	232.24	0.7970	ND	13.62	0.00	NA	
		07/25/13	232.24	0.7970	ND	12.98	0.00	NA	
		08/14/13	232.24	0.7970	ND	12.19	0.00	NA	
		09/26/13	232.24	0.7970	11.72	11.79	0.07	NA	Dark w/traces of yw-grn dye
									Plugged Nov. 2013
NA	SB05	07/17/13	234.52	0.7970	14.92	15.95	1.03	NA	
		07/25/13	234.52	0.7970	14.48	15.40	0.92	NA	
		08/14/13	234.52	0.7970	13.66	13.75	0.09	NA	
		09/26/13	234.52	0.7970	13.20	14.25	1.05	NA	Dark w/traces of yw-grn dye
									Plugged Nov. 2013

Table 1
Fluid Level Measurements - Hydrocarbon Seep Area
Western Refining Southwest, Inc. - Gallup Refinery

Well ID	Soil Boring ID	Date	Top of Casing (ft msl)	Specific Gravity	Depth to HC (ft btoc)	Depth to GW (ft btoc)	Apparent Hydrocarbon Thickness (feet)	Corrected Groundwater Elevation (feet MSL)	Comments
MKTf-05	SB06	07/22/13	6942.22	0.7970	14.10	14.11	0.01	6928.12	
		07/25/13	6942.22	0.7970	14.00	14.01	0.01	6928.22	
		08/14/13	6942.22	0.7970	ND	13.07	0.00	6929.15	
		09/26/13	6942.22	0.7970	12.19	12.40	0.21	6929.99	Dark w/traces of yw-grn dye
		11/20/13	6942.22	0.7970	14.41	14.43	0.02	6927.81	
		01/15/14	6942.22	0.7970	15.04	15.10	0.06	6927.17	
		02/13/14	6942.22	0.7970	15.33	15.37	0.04	6926.88	
		03/11/14	6942.22	0.7970	ND	15.23	0.00	6926.99	
		04/10/14	6942.22	0.7970	15.50	15.55	0.05	6926.71	
		09/15/14	6942.22	0.7970	15.30	15.66	0.36	6926.85	
		03/16/15	6942.22	0.7970	15.72	16.08	0.36	6926.43	
		06/04/15	6942.22	0.7970	15.77	16.40	0.63	6926.32	
NA	SB07	07/22/13	NS	0.7970	14.84	14.85	0.01	NA	
		07/25/13	NS	0.7970	14.78	14.79	0.01	NA	
		08/14/13	NS	0.7970	ND	13.49	0.00	NA	
		09/26/13	NS	0.7970	ND	12.64	0.00	NA	
									Plugged Nov. 2013
MKTf-06	SB08	07/22/13	6946.81	0.7970	17.88	19.74	1.86	6928.55	
		07/25/13	6946.81	0.7970	17.80	19.68	1.88	6928.63	
		08/14/13	6946.81	0.7970	16.65	18.80	2.15	6929.72	
		09/26/13	6946.81	0.7970	15.96	18.25	2.29	6930.39	Dark w/traces of yw-grn dye
		11/20/13	6946.81	0.7970	17.72	17.76	0.04	6929.08	
		01/13/14	6946.81	0.7970	18.14	18.31	0.17	6928.64	
		02/13/14	6946.81	0.7970	18.34	18.77	0.43	6928.38	
		03/11/14	6946.81	0.7970	18.20	18.95	0.75	6928.46	
		04/08/14	6946.81	0.7970	18.53	19.50	0.97	6928.08	
		09/15/14	6946.81	0.7970	18.15	18.90	0.75	6928.51	
		03/16/15	6946.81	0.7970	18.24	19.94	1.70	6928.22	
		06/04/15	6946.81	0.7970	18.56	19.40	0.84	6928.08	
NA	SB09	07/22/13	240.69	0.7970	16.64	16.65	0.01	NA	
		07/25/13	240.69	0.7970	ND	16.65	0.00	NA	
		08/14/13	240.69	0.7970	ND	14.83	0.00	NA	
		09/26/13	240.69	0.7970	NM	NM	NA	NA	
									Plugged Nov. 2013

Table 1
Fluid Level Measurements - Hydrocarbon Seep Area
Western Refining Southwest, Inc. - Gallup Refinery

Well ID	Soil Boring ID	Date	Top of Casing (ft msl)	Specific Gravity	Depth to HC (ft btoc)	Depth to GW (ft btoc)	Apparent Hydrocarbon Thickness (feet)	Corrected Groundwater Elevation (feet MSL)	Comments
MKTf-07	SB10	07/22/13	6947.18	0.7970	ND	8.29	0.00	6938.89	
		07/25/13	6947.18	0.7970	ND	7.74	0.00	6939.44	
		08/14/13	6947.18	0.7970	7.57	9.14	1.57	6939.29	
		09/26/13	6947.18	0.7970	7.35	7.85	0.50	6939.73	Dark w/traces of yw-grn dye
		11/20/13	6947.18	0.7970	12.89	13.09	0.20	6934.25	
		01/13/14	6947.18	0.7970	11.91	13.01	1.10	6935.05	
		02/13/14	6947.18	0.7970	11.88	13.00	1.12	6935.07	
		03/11/14	6947.18	0.7970	11.70	12.85	1.15	6935.25	
		04/08/14	6947.18	0.7970	11.90	13.18	1.28	6935.02	
		09/15/14	6947.18	0.7970	12.00	13.60	1.60	6934.86	
		03/16/15	6947.18	0.7970	13.10	14.23	1.13	6933.85	
		06/04/15	6947.18	0.7970	12.95	14.60	1.65	6933.90	
MKTf-08	SB11	07/22/13	6947.09	0.7970	ND	DRY	0.00	NA	
		07/25/13	6947.09	0.7970	NM	NM	NA	NA	
		08/14/13	6947.09	0.7970	14.06	14.08	0.02	6933.03	
		09/26/13	6947.09	0.7970	13.23	13.45	0.22	6933.82	Dark w/traces of yw-grn dye
		11/20/13	6947.09	0.7970	14.10	14.18	0.08	6932.97	
		01/13/14	6947.09	0.7970	14.20	14.62	0.42	6932.80	
		02/13/14	6947.09	0.7970	14.25	14.69	0.44	6932.75	
		03/11/14	6947.09	0.7970	14.21	14.65	0.44	6932.79	
		04/08/14	6947.09	0.7970	14.44	15.07	0.63	6932.52	
		09/15/14	6947.09	0.7970	14.36	15.05	0.69	6932.59	
		03/16/15	6947.09	0.7970	14.25	14.50	0.25	6932.79	
		06/04/15	6947.09	0.7970	14.35	14.91	0.56	6932.63	
NA	SB12	07/22/13	NS	0.7970	14.13	14.14	0.01	NA	
		07/25/13	NS	0.7970	ND	14.18	0.00	NA	
		08/14/13	NS	0.7970	ND	14.72	0.00	NA	
		09/26/13	NS	0.7970	ND	13.15	0.00	NA	
									Plugged Nov. 2013
MKTf-09	SB13	07/22/13	6946.50	0.7970	ND	15.21	0.00	6931.29	
		07/25/13	6946.50	0.7970	ND	15.03	0.00	6931.47	
		08/14/13	6946.50	0.7970	ND	14.75	0.00	6931.75	
		09/26/13	6946.50	0.7970	ND	13.65	0.00	6932.85	
		11/20/13	6946.50	0.7970	14.72	14.73	0.01	6931.78	
		01/13/14	6946.50	0.7970	ND	14.78	0.00	6931.72	
		02/13/14	6946.50	0.7970	ND	14.82	0.00	6931.68	
		03/11/14	6946.50	0.7970	ND	14.80	0.00	6931.70	
		04/14/14	6946.50	0.7970	ND	15.02	0.00	6931.48	
		09/15/14	6946.50	0.7970	ND	14.89	0.00	6931.61	
		03/16/15	6946.50	0.7970	ND	14.48	0.00	6932.02	
		06/04/15	6946.50	0.7970	ND	14.68	0.00	6931.82	

Table 1
Fluid Level Measurements - Hydrocarbon Seep Area
Western Refining Southwest, Inc. - Gallup Refinery

Well ID	Soil Boring ID	Date	Top of Casing (ft msl)	Specific Gravity	Depth to HC (ft btoc)	Depth to GW (ft btoc)	Apparent Hydrocarbon Thickness (feet)	Corrected Groundwater Elevation (feet MSL)	Comments
NA	SB14	07/25/13	240.79	0.7970	ND	16.09	0.00	NA	
		08/14/13	240.79	0.7970	ND	15.70	0.00	NA	
		09/26/13	240.79	0.7970	ND	15.25	0.00	NA	
									Plugged Nov. 2013
NA	SB15	07/25/13	239.04	0.7970	ND	19.46	0.00	NA	
		08/14/13	239.04	0.7970	ND	18.54	0.00	NA	
		09/26/13	239.04	0.7970	ND	17.83	0.00	NA	
									Plugged Nov. 2013
MKTf-10	SB16	07/25/13	6937.16	0.7970	11.04	14.20	3.16	6925.48	
		08/14/13	6937.16	0.7970	10.76	11.36	0.60	6926.28	Has reddish tint - trace of dye?
		09/26/13	6937.16	0.7970	10.34	10.69	0.35	6926.75	orange w/red tint - traces of dye
		11/20/13	6937.16	0.7970	ND	8.52	0.00	6928.64	
		01/13/14	6937.16	0.7970	ND	8.75	0.00	6928.41	
		02/13/14	6937.16	0.7970	ND	8.89	0.00	6928.27	
		03/11/14	6937.16	0.7970	ND	8.88	0.00	6928.28	
		04/11/14	6937.16	0.7970	ND	8.90	0.00	6928.26	
		09/15/14	6937.16	0.7970	ND	8.99	0.00	6928.17	
		03/16/15	6937.16	0.7970	ND	8.96	0.00	6928.20	
		06/04/15	6937.16	0.7970	ND	8.82	0.00	6928.34	
MKTf-11	SB17	07/25/13	6931.34	0.7970	12.00	12.13	0.13	6919.31	
		08/14/13	6931.34	0.7970	11.09	11.25	0.16	6920.22	
		09/26/13	6931.34	0.7970	9.79	13.02	3.23	6920.89	orange w/red tint - traces of dye
		11/20/13	6931.34	0.7970	ND	7.95	0.00	6923.39	
		01/15/14	6931.34	0.7970	ND	8.49	0.00	6922.85	
		02/13/14	6931.34	0.7970	ND	8.64	0.00	6922.70	
		03/11/14	6931.34	0.7970	ND	8.50	0.00	6922.84	
		04/11/14	6931.34	0.7970	ND	8.85	0.00	6922.49	
		09/15/14	6931.34	0.7970	ND	9.35	0.00	6921.99	
		03/16/15	6931.34	0.7970	ND	8.80	0.00	6922.54	
		06/04/15	6931.34	0.7970	ND	9.00	0.00	6922.34	
NA	SB18	07/25/13	238.53	0.7970	ND	18.58	0.00	NA	
		08/14/13	238.53	0.7970	ND	17.54	0.00	NA	
		09/26/13	238.53	0.7970	ND	14.60	0.00	NA	
									Plugged Nov. 2013

Table 1
Fluid Level Measurements - Hydrocarbon Seep Area
Western Refining Southwest, Inc. - Gallup Refinery

Well ID	Soil Boring ID	Date	Top of Casing (ft msl)	Specific Gravity	Depth to HC (ft btoc)	Depth to GW (ft btoc)	Apparent Hydrocarbon Thickness (feet)	Corrected Groundwater Elevation (feet MSL)	Comments
MKTf-12	SB19	07/25/13	6942.11	0.7970	ND	19.45	0.00	6922.66	
		08/14/13	6942.11	0.7970	18.30	18.80	0.50	6923.71	
		09/26/13	6942.11	0.7970	17.30	21.30	4.00	6924.00	Dark w/traces of yw-grn dye
		11/20/13	6942.11	0.7970	ND	18.51	0.00	6923.60	
		01/13/14	6942.11	0.7970	19.26	19.53	0.27	6922.80	
		02/12/14	6942.11	0.7970	19.45	19.87	0.42	6922.57	
		03/11/14	6942.11	0.7970	19.15	19.43	0.28	6922.90	
		04/08/14	6942.11	0.7970	19.60	20.08	0.48	6922.41	
		09/15/14	6942.11	0.7970	19.81	21.00	1.19	6922.06	
		11/17/14	6942.11	0.7970	20.20	21.38	1.18	6921.67	
		03/12/15	6942.11	0.7970	19.13	20.94	1.81	6922.61	
		06/09/15	6942.11	0.7970	19.47	21.65	2.18	6922.20	
MKTf-13	SB20	07/25/13	6935.18	0.7970	13.62	16.24	2.62	6921.03	
		08/14/13	6935.18	0.7970	12.88	16.30	3.42	6921.61	
		09/26/13	6935.18	0.7970	12.37	15.40	3.03	6922.19	Dark w/traces of yw-grn dye
		11/20/13	6935.18	0.7970	12.02	12.10	0.08	6923.14	
		01/13/14	6935.18	0.7970	12.80	13.10	0.30	6922.32	
		02/12/14	6935.18	0.7970	12.98	13.32	0.34	6922.13	
		03/11/14	6935.18	0.7970	12.67	13.00	0.33	6922.44	
		04/08/14	6935.18	0.7970	14.46	15.03	0.57	6920.60	
		09/15/14	6935.18	0.7970	14.61	15.75	1.14	6920.34	
		11/17/14	6935.18	0.7970	14.93	16.33	1.40	6919.97	
		03/12/15	6935.18	0.7970	13.75	15.82	2.07	6921.01	
		06/09/15	6935.18	0.7970	14.22	15.87	1.65	6920.63	
NA	SB21	07/25/13	NS	0.7970	9.93	12.15	2.22	NA	
		08/14/13	NS	0.7970	9.20	9.98	0.78	NA	
		09/26/13	NS	0.7970	8.49	9.57	1.08	NA	Dark w/traces of yw-grn dye
									Plugged Nov. 2013
MKTf-14	SB22	07/25/13	6928.02	0.7970	7.89	10.99	3.10	6919.50	
		08/14/13	6928.02	0.7970	6.77	7.91	1.14	6921.02	
		09/26/13	6928.02	0.7970	6.35	9.45	3.10	6921.04	red/orange tint - traces of dye
		11/20/13	6928.02	0.7970	6.88	9.05	2.17	6920.70	
		01/13/14	6928.02	0.7970	7.38	8.99	1.61	6920.31	
		02/12/14	6928.02	0.7970	7.60	8.77	1.17	6920.18	
		03/11/14	6928.02	0.7970	7.27	8.42	1.15	6920.52	
		04/08/14	6928.02	0.7970	7.72	8.59	0.87	6920.12	
		09/15/14	6928.02	0.7970	8.30	8.75	0.45	6919.63	
		11/17/14	6928.02	0.7970	8.57	8.94	0.37	6919.37	
		03/12/15	6928.02	0.7970	7.60	8.15	0.55	6920.31	
		06/09/15	6928.02	0.7970	8.00	8.37	0.37	6919.94	

Table 1
Fluid Level Measurements - Hydrocarbon Seep Area
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Well ID	Soil Boring ID	Date	Top of Casing (ft msl)	Specific Gravity	Depth to HC (ft btoc)	Depth to GW (ft btoc)	Apparent Hydrocarbon Thickness (feet)	Corrected Groundwater Elevation (feet MSL)	Comments
MKTf-22	SB23	11/20/13	6942.31	0.7970	ND	25.60	0.00	6916.71	
		04/10/14	6942.31	0.7970	ND	26.10	0.00	6916.21	
		09/23/14	6942.31	0.7970	ND	DRY	0.00	DRY	
		11/17/14	6942.31	0.7970	ND	26.67	0.00	6915.64	
		03/12/15	6942.31	0.7970	ND	26.07	0.00	6916.24	
		06/09/15	6942.31	0.7970	ND	26.18	0.00	6916.13	
NA	SB24	11/20/13	NS	NA	ND	15.23	0.00	NA	
		04/03/14	NS	NA	ND	15.75	0.00	NA	
									Plugged April 2014
MKTf-23	SB25	11/20/13	6929.98	0.7970	14.32	14.33	0.01	6915.66	
		04/10/14	6929.98	0.7970	14.71	14.95	0.24	6915.22	
		09/23/14	6929.98	0.7970	ND	15.39	0.00	6914.59	
		11/17/14	6929.98	0.7970	ND	15.27	0.00	6914.71	
		03/12/15	6929.98	0.7970	ND	14.79	0.00	6915.19	
		06/09/15	6929.98	0.7970	ND	13.82	0.00	6916.16	
MKTf-24	SB26	11/20/13	6928.72	0.7970	ND	19.97	0.00	6908.75	
		04/08/14	6928.72	0.7970	ND	20.25	0.00	6908.47	
		09/23/14	6928.72	0.7970	ND	22.57	0.00	6906.15	
		03/11/15	6928.72	0.7970	ND	21.54	0.00	6907.18	
		06/10/15	6928.72	0.7970	ND	21.65	0.00	6907.07	
NA	SB27	11/20/13	NS	NA	ND	8.13	0.00	NA	
		04/03/14	NS	NA	ND	8.36	0.00	NA	
									Plugged April 2014
MKTf-25	SB28	11/20/13	6916.19	0.7970	ND	10.33	0.00	6905.86	
		04/08/14	6916.19	0.7970	ND	10.80	0.00	6905.39	
		09/23/14	6916.19	0.7970	ND	12.13	0.00	6904.06	
		03/11/15	6916.19	0.7970	ND	10.85	0.00	6905.34	
		06/10/15	6916.19	0.7970	ND	11.04	0.00	6905.15	
MKTf-26	SB29	11/20/13	6915.31	0.7970	ND	8.02	0.00	6907.29	
		04/08/14	6915.31	0.7970	ND	8.18	0.00	6907.13	
		09/23/14	6915.31	0.7970	ND	9.30	0.00	6906.01	
		03/11/15	6915.31	0.7970	ND	8.00	0.00	6907.31	
		06/10/15	6915.31	0.7970	ND	8.57	0.00	6906.74	
MKTf-27	SB30	11/20/13	6917.90	0.7970	ND	8.26	0.00	6909.64	
		04/08/14	6917.90	0.7970	ND	7.42	0.00	6910.48	
		09/23/14	6917.90	0.7970	ND	8.60	0.00	6909.30	
		03/11/15	6917.90	0.7970	ND	7.10	0.00	6910.80	
		06/09/15	6917.90	0.7970	ND	7.44	0.00	6910.46	

