

AP - 111

**Hydrocarbon Seep
Interim Measures
(SWMU No.12)**

2019



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

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

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CERTIFIED MAIL - RETURN RECEIPT REQUESTED



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

APR 03 2020

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

**RE: APPROVAL
HYDROCARBON SEEP INTERIM MEASURES 2019 FOURTH QUARTER STATUS REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-20-005**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Hydrocarbon Seep Interim Measures 2019 Fourth Quarter Status Report* (Report), dated February 5, 2020, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee).

In accordance with NMED's *Disapproval Interim Measures Report Hydrocarbon Seep Area*, dated April 26, 2016, the Permittee implemented source control measures by extracting groundwater and separate phase hydrocarbon (SPH) from the standpipe sumps and recovery trench during the third quarter of 2019.

The recovered water volume from the standpipe sumps during this quarter was 5,690 gallons which was lower than that of the previous quarter (53,260 gallons) presumably because of inoperable conditions caused by cold temperatures. Similarly, the recovered water volume from the retention ditch during this quarter was 1,800 gallons that was lower than that of the

previous quarter (12,651 gallons). The recovered SPH volume from the retention ditch during this quarter proportionally decreased from 245 to 25 gallons. As the temperature warms, the recovery volumes are expected to return to previously observed ranges.

The correlation between the water levels in nearby wells and hydrocarbon recovery rates is discussed in the Report. The Permittee suggests continuing to monitor the correlation, including the evaluation of influence caused by the potential leak from well PW-3. The water levels and recovery volumes may decrease if PW-3 is a source of groundwater and is repaired. The discussion must be included in future status reports.

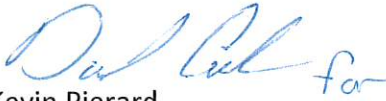
The Permittee proposes to continue current recovery operations at the standpipe sumps and the retention ditch as a source control measure during the first quarter of 2020. NMED concurs with continuation of the current operations. The Permittee also suggests that the operations may be adjusted to capture the gasoline released from the Marketing Tank Farm in October 2019. If such adjustment or optimization is deemed necessary, the Permittee must contact NMED to discuss the details prior to the implementation.

The Permittee has fulfilled its obligation to implement source control measures and submit a quarterly report to NMED. The Permittee must continue to implement source control measures at the site and submit quarterly status reports to NMED. The 2020 first quarter status report must be submitted no later than **May 29, 2020**.

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

If you have questions regarding this letter, please contact Michiya Suzuki of my staff at 505-476-6046.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kevin Pierard" with a stylized flourish at the end.

Kevin Pierard
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (6LCRRC)
B. Moore, WRG

File: Reading File and WRG 2020 File
HWB-WRG-20-005



**Marathon
Petroleum Company LP**

February 5, 2020

Mr. Kevin Pierard, Chief
Hazardous Waste Bureau
New Mexico Environmental Department
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87505-6303

**RE: Hydrocarbon Seep Interim Measures 2019 Fourth Quarter Status Report
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest, Inc.)
EPA ID# NMD000333211
HWB-WRG-19-001**

Dear Mr. Kieling:

Please find enclosed the Hydrocarbon Seep Interim Measures Status Report for the fourth quarter of 2019. If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Brian Moore at 505-726-9745.

Certification

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

Sincerely,
Marathon Petroleum Company LP, Gallup Refinery

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

Robert S. Hanks
Refinery General Manager

Enclosure

cc M. Suzuki, NMED
C. Chavez NMOCD

92 Giant Crossing Road
Jamestown, NM 87347

**QUARTERLY STATUS REPORT
HYDROCARBON SEEP INTERIM MEASURES
MARATHON PETROLEUM COMPANY LP – GALLUP REFINERY
(dba WESTERN REFINING SOUTHWEST, INC)
Fourth Quarter 2019**

Activities conducted during fourth quarter 2019

- Source Control – Marathon continued to recover water from the standpipe sumps (S1 - S6), but no measurable separate-phase hydrocarbon (SPH) was recorded. Approximately 5,690 gallons of water were recovered during the fourth quarter of 2019. During the third quarter of 2019, 53,260 gallons of water were recovered with no measurable SPH recovered.

At the nearby retention ditch, approximately 25 gallons of SPH was recovered during the fourth quarter along with 1,800 gallons of water. Approximately 245 gallons of SPH was recovered during the third quarter 2019 along with 12,651 gallons of water. The percentage of SPH recovered during the fourth quarterly event at the retention ditch decreased slightly, while there was no change observed in the nearby standpipe sumps. There was a significant rise (e.g., over 2 feet at MKTF-11 and MKTF-27) in measured water levels in monitoring wells near and up-gradient the of seeps and retention ditch in the first quarter of 2019, while the water levels in MKTF-11 and MKTF-27 receded to within nearly 0.6 feet of previous levels in the second and third quarter of 2019. Other wells with a smaller increase in the first quarter of 2019 included MKTF-02, MKTF-04, MKTF-09, MKTF-10, and MKTF-14. By the third quarter of 2019, water levels had returned to near previously measured levels in all but MKTF-02, which was still 1.35 feet higher than in the fourth quarter of 2018. Looking at the 4th quarter fluid levels shows a general small decrease from the 3rd quarter measurements, including at MKTF-02. We will continue to monitor the water levels and hydrocarbon recovery rates.

Pursuant to NMED's letter of March 5, 2019, the area of the seeps is routinely monitored to evaluate the discharge of hydrocarbons to the land surface where shallow water discharges within the retention ditch and to the south near the original seep location. While the amount of SPH discharging into the retention ditch has reduced from initial recovery rates, the area remains wet, SPH is still present in the soils and will continue to discharge even if not on a consistent basis.

- Source Identification – An Investigation Work Plan (IWP) for Area of Concern (AOC) 35, which includes the area around the Marketing Tanks and the Truck Loading Racks, was recently revised and was submitted on July 29, 2019. The IWP was approved with modifications on September 12, 2019 and should be implemented after the first of the year in 2020.

In prior status reports there was a reference to on-going efforts to locate sources of fresh water leaks within the refinery that may be affecting the distribution of contaminants at the hydrocarbon seep area, as well as in other areas of the refinery. Based on the hydrogeologic setting at the refinery property, we found it unlikely that much water would be produced from the seep area without a recharge source other than the limited rainfall that occurs at the refinery. The prior reference was not specific to potentially leaking sewer lines, but also

other potential sources such as leaking fire water lines or other piping that transmits fresh water to many locations within the refinery. Since the last status report, leaks in the firewater lines have been confirmed and repairs are being made. Marathon also continues to evaluate PW-3 to determine if potable water is being lost through casing leaks.

Activities planned for first quarter 2020

- Source Control – Marathon will continue current recovery operations at the standpipe sumps and the retention ditch using a vacuum truck to pump SPH and water from each of the sumps and the downstream retention ditch. Additional evaluation of the area will be initiated in the future to determine if additional or alternative methods could be more effective.

A release of gasoline from an underground pipeline near the Truck Loading Rack was discovered in October, well to the south of the hydrocarbon seep area. However, gauging of existing monitoring wells near the Marketing Tank Farm indicates the gasoline is migrating to the north and it may be able to reach the hydrocarbon seep area. We are monitoring the area and will adjust recovery efforts at the standpipe sumps and retention ditch, as necessary.

- Investigation – The IWP for the Sanitary Lagoon was implemented in November. An evaluation of the associated field data will provide additional information on the potential distribution of SPH in the subsurface in this area. This will be included in the associated Investigation Report that is due on February 28, 2020.

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
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
2/25/2014	57	4890	4947

2013 Totals	hydrocarbon recovered	water pumped	total fluid pumped
	2,705	111,045	113,750

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
11/7/2014	32	3320	3352

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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	2014 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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				
12/31/2015	54	5114	5168	2015 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
9/29/2016	109	3891	4000
10/5/2016	280	5180	5460
10/7/2016	280	5180	5460
10/10/2016	280	5180	5460
10/20/2016	109	3891	4000
10/26/2016	50	2450	2500
10/28/2016	109	3891	4000
11/1/2016	109	3891	4000
11/3/2016	109	3891	4000
11/8/2016	109	3891	4000
11/10/2016	109	3891	4000

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/14/2016	109	3891	4000				
11/23/2016	109	3891	4000				
12/6/2016	109	3891	4000				
12/8/2016	109	3891	4000				
12/13/2016	303	4697	5000				
12/15/2016	109	3891	4000				
12/20/2016	109	3891	4000				
12/27/2016	400	4600	5000				
12/29/2016	109	3891	4000	2016 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					8,668	357,619	366,287
1/10/2017	109	3891	4000				
1/20/2017	167	4333	4500				
2/2/2017	109	3891	4000				
2/6/2017	231	4769	5000				
2/17/2017	231	4769	5000				
2/20/2017	109	3891	4000				
3/1/2017	109	4891	5000				
3/6/2017	167	4833	5000				
3/9/2017	109	3891	4000				
3/14/2017	231	4769	5000				
5/8/2017	303	4697	5000				
5/12/2017	167	3833	4000				
5/15/2017	167	3833	4000				
5/16/2017	10	5590	5600				
5/18/2017	10	3090	3100				
5/23/2017	40	5560	5600				
5/24/2017	232	4768	5000				
5/30/2017	20	5980	6000				
6/1/2017	10	2990	3000				
6/6/2017	100	7900	8000				
6/8/2017	10	5990	6000				
6/13/2017	10	5990	6000				
6/15/2017	50	5950	6000				
6/20/2017	10	5990	6000				
6/22/2017	10	5990	6000				
6/27/2017	20	5980	6000				

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
6/29/2017	10	5990	6000
7/5/2017	10	2990	3000
7/7/2017	50	8950	9000
7/11/2017	10	5990	6000
7/14/2017	10	5990	6000
7/17/2017	10	2990	3000
7/18/2017	20	2980	3000
7/20/2017	50	8950	9000
7/26/2017	75	5925	6000
7/27/2017	50	2950	3000
8/2/2017	75	5425	5500
8/4/2017	10	3490	3500
8/8/2017	25	5475	5500
8/10/2017	20	3480	3500
8/16/2017	15	4485	4500
8/21/2017	50	7950	8000
8/25/2017	25	2975	3000
8/29/2017	50	5950	6000
8/31/2017	20	2980	3000
9/6/2017	15	5985	6000
9/8/2017	15	2985	3000
9/12/2017	25	5975	6000
9/14/2017	75	3925	4000
9/19/2017	49	2951	3000
9/26/2017	49	3751	3800
9/28/2017	25	3775	3800
10/4/2017	50	3450	3500
10/6/2017	45	3455	3500
10/10/2017	25	5975	6000
10/12/2017	50	2950	3000
10/17/2017	50	5450	5500
10/19/2017	9	2841	2850
10/24/2017	19	5981	6000
10/26/2017	49	2451	2500
11/1/2017	49	5951	6000
11/7/2017	50	2950	3000
11/9/2017	24	4976	5000
11/14/2017	9	5991	6000

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/15/2017	9	2991	3000				
11/21/2017	9	5991	6000				
11/22/2017	9	2991	3000				
11/28/2017	9	5991	6000				
11/30/2017	9	2991	3000				
12/4/2017	25	7575	7600				
12/7/2017	25	5975	6000				
12/12/2017	19	7581	7600				
12/14/2017	9	2991	3000				
12/19/2017	9	2991	3000				
12/21/2017	49	5951	6000				
12/27/2017	49	5951	6000	2017 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					4,238	365,712	369,950
1/2/2018	9	7591	7600				
1/4/2018	9	3791	3800				
1/9/2018	9	3791	3800				
1/11/2018	9	7591	7600				
1/15/2018	19	3781	3800				
1/17/2018	19	7581	7600				
1/23/2018	9	3791	3800				
1/31/2018	9	2991	3000				
2/2/2018	9	2991	3000				
2/9/2018	9	5991	6000				
2/13/2018	9	3791	3800				
2/15/2018	9	7591	7600				
2/21/2018	9	5991	6000				
2/27/2018	0	3800	3800				
3/1/2018	0	3000	3000				
3/6/2018	0	3000	3000				
3/8/2018	4	3796	3800				
3/13/2018	4	2996	3000				
3/16/2018	4	2996	3000				
3/20/2018	4	2996	3000		hydrocarbon recovered	water pumped	total fluid pumped
3/22/2018	0	3000	3000	1st Qtr 2018 Totals	153	92,847	93,000

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
4/3/2018	3	2997	3000				
6/6/2018	3	3097	3100				
6/8/2018	3	3097	3100				
6/12/2018	0	3800	3800				
6/14/2018	0	3000	3000				
6/20/2018	0	3500	3500				
6/21/2018	0	3000	3000				
6/26/2018	0	3000	3000				
6/28/2018	0	3000	3000	2nd Qtr 2018 Totals	hydrocarbon recovered 9	water pumped 28,491	total fluid pumped 28,500
2-Jul-18	0	2800	2800				
5-Jul-18	0	3000	3000				
10-Jul-18	0	3000	3000				
12-Jul-18	0	3000	3000				
18-Jul-18	0	3000	3000				
19-Jul-18	0	3000	3000				
24-Jul-18	0	3000	3000				
26-Jul-18	0	3000	3000				
31-Jul-18	0	3000	3000				
2-Aug	0	3000	3000				
7-Aug	0	3000	3000				
9-Aug-18	0	3800	3800				
14-Aug-18	0	3800	3800				
16-Aug-18	0	3100	3100				
20-Aug-18	0	3800	3800				
22-Aug-18	0	3800	3800				
27-Aug-18	0	3800	3800				
29-Aug-18	0	3100	3100				
5-Sep-18	0	3000	3000				
7-Sep-18	0	3000	3000				
10-Sep-18	0	4800	4800				
12-Sep-18	0	6000	6000				
17-Sep-18	0	3000	3000				
19-Sep-18	0	6000	6000				
24-Sep-18	0	3000	3000				
26-Sep-18	0	3000	3000	3rd Qtr 2018 Totals	hydrocarbon recovered 0	water pumped 89,800	total fluid pumped 89,800

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
1-Oct	0	3800	3800				
8-Oct-18	0	3500	3500				
16-Oct-18	0	3000	3000				
18-Oct-18	0	3500	3500				
23-Oct-18	0	3000	3000				
27-Oct-18	0	3100	3100				
1-Nov-18	0	3000	3000				
15-Nov-18	0	3000	3000				
20-Nov-18	0	3100	3100				
23-Nov-18	0	3200	3200				
27-Nov-18	0	3000	3000				
28-Nov-18	0	3000	3000				
3-Dec-18	0	3400	3400				
6-Dec-18	0	3100	3100				
10-Dec-18	0	3000	3000				
14-Dec-18	0	2900	2900				
18-Dec-18	0	2900	2900				
21-Dec-18	0	2500	2500				
24-Dec-18	0	3000	3000				
27-Dec-18	0	3000	3000				
28-Dec-19	0	3200	3200				
31-Dec-19	0	3200	3200	4th Qtr 2018 Totals	hydrocarbon recovered	water pumped	total fluid pumped
3-Jan	0	3000	3000		0	68,400	68,400
12-Jan-19	0	3000	3000				
16-Jan-19	0	2800	2800				
22-Jan-19	0	4500	4500				
29-Jan-19	0	4000	4000				
31-Jan-19	0	3200	3200				
4-Feb	0	3000	3000				
7-Feb	0	4500	4500				
15-Feb-19	0	3100	3100				
28-Mar-19	0	3000	3000				
				1st Qtr 2019	hydrocarbon recovered	water pumped	total fluid pumped
3-Apr	0	3900	3900		0	34,100	34,100
4-Apr	0	3000	3000				
10-Apr-19	0	5800	5800				

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
19-Apr-19	0	3090	3090				
22-Apr-19	0	5894	5894				
1-May	0	4925	4925				
3-May	0	3109	3109				
20-May-19	0	6150	6150				
24-May-19	0	3119	3119				
29-May-19	0	6242	6242				
09-Jun-19	0	5061	5061				
10-Jun-19	0	6242	6242				
14-Jun-19	0	3119	3119			hydrocarbon recovered	water pumped
26-Jun-19	0	6242	6242	2nd Qtr 2019	0	65,893	65,893
11-Jul-19	0	6242	6242				
17-Jul-19	0	3119	3119				
09-Aug-19	0	3000	3000				
09-Aug-19	0	2700	2700				
13-Aug-19	0	3000	3000				
13-Aug-19	0	2100	2100				
19-Aug-19	0	3096	3096				
26-Aug-19	0	3000	3000				
26-Aug-19	0	2700	2700				
09-Sep-19	0	2500	2500				
09-Sep-19	0	2500	2500				
11-Sep-19	0	3119	3119				
11-Sep-19	0	3049	3049				
19-Sep-19	0	2850	2850				
19-Sep-19	0	3000	3000				
19-Sep-19	0	1200	1200				
26-Sep-19	0	3057	3057			hydrocarbon recovered	water pumped
26-Sep-19	0	3028	3028	3rd Qtr 2019	0	53,260	53,260
10/2/2019	0	3,050	3,050				
11/14/2019	0	2,640	2,640			hydrocarbon recovered	water pumped
				4th Qtr 2019	0	5,690	5,690
TOTALS	19,009	1,708,563	1,727,574				

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)
4/1/2016	1	5460	NR
4/27/2016	1	5460	NR
4/28/2016	1	5460	NR
5/5/2016	1	5460	NR
5/9/2016	0.75	4200	NR
5/13/2016	1	5460	NR
5/24/2016	1	5460	NR
5/26/2016	0.5	2730	NR
5/27/2016	1	5460	NR
6/1/2016	1	5460	NR
6/2/2016	1	5460	NR
6/6/2016	1	5460	NR
6/8/2016	1	5460	NR
6/9/2016	0.5	2730	NR
6/14/2016	1	5460	NR
6/16/2016	1	5460	NR
6/23/2016	1	5460	NR
6/29/2016	0.5	2730	NR
7/6/2016	1	5460	NR
7/8/2016	1	5460	NR
7/13/2016	1	5460	NR
7/21/2016	1	5460	NR
7/27/2016	1	5460	NR
8/3/2016	1	5460	NR
8/9/2016	2	10920	NR
8/10/2016	0.5	2730	NR
8/16/2016	1	5460	NR
8/17/2016	1	5460	NR
8/18/2016	0.5	2730	NR
8/23/2016	2	10920	NR
8/24/2016	1	5460	NR
8/26/2016	1	5460	NR
8/30/2016	1	5460	NR
9/1/2016	2	10920	NR
9/8/2016	2	10920	NR
9/14/2016	2	10920	NR
10/6/2016	1	5460	NR
10/7/2016	1	5460	NR
10/10/2016	2	10920	NR
10/20/2016	1	5460	NR
10/24/2016	1	5460	NR

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)			
10/26/2016	2	10920	NR			
10/27/2016	1	5460	NR			
10/31/2016	2	10920	NR			
11/8/2016	2	10920	NR			
11/10/2016	3	16380	NR			
11/11/2016	0.77	4200	NR			
11/15/2016	0.5	2730	NR			
11/16/2016	1	5460	NR			
12/6/2016	1	5460	NR			
12/8/2016	1	5460	NR			
12/14/2016	1	5460	NR			
12/15/2016	3	15120	NR	2016 Totals	LOADS	water/oil mixture
					62.52	340,200
2/21/2017	NR	5000	NR			
3/8/2017	NR	10000	NR			
3/10/2017	NR	4000	NR			
3/14/2017	NR	10000	NR			
3/15/2017	NR	4000	NR			
3/16/2017	NR	1250	NR			
3/17/2017	NR	5000	NR			
5/16/2017	1	2000	20			
5/17/2017	3	15000	NR			
5/22/2017	1	5000	NR			
5/23/2017	1	2800	20			
5/24/2017	1	5000	NR			
5/30/2017	1	3500	10			
6/6/2017	1	3100	20			
6/8/2017	2	5800	20			
6/13/2017	1	2900	30			
6/15/2017	1	3000	10			
6/20/2017	1	2000	10			
6/22/2017	1	3000	20			
6/27/2017	2	5500	40			
6/29/2017	1	2500	10			
7/5/2017	2	5600	10			
7/7/2017	1	3000	20			
7/11/2017	1	3000	10			
7/14/2017	1	3000	10			
7/18/2017	1	2500	10			
7/20/2017	1	3000	10			

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)
7/27/2017	2	4500	10
8/3/2017	2	5000	20
8/4/2017	1	3000	20
8/9/2017	1	3000	25
8/16/2017	1	2000	10
8/25/2017	1	1500	50
8/31/2017	1	2000	40
9/7/2017	2	5200	80
9/15/2017	2	5500	100
9/20/2017	1	3800	100
9/26/2017	1	3800	10
10/4/2017	1	3500	100
10/12/2017	1	2800	95
10/19/2017	1	3000	100
10/26/2017	1	2500	100
11/1/2017	1	3000	100
11/7/2017	1	3000	100
11/15/2017	2	5500	100
11/22/2017	1	2000	100
11/28/2017	1	2000	50
12/4/2017	1	1500	100
12/14/2017	1	1500	50
12/19/2017	1	2500	100
12/27/2017	1	2000	50
1/4/2018	1	2800	25
1/9/2018	2	7500	9
1/15/2018	1	2500	20
1/23/2018	1	3800	9
1/31/2018	1	2500	9
2/2/2018	1	2500	9
2/13/2018	1	2000	9
2/21/2018	1	2080	20
3/6/2018	1	1500	19
3/13/2018	1	1500	9
3/22/2018	1	1500	20
	0	0	0
5-Jul-18	1	1800	36
12-Jul-18	1	2000	100
20-Jul-18	1	2000	40
25-Jul-18	1	1800	36

	Loads	Oil/water mixture	oil
2017 Totals	54	194,550	1,890
	# of loads	water/oil mixture	oil
1st Qtr 2018	13	32,180	208
2nd Qtr 2018	0	0	0

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
27-Jul-18	1	1800	36				
7-Aug-18	1	1900	38				
17-Aug-18	1	2000	80				
22-Aug-18	1	1800	72				
24-Aug-18	1	500	20				
30-Aug-18	1	500	20				
7-Sep-18	1	2000	20				
13-Sep-18	1	1500	30				
14-Sep-18	1	2000	40				
19-Sep-18	1	1500	30				
26-Sep-18	1	1500	30		# of loads	water/oil mixture	oil
28-Sep-18	1	1500	30	3rd Qtr 2018	16	26,100	658
16-Oct-18	1	2200	220				
18-Oct-18	1	2000	40				
23-Oct-18	1	1500	30				
1-Nov-18	1	2500	50				
15-Nov-18	1	2500	50				
23-Nov-18	1	2600	52				
6-Dec-18	1	2600	52				
10-Dec-18	1	2000	40				
11-Dec-18	1	300	30				
14-Dec-18	1	2300	46		# of loads	water/oil mixture	oil
13-Jan-19	1	2000	20	4th Qtr 2018	10	20,500	610
23-Jan-19	1	2400	48				
31-Jan-19	1	2400	48				
5-Feb	1	2000	20		# of loads	water/oil	oil
28-Mar-19	1	2900	0	1st Qtr 2019 Totals	5	11700	136
4-Apr	1	2800	28				
19-Apr-19	1	1540	46.2				
14-Jun-19	1	1560	312		# of loads	water/oil	oil
27-Jun-19	1	2400	216	2nd Qtr 2019	4	8300	602.2
11-Jul-19	1	500	25				
17-Jul-19	1	594	75				
20-Aug-19	1	2245	45				
29-Aug-19	1	1820	20				
10-Sep-19	1	2077	25				
20-Sep-19	1	2615	25		# of loads	water/oil	oil
30-Sep-19	1	2800	30	3rd Qtr 2019	7	12651	245

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
3-Oct-19	1	1,800	25		# of loads	water/oil	oil
				4th Qtr 2019	1	1,800	25
Project Totals	171.5	645,981.0	4,324.2				

Totals for oil only includes data since May 2017



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau**

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

CERTIFIED MAIL - RETURN RECEIPT REQUESTED



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

January 22, 2020

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

**RE: APPROVAL
HYDROCARBON SEEP INTERIM MEASURES 2019 THIRD QUARTER STATUS
REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-19-019**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Hydrocarbon Seep Interim Measures 2019 Third Quarter Status Report* (Report), dated November 12, 2019, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee).

In accordance with NMED's *Disapproval Interim Measures Report Hydrocarbon Seep Area*, dated April 26, 2016, the Permittee implemented source control measures by extracting groundwater and separate phase hydrocarbon (SPH) from the standpipe sumps and recovery trench during the third quarter of 2019.

The recovered water volume from the standpipe sumps during this quarter was 53,260 gallons which was comparable to that of the previous quarter (65,893 gallons). Since the third quarter of 2018 the recovered SPH volume continued to be recorded as "zero" from the standpipe

sumps. The recovered water volume from the retention ditch during this quarter was 12,406 gallons that was slightly more than that of the previous quarter (7,698 gallons). The recovered SPH volume from the retention ditch during this quarter decreased from 602.2 to 245 gallons. The recorded recovered groundwater and SPH volumes are within the range of fluctuations in recent quarters. The volume of groundwater and SPH recovery is relatively consistent.

The Permittee proposes to continue current recovery operations at the standpipe sumps and the retention ditch as a source control measure during the fourth quarter of 2019. NMED concurs with the continuation of current recovery operations.

The Permittee has fulfilled its obligation to implement source control measures and submit a quarterly report to NMED. The Permittee must continue to implement source control measures at the site and submit quarterly status reports to NMED. The 2019 fourth quarter status report must be submitted no later than **January 31, 2020**.

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

If you have questions regarding this letter, please contact Michiya Suzuki of my staff at 505-476-6059.

Sincerely,



Kevin Pierard
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6 (GLCRRC)
B. Moore, WRG

File: Reading File and WRG 2020 File
HWB-19-019



**Marathon
Petroleum Company LP**

November 12, 2019

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

**RE: Hydrocarbon Seep Interim Measures 2019 Third Quarter Status Report
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest, Inc.)
EPA ID# NMD000333211
HWB-WRG-19-001**

Dear Mr. Kieling:

Please find enclosed the Hydrocarbon Seep Interim Measures Status Report for the third quarter of 2019. If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Brian Moore at 505-726-9745.

Certification

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

Sincerely,
Marathon Petroleum Company LP, Gallup Refinery

Robert S. Hanks

Robert S. Hanks
Refinery General Manager

Enclosure

cc C. Chavez NMOC

**QUARTERLY STATUS REPORT
HYDROCARBON SEEP INTERIM MEASURES
MARATHON PETROLEUM COMPANY LP – GALLUP REFINERY
(dba WESTERN REFINING SOUTHWEST, INC)
Third Quarter 2019**

Activities conducted during third quarter 2019

- Source Control – Marathon continued to recover water from the standpipe sumps (S1 - S6), but no measurable separate-phase hydrocarbon (SPH) was recorded. Approximately 53,260 gallons of water were recovered during the third quarter of 2019. During the second quarter of 2019, 65,893 gallons of water were recovered with no measurable SPH recovered.

At the nearby retention ditch, approximately 245 gallons of SPH was recovered during the third quarter along with 12,406 gallons of water. Approximately 602.2 gallons of SPH was recovered during the second quarter 2019 along with 7,698 gallons of water. The percentage of SPH recovered during the third quarterly event at the retention ditch decreased, while there was no change observed in the nearby standpipe sumps. There was a significant rise (e.g., over 2 feet at MKTF-11 and MKTF-27) in measured water levels in monitoring wells near and up-gradient the of seeps and retention ditch in the first quarter of 2019, while the water levels in MKTF-11 and MKTF-27 receded to within nearly 0.6 feet of previous levels in the second and third quarter of 2019. Other wells with a smaller increase in the first quarter of 2019 included MKTF-02, MKTF-04, MKTF-09, MKTF-10, and MKTF-14. By the third quarter of 2019, water levels had returned to near previously measured levels in all but MKTF-02, which was still 1.35 feet higher than in the fourth quarter of 2018. This area may have been impacted by the release of water from the RO reject water line that runs to the south of the seeps and we will continue to monitor the water levels and hydrocarbon recovery rates.

Pursuant to NMED's letter of March 5, 2019, the area of the seeps is routinely monitored to evaluate the discharge of hydrocarbons to the land surface where shallow water discharges within the retention ditch and to the south near the original seep location. While the amount of SPH discharging into the retention ditch has reduced from initial recovery rates, the area remains wet, SPH is still present in the soils and will continue to discharge even if not on a consistent basis.

- Source Identification – An Investigation Work Plan (IWP) for Area of Concern (AOC) 35, which includes the area around the Marketing Tanks and the Truck Loading Racks, was recently revised and was submitted on July 29, 2019. The IWP was approved with modifications on September 12, 2019 and should be implemented after the first of the year in 2020.

In prior status reports there was a reference to on-going efforts to locate sources of fresh water leaks within the refinery that may be affecting the distribution of contaminants at the hydrocarbon seep area, as well as in other areas of the refinery. Based on the hydrogeologic setting at the refinery property, we found it unlikely that much water would be produced from the seep area without a recharge source other than the limited rainfall that occurs at the refinery. The prior reference was not specific to potentially leaking sewer lines, but also

other potential sources such as leaking fire water lines or other piping that transmits fresh water to many locations within the refinery. As previously discussed with the NMED in March 2019, Marathon also continues to evaluate PW-3 to determine if potable water is being lost through casing leaks.

Activities planned for fourth quarter 2019

- Source Control – Marathon will continue current recovery operations at the standpipe sumps and the retention ditch using a vacuum truck to pump SPH and water from each of the sumps and the downstream retention ditch. Additional evaluation of the area will be initiated in the future to determine if additional or alternative methods could be more effective.
- Investigation – The IWP for the Sanitary Lagoon, which is located just west of the retention ditch, is being implemented during the fourth quarter and may provide additional information on the potential distribution of SPH in the subsurface in this area.