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MKTf-15	SB31	11/20/13	6943.48	0.7970	ND	17.03	0.00	6926.45	
		01/13/14	6943.48	0.7970	ND	13.88	0.00	6929.60	
		02/13/14	6943.48	0.7970	ND	13.88	0.00	6929.60	
		03/11/14	6943.48	0.7970	ND	13.86	0.00	6929.62	
		04/10/14	6943.48	0.7970	ND	13.90	0.00	6929.58	
		09/15/14	6943.48	0.7970	ND	13.71	0.00	6929.77	
		03/16/15	6943.48	0.7970	13.17	13.92	0.75	6930.16	
		06/04/15	6943.48	0.7970	13.20	13.78	0.58	6930.16	
MKTf-16	SB32	11/20/13	6950.58	0.7970	ND	11.25	0.00	6939.33	
		01/13/14	6950.58	0.7970	ND	9.45	0.00	6941.13	
		02/13/14	6950.58	0.7970	ND	9.63	0.00	6940.95	
		03/11/14	6950.58	0.7970	ND	9.66	0.00	6940.92	
		04/10/14	6950.58	0.7970	ND	9.72	0.00	6940.86	
		09/15/14	6950.58	0.7970	ND	10.60	0.00	6939.98	
		11/18/14	6950.58	0.7970	ND	11.66	0.00	6938.92	
		03/16/15	6950.58	0.7970	ND	10.93	0.00	6939.65	
MKTf-17	SB33	06/08/15	6950.58	0.7970	ND	12.80	0.00	6937.78	
		11/20/13	6945.76	0.7970	ND	11.18	0.00	6934.58	
		01/13/14	6945.76	0.7970	ND	8.81	0.00	6936.95	
		02/13/14	6945.76	0.7970	ND	9.81	0.00	6935.95	
		03/11/14	6945.76	0.7970	ND	10.00	0.00	6935.76	
		04/08/14	6945.76	0.7970	ND	10.10	0.00	6935.66	
		09/15/14	6945.76	0.7970	ND	11.27	0.00	6934.49	
		11/18/14	6945.76	0.7970	ND	12.75	0.00	6933.01	
MKTf-18	SB34	03/12/15	6945.76	0.7970	ND	12.81	0.00	6932.95	
		06/08/15	6945.76	0.7970	ND	13.40	0.00	6932.36	
		11/20/13	6950.65	0.7970	ND	7.25	0.00	6943.40	
		01/13/14	6950.65	0.7970	ND	8.33	0.00	6942.32	
		02/13/14	6950.65	0.7970	ND	8.33	0.00	6942.32	
		03/11/14	6950.65	0.7970	ND	8.09	0.00	6942.56	
		04/14/14	6950.65	0.7970	ND	8.26	0.00	6942.39	
		09/15/14	6950.65	0.7970	ND	8.81	0.00	6941.84	
MKTf-19	SB35	11/18/14	6950.65	0.7970	ND	9.46	0.00	6941.19	
		03/17/15	6950.65	0.7970	ND	8.92	0.00	6941.73	
		06/08/15	6950.65	0.7970	ND	8.86	0.00	6941.79	
		11/20/13	6944.67	0.7970	ND	14.55	0.00	6930.12	
		04/09/14	6944.67	0.7970	ND	12.00	0.00	6932.67	
		09/24/14	6944.67	0.7970	ND	12.47	0.00	6932.20	
		11/18/14	6944.67	0.7970	ND	13.76	0.00	6930.91	
		03/12/15	6944.67	0.7970	ND	12.95	0.00	6931.72	
		06/08/15	6944.67	0.7970	ND	12.76	0.00	6931.91	

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Western Refining Southwest, Inc. - Gallup Refinery

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MKTf-20	NA	04/10/14	6951.78	0.7970	ND	7.86	0.00	6943.92	
		09/23/14	6951.78	0.7970	ND	8.38	0.00	6943.40	
		11/18/14	6951.78	0.7970	ND	8.40	0.00	6943.38	
		03/16/15	6951.78	0.7970	ND	7.26	0.00	6944.52	
		06/08/15	6951.78	0.7970	ND	7.89	0.00	6943.89	
MKTf-21	NA	04/10/14	6952.57	0.7970	ND	7.60	0.00	6944.97	
		09/23/14	6952.57	0.7970	ND	8.39	0.00	6944.18	
		11/18/14	6952.57	0.7970	ND	8.00	0.00	6944.57	
		03/16/15	6952.57	0.7970	ND	7.62	0.00	6944.95	
		06/10/15	6952.57	0.7970	ND	7.96	0.00	6944.61	
MKTf-28	NA	04/09/14	6921.52	0.7970	ND	DRY	0.00	NA	
		09/23/14	6921.52	0.7970	ND	6.20	0.00	6915.32	
		03/11/15	6921.52	0.7970	ND	6.64	0.00	6914.88	
		06/09/15	6921.52	0.7970	ND	5.40	0.00	6916.12	
MKTf-29	NA	04/09/14	6901.62	0.7970	ND	1.91	0.00	6899.71	
		09/23/14	6901.62	0.7970	ND	4.40	0.00	6897.22	
		03/11/15	6901.62	0.7970	ND	2.04	0.00	6899.58	
		06/10/15	6901.62	0.7970	ND	2.69	0.00	6898.93	
MKTf-30	NA	04/09/14	6900.80	0.7970	ND	14.37	0.00	6886.43	
		09/23/14	6900.80	0.7970	ND	15.89	0.00	6884.91	
		11/17/14	6900.80	0.7970	ND	15.87	0.00	6884.93	
		03/11/15	6900.80	0.7970	ND	14.74	0.00	6886.06	
		06/10/15	6900.80	0.7970	ND	14.54	0.00	6886.26	
MKTf-31	NA	04/08/14	6906.87	0.7970	ND	7.90	0.00	6898.97	
		09/23/14	6906.87	0.7970	ND	8.35	0.00	6898.52	
		11/17/14	6906.87	0.7970	ND	8.40	0.00	6898.47	
		03/11/15	6906.87	0.7970	ND	7.98	0.00	6898.89	
		06/10/15	6906.87	0.7970	ND	7.75	0.00	6899.12	
MKTf-32	NA	04/09/14	6911.11	0.7970	ND	14.78	0.00	6896.33	
		09/23/14	6911.11	0.7970	ND	16.68	0.00	6894.43	
		11/17/14	6911.11	0.7970	ND	16.48	0.00	6894.63	
		03/12/15	6911.11	0.7970	ND	15.49	0.00	6895.62	
		06/09/15	6911.11	0.7970	ND	15.49	0.00	6895.62	
MKTf-33	NA	04/09/14	6939.75	0.7970	ND	23.38	0.00	6916.37	
		09/23/14	6939.75	0.7970	ND	23.69	0.00	6916.06	
		11/17/14	6939.75	0.7970	ND	23.79	0.00	6915.96	
		03/12/14	6939.75	0.7970	ND	23.32	0.00	6916.43	
		06/09/15	6939.75	0.7970	ND	23.30	0.00	6916.45	

Table 1
Fluid Level Measurements - Hydrocarbon Seep Area
Western Refining Southwest, Inc. - Gallup Refinery

Well ID	Soil Boring ID	Date	Top of Casing (ft msl)	Specific Gravity	Depth to HC (ft btoc)	Depth to GW (ft btoc)	Apparent Hydrocarbon Thickness (feet)	Corrected Groundwater Elevation (feet MSL)	Comments
MKTf-34	NA	04/09/14	6945.35	0.7970	ND	19.98	0.00	6925.37	
		09/23/14	6945.35	0.7970	ND	19.08	0.00	6926.27	
		11/17/14	6945.35	0.7970	ND	19.08	0.00	6926.27	
		03/12/15	6945.35	0.7970	ND	18.77	0.00	6926.58	
		06/08/15	6945.35	0.7970	ND	18.90	0.00	6926.45	
MKTf-35	NA	11/21/14	6951.65	0.7970	ND	9.76	0.00	6941.89	
		03/17/15	6951.65	0.7970	ND	8.93	0.00	6942.72	
		06/04/15	6951.65	0.7970	ND	8.93	0.00	6942.72	
MKTf-36	NA	11/21/14	6950.12	0.7970	ND	8.05	0.00	6942.07	
		03/17/15	6950.12	0.7970	ND	7.71	0.00	6942.41	
		06/04/15	6950.12	0.7970	ND	7.53	0.00	6942.59	
MKTf-37	NA	11/21/14	6958.87	0.7970	ND	16.50	0.00	6942.37	
		03/17/15	6958.87	0.7970	ND	9.21	0.00	6949.66	
		06/04/15	6958.87	0.7970	ND	9.48	0.00	6949.39	
MKTf-38	NA	11/21/14	6954.89	0.7970	ND	12.90	0.00	6941.99	
		03/16/15	6954.89	0.7970	ND	9.00	0.00	6945.89	
		06/10/15	6954.89	0.7970	ND	9.34	0.00	6945.55	
MKTf-39	NA	11/17/14	6953.75	0.7970	ND	10.25	0.00	6943.50	
		03/16/15	6953.75	0.7970	ND	8.88	0.00	6944.87	
		06/10/19	6953.75	0.7970	ND	9.31	0.00	6944.44	
MKTf-40	NA	11/18/14	6894.33	0.7970	ND	19.94	0.00	6874.39	
		03/11/15	6894.33	0.7970	ND	14.60	0.00	6879.73	
		06/10/15	6894.33	0.7970	ND	14.20	0.00	6880.13	
MKTf-41	NA	11/17/14	6893.64	0.7970	ND	26.90	0.00	6866.74	
		03/12/15	6893.64	0.7970	ND	20.07	0.00	6873.57	
		06/09/15	6893.64	0.7970	ND	19.77	0.00	6873.87	
MKTf-42	NA	11/17/14	6892.95	0.7970	ND	18.79	0.00	6874.16	
		03/11/15	6892.95	0.7970	ND	17.94	0.00	6875.01	
		06/09/15	6892.95	0.7970	ND	17.60	0.00	6875.35	
MKTf-43	NA	11/17/14	6876.90	0.7970	ND	6.95	0.00	6869.95	
		03/11/15	6876.90	0.7970	ND	5.20	0.00	6871.70	
		06/10/15	6876.90	0.7970	ND	3.63	0.00	6873.27	
MKTf-44	NA	11/17/14	6869.95	0.7970	ND	48.80	0.00	6821.15	
		03/12/15	6869.95	0.7970	ND	38.44	0.00	6831.51	
		06/10/15	6869.95	0.7970	ND	29.55	0.00	6840.40	
MKTf-45	NA	03/17/15	6949.59	0.7970	13.14	14.94	1.80	6936.08	
		06/08/15	6949.59	0.7970	13.20	16.75	3.55	6935.67	
OW-10	NA	11/21/14	6874.91	0.7970	ND	3.00	0.00	6871.91	
		03/09/15	6874.91	0.7970	ND	0.96	0.00	6873.95	

Table 1
Fluid Level Measurements - Hydrocarbon Seep Area
Western Refining Southwest, Inc. - Gallup Refinery

Well ID	Soil Boring ID	Date	Top of Casing (ft msl)	Specific Gravity	Depth to HC (ft btoc)	Depth to GW (ft btoc)	Apparent Hydrocarbon Thickness (feet)	Corrected Groundwater Elevation (feet MSL)	Comments
NA	S-1	08/14/13	NS	0.7970	3.76	3.89	0.13		
		09/25/13	NS	0.7970	2.97	4.00	1.03		
		08/14/14	NS	0.7970	4.97	4.97	<0.01		
NA	S-2	08/14/13	NS	0.7970	5.90	6.01	0.11		
		09/25/13	NS	0.7970	5.28	5.66	0.38		
		08/14/14	NS	0.7970	4.22	5.00	0.78		
NA	S-3	08/14/13	NS	0.7970	5.02	5.19	0.17		
		09/25/13	NS	0.7970	4.44	4.69	0.25		
		08/14/14	NS	0.7970	5.29	5.50	0.21		
NA	S-4	08/14/13	NS	0.7970	3.70	ND	NA		
		09/25/13	NS	0.7970	3.04	3.11	0.07		
		08/14/14	NS	0.7970	4.25	5.36	1.11		
NA	S-5	08/14/13	NS	0.7970	3.71	3.96	0.25		
		09/25/13	NS	0.7970	3.02	3.48	0.46		
		08/14/14	NS	0.7970	6.09	6.50	0.41		
NA	S-6	08/14/13	NS	0.7970	3.96	4.37	0.41		
		09/25/13	NS	0.7970	3.30	3.85	0.55		
		08/14/14	NS	0.7970	6.32	6.49	0.17		

NS - not surveyed

ND - no product detected

NA - not available or not applicable

Specific gravity calculated using an API Gravity of 45.7 = 0.797.

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			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 (April 2014)			0.005	1.0	0.7	10	NE
NMED Tap Water (December 2014)			0.00454	1.1	0.0149	0.193	0.143
EPA RSL for Tap Water (November 2014)			0.00045	1.1	0.0015	0.19	0.014
WELL ID	DATE SAMPLED	METHOD					
MKTf-1 / HA1	03/11/15	8260B	9.3	2	0.74	1.9	0.37
	09/15/14		product present				
	06/06/14	8260B	8.7	7.1	0.92	4.3	0.42
MKTf-2 / HA3	03/11/15	8260B	0.2	<0.002	0.0041	0.0076	0.044
	11/14/14	8260B	0.2	0.0022	0.003	0.002	0.059
	09/18/14	8260B	2.1	0.044	0.340	<0.0075	0.1
	06/06/14	8260B	0.23	0.0036	0.022	0.034	0.042
	04/08/14	8260B	0.11	<0.002	0.0035	0.008	0.036
	10/28/13	8021B	0.69	<0.020	0.055	0.160	<0.050
MKTf-4 / SB03	06/04/15	8260B	0.31	0.013	0.450	0.560	1.3
	03/16/15	8260B	0.22	<0.01	0.260	0.340	1.2
	11/13/14	8260B	0.18	<0.01	0.28	0.26	1.4
	09/15/14	8260B	0.15	<0.005	0.14	0.14	1.4
	06/04/14	8260B	0.67	0.019	0.57	0.68	1.8
	04/11/14	8260B	1	0.025	0.8	1.0	2.4
SB07	10/28/13	8021B	3.2	<0.1	1.2	1.6	4.5
SB12	10/28/13	8021B	2.6	0.13	0.82	3.0	3.5
MKTf-9 / SB13	06/04/15	8260B	0.89	0.025	0.015	0.039	0.43
	03/16/15	8260B	0.49	0.013	0.080	0.018	0.500
	11/14/14	8260B	0.81	0.033	0.15	0.11	0.77
	09/18/14	8260B	0.75	0.027	0.096	0.043	0.76
	06/05/14	8260B	1.3	0.052	0.2	0.098	1.2
	04/14/14	8260B	1.1	0.038	0.14	0.075	1.2
SB14	10/28/13	8021B	12	14	0.96	4.7	0.46
SB15	10/28/13	8021B	7.3	7.6	0.92	4.6	0.89
MKTf-10 / SB16	06/04/15	8260B	10	20	1.5	6.5	<0.05
	03/16/15	8260B	11	21	1.6	6.8	<0.05
	11/14/14	8260B	11	20	1.7	7.6	<0.02
	09/18/14	8260B	11	15	0.93	4.0	<0.05
	06/06/14	8260B	12	14	0.74	3.4	0.019
	04/11/14	8260B	14	19	1.5	6.9	<0.05
MKTf-11 / SB17	06/04/15	8260B	12	13	1.2	4.9	0.041
	03/16/15	8260B	10	11	0.93	3.7	0.048
	11/13/14	8260B	9.5	8.2	0.77	2.3	0.08
	09/15/14	8260B	9.5	7.1	0.72	2.0	0.083
	06/05/14	8260B	12	7.8	0.75	0.018	0.096
	04/11/14	8260B	15	7.6	0.93	2.2	0.15
MKTf-15 / SB31	03/16/15	8260B	product present				
	09/17/14	8260B	11	7.0	1.4	4.3	0.38
	06/05/14	8260B	12	8.8	1.3	3.7	0.27
	04/10/14	8260B	16	2.4	1.2	6.1	0.27
	11/01/13	8021B	12	12	1.5	4.8	NA

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			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 (April 2014)			0.005	1.0	0.7	10	NE
NMED Tap Water (December 2014)			0.00454	1.1	0.0149	0.193	0.143
EPA RSL for Tap Water (November 2014)			0.00045	1.1	0.0015	0.19	0.014
WELL ID	DATE SAMPLED	METHOD					
MKTf-16 / SB32	03/16/15	8260B	19	0.45	1.4	5.4	1.6
	11/18/14	8260B	20	1.2	1.3	5.8	1.4
	09/17/14	8260B	17	1.4	1.2	5.3	2.1
	06/05/14	8260B	18	3.7	1.7	8.1	2.0
	04/10/14	8260B	11	7.5	1.1	3.6	0.27
	11/19/13	8021B	9.9	8.2	1.9	9.8	NA
MKTf-17 / SB33	03/12/15	8260B	0.0028	<0.001	0.0059	<0.0015	0.59
	11/18/14	8260B	0.14	<0.001	0.078	<0.0015	0.57
	09/18/14	8260B	0.55	<0.01	0.24	<0.015	0.69
	06/06/14	8260B	2.6	<0.01	0.48	0.068	1.1
	04/09/14	8260B	3.5	<0.01	0.58	0.27	1.3
	11/19/13	8021B	1.8	1.6	0.71	2.7	NA
MKTf-18 / SB34	03/17/15	8260B	0.058	<0.005	0.017	0.029	0.091
	11/18/14	8260B	0.096	0.0076	0.09	0.047	0.1
	09/18/14	8260B	0.12	0.013	0.069	0.042	0.12
	06/06/14	8260B	0.29	0.014	0.036	0.055	0.14
	04/14/14	8260B	0.29	0.015	0.058	0.044	0.15
	11/19/13	8021B	0.33	0.37	0.13	0.47	NA
MKTf-19 / SB35	03/12/15	8260B	1.4	<0.01	0.43	0.15	9.7
	11/18/14	8260B	2.3	<0.05	0.74	0.36	9.7
	09/24/14	8260B	1.8	<0.05	0.73	0.76	11
	04/09/14	8260B	1.4	<0.05	0.68	0.61	9.7
	11/05/13	8021B	0.64	0.14	0.47	1.1	NA
MKTf-20	03/16/15	8260B	7	2.3	0.089	9.6	<0.05
	11/18/14	8260B	4.4	1.3	0.48	10	0.083
	04/11/14	8260B	25	17	2.8	14	0.38
MKTf-21	03/16/15	8260B	3.7	0.26	0.013	0.27	0.63
	04/11/14	8260B	7.2	13	2.1	11	0.58
MKTf-22 / SB23	03/12/15	8260B	2.6	<0.02	0.25	<0.03	5.1
	11/17/14	8260B	1.6	<0.01	0.09	<0.015	3.9
	09/23/14		Dry				
	04/10/14	8260B	2.3	0.021	0.28	0.032	3.7
	11/19/13	8021B	1.3	0.0075	0.072	0.016	NA
SB24	11/05/13	8021B	0.49	0.36	0.19	0.9	NA
MKTf-23 / SB25	03/12/15	8260B	3.3	4.8	0.6	8.1	1.1
	11/17/14	8260B	3.6	3	0.47	4.5	0.57
	09/23/14	8260B	2.7	1.4	0.34	1.6	0.48
	04/10/14		product present				
	11/05/13	8021B	0.92	1	0.23	0.66	NA
MKTf-24 / SB26	03/11/15	8260B	2.6	0.012	0.031	<0.0075	0.17
	11/14/14	8260B	1.6	0.0095	0.049	0.0029	0.063
	09/24/14	8260B	1.6	0.0087	0.058	<0.003	0.017
	04/08/14	8260B	0.45	0.0067	0.065	0.0023	0.18
	11/01/13	8021B	1.2	<0.020	0.23	<0.040	NA

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			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 (April 2014)			0.005	1.0	0.7	10	NE
NMED Tap Water (December 2014)			0.00454	1.1	0.0149	0.193	0.143
EPA RSL for Tap Water (November 2014)			0.00045	1.1	0.0015	0.19	0.014
WELL ID	DATE SAMPLED	METHOD					
SB27	11/01/13	8021B	1.8	0.200	1.5	6.4	NA
MKTf-25 / SB28	03/11/15	8260B	0.97	0.012	0.17	<0.0075	0.27
	11/14/14	8260B	0.58	<0.005	0.023	<0.0075	0.18
	09/23/14	8260B	0.53	<0.01	0.012	<0.015	0.23
	04/08/14	8260B	1	0.0092	0.13	0.013	0.27
	11/01/13	8021B	1.4	<0.020	0.16	<0.040	NA
MKTf-26 / SB29	03/11/15	8260B	0.8	0.0078	0.0071	<0.0075	0.099
	11/14/14	8260B	0.97	0.011	<0.005	<0.0075	0.094
	09/24/14	8260B	1.6	0.019	0.012	0.0016	0.084
	04/08/14	8260B	0.017	<0.001	<0.001	<0.0015	0.049
	11/01/13	8021B	0.57	0.008	0.15	0.002	NA
MKTf-27 / SB30	03/11/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.0089
	11/14/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.019
	09/24/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.011
	04/08/14	8260B	<0.002	<0.002	<0.002	<0.003	0.038
	11/19/13	8021B	<0.001	<0.001	<0.001	<0.002	NA
MKTf-28	03/11/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/14/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.013
	09/24/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.016
	04/09/14		DRY				
MKTf-29	03/11/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.017
	09/24/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.013
	04/08/14	8260B	<0.001	<0.001	<0.001	<0.015	0.012
MKTf-30	03/11/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.0019
	11/17/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.0037
	09/24/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.0059
	04/09/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.021
MKTf-31	03/11/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.054
	11/17/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.058
	09/23/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.055
	04/08/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.055
MKTf-32	03/12/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.54
	11/17/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.4
	09/23/14	8260B	<0.005	<0.005	<0.005	<0.0075	0.32
	04/09/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.15
MKTf-33	03/12/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.48
	11/17/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.41
	09/23/14	8260B	<0.005	<0.005	<0.005	<0.0075	0.45
	04/10/14	8260B	0.028	<0.001	<0.001	<0.0015	0.36
MKTf-34	03/12/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/17/14	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	09/24/14	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	04/09/14	8260B	<0.002	<0.002	<0.002	<0.003	<0.002
MKTf-35	06/04/15	8260B	0.79	0.0023	0.19	0.0021	0.027
	03/17/15	8260B	0.47	0.0052	0.32	0.17	0.033
	11/21/14	8260B	0.039	<0.001	0.052	0.073	0.066

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			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 (April 2014)			0.005	1.0	0.7	10	NE
NMED Tap Water (December 2014)			0.00454	1.1	0.0149	0.193	0.143
EPA RSL for Tap Water (November 2014)			0.00045	1.1	0.0015	0.19	0.014
WELL ID	DATE SAMPLED	METHOD					
MKTf-36	06/04/15	8260B	8.1	0.034	1.6	0.14	8.4
	03/17/15	8260B	8.3	0.023	1.4	0.078	8.3
	11/21/14	8260B	8.4	0.032	1.5	0.56	7.2
MKTf-37	06/04/15	8260B	1.2	0.058	0.017	0.93	0.054
	03/17/15	8260B	0.82	0.27	0.029	0.49	0.057
	11/21/14	8260B	0.14	0.2	0.0093	1.3	0.027
MKTf-38	03/16/15	8260B	0.0092	0.018	<0.001	<0.0015	0.006
	11/21/14	8260B	0.0028	<0.001	0.0029	0.0031	0.0074
MKTf-39	03/16/15	8260B	0.016	<0.002	0.039	<0.003	<0.002
	11/18/14	8260B	0.02	<0.005	0.06	<0.0075	<0.005
MKTf-40	03/11/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/21/14	8260B	<0.001	<0.001	<0.001	<0.001	<0.001
MKTf-41	03/12/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/18/14	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
MKTf-42	03/11/15	8260B	0.0017	<0.001	<0.001	0.01	<0.001
	11/18/14	8260B	0.012	<0.01	<0.01	0.056	<0.01
MKTf-43	03/11/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/18/14	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
MKTf-44	03/12/15	8260B	<0.002	<0.002	<0.002	<0.003	<0.002
	11/21/14	8260B	<0.002	<0.002	<0.002	<0.003	<0.002
SB24	4/3/2014	8260B	0.43	0.003	0.021	0.039	0.27
SB27	4/3/2014	8260B	2.2	0.17	1.1	4.1	0.26

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.

40 CFR Part 141 National Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)

New Mexico Environment Department Tap Water Screening Levels December 2014

EPA Regional Screening Level (RSL) Tap Water Screening Levels November 2014

Applicable screening levels per Gallup's RCRA Permit Section IV.D.1 bolded

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250.0	NE	NE	10	NE	600.0
40 CFR 141.62 MCL (April 2014)			NE	NE	NE	NE	NE	NE	1	10	NE	NE
NMED Tap Water (December 2014)			NE	NE	NE	1.2	NE	NE	1.97	31.6	NE	NE
EPA RSL for Tap Water (November 2014)			NE	NE	NE	0.8	NE	NE	2	32	NE	NE
WELL ID	DATE SAMPLED	METHOD										
MKTf-1 / HA1	03/11/15	8015D	370	31	<5.0	NA	NA	NA	NA	NA	NA	NA
	06/06/14	300.0/8015D	510	50	<5.0	0.6	400	0.96	<1.0	<1.0	<0.5	0.58
	07/17/13	8015D	3.3	19	<5	NA	NA	NA	NA	NA	NA	NA
HA2	07/17/13	8015D	3.1	16	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-2 / HA3	03/11/15	8015D	<1.0	1.3	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/14/14	300.0/8015D	<1.0	0.061	<5.0	<1.0	830	1.2	<1.0	<1.0	<5.0	230
	09/18/14	8015D	1.7	6.8	<5.0	NA	NA	NA	NA	NA	NA	NA
	06/06/14	300.0/8015D	<1.0	1.5	<5.0	0.76	750	0.5	<1.0	<1.0	<0.5	200
	04/08/14	8015D	<1.0	0.67	<5.0	NA	NA	NA	NA	NA	NA	NA
	10/28/13	8015D	<1.0	3.8	<5.0	NA	NA	NA	NA	NA	NA	NA
	07/17/13	8015D	4.8	25	<5.0	NA	NA	NA	NA	NA	NA	NA
HA4	07/17/13	8015D	17	17	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-4 / SB03	06/04/15	8015D	2.3	6.2	<5.0	NA	NA	NA	NA	NA	NA	NA
	03/16/15	8015D	1.9	4.8	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/13/14	300.0/8015D	2.0	4.2	<5.0	<1.0	250	2.1	<1.0	<1.0	<5.0	26
	09/15/14	8015D	1.5	3.4	<5.0	NA	NA	NA	NA	NA	NA	NA
	06/04/14	300.0/8015D	2.9	8.2	<5.0	0.7	0.19	1.8	<1.0	<1.0	<0.5	6.8
	04/11/14	8015D	4.5	9.4	<5.0	NA	NA	NA	NA	NA	NA	NA
SB07	10/28/13	8015D	24	21	<5.0	NA	NA	NA	NA	NA	NA	NA
SB12	10/28/13	8015D	110	22	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-9 / SB13	06/04/15	8015D	1.8	4.1	<5.0	NA	NA	NA	NA	NA	NA	NA
	03/16/15	8015D	<1.0	3.3	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/14/14	300.0/8015D	2.1	4.4	<5.0	<1.0	180	1.2	<1.0	<1.0	<5.0	140
	09/18/14	8015D	1.4	5.6	<5.0	NA	NA	NA	NA	NA	NA	NA
	06/05/14	300.0/8015D	2.7	6.2	<5.0	0.43	180	1.1	<1.0	<1.0	<0.5	78
	04/14/14	8015D	3.6	5.7	<5.0	NA	NA	NA	NA	NA	NA	NA
SB14	10/28/13	8015D	87	71	<5.0	NA	NA	NA	NA	NA	NA	NA
SB15	10/28/13	8015D	4.8	46	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-10 / SB16	06/04/15	8015D	23	79	<5.0	NA	NA	NA	NA	NA	NA	NA
	03/16/15	8015D	32	80	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/14/14	300.0/8015D	74	84	<5.0	270	260	<1.0	<2.0	<2.0	<5.0	<5.0
	09/18/14	8015D	7.7	88	<5.0	NA	NA	NA	NA	NA	NA	NA
	06/06/14	8015D	5.5	64	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/11/14	8015D	5.9	88	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-11 / SB17	06/04/15	8015D	2.8	71	<5.0	NA	NA	NA	NA	NA	NA	NA
	03/16/15	8015D	2.6	55	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/13/14	300.0/8015D	1.8	35	<5.0	6.5	780	<1.0	<1.0	<1.0	<5.0	<5.0
	09/15/14	8015D	1.8	57	<5.0	NA	NA	NA	NA	NA	NA	NA
	06/05/14	300.0/8015D	2.6	48	<5.0	7.0	480	0.67	<1.0	<1.0	<0.5	11
	04/11/14	8015D	2.7	53	<5.0	NA	NA	NA	NA	NA	NA	NA
SB18	07/25/13	8015D	73	73	<5.0	NA	NA	NA	NA	NA	NA	NA
SB19	07/25/13	8015D	30	19	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-15 / SB31	09/17/14	8015D	17	88	<5.0	NA	NA	NA	NA	NA	NA	NA
	06/05/14	300.0/8015D	10	57	<5.0	<2.0	5200	<2.0	<4.0	<4.0	<0.5	1.2
	04/10/14	8015D	4.1	71	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/01/13	8015D	2.4	65	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-16 / SB32	03/16/15	8015D	2.9	61	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/18/14	300.0/8015D	2.7	53	<5.0	1.5	700	1.8	<0.5	<0.5	<2.5	<2.5
	09/17/14	8015D	4.6	66	<5.0	NA	NA	NA	NA	NA	NA	NA
	06/05/14	300.0/8015D	5.7	71	<5.0	1.1	540	1.7	<1.0	<1.0	<2.5	<2.5
	04/10/14	8015D	3.5	67	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/19/13	8015D	4.2	68	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-17 / SB33	03/12/15	8015D	<1.0	0.8	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/18/14	300.0/8015D	1.4	1.2	<5.0	0.66	84	0.44	<0.1	<0.1	<0.5	200
	09/18/14	8015D	1.5	3.3	<5.0	NA	NA	NA	NA	NA	NA	NA
	06/06/14/06/16/14 ¹	8015D	4.2	8.3	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/09/14	8015D	2.6	8.6	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/19/13	8015D	5.8	17	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-18 / SB34	03/17/15	8015D	5.4	1.8	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/18/14	300.0/8015D	2.3	1.4	<5.0	0.68	160	0.81	<0.5	<0.5	<2.5	<2.5
	09/18/14	8015D	3.1	1.4	<5.0	NA	NA	NA	NA	NA	NA	NA
	06/06/14	300.0/8015D	7.8	2.2	<5.0	0.65	170	0.81	<1.0	<1.0	<0.5	0.95
	04/14/14	8015D	4.4	2.2	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/19/13	8015D	11	4	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-19 / SB35	03/12/15	8015D	9.3	14	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/18/14	300.0/8015D	13	20	<5.0	<0.5	110	1.2	<0.5	<0.5	<2.5	<2.5
	09/24/14	8015D	61	16	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/09/14	8015D	17	18	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/05/13	8015D	7.2	10	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-20	03/16/15	8015D	4.5	37	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/18/14	300.0/8015D	24	45	<5.0	0.87	82	<0.5	<0.5	<0.5	<2.5	16
	04/11/14	8015D	16	120	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-21	03/16/15	8015D	3.8	16	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/11/14	8015D	27	78	<5.0	NA	NA	NA	NA	NA	NA	NA
	03/12/15	8015D	2.5	13	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-22 / SB23	11/17/14	300.0/8015D	1.6	6.8	<5.0	0.38	96	<0.1	7.1 ¹	7.1 ¹	<0.5	19
	04/10/14	8015D	2.6	10	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/19/13	8015D	2.1	6.5	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/05/13	8015D	<1.0	5.7	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-23 / SB25	03/12/15	8015D	14	35	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/17/14	300.0/8015D	7.7	26	<5.0	0.43	390	<0.1	<1.0	<1.0	<0.5	5.9
	09/23/14	8015D	14	23	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/05/13	8015D	1.1	12	<5.0	NA	NA	NA	NA	NA	NA	NA

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250.0	NE	NE	10	NE	600.0
40 CFR 141.62 MCL (April 2014)			NE	NE	NE	NE	NE	NE	1	10	NE	NE
NMED Tap Water (December 2014)			NE	NE	NE	1.2	NE	NE	1.97	31.6	NE	NE
EPA RSL for Tap Water (November 2014)			NE	NE	NE	0.8	NE	NE	2	32	NE	NE
WELL ID	DATE SAMPLED	METHOD										
MKTf-24 / SB26	03/11/15	8015D	<1.0	9.2	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/14/14	300.0/8015D	<1.0	5.7	<5.0	<1.0	630	1.4	<1.0	<1.0	<5.0	72
	09/24/14	8015D	<1.0	6.3	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/08/14	8015D	<1.0	4.2	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/01/13	8015D	1.5	8.4	<5.0	NA	NA	NA	NA	NA	NA	NA
SB27	11/01/13	8015D	5.8	37	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-25 / SB28	03/11/15	8015D	1.1	10	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/14/14	300.0/8015D	<1.0	4.8	<5.0	<1.0	880	1.4	<1.0	<1.0	<5.0	35
	04/08/14	8015D	1.2	6.9	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-26 / SB29	03/11/14	8015D	<1.0	2.5	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/14/14	300.0/8015D	<1.0	2.0	<5.0	<1.0	1500	1.2	<2.0	<2.0	<5.0	160
	09/24/14	8015D	<1.0	2.8	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/08/14	8015D	<1.0	0.2	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/01/13	8015D	<1.0	1.7	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-27 / SB30	03/11/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/14/14	300.0/8015D	<1.0	<0.05	<5.0	<1.0	2500	1.8	<2.0	<2.0	<5.0	470
	09/24/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/08/14	8015D	<1.0	<0.01	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/19/13	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-28	03/11/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/14/14	300.0/8015D	<1.0	<0.05	<5.0	<1.0	540	2.7	<1.0	<1.0	<5.0	260
	09/24/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-29	03/11/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	09/24/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/09/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-30	03/11/15	8015D	<1.0	0.053	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/17/14	300.0/8015D	<1.0	0.054	<5.0	0.56	1400	1.3	<1.0	<1.0	<0.5	730
	09/24/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/09/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-31	03/11/15	8015D	<1.0	0.077	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/17/14	300.0/8015D	<1.0	0.068	<5.0	<0.1	920	<0.1	<1.0	<1.0	<0.5	82
	09/23/14	8015D	<1.0	0.061	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/08/14	8015D	<1.0	0.11	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-32	03/12/15	8015D	<1.0	0.46	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/17/14	300.0/8015D	<1.0	0.28	<5.0	0.27	610	1.3	<1.0	<1.0	<0.5	100
	09/23/14	8015D	<1.0	0.23	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/09/14	8015D	<1.0	0.22	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-33	03/12/15	8015D	<1.0	0.35	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/17/14	300.0/8015D	<1.0	0.36	<5.0	0.31	98	0.61	<1.0	<1.0	<0.5	360
	09/23/14	8015D	<1.0	0.25	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/09/14	8015D	<1.0	0.21	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-34	03/12/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/17/14	300.0/8015D	<1.0	<0.05	<5.0	0.54	400	2.2	6.6 ¹	6.6 ¹	<0.5	73
	09/24/14	8015D	<1.0	0.25	<5.0	NA	NA	NA	NA	NA	NA	NA
	04/09/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-35	06/04/15	8015D	2.3	2.9	<5.0	NA	NA	NA	NA	NA	NA	NA
	03/17/15	8015D	6	3.7	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/21/14	8015D	3.3	1.6	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-36	06/04/15	8015D	13	30	<5.0	NA	NA	NA	NA	NA	NA	NA
	03/17/15	8015D	10	38	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/21/14	8015D	6.8	25	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-37	06/04/15	8015D	5.7	12	<5.0	NA	NA	NA	NA	NA	NA	NA
	03/17/15	8015D	4.5	11	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/21/14	8015D	<1.0	8.7	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-38	03/16/15	8015D	<1.0	0.33	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/21/14	8015D	3.8	0.12	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-39	03/16/15	8015D	6.2	0.21	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/18/14	8015D	15	0.39	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-40	03/11/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/21/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-41	03/12/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/18/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-42	03/11/15	8015D	27	<0.50	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/18/14	8015D	44	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-43	03/11/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/18/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTf-44	03/12/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	11/21/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
SB24	4/3/2014	300.0/8015D	<1.0	1.4	<5.0	0.22	530	0.91	<1.0	<1.0	<0.5	560
SB27	4/3/2014	300.0/8015D	3.6	34	<5.0	0.29	540	0.1	<1.0	<1.0	<0.5	8

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.
40 CFR Part 141 National Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)
New Mexico Environment Department Tap Water Screening Levels December 2014