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
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
2/25/2014	57	4890	4947

2013 Totals

hydrocarbon recovered	water pumped	total fluid pumped
2,705	111,045	113,750

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
11/7/2014	32	3320	3352

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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	2014 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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				
12/31/2015	54	5114	5168	2015 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
9/29/2016	109	3891	4000
10/5/2016	280	5180	5460
10/7/2016	280	5180	5460
10/10/2016	280	5180	5460
10/20/2016	109	3891	4000
10/26/2016	50	2450	2500
10/28/2016	109	3891	4000
11/1/2016	109	3891	4000
11/3/2016	109	3891	4000
11/8/2016	109	3891	4000
11/10/2016	109	3891	4000

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/14/2016	109	3891	4000				
11/23/2016	109	3891	4000				
12/6/2016	109	3891	4000				
12/8/2016	109	3891	4000				
12/13/2016	303	4697	5000				
12/15/2016	109	3891	4000				
12/20/2016	109	3891	4000				
12/27/2016	400	4600	5000				
12/29/2016	109	3891	4000	2016 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					8,668	357,619	366,287
1/10/2017	109	3891	4000				
1/20/2017	167	4333	4500				
2/2/2017	109	3891	4000				
2/6/2017	231	4769	5000				
2/17/2017	231	4769	5000				
2/20/2017	109	3891	4000				
3/1/2017	109	4891	5000				
3/6/2017	167	4833	5000				
3/9/2017	109	3891	4000				
3/14/2017	231	4769	5000				
5/8/2017	303	4697	5000				
5/12/2017	167	3833	4000				
5/15/2017	167	3833	4000				
5/16/2017	10	5590	5600				
5/18/2017	10	3090	3100				
5/23/2017	40	5560	5600				
5/24/2017	232	4768	5000				
5/30/2017	20	5980	6000				
6/1/2017	10	2990	3000				
6/6/2017	100	7900	8000				
6/8/2017	10	5990	6000				
6/13/2017	10	5990	6000				
6/15/2017	50	5950	6000				
6/20/2017	10	5990	6000				
6/22/2017	10	5990	6000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
6/27/2017	20	5980	6000
6/29/2017	10	5990	6000
7/5/2017	10	2990	3000
7/7/2017	50	8950	9000
7/11/2017	10	5990	6000
7/14/2017	10	5990	6000
7/17/2017	10	2990	3000
7/18/2017	20	2980	3000
7/20/2017	50	8950	9000
7/26/2017	75	5925	6000
7/27/2017	50	2950	3000
8/2/2017	75	5425	5500
8/4/2017	10	3490	3500
8/8/2017	25	5475	5500
8/10/2017	20	3480	3500
8/16/2017	15	4485	4500
8/21/2017	50	7950	8000
8/25/2017	25	2975	3000
8/29/2017	50	5950	6000
8/31/2017	20	2980	3000
9/6/2017	15	5985	6000
9/8/2017	15	2985	3000
9/12/2017	25	5975	6000
9/14/2017	75	3925	4000
9/19/2017	49	2951	3000
9/26/2017	49	3751	3800
9/28/2017	25	3775	3800
10/4/2017	50	3450	3500
10/6/2017	45	3455	3500
10/10/2017	25	5975	6000
10/12/2017	50	2950	3000
10/17/2017	50	5450	5500
10/19/2017	9	2841	2850
10/24/2017	19	5981	6000
10/26/2017	49	2451	2500
11/1/2017	49	5951	6000
11/7/2017	50	2950	3000

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/9/2017	24	4976	5000				
11/14/2017	9	5991	6000				
11/15/2017	9	2991	3000				
11/21/2017	9	5991	6000				
11/22/2017	9	2991	3000				
11/28/2017	9	5991	6000				
11/30/2017	9	2991	3000				
12/4/2017	25	7575	7600				
12/7/2017	25	5975	6000				
12/12/2017	19	7581	7600				
12/14/2017	9	2991	3000				
12/19/2017	9	2991	3000				
12/21/2017	49	5951	6000				
12/27/2017	49	5951	6000	2017 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					4,238	365,712	369,950
1/2/2018	9	7591	7600				
1/4/2018	9	3791	3800				
1/9/2018	9	3791	3800				
1/11/2018	9	7591	7600				
1/15/2018	19	3781	3800				
1/17/2018	19	7581	7600				
1/23/2018	9	3791	3800				
1/31/2018	9	2991	3000				
2/2/2018	9	2991	3000				
2/9/2018	9	5991	6000				
2/13/2018	9	3791	3800				
2/15/2018	9	7591	7600				
2/21/2018	9	5991	6000				
2/27/2018	0	3800	3800				
3/1/2018	0	3000	3000				
3/6/2018	0	3000	3000				
3/8/2018	4	3796	3800				
3/13/2018	4	2996	3000				
3/16/2018	4	2996	3000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)		hydrocarbon recovered	water pumped	total fluid pumped
3/20/2018	4	2996	3000				
3/22/2018	0	3000	3000	1st Qtr 2018 Totals	153	92,847	93,000
4/3/2018	3	2997	3000				
6/6/2018	3	3097	3100				
6/8/2018	3	3097	3100				
6/12/2018	0	3800	3800				
6/14/2018	0	3000	3000				
6/20/2018	0	3500	3500				
6/21/2018	0	3000	3000				
6/26/2018	0	3000	3000		hydrocarbon recovered	water pumped	total fluid pumped
6/28/2018	0	3000	3000	2nd Qtr 2018 Totals	9	28,491	28,500
2-Jul-18	0	2800	2800				
5-Jul-18	0	3000	3000				
10-Jul-18	0	3000	3000				
12-Jul-18	0	3000	3000				
18-Jul-18	0	3000	3000				
19-Jul-18	0	3000	3000				
24-Jul-18	0	3000	3000				
26-Jul-18	0	3000	3000				
31-Jul-18	0	3000	3000				
2-Aug	0	3000	3000				
7-Aug	0	3000	3000				
9-Aug-18	0	3800	3800				
14-Aug-18	0	3800	3800				
16-Aug-18	0	3100	3100				
20-Aug-18	0	3800	3800				
22-Aug-18	0	3800	3800				
27-Aug-18	0	3800	3800				
29-Aug-18	0	3100	3100				
5-Sep-18	0	3000	3000				
7-Sep-18	0	3000	3000				
10-Sep-18	0	4800	4800				
12-Sep-18	0	6000	6000				
17-Sep-18	0	3000	3000				
19-Sep-18	0	6000	6000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)		hydrocarbon recovered	water pumped	total fluid pumped
24-Sep-18	0	3000	3000				
26-Sep-18	0	3000	3000	3rd Qtr 2018 Totals	0	89,800	89,800
1-Oct	0	3800	3800				
8-Oct-18	0	3500	3500				
16-Oct-18	0	3000	3000				
18-Oct-18	0	3500	3500				
23-Oct-18	0	3000	3000				
27-Oct-18	0	3100	3100				
1-Nov-18	0	3000	3000				
15-Nov-18	0	3000	3000				
20-Nov-18	0	3100	3100				
23-Nov-18	0	3200	3200				
27-Nov-18	0	3000	3000				
28-Nov-18	0	3000	3000				
3-Dec-18	0	3400	3400				
6-Dec-18	0	3100	3100				
10-Dec-18	0	3000	3000				
14-Dec-18	0	2900	2900				
18-Dec-18	0	2900	2900				
21-Dec-18	0	2500	2500				
24-Dec-18	0	3000	3000				
27-Dec-18	0	3000	3000				
28-Dec-19	0	3200	3200		hydrocarbon recovered	water pumped	total fluid pumped
31-Dec-19	0	3200	3200	4th Qtr 2018 Totals	0	68,400	68,400
3-Jan	0	3000	3000				
12-Jan-19	0	3000	3000				
16-Jan-19	0	2800	2800				
22-Jan-19	0	4500	4500				
29-Jan-19	0	4000	4000				
31-Jan-19	0	3200	3200				
4-Feb	0	3000	3000				
7-Feb	0	4500	4500				
15-Feb-19	0	3100	3100				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

Standard Operating Procedure, Record											
DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)								
28-Mar-19	0	3000	3000		hydrocarbon recovered	water pumped	total fluid pumped				
				1st Qtr 2019	0	34,100	34,100				
3-Apr	0	3900	3900								
4-Apr	0	3000	3000								
10-Apr-19	0	5800	5800								
19-Apr-19	0	3090	3090								
22-Apr-19	0	5894	5894								
1-May	0	4925	4925								
3-May	0	3109	3109								
20-May-19	0	6150	6150								
24-May-19	0	3119	3119								
29-May-19	0	6242	6242								
09-Jun-19	0	5061	5061								
10-Jun-19	0	6242	6242								
									hydrocarbon recovered	water pumped	total fluid pumped
14-Jun-19	0	3119	3119								
26-Jun-19	0	6242	6242					2nd Qtr 2019	0	65,893	65,893
11-Jul-19	0	6242	6242								
17-Jul-19	0	3119	3119								
09-Aug-19	0	3000	3000								
09-Aug-19	0	2700	2700								
13-Aug-19	0	3000	3000								
13-Aug-19	0	2100	2100								
19-Aug-19	0	3096	3096								
26-Aug-19	0	3000	3000								
26-Aug-19	0	2700	2700								
09-Sep-19	0	2500	2500								
09-Sep-19	0	2500	2500								
11-Sep-19	0	3119	3119								
11-Sep-19	0	3049	3049								
19-Sep-19	0	2850	2850								
19-Sep-19	0	3000	3000								
19-Sep-19	0	1200	1200								
					hydrocarbon recovered	water pumped	total fluid pumped				
26-Sep-19	0	3057	3057								
26-Sep-19	0	3028	3028	3rd Qtr 2019	0	53,260	53,260				

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)
4/1/2016	1	5460	NR
4/27/2016	1	5460	NR
4/28/2016	1	5460	NR
5/5/2016	1	5460	NR
5/9/2016	0.75	4200	NR
5/13/2016	1	5460	NR
5/24/2016	1	5460	NR
5/26/2016	0.5	2730	NR
5/27/2016	1	5460	NR
6/1/2016	1	5460	NR
6/2/2016	1	5460	NR
6/6/2016	1	5460	NR
6/8/2016	1	5460	NR
6/9/2016	0.5	2730	NR
6/14/2016	1	5460	NR
6/16/2016	1	5460	NR
6/23/2016	1	5460	NR
6/29/2016	0.5	2730	NR
7/6/2016	1	5460	NR
7/8/2016	1	5460	NR
7/13/2016	1	5460	NR
7/21/2016	1	5460	NR
7/27/2016	1	5460	NR
8/3/2016	1	5460	NR
8/9/2016	2	10920	NR
8/10/2016	0.5	2730	NR
8/16/2016	1	5460	NR
8/17/2016	1	5460	NR
8/18/2016	0.5	2730	NR
8/23/2016	2	10920	NR
8/24/2016	1	5460	NR
8/26/2016	1	5460	NR
8/30/2016	1	5460	NR
9/1/2016	2	10920	NR
9/8/2016	2	10920	NR
9/14/2016	2	10920	NR
10/6/2016	1	5460	NR
10/7/2016	1	5460	NR
10/10/2016	2	10920	NR
10/20/2016	1	5460	NR
10/24/2016	1	5460	NR

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)			
10/26/2016	2	10920	NR			
10/27/2016	1	5460	NR			
10/31/2016	2	10920	NR			
11/8/2016	2	10920	NR			
11/10/2016	3	16380	NR			
11/11/2016	0.77	4200	NR			
11/15/2016	0.5	2730	NR			
11/16/2016	1	5460	NR			
12/6/2016	1	5460	NR			
12/8/2016	1	5460	NR			
12/14/2016	1	5460	NR			
12/15/2016	3	15120	NR	2016 Totals	LOADS	water/oil mixture
					62.52	340,200
2/21/2017	NR	5000	NR			
3/8/2017	NR	10000	NR			
3/10/2017	NR	4000	NR			
3/14/2017	NR	10000	NR			
3/15/2017	NR	4000	NR			
3/16/2017	NR	1250	NR			
3/17/2017	NR	5000	NR			
5/16/2017	1	2000	20			
5/17/2017	3	15000	NR			
5/22/2017	1	5000	NR			
5/23/2017	1	2800	20			
5/24/2017	1	5000	NR			
5/30/2017	1	3500	10			
6/6/2017	1	3100	20			
6/8/2017	2	5800	20			
6/13/2017	1	2900	30			
6/15/2017	1	3000	10			
6/20/2017	1	2000	10			
6/22/2017	1	3000	20			
6/27/2017	2	5500	40			
6/29/2017	1	2500	10			
7/5/2017	2	5600	10			
7/7/2017	1	3000	20			
7/11/2017	1	3000	10			
7/14/2017	1	3000	10			
7/18/2017	1	2500	10			

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
7/20/2017	1	3000	10				
7/27/2017	2	4500	10				
8/3/2017	2	5000	20				
8/4/2017	1	3000	20				
8/9/2017	1	3000	25				
8/16/2017	1	2000	10				
8/25/2017	1	1500	50				
8/31/2017	1	2000	40				
9/7/2017	2	5200	80				
9/15/2017	2	5500	100				
9/20/2017	1	3800	100				
9/26/2017	1	3800	10				
10/4/2017	1	3500	100				
10/12/2017	1	2800	95				
10/19/2017	1	3000	100				
10/26/2017	1	2500	100				
11/1/2017	1	3000	100				
11/7/2017	1	3000	100				
11/15/2017	2	5500	100				
11/22/2017	1	2000	100				
11/28/2017	1	2000	50				
12/4/2017	1	1500	100				
12/14/2017	1	1500	50				
12/19/2017	1	2500	100				
12/27/2017	1	2000	50	2017 Totals	54	194,550	1,890
1/4/2018	1	2800	25				
1/9/2018	2	7500	9				
1/15/2018	1	2500	20				
1/23/2018	1	3800	9				
1/31/2018	1	2500	9				
2/2/2018	1	2500	9				
2/13/2018	1	2000	9				
2/21/2018	1	2080	20				
3/6/2018	1	1500	19				
3/13/2018	1	1500	9				
3/22/2018	1	1500	20	1st Qtr 2018	13	32,180	208
	0	0	0	2nd Qtr 2018	0	0	0
5-Jul-18	1	1800	36				

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
12-Jul-18	1	2000	100				
20-Jul-18	1	2000	40				
25-Jul-18	1	1800	36				
27-Jul-18	1	1800	36				
7-Aug-18	1	1900	38				
17-Aug-18	1	2000	80				
22-Aug-18	1	1800	72				
24-Aug-18	1	500	20				
30-Aug-18	1	500	20				
7-Sep-18	1	2000	20				
13-Sep-18	1	1500	30				
14-Sep-18	1	2000	40				
19-Sep-18	1	1500	30				
26-Sep-18	1	1500	30				
28-Sep-18	1	1500	30	3rd Qtr 2018	# of loads	water/oil mixture	oil
16-Oct-18	1	2200	220		16	26,100	658
18-Oct-18	1	2000	40				
23-Oct-18	1	1500	30				
1-Nov-18	1	2500	50				
15-Nov-18	1	2500	50				
23-Nov-18	1	2600	52				
6-Dec-18	1	2600	52				
10-Dec-18	1	2000	40				
11-Dec-18	1	300	30				
14-Dec-18	1	2300	46		# of loads	water/oil mixture	oil
13-Jan-19	1	2000	20	4th Qtr 2018	10	20,500	610
23-Jan-19	1	2400	48				
31-Jan-19	1	2400	48				
5-Feb	1	2000	20		# of loads	mixture	oil
28-Mar-19	1	2900	0	1st Qtr 2019 Totals	5	11700	136
4-Apr	1	2800	28				
19-Apr-19	1	1540	46.2				
14-Jun-19	1	1560	312		# of loads	mixture	oil
27-Jun-19	1	2400	216	2nd Qtr 2019	4	8300	602.2
11-Jul-19	1	500	25				
17-Jul-19	1	594	75				

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
20-Aug-19	1	2245	45				
29-Aug-19	1	1820	20				
10-Sep-19	1	2077	25				
20-Sep-19	1	2590	0				
20-Sep-19	1	25	25		# of loads	mixture	oil
30-Sep-19	1	2800	30	3rd Qtr 2019	8	12651	245
Project Totals	163.5	631,530.0	4,054.2				

Totals for oil only includes data since May 2017



**Marathon
Petroleum Company LP**

November 12, 2019

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

**RE: Hydrocarbon Seep Interim Measures 2019 Second Quarter Status Report
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest, Inc.)
EPA ID# NMD000333211
HWB-WRG-19-001**

Dear Mr. Kieling:

Please find enclosed the Response to Comments for the Hydrocarbon Seep Interim Measures Status Report for the second quarter of 2019. If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Brian Moore at 505-726-9745.

Certification

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

Sincerely,
Marathon Petroleum Company LP, Gallup Refinery

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

Robert S. Hanks
Refinery General Manager

Enclosure

cc C. Chavez NMOC

92 Giant Crossing Road
Jamestown, NM 87347

NMED Comment 1:

NMED's *Approval* dated August 23, 2019 requires the Permittee to provide the information regarding the difference between RO reject water and boiler water. The Response provides a detailed explanation regarding the RO reject water. However, it is not clear whether the boiler water, described in the *2019 Facility-Wide Groundwater Monitoring Plan*, refers to the purified, raw, condensate water or the same RO reject water. Clarify the definition of the boiler water that was historically discharged to Pond EP-2.

MPC Response 1:

As discussed with the NMED during a phone call in September 2019, use of the sample IDs of "Boiler Water" and "RO Reject" for identification are synonymous. Some persons collecting samples called them "Boiler Water" others called them "RO Reject". However, all samples consisted of "RO Reject" water. As discussed in the September 5, 2019 response letter to the NMED, the boiler water feedstock is very pure and would not be disposed of in a waste pond. Most of the boiler water is recycled for re-use in the boilers due to its purity. Generating that type of purified water at this location is expensive and it is not simply discarded in a waste pond.

NMED Comment 2:

The Permittee's Response under the heading "Difference between RO Reject Water and Boiler Water" states, "(t]he heated condensate is then sent to a cooling tower for conversion back to water." Explain the fate of the heated condensate that is cooled down and converted to water. In addition, identify any chemicals used to prevent scaling. Provide the information in a response letter.

MPC Response 2:

The water that results from the heated condensate is sent to the cooling towers to reduce the temperature prior to recycling back into the boiler water system. The heated condensate that is converted to water is returned to the boiler house to begin the process again immediately. It is a closed loop system and we only add water to replace the losses.

Chemicals that are added are provided by Suez and vary on the chemistry and are added as needed to maintain the water quality/consistency. They can include small additions of biocide, corrosion inhibitor, and acids/bases.

NMED Comment 3:

The Permittee's Response under the heading "History of RO Reject Discharge to Pond 9" states, "[t]his brings us to the current day where the RO Reject is again discharged to Pond 9 while design is currently being conducted for total replacement. Once the replacement installation is completed (anticipated in 2nd or 3rd quarter of 2020), it is anticipated that the remainder of the line will be abandoned, and the new line will carry the RO reject water to pond STP-1." Clarify whether the Permittee currently has an approval from New Mexico Department of Energy, Minerals, and Natural Resources (EMNRD) Oil Conservation Division (OCD) to use evaporation ponds (e.g., EP-9) for the discharge of the RO reject water. Additionally, it is not clear whether EMNRD OCD has agreed to the direct discharge of the RO reject water to Pond STP-1 because wastewater treatment process associated with Pond STP-1 does not reduce the concentrations of constituents (e.g., chloride and sulfate) in the RO reject water. Clarify whether the Permittee has an approval from EMNRD OCD to route the RO reject water to Pond STP-1.

MPC Response 3:

Attached are (1) a letter rescinding the Discharge Permit that says the State of New Mexico will notify MPC (Western Refining Southwest, Inc.) if there is a need to get any individual permits, and (2) emails between the refinery and OCD clearly discussing the discharge of the reject water into EP-2, which is no different than sending to EP-9.

The State of New Mexico has been aware of the discharge of the RO Reject to Pond 2 for some time. The Annual Groundwater Reports that are submitted to the NMED and OCD contain data tables that summarize “general chemistry” of the pond water that includes a discussion of chlorides. Re-routing the RO Reject to Pond-9 from Pond-2 does not represent a substantial change in that process.

The re-routing of RO Reject to STP-1 as part of future waste water treatment modifications is merely in the assessment stages as an option. No firm decisions have been made as to the exact configuration of future waste routing. However, as previously mentioned, chlorides are currently discharged to the evaporation ponds.



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

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

CERTIFIED MAIL - RETURN RECEIPT REQUESTED



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

September 20, 2019

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

**RE: RESPONSE TO COMMENTS
APPROVAL - HYDROCARBON SEEP INTERIM MEASURES 2019 SECOND QUARTER
STATUS REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-19-014**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Response to Comments Approval - Hydrocarbon Seep Interim Measures 2019 Second Quarter Status Report* (Response), dated September 5, 2019, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). The Permittee must address the following comments.

Comment 1

NMED's *Approval* dated August 23, 2019 requires the Permittee to provide the information regarding the difference between RO reject water and boiler water. The Response provides a detailed explanation regarding the RO reject water. However, it is not clear whether the boiler water, described in the *2019 Facility-Wide Groundwater Monitoring Plan*, refers to the purified, raw, condensate water or the same RO reject water. Clarify the definition of the boiler water that was historically discharged to Pond EP-2.

Comment 2

The Permittee's Response under the heading "Difference between RO Reject Water and Boiler Water" states, "[t]he heated condensate is then sent to a cooling tower for conversion back to water." Explain the fate of the heated condensate that is cooled down and converted to water. In addition, identify any chemicals used to prevent scaling. Provide the information in a response letter.

Comment 3

The Permittee's Response under the heading "History of RO Reject Discharge to Pond 9" states, "[t]his brings us to the current day where the RO Reject is again discharged to Pond 9 while design is currently being conducted for total replacement. Once the replacement installation is completed (anticipated in 2nd or 3rd quarter of 2020), it is anticipated that the remainder of the line will be abandoned, and the new line will carry the RO reject water to pond STP-1." Clarify whether the Permittee currently has an approval from New Mexico Department of Energy, Minerals, and Natural Resources (EMNRD) Oil Conservation Division (OCD) to use evaporation ponds (e.g., EP-9) for the discharge of the RO reject water. Additionally, it is not clear whether EMNRD OCD has agreed to the direct discharge of the RO reject water to Pond STP-1 because wastewater treatment process associated with Pond STP-1 does not reduce the concentrations of constituents (e.g., chloride and sulfate) in the RO reject water. Clarify whether the Permittee has an approval from EMNRD OCD to route the RO reject water to Pond STP-1.

The Permittee must address all comments in this letter and submit a response letter. The response letter must be submitted to NMED no later than **November 1, 2019**.

Mr. Moore
September 20, 2019
Page 3

If you have questions regarding this letter, please contact Kristen Van Horn of my staff at 505-476-6046.

Sincerely,

A handwritten signature in blue ink, appearing to read "John E. Kielling". The signature is stylized with a large loop at the beginning and a long horizontal stroke.

John E. Kielling
Chief
Hazardous Waste Bureau

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

File: Reading File and WRG 2019 File
HWB-19-014



September 5, 2019

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

RE: Response to Comments
Approval - Hydrocarbon Seep Interim Measures 2019 Second Quarter Status Report
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest, Inc.)
EPA ID# NMD000333211

Dear Mr. Kieling:

Marathon Petroleum Company LP (Marathon) is providing this letter to the New Mexico Environment Department (NMED) in response to inquiries made in the Approval - Hydrocarbon Seep Interim Measures 2019 Second Quarter Status Report letter. If you have any questions regarding this response, please do not hesitate to contact me at 505-7269745.

Sincerely,
Marathon Petroleum Company LP

A handwritten signature in black ink, appearing to be 'B. Moore', with a long horizontal stroke extending to the right.

Brian K. Moore
Senior HES Professional

Cc: Carl Chavez (OCD)

NMED Comment
Approval Letter Dated August 23, 2019
Hydrocarbon Seep Interim Measures Report: Second Quarter 2019

NMED's *Approval Hydrocarbon Seep Interim Measures 2019 1st Quarter Status Report*, dated May 29, 2019 stated, "[t]he RO reject water must be sampled if it is directly discharged to Pond EP-9. Include the provision in the 2019 Facility-Wide Groundwater Monitoring Plan 2019 update, as necessary. Additionally, provide a map that presents locations of the pipeline that carries the reject water and point(s) where leaks along the pipeline were detected. Furthermore, include the information regarding (1) the depth of the pipeline, (2) the difference between RO reject water and boiler water which is described in the 2018 Facility-Wide Groundwater Monitoring Plan and identified as no longer in service, and (3) history of the discharge directly to Pond-9 in a response letter. The map and response letter must be submitted no later than **July 18, 2019.**" The Permittee states, "[f]urther information will be provided in a separate letter as requested in NMED's letter of May 29, 2019." The referenced letter was due on July 18, 2019; however, it was not received by NMED at the time this letter was sent out. The Permittee must submit the letter required by NMED's May 29, 2019 letter no later than **August 30, 2019** or provide a letter requesting an extension of the submittal date in accordance with Permit Section I.J.12.

Marathon Response:

RO Reject Sampling Protocol:

The requirement to collect a water sample from the RO Reject line discharging into pond EP-9 will be added to the 2019 Facility Wide Groundwater Monitoring Plan for 2019. This sampling activity will be conducted only during the time in which the RO Reject line is discharging directly into Pond 9. The same analyses that were collected from the RO Reject/Boiler water lines discharging to Pond 2 will be collected from the RO Reject going into Pond 9 (i.e., major anions and cations).

Map of Line:

Leaks in the RO Reject line were detected near the 90 degree bend located north of the boilers (see attached figure). Following the discovery of the leaks, a temporary line was installed to transmit the RO Reject water to Pond EP-9. A second leak was discovered west of the bundle pad after the completion of repairs. At this point the decision was made to replace the line and run a new discharge to STP-1. The water will remain in the temporary line until the new line can be installed.

Depth of RO Reject Line:

As indicated in the attached photos, the RO Reject line was buried approximately two (2) feet below ground surface in the vicinity of the boilers.

Difference Between RO Reject Water and Boiler Water:

The RO Reject water is the “waste” product that is generated during the water purification process (reverse osmosis) for water that will be used to generate steam in the Boilers. The water that is used to generate steam in the boilers must be very pure to prevent the buildup of precipitates in the boiler system and associated piping. The attached figure illustrates the flow of water through the boiler system.

As illustrated in the figure, raw water from the onsite water wells is pumped into a water purification system that consists of a softener which feeds into a reverse osmosis (RO) water purification system (see bottom of figure). As the water is going through the purification process, a “reject” is generated that is high in impurities. This is the RO Reject that is pumped to the evaporation ponds.

The water which has been purified is then processed through the de-aeration system to remove air. Following de-aeration, the water is then sent to tank 2-18-75 which feeds the boilers. After the purified water is converted to steam by the boilers, it is used in various processes throughout the refinery. After the steam is utilized in the processing equipment, a heated condensate is formed. The heated condensate is then sent to a cooling tower for conversion back to water.

There is a total of four boilers at the refinery (B102, B104, B105 and B106). Depending on the need for steam, one or more boilers are always in service and the other(s) are back up systems for use when one of the active boilers needs repair or the process requires more steam. This redundancy allows us to continue operations even when one of the boilers goes out of service for repair.

History of RO Reject Discharge to Pond 9:

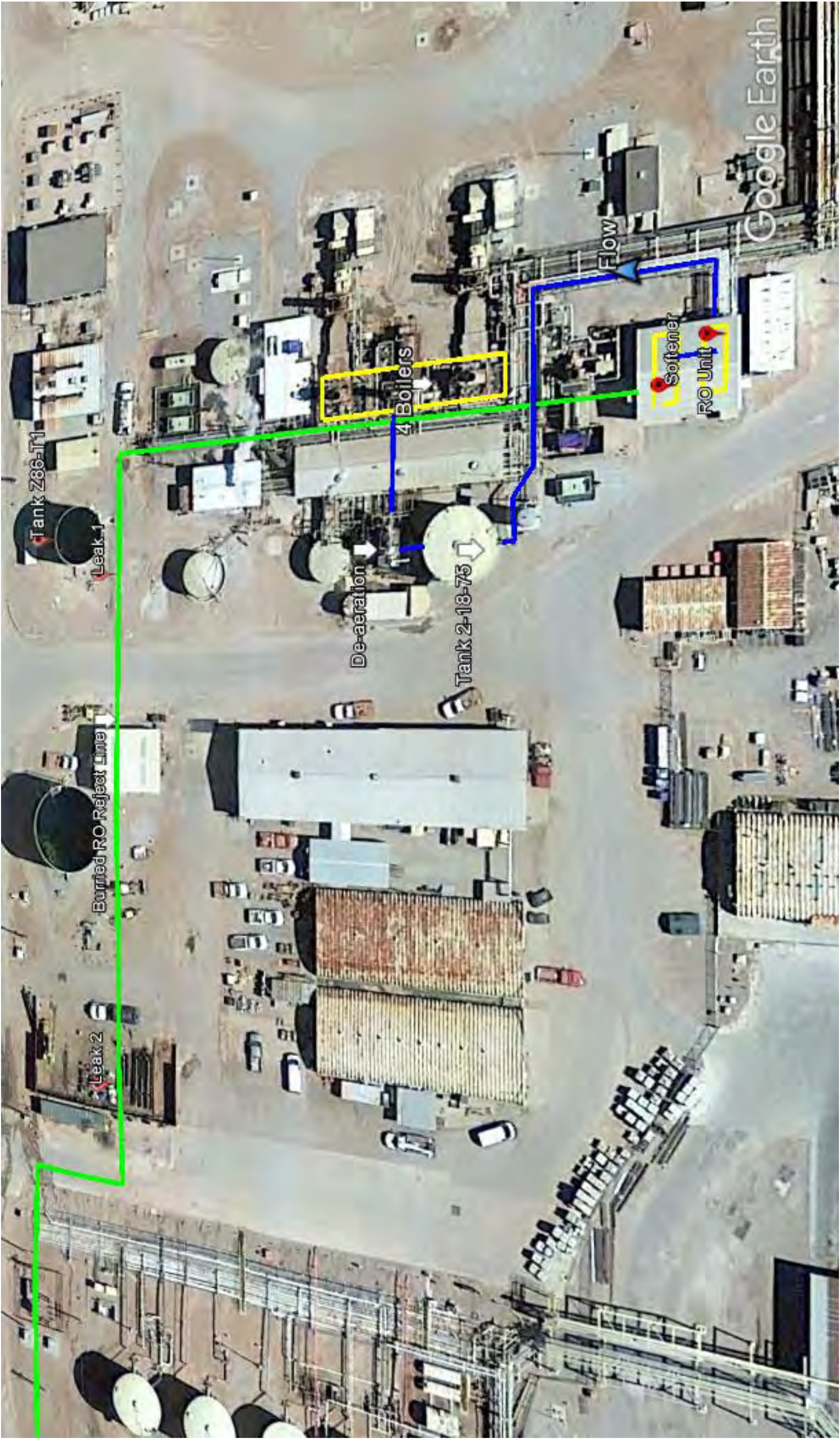
The RO Reject line was discovered to be leaking (leak 1 on map) during the first quarter of 2019 and was taken out of service. The original RO Reject line discharged into pond EP-2. The RO Reject was rerouted from the water purification system to Pond 9 using a temporary, flexible “fire hose” line that was able to convey the water to Pond 9 by gravity flow.