EPA Regional Screening Level (RSL) Tap Water Screening Levels November 2014

Applicable screening levels per Gallup's RCRA Permit Section IV.D.1 bolded

1) - reported as nitrite + nitrate

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			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 ¹			0.1000	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 (April 2014)			0.0100	2.0	0.005	NE	NE	NE	0.015 ²	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (December 2014)			0.0051	3.3	0.00624	0.00559	0.79	13.8	NE	2.02	0.0987	0.0812	0.00626	0.00592	5.96
EPA RSL for Tap Water (November 2014)			0.0001	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.06	6
WELL ID	DATE SAMPLED	METHOD													
MKTf-1 / HA1	03/11/15	200.7/200.8	0.0032	2.1	<0.002	<0.006	<0.006	5.6	0.002	1.9	0.0056	<0.005	<0.0002	<0.001	<0.01
	06/06/14	200.7/200.8	0.0070	4.7	<0.002	0.035	0.038	35	0.074	4.1	0.0091	<0.005	<0.0002	<0.005	0.078
	03/11/15	200.7/200.8	0.0046	0.21	<0.002	<0.006	0.0074	4.6	0.0057	0.64	0.0043	<0.005	<0.0002	0.048	0.017
MKTf-2 / HA3	11/14/14	200.7/200.8	0.0059	0.22	<0.002	<0.006	0.012	7.0	0.0079	0.68	<0.01	<0.005	<0.0002	0.073	0.03
	09/18/14	200.7/200.8	0.0017	0.15	<0.002	<0.006	<0.006	0.15	<0.001	0.6	0.0031	<0.005	<0.0002	0.013	<0.01
	06/06/14	200.7/200.8	<0.005	0.2	<0.002	<0.006	<0.006	4.2	<0.005	0.7	0.0069	<0.005	<0.0002	0.056	0.017
MKTf-4 / SB03	06/04/15	200.7/200.8	0.0082	2.5	<0.002	0.0087	<0.006	13	0.0097	1.9	<0.01	<0.005	<0.0002	0.0053	0.017
	03/16/15	200.7/200.8	<0.01	1.8	<0.002	0.0092	0.012	11	0.022	2.5	0.016	<0.005	<0.0002	0.017	0.03
	11/13/14	200.7/200.8	0.0079	1.9	<0.002	0.0086	0.015	15	0.023	2.5	<0.05	<0.005	<0.0002	0.013	0.03
	09/15/14	200.7/200.8	0.0060	2	<0.002	0.015	0.021	20	0.036	2.9	0.0078	<0.005	<0.0002	0.02	0.044
	06/04/14	200.7/200.8	0.0061	1.4	<0.002	0.0085	0.013	7.9	0.013	2.1	0.013	<0.005	<0.0002	0.009	0.02
MKTf-9 / SB13	06/04/15	200.7/200.8	<0.005	0.34	<0.002	<0.006	<0.006	3.1	<0.0025	3	<0.005	<0.005	<0.0002	0.0076	<0.01
	03/16/15	200.7/200.8	0.0029	0.22	<0.002	<0.002	<0.002	2	0.0015	2.4	0.0053	<0.005	<0.0002	0.014	0.01
	11/14/14	200.7/200.8	<0.005	0.39	<0.002	<0.006	<0.006	4.5	0.0053	2.7	<0.01	<0.005	<0.0002	0.01	0.013
	09/18/14	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
	06/05/14	200.7/200.8	<0.005	0.58	<0.002	<0.006	<0.006	6.7	0.0058	3.8	0.0073	<0.005	<0.0002	0.006	0.015
MKTf-10 / SB16	06/04/15	200.7/200.8	0.0150	19	<0.002	0.077	0.01	120	0.19	24	<0.01	<0.005	<0.0002	0.014	0.15
	03/16/15	200.7/200.8	0.0190	22	<0.002	0.036	0.095	100	0.2	27	<0.01	<0.005	<0.0002	0.019	0.14
	11/14/14	200.7/200.8	<0.04	45	<0.004	0.099	0.24	250	0.58	49	<0.04	<0.01	<0.0004	0.052	0.31
	09/18/14	200.7/200.8	<0.005	12	<0.002	<0.006	<0.006	46	0.0015	15	0.0032	<0.005	<0.0002	0.0013	<0.01
	06/06/14	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
MKTf-11 / SB17	06/04/15	200.7/200.8	0.0056	2.7	<0.002	<0.006	<0.006	13	0.0027	3	<0.005	<0.005	<0.0002	<0.0025	0.013
	03/16/15	200.7/200.8	0.0086	1.9	<0.002	<0.006	<0.006	10	0.0068	3.1	0.006	<0.005	<0.0002	0.0021	0.024
	11/13/14	200.7/200.8	0.0087	1.7	<0.002	<0.006	<0.006	5.8	<0.005	3.4	<0.005	<0.005	<0.0002	<0.005	0.012
	09/15/14	200.7/200.8	0.0072	1.4	<0.002	<0.006	<0.006	8.1	0.0062	3.1	0.0029	<0.005	<0.0002	0.0058	0.021
	06/05/14	200.7/200.8	0.0063	1.2	<0.002	0.0061	<0.006	8.8	0.0096	2.8	0.0055	<0.005	<0.0002	<0.005	0.038
MKTf-15 / SB31	09/17/14	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
	06/05/14	200.7/200.8	<0.01	25	<0.002	0.0074	<0.006	11	0.011	7.9	<0.01	<0.005	<0.0002	<0.005	0.017
	03/16/15	200.7/200.8	<0.01	1	<0.002	<0.006	0.023	7.2	<0.01	1.3	<0.02	<0.005	<0.0002	<0.01	0.035
MKTf-16 / SB32	11/18/14	200.7/200.8	0.0100	1.1	<0.002	<0.006	<0.006	10	0.0042	1.3	<0.05	<0.005	<0.0002	0.0016	0.05
	09/17/14	200.7/200.8	0.0120	0.8	<0.002	<0.006	<0.006	8.6	0.0031	1.2	<0.01	<0.005	<0.0002	<0.001	0.034
	06/05/14	200.7/200.8	0.0230	0.9	<0.002	<0.006	0.008	7.9	<0.005	1.2	0.013	<0.005	<0.0002	0.015	0.089
	03/12/15	200.7/200.8	0.0057	0.17	<0.002	<0.006	<0.006	1.8	0.0017	3.1	0.0023	<0.005	<0.0002	0.022	<0.01
MKTf-17 / SB33	11/18/14	200.7/200.8	0.0051	0.21	<0.002	<0.006	<0.006	2.0	0.0031	3.0	<0.01	<0.005	<0.0002	0.025	0.019
	09/18/14	200.7/200.8	0.0055	0.21	<0.002	<0.006	<0.006	1.8	0.0016	3.3	0.0019	<0.005	<0.0002	0.022	0.013
	06/16/14	200.7/200.8	0.0063	0.61	<0.002	0.013	0.012	10	0.022	4.1	0.0045	<0.005	<0.0002	0.027	0.036

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			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 ¹			0.1000	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 (April 2014)			0.0100	2.0	0.005	NE	NE	NE	0.015 ²	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (December 2014)			0.0051	3.3	0.00624	0.00559	0.79	13.8	NE	2.02	0.0987	0.0812	0.00626	0.00592	5.96
EPA RSL for Tap Water (November 2014)			0.0001	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.06	6
WELL ID	DATE SAMPLED	METHOD													
MKTf-18 / SB34	03/17/15	200.7/200.8	0.0031	3.5	<0.002	0.012	0.011	14	0.021	2.7	<0.01	<0.005	<0.0002	0.0026	0.051
	11/18/14	200.7/200.8	0.0019	2.5	<0.002	<0.006	<0.006	4.0	0.0016	1.8	<0.01	<0.005	<0.0002	<0.001	0.02
	09/18/14	200.7/200.8	0.0015	2.6	<0.002	<0.006	<0.006	3.2	0.0028	2.0	0.0025	<0.005	<0.0002	0.0015	0.018
	06/06/14	200.7/200.8	0.0130	19	<0.01	0.11	0.12	81	0.29	17	0.013	<0.025	<0.0002	0.022	0.31
MKTf-19 / SB35	03/12/15	200.7/200.8	0.0170	2.7	<0.002	0.022	0.026	33	0.052	4.2	<0.01	<0.005	<0.0002	0.0065	0.078
	11/18/14	200.7/200.8	0.0220	3.6	<0.002	0.035	0.043	47	0.079	5.6	<0.01	<0.005	<0.0002	0.014	0.11
	03/16/15	200.7/200.8	0.0250	2	<0.002	<0.006	0.016	11	0.0066	3.2	0.0046	<0.005	<0.0002	0.011	0.03
MKTf-20	11/18/14	200.7/200.8	0.0170	4.5	<0.002	0.022	0.12	45	0.048	4.9	<0.005	<0.005	<0.0002	0.0066	0.19
MKTf-21	03/16/15	200.7/200.8	0.0200	4.9	<0.002	0.029	0.1	55	0.079	6.4	0.01	<0.005	<0.0002	0.0066	0.44
MKTf-22 / SB23	03/12/15	200.7/200.8	<0.01	2.1	<0.002	0.018	0.015	21	0.035	3.5	<0.01	<0.005	<0.0002	0.0047	0.038
	11/17/14	200.7/200.8	0.0028	1.1	<0.002	<0.006	<0.006	15	0.014	3.0	0.004	<0.005	<0.0002	0.0041	0.025
MKTf-23 / SB25	03/12/15	200.7/200.8	0.0130	0.64	<0.002	<0.006	<0.006	5.2	0.0035	1.8	0.01	<0.005	<0.0002	0.0062	0.011
	11/17/14	200.7/200.8	0.0110	0.49	<0.002	<0.006	<0.006	6.2	0.005	1.6	0.0067	<0.005	<0.0002	0.016	0.035
MKTf-24 / SB26	03/11/15	200.7/200.8	<0.01	0.71	<0.002	0.014	0.019	12	0.02	2.2	<0.01	<0.005	<0.0002	0.046	0.031
	11/14/14	200.7/200.8	<0.005	0.48	<0.002	0.0098	0.015	6.9	0.012	1.9	<0.01	<0.005	<0.0002	0.038	0.026
MKTf-25 / SB28	03/11/15	200.7/200.8	0.0041	0.58	<0.002	0.0064	0.014	7.5	0.013	3.9	0.0058	<0.005	<0.0002	0.038	0.017
	11/14/14	200.7/200.8	<0.005	0.37	<0.002	<0.006	0.011	2.7	0.0074	3.6	<0.01	<0.005	<0.0002	0.03	0.013
MKTf-26 / SB29	03/11/15	200.7/200.8	0.0040	0.2	<0.002	<0.006	<0.006	3.1	0.0029	1.3	0.0047	<0.005	<0.0002	0.045	0.012
	11/14/14	200.7/200.8	<0.005	0.15	<0.002	<0.006	<0.006	1.3	<0.005	1.4	<0.01	<0.005	<0.002	0.077	0.014
MKTf-27 / SB30	03/11/15	200.7/200.8	<0.01	0.13	<0.002	<0.006	<0.006	3.3	<0.01	0.27	<0.01	<0.005	<0.0002	0.071	0.014
	11/14/14	200.7/200.8	<0.005	0.13	<0.002	<0.006	<0.006	3.4	<0.005	0.5	<0.01	<0.005	<0.0002	0.087	0.024
MKTf-29	03/11/15	200.7/200.8	0.0020	0.057	<0.002	<0.006	<0.006	0.81	<0.001	0.36	0.0023	<0.005	<0.0002	0.023	<0.01
MKTf-28	03/11/15	200.7/200.8	<0.01	0.14	<0.002	<0.006	<0.006	2.5	0.0028	0.097	0.013	<0.005	<0.0002	0.17	0.014
	11/14/14	200.7/200.8	0.0054	0.12	<0.002	<0.006	<0.006	2.0	<0.005	0.38	<0.05	<0.005	<0.0002	0.11	0.015
MKTf-30	03/11/15	200.7/200.8	<0.005	0.29	<0.002	0.0072	<0.006	8.6	0.011	0.64	0.0079	<0.005	<0.0002	0.044	0.021
	11/17/14	200.7/200.8	<0.005	0.26	<0.002	0.007	<0.006	8.0	0.009	0.72	0.01	<0.005	<0.0002	0.039	0.029
MKTf-31	03/11/15	200.7/200.8	<0.01	0.2	<0.002	<0.006	<0.006	2.2	<0.01	0.12	<0.01	<0.005	<0.0002	0.056	<0.01
	11/17/14	200.7/200.8	<0.005	0.22	<0.002	0.007	<0.006	2.9	0.0041	0.24	0.008	<0.005	<0.0002	0.05	0.017
MKTf-32	03/12/15	200.7/200.8	<0.01	0.085	<0.002	<0.006	<0.006	1.6	0.0018	0.12	0.01	<0.005	<0.0002	0.067	<0.01
	11/17/14	200.7/200.8	<0.005	0.091	<0.002	0.007	<0.006	2.0	0.0027	0.23	<0.01	<0.005	<0.0002	0.067	0.014
MKTf-33	03/12/15	200.7/200.8	<0.005	0.25	<0.002	0.0062	<0.006	3.7	0.0059	0.68	0.0041	<0.005	<0.0002	0.045	0.014
	11/17/14	200.7/200.8	0.0016	0.18	<0.002	<0.006	<0.006	3.3	0.005	0.92	0.0031	<0.005	<0.0002	0.067	0.043
MKTf-34	03/12/15	200.7/200.8	<0.01	0.25	<0.002	<0.006	<0.006	5.2	0.0045	0.15	0.013	<0.005	<0.0002	0.028	0.059
	11/17/14	200.7/200.8	<0.01	0.17	<0.002	<0.006	<0.006	2.4	0.0014	0.075	<0.02	<0.005	<0.0002	0.026	0.037
MKTf-35	06/04/15	200.7/200.8	<0.005	5	<0.002	0.018	0.013	13	0.023	6.4	<0.005	<0.005	<0.0002	0.0044	0.032
	03/17/15	200.7/200.8	0.0040	8.2	<0.002	0.013	0.025	15	0.034	6.3	<0.005	<0.005	<0.0002	0.0053	0.062
MKTf-36	06/04/15	200.7/200.8	0.0170	6.8	<0.002	0.0096	0.0078	22	0.016	2.8	<0.005	<0.005	<0.0002	<0.0025	0.023
	03/17/15	200.7/200.8	0.0160	7	<0.002	<0.006	<0.006	22	0.015	2.8	0.0057	<0.005	<0.0002	0.0016	0.028

Total Metals Analytical Result Summary

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			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 ¹			0.1000	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 (April 2014)			0.0100	2.0	0.005	NE	NE	NE	0.015 ²	NE	0.05	NE	0.002	0.03	NE
NMED Tap Water (December 2014)			0.0051	3.3	0.00624	0.00559	0.79	13.8	NE	2.02	0.0987	0.0812	0.00626	0.00592	5.96
EPA RSL for Tap Water (November 2014)			0.0001	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.06	6
WELL ID	DATE SAMPLED	METHOD													
MKTf-37	06/04/15	200.7/200.8	<0.005	0.23	<0.002	0.0063	0.0097	4.8	0.036	2.6	<0.005	<0.005	<0.0002	0.024	0.044
	03/17/15	200.7/200.8	0.0032	0.23	<0.002	<0.006	0.012	5.1	0.03	2.9	0.0036	<0.005	<0.0002	0.026	0.14
MKTf-38	03/16/15	200.7/200.8	0.0031	0.34	<0.002	<0.006	<0.006	3.5	0.006	3.1	0.0058	<0.005	<0.0002	0.029	0.014
MKTf-39	03/16/15	200.7/200.8	<0.01	35	<0.01	<0.03	<0.03	50	0.034	8.6	<0.01	<0.025	0.00021	0.012	0.059
MKTf-40	03/11/15	200.7/200.8	<0.01	0.28	<0.002	<0.006	<0.006	5.6	<0.01	0.34	0.015	<0.005	<0.0002	0.085	0.023
MKTf-41	03/12/15	200.7/200.8	<0.01	0.19	<0.002	0.0075	<0.006	8.4	0.0061	0.22	0.059	<0.005	<0.0002	0.034	0.024
MKTf-42	03/11/15	200.7/200.8	0.0035	0.16	<0.002	<0.006	0.0071	2.5	0.0034	0.58	0.0075	<0.005	<0.0002	0.039	0.012
MKTf-43	03/11/15	200.7/200.8	<0.05	0.24	<0.01	0.031	<0.030	3.2	<0.02	3.7	0.071	<0.025	<0.0002	0.14	<0.05
MKTf-44	03/12/15	200.7/200.8	<0.01	0.22	<0.002	0.023	0.0079	16	0.016	0.34	0.015	<0.005	<0.0002	0.22	0.056
SB24	04/03/14	200.7/200.8	<0.005	0.16	<0.002	0.0071	<0.006	5.9	0.0025	0.71	<0.005	<0.005	<0.0002	0.014	0.022
SB-27	04/03/14	200.7/200.8	<0.005	2.1	<0.002	<0.006	0.011	9.2	0.016	2.8	<0.005	<0.005	<0.0002	0.0061	0.024

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

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.

40 CFR Part 141 National Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)

New Mexico Environment Department Tap Water Screening Levels December 2014

EPA Regional Screening Level (RSL) Tap Water Screening Levels November 2014

Applicable screening levels per Gallup's RCRA Permit Section IV.D.1 bolded

NOTES

Reported values represent total concentrations

1 - WQCC standards listed for reference only as they apply to the dissolved portion and not total

2) National Primary Drinking Water Regulation (May 2009); Action Level

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			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			0.1000	1.0	0.01	0.05	1.0	1.0	0.05	0.200	0.05	0.050	0.03	10.00
40 CFR 141.62 MCL (April 2014)			0.0100	2.0	0.005	NE	NE	NE	0.015 ¹	NE	NE	0.050	0.03	NE
NMED Tap Water (December 2014)			0.0051	3.3	0.00624	0.00559	0.79	13.8	NE	2.020	0.0812	0.099	0.00592	5.96
EPA RSL for Tap Water (November 2014)			0.0001	3.8	0.0092	NE	0.8	14	0.015	0.430	0.094	0.100	0.06	6.00
WELL ID	DATE SAMPLED	METHOD												
MKTf-1 / HA1	03/11/15	200.7/200.8	<0.01	2	<0.002	<0.006	<0.006	4.4	<0.001	1.900	<0.005	<0.02	<0.001	<0.01
	06/06/14	200.7/200.8	<0.005	1.4	<0.002	<0.006	<0.006	4.7	<0.005	1.700	<0.005	0.013	<0.01	0.028
MKTf-2 / HA3	03/11/15	200.7/200.8	0.0047	0.13	<0.002	<0.006	<0.006	0.11	<0.001	0.560	<0.005	0.008	0.049	<0.01
	11/14/14	200.7/200.8	<0.01	0.13	<0.002	<0.006	<0.006	2.2	<0.01	0.510	<0.005	<0.01	0.059	0.027
	09/18/14	200.7/200.8	<0.005	0.15	<0.002	<0.006	<0.006	0.029	<0.001	0.590	<0.005	<0.005	0.0012	0.041
	06/06/14	200.7/200.8	<0.005	0.13	<0.002	<0.006	<0.006	0.34	<0.005	0.560	<0.005	0.012	0.056	0.010
MKTf-4 / SB03	06/04/15	200.7/200.8	<0.01	2.2	<0.002	<0.006	<0.006	8.6	<0.01	1.600	<0.005	<0.1	<0.01	0.023
	03/16/15	200.7/200.8	0.0097	1.1	<0.002	<0.006	<0.006	2	<0.005	1.900	<0.005	<0.05	0.013	0.021
	11/13/14	200.7/200.8	0.0060	1.3	<0.002	<0.006	<0.006	4.7	<0.005	1.800	<0.005	<0.005	0.013	0.010
	09/15/14	200.7/200.8	<0.01	0.78	<0.002	<0.006	<0.006	3.6	0.0013	1.700	<0.005	<0.1	0.018	<0.1
MKTf-9 / SB13	06/04/14	200.7/200.8	0.0078	1.9	<0.002	<0.006	<0.006	2.5	<0.005	1.400	<0.005	0.022	<0.01	<0.01
	06/04/15	200.7/200.8	<0.01	0.31	<0.002	<0.006	<0.006	1.9	<0.01	3.200	<0.005	<0.01	<0.01	0.012
	03/16/15	200.7/200.8	<0.005	0.19	<0.002	<0.006	<0.006	1.4	<0.001	2.300	<0.005	<0.01	0.012	0.039
	11/14/14	200.7/200.8	<0.01	0.34	<0.002	<0.006	<0.006	2.4	<0.01	2.800	<0.005	<0.01	<0.01	0.017
MKTf-10 / SB16	09/18/14	200.7/200.8	<0.01	0.32	<0.002	<0.006	<0.006	2.2	<0.001	2.600	<0.005	<0.01	0.012	<0.01
	06/05/14	200.7/200.8	<0.005	0.44	<0.002	<0.006	<0.006	3.4	<0.005	3.600	<0.005	0.014	<0.01	<0.01
	06/04/15	200.7/200.8	<0.01	12	<0.002	<0.006	<0.006	53	<0.01	18.000	<0.005	<0.01	<0.01	0.034
	03/16/15	200.7/200.8	<0.005	12	<0.002	<0.006	<0.006	49	<0.001	17.000	<0.005	0.007	<0.001	<0.01
MKTf-11 / SB17	11/14/14	200.7/200.8	<0.01	17	<0.002	<0.006	<0.006	67	<0.01	24.000	<0.005	<0.01	<0.01	0.018
	09/18/14	200.7/200.8	<0.005	11	<0.002	<0.006	<0.006	33	<0.001	14.000	<0.005	<0.005	<0.001	<0.01
	06/06/14	200.7/200.8	<0.005	8.1	<0.002	<0.006	<0.006	18	<0.005	9.200	<0.005	0.011	<0.01	<0.01
	06/04/15	200.7/200.8	<0.01	2.7	<0.002	<0.006	<0.006	9.9	<0.01	3.000	<0.005	<0.01	<0.01	0.018
MKTf-15 / SB31	03/16/15	200.7/200.8	0.0087	2	<0.002	<0.006	<0.006	4.8	<0.001	2.900	<0.005	0.008	0.0013	<0.01
	11/13/14	200.7/200.8	<0.01	1.5	<0.002	<0.006	<0.006	3.4	<0.001	3.200	<0.005	0.005	0.003	0.019
	09/15/14	200.7/200.8	0.0086	1.1	<0.002	<0.006	<0.006	2.7	<0.001	2.400	<0.005	<0.005	0.004	<0.01
	06/06/14	200.7/200.8	0.0064	1.8	<0.002	6.0E-03	<0.006	11	0.022	3.600	<0.005	0.010	<0.01	0.036
MKTf-16 / SB32	09/17/14	200.7/200.8	<0.01	27	<0.002	<0.006	<0.006	13	<0.01	9.000	<0.005	<0.01	<0.01	<0.01
	06/05/14	200.7/200.8	<0.005	25	<0.002	<0.006	<0.006	11	<0.005	7.500	<0.005	<0.01	<0.01	0.011
	03/16/15	200.7/200.8	<0.01	0.94	<0.002	<0.006	<0.006	5.6	<0.001	1.200	<0.005	<0.02	<0.001	0.024
	11/18/14	200.7/200.8	0.0110	0.88	<0.002	<0.006	<0.006	7.2	<0.001	1.100	<0.005	<0.01	<0.001	0.019
MKTf-17 / SB33	09/17/14	200.7/200.8	0.0110	0.81	<0.002	<0.006	<0.006	7.3	<0.001	1.100	<0.005	<0.01	<0.001	0.017
	06/05/14	200.7/200.8	0.0130	0.81	<0.002	<0.006	<0.006	7.9	<0.005	1.300	<0.005	0.017	<0.01	0.022
	03/12/15	200.7/200.8	0.0062	0.13	<0.002	<0.006	<0.006	0.57	<0.001	3.000	<0.005	0.006	0.021	<0.01
	11/18/14	200.7/200.8	0.0047	0.14	<0.002	<0.006	<0.006	0.08	<0.001	2.800	<0.005	<0.01	0.022	0.027
	09/18/14	200.7/200.8	0.0053	0.16	<0.002	<0.006	<0.006	0.27	<0.001	3.100	<0.005	<0.005	0.022	0.018
	06/16/14	200.7/200.8	0.0054	0.24	<0.002	<0.006	<0.006	0.94	<0.005	3.300	<0.005	<0.005	0.022	0.140

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			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			0.1000	1.0	0.01	0.05	1.0	1.0	0.05	0.200	0.05	0.050	0.03	10.00
40 CFR 141.62 MCL (April 2014)			0.0100	2.0	0.005	NE	NE	NE	0.015 ¹	NE	NE	0.050	0.03	NE
NMED Tap Water (December 2014)			0.0051	3.3	0.00624	0.00559	0.79	13.8	NE	2.020	0.0812	0.099	0.00592	5.96
EPA RSL for Tap Water (November 2014)			0.0001	3.8	0.0092	NE	0.8	14	0.015	0.430	0.094	0.100	0.06	6.00
WELL ID	DATE SAMPLED	METHOD												
MKTf-18 / SB34	03/17/15	200.7/200.8	<0.01	2.5	<0.002	<0.006	<0.006	3.8	<0.001	1.800	<0.005	<0.01	<0.001	<0.01
	11/18/14	200.7/200.8	0.0020	2.4	<0.002	<0.006	<0.006	3.4	<0.001	1.700	<0.005	<0.01	<0.001	0.025
	09/18/14	200.7/200.8	<0.005	2.3	<0.002	<0.006	<0.006	0.3	<0.001	1.700	<0.005	<0.005	0.0012	0.012
	06/06/14	200.7/200.8	<0.005	2.4	<0.002	<0.006	<0.006	4.5	<0.005	2.000	<0.005	0.009	<0.01	<0.01
MKTf-19 / SB35	03/12/15	200.7/200.8	0.0210	1.6	<0.002	<0.006	<0.006	9.5	0.0017	3.100	<0.005	<0.02	<0.001	0.012
	11/18/14	200.7/200.8	0.0220	1.6	<0.002	<0.006	<0.006	11	0.0019	3.000	<0.005	<0.01	<0.001	0.018
MKTf-20	03/16/15	200.7/200.8	0.0220	2	<0.002	<0.006	<0.006	8.6	0.0013	3.100	<0.005	<0.01	0.0088	<0.01
	11/18/14	200.7/200.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MKTf-21	03/16/15	200.7/200.8	0.0110	1.9	<0.002	<0.006	<0.006	18	0.012	3.100	<0.005	0.010	0.0012	0.074
MKTf-22 / SB23	03/12/15	200.7/200.8	0.0031	1.3	<0.002	<0.006	<0.006	7.5	0.0016	2.300	<0.005	0.007	0.0032	<0.01
	11/17/14	200.7/200.8	<0.005	0.78	<0.002	<0.006	<0.006	6.8	<0.001	2.200	<0.005	<0.005	0.0053	0.024
MKTf-23 / SB25	03/12/15	200.7/200.8	0.0130	0.61	<0.002	<0.006	<0.006	4.4	<0.001	1.900	<0.005	<0.02	0.0045	<0.01
	11/17/14	200.7/200.8	0.0100	0.57	<0.002	<0.006	<0.006	3.1	<0.001	1.700	<0.005	<0.01	0.013	0.018
MKTf-24 / SB26	03/11/15	200.7/200.8	<0.005	0.26	<0.002	<0.006	<0.006	0.34	0.0015	1.200	<0.005	0.011	0.043	0.018
	11/14/14	200.7/200.8	<0.005	0.29	<0.002	<0.006	<0.006	4.4	<0.005	1.600	<0.005	<0.005	0.038	<0.01
MKTf-25 / SB28	03/11/15	200.7/200.8	<0.01	0.26	<0.002	<0.006	<0.006	0.2	<0.001	3.200	<0.005	<0.02	0.038	0.017
	11/14/14	200.7/200.8	<0.005	0.28	<0.002	<0.006	<0.006	0.21	<0.005	3.100	<0.005	<0.005	0.03	0.100
MKTf-26 / SB29	03/11/15	200.7/200.8	<0.01	0.17	<0.002	<0.006	<0.006	0.85	<0.001	1.400	<0.005	<0.01	0.045	0.068
	11/14/14	200.7/200.8	<0.01	0.13	<0.002	<0.006	<0.006	0.18	<0.01	1.400	<0.005	<0.01	0.066	0.014
MKTf-27 / SB30	03/11/15	200.7/200.8	<0.01	0.086	<0.002	<0.006	<0.006	0.15	<0.01	0.100	<0.005	0.014	0.075	<0.01
	11/14/14	200.7/200.8	<0.01	0.094	<0.002	<0.006	<0.006	0.55	<0.01	0.280	<0.005	<0.01	0.075	0.030
MKTf-28	03/11/15	200.7/200.8	<0.01	0.09	<0.002	<0.006	<0.006	0.1	<0.001	0.006	<0.005	<0.05	0.17	<0.01
	11/14/14	200.7/200.8	<0.005	0.099	<0.002	<0.006	<0.006	0.6	<0.005	0.320	<0.005	<0.02	0.12	0.038
MKTf-29	03/11/15	200.7/200.8	0.0024	0.031	<0.002	<0.006	<0.006	<0.002	<0.001	0.340	<0.005	0.005	0.023	<0.01
MKTf-30	03/11/15	200.7/200.8	<0.01	0.036	<0.002	<0.006	<0.006	0.19	<0.01	0.018	<0.005	0.014	0.041	<0.01
	11/17/14	200.7/200.8	<0.01	0.036	<0.002	<0.006	<0.006	0.26	<0.001	0.021	<0.005	<0.01	0.041	0.039
MKTf-31	03/11/15	200.7/200.8	<0.01	0.17	<0.002	<0.006	<0.006	0.026	<0.001	0.032	<0.005	0.013	0.054	<0.01
	11/17/14	200.7/200.8	<0.005	0.17	<0.002	<0.006	<0.006	<0.02	<0.001	0.059	<0.005	0.008	0.045	0.027
MKTf-32	03/12/15	200.7/200.8	<0.01	0.057	<0.002	<0.006	<0.006	0.18	<0.001	0.080	<0.005	<0.02	0.068	0.014
	11/17/14	200.7/200.8	<0.005	0.064	<0.002	<0.006	<0.006	0.21	<0.001	0.094	<0.005	<0.01	0.059	0.010
MKTf-33	03/12/15	200.7/200.8	<0.01	0.061	<0.002	<0.006	<0.006	0.026	<0.001	0.280	<0.005	<0.01	0.045	0.017
	11/17/14	200.7/200.8	<0.005	0.064	<0.002	<0.006	<0.006	0.061	<0.001	0.240	<0.005	<0.005	0.045	0.016
MKTf-34	03/12/15	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
	11/17/14	200.7/200.8	<0.01	0.15	<0.002	<0.006	<0.006	<0.02	<0.001	0.004	<0.005	<0.02	0.027	0.051
MKTf-35	06/04/15	200.7/200.8	<0.005	0.36	<0.002	<0.006	<0.006	2.6	<0.005	3.500	<0.005	<0.005	<0.005	0.017
	03/17/15	200.7/200.8	<0.01	0.31	<0.002	<0.006	<0.006	3.6	0.0011	3.500	<0.005	<0.01	0.0026	<0.01
MKTf-36	06/04/15	200.7/200.8	0.0160	6.6	<0.002	<0.006	<0.006	18	<0.005	2.400	<0.005	<0.005	<0.005	0.012
	03/17/15	200.7/200.8	0.0150	6.4	<0.002	<0.006	<0.006	19	0.0034	2.600	<0.005	<0.01	<0.001	0.047

Table 2
Chemical Analyses
Western Refining Southwest, Inc. - Gallup Refinery

			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			0.1000	1.0	0.01	0.05	1.0	1.0	0.05	0.200	0.05	0.050	0.03	10.00
40 CFR 141.62 MCL (April 2014)			0.0100	2.0	0.005	NE	NE	NE	0.015 ¹	NE	NE	0.050	0.03	NE
NMED Tap Water (December 2014)			0.0051	3.3	0.00624	0.00559	0.79	13.8	NE	2.020	0.0812	0.099	0.00592	5.96
EPA RSL for Tap Water (November 2014)			0.0001	3.8	0.0092	NE	0.8	14	0.015	0.430	0.094	0.100	0.06	6.00
WELL ID	DATE SAMPLED	METHOD												
MKTf-37	06/04/15	200.7/200.8	<0.01	0.19	<0.002	<0.006	<0.006	1.8	<0.01	2.300	<0.005	<0.01	0.023	0.039
	03/17/15	200.7/200.8	<0.005	0.16	<0.002	<0.006	<0.006	1.1	0.0071	2.700	<0.005	<0.01	0.021	0.029
MKTf-38	03/16/15	200.7/200.8	<0.01	0.14	<0.002	<0.006	<0.006	0.24	<0.001	3.100	<0.005	<0.01	0.025	0.096
MKTf-39	03/16/15	200.7/200.8	<0.01	21	<0.002	<0.006	<0.006	31	<0.005	7.000	<0.005	0.011	0.0099	<0.01
MKTf-40	03/11/15	200.7/200.8	<0.01	0.19	<0.002	<0.006	<0.006	0.11	<0.01	0.200	<0.005	<0.02	0.07	<0.01
MKTf-41	03/12/15	200.7/200.8	<0.01	0.081	<0.002	<0.006	<0.006	0.2	<0.001	0.024	<0.005	0.059	0.034	0.013
MKTf-42	03/11/15	200.7/200.8	<0.01	0.094	<0.002	<0.006	<0.006	0.11	<0.001	0.540	<0.005	0.015	0.04	0.036
MKTf-43	03/11/15	200.7/200.8	<0.05	0.17	<0.01	0.048	<0.03	0.49	<0.05	3.700	<0.025	0.110	0.15	<0.05
MKTf-44	03/12/15	200.7/200.8	<0.01	0.07	<0.002	0.0072	<0.006	0.85	0.0031	0.079	<0.005	0.017	0.22	0.011

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

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.

40 CFR Part 141 National Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)

New Mexico Environment Department Tap Water Screening Levels December 2014

EPA Regional Screening Level (RSL) Tap Water Screening Levels November 2014

Applicable screening levels per Gallup's RCRA Permit Section IV.D.1 bolded

NOTES

Reported values represent dissolved concentrations

1) National Primary Drinking Water Regulation (May 2009); Action Level

Table 2 Chemical Analyses Western Refining Southwest, Inc. - Gallup Refinery																								
		1,2,4- Trimethyl benzene (mg/L)	1,3,5- Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2- Dibromoetha ne (EDB)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	(n-butyl ethyl ketone) 2- Butanone (mg/L)	cis-1,2-DCE (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethane (mg/L)	Isopropyl benzene (mg/L)	4- Isopropyl toluene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (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	0.025	0.005	NE	NE	NE	NE	NE	0.02	0.06	0.01	0.1	0.001	
40 CFR 141.62 MCL (April 2014)		NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	0.07	NE	0.007	NE	NE	NE	NE	NE	0.005	0.2	0.005	0.005	0.002	
NMED Tap Water (December 2014)		NE	NE	0.00171	0.0000746	0.00165	NE	NE	14.1	5.56	0.00365	0.0275	0.284	NE	NE	NE	NE	NE	0.0403	8	0.000415	0.00282	0.000201	
EPA RSL for Tap Water (November 2014)		0.015	0.12	0.00017	0.0000075	0.00017	0.0011	0.036	14	5.6	0.036	0.0027	0.28	NE	NE	1	0.66	2	0.011	8	0.00028	0.00049	0.000019	
WELL ID	DATE SAMPLED	METHOD																						
MKT-1 / HA1	03/11/15	82608	0.59	0.1	<0.05	<0.05	<0.1	<0.2	<0.2	<0.5	<0.5	<0.05	0.066	0.058	<0.05	<0.05	<0.15	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	
	06/06/14	82608	1.1	0.27	<0.05	<0.05	0.3	<0.2	<0.2	<0.5	<0.5	<0.05	0.094	<0.05	<0.05	<0.15	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	03/17/15	82608	0.0051	<0.002	0.0045	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	0.0093	0.05	0.031	<0.002	<0.002	<0.006	<0.002	<0.002	0.0024	0.0023	<0.002	0.0024	
	11/14/14	82608	0.0016	<0.001	0.016	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	0.011	0.075	0.074	0.0016	<0.001	<0.003	0.0012	<0.001	0.0036	0.0024	0.0071	0.0097	
	09/18/14	82608	0.14	<0.005	0.0051	<0.002	0.017	0.037	<0.02	<0.05	0.03	0.098	0.024	0.03	<0.005	<0.015	0.13	0.0068	<0.005	<0.005	<0.005	<0.005	<0.005	
MKT-2 / HA3	06/06/14	82608	0.031	0.0019	0.0081	<0.002	0.0049	<0.004	<0.004	0.012	<0.01	0.011	0.07	0.041	0.0031	<0.001	<0.003	0.009	<0.001	<0.001	0.0035	0.0012	0.0041	0.001
	04/08/14	82608	0.0035	<0.002	0.0068	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	0.0052	0.041	0.034	<0.002	<0.002	<0.006	<0.002	<0.002	0.0022	<0.002	0.0034	<0.002	
	10/28/13	80218	0.190	0.026	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	06/04/15	82608	0.2700	0.023	<0.01	<0.01	0.22	0.14	0.086	<0.1	<0.1	<0.01	<0.01	0.022	0.021	<0.01	<0.02	0.027	<0.01	<0.01	<0.01	<0.01	<0.01	
	03/16/15	82608	0.2000	0.024	<0.01	<0.01	0.17	0.096	0.089	<0.1	<0.1	<0.01	0.019	0.032	0.01	<0.1	<0.03	0.021	<0.01	<0.01	<0.01	<0.01	<0.01	
MKT-4 / SB03	11/13/14	82608	0.2	0.019	<0.01	<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	
	09/15/14	82608	0.096	0.012	<0.005	<0.02	0.092	0.041	0.013	<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	0.0051	
	06/04/14	82608	0.27	0.049	<0.01	<0.02	0.31	0.13	0.17	<0.1	<0.1	<0.01	0.011	0.021	0.02	<0.01	<0.01	0.046	<0.01	<0.01	<0.01	<0.01	<0.01	
	04/17/14	82608	0.51	0.094	<0.02	<0.02	0.43	0.18	0.28	<0.2	<0.2	<0.02	0.028	<0.02	0.028	<0.02	<0.06	0.077	<0.02	<0.02	<0.02	<0.02	<0.02	
	SB07	10/28/13	80218	1	0.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB12	10/28/13	80218	0.87	0.26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
MKT-9 / SB13	06/04/15	82608	0.033	<0.005	<0.005	<0.005	0.015	0.051	<0.02	<0.05	<0.05	0.03	0.028	0.055	0.015	<0.005	<0.0015	0.022	<0.005	0.0078	0.067	<0.005	0.0076	
	03/16/15	82608	0.018	<0.005	<0.005	0.005	0.011	0.03	<0.02	<0.05	<0.05	0.036	0.034	0.074	0.0074	<0.005	<0.0015	0.013	<0.005	0.0071	0.13	<0.005	0.009	
	11/14/14	82608	0.087	<0.01	<0.01	<0.01	0.043	0.11	<0.04	<0.1	<0.1	0.024	0.035	0.068	0.034	<0.01	<0.03	0.03	<0.01	<0.01	0.096	<0.01	0.011	
	09/18/14	82608	0.038	<0.01	<0.01	<0.005	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	
	06/05/14	82608	0.083	<0.01	<0.1	<0.0005	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	
SB14	04/14/14	82608	0.074	<0.005	<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	<0.05	0.0089	
SB15	10/28/13	80218	0.59	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
MKT-10 / SB16	06/04/15	82608	0.79	0.21	<0.05	<0.05	0.19	<0.2	<0.2	<0.5	1.3	<0.05	0.06	<0.05	0.054	<0.05	<15	0.13	<0.05	<0.05	<0.05	<0.05	<0.05	
	03/16/15	82608	0.96	0.24	<0.05	<0.05	0.2	<0.2	<0.2	<0.5	<0.5	<0.05	0.078	<0.05	0.051	<0.05	<15	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	
	11/14/14	82608	1.5	0.57	<0.02	<0.02	0.36	0.24	0.38	<0.2	<0.2	0.066	0.039	<0.02	0.12	0.034	0.084	0.36	0.04	<0.02	<0.02	<0.02	<0.02	
	09/18/14	82608	0.5	0.11	<0.05	<0.05	0.13	<0.2	<0.2	<0.5	2.8	<0.05	0.057	<0.005	<0.05	<0.05	<0.15	0.068	<0.05	<0.05	<0.05	<0.05	<0.05	
	06/06/14	82608	0.27	0.065	<0.01	<0.05	0.079	<0.04	<0.04	0.21	1.8	0.033	0.051	<0.01	0.019	<0.01	<0.03	0.018	<0.01	<0.01	0.015	<0.01	<0.01	
MKT-11 / SB17	04/11/14	82608	0.96	0.21	<0.05	<0.05	0.2	<0.2	<0.2	1.2	1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15	0.13	<0.05	<0.05	<0.05	<0.05	<0.05	
	06/04/15	82608	0.57	0.14	<0.02	<0.02	0.11	<0.08	<0.08	<0.2	0.43	<0.02	0.031	<0.02	0.036	<0.02	<0.06	0.099	<0.02	<0.02	<0.02	<0.02	0.034	
	03/16/15	82608	0.51	0.11	<0.02	<0.02	0.093	<0.08	<0.08	<0.2	<0.2	<0.02	0.048	<0.02	0.033	<0.02	<0.06	0.094	<0.02	<0.02	<0.02	<0.02	0.045	
	11/13/14	82608	0.4	0.06	<0.02	<0.02	0.058	<0.08	<0.08	<0.2	<0.2	<0.02	0.047	<0.02	0.029	<0.02	<0.06	0.078	<0.02	<0.02	<0.02	<0.02	0.054	
	09/15/14	82608	0.36	0.058	<0.05	<0.02	<0.1	<0.2	<0.2	<0.5	<0.5	<0.5	0.057	<0.05	<0.05	<0.05	<0.15	0.069	<0.05	<0.05	<0.05	<0.05	<0.05	
MKT-15 / SB31	06/05/14	82608	0.27	0.052	<0.005	<0.02	0.066	<0.02	<0.02	0.29	0.17	0.016	0.053	<0.005	0.029	<0.005	<0.015	0.068	0.0078	<0.005	0.014	<0.005	0.005	
	04/11/14	82608	0.41	0.062	<0.05	<0.05	<0.1	<0.2	<0.2	<0.5	<0.5	<0.05	0.065	<0.05	<0.05	<0.05	<0.15	0.097	<0.05	<0.05	<0.05	<0.05	<0.05	
	09/17/14	82608	0.66	0.18	<0.05	<0.05	0.12	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05	<0.05	0.068	<0.05	<0.15	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	
	06/05/14	82608	0.33	0.095	<0.005	<0.005	0.08	0.09	0.035	0.29	0.062	<0.005	<0.005	<0.005	0.059	0.0059	<0.015	0.097	0.012	<0.005	<0.005	<0.005	<0.005	
	04/10/14	82608	0.46	0.11	<0.01	<0.01	0.072	<0.04	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01	0.053	<0.01	<0.03	0.094	0.012	<0.01	<0.01	<0.01	<0.01	
MKT-16 / SB32	03/16/15	82608	0.94	0.31	<0.05	<0.05	0.2	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	
	11/18/14	82608	1	0.36	<0.05	<0.05	0.16	<0.2	<0.2	<0.5	<0.5	<0.05	0.081	<0.05	<0.05	<0.05	<0.15	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	
	09/17/14	82608	1.1	0.36	<0.05	<0.05	0.26	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	
	06/05/14	82608	1.2	0.36	<0.05	<0.05	0.24	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	
	04/10/14	82608	0.49	0.12	<0.																			