Following the initial repair to the known leak using an in-site slip line repair, the RO discharge line was put back into service. The slip line provides a new, rigid surface on the interior of the old line to prevent leaks. The repairs were completed in the second quarter of 2019.

After putting the discharge line back into service, leaks in the line immediately west of the “bundle cleaning pad” were discovered (leak 2 on map) so the line was again taken out of service and routed back to the flexible line. This brings us to the current day where the RO

Reject is again being discharged to Pond 9 while design is currently being conducted for total replacement. Once the replacement installation is completed (anticipated in 2nd or 3rd quarter of 2020), it is anticipated that the remainder of the line will be abandoned, and the new line will carry the RO reject water to pond STP-1.

REVERSE OSMOSIS SYSTEM LAYOUT





REVERSE OSMOSIS SYSTEM PHOTOS



Step 1: Water softening unit.



Step 2: Reverse Osmosis water softening system.



Step 3: Boiler water de-aeration unit.



RO reject line coming from water treatment buildings near de-aeration unit.



RO reject line (temporary) going to Pond 9.



Boiler 106.



Boiler 106.



**Marathon
Petroleum Company LP**

July 26, 2019

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

RE: Hydrocarbon Seep Interim Measures 2019 Second Quarter Status Report
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest, Inc.)
EPA ID# NMD000333211
HWB-WRG-19-001

Dear Mr. Kieling:

Please find enclosed the Hydrocarbon Seep Interim Measures Status Report for the second quarter of 2019. If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Brain Moore at 505-726-9745.

Certification

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

Sincerely,
Marathon Petroleum Company LP, Gallup Refinery

Robert S. Hanks

Robert S. Hanks
Refinery General Manager

Enclosure

cc C. Chavez NMOC

92 Giant Crossing Road
Jamestown, NM 87347

**QUARTERLY STATUS REPORT
HYDROCARBON SEEP INTERIM MEASURES
MARATHON PETROLEUM COMPANY LP – GALLUP REFINERY
(dba WESTERN REFINING SOUTHWEST, INC)
Second Quarter 2019**

Activities conducted during second quarter 2019

- Source Control – Marathon continued to recover water from the standpipe sumps (S1 - S6), but no measurable separate-phase hydrocarbon (SPH) was recorded. Approximately 65,893 gallons of water were recovered during the second quarter of 2019. During the first quarter of 2019, 34,100 gallons of water were recovered with no measurable SPH recovered.

At the retention ditch, approximately 602.2 gallons of SPH was recovered during the second quarter along with 7,698 gallons of water. Approximately 136 gallons of SPH was recovered during the first quarter 2019 along with 11,700 gallons of water. The percentage of SPH recovered during the second quarterly event at the retention ditch increased, while there was no increase observed in the nearby standpipe sumps. There was a significant rise (e.g., over 2 feet at MKTF-11 and MKTF-27) in measured water levels in monitoring wells near and up-gradient of the seeps and retention ditch in the first quarter of 2019. Other wells with a smaller increase included MKTF-02, MKTF-04, MKTF-09, MKTF-10, and MKTF-14. At wells MKTF-02 and MKTF-04, the water levels remained relatively stable into the second quarter, while at the other locations it appears the water levels are decreasing. This will be evaluated further in the 3rd Quarter 2019 Report. This area may have been impacted by the release of water from the RO reject water line that runs to the south of the seeps and we will continue to monitor the water levels and hydrocarbon recovery rates.

Pursuant to NMED's letter of March 5, 2019, the area of the seeps is routinely monitored to evaluate the discharge of hydrocarbons to the land surface where shallow water discharges within the retention ditch and to the south near the original seep location. While the amount of SPH discharging into the retention ditch has reduced from initial recovery rates, the area remains wet, SPH is still present in the soils and will continue to discharge even if not on a consistent basis.

- Source Identification – An Investigation Work Plan (IWP) for Area of Concern (AOC) 35, which includes the area around the Marketing Tanks and the Truck Loading Racks, was recently revised and was submitted on July 29, 2019.

In prior status reports there was a reference to on-going efforts to locate sources of fresh water leaks within the refinery that may be affecting the distribution of contaminants at the hydrocarbon seep area, as well as in other areas of the refinery. Based on the hydrogeologic setting at the refinery property, we found it unlikely that much water would be produced from the seep area without a recharge source other than the limited rainfall that occurs at the refinery. The prior reference was not specific to potentially leaking sewer lines, but also other potential sources such as leaking fire water lines or other piping that transmits fresh water to many locations within the refinery.

In the last quarterly report, there was a discussion on efforts to repair leaks in the reverse osmosis reject water line. This included placing a new line inside of the original pipeline and then injecting a sealant between the replacement line and the original line to form a water tight barrier. This effort was not fully successful and plans are being developed to entirely bypass the old pipeline with construction of a new pipeline. Currently, a temporary aboveground line is being used to eliminate discharge from the old pipeline. Further information will be provided in a separate letter as requested in NMED's letter of May 29, 2019.

As previously discussed with the NMED in March 2019, Marathon also continues to evaluate PW-3 to determine if potable water is being lost through casing leaks.

Activities planned for third quarter 2019

- Source Control – Marathon will continue current recovery operations at the standpipe sumps and the retention ditch using a vacuum truck to pump SPH and water from each of the sumps and the downstream retention ditch. Additional evaluation of the area will be initiated in the future to determine if additional or alternative methods could be more effective.

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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				
12/24/2013	57	4890	4947	2013 Totals	hydrocarbon recovered	water pumped	total fluid pumped
1/2/2014	88	4687	4775		2,705	111,045	113,750
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				
2/25/2014	57	4890	4947				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
11/7/2014	32	3320	3352

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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	2014 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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				
12/31/2015	54	5114	5168	2015 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
9/29/2016	109	3891	4000
10/5/2016	280	5180	5460
10/7/2016	280	5180	5460
10/10/2016	280	5180	5460
10/20/2016	109	3891	4000
10/26/2016	50	2450	2500
10/28/2016	109	3891	4000
11/1/2016	109	3891	4000
11/3/2016	109	3891	4000
11/8/2016	109	3891	4000
11/10/2016	109	3891	4000

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/14/2016	109	3891	4000				
11/23/2016	109	3891	4000				
12/6/2016	109	3891	4000				
12/8/2016	109	3891	4000				
12/13/2016	303	4697	5000				
12/15/2016	109	3891	4000				
12/20/2016	109	3891	4000				
12/27/2016	400	4600	5000				
12/29/2016	109	3891	4000	2016 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					8,668	357,619	366,287
1/10/2017	109	3891	4000				
1/20/2017	167	4333	4500				
2/2/2017	109	3891	4000				
2/6/2017	231	4769	5000				
2/17/2017	231	4769	5000				
2/20/2017	109	3891	4000				
3/1/2017	109	4891	5000				
3/6/2017	167	4833	5000				
3/9/2017	109	3891	4000				
3/14/2017	231	4769	5000				
5/8/2017	303	4697	5000				
5/12/2017	167	3833	4000				
5/15/2017	167	3833	4000				
5/16/2017	10	5590	5600				
5/18/2017	10	3090	3100				
5/23/2017	40	5560	5600				
5/24/2017	232	4768	5000				
5/30/2017	20	5980	6000				
6/1/2017	10	2990	3000				
6/6/2017	100	7900	8000				
6/8/2017	10	5990	6000				
6/13/2017	10	5990	6000				
6/15/2017	50	5950	6000				
6/20/2017	10	5990	6000				
6/22/2017	10	5990	6000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
6/27/2017	20	5980	6000
6/29/2017	10	5990	6000
7/5/2017	10	2990	3000
7/7/2017	50	8950	9000
7/11/2017	10	5990	6000
7/14/2017	10	5990	6000
7/17/2017	10	2990	3000
7/18/2017	20	2980	3000
7/20/2017	50	8950	9000
7/26/2017	75	5925	6000
7/27/2017	50	2950	3000
8/2/2017	75	5425	5500
8/4/2017	10	3490	3500
8/8/2017	25	5475	5500
8/10/2017	20	3480	3500
8/16/2017	15	4485	4500
8/21/2017	50	7950	8000
8/25/2017	25	2975	3000
8/29/2017	50	5950	6000
8/31/2017	20	2980	3000
9/6/2017	15	5985	6000
9/8/2017	15	2985	3000
9/12/2017	25	5975	6000
9/14/2017	75	3925	4000
9/19/2017	49	2951	3000
9/26/2017	49	3751	3800
9/28/2017	25	3775	3800
10/4/2017	50	3450	3500
10/6/2017	45	3455	3500
10/10/2017	25	5975	6000
10/12/2017	50	2950	3000
10/17/2017	50	5450	5500
10/19/2017	9	2841	2850
10/24/2017	19	5981	6000
10/26/2017	49	2451	2500
11/1/2017	49	5951	6000
11/7/2017	50	2950	3000

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/9/2017	24	4976	5000				
11/14/2017	9	5991	6000				
11/15/2017	9	2991	3000				
11/21/2017	9	5991	6000				
11/22/2017	9	2991	3000				
11/28/2017	9	5991	6000				
11/30/2017	9	2991	3000				
12/4/2017	25	7575	7600				
12/7/2017	25	5975	6000				
12/12/2017	19	7581	7600				
12/14/2017	9	2991	3000				
12/19/2017	9	2991	3000				
12/21/2017	49	5951	6000				
12/27/2017	49	5951	6000	2017 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					4,238	365,712	369,950
1/2/2018	9	7591	7600				
1/4/2018	9	3791	3800				
1/9/2018	9	3791	3800				
1/11/2018	9	7591	7600				
1/15/2018	19	3781	3800				
1/17/2018	19	7581	7600				
1/23/2018	9	3791	3800				
1/31/2018	9	2991	3000				
2/2/2018	9	2991	3000				
2/9/2018	9	5991	6000				
2/13/2018	9	3791	3800				
2/15/2018	9	7591	7600				
2/21/2018	9	5991	6000				
2/27/2018	0	3800	3800				
3/1/2018	0	3000	3000				
3/6/2018	0	3000	3000				
3/8/2018	4	3796	3800				
3/13/2018	4	2996	3000				
3/16/2018	4	2996	3000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)		hydrocarbon recovered	water pumped	total fluid pumped
3/20/2018	4	2996	3000				
3/22/2018	0	3000	3000	1st Qtr 2018 Totals	153	92,847	93,000
4/3/2018	3	2997	3000				
6/6/2018	3	3097	3100				
6/8/2018	3	3097	3100				
6/12/2018	0	3800	3800				
6/14/2018	0	3000	3000				
6/20/2018	0	3500	3500				
6/21/2018	0	3000	3000				
6/26/2018	0	3000	3000		hydrocarbon recovered	water pumped	total fluid pumped
6/28/2018	0	3000	3000	2nd Qtr 2018 Totals	9	28,491	28,500
2-Jul-18	0	2800	2800				
5-Jul-18	0	3000	3000				
10-Jul-18	0	3000	3000				
12-Jul-18	0	3000	3000				
18-Jul-18	0	3000	3000				
19-Jul-18	0	3000	3000				
24-Jul-18	0	3000	3000				
26-Jul-18	0	3000	3000				
31-Jul-18	0	3000	3000				
2-Aug	0	3000	3000				
7-Aug	0	3000	3000				
9-Aug-18	0	3800	3800				
14-Aug-18	0	3800	3800				
16-Aug-18	0	3100	3100				
20-Aug-18	0	3800	3800				
22-Aug-18	0	3800	3800				
27-Aug-18	0	3800	3800				
29-Aug-18	0	3100	3100				
5-Sep-18	0	3000	3000				
7-Sep-18	0	3000	3000				
10-Sep-18	0	4800	4800				
12-Sep-18	0	6000	6000				
17-Sep-18	0	3000	3000				
19-Sep-18	0	6000	6000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)		hydrocarbon recovered	water pumped	total fluid pumped
24-Sep-18	0	3000	3000				
26-Sep-18	0	3000	3000	3rd Qtr 2018 Totals	0	89,800	89,800
1-Oct	0	3800	3800				
8-Oct-18	0	3500	3500				
16-Oct-18	0	3000	3000				
18-Oct-18	0	3500	3500				
23-Oct-18	0	3000	3000				
27-Oct-18	0	3100	3100				
1-Nov-18	0	3000	3000				
15-Nov-18	0	3000	3000				
20-Nov-18	0	3100	3100				
23-Nov-18	0	3200	3200				
27-Nov-18	0	3000	3000				
28-Nov-18	0	3000	3000				
3-Dec-18	0	3400	3400				
6-Dec-18	0	3100	3100				
10-Dec-18	0	3000	3000				
14-Dec-18	0	2900	2900				
18-Dec-18	0	2900	2900				
21-Dec-18	0	2500	2500				
24-Dec-18	0	3000	3000				
27-Dec-18	0	3000	3000				
28-Dec-19	0	3200	3200		hydrocarbon recovered	water pumped	total fluid pumped
31-Dec-19	0	3200	3200	4th Qtr 2018 Totals	0	68,400	68,400
3-Jan	0	3000	3000				
12-Jan-19	0	3000	3000				
16-Jan-19	0	2800	2800				
22-Jan-19	0	4500	4500				
29-Jan-19	0	4000	4000				
31-Jan-19	0	3200	3200				
4-Feb	0	3000	3000				
7-Feb	0	4500	4500				
15-Feb-19	0	3100	3100				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)		hydrocarbon recovered	water pumped	total fluid pumped
28-Mar-19	0	3000	3000				
				1st Qtr 2019	0	34,100	34,100
3-Apr	0	3900	3900				
4-Apr	0	3000	3000				
10-Apr-19	0	5800	5800				
19-Apr-19	0	3090	3090				
22-Apr-19	0	5894	5894				
1-May	0	4925	4925				
3-May	0	3109	3109				
20-May-19	0	6150	6150				
24-May-19	0	3119	3119				
29-May-19	0	6242	6242				
9-Jun-2019	0	5061	5061				
10-Jun-2019	0	6242	6242				
14-Jun-2019	0	3119	3119		hydrocarbon recovered	water pumped	total fluid pumped
26-Jun-2019	0	6242	6242	2nd Qtr 2019	0	65,893	65,893
Project Totals	19,009	1,649,613	1,668,624				

* two loads were removed on this date

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

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)
4/1/2016	1	5460	NR
4/27/2016	1	5460	NR
4/28/2016	1	5460	NR
5/5/2016	1	5460	NR
5/9/2016	0.75	4200	NR
5/13/2016	1	5460	NR
5/24/2016	1	5460	NR
5/26/2016	0.5	2730	NR
5/27/2016	1	5460	NR
6/1/2016	1	5460	NR
6/2/2016	1	5460	NR
6/6/2016	1	5460	NR
6/8/2016	1	5460	NR
6/9/2016	0.5	2730	NR
6/14/2016	1	5460	NR
6/16/2016	1	5460	NR
6/23/2016	1	5460	NR
6/29/2016	0.5	2730	NR
7/6/2016	1	5460	NR
7/8/2016	1	5460	NR
7/13/2016	1	5460	NR
7/21/2016	1	5460	NR
7/27/2016	1	5460	NR
8/3/2016	1	5460	NR
8/9/2016	2	10920	NR
8/10/2016	0.5	2730	NR
8/16/2016	1	5460	NR
8/17/2016	1	5460	NR
8/18/2016	0.5	2730	NR
8/23/2016	2	10920	NR
8/24/2016	1	5460	NR
8/26/2016	1	5460	NR
8/30/2016	1	5460	NR
9/1/2016	2	10920	NR
9/8/2016	2	10920	NR
9/14/2016	2	10920	NR
10/6/2016	1	5460	NR
10/7/2016	1	5460	NR
10/10/2016	2	10920	NR
10/20/2016	1	5460	NR
10/24/2016	1	5460	NR

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)			
10/26/2016	2	10920	NR			
10/27/2016	1	5460	NR			
10/31/2016	2	10920	NR			
11/8/2016	2	10920	NR			
11/10/2016	3	16380	NR			
11/11/2016	0.77	4200	NR			
11/15/2016	0.5	2730	NR			
11/16/2016	1	5460	NR			
12/6/2016	1	5460	NR			
12/8/2016	1	5460	NR			
12/14/2016	1	5460	NR			
12/15/2016	3	15120	NR	2016 Totals	LOADS	water/oil mixture
					62.52	340,200
2/21/2017	NR	5000	NR			
3/8/2017	NR	10000	NR			
3/10/2017	NR	4000	NR			
3/14/2017	NR	10000	NR			
3/15/2017	NR	4000	NR			
3/16/2017	NR	1250	NR			
3/17/2017	NR	5000	NR			
5/16/2017	1	2000	20			
5/17/2017	3	15000	NR			
5/22/2017	1	5000	NR			
5/23/2017	1	2800	20			
5/24/2017	1	5000	NR			
5/30/2017	1	3500	10			
6/6/2017	1	3100	20			
6/8/2017	2	5800	20			
6/13/2017	1	2900	30			
6/15/2017	1	3000	10			
6/20/2017	1	2000	10			
6/22/2017	1	3000	20			
6/27/2017	2	5500	40			
6/29/2017	1	2500	10			
7/5/2017	2	5600	10			
7/7/2017	1	3000	20			
7/11/2017	1	3000	10			
7/14/2017	1	3000	10			
7/18/2017	1	2500	10			

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
7/20/2017	1	3000	10				
7/27/2017	2	4500	10				
8/3/2017	2	5000	20				
8/4/2017	1	3000	20				
8/9/2017	1	3000	25				
8/16/2017	1	2000	10				
8/25/2017	1	1500	50				
8/31/2017	1	2000	40				
9/7/2017	2	5200	80				
9/15/2017	2	5500	100				
9/20/2017	1	3800	100				
9/26/2017	1	3800	10				
10/4/2017	1	3500	100				
10/12/2017	1	2800	95				
10/19/2017	1	3000	100				
10/26/2017	1	2500	100				
11/1/2017	1	3000	100				
11/7/2017	1	3000	100				
11/15/2017	2	5500	100				
11/22/2017	1	2000	100				
11/28/2017	1	2000	50				
12/4/2017	1	1500	100				
12/14/2017	1	1500	50				
12/19/2017	1	2500	100				
12/27/2017	1	2000	50	2017 Totals	54	194,550	1,890
1/4/2018	1	2800	25				
1/9/2018	2	7500	9				
1/15/2018	1	2500	20				
1/23/2018	1	3800	9				
1/31/2018	1	2500	9				
2/2/2018	1	2500	9				
2/13/2018	1	2000	9				
2/21/2018	1	2080	20				
3/6/2018	1	1500	19				
3/13/2018	1	1500	9		# of loads	water/oil mixture	oil
3/22/2018	1	1500	20	1st Qtr 2018	13	32,180	208
	0	0	0	2nd Qtr 2018	0	0	0
5-Jul-18	1	1800	36				

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
12-Jul-18	1	2000	100				
20-Jul-18	1	2000	40				
25-Jul-18	1	1800	36				
27-Jul-18	1	1800	36				
7-Aug-18	1	1900	38				
17-Aug-18	1	2000	80				
22-Aug-18	1	1800	72				
24-Aug-18	1	500	20				
30-Aug-18	1	500	20				
7-Sep-18	1	2000	20				
13-Sep-18	1	1500	30				
14-Sep-18	1	2000	40				
19-Sep-18	1	1500	30				
26-Sep-18	1	1500	30		# of loads	water/oil mixture	oil
28-Sep-18	1	1500	30	3rd Qtr 2018	16	26,100	658
16-Oct-18	1	2200	220				
18-Oct-18	1	2000	40				
23-Oct-18	1	1500	30				
1-Nov-18	1	2500	50				
15-Nov-18	1	2500	50				
23-Nov-18	1	2600	52				
6-Dec-18	1	2600	52				
10-Dec-18	1	2000	40				
11-Dec-18	1	300	30				
14-Dec-18	1	2300	46		# of loads	water/oil mixture	oil
13-Jan-19	1	2000	20	4th Qtr 2018	10	20,500	610
23-Jan-19	1	2400	48				
31-Jan-19	1	2400	48				
5-Feb	1	2000	20		# of loads	mixture	oil
28-Mar-19	1	2900	0	1st Qtr 2019 Totals	5	11700	136
4-Apr	1	2800	28				
19-Apr-19	1	1540	46.2				
14-Jun-2019	1	1560	312		# of loads	mixture	oil
27-Jun-2019	1	2400	216	2nd Qtr 2019	4	8300	602.2
Project Totals	163.5	631,530.0	4,054.2				

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)

Totals for oil only includes data since May 2017



**Marathon
Petroleum Company LP**

June 28, 2019

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

**Re: Response to Approval With Modifications
(Revised) Investigation Work Plan Up-Gradient MKTF Wells
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest Inc.)
EPA ID #NMD000333211
HWB-WRG-18-011**

Dear Mr. Kieling:

Attached please find the response to comments contained in the New Mexico Environmental Department (NMED) Approval With Modifications letter dated March 7, 2019.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. Brian Moore at 505-726-9745.

Certification

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

Sincerely,
Marathon Petroleum Company – Gallup Refinery

Robert S. Hanks

Robert S. Hanks
Refinery General Manager

Cc: C. Chavez (OCD)

92 Giant Crossing Road
Jamestown, NM 87347

NMED Comment 1:

In the response to NMED's *Disapproval* Comment 4, the Permittee states, "[t]he requested discussion [regarding the implications of installing groundwater monitoring wells closer to the process area] has been added to Section 4.1, page 4-1." Section 4.1, *Plume Delineation*, page 4- 1, states that while these two wells will provide additional control up-gradient of the truck loading rack and the location where the process sewer line was leaking, it is possible that any detections in these wells may not be associated with the truck loading rack or process sewer line. It may not be possible to delineate the plume as there are multiple source areas and widespread contamination evident in this area. However, by installing additional wells the Permittee may be able to better identify plume migration and potential separate phase hydrocarbon saturation so that future remediation plans may be designed. If the source of potential detections is not the truck loading rack or process sewer line, the Permittee must evaluate for other potential sources and implement source control measures as appropriate.

MPC Response 1:

No response.

NMED Comment 2:

In the response to NMED's *Disapproval* Comment 9, the Permittee states, "[i]n an] attempt to address this comment, additional text has been added to Section 4 (page 4-3) to describe how screen intervals are selected after the soil bo[r]ing has been drilled and logged." Section 4.2.1, *Drilling Activities*, page 4-3, states that slotted (0.01 inch) PVC well screen will be placed in the borings and will extend for 10 feet, unless a longer screen length is necessary to screen across all saturated and likely transmissive zones while also extending above the static water level in the well. In order to accommodate the decreasing trend of groundwater elevations in recent years, a longer screened interval (e.g., 20-foot screen) may be more appropriate for the proposed wells. No revision is required.

MPC Response 2:

No response.

NMED Comment 3:

In the response to NMED's *Disapproval* Comment 10, the Permittee states, "[t]he only reason the Work Plan includes the collection of soil samples is because NMED directed us to collect soil samples from all soil borings we complete in this area... If we are not required to collect soil samples from borings installed for the primary purpose of well installations, then please inform us and the reference to collection of soil samples will be removed." NMED's comment required clarification as to whether soil samples will be collected since it was not clear from the text. The Permittee must collect soil samples for laboratory analysis in all groundwater well installations in order to collect data that may provide essential information regarding the investigation.

MPC Response 3:

Soil samples will be collected.

NMED Comment 4:

In the response to NMED's *Disapproval* Comment 13, the Permittee states, "[t]he fluid level measurements in Table 2 have been updated to include the most recent measurements completed through the end of 2018." Some MKTF wells in the vicinity of the Sanitary Lagoon exhibit a noticeable decrease in groundwater levels according to Table 2. For example, the depth-to-water (DTW) in well MKTF-25 was recorded as 11.20 feet below ground surface (bgs) during the first quarter of 2018 while DTW was measured at 13.35 feet bgs during the fourth quarter of 2018. In a response letter, provide an exact date when the outfall to the Sanitary Lagoon was plugged and discuss any implications of decreased fluid levels in the vicinity of the Sanitary Lagoon.

MPC Response 4:

Attached to this response letter is an email from John Moore (MPC) to Kristen VanHorn (NMED) and Carl Chavez (OCD) documenting the plugging of the sewer line that discharged into the Sanitary Lagoon.

Efforts to repair leaking lines are ongoing at the refinery, as reported in the First Quarter 2019 Hydrocarbon Seep Interim Measures Report. One example is the reverse osmosis (RO) reject line that was discharging into the Sanitary Lagoon. The RO line was repaired by placing a new coating on the inside of the line to plug leaks. Additionally, efforts are ongoing to evaluate whether water supply well PW-3 is leaking water. Well PW-3 has an artesian flow rate of approximately 250 gallons per minute.

From: Moore, John
Sent: Monday, October 15, 2018 11:39 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: VanHorn, Kristen, NMENV <Kristen.VanHorn@state.nm.us>
Subject: Sanitary Sewer

Carl,

We were able to complete the grouting of the sanitary sewer on October 11, 2018. The work consisted of pumping approximately five cubic yards of cement into the pipe and placing a plug at the end. I have attached a picture that was taken early Friday morning to show some of the work. Upon completion of the work there was no further evidence of any water entering the old location. I have not received the lab data yet, but I will forward that as soon as I have it available. If you have any questions, or would like to discuss this work, please let me know.

John Moore, P.E.
Environmental Superintendent
MPC – Gallup Refinery
92 Giant Crossing Road
Gallup, NM 87301
Phone: (505) 722-0205
Mobile: (307) 337-7642
Fax: (505) 722-0268
John.Moore@andeavor.com





Chavez, Carl J, EMNRD

From: Kraemer, Janine, NMENV
Sent: Wednesday, June 19, 2019 1:39 PM
To: jmoore5@marathonpetroleum.com
Cc: Cobrain, Dave, NMENV; VanHorn, Kristen, NMENV; Chavez, Carl J, EMNRD; king.ori@epa.gov; BMoore1@Marathonpetroleum.com
Subject: Resolution of Notice of Violation
Attachments: nmenv.scanner@state.nm.us_20190619_122344.pdf

Good Afternoon Mr. Moore,

In an effort to provide a more efficient service, the New Mexico Environment Department, Hazardous Waste Bureau is forwarding the attached document to you by electronic correspondence “e-correspondence” in lieu of a hard copy through the normal postal service.

We ask that you verify receipt of this document by sending a “reply” message. (An automatic “reply message” is not sufficient to verify receipt). If your email address has changed or you anticipate that it will change in the future, please advise accordingly in your reply. You may also update this information by contacting me at 505-476-4372.

The attached document is in “pdf” format and will require Adobe Reader 6 or higher to open properly. You may download a free copy of this software at www.adobe.com/products/acrobat/readstep2.html.

Your cooperation in helping us affect this process by replying as requested is greatly appreciated. If you should have any questions about the attached document, please direct your questions to the contact person listed in the correspondence.

Thank you,
Janine Kraemer, CHMM
Program Manager
Compliance & Technical Assistance Program Hazardous Waste Bureau New Mexico Environment Department
2905 Rodeo Park Drive
Santa Fe, NM 87505
O: 505-476-4372
C: 505-670-9424
Janine.Kraemer@state.nm.us
<https://www.env.nm.gov/hazardous-waste/>



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

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

www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

VIA EMAIL

June 20, 2019

Email address:

JMoore5@Marathonpetroleum.com

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

**RE: RESOLUTION OF NOTICE OF VIOLATION
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID# NMD000333211**

Dear Mr. Moore:

On April 20, 2016 the New Mexico Environment Department (NMED) issued a Notice of Violation (NOV) to Western Refining Southwest Inc. (Western) for violations related to its Gallup Refinery located at 92 Giant Crossing Road, Gallup, New Mexico (Facility). The NOV addressed several violations based on review of the *Hydrocarbon Seep Interim Measures Report*, dated July 2015 which indicated the improper disposal of soil contaminated with listed hazardous waste.

The Facility responded to the NOV in a letter dated July 7, 2016 in which Western denied improperly disposing of listed hazardous waste. NMED responded in a letter dated October 11, 2016 which stated that Western did not provide sufficient supporting documentation. Western submitted a response on February 9, 2017 which provided some additional, but inadequate, information and illegible figures.