Table 2 Chemical Analyses Western Refining Southwest, Inc. - Gallup Refinery																								
		1,2,4- Trimethyl benzene (mg/L)	1,3,5- Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2- Dibromoetha ne (EDB)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	(n-butyl ethyl ketone) 2- Butanone (mg/L)	cis-1,2-DCE (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)	Isopropyl benzene (mg/L)	4- Isopropyl toluene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,1,1- Trichloro ethane (mg/L)	1,1,2- Trichloro ethane (TCE) (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	0.025	0.005	NE	NE	NE	NE	NE	0.02	0.06	0.01	0.1	0.001	
40 CFR 141.62 MCL (April 2014)		NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	0.07	NE	0.007	NE	NE	NE	NE	NE	0.005	0.2	0.005	0.005	0.002	
NMED Tap Water (December 2014)		NE	NE	0.00171	0.0000746	0.00165	NE	NE	NE	14.1	5.56	0.00365	0.0275	0.284	NE	NE	NE	NE	NE	0.0403	8	0.000415	0.00282	0.000201
EPA RSL for Tap Water (November 2014)		0.015	0.12	0.00017	0.0000075	0.00017	0.0011	0.036	14	5.6	0.036	0.0027	0.28	NE	NE	NE	1	0.66	2	0.011	8	0.00028	0.00049	0.000019
WELL ID	DATE SAMPLED	METHOD																						
MKTf-19 / SB35	03/12/15	82608	0.39	0.047	<0.01	<0.01	0.38	0.17	0.25	<0.1	<0.1	<0.01	<0.01	<0.01	0.0180	<0.01	<0.03	0.0370	<0.01	<0.01	<0.01	<0.01	<0.01	
	11/18/14	82608	0.83	0.11	<0.05	<0.05	0.58	0.41	0.54	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.15	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	09/24/14	82608	0.69	0.11	<0.05	<0.05	0.5	0.22	0.36	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.15	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	
	04/09/14	82608	0.59	0.099	<0.05	<0.05	0.43	<0.2	0.3	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MKTf-20	03/16/15	82608	1.3	0.39	<0.05	<0.05	0.21	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	11/18/14	82608	1.8	0.53	<0.5	<0.05	0.16	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.15	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	04/11/14	82608	1.9	0.5	<0.05	<0.05	3.0	<0.2	<0.2	<0.5	<0.05	<0.05	<0.05	<0.05	0.076	<0.05	<0.15	0.26	<0.05	<0.05	<0.05	<0.05	<0.05	
	03/16/15	82608	0.11	0.051	<0.01	<0.01	<0.02	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	0.016	<0.01	<0.01	<0.01	<0.01	<0.01	
MKTf-21	04/11/14	82608	2.2	0.6	<0.05	<0.05	0.49	<0.2	<0.2	<0.5	<0.5	<0.5	<0.05	<0.05	0.1	<0.05	<0.15	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	
	03/12/15	82608	0.058	<0.02	<0.02	<0.02	<0.04	0.099	<0.08	<0.2	<0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	0.031	<0.02	<0.02	<0.02	<0.02	<0.02	
	11/17/14	82608	<0.01	<0.01	<0.01	<0.01	<0.02	0.058	<0.04	<0.1	<0.1	0.01	0.015	<0.01	<0.01	<0.01	<0.03	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	
	04/10/14	82608	0.089	<0.01	<0.01	<0.01	<0.02	0.048	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01	0.015	<0.01	<0.03	0.033	<0.01	<0.01	<0.01	<0.01	<0.01	
MKTf-23 / SB25	03/12/15	82608	1.4	0.38	<0.01	<0.01	0.3	0.097	0.14	<0.1	<0.1	0.055	0.12	0.053	0.044	<0.01	<0.03	0.093	<0.01	<0.01	0.049	<0.01	<0.01	
	11/17/14	82608	0.89	0.22	<0.01	<0.01	0.15	0.074	0.11	<0.1	<0.1	0.043	0.15	0.064	0.034	<0.01	<0.03	0.066	<0.01	<0.01	0.024	<0.01	0.022	
	09/24/14	82608	0.54	0.15	<0.01	<0.01	0.1	<0.04	0.041	<0.1	<0.1	0.029	0.092	0.047	0.026	<0.01	<0.03	0.058	<0.01	<0.01	0.024	<0.01	<0.01	
	03/11/15	82608	<0.005	<0.005	0.007	<0.005	<0.01	<0.02	<0.02	<0.05	<0.05	0.035	0.1	0.051	0.016	<0.005	<0.015	0.024	<0.005	<0.005	0.01	<0.005	<0.005	
MKTf-24 / SB26	11/14/14	82608	0.0027	<0.001	0.0096	<0.001	<0.002	0.0046	<0.004	<0.01	<0.01	0.039	0.15	0.058	0.018	<0.001	0.0058	0.028	0.004	<0.001	0.0046	0.0011	0.0049	
	09/24/14	82608	0.0023	<0.002	0.0098	<0.001	<0.004	<0.008	<0.008	<0.02	<0.02	0.044	0.14	0.067	0.024	<0.002	0.0087	0.039	0.0005	<0.002	<0.002	<0.002	<0.005	
	04/08/14	82608	<0.001	<0.001	0.014	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	0.057	0.2	0.088	0.02	<0.001	0.0091	0.018	0.0005	0.0019	0.021	0.0014	0.0052	
	03/11/15	82608	0.0086	0.005	0.012	<0.005	0.018	<0.02	<0.02	<0.05	<0.05	0.055	0.28	0.14	0.037	<0.005	0.0160	0.051	0.0073	<0.005	0.053	<0.005	0.031	
MKTf-25 / SB8	11/14/14	82608	<0.005	0.005	0.012	<0.005	<0.01	<0.02	<0.02	<0.05	<0.05	0.044	0.23	0.098	0.04	<0.005	<0.015	0.037	0.0066	<0.005	0.023	<0.005	0.027	
	09/23/14	82608	<0.01	<0.01	<0.01	<0.002	<0.02	<0.04	<0.04	<0.1	<0.1	0.046	0.25	0.1	0.038	<0.01	<0.03	0.041	<0.01	<0.01	0.03	<0.01	0.024	
	04/08/14	82608	0.010	0.003	0.05	<0.002	0.05	<0.08	<0.08	<0.02	<0.02	0.054	0.35	0.15	0.034	<0.002	0.014	0.039	0.0058	0.0033	0.076	<0.002	0.003	
	03/11/15	82608	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.02	<0.05	<0.05	0.008	0.049	0.009	<0.005	<0.005	<0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MKTf-26 / SB29	11/14/14	82608	<0.005	<0.005	0.0093	<0.005	<0.01	<0.02	<0.02	<0.05	<0.05	0.011	0.083	0.043	<0.005	<0.005	<0.015	<0.005	<0.005	<0.005	<0.005	<0.005	0.017	
	09/24/14	82608	<0.001	<0.001	0.0081	<0.005	<0.002	<0.004	<0.004	<0.01	<0.01	0.013	0.084	0.032	0.0073	<0.001	<0.003	0.005	0.0013	<0.001	0.0025	0.0011	0.0017	
	04/08/14	82608	<0.001	<0.001	0.013	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	0.0045	0.083	0.066	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	0.0017	0.0014	0.0029	
	03/11/15	82608	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	0.0016	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
MKTf-27 / SB30	11/14/14	82608	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	0.0028	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	09/24/14	82608	<0.001	<0.001	<0.001	<0.002	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	0.002	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	04/08/14	82608	<0.002	<0.002	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.001	<0.006	<0.002	<0.002	<0.001	<0.002	<0.002	<0.002	
	03/11/15	82608	<0.001	<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	
MKTf-28	11/14/14	82608	<0.001	<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	
	09/24/14	82608	<0.001	<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	
	04/08/14	82608	<0.001	<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	
	03/11/15	82608	<0.001	<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	
MKTf-29	09/24/14	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	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	04/09/14	82608	<0.001	<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	
	03/11/15	82608	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	0.0045	0.081	0.004	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001</	

		1,2,4- Trimethyl benzene (mg/L)	1,3,5- Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2- Dibromoetha ne (EDB) (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	(Isobutyl ethyl ketone) 2- Butanone (mg/L)	cis-1,2-DCE (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)	Isopropyl benzene (mg/L)	4- Isopropyl toluene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (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	0.025	0.005	NE	NE	NE	NE	NE	0.02	0.06	0.01	0.1	0.001
40 CFR 141.62 MCL (April 2014)		NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	0.07	NE	0.007	NE	NE	NE	NE	NE	0.005	0.2	0.005	0.005	0.002
NMED Tap Water (December 2014)		NE	NE	0.00171	0.0000746	0.00165	NE	NE	14.1	5.56	0.00365	0.0275	0.284	NE	NE	NE	NE	NE	0.0403	8	0.000415	0.00282	0.000201
EPA RSL for Tap Water (November 2014)		0.015	0.12	0.00017	0.0000075	0.00017	0.0011	0.036	14	5.6	0.036	0.0027	0.28	NE	NE	1	0.66	2	0.011	8	0.00028	0.00049	0.000019
WELL ID	DATE SAMPLED	METHOD																					
MKTFF-34	03/12/15	82608	<0.001	<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
	11/17/14	82608	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	0.0015	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	09/24/14	82608	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	0.0011	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
MKTFF-35	04/09/14	82608	<0.002	<0.002	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	<0.002	<0.002	0.0028	<0.002	<0.001	<0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
	06/04/15	82608	0.0095	0.0023	<0.001	<0.001	0.0039	0.0042	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001	0.0084	<0.001	<0.003	0.022	0.0017	<0.001	<0.001	<0.001	<0.001
	03/17/15	82608	0.034	0.046	<0.01	<0.01	0.036	0.0077	0.0063	<0.01	<0.01	<0.001	<0.001	<0.001	0.0082	<0.001	<0.003	0.035	0.0018	<0.001	<0.001	<0.001	<0.001
MKTFF-36	11/21/14	82608	0.12	0.05	0.04	<0.01	0.04	0.038	0.059	<0.01	<0.01	<0.001	<0.001	0.0011	0.0051	<0.001	0.0061	0.028	0.0027	<0.001	<0.001	<0.001	<0.001
	06/04/15	82608	0.065	<0.02	<0.02	<0.02	0.58	0.34	0.58	<0.2	<0.2	<0.02	<0.02	0.044	<0.02	<0.06	0.091	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
	03/17/15	82608	0.031	<0.01	<0.01	<0.01	0.43	0.26	0.51	<0.1	<0.1	<0.01	<0.01	<0.01	0.03	<0.01	<0.03	0.081	<0.01	<0.01	<0.01	<0.01	<0.01
MKTFF-37	11/21/14	82608	0.27	0.062	0.59	<0.01	0.59	0.34	0.53	<0.1	<0.1	<0.1	<0.1	0.041	<0.1	<0.03	0.099	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	06/04/15	82608	0.95	0.33	0.011	<0.01	0.72	0.15	0.27	<0.1	<0.1	<0.01	0.015	0.1	0.15	0.021	0.14	0.19	0.045	<0.01	0.019	<0.01	<0.01
	03/17/15	82608	0.24	0.11	0.0091	<0.001	0.088	0.03	0.038	<0.01	<0.01	<0.001	0.018	0.081	0.047	0.0045	0.02	0.056	0.0073	<0.001	0.0087	0.0022	0.12
MKTFF-38	11/21/14	82608	0.51	0.14	0.017	0.0015	0.35	0.047	0.084	<0.01	<0.01	<0.001	0.034	0.21	0.078	0.0048	0.026	0.082	0.011	<0.001	<0.001	0.0017	0.1
	03/16/15	82608	<0.001	<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
	11/21/14	82608	0.0046	0.0015	<0.001	<0.001	0.0055	0.0088	0.0098	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	0.0014	<0.003	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001
MKTFF-39	03/16/15	82608	0.064	<0.002	<0.002	<0.002	0.044	0.091	0.013	<0.02	<0.02	<0.002	<0.002	<0.002	0.011	0.0052	<0.006	0.014	0.0057	<0.002	<0.002	<0.002	<0.002
	11/18/14	82608	0.043	<0.005	<0.005	<0.005	0.12	0.17	0.13	<0.05	<0.05	<0.005	<0.005	<0.005	0.015	<0.005	<0.015	0.019	0.0055	<0.005	<0.005	<0.005	<0.005
	03/17/15	82608	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	0.0011	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MKTFF-40	11/21/14	82608	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	0.0011	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	03/12/15	82608	<0.001	<0.001	0.0013	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	0.0018	0.0016	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	11/18/14	82608	<0.001	<0.001	0.002	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	0.0036	0.0038	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MKTFF-42	03/11/15	82608	0.0039	0.0026	<0.001	<0.001	0.014	0.0075	0.0061	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
	11/18/14	82608	0.007	<0.01	<0.01	<0.01	0.035	0.073	0.058	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	03/17/15	82608	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	0.0011	<0.001	0.0036	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MKTFF-43	11/18/14	82608	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	0.0011	<0.001	0.0036	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	03/12/15	82608	<0.002	<0.002	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
	11/21/14	82608	<0.002	<0.002	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MKTFF-44	4/3/2014	82608	0.014	0.0062	0.0094	<0.001	0.0074	<0.004	<0.004	<0.03	<0.01	<0.001	0.007	0.0043	0.0027	<0.001	<0.003	0.0027	<0.001	<0.001	<0.001	<0.001	<0.001
	8/27	82608	1.1	0.3	0.012	<0.01	0.3	<0.04	0.065	<0.1	<0.1	0.061	0.35	0.22	0.046	<0.01	<0.03	0.18	0.012	<0.01	0.17	<0.01	0.037

DEFINITIONS

NE = Not established

NA = Not analyzed

Solid 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.