Mr. Moore
June 20, 2019
Page 2

In October 2018 the Marathon Petroleum Corporation purchased Western Refining Southwest Inc. The resultant change in management appears to have changed the approach to environmental compliance, repairs to the Facility, and the startup of remediation efforts, which leads NMED to believe the issues outlined in the NOV will be resolved in the future. Therefore, the NMED has determined that no further action relative to the NOV on the part of the Facility is required. Any action taken in response to this letter does not relieve the Facility of its obligation to comply with all applicable laws and regulations.

If you have any questions regarding this letter, please contact Janine Kraemer at (505) 476-4372.

Sincerely,

A handwritten signature in blue ink, appearing to read "John E. Kielling", with a large loop at the end.

John E. Kielling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
K. Van Horn, NMED HWB
J. Kraemer, NMED HWB
C. Chavez, EMNRD OCD
B. Moore, Marathon
L. King, EPA

File: WRG 2019 and Reading
File 2401



**Marathon
Petroleum Company LP**

May 24, 2019

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

**Re: Response to Approval With Modifications
[REVISED] Investigation Work Plan Up-Gradient MKTF Wells
Marathon Refining Company LP, Gallup Refinery
(dba Western Refining Southwest Inc.)
EPA ID NMD000333211
HWB-WRG-18-011**

Dear Mr. Kieling:

Attached please find the response to comments contained in the New Mexico Environmental Department Approval with Modifications letter dated May 7, 2019.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. Brian Moore at 505-726-9745.

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

Sincerely,
Marathon Petroleum Company – Gallup Refinery

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

Robert S. Hanks
Refinery General Manager

Cc: C. Chavez (OCD)

92 Giant Crossing Road
Jamestown, NM 87347

NMED Comment 1:

In the response to NMED's *Disapproval* Comment 4, the Permittee states, "[t]he requested discussion [regarding the implications of installing groundwater monitoring wells closer to the process area] has been added to Section 4.1, page 4-1." Section 4.1, *Plume Delineation*, page 4- 1, states that while these two wells will provide additional control up-gradient of the truck loading rack and the location where the process sewer line was leaking, it is possible that any detections in these wells may not be associated with the truck loading rack or process sewer line. It may not be possible to delineate the plume as there are multiple source areas and widespread contamination evident in this area. However, by installing additional wells the Permittee may be able to better identify plume migration and potential separate phase hydrocarbon saturation so that future remediation plans may be designed. If the source of potential detections is not the truck loading rack or process sewer line, the Permittee must evaluate for other potential sources and implement source control measures as appropriate.

MPC Response 1:

No comment.

NMED Comment 2:

In the response to NMED's *Disapproval* Comment 9, the Permittee states, "[i]n [an] attempt to address this comment, additional text has been added to Section 4 (page 4-3) to describe how screen intervals are selected after the soil boring has been drilled and logged." Section 4.2.1, *Drilling Activities*, page 4-3, states that slotted (0.01 inch) PVC well screen will be placed in the borings and will extend for 10 feet, unless a longer screen length is necessary to screen across all saturated and likely transmissive zones while also extending above the static water level in the well. In order to accommodate the decreasing trend of groundwater elevations in recent years, a longer screened interval (e.g., 20-foot screen) may be more appropriate for the proposed wells. No revision is required.

MPC Response 2:

No comment.

NMED Comment 3:

In the response to NMED's *Disapproval* Comment 10, the Permittee states, "[t]he only reason the Work Plan includes the collection of soil samples is because NMED directed us to collect soil samples from all soil borings we complete in this area... If we are not required to collect soil samples from borings installed for the primary purpose of well installations, then please inform us and the reference to collection of soil samples will be removed." NMED's comment required clarification as to whether soil samples will be collected since it was not clear from the text. The Permittee must collect soil samples for

laboratory analysis in all groundwater well installations in order to collect data that may provide essential information regarding the investigation.

MPC Response 3:

No comment.

NMED Comment 4:

In the response to NMED's *Disapproval* Comment 13, the Permittee states, "[t]he fluid level measurements in Table 2 have been updated to include the most recent measurements completed through the end of 2018." Some MKTF wells in the vicinity of the Sanitary Lagoon exhibit a noticeable decrease in groundwater levels according to Table 2. For example, the depth-to-water (DTW) in well MKTF-25 was recorded as 11.20 feet below ground surface (bgs) during the first quarter of 2018 while DTW was measured at 13.35 feet bgs during the fourth quarter of 2018. In a response letter, provide an exact date when the outfall to the Sanitary Lagoon was plugged and discuss any implications of decreased fluid levels in the vicinity of the Sanitary Lagoon.

MPC Response 4:

Per the attached email to Carl Chavez and Christen VanHorn, the sewer line was plugged on October 11, 2018.

The line was plugged due to suspected leaks, so the decrease in water levels in the referenced MKTF wells is likely impacted by the elimination of the sewer line and the source of water that it provided.

Additionally, as stated in the 2019 First Quarter Report for the Hydrocarbon Seep Area, the reverse osmosis (RO) reject fluid line was taken out of service and repaired, which eliminated another potential source of water in the area.



April 30, 2019

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

**RE: Hydrocarbon Seep Interim Measures 2019 1st Quarter Status Report
Marathon Petroleum Company LP, Gallup Refinery
(dba Western Refining Southwest, Inc.)
EPA ID# NMD000333211
HWB-WRG-18-006**

Dear Mr. Kieling:

Attached please find the Hydrocarbon Seep Interim Measures 2019 First Quarter Status Report.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. Brian Moore at 505-726-9745.

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,

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

Robert S. Hanks
Refinery General Manager
Marathon Petroleum Company – Gallup Refinery

Cc: C. Chavez (OCD)

**QUARTERLY STATUS REPORT
HYDROCARBON SEEP INTERIM MEASURES
MARATHON PETROLEUM COMPANY LP – GALLUP REFINERY
(dba WESTERN REFINING SOUTHWEST, INC)
First Quarter 2019**

Activities conducted during first quarter 2019

- Source Control – Marathon continued to recover water from the standpipe sumps (S1 - S6), but no measurable separate-phase hydrocarbon (SPH) was recorded. Approximately 34,100 gallons of water were recovered during the first quarter of 2019. During the fourth quarter of 2018, 68,400 gallons of water were recovered.

At the retention ditch, approximately 136 gallons of SPH was recovered during the first quarter along with 11,700 gallons of water. Approximately 610 gallons of SPH was recovered during the fourth quarter 2018 along with 20,500 gallons of water. The percentage of SPH recovered during each event was similar with the previous quarter with the exception of the last event on March 28, 2019, when no SPH was recovered. This appears to be the first time since recovery began at the retention ditch that no SPH was recovered along with the water removed from the ditch.

Pursuant to NMED's letter of March 5, 2019, the area of the seeps is routinely monitored to evaluate the discharge of hydrocarbons to the land surface where shallow water discharges within the retention ditch and to the south near the original seep location. While the amount of SPH discharging into the retention ditch has reduced, the area remains wet and it is likely that SPH is still present in the soils and will continue to discharge even if not on a consistent basis.

- Source Identification – An Investigation Work Plan (IWP) was submitted in the third quarter for Area of Concern (AOC) 35, which includes the area around the Marketing Tanks and the Truck Loading Racks. Comments were received and this IWP will be revised in the near future and hopefully implemented in 2019.

In prior status reports there was a reference to on-going efforts to locate sources of fresh water leaks within the refinery that may be affecting the distribution of contaminants at the hydrocarbon seep area, as well as in other areas of the refinery. Based on the hydrogeologic setting at the refinery property, we found it unlikely that much water would be produced from the seep area without a recharge source other than the limited rainfall that occurs at the refinery. The prior reference was not specific to potentially leaking sewer lines, but also other potential sources such as leaking fire water lines or other piping that transmits fresh water to many locations within the refinery.

In an effort to identify and repair clean water leaks on the refinery property, Marathon has been evaluating underground lines. This was discussed with the NMED during a meeting in March 2019. As a result of this effort, leaks in the reverse osmosis reject water line were identified. This line transmits approximately 45 gallons per minute (gpm) of reject from the Boiler House area (near potable water well PW-3) to evaporation pond number 9 (Pond-9). To

ensure all leaks are addressed, the entire section of pipeline has been removed from service and a new temporary line is now handling this flow pending repair of the original pipeline. In order to eliminate the loss of fluid from the reject line, a new line will be placed inside of the original pipeline and then a sealant will be placed between the replacement line and the original line to form a water tight barrier.

As previously discussed with the NMED in March 2019, Marathon also continues to evaluate PW-3 to determine if potable water is being lost through casing leaks.

- Location of Standpipe Sumps and Retention Ditch – A map and photos of the area have been provided to address comments in 2018, and are enclosed again for reference.

Activities planned for second quarter 2019

- Source Control – Although SPH recovery has declined, Marathon will continue current recovery operations at the standpipe sumps and the retention ditch using a vacuum truck to pump SPH and water from each of the sumps and the downstream retention ditch. Additional evaluation of the area will be initiated in the future to determine if additional or alternative methods could be more effective.

Standpipe and Retention Ditch Recovery Records

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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				
12/24/2013	57	4890	4947	2013 Totals	hydrocarbon recovered	water pumped	total fluid pumped
1/2/2014	88	4687	4775		2,705	111,045	113,750
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				
2/25/2014	57	4890	4947				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
11/7/2014	32	3320	3352

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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	2014 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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				
12/31/2015	54	5114	5168	2015 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
9/29/2016	109	3891	4000
10/5/2016	280	5180	5460
10/7/2016	280	5180	5460
10/10/2016	280	5180	5460
10/20/2016	109	3891	4000
10/26/2016	50	2450	2500
10/28/2016	109	3891	4000
11/1/2016	109	3891	4000
11/3/2016	109	3891	4000
11/8/2016	109	3891	4000
11/10/2016	109	3891	4000

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/14/2016	109	3891	4000				
11/23/2016	109	3891	4000				
12/6/2016	109	3891	4000				
12/8/2016	109	3891	4000				
12/13/2016	303	4697	5000				
12/15/2016	109	3891	4000				
12/20/2016	109	3891	4000				
12/27/2016	400	4600	5000				
12/29/2016	109	3891	4000	2016 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					8,668	357,619	366,287
1/10/2017	109	3891	4000				
1/20/2017	167	4333	4500				
2/2/2017	109	3891	4000				
2/6/2017	231	4769	5000				
2/17/2017	231	4769	5000				
2/20/2017	109	3891	4000				
3/1/2017	109	4891	5000				
3/6/2017	167	4833	5000				
3/9/2017	109	3891	4000				
3/14/2017	231	4769	5000				
5/8/2017	303	4697	5000				
5/12/2017	167	3833	4000				
5/15/2017	167	3833	4000				
5/16/2017	10	5590	5600				
5/18/2017	10	3090	3100				
5/23/2017	40	5560	5600				
5/24/2017	232	4768	5000				
5/30/2017	20	5980	6000				
6/1/2017	10	2990	3000				
6/6/2017	100	7900	8000				
6/8/2017	10	5990	6000				
6/13/2017	10	5990	6000				
6/15/2017	50	5950	6000				
6/20/2017	10	5990	6000				
6/22/2017	10	5990	6000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
6/27/2017	20	5980	6000
6/29/2017	10	5990	6000
7/5/2017	10	2990	3000
7/7/2017	50	8950	9000
7/11/2017	10	5990	6000
7/14/2017	10	5990	6000
7/17/2017	10	2990	3000
7/18/2017	20	2980	3000
7/20/2017	50	8950	9000
7/26/2017	75	5925	6000
7/27/2017	50	2950	3000
8/2/2017	75	5425	5500
8/4/2017	10	3490	3500
8/8/2017	25	5475	5500
8/10/2017	20	3480	3500
8/16/2017	15	4485	4500
8/21/2017	50	7950	8000
8/25/2017	25	2975	3000
8/29/2017	50	5950	6000
8/31/2017	20	2980	3000
9/6/2017	15	5985	6000
9/8/2017	15	2985	3000
9/12/2017	25	5975	6000
9/14/2017	75	3925	4000
9/19/2017	49	2951	3000
9/26/2017	49	3751	3800
9/28/2017	25	3775	3800
10/4/2017	50	3450	3500
10/6/2017	45	3455	3500
10/10/2017	25	5975	6000
10/12/2017	50	2950	3000
10/17/2017	50	5450	5500
10/19/2017	9	2841	2850
10/24/2017	19	5981	6000
10/26/2017	49	2451	2500
11/1/2017	49	5951	6000
11/7/2017	50	2950	3000

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/9/2017	24	4976	5000				
11/14/2017	9	5991	6000				
11/15/2017	9	2991	3000				
11/21/2017	9	5991	6000				
11/22/2017	9	2991	3000				
11/28/2017	9	5991	6000				
11/30/2017	9	2991	3000				
12/4/2017	25	7575	7600				
12/7/2017	25	5975	6000				
12/12/2017	19	7581	7600				
12/14/2017	9	2991	3000				
12/19/2017	9	2991	3000				
12/21/2017	49	5951	6000				
12/27/2017	49	5951	6000	2017 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					4,238	365,712	369,950
1/2/2018	9	7591	7600				
1/4/2018	9	3791	3800				
1/9/2018	9	3791	3800				
1/11/2018	9	7591	7600				
1/15/2018	19	3781	3800				
1/17/2018	19	7581	7600				
1/23/2018	9	3791	3800				
1/31/2018	9	2991	3000				
2/2/2018	9	2991	3000				
2/9/2018	9	5991	6000				
2/13/2018	9	3791	3800				
2/15/2018	9	7591	7600				
2/21/2018	9	5991	6000				
2/27/2018	0	3800	3800				
3/1/2018	0	3000	3000				
3/6/2018	0	3000	3000				
3/8/2018	4	3796	3800				
3/13/2018	4	2996	3000				
3/16/2018	4	2996	3000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)		hydrocarbon recovered	water pumped	total fluid pumped
3/20/2018	4	2996	3000	1st Qtr 2018 Totals	153	92,847	93,000
3/22/2018	0	3000	3000				
4/3/2018	3	2997	3000				
6/6/2018	3	3097	3100				
6/8/2018	3	3097	3100				
6/12/2018	0	3800	3800				
6/14/2018	0	3000	3000				
6/20/2018	0	3500	3500				
6/21/2018	0	3000	3000				
6/26/2018	0	3000	3000				
6/28/2018	0	3000	3000	2nd Qtr 2018 Totals	9	28,491	28,500
2-Jul-18	0	2800	2800				
5-Jul-18	0	3000	3000				
10-Jul-18	0	3000	3000				
12-Jul-18	0	3000	3000				
18-Jul-18	0	3000	3000				
19-Jul-18	0	3000	3000				
24-Jul-18	0	3000	3000				
26-Jul-18	0	3000	3000				
31-Jul-18	0	3000	3000				
2-Aug	0	3000	3000				
7-Aug	0	3000	3000				
9-Aug-18	0	3800	3800				
14-Aug-18	0	3800	3800				
16-Aug-18	0	3100	3100				
20-Aug-18	0	3800	3800				
22-Aug-18	0	3800	3800				
27-Aug-18	0	3800	3800				
29-Aug-18	0	3100	3100				
5-Sep-18	0	3000	3000				
7-Sep-18	0	3000	3000				
10-Sep-18	0	4800	4800				
12-Sep-18	0	6000	6000				
17-Sep-18	0	3000	3000				
19-Sep-18	0	6000	6000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)		hydrocarbon recovered	water pumped	total fluid pumped
24-Sep-18	0	3000	3000				
26-Sep-18	0	3000	3000	3rd Qtr 2018 Totals	0	89,800	89,800
1-Oct	0	3800	3800				
8-Oct-18	0	3500	3500				
16-Oct-18	0	3000	3000				
18-Oct-18	0	3500	3500				
23-Oct-18	0	3000	3000				
27-Oct-18	0	3100	3100				
1-Nov-18	0	3000	3000				
15-Nov-18	0	3000	3000				
20-Nov-18	0	3100	3100				
23-Nov-18	0	3200	3200				
27-Nov-18	0	3000	3000				
28-Nov-18	0	3000	3000				
3-Dec-18	0	3400	3400				
6-Dec-18	0	3100	3100				
10-Dec-18	0	3000	3000				
14-Dec-18	0	2900	2900				
18-Dec-18	0	2900	2900				
21-Dec-18	0	2500	2500				
24-Dec-18	0	3000	3000				
27-Dec-18	0	3000	3000				
28-Dec-19	0	3200	3200		hydrocarbon recovered	water pumped	total fluid pumped
31-Dec-19	0	3200	3200	4th Qtr 2018 Totals	0	68,400	68,400
3-Jan	0	3000	3000				
12-Jan-19	0	3000	3000				
16-Jan-19	0	2800	2800				
22-Jan-19	0	4500	4500				
29-Jan-19	0	4000	4000				
31-Jan-19	0	3200	3200				
4-Feb	0	3000	3000				
7-Feb	0	4500	4500				
15-Feb-19	0	3100	3100				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)		hydrocarbon recovered	water pumped	total fluid pumped
28-Mar-19	0	3000	3000				
				1st Qtr 2019	0	34,100	34,100
Project Totals	19,009	1,583,720	1,602,731				

* two loads were removed on this date

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

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)
4/1/2016	1	5460	NR
4/27/2016	1	5460	NR
4/28/2016	1	5460	NR
5/5/2016	1	5460	NR
5/9/2016	0.75	4200	NR
5/13/2016	1	5460	NR
5/24/2016	1	5460	NR
5/26/2016	0.5	2730	NR
5/27/2016	1	5460	NR
6/1/2016	1	5460	NR
6/2/2016	1	5460	NR
6/6/2016	1	5460	NR
6/8/2016	1	5460	NR
6/9/2016	0.5	2730	NR
6/14/2016	1	5460	NR
6/16/2016	1	5460	NR
6/23/2016	1	5460	NR
6/29/2016	0.5	2730	NR
7/6/2016	1	5460	NR
7/8/2016	1	5460	NR
7/13/2016	1	5460	NR
7/21/2016	1	5460	NR
7/27/2016	1	5460	NR
8/3/2016	1	5460	NR
8/9/2016	2	10920	NR
8/10/2016	0.5	2730	NR
8/16/2016	1	5460	NR
8/17/2016	1	5460	NR
8/18/2016	0.5	2730	NR
8/23/2016	2	10920	NR
8/24/2016	1	5460	NR
8/26/2016	1	5460	NR
8/30/2016	1	5460	NR
9/1/2016	2	10920	NR
9/8/2016	2	10920	NR
9/14/2016	2	10920	NR
10/6/2016	1	5460	NR
10/7/2016	1	5460	NR
10/10/2016	2	10920	NR
10/20/2016	1	5460	NR
10/24/2016	1	5460	NR

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)			
10/26/2016	2	10920	NR			
10/27/2016	1	5460	NR			
10/31/2016	2	10920	NR			
11/8/2016	2	10920	NR			
11/10/2016	3	16380	NR			
11/11/2016	0.77	4200	NR			
11/15/2016	0.5	2730	NR			
11/16/2016	1	5460	NR			
12/6/2016	1	5460	NR			
12/8/2016	1	5460	NR			
12/14/2016	1	5460	NR			
12/15/2016	3	15120	NR	2016 Totals	LOADS	water/oil mixture
					62.52	340,200
2/21/2017	NR	5000	NR			
3/8/2017	NR	10000	NR			
3/10/2017	NR	4000	NR			
3/14/2017	NR	10000	NR			
3/15/2017	NR	4000	NR			
3/16/2017	NR	1250	NR			
3/17/2017	NR	5000	NR			
5/16/2017	1	2000	20			
5/17/2017	3	15000	NR			
5/22/2017	1	5000	NR			
5/23/2017	1	2800	20			
5/24/2017	1	5000	NR			
5/30/2017	1	3500	10			
6/6/2017	1	3100	20			
6/8/2017	2	5800	20			
6/13/2017	1	2900	30			
6/15/2017	1	3000	10			
6/20/2017	1	2000	10			
6/22/2017	1	3000	20			
6/27/2017	2	5500	40			
6/29/2017	1	2500	10			
7/5/2017	2	5600	10			
7/7/2017	1	3000	20			
7/11/2017	1	3000	10			
7/14/2017	1	3000	10			
7/18/2017	1	2500	10			

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
7/20/2017	1	3000	10				
7/27/2017	2	4500	10				
8/3/2017	2	5000	20				
8/4/2017	1	3000	20				
8/9/2017	1	3000	25				
8/16/2017	1	2000	10				
8/25/2017	1	1500	50				
8/31/2017	1	2000	40				
9/7/2017	2	5200	80				
9/15/2017	2	5500	100				
9/20/2017	1	3800	100				
9/26/2017	1	3800	10				
10/4/2017	1	3500	100				
10/12/2017	1	2800	95				
10/19/2017	1	3000	100				
10/26/2017	1	2500	100				
11/1/2017	1	3000	100				
11/7/2017	1	3000	100				
11/15/2017	2	5500	100				
11/22/2017	1	2000	100				
11/28/2017	1	2000	50				
12/4/2017	1	1500	100				
12/14/2017	1	1500	50				
12/19/2017	1	2500	100				
12/27/2017	1	2000	50	2017 Totals	54	194,550	1,890
1/4/2018	1	2800	25				
1/9/2018	2	7500	9				
1/15/2018	1	2500	20				
1/23/2018	1	3800	9				
1/31/2018	1	2500	9				
2/2/2018	1	2500	9				
2/13/2018	1	2000	9				
2/21/2018	1	2080	20				
3/6/2018	1	1500	19				
3/13/2018	1	1500	9				
3/22/2018	1	1500	20	1st Qtr 2018	13	32,180	208
	0	0	0	2nd Qtr 2018	0	0	0
5-Jul-18	1	1800	36				

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
12-Jul-18	1	2000	100				
20-Jul-18	1	2000	40				
25-Jul-18	1	1800	36				
27-Jul-18	1	1800	36				
7-Aug-18	1	1900	38				
17-Aug-18	1	2000	80				
22-Aug-18	1	1800	72				
24-Aug-18	1	500	20				
30-Aug-18	1	500	20				
7-Sep-18	1	2000	20				
13-Sep-18	1	1500	30				
14-Sep-18	1	2000	40				
19-Sep-18	1	1500	30				
26-Sep-18	1	1500	30				
28-Sep-18	1	1500	30	3rd Qtr 2018	# of loads	water/oil mixture	oil
					16	26,100	658
16-Oct-18	1	2200	220				
18-Oct-18	1	2000	40				
23-Oct-18	1	1500	30				
1-Nov-18	1	2500	50				
15-Nov-18	1	2500	50				
23-Nov-18	1	2600	52				
6-Dec-18	1	2600	52				
10-Dec-18	1	2000	40				
11-Dec-18	1	300	30				
14-Dec-18	1	2300	46		# of loads	water/oil mixture	oil
13-Jan-19	1	2000	20	4th Qtr 2018	10	20,500	610
23-Jan-19	1	2400	48				
31-Jan-19	1	2400	48				
5-Feb	1	2000	20				
28-Mar-19	1	2900	0		# of loads	water/oil mixture	oil
				1st Qtr 2019	5	11700	136
Project Totals	159.5	623,230.0	3,452.0				

Totals for oil only includes data since May 2017

Site Features and Photos

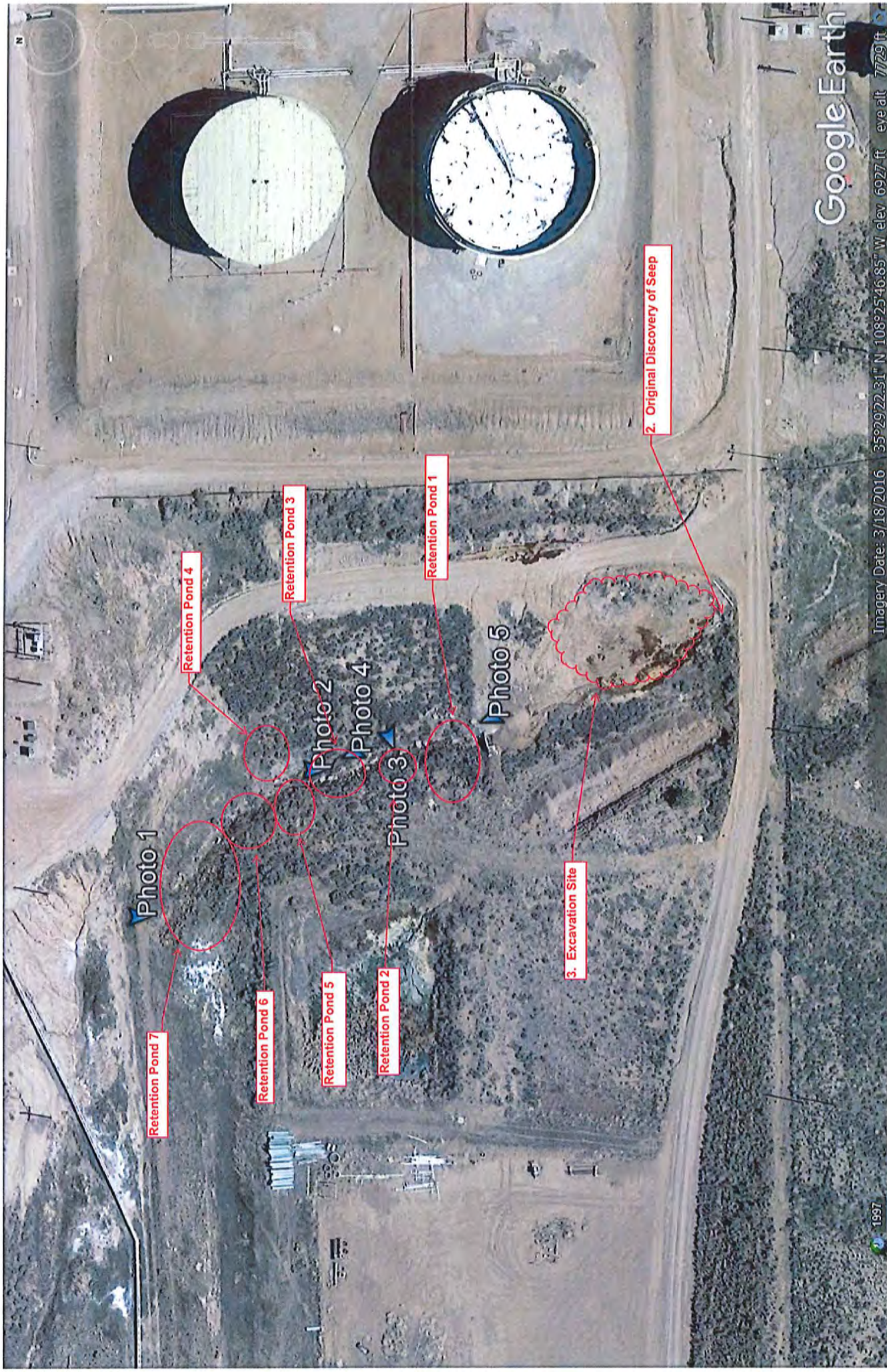


Photo 1

Retention Pond 7

Retention Pond 4

Retention Pond 6

Retention Pond 3

Photo 2

Retention Pond 5

Photo 4

Photo 3

Retention Pond 2

Retention Pond 1

Photo 5

3. Excavation Site

2. Original Discovery of Seep

Google Earth

Imagery Date: 3/18/2016 35°29'22.31" N 108°25'46.85" W elev 6927 ft eye alt 7729 ft

1997

PHOTOS OF RETENTION DITCH LOCATED NORTH OF HYDROCARBON SEEP

PHOTOS PROGRESS FROM LOWER (NORTHERN) END TO HIGHEST (SOUTHERN) END OF DITCH



Photo No. 1 of lowermost (northern) end of retention ditch. Oil stained vegetation shown around edges of ditch but no recoverable product on water.



Photo No. 2: Looking south along retention ditch, midway between north and south ends. Some hydrocarbon staining along perimeter of ditch, but very little hydrocarbon present on water. Location of concentrated hydrocarbon discharge at upper (southern) end of this ponded area.



Photo No. 3 of location with concentrated discharge of hydrocarbons midway along retention ditch. Looking west, midway along retention ditch.



Photo No. 4 of pond along retention ditch immediately downstream from concentrated hydrocarbon discharge point. Photo taken looking north. Very little potentially recoverable hydrocarbon present on water.



Photo No. 5: Uppermost (southern) end of retention ditch looking north.



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

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



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

March 22, 2019

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

**RE: APPROVAL WITH MODIFICATIONS
RESPONSE TO APPROVAL WITH MODIFICATIONS
HYDROCARBON SEEP INTERIM MEASURES 2018 3RD QUARTER STATUS
REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-18-017**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has reviewed the *Response to Approval with Modifications Hydrocarbon Seep Interim Measures 2018 3rd Quarter Status Report* (Response), dated February 21, 2019, submitted on behalf of Marathon Petroleum Company dba Western Refining Southwest Inc., Gallup Refinery (the Permittee). The NMED hereby issues this Approval with Modifications. The Permittee must address the following comments.

Comment 1

The Permittee's response to NMED's Comment 3 states, "[s]ince the water and hydrocarbon that accumulate in the retention ditches are comingled prior to accumulating in the ditches, it is unlikely that additional impact to the shallow water occurs within the ditches and is then conveyed to the subsurface." The behavior of separate phase hydrocarbon (SPH) in the subsurface environment and surface water is different. The statement is subject to verification. If the accumulated SPH contains miscible constituents, the groundwater quality downgradient of the retention ditches may potentially degrade. For example, Figure 17B in the *Annual Ground*

Water Monitoring Report Gallup Refinery – 2017, dated November 30, 2018, indicates that the MTBE concentrations in groundwater upgradient of the retention ditches are generally lower compared to downgradient of the ditches. Concentrations of less miscible constituents (e.g., BTEX) in groundwater upgradient of the retention ditches are generally higher or relatively consistent. The Permittee must demonstrate that the groundwater quality downgradient of the retention ditches is not adversely affected in the next annual groundwater monitoring report.

Comment 2

The Permittee's response to NMED's Comment 3 states, "[t]he occurrence of shallow water may be indicative of fresh water leaks associated with plant operations. Efforts are currently under way to evaluate potential source(s) associated with facility operations." Clarify whether the occurrence of shallow water refers to water accumulation in the retention ditches and whether the on-going efforts to evaluate water leaks refers to the investigations associated with the sewer line leaks. Provide a more detailed discussion regarding the on-going efforts in the subsequent status report.

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

If you have questions regarding this letter, please contact Michiya Suzuki of my staff at 505-476-6059.

Sincerely,



John E. Kielling
Chief
Hazardous Waste Bureau

cc: K. Van Horn, NMED HWB
D. Cobrain, NMED HWB
M. Suzuki, NMED HWB
C. Chavez, OCD
L. King, EPA Region 6
B. Moore, WRG

File: Reading File and WRG 2019 File
HWB-WRG-18-017



**Marathon
Petroleum Company LP**

February 21, 2019

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

**RE: RESPONSE TO APPROVAL WITH MODIFICATIONS
HYDROCARBON SEEP INTERIM MEASURES 2018 3RD
QUARTER STATUS REPORT
WESTERN REFINING SOUTHWEST INC.,
GALLUP REFINERY EPA ID# NMD000333211
HWB-WRG-18-017**

Dear Mr. Kieling:

Marathon Petroleum Company (Marathon) dba Western Refining Southwest Inc., Gallup Refinery (the Permittee) is providing this letter in response to the New Mexico Environment Department (NMED) Approval with Modifications letter dated February 7, 2019. A response to each of the NMED comments is provided below.

If the New Mexico Environmental Department (NMED) requires any additional information, please do not hesitate to contact Brian Moore at 505-726-9745.

Certification

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

Sincerely,
Marathon Petroleum Company LP

A handwritten signature in cursive script that reads 'Robert S. Hanks'.

Robert S. Hanks
Refinery General Manager

cc: C. Chavez (OCD)

92 Giant Crossing Road
Jamestown, NM 87347

NMED Comment 1:

In the *Cover Letter*, the Permittee states, "[i]ncluded with the submittal are electronic files on CD." However, electronic files were not included with the submittal. Provide an electronic version of the Report and Cover Letter no later than **March 8, 2019**.

MPC Response:

An electronic copy of the cover letter and report are included as Attachment 1.

NMED Comment 2:

In the *Activities Conducted During Third Quarter 2018* Section, the Permittee states, "[a]lthough no SPH was recovered from the standpipe sumps, SPH was recovered from the retention ditch area to the north." It is not clear whether the retention ditch is one large ditch or divided into cells, north and south. In all future status reports, provide a figure that depicts the referenced standpipe sumps and retention ditch in relation to the areas where hydrocarbon seepage occurred.

MPC Response:

As part of the Response to Comments for the Second Quarter 2018 Hydrocarbon Seep Report, MPC provided an illustration to the NMED that identifies where each of the retention ditches and stand pipes are located. MPC can include this figure with the quarterly reports, however, it is unlikely that contractors will have a copy of that illustration with them every time they pump water out of the ditches in order to identify the exact location where fluids were removed. A copy of the illustration provided to the NMED in January 2019 is provided as Attachment B.

NMED Comment 3:

In the *Activities Conducted During Third Quarter 2018* Section, the Permittee states, "[t]he increase in [SPH] recovery [from 208 gallons in the first quarter to 658 gallons] during the third quarter could possibly be attributed the fact that no recovery was conducted during the second quarter, thus allowing more SPH to accumulate in the subsurface adjacent to the retention ditch. The volume of water recovered was lower in the third quarter [25,442 gallons] compared to the first quarter, when approximately 31,972 gallons were recovered." SPH is retained within the ditch and removed periodically; however, some portion of the retained water flows back into the subsurface. Evaluate whether the retained water in contact with accumulated SPH potentially further degrades groundwater quality downgradient of the retention ditch in a response letter.

MPC Response:

Since the water and hydrocarbon that accumulate in the retention ditches are comingled prior to accumulating in the ditches, it is unlikely that additional impact to the shallow water occurs within the ditches and is then conveyed to the subsurface. The occurrence of shallow water may be indicative of fresh water leaks associated with plant operations. Efforts are currently under way to evaluate potential source(s) associated with facility operations.

NMED Comment 4:

The table presenting recovery records from the standpipes indicates that no SPH were recovered between June 12, 2018 and the end of the 2018 third quarter. Evaluate whether fluid recovery from the standpipes is still a viable approach to recover SPH. If appropriate, propose to cease fluid recovery from the standpipes and to implement a more effective approach to recover SPH in the vicinity of the hydrocarbon seep areas in the response letter.

MPC Response:

The volume of hydrocarbon recovered from the retention ditches suggests that there is still oil and water being conveyed through the shallow sediments. MPC will evaluate whether other options would be more effective at recovering hydrocarbons than the standpipes. However, the standpipes are capable of recovering large volumes of fluid and serve their purpose well. Also, as indicated in response to NMED Comment 3 above, MPC is currently evaluating potential source(s) of water in the refinery.

Attachment 1
CD Files for Third Quarter Submittal

Attachment 2
Hydrocarbon Seep Area Aerial Photo Map

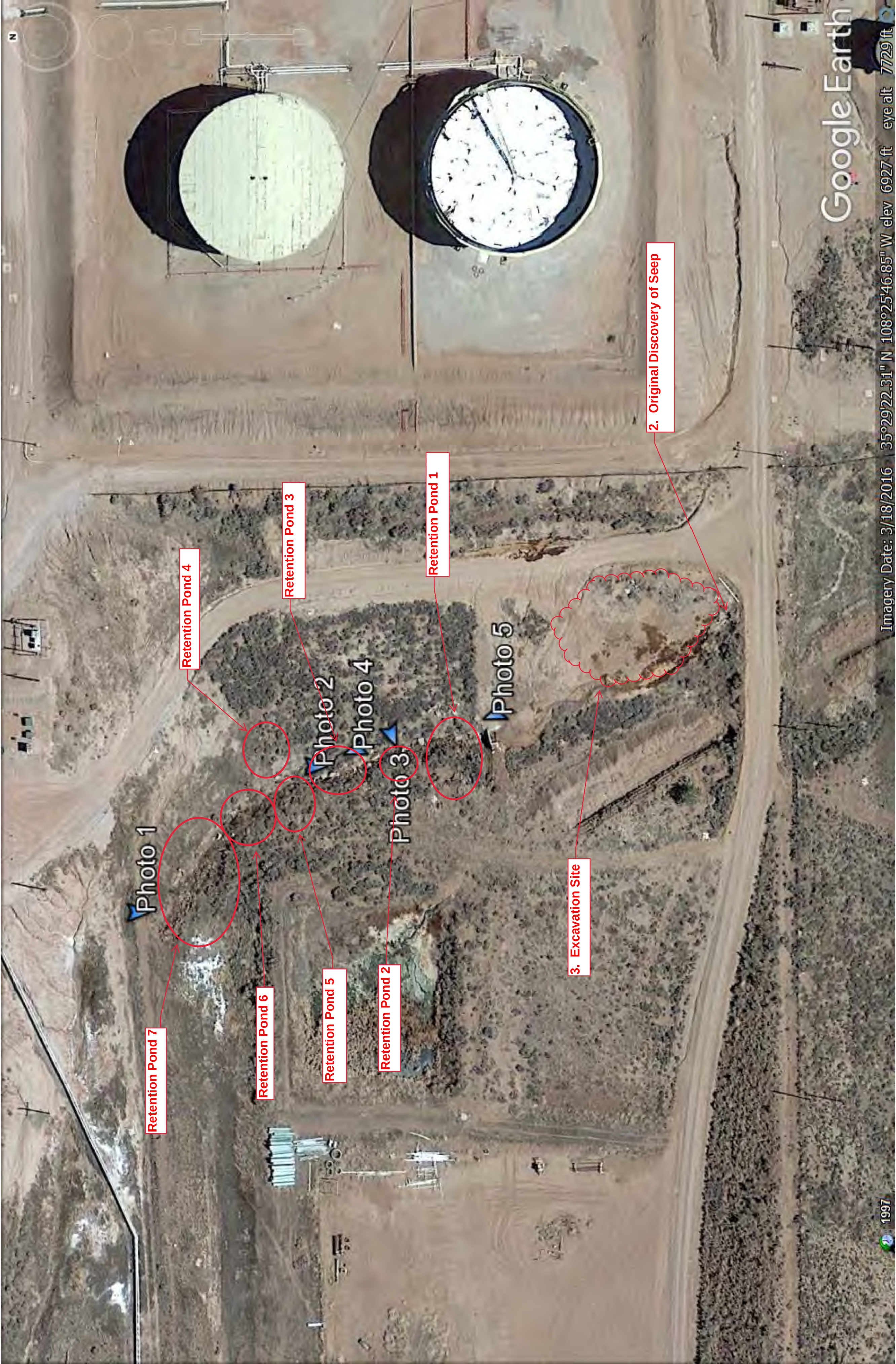


Photo 1

Retention Pond 7

Retention Pond 4

Retention Pond 6

Retention Pond 5

Photo 2

Retention Pond 3

Photo 4

Retention Pond 2

Photo 3

Retention Pond 1

Photo 5

3. Excavation Site

2. Original Discovery of Seep



**Marathon
Petroleum Company LP**

December 13, 2018

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

Re: HYDROCARBON SEEP INTERIM MEASURES 2018 3rd QUARTER STATUS REPORT
Marathon Petroleum Company LP
EPA ID # NMD000333211
HWB-WRG-15-006

Dear Mr. Kieling:

Marathon Petroleum Company LP (Marathon) is submitting the 3rd Quarter 2018 Interim Measures Report for the Hydrocarbon Seep Area at the Gallup, New Mexico Refinery. Included with the submittal are electronic files on CD.

If the New Mexico Environmental Department (NMED) requires any additional information, please do not hesitate to contact Brian Moore at 505-726-9745.

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

Sincerely,
Marathon Petroleum Company LP

A handwritten signature in cursive script that reads 'Robert S. Hanks'.

Robert S. Hanks
Refinery General Manager

cc: C. Chavez (OCD)

92 Giant Crossing Road
Jamestown, NM 87347

**QUARTERLY STATUS REPORT
HYDROCARBON SEEP INTERIM MEASURES
WESTERN REFINING SOUTHWEST, INC – GALLUP REFINERY
Fourth Quarter 2018**

Activities conducted during fourth quarter 2018

- Source Control – Marathon continued to recover groundwater from the standpipe sumps (S1 - S6), but no measurable separate-phase hydrocarbon (SPH) was recorded. Approximately 68,400 gallons of groundwater were recovered during the fourth quarter, which is similar to the recovery of the previous quarter of 89,800 gallons.

At the retention ditch, approximately 610 gallons of SPH was recovered during the fourth quarter along with 20,500 gallons of water. Approximately 658 gallons of SPH was recovered during the third quarter along with 25,442 gallons of water. The recovery during the fourth quarter at the retention ditch is similar to the previous quarter recovery volumes.

- Source Identification – An Investigation Work Plan (IWP) was submitted in the third quarter for Area of Concern (AOC) 35, which includes the area around the Marketing Tanks and the Truck Loading Racks. Currently waiting on approval of the AOC 35 IWP.

Activities planned for first quarter 2019

- Source Control – Marathon will continue current recovery operations at the standpipe sumps and the retention ditch using a vacuum truck to pump SPH and groundwater from each of the sumps and the downstream retention ditch.

Standpipe and Retention Ditch Recovery Records

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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				
12/24/2013	57	4890	4947	2013 Totals	hydrocarbon recovered	water pumped	total fluid pumped
1/2/2014	88	4687	4775		2,705	111,045	113,750
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				
2/25/2014	57	4890	4947				

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
11/7/2014	32	3320	3352

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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	2014 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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				
12/31/2015	54	5114	5168	2015 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
9/29/2016	109	3891	4000
10/5/2016	280	5180	5460
10/7/2016	280	5180	5460
10/10/2016	280	5180	5460
10/20/2016	109	3891	4000
10/26/2016	50	2450	2500
10/28/2016	109	3891	4000
11/1/2016	109	3891	4000
11/3/2016	109	3891	4000
11/8/2016	109	3891	4000
11/10/2016	109	3891	4000

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/14/2016	109	3891	4000				
11/23/2016	109	3891	4000				
12/6/2016	109	3891	4000				
12/8/2016	109	3891	4000				
12/13/2016	303	4697	5000				
12/15/2016	109	3891	4000				
12/20/2016	109	3891	4000				
12/27/2016	400	4600	5000				
12/29/2016	109	3891	4000	2016 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					8,668	357,619	366,287
1/10/2017	109	3891	4000				
1/20/2017	167	4333	4500				
2/2/2017	109	3891	4000				
2/6/2017	231	4769	5000				
2/17/2017	231	4769	5000				
2/20/2017	109	3891	4000				
3/1/2017	109	4891	5000				
3/6/2017	167	4833	5000				
3/9/2017	109	3891	4000				
3/14/2017	231	4769	5000				
5/8/2017	303	4697	5000				
5/12/2017	167	3833	4000				
5/15/2017	167	3833	4000				
5/16/2017	10	5590	5600				
5/18/2017	10	3090	3100				
5/23/2017	40	5560	5600				
5/24/2017	232	4768	5000				
5/30/2017	20	5980	6000				
6/1/2017	10	2990	3000				
6/6/2017	100	7900	8000				
6/8/2017	10	5990	6000				
6/13/2017	10	5990	6000				
6/15/2017	50	5950	6000				
6/20/2017	10	5990	6000				
6/22/2017	10	5990	6000				
6/27/2017	20	5980	6000				

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
6/29/2017	10	5990	6000
7/5/2017	10	2990	3000
7/7/2017	50	8950	9000
7/11/2017	10	5990	6000
7/14/2017	10	5990	6000
7/17/2017	10	2990	3000
7/18/2017	20	2980	3000
7/20/2017	50	8950	9000
7/26/2017	75	5925	6000
7/27/2017	50	2950	3000
8/2/2017	75	5425	5500
8/4/2017	10	3490	3500
8/8/2017	25	5475	5500
8/10/2017	20	3480	3500
8/16/2017	15	4485	4500
8/21/2017	50	7950	8000
8/25/2017	25	2975	3000
8/29/2017	50	5950	6000
8/31/2017	20	2980	3000
9/6/2017	15	5985	6000
9/8/2017	15	2985	3000
9/12/2017	25	5975	6000
9/14/2017	75	3925	4000
9/19/2017	49	2951	3000
9/26/2017	49	3751	3800
9/28/2017	25	3775	3800
10/4/2017	50	3450	3500
10/6/2017	45	3455	3500
10/10/2017	25	5975	6000
10/12/2017	50	2950	3000
10/17/2017	50	5450	5500
10/19/2017	9	2841	2850
10/24/2017	19	5981	6000
10/26/2017	49	2451	2500
11/1/2017	49	5951	6000
11/7/2017	50	2950	3000
11/9/2017	24	4976	5000
11/14/2017	9	5991	6000

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/15/2017	9	2991	3000				
11/21/2017	9	5991	6000				
11/22/2017	9	2991	3000				
11/28/2017	9	5991	6000				
11/30/2017	9	2991	3000				
12/4/2017	25	7575	7600				
12/7/2017	25	5975	6000				
12/12/2017	19	7581	7600				
12/14/2017	9	2991	3000				
12/19/2017	9	2991	3000				
12/21/2017	49	5951	6000				
12/27/2017	49	5951	6000	2017 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					4,238	365,712	369,950
1/2/2018	9	7591	7600				
1/4/2018	9	3791	3800				
1/9/2018	9	3791	3800				
1/11/2018	9	7591	7600				
1/15/2018	19	3781	3800				
1/17/2018	19	7581	7600				
1/23/2018	9	3791	3800				
1/31/2018	9	2991	3000				
2/2/2018	9	2991	3000				
2/9/2018	9	5991	6000				
2/13/2018	9	3791	3800				
2/15/2018	9	7591	7600				
2/21/2018	9	5991	6000				
2/27/2018	0	3800	3800				
3/1/2018	0	3000	3000				
3/6/2018	0	3000	3000				
3/8/2018	4	3796	3800				
3/13/2018	4	2996	3000				
3/16/2018	4	2996	3000				
3/20/2018	4	2996	3000		hydrocarbon	water	total fluid
3/22/2018	0	3000	3000	1st Qtr 2018	153	92,847	93,000
4/3/2018	3	2997	3000				

Marathon Petroleum Company - Gallup Refinery
Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
6/6/2018	3	3097	3100				
6/8/2018	3	3097	3100				
6/12/2018	0	3800	3800				
6/14/2018	0	3000	3000				
6/20/2018	0	3500	3500				
6/21/2018	0	3000	3000				
6/26/2018	0	3000	3000		hydrocarbon	water	total fluid
6/28/2018	0	3000	3000		9	28,491	28,500
2-Jul-18	0	2800	2800				
5-Jul-18	0	3000	3000				
10-Jul-18	0	3000	3000				
12-Jul-18	0	3000	3000				
18-Jul-18	0	3000	3000				
19-Jul-18	0	3000	3000				
24-Jul-18	0	3000	3000				
26-Jul-18	0	3000	3000				
31-Jul-18	0	3000	3000				
2-Aug	0	3000	3000				
7-Aug	0	3000	3000				
9-Aug-18	0	3800	3800				
14-Aug-18	0	3800	3800				
16-Aug-18	0	3100	3100				
20-Aug-18	0	3800	3800				
22-Aug-18	0	3800	3800				
27-Aug-18	0	3800	3800				
29-Aug-18	0	3100	3100				
5-Sep-18	0	3000	3000				
7-Sep-18	0	3000	3000				
10-Sep-18	0	4800	4800				
12-Sep-18	0	6000	6000				
17-Sep-18	0	3000	3000				
19-Sep-18	0	6000	6000		hydrocarbon	water	total fluid
24-Sep-18	0	3000	3000		0	89,800	89,800
26-Sep-18	0	3000	3000	3rd Qtr 2018			
Project Totals	19,009	1,481,220	1,500,231				

* two loads were removed on this date

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

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)
4/1/2016	1	5460	NR
4/27/2016	1	5460	NR
4/28/2016	1	5460	NR
5/5/2016	1	5460	NR
5/9/2016	0.75	4200	NR
5/13/2016	1	5460	NR
5/24/2016	1	5460	NR
5/26/2016	0.5	2730	NR
5/27/2016	1	5460	NR
6/1/2016	1	5460	NR
6/2/2016	1	5460	NR
6/6/2016	1	5460	NR
6/8/2016	1	5460	NR
6/9/2016	0.5	2730	NR
6/14/2016	1	5460	NR
6/16/2016	1	5460	NR
6/23/2016	1	5460	NR
6/29/2016	0.5	2730	NR
7/6/2016	1	5460	NR
7/8/2016	1	5460	NR
7/13/2016	1	5460	NR
7/21/2016	1	5460	NR
7/27/2016	1	5460	NR
8/3/2016	1	5460	NR
8/9/2016	2	10920	NR
8/10/2016	0.5	2730	NR
8/16/2016	1	5460	NR
8/17/2016	1	5460	NR
8/18/2016	0.5	2730	NR
8/23/2016	2	10920	NR
8/24/2016	1	5460	NR
8/26/2016	1	5460	NR
8/30/2016	1	5460	NR
9/1/2016	2	10920	NR
9/8/2016	2	10920	NR
9/14/2016	2	10920	NR
10/6/2016	1	5460	NR
10/7/2016	1	5460	NR
10/10/2016	2	10920	NR
10/20/2016	1	5460	NR
10/24/2016	1	5460	NR

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)			
10/26/2016	2	10920	NR			
10/27/2016	1	5460	NR			
10/31/2016	2	10920	NR			
11/8/2016	2	10920	NR			
11/10/2016	3	16380	NR			
11/11/2016	0.77	4200	NR			
11/15/2016	0.5	2730	NR			
11/16/2016	1	5460	NR			
12/6/2016	1	5460	NR			
12/8/2016	1	5460	NR			
12/14/2016	1	5460	NR			
12/15/2016	3	15120	NR	2016 Totals	LOADS	water/oil mixture
					62.52	340,200
2/21/2017	NR	5000	NR			
3/8/2017	NR	10000	NR			
3/10/2017	NR	4000	NR			
3/14/2017	NR	10000	NR			
3/15/2017	NR	4000	NR			
3/16/2017	NR	1250	NR			
3/17/2017	NR	5000	NR			
5/16/2017	1	2000	20			
5/17/2017	3	15000	NR			
5/22/2017	1	5000	NR			
5/23/2017	1	2800	20			
5/24/2017	1	5000	NR			
5/30/2017	1	3500	10			
6/6/2017	1	3100	20			
6/8/2017	2	5800	20			
6/13/2017	1	2900	30			
6/15/2017	1	3000	10			
6/20/2017	1	2000	10			
6/22/2017	1	3000	20			
6/27/2017	2	5500	40			
6/29/2017	1	2500	10			
7/5/2017	2	5600	10			
7/7/2017	1	3000	20			
7/11/2017	1	3000	10			
7/14/2017	1	3000	10			
7/18/2017	1	2500	10			
7/20/2017	1	3000	10			

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)
7/27/2017	2	4500	10
8/3/2017	2	5000	20
8/4/2017	1	3000	20
8/9/2017	1	3000	25
8/16/2017	1	2000	10
8/25/2017	1	1500	50
8/31/2017	1	2000	40
9/7/2017	2	5200	80
9/15/2017	2	5500	100
9/20/2017	1	3800	100
9/26/2017	1	3800	10
10/4/2017	1	3500	100
10/12/2017	1	2800	95
10/19/2017	1	3000	100
10/26/2017	1	2500	100
11/1/2017	1	3000	100
11/7/2017	1	3000	100
11/15/2017	2	5500	100
11/22/2017	1	2000	100
11/28/2017	1	2000	50
12/4/2017	1	1500	100
12/14/2017	1	1500	50
12/19/2017	1	2500	100
12/27/2017	1	2000	50
1/4/2018	1	2800	25
1/9/2018	2	7500	9
1/15/2018	1	2500	20
1/23/2018	1	3800	9
1/31/2018	1	2500	9
2/2/2018	1	2500	9
2/13/2018	1	2000	9
2/21/2018	1	2080	20
3/6/2018	1	1500	19
3/13/2018	1	1500	9
3/22/2018	1	1500	20
	0	0	0
5-Jul-18	1	1800	36
12-Jul-18	1	2000	100
20-Jul-18	1	2000	40
25-Jul-18	1	1800	36

Loads	Oil/water mixture	oil
54	194,550	1,890

2017 Totals

# of loads	water/oil mixture	oil
13	32,180	208
0	0	0

1st Qtr 2018

2nd Qtr 2018

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
27-Jul-18	1	1800	36				
7-Aug	1	1900	38				
17-Aug-18	1	2000	80				
22-Aug-18	1	1800	72				
24-Aug-18	1	500	20				
30-Aug-18	1	500	20				
7-Sep-18	1	2000	20				
13-Sep-18	1	1500	30				
14-Sep-18	1	2000	40				
19-Sep-18	1	1500	30				
26-Sep-18	1	1500	30	3rd Qtr 2018	# of loads	water/oil mixture	oil
28-Sep-18	1	1500	30		16	26,100	658
Project Totals	129.5	564,930	2,048				

Totals for oil only includes data since May 2017



**Marathon
Petroleum Company LP**

January 31, 2019

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

**RE: Response to Approval With Modifications
Hydrocarbon Seep Interim Measures 2018 2nd Quarter Status
Report
Marathon Petroleum Company LP, Gallup Refinery
(Formerly Western Refining Southwest, Inc.)
EPA ID# NMD000333211
HWB-WRG-18-006**

Dear Mr. Kieling:

This letter provides responses to comments contained in the December 2018 Approval with Modifications letter issued by the New Mexico Environmental Department (NMED).

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. Brian Moore at 505-726-9745.

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,

A handwritten signature in cursive script that reads "R. Scott Hanks".

Robert S. Hanks
Refinery General Manager
Marathon Petroleum Company – Gallup Refinery

Cc: C. Chavez, OCD (via email)

92 Giant Crossing Road
Jamestown, NM 87347



**Marathon
Petroleum Company LP**

January 31, 2019

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

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Hydrocarbon Seep Interim Measures 2018 2nd Quarter Status
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Robert S. Hanks
Refinery General Manager
Marathon Petroleum Company – Gallup Refinery

Cc: C. Chavez, OCD (via email)

92 Giant Crossing Road
Jamestown, NM 87347

NMED Comment 1

Five photographs of the retention ditch are included in the Response. Provide a figure showing each location where the photographs were taken in a response letter. The figure must also include the locations of 1) the retention ditch, 2) the area where hydrocarbon seeps were initially observed in June 2013 and 3) the areas where related contaminated soils were previously excavated.

MPC Response 1

The requested figure is attached. The photo locations are numbered and an updated copy of the previously submitted photos with numbering is also included.

NMED Comment 2

The third photograph shows the surface soils contaminated with hydrocarbons. Discuss whether there are plans to address separate phase hydrocarbon (SPH)-saturated soils. If the Permittee already has an approved work plan to remove the soils, provide information regarding the soil removal in either a status report or new interim measures report. Otherwise, submit a soil removal work plan for NMED review and approval.

MPC Response 2

Although there has already been some soil removal in the area, MPC is not prepared to implement a remedy at the site until such time as the seeps have ceased to receive hydrocarbons. At that time, MPC will evaluate remedy options for the area and submit a plan to the NMED for review and approval.

As indicated in Comment 4 below, the current plan is to leave the retention ditches open to collect free hydrocarbons. Until the hydrocarbons are no longer seeping into the soil, there would seem to be little purpose in developing a remediation plan. Once the discharge of hydrocarbons has ceased, a remediation plan can be submitted for review and approval.

NMED Comment 3

The fourth photograph shows oil sheen on the water that may be recoverable. The Permittee must resume efforts to recover free product from the retention ditch.

MPC Response 3

A vacuum truck continues to be used to remove hydrocarbon and impacted water from the stand pipes and retention ditches. That effort has been ongoing as indicated in the tables attached to the quarterly reports, with some short-term interruptions due to lack of accumulation of SPH in the retention ditches.

NMED Comment 4

The Permittee's response to NMED *Disapproval* Comment 2 states, "[o]verall, the

measured thickness of SPH has decreased in most wells with the exception of MKTF-06..." A table showing fluid level measurements (2016 through 3rd Quarter 2018) for MKTF wells in the area of the sumps and retention ditch that contained SPH is included in the Response. The data suggest that the Permittee's observation is correct and the SPH within the soil matrix may be gradually decreasing since 2016. However, significant and sudden reduction in the recovered SPH volume from the retention ditch during the second quarter of 2018 is not supported by the data. The photographs included in the Response also suggest that the hydrocarbons are still seeping into the retention ditch. The Permittee's response to NMED *Disapproval* Comment 1 states that the current plan is to leave the retention ditch open to monitor whether any recoverable hydrocarbons returns to the ditch. NMED concurs with the Permittee's plan.

MPC Response 4

No comment.

NMED Comment 5

The Permittee's response to NMED *Disapproval* Comment 3 states, "[w]e believe that implementation of that Investigation Work Plan [for the Sanitary Lagoon Investigation] will address this comment [requesting the investigation to determine whether the hydrocarbon seep area coincides with the location of the underground sewer pipe]." In the Sanitary Lagoon Investigation Report, provide a discussion that addresses NMED *Disapproval* Comment 3.

MPC Response 5

A discussion will be included in the report.

Site Features Map and Photos



Photo 1

Retention Pond 7

Retention Pond 4

Retention Pond 6

Retention Pond 5

Photo 2

Retention Pond 3

Photo 4

Photo 3

Retention Pond 2

Retention Pond 1

Photo 5

3. Excavation Site

2. Original Discovery of Seep

PHOTOS OF RETENTION DITCH LOCATED NORTH OF HYDROCARBON SEEP

PHOTOS PROGRESS FROM LOWER (NORTHERN) END TO HIGHEST (SOUTHERN) END OF DITCH



Photo No. 1 of lowermost (northern) end of retention ditch. Oil stained vegetation shown around edges of ditch but no recoverable product on water.



Photo No. 2: Looking south along retention ditch, midway between north and south ends. Some hydrocarbon staining along perimeter of ditch, but very little hydrocarbon present on water. Location of concentrated hydrocarbon discharge at upper (southern) end of this ponded area.



Photo No. 3 of location with concentrated discharge of hydrocarbons midway along retention ditch. Looking west, midway along retention ditch.



Photo No. 4 of pond along retention ditch immediately downstream from concentrated hydrocarbon discharge point. Photo taken looking north. Very little potentially recoverable hydrocarbon present on water.



Photo No. 5: Uppermost (southern) end of retention ditch looking north.



**Marathon
Petroleum Company LP**

January 31, 2019

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

**RE: Hydrocarbon Seep Interim Measures 2018 4th Quarter Status Report
Marathon Petroleum Company LP, Gallup Refinery
(Formerly Western Refining Southwest, Inc.)
EPA ID# NMD000333211
HWB-WRG-18-006**

Dear Mr. Kieling:

Attached please find the Hydrocarbon Seep Interim Measures 2018 Fourth Quarter Status Report.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. Brian Moore at 505-726-9745.

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,

A handwritten signature in cursive script that reads 'Robert S. Hanks'.

Robert S. Hanks
Refinery General Manager
Marathon Petroleum Company – Gallup Refinery

Cc: C. Chavez (OCD)

92 Giant Crossing Road
Jamestown, NM 87347



**Marathon
Petroleum Company LP**

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Robert S. Hanks
Refinery General Manager
Marathon Petroleum Company – Gallup Refinery

Cc: C. Chavez (OCD)

92 Giant Crossing Road
Jamestown, NM 87347

**QUARTERLY STATUS REPORT
HYDROCARBON SEEP INTERIM MEASURES
WESTERN REFINING SOUTHWEST, INC – GALLUP REFINERY
Fourth Quarter 2018**

Activities conducted during fourth quarter 2018

- Source Control – Marathon continued to recover groundwater from the standpipe sumps (S1 - S6), but no measurable separate-phase hydrocarbon (SPH) was recorded. Approximately 68,400 gallons of groundwater were recovered during the fourth quarter, which is similar to the recovery of the previous quarter of 89,800 gallons.