40 CFR Part 141 National Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)

New Mexico Environment Department Tap Water Screening Levels December 2014

EPA Regional Screening Level (RSL) Tap Water Screening Levels November 2014

Applicable screening levels per Gallup's RCRA Permit Section IV.D.1.1 bolded

Table 2 Chemical Analyses Western Refining Southwest, Inc. - Gallup Refinery																		
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz (a)anthracene (mg/L)	Benzoic Acid (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Carbazole (mg/L)	2,4-Dimethylphenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4- Methylphenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	
WQCC 20NMCL 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
40 CFR 141.62 MCL (April 2014)			NE	NE	NE	NE	0.006	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
NMED Tap Water (December 2014)			0.535	NE	0.000343	NE	0.0556	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.17	0.576	
EPA RSL for Tap Water (November 2014)			0.53	0.013	0.00034	75.0	0.0056	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.00017	NE	5.8	
WELL ID	DATE SAMPLED	METHOD																
MKTf-1 / HA1	03/11/15	8270C	<0.01	0.018	<0.01	<0.02	<0.01	<0.01	<0.01	0.051	<0.01	0.12	<0.01	0.061	0.035	0.09	<0.01	0.023
	06/06/14	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.05	0.02	0.12	0.31	0.06	0.031	0.31	0.028	0.019	
	03/11/15	8270C	<0.01	<0.01	<0.01	<0.02	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
MKTf-2 / HA3	11/14/14	8270C	<0.01	<0.01	<0.01	<0.02	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	09/18/14	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.023	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	
	06/06/14	8270C	<0.01	<0.01	<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-4 / SB03	04/08/14	8270C	<0.01	<0.01	<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	
	06/04/15	8270C	<0.01	<0.01	<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	
	03/16/15	8270C	<0.01	<0.01	<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	
	11/13/14	8270C	<0.01	<0.01	<0.01	0.021	<0.01	0.017	<0.01	<0.01	0.061	0.047	<0.01	<0.01	0.08	<0.01	<0.01	
	09/24/14	8270C	<0.01	<0.01	<0.01	0.021	<0.01	<0.01	<0.01	<0.01	0.13	0.16	<0.02	<0.01	0.19	<0.01	<0.01	
	06/06/14	8270C	<0.01	<0.01	<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	
	04/11/14	8270C	<0.01	<0.01	<0.01	0.021	<0.01	0.017	<0.01	<0.01	0.12	0.16	<0.02	<0.01	0.23	<0.01	<0.01	
MKTf-9 / SB13	06/04/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.036	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	
	03/16/15	8270C	<0.01	<0.01	<0.1	<0.02	<0.01	<0.01	<0.01	<0.01	0.049	<0.01	<0.01	<0.01	0.021	<0.01	<0.01	
	11/14/14	8270C	<0.01	<0.01	<0.1	<0.02	<0.01	<0.01	<0.01	<0.01	0.027	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	09/18/14	8270C	<0.01	<0.01	<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	
	06/05/14	8270C	<0.01	<0.01	<0.01	0.021	<0.01	0.01	<0.01	<0.01	0.058	0.014	<0.02	<0.01	0.041	<0.01	<0.01	
	04/14/14	8270C	<0.01	<0.01	<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	
	06/04/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.1	<0.01	0.066	0.084	0.35	0.54	0.18	<0.01	0.28	
MKTf-10 / SB16	03/16/15	8270C	<0.01	0.067	<0.01	<0.02	0.01	<0.01	0.11	<0.01	<0.01	0.088	0.53	0.63	0.17	<0.01	0.42	
	11/14/14	8270C	<0.01	0.054	<0.01	<0.02	0.01	<0.01	0.063	<0.01	0.046	0.051	0.33	0.4	0.099	<0.01	0.29	
	09/18/14	8270C	<0.01	0.073	<0.01	<0.02	<0.01	<0.01	0.09	<0.01	0.036	0.042	0.32	0.38	0.098	<0.01	0.25	
	06/06/14	8270C	<0.01	0.075	<0.01	<0.01	<0.01	<0.01	0.11	<0.01	0.04	0.053	0.49	0.61	0.14	<0.01	0.37	
	04/11/14	8270C	<0.012	0.075	<0.012	<0.023	<0.012	<0.012	0.12	<0.012	0.042	0.056	0.3	0.26	0.14	<0.012	0.061	
MKTf-11 / SB17	06/04/15	8270C	<0.01	0.046	<0.01	<0.02	<0.01	<0.01	0.14	<0.01	0.02	0.021	0.3	0.23	0.07	<0.01	0.053	
	03/16/15	8270C	<0.01	0.044	<0.01	<0.02	<0.01	<0.01	0.11	<0.01	0.025	0.02	0.24	0.069	<0.01	0.052		
	11/13/14	8270C	<0.01	<0.01	<0.01	<0.02	0.014	<0.01	0.012	<0.01	0.015	<0.01	0.07	0.046	0.031	<0.01	0.02	
	09/24/14	8270C	<0.01	0.027	<0.1	<0.01	<0.10	<0.1	0.19	<0.01	0.024	0.022	0.35	0.24	0.067	<0.01	0.078	
	06/05/14	8270C	<0.01	0.025	<0.01	<0.01	<0.01	<0.01	0.092	<0.01	0.011	<0.01	0.18	0.13	0.046	<0.01	0.032	
MKTf-15 / SB31	04/11/14	8270C	<0.01	0.023	<0.01	<0.02	<0.01	<0.01	0.078	<0.01	0.012	<0.01	0.16	0.11	0.038	<0.01	0.021	
	09/17/14	8270C	<0.01	<0.01	<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	
	06/05/14	8270C	<0.01	<0.01	<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	
	04/10/14	8270C	<0.012	<0.012	<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	
	03/16/15	8270C	<0.01	0.02	<0.01	<0.02	<0.01	<0.01	0.19	<0.01	0.045	0.053	0.15	<0.01	0.15	<0.01	0.031	
MKTf-16 / SB32	11/18/14	8270C	<0.01	0.018	<0.01	<0.02	0.014	<0.01	0.08	<0.01	0.047	0.051	0.14	0.016	0.13	<0.01	0.038	
	09/17/14	8270C	<0.01	0.024	<0.01	<0.02	<0.01	<0.01	0.18	<0.01	0.053	0.062	0.15	0.03	0.18	<0.01	0.031	
	06/16/14	8270C	<0.01	0.011	<0.01	<0.02	<0.01	<0.01	0.17	<0.01	0.037	0.042	0.22	0.16	0.14	<0.01	0.42	
	04/10/14	8270C	<0.01	0.015	<0.01	<0.02	<0.01	<0.01	0.2	<0.01	0.035	0.044	0.16	0.091	0.13	<0.01	0.09	
	03/12/15	8270C	<0.01	<0.01	<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	
MKTf-17 / SB33	11/18/14	8270C	<0.01	<0.01	<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	
	09/18/14	8270C	<0.01	<0.01	<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	
	06/16/14	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	0.039	
MKTf-18 / SB34	04/09/14	8270C	<0.01	<0.01	<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	
	03/17/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02	<0.01	0.1	0.028	<0.01	<0.01	0.032	<0.01	<0.01	
	11/18/14	8270C	<0.01	<0.01	<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	
	09/18/14	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.12	0.023	<0.02	<0.01	0.059	<0.01	<0.01	
	06/06/14	8270C	<0.014	<0.014	<0.014	<0.029	<0.014	<0.014	<0.014	<0.014	0.064	<0.014	<0.029	<0.014	0.026	<0.014	<0.014	
MKTf-19 / SB35	04/14/14	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.11	0.035	<0.02	<0.01	0.061	<0.01	<0.01	
	03/12/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.17	0.27	<0.01	<0.01	0.34	<0.01	0.015	
	11/18/14	8270C	<0.01	<0.01	<0.01	<0.02	0.011	<0.01	<0.01	<0.01	0.11	0.033	<0.01	<0.01	0.054	<0.01	<0.01	
	04/09/14	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.16	0.25	<0.02	<0.01	0.32	<0.01	0.012	

			Acenaphthene (mg/L)	Aniline (mg/L)	Benz (a)anthracene (mg/L)	Benzoic Acid (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Carbazole (mg/L)	2,4-Dimethylphenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4- Methylphenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (April 2014)			NE	NE	NE	NE	0.006	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
NMED Tap Water (December 2014)			0.535	NE	0.000343	NE	0.0556	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.17	0.576
EPA RSL for Tap Water (November 2014)			0.53	0.013	0.00034	75.0	0.0056	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.00017	NE	5.8
WELL ID	DATE SAMPLED	METHOD															
MKTf-20	03/16/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.32	<0.01	0.045	0.037	0.21	0.36	0.13	<0.01	0.21
	11/18/14	8270C	<0.01	<0.01	<0.01	<0.02	0.014	<0.01	0.61	<0.01	0.11	0.066	0.12	0.051	0.1	<0.01	0.037
	04/11/14	8270C	<0.013	0.002	<0.013	<0.026	<0.013	<0.013	0.12	<0.013	0.069	0.12	0.12	0.076	0.25	<0.013	<0.013
MKTf-21	03/16/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.069	<0.01	0.038
	04/11/14	8270C	<0.012	<0.012	<0.012	<0.025	<0.012	<0.012	0.1	<0.012	0.069	0.11	0.14	0.1	0.27	<0.012	0.013
	03/12/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.066	<0.01	<0.01	<0.01	0.016	<0.01	0.014
MKTf-22 / SB23	11/17/14	8270C	<0.01	<0.01	<0.01	<0.02	0.013	<0.01	<0.01	<0.01	0.045	<0.01	<0.01	<0.01	<0.01	<0.01	0.037
	04/10/14	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02	<0.01	0.045	<0.01	<0.02	<0.01	0.013	<0.01	<0.01
	03/12/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.094	<0.01	0.079	0.082	0.042	0.063	0.15	<0.01	0.021
MKTf-23 / SB25	11/14/14	8270C	<0.01	<0.01	<0.01	<0.02	0.004	<0.01	0.031	<0.01	0.094	0.095	0.058	0.053	0.13	<0.01	0.037
	09/23/14	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.027	<0.01	0.075	0.079	0.034	0.025	0.13	<0.01	0.022
	03/11/15	8270C	<0.01	<0.01	<0.01	<0.02	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTf-24 / SB26	11/14/14	8270C	<0.01	<0.01	<0.01	<0.02	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	09/24/14	8270C	<0.01	<0.01	<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
	04/08/14	8270C	<0.01	<0.01	<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
MKTf-25 / SB8	03/11/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.017	<0.01	<0.01
	11/14/14	8270C	<0.01	<0.01	<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
	09/23/14	8270C	<0.01	<0.01	<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
MKTf-26 / SB29	04/08/14	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.021	<0.01	0.013
	03/11/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	0.014
	11/14/14	8270C	<0.01	<0.01	<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
MKTf-27 / SB30	09/24/14	8270C	<0.01	<0.01	<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
	04/08/14	8270C	<0.01	<0.01	<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
	03/11/15	8270C	<0.01	<0.01	<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-28	11/14/14	8270C	<0.01	<0.01	<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
	09/24/14	8270C	<0.01	<0.01	<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
	03/11/15	8270C	<0.01	<0.01	<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
MKTf-29	09/24/14	8270C	<0.01	<0.01	<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
	03/09/14	8270C	<0.01	<0.01	<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
	03/11/15	8270C	<0.01	<0.01	<0.01	<0.02	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTf-30	11/17/14	8270C	<0.01	<0.01	<0.01	<0.02	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	09/24/14	8270C	<0.01	<0.01	<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
	04/09/14	8270C	<0.01	<0.01	<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
MKTf-31	03/11/15	8270C	<0.01	<0.01	<0.01	<0.02	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	11/17/14	8270C	<0.01	<0.01	<0.01	<0.02	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	03/12/15	8270C	<0.01	<0.01	<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-32	11/17/14	8270C	<0.01	<0.01	<0.01	<0.02	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	09/23/14	8270C	<0.01	<0.01	<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
	04/09/14	8270C	<0.01	<0.01	<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
MKTf-33	03/12/15	8270C	<0.01	<0.01	<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
	11/17/14	8270C	<0.01	<0.01	<0.01	<0.02	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	09/23/14	8270C	<0.01	<0.01	<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
MKTf-34	04/10/14	8270C	<0.01	<0.01	<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
	03/12/15	8270C	<0.01	<0.01	<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
	11/17/14	8270C	<0.01	<0.01	<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
	09/24/14	8270C	<0.01	<0.01	<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
	04/09/14	8270C	<0.01	<0.01	<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

			Acenaphthene (mg/L)	Aniline (mg/L)	Benz (a)anthracene (mg/L)	Benzoic Acid (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Carbazole (mg/L)	2,4-Dimethylphenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4- Methylphenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (April 2014)			NE	NE	NE	NE	0.006	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
NMED Tap Water (December 2014)			0.535	NE	0.000343	NE	0.0556	NE	0.354	0.288	NE	NE	NE	NE	0.00165	0.17	0.576
EPA RSL for Tap Water (November 2014)			0.53	0.013	0.00034	75.0	0.0056	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.00017	NE	5.8
WELL ID	DATE SAMPLED	METHOD															
MKTf-35	06/04/15	8270C	<0.01	<0.01	<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
	03/17/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.028	<0.01	<0.01
	11/21/14	8270C	<0.01	<0.01	<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
MKTf-36	06/04/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	0.013	0.13	0.51	<0.01	<0.01	0.49	<0.01	0.056
	03/17/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	0.01	0.24	0.39	<0.01	<0.01	0.47	<0.01	0.015
	11/21/14	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.16	0.23	<0.01	<0.01	0.28	<0.01	0.044
MKTf-37	06/04/15	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.074	0.11	0.028	<0.01	0.23	<0.01	<0.01
	03/17/15	8270C	<0.01	<0.01	<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
	11/21/14	8270C	<0.01	<0.01	<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	03/16/15	8270C	<0.01	<0.01	<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
	11/21/14	8270C	<0.01	<0.01	<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
	03/16/15	8270C	<0.01	<0.01	<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
MKTf-39	11/18/14	8270C	<0.01	<0.01	<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
	03/11/15	8270C	<0.01	<0.01	<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
	11/21/14	8270C	<0.01	<0.01	<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
MKTf-40	03/12/15	8270C	<0.01	<0.01	<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
	11/18/14	8270C	<0.01	<0.01	<0.01	<0.02	0.034	<0.01	<0.01	<0.01	0.072	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	03/11/15	8270C	<0.01	<0.01	<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
MKTf-42	11/18/14	8270C	<0.01	<0.01	<0.01	<0.02	0.013	<0.01	<0.01	<0.01	0.072	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	03/11/15	8270C	<0.01	<0.01	<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
	11/18/14	8270C	<0.01	<0.01	<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
MKTf-43	03/11/15	8270C	<0.01	<0.01	<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
	11/18/14	8270C	<0.01	<0.01	<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
	03/12/15	8270C	<0.01	<0.01	<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
MKTf-44	11/21/14	8270C	<0.01	<0.01	<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
	S824	4/3/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	S827	4/3/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<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.

40 CFR Part 141 National Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)

New Mexico Environment Department Tap Water Screening Levels December 2014

EPA Regional Screening Level (RSL) Tap Water Screening Levels November 2014

Applicable screening levels per Gallup's RCRA Permit Section IV.D.1. **Bolded**

Table 3
Temporary Sump Recovery Volumes
Hydrocarbon Seep Area
Western Refining Southwest, Inc., Gallup Refinery

Date	Hydrocarbon Recovered (gallons)	Water Pumped (gallons)	Total Fluid Pumped (gallons)
6/26/2013 - 8/13/2013	?	?	27,000
9/3/2013 ¹	682	3818	4500
9/3/2013 ¹	367	4133	4500
9/4/2013	62	3938	4000
9/6/2013	62	3938	4000
9/9/2013	30	4470	4500
9/11/2013	30	4470	4500
9/13/2013	62	3938	4000
9/16/2013	135	5140	5275
9/18/2013	125	4111	4236
9/24/2013	58	4742	4800
9/26/2013	16	4220	4236
10/2/2013	29	4918	4947
10/8/2013	30	4569	4599
10/18/2013	109	5059	5168
10/28/2013	199	5379	5578
10/29/2013	63	4049	4112
11/12/2013	205	5275	5480
11/14/2013	78	5168	5246
11/18/2013	60	4539	4599
11/26/2013	80	5168	5248
12/3/2013	54	5169	5223
12/6/2013	57	4890	4947
12/12/2013	54	5169	5223
12/17/2013	58	4775	4833
12/24/2013	57	4890	4947
1/2/2014	88	4687	4775
1/6/2014	56	4947	5003
1/7/2014	32	3829	3861
1/9/2014	32	3448	3480
1/13/2014	29	4688	4717
1/16/2014	29	4688	4717
1/22/2014	29	4918	4947
1/29/2014	30	4449	4479
1/31/2014	61	4236	4297
2/4/2014	61	4236	4297
2/11/2014	60	4539	4599
2/18/2014	57	4890	4947

Table 3
Temporary Sump Recovery Volumes
Hydrocarbon Seep Area
Western Refining Southwest, Inc., Gallup Refinery

Date	Hydrocarbon Recovered (gallons)	Water Pumped (gallons)	Total Fluid Pumped (gallons)
2/25/2014	57	4890	4947
2/28/2014	63	3924	3987
3/4/2014	31	4327	4358
3/7/2014	29	4804	4833
3/12/2014	29	4804	4833
3/14/2014	30	4449	4479
3/17/2014	32	3829	3861
3/19/2014	32	3448	3480
3/24/2014	32	3703	3735
3/28/2014	32	3703	3735
4/1/2014	32	3703	3735
4/3/2014	32	3320	3352
4/7/2014	15	4220	4235
4/15/2014	30	4205	4235
4/23/2014	31	4327	4358
5/1/2014	31	4327	4358
5/7/2014	31	4081	4112
5/14/2014	30	4205	4235
5/22/2014	31	4081	4112
5/29/2014	31	3994	4025
6/6/2014	31	4081	4112
6/13/2014	32	3829	3861
6/20/2014	32	3955	3987
7/3/2014	31	4081	4112
7/10/2014	30	4205	4235
7/18/2014	30	4205	4235
7/28/2014	30	4205	4235
8/4/2014	30	4205	4235
8/14/2014	32	3955	3987
8/20/2014	31	4081	4112
8/29/2014	32	3955	3987
9/4/2014	32	3703	3735
9/11/2014	32	3576	3608
9/18/2014	32	3320	3352
9/26/2014	32	3448	3480
9/30/2014	32	3576	3608
10/7/2014	32	3320	3352
10/14/2014	32	3320	3352
10/21/2014	32	3955	3987
10/30/2014	32	3955	3987

Table 3
Temporary Sump Recovery Volumes
Hydrocarbon Seep Area
Western Refining Southwest, Inc., Gallup Refinery

Date	Hydrocarbon Recovered (gallons)	Water Pumped (gallons)	Total Fluid Pumped (gallons)
11/7/2014	32	3320	3352
11/12/2014	32	3320	3352
11/18/2014	32	3064	3096
12/4/2014	32	3829	3861
12/9/2014	32	3955	3987
12/15/2014	31	4081	4112
12/24/2014	31	4081	4112
12/30/2014	32	3703	3735
1/8/2015	31	4081	4112
1/21/2015	31	4327	4358
1/29/2015	32	3448	3480
2/6/2015	32	3448	3480
2/11/2015	32	3320	3352
3/5/2015	29	4688	4717
3/12/2015	31	4081	4112
3/16/2015	31	4081	4112
3/25/2015	32	3703	3735
3/31/2015	32	3955	3987
4/13/2015	32	3829	3861
4/20/2015	32	3703	3735
4/27/2015	16	4096	4112
4/30/2015	16	4096	4112
5/11/2015	16	4220	4236
5/29/2015	16	3971	3987
6/8/2015	16	4096	4112
6/12/2015	16	4096	4112
total ²	5,343	429,356	461,699

1 - two loads were removed on this date

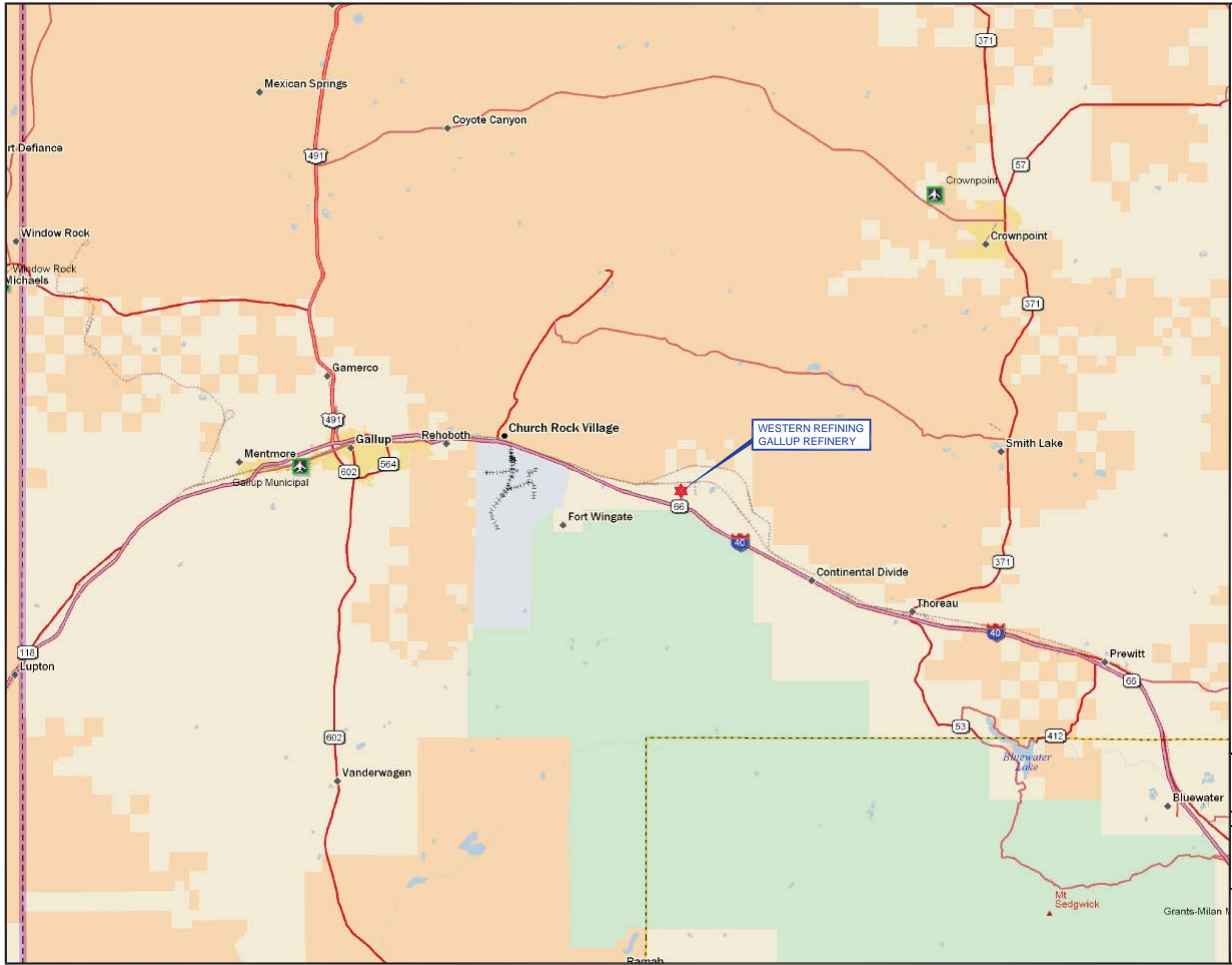
2 - separate totals for hydrocarbon and water not available for full time period