At the retention ditch, approximately 610 gallons of SPH was recovered during the fourth quarter along with 20,500 gallons of water. Approximately 658 gallons of SPH was recovered during the third quarter along with 25,442 gallons of water. The recovery during the fourth quarter at the retention ditch is similar to the previous quarter recovery volumes.

- Source Identification – An Investigation Work Plan (IWP) was submitted in the third quarter for Area of Concern (AOC) 35, which includes the area around the Marketing Tanks and the Truck Loading Racks. Currently waiting on approval of the AOC 35 IWP.

Activities planned for first quarter 2019

- Source Control – Marathon will continue current recovery operations at the standpipe sumps and the retention ditch using a vacuum truck to pump SPH and groundwater from each of the sumps and the downstream retention ditch.

Standpipe and Retention Ditch Recovery Records

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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				
12/24/2013	57	4890	4947	2013 Totals	hydrocarbon recovered	water pumped	total fluid pumped
1/2/2014	88	4687	4775		2,705	111,045	113,750
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				
2/25/2014	57	4890	4947				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
11/7/2014	32	3320	3352

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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	2014 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
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				
12/31/2015	54	5114	5168	2015 Totals	hydrocarbon recovered	water pumped	total fluid pumped
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				
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				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
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
9/29/2016	109	3891	4000
10/5/2016	280	5180	5460
10/7/2016	280	5180	5460
10/10/2016	280	5180	5460
10/20/2016	109	3891	4000
10/26/2016	50	2450	2500
10/28/2016	109	3891	4000
11/1/2016	109	3891	4000
11/3/2016	109	3891	4000
11/8/2016	109	3891	4000
11/10/2016	109	3891	4000

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/14/2016	109	3891	4000				
11/23/2016	109	3891	4000				
12/6/2016	109	3891	4000				
12/8/2016	109	3891	4000				
12/13/2016	303	4697	5000				
12/15/2016	109	3891	4000				
12/20/2016	109	3891	4000				
12/27/2016	400	4600	5000				
12/29/2016	109	3891	4000	2016 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					8,668	357,619	366,287
1/10/2017	109	3891	4000				
1/20/2017	167	4333	4500				
2/2/2017	109	3891	4000				
2/6/2017	231	4769	5000				
2/17/2017	231	4769	5000				
2/20/2017	109	3891	4000				
3/1/2017	109	4891	5000				
3/6/2017	167	4833	5000				
3/9/2017	109	3891	4000				
3/14/2017	231	4769	5000				
5/8/2017	303	4697	5000				
5/12/2017	167	3833	4000				
5/15/2017	167	3833	4000				
5/16/2017	10	5590	5600				
5/18/2017	10	3090	3100				
5/23/2017	40	5560	5600				
5/24/2017	232	4768	5000				
5/30/2017	20	5980	6000				
6/1/2017	10	2990	3000				
6/6/2017	100	7900	8000				
6/8/2017	10	5990	6000				
6/13/2017	10	5990	6000				
6/15/2017	50	5950	6000				
6/20/2017	10	5990	6000				
6/22/2017	10	5990	6000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)
6/27/2017	20	5980	6000
6/29/2017	10	5990	6000
7/5/2017	10	2990	3000
7/7/2017	50	8950	9000
7/11/2017	10	5990	6000
7/14/2017	10	5990	6000
7/17/2017	10	2990	3000
7/18/2017	20	2980	3000
7/20/2017	50	8950	9000
7/26/2017	75	5925	6000
7/27/2017	50	2950	3000
8/2/2017	75	5425	5500
8/4/2017	10	3490	3500
8/8/2017	25	5475	5500
8/10/2017	20	3480	3500
8/16/2017	15	4485	4500
8/21/2017	50	7950	8000
8/25/2017	25	2975	3000
8/29/2017	50	5950	6000
8/31/2017	20	2980	3000
9/6/2017	15	5985	6000
9/8/2017	15	2985	3000
9/12/2017	25	5975	6000
9/14/2017	75	3925	4000
9/19/2017	49	2951	3000
9/26/2017	49	3751	3800
9/28/2017	25	3775	3800
10/4/2017	50	3450	3500
10/6/2017	45	3455	3500
10/10/2017	25	5975	6000
10/12/2017	50	2950	3000
10/17/2017	50	5450	5500
10/19/2017	9	2841	2850
10/24/2017	19	5981	6000
10/26/2017	49	2451	2500
11/1/2017	49	5951	6000
11/7/2017	50	2950	3000

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)				
11/9/2017	24	4976	5000				
11/14/2017	9	5991	6000				
11/15/2017	9	2991	3000				
11/21/2017	9	5991	6000				
11/22/2017	9	2991	3000				
11/28/2017	9	5991	6000				
11/30/2017	9	2991	3000				
12/4/2017	25	7575	7600				
12/7/2017	25	5975	6000				
12/12/2017	19	7581	7600				
12/14/2017	9	2991	3000				
12/19/2017	9	2991	3000				
12/21/2017	49	5951	6000				
12/27/2017	49	5951	6000	2017 Totals	hydrocarbon recovered	water pumped	total fluid pumped
					4,238	365,712	369,950
1/2/2018	9	7591	7600				
1/4/2018	9	3791	3800				
1/9/2018	9	3791	3800				
1/11/2018	9	7591	7600				
1/15/2018	19	3781	3800				
1/17/2018	19	7581	7600				
1/23/2018	9	3791	3800				
1/31/2018	9	2991	3000				
2/2/2018	9	2991	3000				
2/9/2018	9	5991	6000				
2/13/2018	9	3791	3800				
2/15/2018	9	7591	7600				
2/21/2018	9	5991	6000				
2/27/2018	0	3800	3800				
3/1/2018	0	3000	3000				
3/6/2018	0	3000	3000				
3/8/2018	4	3796	3800				
3/13/2018	4	2996	3000				
3/16/2018	4	2996	3000				

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)					
3/20/2018	4	2996	3000	1st Qtr 2018 Totals	hydrocarbon recovered	water pumped	total fluid pumped	
3/22/2018	0	3000	3000		153	92,847	93,000	
4/3/2018	3	2997	3000					
6/6/2018	3	3097	3100					
6/8/2018	3	3097	3100					
6/12/2018	0	3800	3800					
6/14/2018	0	3000	3000					
6/20/2018	0	3500	3500					
6/21/2018	0	3000	3000					
6/26/2018	0	3000	3000	2nd Qtr 2018 Totals	hydrocarbon recovered	water pumped	total fluid pumped	
6/28/2018	0	3000	3000		9	28,491	28,500	
2-Jul-18	0	2800	2800					
5-Jul-18	0	3000	3000					
10-Jul-18	0	3000	3000					
12-Jul-18	0	3000	3000					
18-Jul-18	0	3000	3000					
19-Jul-18	0	3000	3000					
24-Jul-18	0	3000	3000					
26-Jul-18	0	3000	3000					
31-Jul-18	0	3000	3000					
2-Aug	0	3000	3000					
7-Aug	0	3000	3000					
9-Aug-18	0	3800	3800					
14-Aug-18	0	3800	3800					
16-Aug-18	0	3100	3100					
20-Aug-18	0	3800	3800					
22-Aug-18	0	3800	3800					
27-Aug-18	0	3800	3800					
29-Aug-18	0	3100	3100					
5-Sep-18	0	3000	3000					
7-Sep-18	0	3000	3000					
10-Sep-18	0	4800	4800					
12-Sep-18	0	6000	6000					
17-Sep-18	0	3000	3000					
19-Sep-18	0	6000	6000					

Marathon Petroleum Company - Gallup Refinery

Stand Pipes Recovery Records

DATE	hydrocarbon recovered (gallons)	water pumped (gallons)	total fluid pumped (gallons)		hydrocarbon recovered	water pumped	total fluid pumped
24-Sep-18	0	3000	3000				
26-Sep-18	0	3000	3000	3rd Qtr 2018 Totals	0	89,800	89,800
1-Oct	0	3800	3800				
8-Oct-18	0	3500	3500				
16-Oct-18	0	3000	3000				
18-Oct-18	0	3500	3500				
23-Oct-18	0	3000	3000				
27-Oct-18	0	3100	3100				
1-Nov-18	0	3000	3000				
15-Nov-18	0	3000	3000				
20-Nov-18	0	3100	3100				
23-Nov-18	0	3200	3200				
27-Nov-18	0	3000	3000				
28-Nov-18	0	3000	3000				
3-Dec-18	0	3400	3400				
6-Dec-18	0	3100	3100				
10-Dec-18	0	3000	3000				
14-Dec-18	0	2900	2900				
18-Dec-18	0	2900	2900				
21-Dec-18	0	2500	2500				
24-Dec-18	0	3000	3000				
27-Dec-18	0	3000	3000				
28-Dec-19	0	3200	3200		hydrocarbon recovered	water pumped	total fluid pumped
31-Dec-19	0	3200	3200	4th Qtr 2018 Totals	0	68,400	68,400
Project Totals	19,009	1,481,220	1,500,231				

* two loads were removed on this date

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

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)
4/1/2016	1	5460	NR
4/27/2016	1	5460	NR
4/28/2016	1	5460	NR
5/5/2016	1	5460	NR
5/9/2016	0.75	4200	NR
5/13/2016	1	5460	NR
5/24/2016	1	5460	NR
5/26/2016	0.5	2730	NR
5/27/2016	1	5460	NR
6/1/2016	1	5460	NR
6/2/2016	1	5460	NR
6/6/2016	1	5460	NR
6/8/2016	1	5460	NR
6/9/2016	0.5	2730	NR
6/14/2016	1	5460	NR
6/16/2016	1	5460	NR
6/23/2016	1	5460	NR
6/29/2016	0.5	2730	NR
7/6/2016	1	5460	NR
7/8/2016	1	5460	NR
7/13/2016	1	5460	NR
7/21/2016	1	5460	NR
7/27/2016	1	5460	NR
8/3/2016	1	5460	NR
8/9/2016	2	10920	NR
8/10/2016	0.5	2730	NR
8/16/2016	1	5460	NR
8/17/2016	1	5460	NR
8/18/2016	0.5	2730	NR
8/23/2016	2	10920	NR
8/24/2016	1	5460	NR
8/26/2016	1	5460	NR
8/30/2016	1	5460	NR
9/1/2016	2	10920	NR
9/8/2016	2	10920	NR
9/14/2016	2	10920	NR
10/6/2016	1	5460	NR
10/7/2016	1	5460	NR
10/10/2016	2	10920	NR
10/20/2016	1	5460	NR
10/24/2016	1	5460	NR

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)			
10/26/2016	2	10920	NR			
10/27/2016	1	5460	NR			
10/31/2016	2	10920	NR			
11/8/2016	2	10920	NR			
11/10/2016	3	16380	NR			
11/11/2016	0.77	4200	NR			
11/15/2016	0.5	2730	NR			
11/16/2016	1	5460	NR			
12/6/2016	1	5460	NR			
12/8/2016	1	5460	NR			
12/14/2016	1	5460	NR			
12/15/2016	3	15120	NR	2016 Totals	LOADS	water/oil mixture
					62.52	340,200
2/21/2017	NR	5000	NR			
3/8/2017	NR	10000	NR			
3/10/2017	NR	4000	NR			
3/14/2017	NR	10000	NR			
3/15/2017	NR	4000	NR			
3/16/2017	NR	1250	NR			
3/17/2017	NR	5000	NR			
5/16/2017	1	2000	20			
5/17/2017	3	15000	NR			
5/22/2017	1	5000	NR			
5/23/2017	1	2800	20			
5/24/2017	1	5000	NR			
5/30/2017	1	3500	10			
6/6/2017	1	3100	20			
6/8/2017	2	5800	20			
6/13/2017	1	2900	30			
6/15/2017	1	3000	10			
6/20/2017	1	2000	10			
6/22/2017	1	3000	20			
6/27/2017	2	5500	40			
6/29/2017	1	2500	10			
7/5/2017	2	5600	10			
7/7/2017	1	3000	20			
7/11/2017	1	3000	10			
7/14/2017	1	3000	10			
7/18/2017	1	2500	10			

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
7/20/2017	1	3000	10				
7/27/2017	2	4500	10				
8/3/2017	2	5000	20				
8/4/2017	1	3000	20				
8/9/2017	1	3000	25				
8/16/2017	1	2000	10				
8/25/2017	1	1500	50				
8/31/2017	1	2000	40				
9/7/2017	2	5200	80				
9/15/2017	2	5500	100				
9/20/2017	1	3800	100				
9/26/2017	1	3800	10				
10/4/2017	1	3500	100				
10/12/2017	1	2800	95				
10/19/2017	1	3000	100				
10/26/2017	1	2500	100				
11/1/2017	1	3000	100				
11/7/2017	1	3000	100				
11/15/2017	2	5500	100				
11/22/2017	1	2000	100				
11/28/2017	1	2000	50				
12/4/2017	1	1500	100				
12/14/2017	1	1500	50				
12/19/2017	1	2500	100				
12/27/2017	1	2000	50				
				2017 Totals	54	194,550	1,890
1/4/2018	1	2800	25				
1/9/2018	2	7500	9				
1/15/2018	1	2500	20				
1/23/2018	1	3800	9				
1/31/2018	1	2500	9				
2/2/2018	1	2500	9				
2/13/2018	1	2000	9				
2/21/2018	1	2080	20				
3/6/2018	1	1500	19				
3/13/2018	1	1500	9				
3/22/2018	1	1500	20	1st Qtr 2018	13	32,180	208
	0	0	0	2nd Qtr 2018	0	0	0
5-Jul-18	1	1800	36				

Marathon Petroleum Company - Gallup Refinery
Retention Ditch Recovery Records

DATE	LOADS	water/oil mixture (gallons)	oil (gallons)				
12-Jul-18	1	2000	100				
20-Jul-18	1	2000	40				
25-Jul-18	1	1800	36				
27-Jul-18	1	1800	36				
7-Aug-18	1	1900	38				
17-Aug-18	1	2000	80				
22-Aug-18	1	1800	72				
24-Aug-18	1	500	20				
30-Aug-18	1	500	20				
7-Sep-18	1	2000	20				
13-Sep-18	1	1500	30				
14-Sep-18	1	2000	40				
19-Sep-18	1	1500	30				
26-Sep-18	1	1500	30	3rd Qtr 2018	# of loads	water/oil mixture	oil
28-Sep-18	1	1500	30		16	26,100	658
16-Oct-18	1	2200	220				
18-Oct-18	1	2000	40				
23-Oct-18	1	1500	30				
1-Nov-18	1	2500	50				
15-Nov-18	1	2500	50				
23-Nov-18	1	2600	52				
6-Dec-18	1	2600	52				
10-Dec-18	1	2000	40				
11-Dec-18	1	300	30				
14-Dec-18	1	2300	46	4th Qtr 2018	# of loads	water/oil mixture	oil
					10	20,500	610
Project Totals	154.5	611,530	3,316				

Totals for oil only includes data since May 2017



February 4, 2019

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: RESPONSE TO DISAPPROVAL
INVESTIGATION WORK PLAN UP-GRADIENT MKTF WELLS
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD00033211
HWB-WRG- 18-011**

Dear Mr. Kieling:

Marathon Petroleum Company ("Marathon") has revised the referenced Investigation Work Plan pursuant to your comments received November 16, 2018. Your comments are shown below followed by Marathon's response.

NMED Comment 1

In the *Executive Summary*, page E1, the Permittee states, "[four new wells are proposed; one well to the south of monitoring well MKTF-35, a new well to the east of MKTF-37, one well to the east of MKTF-39, and the fourth well on the north side of crude Tank 101." Comment 24 in the NMED's *Disapproval for Interim Measures Report Hydrocarbon Seep Area*, dated February 1, 2018 directs the Permittee to investigate the subsurface and groundwater conditions north of Tank 102, rather than Tank 101. The Permittee proposed to install a well north of Tank 101; however, in order to address the comment more accurately, the proposed well must be installed north of Tank 102 and south of Tank 101. A recommended well location is shown on Figure A below:

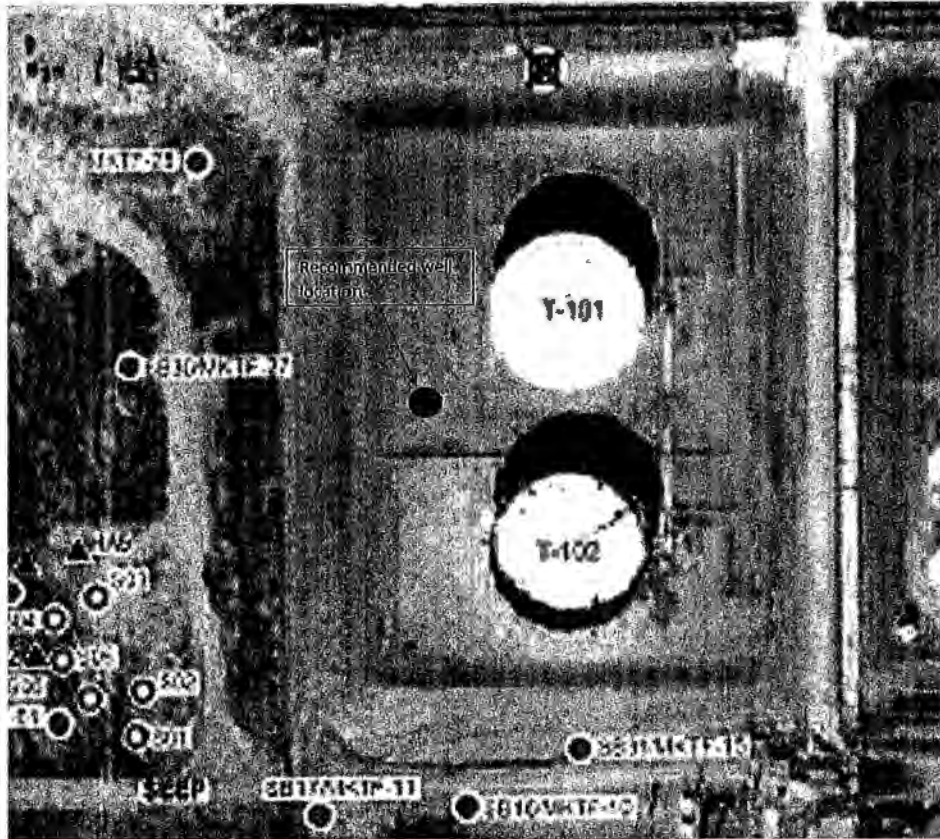


Figure A: Recommended Well Location

The Permittee may adjust the final well location shown on Figure A as necessary to avoid underground pipelines and structures but must attempt to install the well as close as possible to NMED's recommended location. The Permittee still must install the proposed groundwater monitoring well north of Tank 101 as shown in Figure 5, *Proposed Well Locations Map*. Revise the Work Plan accordingly.

Marathon Response:

The additional well location has been added as requested (see Figure 7) and discussion on pages E-1, 1-1, and 4-1.

NMED Comment 2

In Section 2.1, *Hydrocarbon Seep Area*, page 2-2, the Permittee states, "[t]he chemical analyses from groundwater samples at the MKTF wells are summarized in Table 1." Table 1 is not included in the Work Plan. The referenced table appears to be "Table 2, *Groundwater Analyses Summary*". Resolve the discrepancy in the revised Work Plan.

Marathon Response:

The table that includes the groundwater analyses summary was mislabeled as Table 2. The table header has been revised to Table 1 Groundwater Analyses Summary.

NMED Comment 3

In Section 2.1, *Hydrocarbon Seep Area*, page 2-2, the Permittee states, "Figures 4 and 5 show the distribution of benzene and MTBE in groundwater, which appear to have sources in the vicinity of the leaking process sewer line discussed above and the main truck loading racks." Separate-phase

hydrocarbon (SPH) may also be an indication of source areas. Include a figure showing the distribution of SPH and provide a discussion of SPH in the revised Work Plan. In addition, the figures included in the Work Plan were prepared based on 2015 data, which are outdated. Since review of more recent data will help the Permittee to propose more effective investigation and also help NMED to provide more appropriate direction to execute the Work Plan, the most recent data that has previously been reported to NMED must be used in the figures. Prepare the figures using newer data in the revised Work Plan.

Marathon Response:

New Figure 6 has been added to include SPH measurements. A discussion on the presence of SPH has been added to Section 2.1 (page 2-2). Figures 4 and 5 have been updated to include “the most recent data that has previously been reported to NMED.” This includes data presented in the 2017 Annual Groundwater Monitoring Report.

NMED Comment 4

In Section 4.1, *Plume Delineation*, page 4-1, the Permittee states, “[i]t is noted that the new locations east of MKTF-37 and MKTF-39 will actually be physically closer to the process area than the either the truck loading rack or the process sewer line that was found to be leaking.” Discuss the implications of installing groundwater monitoring wells closer to the process area in the revised Work Plan.

Marathon Response:

The requested discussion has been added to Section 4.1, page 4-1.

NMED Comment 5

In Section 4.2, *Soil Sample Field Screening and Logging*, page 4-1, the Permittee states, “[v]isual screening includes examination of soil samples for evidence of staining caused by petroleum related compounds or other substances that may cause staining of natural soils such as elemental sulfur or cyanide compounds.” The proposed analyses for soil and groundwater samples are limited to VOCs, SVOCs, TPH-GRO, DRO and ORO, and metals. If any signs of analytes that may not be included in above analytical suite are observed (e.g., elemental sulfur), revise the Work Plan to propose to include appropriate additional analyses that address the potential impacts.

Marathon Response:

As specified in Section 4.6, the soil and groundwater samples are to be analyzed for cyanide, in addition, groundwater samples will be analyzed for sulfate. No analysis has been included for elemental sulfur in soils, as there are no soil screening levels established by NMED in the *Risk Assessment Guidance for Site Investigations and Remediation* (March 2017) with which to compare any chemical analyses. A general provision has been added to Section 4.6, page 4-7 to allow for inclusion of additional analyses based on field screening results.

NMED Comment 6

In Section 4.2, *Soil Sample Field Screening and Logging*, page 4-3, the Permittee states, “[e]quipment blanks will be collected from all sampling apparatus at a frequency of one per day.” The Permittee did not include field blanks for soil samples as a measure for quality control and quality assurance (QA/QC). Permit Section IV.J.2.d.vii (Soil, Rock, and Sediment Sample Types) requires collection of field blanks at a frequency of one per day. Provide a justification for why field blanks are not proposed for QA/QC on this investigation or propose the additional QA/QC measure in the revised Work Plan.

Marathon Response:

The removal of field blanks from the Investigation Work Plans was previously discussed and approved by NMED. All of the recent Investigation Work Plans reviewed and approved by NMED have contained the exact same provisions regarding collection of equipment blanks and no field blanks. The reason the field blanks were omitted is because the equipment blanks are capable of detecting the same types of possible interference as would be detected in field blanks with the possible addition of interference related to decontamination of sampling equipment. The methods used to collect both types of samples are described below. Any contamination identified in a field blank can similarly be detected in an equipment blank.

Rinsate/Equipment Blank: A sample of analyte free water poured over or through decontaminated field sampling equipment and into the container in the field prior to the collection of environmental samples.

Purpose: Assess the adequacy of the decontamination process. Assess contamination from the total sampling, sample preparation and measurement process, when decontaminated sampling equipment is used to collect samples.

Field Blank: A sample of analyte free water poured into the container in the field, preserved and shipped to the laboratory with field samples. Purpose: Assess contamination from field conditions during sampling.

NMED Comment 7

In Section 4.3, *Groundwater Sample Collection*, page 4-3, the Permittee states, "[g]roundwater samples will be collected from the new monitoring wells within 24 hours of the completion of well purging using disposal hailers." SPH may be present in the wells. If SPH is present, propose to gauge the well for SPH thickness and collect a SPH sample for hydrocarbon fingerprint analysis in the revised Work Plan.

Marathon Response:

An additional provision for the collection and analysis of SPH samples has been added to Section 4.3, page 4-3.

NMED Comment 8

In Section 4.7, *Data Quality Objectives*, page 4-8, the Permittee states, "[m]ethod detection limits should be 20% or less of the applicable background levels, cleanup standards and screening levels." If there are analytes where the method detection limits are outside of the acceptable ranges, all of these analytes must be retained in the uncertainty discussion in the investigation report. No revision to the Work Plan is necessary.

Marathon Response:

The affected analytes will be retained in the uncertainty discussion.

NMED Comment 9

In Section 4, *Scope of Services*, the Permittee did not discuss how the depth of the screened interval in each proposed well was determined. Include a discussion regarding how the depths of the proposed screened intervals were determined in the revised Work Plan. Since screened intervals in several existing MKTF wells did not intercept water table, the Permittee must ensure that the screen depths of the proposed wells are appropriate to intersect the water table. In addition, the total depths of proposed borings and wells were not discussed. Since the leaking sanitary sewer line was recently repaired, the depths to water may have changed. Propose to measure groundwater depths in the

vicinity of the proposed wells to make appropriate decisions prior to installation of the wells, as necessary. Include the discussion in the revised Work Plan.

Marathon Response:

There are no depths for the screened intervals included in the Work Plan. It is not possible to predict the depths of the screen intervals prior to drilling the borings due to the irregular nature of the subsurface deposits at the Gallup Refinery. In attempt to address this comment, additional text has been added to Section 4 (page 4-3) to describe how screen intervals are selected after the soil boring has been drilled and logged. The total depth of the soil borings and final well completions were not discussed in the Work Plan for the same reason; the irregular subsurface conditions make it impossible to predict total well depths in advance. Screen interval depths and well depths have not been included in any of the previous Investigation Work Plans submitted under the RCRA Permit. However, additional text has been added on page 4-1 to note the wells will be completed in the Alluvium/Chinle Interface, as described in the Annual Groundwater Monitoring Reports.

Regarding the recent repairs to the sanitary sewer line and groundwater levels, none of the proposed well locations are likely to be affected by the repairs. All of the proposed well locations are well up-gradient of sanitary line with the possible exception of the southernmost well, which is up-gradient to cross-gradient to the sanitary line and over 300 feet away from the line. Regardless, potentiometric surface elevations from many past quarterly sampling events are available and used to help predict possible water levels in new wells. This is noted in new text added on page 4-3.

NMED Comment 10

In Section 4, *Scope of Services*, soil borings designed to collect soil samples appear to be converted to groundwater monitoring wells; however, the text of the Work Plan does not clearly state the procedure. For example, Section 4.2.1, *Drilling Activities*, discusses the procedures regarding installation of the soil borings and well construction. However, it is not clear from the text of the Report whether the soil borings are proposed in order to collect soil samples, or to install wells or both. Provide a more detailed description of the investigative procedure in the revised Work Plan. In addition, Section 4.2.1 states, "[s]lotted (0.01 inch) PVC well screen will be placed at the bottom of the borings and will extend for 10 feet." During the meeting between the Permittee and NMED/OCD on September 19, 2018, well screen lengths were discussed related to installing wells across the water table and the issue with tight clays at the refinery. Suggestions were made to try longer well screens, installation of well screens longer than 10 feet may be used for this project to ensure that the screens intersect the water table. Include the measure in the revised Work Plan.

Marathon Response:

This Work Plan was prepared at the explicit request of NMED to install additional monitoring wells in the "MKTF Area." This is noted in the first paragraph of the Executive Summary, *"This Investigation Work Plan has been prepared pursuant to the terms and conditions of the facility Resource Conservation and Recovery Act (RCRA) Post-Closure Care Permit and 20.4.1.500 New Mexico Administrative Code. It includes the installation of additional monitoring wells, as specified by the New Mexico Environment Department (NMED) in a comment letter (dated February 1, 2018) regarding the 2016 Revised Interim Measures Report Hydrocarbon Seep Area."* The second paragraph continues discussing only the installation of new monitoring wells and collection of groundwater samples. Section 1.0 Introduction similarly describes the purpose of the Work Plan, *"This investigation work plan addresses the installation of four additional groundwater monitoring wells in the area generally up-gradient of the Hydrocarbon Seep Area."* The only reason the Work Plan includes the collection of soil samples is because NMED directed us to collect soil samples from all soil borings we complete in this area. See comment below from your letter of February 1, 2018 on the 2016 Hydrocarbon Seep Area Interim Measures Report. NMED Comment 9.

On page 2-7, the Permittee states, "[s]oil samples were not collected as the purpose of the wells was to define the impacts to groundwater."

1. NMED acknowledges the Permittee's intention of focusing on identification of primary sources and associated groundwater impacts; however, the Permittee must approach each corrective measure more holistically. Observations pertaining to hydrocarbon odor and PID readings are useful for site delineation. But they are insufficient and incomplete unless associated soil samples are also collected for laboratory analysis. Include soil sampling for laboratory analyses for every future soil boring or test pit installation in the area of the seep.

To address this potential confusion, additional text has been added to both the Executive Summary (page E1) and page 4-2 to clarify that soil samples are being collected only due to NMED's earlier direction that soil samples must be collected from all soil borings completed in this area. If we are not required to collect soil samples from borings installed for the primary purpose of well installations, then please inform us and the reference to collection of soil samples will be removed.

Additional discussion regarding well screen length has been added on page 4-3.

NMED Comment 11

In Section 5, *References*, some references are not found in the Work Plan (e.g., Geoscience Consultants, Ltd.). If some of the references are not used, remove them from the revised Work Plan; otherwise, indicate the page numbers where each reference was used.

Marathon Response:

The references to Geoscience Consultants, Ltd. and Western, 2013 have been removed from Section 5. A new reference to NMED 2017 screening levels has been added on page 4-8.

NMED Comment 12

Table 2 [sic], *Groundwater Analyses Summary*, presents historical concentrations of constituents in the groundwater samples collected from the relevant wells up to 2016, However, new data collected in 2017 and 2018 are not included in the table. Since review of recent data will help NMED to provide more appropriate direction to execute the Work Plan, new data must be provided. Prepare the table using new data in the revised Work Plan. See Comment 3.

Marathon Response:

The Groundwater Analyses Summary Table (with corrected Header of Table 1) has been updated to include analyses for 2017. This is consistent with the direction provided in referenced Comment 3, wherein we are directed to include "*the most recent data that has previously been reported to NMED.*" The chemical analyses for 2018 have not been compiled nor has data validation been completed.

NMED Comment 13

Table 2, *Fluid Level Measurements*, presents ground water level measurement data collected in 2017. Since newer data collected in 2018 are available, they must be included in the revised Work Plan. If gauging data after the leaking sanitary sewer line was repaired are available, include the data in the revised Work Plan.

Marathon Response:

The fluid level measurements in Table 2 have been updated to include the most recent measurements completed through the end of 2018.

Please find enclosed two new hard copies of the revised work plan and a CD that contains a redline-strikeout version of the work plan text and an electronic copy of the revised work plan. Please contact Brian Moore at 505-726-9745 if you have questions regarding this submittal.

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,



Robert S. Hanks
Refining General Manager
Marathon Petroleum Company – Gallup Refinery

cc K. Van Horn, NMED HWB
 M. Suzuki, NMED HWB
 C. Chavez, OCD
 L. King, EPA Region 6
 Brian Moore, Marathon Gallup Refinery

INVESTIGATION WORK PLAN UP-GRADIENT MKTF WELLS



**Marathon
Petroleum Company LP**

Gallup Refinery
Marathon Petroleum Company
Gallup, New Mexico

EPA ID# NMD000333211

AUGUST 2018

Revised JANUARY 2019

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Senior Geologist



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Figure 7 Proposed Monitoring Well Locations

Appendices

Appendix A Boring Logs

Appendix B Investigation Derived Waste Management Plan

List of Acronyms

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

Executive Summary

The Gallup Refinery, which is located 17 miles east of Gallup, New Mexico, has been in operation since the 1950s. This Investigation Work Plan has been prepared pursuant to the terms and conditions of the facility Resource Conservation and Recovery Act (RCRA) Post-Closure Care Permit and 20.4.1.500 New Mexico Administrative Code. It includes the installation of additional monitoring wells, as specified by the New Mexico Environment Department (NMED) in a comment letter (dated February 1, 2018) regarding the 2016 *Revised Interim Measures Report Hydrocarbon Seep Area*.

Five new wells are proposed; one well to the south of monitoring well MKTF-35, a new well to the east of MKTF-37, one well to the east of MKTF-39, one well to the northwest of crude tank 102, and the fifth well on the north side of crude Tank 101. Permanent wells will be installed at each location with groundwater samples collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), Skinner List metals (total and dissolved), iron, manganese, and major anions (e.g., carbonate, bicarbonate, sulfate, fluoride and chloride) and major cations (e.g., carbonate, bicarbonate, sulfate, fluoride and chloride). Soil samples will be collected and analyzed during drilling of the borings for the new monitoring wells, but the focus of the investigation is characterization of potential impacts to groundwater.

Section 1

Introduction

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

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

This investigation work plan addresses the installation of five additional groundwater monitoring wells in the area generally up-gradient of the Hydrocarbon Seep Area. Previous efforts to identify potential sources of the hydrocarbon seep and delineate the extent of the associated groundwater plume included the installation of 44 permanent monitoring wells with the MKTF designation. Wells MKTF-37 and MKTF-39 were drilled up-gradient of the two apparently most significant sources of the hydrocarbon seep, the main truck loading rack and a leak identified in the process sewer pipeline, respectively. One additional well will be installed to the east of each of these two locations. Well MKTF-35 was drilled to the south and cross-gradient of the main truck loading rack. One additional well will be drilled to the south of MKTF-35 to further define the extent of the plume in this cross-gradient direction. A new well is proposed to the north to crude Tank 101 to evaluate groundwater conditions to the north of the crude oil tanks. An additional well will also be installed northwest of crude tank 102 to evaluate for potential releases from the crude tanks. The investigation activities will be conducted in accordance with Section IV.H.5 of the Post-Closure Care Permit.

Section 2

Background

This section presents background information for the area of the refinery property near the hydrocarbon seep, which is located west of crude oil Tank 102, including a review of historical waste management activities to identify the following:

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

2.1 Hydrocarbon Seep Area

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 Divisions (NMOCD) with copy to the NMED. 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 activities focused on: (1) source identification, (2) source control measures, and (3) characterization of groundwater impacts.

Initial efforts in 2013 to identify the source of the hydrocarbons included the following actions and are more fully described in the 2016 *Revised Interim Measures Report Hydrocarbon Seep Area* (DiSorbo, 2016):

- Completion of 14 soil excavations with a backhoe;
- Distillation analyses of two hydrocarbon samples collected near the seep (Seep 1 and Seep 2);
- Dye tracer tests on the process sewer system;
- Completion of five hand-auger borings (HA-1 through HA-5) to the west and northwest of the seep location with temporary well completions;
- Installation of 22 soil borings with temporary well completions to the southeast of the seep location; and

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- Collection and laboratory analysis of one product sample and six groundwater samples from temporary well completions.

Subsequently, additional monitoring wells were added in 2014 with a total of 44 permanent monitoring wells (MKTF-1 through MKTF-44) installed to help identify source locations and delineate the extent of the associated groundwater plume. Two apparent significant sources were located, a section of leaking process sewer pipeline running south from near the bundle cleaning pad and the main truck loading racks (Figure 2). Two apparently smaller leaks in underground lines (slop oil and transmix) were identified near the leaking process sewer line and are discussed in the 2016 *Revised Interim Measures Report Hydrocarbon Seep Area* (DiSorbo, 2016). The chemical analyses from groundwater samples at the MKTF wells are summarized in Table 1.

As part of the characterization effort, wells were drilled up-gradient and cross-gradient to the major source areas to facilitate delineation of the associated plume. Wells MKTF-37, MKTF-38, and MKTF-39 are positioned up-gradient from the source areas (Figure 3). Well MKTF-35 is located south of and cross-gradient to the truck loading rack. Fluid level measurements from the MKTF wells are provided in Table 2.

Boring logs for the MKTF wells are provided in Appendix A. Figures 4 and 5 show the distribution of benzene and MTBE in groundwater, which appear to have sources in the vicinity of the leaking process sewer line discussed above and the main truck loading racks. Figure 6 shows the measurements of separate phase hydrocarbon (SPH), which is primarily present to the west and northwest of the truck loading rack and marketing tank farm.

Section 3

Site Conditions

3.1 Surface Conditions

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

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

3.2 Subsurface Conditions

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

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

the Petrified Forest Formation with prevailing flow from the southeast to the northwest, although localized areas may have varying flow directions (Figure 3). Fluid level measurements for wells in the immediate area are included in Table 2.

Section 4

Scope of Services

Five additional monitoring wells will be installed to facilitate delineation of groundwater plumes in the vicinity of the Hydrocarbon Seep Area and the associated sources. The investigation will commence upon approval of this investigation work plan by NMED.

4.1 Plume Delineation

As directed by NMED, five additional permanent monitoring wells will be completed to facilitate plume delineation near the previously identified sources of the hydrocarbon seep plume (Figure 7). The wells will be completed in the Alluvium/Chinle Group Interface zone. A permanent monitoring well will be installed to the south of MKTF-35. This location is anticipated to be cross-gradient to possibly slightly up-gradient of MKTF-35 to help define the extent of impacted groundwater away from the main truck loading rack to the south. A new permanent monitoring well will be installed east of MKTF-37 to evaluate groundwater conditions further to the east of the main truck loading rack. Well MKTF-37 is located up-gradient of the truck loading rack (Figure 3). An additional well will be drilled to the east of MKTF-39, which is located to the east of the process sewer line that was found to be leaking. It is noted that the new locations east of MKTF-37 and MKTF-39 will actually be physically closer to the process area than either the truck loading rack or the process sewer line that was found to be leaking. While these two wells will provide additional control up-gradient of the truck loading rack and the location where the process sewer line was leaking, it is possible that any detections in these wells may not be associated with the truck loading rack or process sewer line. The fourth new well is located to the north of the two crude oil storage tanks and will help to determine if any contaminants are migrating to the north from the area of the leaking process sewer line or any other releases in the area (e.g., slop oil line and transmix line). The fifth well is located to the northwest of crude tank 102 and should provide information on possible releases from the crude tanks.

4.2 Soil Sample Field Screening and Logging

Samples obtained from the soil borings will be screened in the field on 2.0 foot intervals for evidence of contaminants. Field screening results will be recorded on the exploratory boring logs. Field screening results will be used to aid in the possible selection of soil samples for laboratory analysis.

The primary screening methods include: (1) visual examination, (2) olfactory examination, and (3) headspace vapor screening for volatile organic compounds.

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

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

Although the focus of the investigation is characterization of impacts to groundwater, discrete soil samples will be retained for laboratory analyses from within the following intervals to address NMED's directive that soil samples must be collected from all borings completed in this area of the refinery:

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

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

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

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

4.2.1 Drilling Activities

Soil borings will be drilled using hollow-stem augers. The drilling equipment will be properly decontaminated before drilling each boring. The NMED will be notified as early as practicable if conditions arise or are encountered that do not allow the advancement of borings to the specified depths or at planned sampling locations. Appropriate actions (e.g., installation of protective surface casing or relocation of borings to a less threatening location) will be taken to minimize any negative impacts from investigative borings. Slotted (0.01 inch) PVC well screen will be placed in the borings and will extend for 10 feet, unless a longer screen length is necessary to screen across all saturated and likely transmissive zones while also extending above the static water level in the well. Water levels from nearby wells, where available, are used to help determine potential static water levels in new wells that may otherwise be difficult to determine during well installation due to very slow recovery rates observed in some wells. A 10/20 sand filter pack will be installed to two feet over the top of the well screen.

4.3 Groundwater Sample Collection

Groundwater samples will be collected from the new monitoring wells within 24 hours of the completion of well purging using disposal bailers. Alternatively, well sampling may also be conducted in accordance with the NMED's Position Paper *Use of Low-Flow and other Non-Traditional Sampling Techniques for RCRA Compliant Groundwater Monitoring* (October 30, 2001, as updated). Sample

collection methods will be documented in the field monitoring reports. The samples will be transferred to the appropriate, clean, laboratory-prepared containers provided by the analytical laboratory. Sample handling and chain-of-custody procedures will be in accordance with the procedures presented below in Section 4.3.1. If SPH is present in the well, then the SPH thickness will be measured and a sample of SPH collected for fingerprint analysis.

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

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

4.3.1 Sample Handling

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

1. Neoprene, nitrile, or other protective gloves will be worn when collecting samples. New disposable gloves will be used to collect each sample;
2. All samples collected of each medium for chemical analysis will be transferred into clean sample containers supplied by the project analytical laboratory with the exception of soil,

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- rock, and sediment samples obtained in Encore® samplers. Sample container volumes and preservation methods will be in accordance with the most recent standard EPA and industry accepted practices for use by accredited analytical laboratories. Sufficient sample volume will be obtained for the laboratory to complete the method-specific QC analyses on a laboratory-batch basis; and
3. Sample labels and documentation will be completed for each sample following procedures discussed below. Immediately after the samples are collected, they will be stored in a cooler with ice or other appropriate storage method until they are delivered to the analytical laboratory. Standard chain-of-custody procedures, as described below, will be followed for all samples collected. All samples will be submitted to the laboratory soon enough to allow the laboratory to conduct the analyses within the method holding times.

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

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

4.4 Collection and Management of Investigation Derived Waste

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

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

4.5 Documentation of Field Activities

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

1. Site or unit designation;
2. Date;
3. Time of arrival and departure;
4. Field investigation team members including subcontractors and visitors;
5. Weather conditions;

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6. Daily activities and times conducted;
 7. Observations;
 8. Record of samples collected with sample designations and locations specified;
 9. Photographic log, as appropriate;
 10. Field monitoring data, including health and safety monitoring;
 11. Equipment used and calibration records, if appropriate;
 12. List of additional data sheets and maps completed;
 13. An inventory of the waste generated and the method of storage or disposal; and
 14. Signature of personnel completing the field record.

4.6 Chemical Analyses

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

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

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

Groundwater and soil samples will also be analyzed for the following Skinner List metals and iron and manganese using the indicated analytical methods shown. The groundwater samples collected for metals analysis will be analyzed for total and dissolved concentrations. Groundwater samples will also be analyzed for major cations (calcium, magnesium, sodium, and potassium) and anions (e.g., carbonate, bicarbonate, sulfate, fluoride and chloride). Based on field screening results, additional analyses may be added to evaluate field observations.

Inorganic Analytical Methods

Analyte	Analytical Method
Antimony	SW-846 method 6010/6020
Arsenic	SW-846 method 6010/6020

Barium	SW-846 method 6010/6020
Beryllium	SW-846 method 6010/6020
Cadmium	SW-846 method 6010/6020
Chromium	SW-846 method 6010/6020
Cobalt	SW-846 method 6010/6020
Cyanide	SW-846 method 335.4/335.2 mod
Lead	SW-846 method 6010/6020
Mercury	SW-846 method 7470/7471
Nickel	SW-846 method 6010/6020
Selenium	SW-846 method 6010/6020
Silver	SW-846 method 6010/6020
Vanadium	SW-846 method 6010/6020
Zinc	SW-846 method 6010/6020
Iron	SW-846 method 6010/6020
Manganese	SW-846 method 6010/6020

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

4.7 Data Quality Objectives

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

The quantity of data is location specific and is based on the historical operations at individual locations. Method detection limits should be 20% or less of the applicable background levels, cleanup standards and screening levels (NMED, 2017).

Additional DQOs include precision, accuracy, representativeness, completeness, and comparability. Precision is a measurement of the reproducibility of measurements under a given set of circumstances and is commonly stated in terms of standard deviation or coefficient of variation (EPA, 1987). Precision is also specific to sampling activities and analytical performance. Sampling

precision will be evaluated through the analyses of duplicate field samples and laboratory replicates will be utilized to assess laboratory precision.

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

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

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

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

Section 5 References

DiSorbo, 2016, Revised Interim Measures Report Hydrocarbon Seep Area, Gallup Refinery Western Refining Southwest, Inc., p. 15.

EPA, 1987, Data Quality Objectives for Remedial Response Activities; United States Environmental Protection Agency, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, OSWER Directive 9355.0-7B, 85p.

EPA, 2006, Guidance on Systematic Planning Using the Data Quality Objectives Process, United States Environmental Protection Agency, Office of Environmental Information; EPA/240/B-06/001, p. 111.

NMED, 2017, Risk Assessment Guidance for Site Investigation and Remediation, New Mexico Environment Department.

Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizel, N.H., and Padgett, E.T., 1983, Hydrogeology and Water Resources of San Juan Basin, New Mexico; Hydrogeologic Report 6, New Mexico Bureau of Mines and Mineral Resources, p. 70.

Western, 2009, Facility-wide Groundwater Monitoring Plan: Gallup Refinery, p. 97.

Tables

Table 1 MKTF Wells Groundwater Analytical Summary

Table 2 Fluid Level Measurements

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1	0.7	10	NE
NMED Tap Water (MARCH 2017)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (MAY 2018)			0.00046	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-1	02/24/16	8260B	9.5	1.8	0.85	1	0.33
	11/04/15	8260B	10	1.4	0.79	1.2	0.39
	08/21/15	8260B	9.1	1	0.7	0.87	0.44
	06/09/15	8260B	9.3	1.5	0.74	1.8	0.41
	03/11/15	8260B	9.3	2	0.74	1.9	0.37
	06/06/14	8260B	8.7	7.1	0.92	4.3	0.42
MKTf-2	11/20/17	8260B	2.9	0.05	0.28	0.069	0.13
	10/03/17	8260B	2.7	0.028	0.15	0.037	0.13
	03/16/17	8260B	4	0.056	0.51	0.23	0.15
	10/28/16	8260B	1.6	0.02	0.095	0.0099	0.15
	09/07/16	8260B	1.8	0.017	0.16	0.028	0.11
	06/10/16	8260B	1.2	0.026	0.21	0.16	0.087
	02/24/16	8260B	0.11	0.00095	0.0011	<0.0075	0.036
	11/04/15	8260B	0.44	0.013	0.072	0.0063	0.058
	08/21/15	8260B	0.37	0.0056	0.011	0.0033	0.044
	06/09/15	8260B	0.47	0.011	0.062	0.039	0.037
	03/11/15	8260B	0.2	<0.002	0.0041	0.0076	0.044
	11/14/14	8260B	0.2	0.0022	0.0029	0.0016	0.059
	09/18/14	8260B	2.1	0.044	0.34	<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	<0.02	0.055	0.16	<0.05
MKTf-4	11/28/17	8260B	1.2	0.019	0.82	1.1	2.3
	09/26/17	8260B	1.1	0.019	0.82	1.1	2.3
	06/08/17	8260B	0.92	0.016	0.59	0.89	2
	03/02/17	8260B	0.98	0.015	0.68	0.88	2.5
	11/02/16	8260B	0.88	0.018	0.64	0.85	2.1
	09/11/16	8260B	0.88	0.015	0.67	0.76	2.4
	06/09/16	8260B	0.63	0.015	0.58	0.72	1.8
	02/29/16	8260B	0.8	0.017	0.73	0.8	2.2
	11/03/15	8260B	0.38	0.015	0.7	0.78	1.5
	08/18/15	8260B	0.32	0.011	0.43	0.55	1.4
	06/04/15	8260B	0.31	0.013	0.45	0.56	1.3
	03/16/15	8260B	0.22	<0.01	0.26	0.34	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	2.4
MKTf-9	11/28/17	8260B	3.2	0.027	0.26	0.086	0.51
	09/28/17	8260B	3	0.03	0.3	0.097	0.53
	06/12/17	8260B	3	0.032	0.3	0.086	0.68
	03/15/17	8260B	2.4	0.032	0.3	0.083	0.61
	11/02/16	8260B	1.6	0.026	0.21	0.052	0.5
	09/11/16	8260B	2	0.03	0.22	0.059	0.62
	06/09/16	8260B	1.4	0.029	0.21	0.056	0.53
	02/29/16	8260B	1.6	0.029	0.24	0.064	0.69
	11/03/15	8260B	1.5	0.036	0.23	0.07	0.63
	08/18/15	8260B	1.2	0.035	0.2	0.063	0.6
	06/04/15	8260B	0.89	0.025	0.15	0.039	0.43
	03/16/15	8260B	0.49	0.013	0.08	0.018	0.5
	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

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
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EPA RSL for Tap Water (MAY 2018)			0.00046	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-10	11/28/17	8260B	9.8	4.7	1.8	8.3	0.035
	09/28/17	8260B	9.5	8.8	1.8	8.7	<0.1
	06/08/17	8260b	12	20	1.8	8.2	<0.1
	03/02/17	8260B	18	21	1.6	7.8	0.028
	11/02/16	8260B	17	22	1.7	8	<0.1
	09/11/16	8260b	16	20	1.6	7.3	<0.1
	06/09/16	8260B	15	22	1.7	8.9	0.018
	02/29/16	8260B	11	23	1.7	7.7	<0.1
	11/03/15	8260B	12	22	1.6	6.8	<0.05
	08/18/15	8260B	9.2	19	1.5	6.5	<0.5
	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	<0.05
	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	11/28/17	8260B	9.9	8.8	0.84	2.6	0.068
	09/26/17	8260B	10	10	0.81	2.8	0.054
	06/08/17	8260B	4.5	4.7	0.47	1.5	0.05
	03/02/17	8260B	3.9	3.4	0.59	1.6	0.065
	11/02/16	8260B	3.9	4.5	0.52	1.6	0.071
	09/11/16	8260B	4.5	4.8	0.53	1.6	0.081
	06/09/16	8260B	4.5	5.8	0.57	1.8	0.078
	02/29/16	8260B	5.1	6.4	0.67	2.2	0.12
	11/03/15	8260B	11	13	0.96	3.9	0.056
	08/18/15	8260B	3.7	4.2	0.5	1.5	0.082
	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	0.083
	06/05/14	8260B	12	7.8	0.75	2.2	0.096
	04/11/14	8260B	15	7.6	0.93	2.2	0.15
MKTf-13	03/15/17	8260B	3	0.21	0.87	4	2.3
MKTf-15	11/28/17	8260B	18	15	2.2	7.7	0.16
	06/08/17	8260B	23	22	2.6	8.7	0.13
	03/02/17	8260B	24	17	2.1	7.7	0.16
	11/02/16	8260B	20	16	2.1	7.6	0.099
	09/11/16	8260B	24	16	2	7.3	0.096
	6/4/15 , 3/16/15	8260B	SPH DETECTED				
	09/17/14	8260B	11	7	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 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1	0.7	10	NE
NMED Tap Water (MARCH 2017)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (MAY 2018)			0.00046	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-16	11/29/17	8260B	21	0.21	1.4	3.2	0.8
	09/26/17	8260B	23	0.24	1.6	3.9	0.92
	06/08/17	8260B	19	0.22	0.71	2.8	0.82
	03/14/17	8260B	22	0.34	1.7	4.9	0.72
	11/03/16	8260B	19	0.22	0.88	3.4	0.97
	09/12/16	8260B	23	0.24	1.3	4.3	1.7
	06/09/16	8260B	16	0.34	1.1	3.6	1.4
	02/29/16	8260B	19	0.28	1	3.9	1.4
	11/03/15	8260B	28	0.62	1.7	6.6	1.7
	08/23/15	8260B	24	0.64	1.4	5.6	2.1
	06/08/15	8260B	23	1.3	1.4	5.3	2
	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
	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	12/01/17	8260B	0.14	0.0008	0.17	<0.0075	1.5
	09/26/17	8260B	0.047	0.0011	0.68	<0.0075	0.94
	06/14/17	8260B	0.26	0.0017	0.58	0.0048	0.39
	03/15/17	8260B	0.29	0.0022	0.23	0.07	0.28
	11/08/16	8260B	0.76	0.0019	0.39	0.0043	0.36
	09/13/16	8260B	1.3	0.0021	0.55	<0.015	0.38
	06/10/16	8260B	1.9	0.006	0.52	0.24	0.49
	02/26/16	8260B	0.26	<0.005	0.018	0.023	0.64
	11/03/15	8260B	0.029	<0.002	0.31	<0.003	0.77
	08/18/15	8260B	0.036	0.0011	0.3	0.0018	0.64
	06/08/15	8260B	0.011	<0.001	0.018	<0.0015	0.5
	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
	11/13/13	8021B	1.8	1.6	0.71	2.7	NA
MKTf-18	06/14/17	8260B	0.03	<0.002	0.022	<0.003	0.1
	03/01/17	8260B	0.027	0.00033	0.026	0.00085	0.093
	11/08/16	8260B	0.016	0.0003	0.014	0.00076	0.081
	09/13/16	8260B	0.016	0.000377	0.015	0.0013	0.074
	06/10/16	8260B	0.016	0.00048	0.021	0.0025	0.092
	02/26/16	8260B	0.017	0.00059	0.034	0.0056	0.071
	11/03/15	8260B	0.019	<0.002	0.041	0.017	0.083
	08/18/15	8260B	0.032	0.0016	0.054	0.019	0.1
	06/08/15	8260B	0.05	0.0033	0.049	0.031	0.082
	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

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1	0.7	10	NE
NMED Tap Water (MARCH 2017)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (MAY 2018)			0.00046	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-19	12/01/17	8260B	1.9	0.0059	0.75	0.75	11
	09/26/17	8260B	3.2	0.014	0.8	0.87	12
	06/14/17	8260B	2.3	0.0084	0.78	0.9	10
	03/15/17	8260B	1.8	0.0098	0.6	0.92	9
	11/08/16	8260B	1.3	0.0068	0.7	1	10
	09/13/16	8260B	1.4	0.0075	0.69	0.92	8.9
	06/10/16	8260B	1.5	0.0064	0.69	0.66	7.9
	02/25/16	8260B	1.5	0.005	0.79	0.67	8.6
	11/03/15	8260B	2.8	0.022	0.76	0.93	8.4
	08/18/15	8260B	2.4	0.015	0.74	0.45	8.8
	06/08/15	8260B	1.8	0.013	0.59	0.31	9.1
	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 ¹	11/29/17	8260B	17	0.24	0.8	11	0.1
	09/26/17	8260B	16	0.34	0.58	11	0.17
	06/12/17	8260B	21	3.5	0.7	14	0.16
	03/14/17	8260B	17	2.2	0.26	9.8	0.23
	11/03/16	8260B	13	0.4	1.1	9.2	0.19
	09/12/16	8260B	18	0.48	1.3	8.8	0.16
	06/09/16	8260B	11	0.39	0.85	7.9	0.16
	03/01/16	8260B	13	0.47	1.1	9.2	0.13
	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 ¹	11/28/17	8260B	4.9	0.018	0.52	1.4	0.52
	09/26/17	8260B	6.3	0.016	0.61	0.83	0.63
	06/21/17	8260B	10	0.041	0.69	2.6	1.2
	03/14/17	8260B	8	0.038	0.46	2	0.61
	11/03/16	8260B	7.6	0.068	0.4	2.3	0.77
	09/12/16	8260B	9.3	0.059	0.48	2	0.68
	06/09/16	8260B	7.5	0.17	0.25	1.3	0.55
	03/01/16	8260B	4.6	0.34	0.15	1.3	0.48
	06/10/15	8260B	6.2	0.48	0.18	0.81	0.82
	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	11/28/17	8260B	2.5	0.013	0.18	0.025	6
	10/03/17	8260B	2.4	0.018	0.28	0.037	4.9
	06/08/17	8260B	2.9	0.014	0.18	0.022	5.9
	03/08/17	8260B	3.5	0.03	0.42	0.046	6.5
	11/01/16	8260B	3.7	0.032	0.46	<0.03	8
	09/10/16	8260B	4.2	0.03	0.43	0.049	8.8
	06/10/16	8260B	3.8	0.035	0.5	0.062	6.5
	02/25/16	8260B	4	0.032	0.57	0.07	7.2
	11/09/15	8260B	2.7	<0.02	0.35	<0.03	5.5
	08/20/15	8260B	1.2	<0.02	0.097	<0.03	4.8
	06/09/15	8260B	2.9	0.022	0.32	0.047	5.7
	03/12/15	8260B	2.6	<0.02	0.25	<0.03	5.1
	11/17/14	8260B	1.6	<0.01	0.09	<0.0015	3.9
	09/23/14	8260B			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

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1	0.7	10	NE
NMED Tap Water (MARCH 2017)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (MAY 2018)			0.00046	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-23	06/10/16	8260B	3.2	0.98	0.3	6.1	1.4
	02/25/16	8260B	3.1	1.2	0.31	6.7	1.6
	11/09/15	8260B	2.6	3	0.57	7.8	1.4
	08/21/15	8260B	3	2.7	0.42	6.2	1.2
	06/09/15	8260B	2.9	3	0.51	6.5	1.1
	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	--	SPH DETECTED				
	11/05/13	8021B	0.92	1	0.23	0.66	NA
MKTf-24	11/20/17	8260B	5.5	0.023	0.32	0.018	0.16
	10/03/17	8260B	2.6	0.019	0.071	<0.03	0.16
	06/05/17	8260B	6	0.024	0.3	0.0083	0.2
	03/29/17	8260B	3	0.015	0.042	<0.03	0.19
	10/28/16	8260B	6.1	0.025	0.3	0.015	0.23
	09/07/16	8260B	5.3	0.021	0.21	0.011	0.17
	06/08/16	8260B	3	0.018	0.074	0.006	0.21
	02/22/16	8260B	5.6	0.027	0.31	0.0088	0.21
	11/04/15	8260B	2.8	<0.02	0.054	<0.03	0.21
	08/20/15	8260B	2.7	<0.02	0.056	<0.03	0.2
	06/10/15	8260B	2.9	0.015	0.046	<0.0075	0.17
	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	0.17
	04/08/14	8260B	0.45	0.0067	0.065	0.0023	0.18
	11/01/13	8021B	1.2	<0.02	0.23	<0.04	NA
MKTf-25	11/21/17	8260B	1.6	0.011	0.14	0.013	0.2
	09/25/17	8260B	1.6	0.01	0.13	0.014	0.23
	06/05/17	8260B	0.62	0.0028	0.021	0.003	0.12
	03/29/17	8260B	0.78	0.0045	0.024	0.0043	0.12
	11/01/16	8260B	0.96	0.006	0.046	0.0046	0.19
	09/09/16	8260B	0.92	0.005	0.018	<0.015	0.15
	06/09/16	8260B	0.99	0.013	0.19	0.018	0.48
	02/23/16	8260B	1.2	0.011	0.19	0.0064	0.2
	11/05/15	8260B	1.1	0.0087	0.14	0.016	0.25
	08/21/15	8260B	1.2	0.0099	0.13	0.0089	0.24
	06/10/15	8260B	1	0.0066	0.099	0.016	0.21
	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	<0.02	0.16	<0.04	NA
MKTf-26	06/09/16	8260B	0.33	0.019	0.0036	0.0077	0.082
	02/22/16	8260B	0.15	0.0014	<0.005	<0.0075	0.055
	11/04/15	8260B	0.76	0.0072	0.0069	<0.0075	0.094
	08/20/15	8260B	0.38	0.005	<0.005	<0.0075	0.065
	06/10/15	8260B	0.8	0.0087	0.0069	<0.0075	0.079
	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