Table 4
Monitoring well Recovery Volumes
Hydrocarbon Seep Area
Western Refining Southwest, Inc., Gallup Refinery

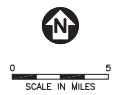
Well ID	Date	Hydrocarbon Recovered (gallons)
MKTf-01	8/14/2014	0.3
	2/25/2015	0.5
MKTf-03	8/14/2014	0.7
	2/25/2015	0.1
	6/30/2015	0.5
MKTf-05	8/14/2014	0.7
	2/25/2015	0.2
	6/30/2015	0.4
MKTf-06	8/14/2014	2.0
	2/25/2015	0.2
	6/30/2015	0.5
MKTf-07	8/14/2014	0.7
	2/25/2015	0.1
	6/30/2015	1.2
MKTf-08	8/14/2014	3.9
	2/25/2015	0.4
	6/30/2015	0.3
MKTf-09	2/25/2015	0.3
MKTf-12	8/14/2014	0.7
	2/25/2015	0.1
	6/30/2015	1.5
MKTf-13	8/14/2014	0.7
	2/25/2015	0.1
	6/30/2015	0.9
MKTf-14	8/14/2014	0.3
	2/25/2015	0.3
	6/30/2015	0.3
MKTf-15	6/30/2015	0.5
MKTf-45	6/30/2015	2.9
total		21

Figures

- Figure 1** **Site Location Map**
- Figure 2** **Location Map of 2013 Soil Boring/Temporary Wells, Hand Augers and Excavations**
- Figure 3** **Distillation Curves**
- Figure 4** **Sewer Line Excavation near Bundle Cleaning Pad**
- Figure 5** **Cross Section Location & Potentiometric Surface Map April 2014**
- Figure 6** **Potentiometric Map March 2015**
- Figure 7** **Cross Section A-A'**
- Figure 8** **Cross Section B-B'**
- Figure 9** **Cross Section C-C'**
- Figure 10** **Benzene Map March 2015**
- Figure 11** **1,1-Dichloroethane Map March 2015**
- Figure 12** **Dissolved Iron Map March 2015**
- Figure 13** **MTBE Map March 2015**
- Figure 14** **Naphthalene Map March 2015**
- Figure 15** **1,2,4-Trimethylbenzene Map March 2015**
- Figure 16** **Separate-Phase Hydrocarbon Thickness Map March 2015**
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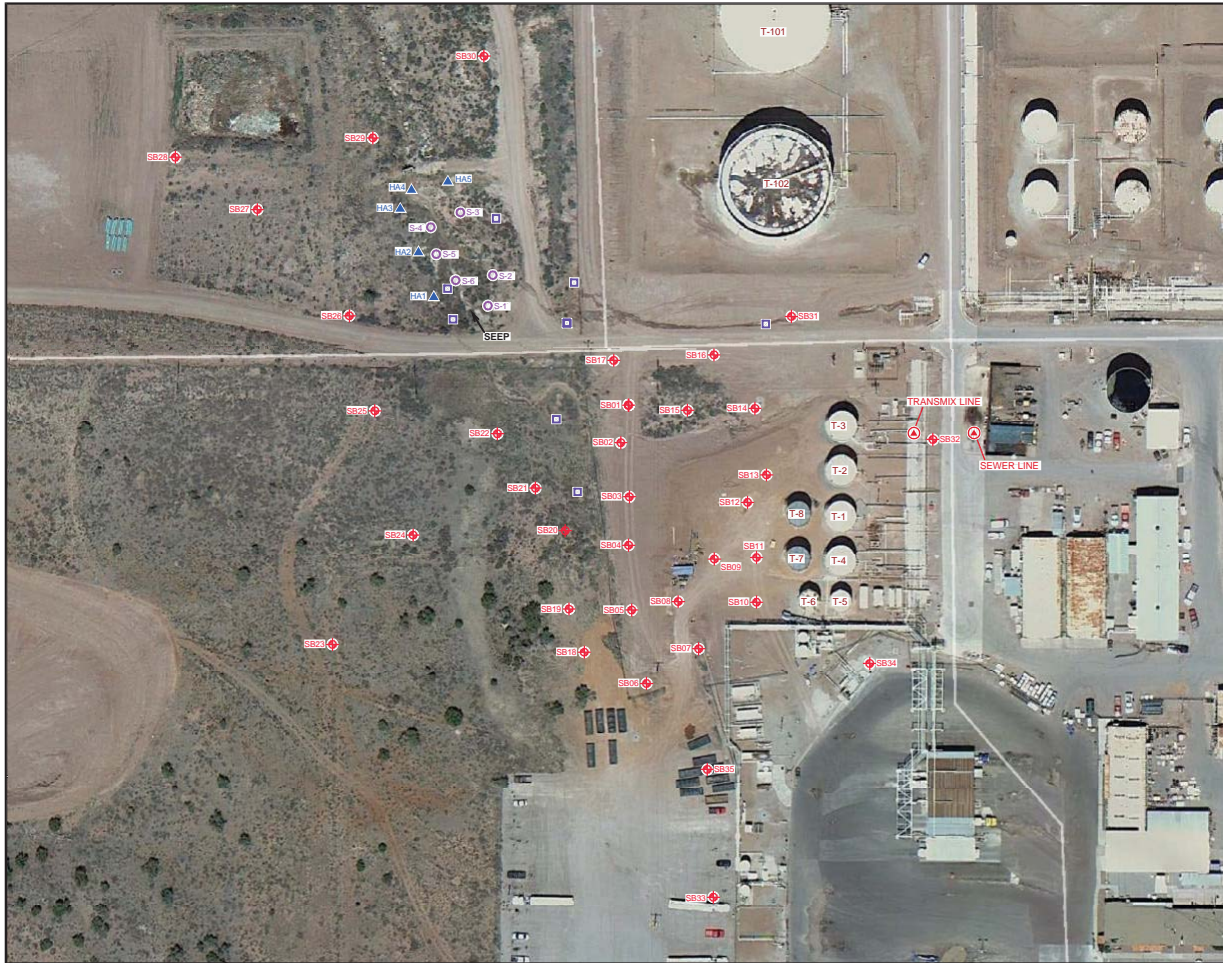
Map Source: DeLorme Street Atlas USA 2007 Plus.



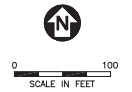
PROJ. NO.: Western Refining DATE: 07/13/14 FILE: WestRef-B198

FIGURE 1
SITE LOCATION MAP
GALLUP REFINERY

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Suite 300
Austin, Texas 78759



Aerial Map Source: Google Map, 05/03/2012.



LEGEND

- SB01 SOIL BORING / TEMPORARY WELL LOCATION
- HA1 HAND AUGER LOCATION
- EXCAVATION LOCATION
- S-1 TEMPORARY SUMP
- RELEASE POINT

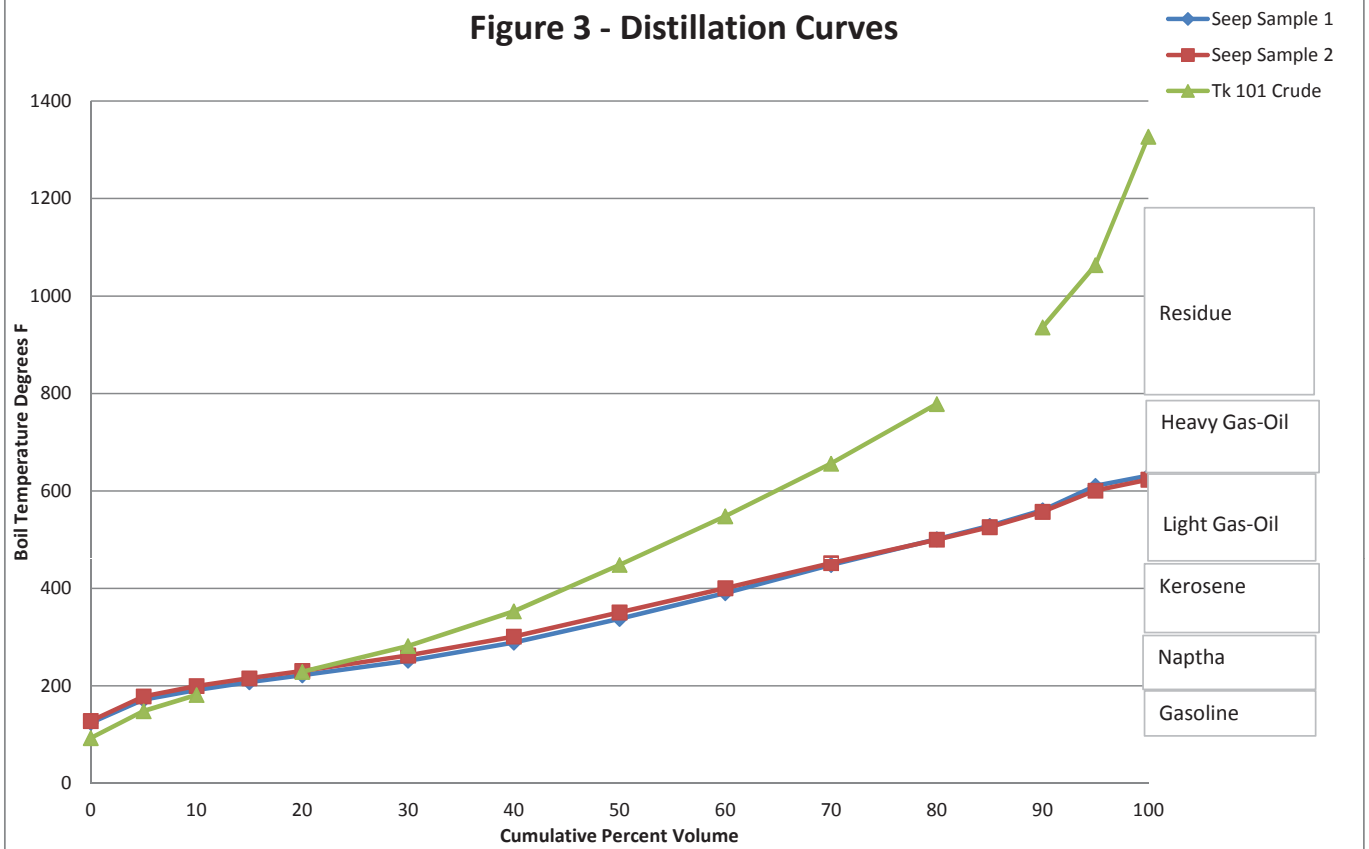


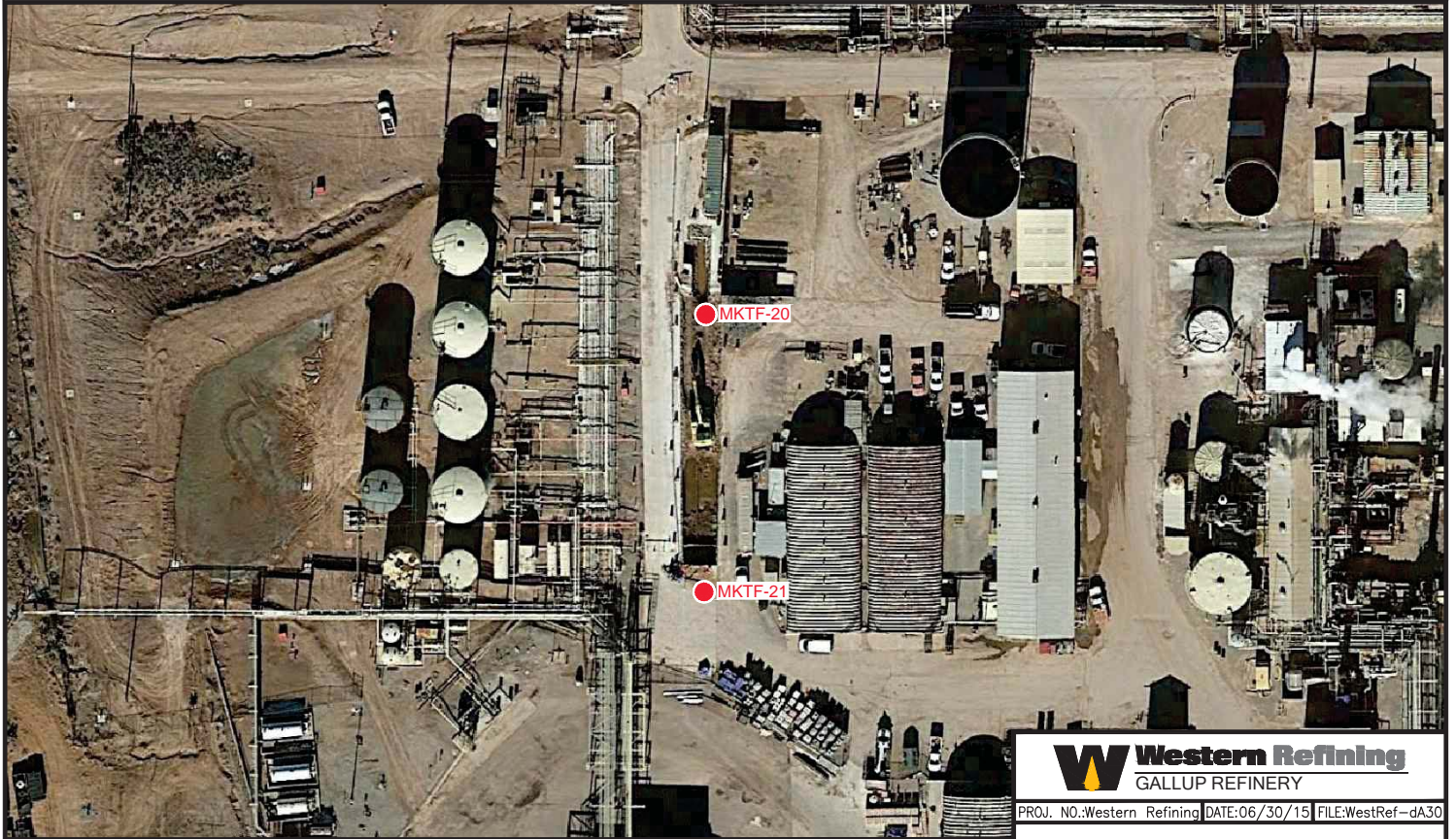
PROJ. NO.: Western Refining DATE: 06/30/13 FILE: WestRef-bB45

**FIGURE 2
LOCATION MAP OF 2013
SOIL BORING / TEMPORARY WELLS,
HAND AUGERS AND EXCAVATIONS**

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Figure 3 - Distillation Curves





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



0 80
SCALE IN FEET

LEGEND



MONITORING WELL LOCATION
(PERMANENT WELL)

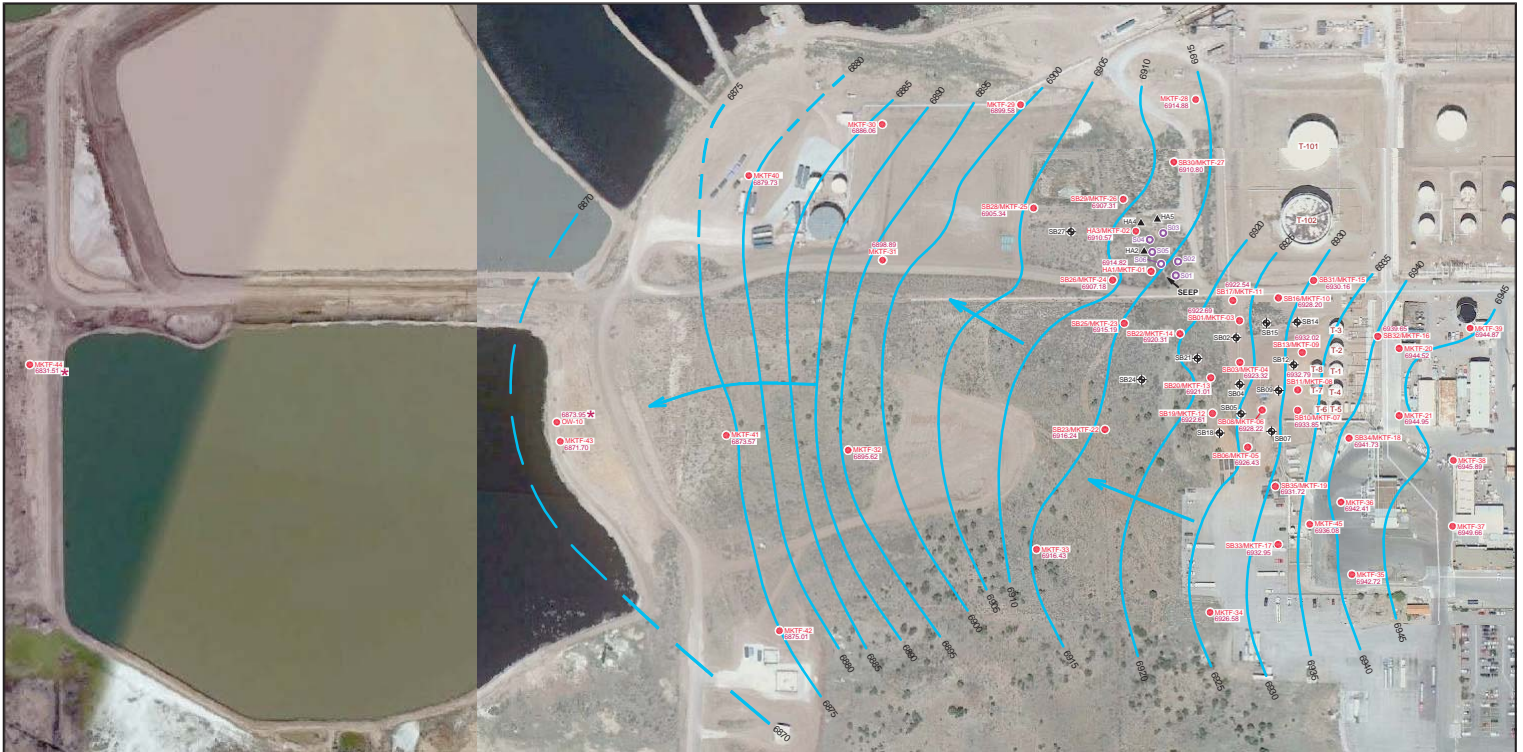
Western Refining
GALLUP REFINERY

PROJ. NO.: Western Refining DATE: 06/30/15 FILE: WestRef-dA30

FIGURE 4
SEWER LINE EXCAVATION
NEAR BUNDLE CLEANING PAD

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



0 220
SCALE IN FEET

LEGEND

- SB01 TEMPORARY WELL LOCATION (PLUGGED)
- HA1 HAND AUGER LOCATION (PLUGGED)
- S01 TEMPORARY SUMP
- MONITORING WELL LOCATION (PERMANENT WELL)

- 6930 POTENTIOMETRIC CONTOUR (FT) (5 FT INTERVAL)
- GROUNDWATER FLOW DIRECTION
- 6875.01 POTENTIOMETRIC SURFACE MEASURED RELATIVE TO MEAN SEA LEVEL (MARCH 2015)
- MEASUREMENT NOT USED IN CONTOURING



QUADRANGLE LOCATION

Western Refining
GALLUP REFINERY

PROJ. NO.: Western Refining DATE: 05/28/13 FILE: WestRef-dB34

FIGURE 6
POTENTIOMETRIC MAP
MARCH 2015

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