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1	0.7	10	NE
NMED Tap Water (MARCH 2017)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (MAY 2018)			0.00046	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-27	11/20/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.023
	10/03/17	8260B	0.00013	<0.001	<0.001	<0.0015	0.025
	06/05/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.031
	03/29/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.022
	10/28/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.021
	09/07/16	8260B	0.00031	0.00021	<0.001	<0.0015	0.026
	06/08/16	8260B	0.00015	0.0004	0.00015	0.00091	0.042
	02/22/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.015
	11/04/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.031
	08/20/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.033
	06/09/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.034
	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
MKTf-28	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
	11/20/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0033
	10/03/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.00035
	06/05/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.00044
	03/29/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.00097
	10/28/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00052
	09/08/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.0021
	06/08/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00054
	02/23/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/04/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.01
	08/20/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.0014
	06/09/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	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
MKTf-29	09/24/14	8260B	<0.001	<0.001	<0.001	<0.0015	0.016
	11/20/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0095
	10/03/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0072
	06/05/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0058
	03/29/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0094
	10/28/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.005
	09/07/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.0024
	06/09/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.0088
	02/23/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.012
	11/04/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.01
	08/20/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.011
	06/10/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.014
	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	11/20/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0014
	10/03/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0011
	06/05/17	8260B	<0.002	<0.002	<0.002	<0.003	0.002
	03/29/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0028
	10/28/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.002
	09/07/16	8260B	0.0006	<0.001	0.00019	<0.0015	0.00084
	06/09/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.0036
	02/23/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.0023
	11/04/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.0025
	08/20/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.0019
	06/10/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.0027
	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

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1	0.7	10	NE
NMED Tap Water (MARCH 2017)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (MAY 2018)			0.00046	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-31	11/21/17	8260B	0.00062	<0.001	<0.001	<0.0015	0.066
	09/25/17	8260B	0.00085	<0.001	<0.001	<0.0015	0.076
	06/05/17	8260B	0.00066	<0.001	<0.001	<0.0015	0.072
	03/07/17	8260B	0.00062	<0.001	<0.001	<0.0015	0.074
	10/31/16	8260B	0.00048	0.00015	<0.001	<0.0015	0.07
	09/08/16	8260B	0.00077	<0.001	<0.001	<0.0015	0.063
	06/09/16	8260B	0.00075	<0.001	<0.001	<0.0015	0.08
	02/23/16	8260B	0.00062	<0.001	<0.001	<0.0015	0.061
	11/04/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.079
	08/21/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.064
	06/10/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.056
	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	11/27/17	8260B	0.00028	<0.001	<0.001	<0.0015	0.6
	09/25/17	8260B	0.00038	<0.001	<0.001	<0.0015	0.69
	06/06/17	8260B	0.00042	<0.001	<0.001	<0.0015	0.64
	03/07/17	8260B	0.00045	<0.001	<0.001	<0.0015	0.66
	10/31/16	8260B	0.00049	<0.001	<0.001	<0.0015	0.63
	09/09/16	8260B	0.00047	<0.002	<0.002	<0.003	0.75
	06/09/16	8260B	0.00081	<0.002	<0.002	<0.003	0.64
	02/24/16	8260B	0.0004	<0.001	<0.001	<0.0015	0.62
	11/05/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.59
	08/21/15	8260B	<0.002	<0.002	<0.002	<0.003	0.49
	06/09/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.59
	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	11/28/17	8260B	0.00011	<0.001	<0.001	<0.0015	0.53
	09/25/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.25
	06/08/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.22
	03/08/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.23
	11/01/16	8260B	<0.001	0.00015	0.00019	<0.0015	0.2
	09/10/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.27
	06/10/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.4
	02/25/16	8260B	0.00016	<0.001	<0.001	<0.0015	0.31
	11/09/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.58
	08/21/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.63
	06/09/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.49
	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	12/01/17	8260B	0.000096	<0.001	<0.001	<0.0015	0.00075
	09/26/17	8260B	0.0003	<0.001	0.00014	<0.0015	0.00078
	06/14/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.00038
	03/01/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.00058
	11/08/16	8260B	0.00014	<0.001	0.00016	<0.0015	0.00097
	09/13/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00035
	06/10/16	8260B	0.00045	<0.001	0.00026	<0.0015	0.00058
	02/25/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/03/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	08/18/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/08/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	03/12/14	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

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1	0.7	10	NE
NMED Tap Water (MARCH 2017)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (MAY 2018)			0.00046	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-35	11/30/17	8260B	0.0015	0.0001	0.00029	<0.0015	0.11
	09/27/17	8260B	0.0015	<0.001	0.00015	<0.0015	0.077
	06/14/17	8260B	0.0023	<0.001	0.0011	<0.0015	0.033
	03/01/17	8260B	0.053	0.00011	0.0027	<0.0015	0.0079
	11/03/16	8260B	0.065	0.00026	0.055	0.01	0.01
	09/13/16	8260B	0.37	0.00052	0.025	0.011	0.012
	06/10/16	8260B	0.067	0.00027	0.012	0.0055	0.019
	02/26/16	8260B	0.046	<0.005	0.034	0.0045	0.02
	11/03/15	8260B	0.19	<0.001	0.039	0.0023	0.048
	08/18/15	8260B	0.97	<0.005	0.16	<0.0075	0.061
	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
MKTf-36	11/30/17	8260B	9.5	0.03	1.7	0.22	2.9
	09/27/17	8260B	9.1	0.023	1.6	0.067	2.3
	06/14/17	8260B	9.4	0.017	1.6	0.27	3.9
	03/01/17	8260B	8.6	0.013	1.4	0.032	8
	11/08/16	8260B	8.4	0.021	1.3	0.13	6
	09/13/16	8260B	SPH DETECTED				
	08/18/15	8260B	9	0.033	1.6	0.064	8
	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	03/01/17	8260B	2	0.18	0.024	0.96	0.032
	11/03/16	8260B	0.96	0.012	0.014	0.84	0.03
	08/18/15	8260B	0.76	0.14	0.024	1.6	0.05
	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	11/30/17	8260B	0.0012	0.000074	<0.001	<0.0015	0.001
	09/28/17	8260B	0.002	<0.001	<0.001	<0.0015	0.00049
	06/21/17	8260B	0.00079	<0.001	<0.001	<0.0015	0.00068
	03/14/17	8260B	0.00017	<0.001	<0.001	<0.0015	0.00048
	11/01/16	8260B	0.00039	<0.001	<0.001	<0.0015	0.001
	09/13/16	8260B	0.00093	<0.001	<0.001	<0.0015	0.0006
	06/08/16	8260B	0.0012	<0.001	<0.001	<0.0015	0.0052
	02/29/16	8260B	0.00034	<0.001	<0.001	<0.0015	0.00059
	11/09/15	8260B	0.0013	<0.001	<0.001	<0.0015	0.0043
	08/24/15	8260B	0.0017	<0.001	<0.001	<0.0015	0.0073
	06/10/15	8260B	0.0054	<0.001	<0.001	<0.0015	0.0076
	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	11/28/17	8260B	0.013	<0.005	0.05	<0.0075	<0.005
	09/28/17	8260B	0.01	<0.005	0.049	<0.0075	<0.005
	06/08/17	8260B	0.012	<0.005	0.057	<0.0075	<0.005
	03/14/17	8260B	0.012	<0.005	0.063	<0.0075	<0.005
	11/01/16	8260B	0.013	<0.005	0.059	<0.0075	<0.005
	09/13/16	8260B	0.016	<0.005	0.06	<0.0075	<0.005
	06/08/16	8260B	0.016	<0.001	0.061	0.0069	0.00036
	03/03/16	8260B	0.019	<0.001	0.064	0.00069	<0.001
	11/09/15	8260B	0.021	<0.001	0.064	<0.0015	<0.001
	08/23/15	8260B	0.023	<0.001	0.06	0.0016	<0.001
	06/10/15	8260B	0.025	<0.002	0.064	<0.003	<0.002
	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

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1	0.7	10	NE
NMED Tap Water (MARCH 2017)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (MAY 2018)			0.00046	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-40	11/21/17	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	09/25/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.00046
	06/05/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.00046
	03/07/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.00041
	10/31/16	8260B	<0.001	0.00015	<0.001	<0.0015	0.0003
	09/08/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/09/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00062
	02/23/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00061
	11/04/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	08/21/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/10/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	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	11/27/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.00081
	09/25/17	8260	<0.001	<0.001	<0.001	<0.0015	0.0012
	06/06/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0012
	03/07/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0012
	10/31/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00091
	09/09/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00041
	06/09/16	8260	<0.001	<0.001	<0.001	<0.0015	0.003
	02/24/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00068
	11/05/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	08/21/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/10/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	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	11/27/17	8260B	0.0071	0.0008	0.0026	0.037	0.002
	09/25/17	8260B	0.0093	0.00098	0.0039	0.046	0.002
	06/06/17	8260B	0.0049	0.00037	0.0011	0.021	0.0014
	03/07/17	8260B	0.0049	0.00044	0.0011	0.024	0.0011
	10/31/16	8260B	0.0034	0.00049	0.0019	0.027	0.00067
	09/09/16	8260B	0.004	0.00033	0.0018	0.025	0.00056
	06/09/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	02/24/16	8260B	0.0041	0.0022	0.0011	0.026	<0.001
	11/05/15	8260B	0.0033	<0.001	0.0017	0.022	<0.001
	08/21/15	8260B	0.0028	<0.001	0.001	0.017	<0.001
	06/10/15	8260B	0.0016	<0.001	<0.001	0.011	<0.001
	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	11/27/17	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	09/25/17	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/06/17	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	03/08/17	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/31/16	8260B	<0.001	0.00013	<0.001	<0.0015	<0.001
	09/09/16	8260B	0.00041	<0.001	<0.001	<0.0015	<0.001
	06/09/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	02/24/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/05/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	08/21/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/10/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	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

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL			0.005	1	0.7	10	NE
NMED Tap Water (MARCH 2017)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (MAY 2018)			0.00046	1.1	0.0015	0.19	0.014
Well ID	DATE SAMPLED	METHOD					
MKTf-44	11/28/17	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	09/25/17	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/05/17	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	03/08/17	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/01/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	09/09/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/09/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	02/24/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/09/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	08/17/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/10/15	8260B	<0.002	<0.002	<0.002	<0.003	<0.002
	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

DEFINITIONS

NE = Not established

NA = Not analyzed

Bold and highlighted values represent values above the applicable standards

STANDARDS

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

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

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

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

NOTES

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250	NE	10	600
40 CFR 141.62 MCL			NE	NE	NE	4	NE	1	10	NE
NMED Tap Water (MARCH 2017)			NE	NE	NE	1.18	NE	1.97	31.59	NE
EPA RSL for Tap Water (MAY 2018)			NE	NE	NE	0.8	NE	2	32	NE
NMED SSG (MARCH 2017)			0.0452	0.055	0.0902	NE	NE	NE	NE	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-1	02/24/16	8015D/300.0	3	51	<5.0	<0.1	470	2.6	2.6	0.55
	11/04/15	8015D/300.0	200	36	<5.0	1.1	450	<1.0	<1.0	<0.5
	08/21/15	8015D/300.0	34	26	<5.0	0.78	460	<1.0	<1.0	<2.5
	06/09/15	8015D	110	31	<50	NA	NA	NA	NA	NA
	03/11/15	8015D	370	31	<50	NA	NA	NA	NA	NA
	06/06/14	8015D/300.0	510	50	<50	0.6	400	<1.0	<1.0	0.58
MKTf-2	11/20/17	8015D/300.0	2.7	12	<5	2.4	540	<1	<1	18
	10/03/17	8015D/300.0	1.5	9.3	<5	1.8	460	<2	<2	20
	03/16/17	8015D/300.0	2.7	14	<5	2.7	400	<0.5	<0.5	16
	10/28/16	8015D/300.0	1.4	6.1	<5.0	2.7	380	<1.0	<1.0	40
	09/07/16	8015D/300.0	1.5	6.2	<5.0	2.3	410	<1.0	<1.0	48
	06/10/16	8015D/300.0	1.2	5.2	<5.0	2.7	390	<1.0	<1.0	50
	02/24/16	8015D/300.0	1	1.2	<5.0	1.8	520	8.8	8.8	160
	11/04/15	8015D/300.0	1	2.5	<5.0	2.5	360	<1.0	<1.0	49
	08/21/15	8015D/300.0	<1.0	2	<5.0	1.2	550	6.2	6.2	130
	06/09/15	8015D	<1.0	3.5	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	<1.0	1.3	<5.0	NA	NA	NA	NA	NA
	11/14/14	8015D/300.0	<1.0	0.61	<5.0	<1.0	830	<1.0	<1.0	230
	09/18/14	8015D	1.7	6.8	<5.0	NA	NA	NA	NA	NA
	06/06/14	8015D/300.0	<1.0	1.5	<5.0	0.76	750	<1.0	<1.0	200
04/08/14	8015D	<1.0	0.67	<5.0	NA	NA	NA	NA	NA	
10/28/13	8015D	<1.0	3.8	<5.0	NA	NA	NA	NA	NA	
MKTf-4	11/28/17	8015D/300.0	5.6	16	<5	1.1	210	<1	<1	2.3
	09/26/17	8015D/300.0	6.6	13	<5	0.87	200	<1	<1	0.7
	06/08/17	8015D/300.0	5.7	10	<5	0.67	210	<1	<1	5.3
	03/02/17	8015D/300.0	5.7	12	<5	0.99	220	<1	<1	2.8
	11/02/16	8015D/300.0	4.1	9.8	<5.0	1	180	<0.5	<0.5	6.1
	09/11/16	8015D/300.0	5.3	10	<5.0	0.74	220	<1.0	<1.0	4.1
	06/09/16	8015D/300.0	3.9	9	<5.0	0.79	250	<1.0	<1.0	7
	02/29/16	8015D/300.0	3.6	9.2	<5.0	0.97	250	<1.0	<1.0	3.2
	11/03/15	8015D/300.0	3	8.6	<5.0	0.96	300	<1.0	<1.0	3
	08/18/15	8015D	3.7	6.8	<5.0	0.86	300	<0.1	<0.1	4.2
	06/04/15	8015D	2.3	6.2	<5.0	NA	NA	NA	NA	NA
	03/16/15	8015D	1.9	4.8	<5.0	NA	NA	NA	NA	NA
	11/13/14	8015D/300.0	2	4.2	<5.0	<1.0	250	<1.0	<1.0	26
	09/15/14	8015D	1.5	3.4	<5.0	NA	NA	NA	NA	NA
	06/04/14	300.0/8015D	2.9	8.2	<5.0	0.7	0.19	<1.0	<1.0	6.8
	04/11/14	8015D	4.5	9.4	<5.0	NA	NA	NA	NA	NA
MKTf-9	11/28/17	300.0/8015D	2.6	11	<5	0.45	220	<1	<1	27
	09/28/17	300.0/8015D	4.2	13	<5	0.35	180	<0.5	<0.5	14
	06/12/17	8015D/300.0	2.4	11	<5	<0.5	180	<1	<1	14
	03/15/17	300.0/8015D	3.9	12	<5	0.33	180	<0.1	<0.1	28
	11/02/16	300.0/8015D	1.6	7.8	<5.0	0.46	150	<0.5	<0.5	71
	09/11/16	8015D/300.0	2.3	6.7	<5.0	0.26	160	<1.0	<1.0	57
	06/09/16	300.0/8015D	1.7	7.8	<5.0	0.35	170	<1.0	<1.0	81
	02/29/16	300.0/8015D	2.5	7.4	<5.0	0.47	170	<1.0	<1.0	70
	11/03/15	300.0/8015D	5.3	9.8	<5.0	0.46	170	<0.1	<0.1	110
	08/18/15	8015D/300.0	4.7	7.1	<5.0	0.43	170	<0.1	<0.1	130
	06/04/15	8015D	1.8	4.1	<5.0	NA	NA	NA	NA	NA
	03/16/15	8015D	<1.0	3.3	<5.0	NA	NA	NA	NA	NA
	11/14/14	8015D/300.0	2.1	4.4	<5.0	<1.0	180	<1.0	<1.0	140
	09/18/14	8015D	1.4	5.6	<5.0	NA	NA	NA	NA	NA
	06/05/14	8015D/300.0	2.7	6.2	<5.0	0.43	180	<1.0	<1.0	78
	04/14/14	8015D	3.6	5.7	<5.0	NA	NA	NA	NA	NA

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250	NE	10	600
40 CFR 141.62 MCL			NE	NE	NE	4	NE	1	10	NE
NMED Tap Water (MARCH 2017)			NE	NE	NE	1.18	NE	1.97	31.59	NE
EPA RSL for Tap Water (MAY 2018)			NE	NE	NE	0.8	NE	2	32	NE
NMED SSG (MARCH 2017)			0.0452	0.055	0.0902	NE	NE	NE	NE	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-10	11/28/17	300.0/8015D	3.5	83	<5	1.1	370	<1	<1	<2.5
	09/28/17	300.0/8015D	3.6	74	<5	<0.5	330	<0.5	<0.5	0.55
	06/08/17	8015D/300.0	3.5	100	<5	0.49	310	<1	<1	0.25
	03/02/17	300.0/8015D	5.3	110	<5	0.35	350	<1	<1	0.3
	11/02/16	300.0/8015D	3.8	100	<5.0	<0.05	230	<0.5	<0.5	<2.5
	09/11/16	8015D/300.0	6	110	<5.0	<2.0	240	<1.0	<1.0	<2.5
	06/09/16	300.0/8015D	8	110	<5.0	<2.0	260	<1.0	<1.0	0.4
	02/29/16	300.0/8015D	14	110	<5.0	<2.0	280	<1.0	<1.0	<2.5
	11/03/15	300.0/8015D	8	100	<5.0	<2.0	380	<0.5	<0.5	<2.5
	08/18/15	8015D/300.0	55	130	<5.0	<5.0	390	<0.5	<0.5	<2.5
	06/04/15	8015D	23	79	<5.0	NA	NA	NA	NA	NA
	03/16/15	8015D	32	80	<5.0	NA	NA	NA	NA	NA
	11/14/14	8015D/300.0	74	84	<50	270	260	<2.0	<2.0	<5.0
	09/18/14	8015D	7.7	88	<5.0	NA	NA	NA	NA	NA
	6/6/2014 ¹	300.0/8015D	5.5	64	<5.0	NA	NA	NA	NA	NA
	04/11/14	8015D	5.9	88	<5.0	NA	NA	NA	NA	NA
MKTf-11	11/28/17	300.0/8015D	2.1	59	<5	<0.5	860	0.27	0.27	1.2
	09/26/17	300.0/8015D	2.8	63	<5	<0.5	820	<1	<1	<2.5
	06/08/17	8015D/300.0	1.8	30	<5	<2	630	<1	<1	4.3
	03/02/17	300.0/8015D	1.7	27	<5	<0.5	650	<1	<1	3.4
	11/02/16	300.0/8015D	1.6	27	<5.0	<0.5	900	<0.5	<0.5	2.2
	09/11/16	8015D/300.0	1.7	29	<5.0	<2.0	880	<1.0	<1.0	2.2
	06/09/16	300.0/8015D	1.4	39	<5.0	<2.0	1000	<1.0	<1.0	2.2
	02/29/16	300.0/8015D	1.5	42	<5.0	<0.5	1600	<1.0	<1.0	0.58
	11/03/15	300.0/8015D	2.9	71	<5.0	<2.0	740	<0.5	<0.5	<2.5
	08/18/15	8015D/300.0	1.6	36	<5.0	<2.0	1200	<2.0	<0.1	1.2
	06/04/15	8015D	2.8	71	<5.0	NA	NA	NA	NA	NA
	03/16/15	8015D	2.6	55	<5.0	NA	NA	NA	NA	NA
	11/13/14	8015D/300.0	1.8	35	<5.0	6.5	780	<1.0	<1.0	<5.0
	09/15/14	8015D	1.8	57	<5.0	NA	NA	NA	NA	NA
	06/05/14	8015D/300.0	2.6	48	<5.0	7	480	<1.0	<1.0	11
	04/11/14	300.0/8015D	2.7	53	<5.0	NA	NA	NA	NA	NA
MKTf-13	03/15/17	8015D/300.0	48	28	<5	0.27	120	<0.5	<0.5	<2.5
MKTf-15	11/28/17	8015D	5.3	130	<5	<2	6000	1.8	1.8	0.56
	06/08/17	8015D/300.0	5.9	150	<5	<2	4300	<4	<4	0.74
	03/02/17	8015D/300.0	8.8	140	<5	<2	3400	<2	<2	1
	11/02/16	8015D/300.0	6.2	110	<5.0	<0.05	2800	<2.0	<0.5	<2.5
	09/11/16	8015D/300.0	17	NA	<5.0	<2.0	3100	<4.0	<4.0	<2.5
	09/17/14	8015D	17	88	<5.0	NA	NA	NA	NA	NA
	06/05/14	8015D/300.0	10	57	<5.0	<2.0	5200	<4.0	<4.0	1.2
	04/10/14	8015D	4.1	71	<5.0	NA	NA	NA	NA	NA
	11/01/13	8015D	2.4	65	<5.0	NA	NA	NA	NA	NA
MKTf-16	11/29/17	300.0/8015D	4	70	<5	0.63	700	<1	<1	<2.5
	09/26/17	300.0/8015D	4.7	78	<5	0.48	810	<1	<1	0.64
	06/08/17	300.0/8015D	4.3	60	<5	1.4	800	<1	<1	0.68
	03/14/17	300.0/8015D	5.9	85	<5	0.95	580	<2	<2	0.14
	11/03/16	300.0/8015D	3.3	70	<5.0	1.2	380	<0.5	<0.5	<2.5
	09/12/16	300.0/8015D	3.5	62	<5.0	1.3	390	<1.0	<1.0	0.36
	06/09/16	300.0/8015D	3	69	<5.0	NA	NA	NA	NA	NA
	02/29/16	300.0/8015D	2.6	73	<5.0	1	710	<1.0	<1.0	0.068
	11/03/15	300.0/8015D	3.1	91	<5.0	0.88	1000	<1.0	<1.0	<2.5
	08/23/15	8015D/300.0	3.7	83	<5.0	0.66	1700	<1.0	<1.0	<2.5
	06/08/15	8015D	4.3	69	<5.0	NA	NA	NA	NA	NA
	03/16/15	8015D	2.9	61	<5.0	NA	NA	NA	NA	NA
	11/18/14	8015D/300.0	2.7	53	<5.0	1.5	700	<0.5	<0.5	<2.5
	09/17/14	8015D	4.6	66	<5.0	NA	NA	NA	NA	NA
	06/05/14	8015D/300.0	5.7	71	<5.0	1.1	540	<1.0	<1.0	<2.5
	04/10/14	8015D	3.5	67	<5.0	NA	NA	NA	NA	NA
	11/19/13	8015D	4.2	68	<5.0	NA	NA	NA	NA	NA

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250	NE	10	600
40 CFR 141.62 MCL			NE	NE	NE	4	NE	1	10	NE
NMED Tap Water (MARCH 2017)			NE	NE	NE	1.18	NE	1.97	31.59	NE
EPA RSL for Tap Water (MAY 2018)			NE	NE	NE	0.8	NE	2	32	NE
NMED SSG (MARCH 2017)			0.0452	0.055	0.0902	NE	NE	NE	NE	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-17	12/01/17	300.0/8015D	1.1	2.5	<5	0.91	92	<1	<1	97
	09/26/17	300.0/8015d	2	4.3	<5	0.76	83	<1	<1	22
	06/14/17	300.0/8015D	2.2	4	<5	0.81	70	<1	<1	66
	03/15/17	300.0/8015D	2.4	3.5	<5	0.73	61	<0.1	<0.1	43
	11/08/16	300.0/8015D	1.3	4.5	<5.0	0.77	64	<1.0	<1.0	45
	09/13/16	300.0/8015D	1.6	7.5	<5.0	0.83	70	0.58	0.58	45
	06/10/16	300.0/8015d	2.1	9.2	<5.0	NA	NA	NA	NA	NA
	02/26/16	300.0/8015D	<1.0	1.6	<5.0	0.54	76	<1.0	<1.0	180
	11/03/15	300.0/8015D	1.5	2.5	<5.0	0.61	78	<0.1	<0.1	120
	08/18/15	8015D/300.0	1.1	1.7	<0.005	0.5	74	<0.1	<0.01	160
	06/08/15	8015D	1.3	0.77	<5.0	NA	NA	NA	NA	NA
	03/12/15	8015D	<1.0	0.8	<5.0	NA	NA	NA	NA	NA
	11/18/14	8015D/300.0	1.4	1.2	<5.0	0.66	84	<0.1	<0.1	200
	09/18/14	8015D	1.5	3.3	<5.0	NA	NA	NA	NA	NA
	6/6/2014: 6/16/14	8015D/300.0	4.2	8.3	<5.0	0.61	98	<0.1	<0.1	60
	04/09/14	8015D	2.6	8.6	<5.0	NA	NA	NA	NA	NA
	11/19/13	8015D	5.8	17	<5.0	NA	NA	NA	NA	NA
MKTf-18	06/14/17	300.0/8015D	7.1	0.83	<5	<0.5	190	<1	<1	0.53
	03/01/17	300.0/8015D	2.7	0.81	<5	0.62	180	<1	<1	0.22
	11/08/16	300.0/8015D	1.7	0.6	<5.0	0.62	160	<1.0	<1.0	0.23
	09/13/16	300.0/8015D	2.2	0.56	<5.0	0.67	170	<1.0	<1.0	0.34
	06/10/16	8015D/300.0	1.9	0.71	<5.0	0.63	180	<1.0	<1.0	0.21
	02/26/16	300.0/8015D	0.3	0.79	<5.0	0.64	160	<1.0	<1.0	0.26
	11/03/15	300.0/8015D	2.5	1.3	<5.0	0.61	160	<0.1	<0.1	<0.5
	08/18/15	8015D/300.0	34	1.3	<5.0	0.55	170	<0.1	<0.1	<0.5
	06/08/15	8015D	3.3	1.4	<5.0	NA	NA	NA	NA	NA
	03/17/15	8015D	5.4	1.8	<5.0	NA	NA	NA	NA	NA
	11/18/14	8015D/300.0	2.3	1.4	<5.0	0.68	160	<0.5	<0.5	<2.5
	09/18/14	8015D	3.1	1.4	<5.0	NA	NA	NA	NA	NA
	06/06/14	8015D/300.0	7.8	2.2	<5.0	0.65	170	<1.0	<1.0	0.95
	04/14/14	8015D	4.4	2.2	<5.0	NA	NA	NA	NA	NA
	11/19/13	8015D	11	4	<5.0	NA	NA	NA	NA	NA
MKTf-19	12/01/17	300.0/8015D	13	24	<5	<0.5	120	0.14	0.14	0.67
	09/26/17	8015D/300.0	11	29	<5	<0.5	120	<1	<1	0.77
	06/14/17	300.0/8015D	11	23	<5	<0.5	130	<1	<1	0.73
	03/15/17	300.0/8015D	14	25	<5	0.098	130	<0.1	<0.1	0.52
	11/08/16	300.0/8015D	6.7	26	<5.0	0.28	110	<1.0	<1.0	0.89
	09/13/16	300.0/8015D	7.3	25	<5.0	0.34	130	<1.0	<1.0	0.57
	06/10/16	8015D/300.0	7.2	21	<5.0	0.17	150	<1.0	<1.0	0.28
	02/25/16	300.0/8015D	7.8	22	<5.0	0.24	150	<1.0	<1.0	<2.5
	11/03/15	300.0/8015D	13	34	<5.0	<0.5	130	<0.5	<0.5	<2.5
	08/18/15	8015D/300.0	27	20	<5.0	0.18	140	<0.1	0.17	<0.5
	06/08/15	8015D	9.9	19	<5.0	NA	NA	NA	NA	NA
	03/12/15	8015D	9.3	14	<5.0	NA	NA	NA	NA	NA
	11/18/14	8015D/300.0	13	20	<5.0	<0.5	110	<0.5	<0.5	<2.5
	09/24/14	8015D	61	16	<5.0	NA	NA	NA	NA	NA
	04/09/14	8015D	17	18	<5.0	NA	NA	NA	NA	NA
	11/05/13	8015D	7.2	10	<5.0	NA	NA	NA	NA	NA
MKTf-20	11/29/17	8015D	22	91	<5	2.1	420	<1	<1	1
	09/26/17	8015D/300.0	3.9	78	<5	2.2	590	<1	<1	73
	06/12/17	8015D/300.0	5.3	95	<5	2	580	<1	<1	0.64
	03/14/17	8015D	16	90	<5	1	1100	<0.5	<0.5	5
	11/03/16	8015D	9.4	65	<5.0	2.6	1500	<0.5	<0.5	13
	09/12/16	8015D/300.0	8.7	72	<5.0	2.1	370	<1.0	<1.0	1.2
	06/09/16	8015D/300.0	9	63	<5.0	3.1	450	<1.0	<1.0	10
	03/01/16	8015D	6.9	73	<5.0	NA	NA	NA	NA	NA
	06/08/15	8015D	9.9	30	<5.0	NA	NA	NA	NA	NA
	03/16/15	8015D	4.5	37	<5.0	NA	NA	NA	NA	NA
	11/18/14	8015D/300.0	24	45	<5.0	0.87	82	<0.5	<0.5	16
	04/11/14	8015D	16	120	<5.0	NA	NA	NA	NA	NA

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250	NE	10	600
40 CFR 141.62 MCL			NE	NE	NE	4	NE	1	10	NE
NMED Tap Water (MARCH 2017)			NE	NE	NE	1.18	NE	1.97	31.59	NE
EPA RSL for Tap Water (MAY 2018)			NE	NE	NE	0.8	NE	2	32	NE
NMED SSG (MARCH 2017)			0.0452	0.055	0.0902	NE	NE	NE	NE	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-21	11/28/17	8015D	2.6	25	<5	<0.5	210	<1	<1	7
	09/26/17	8015D	2	24	<5	<0.5	230	<1	<1	2
	06/21/17	8015D/300.0	6.2	30	<5	<0.5	310	<1	<1	1.1
	03/14/17	8015D/300.0	4	37	<5	<0.5	440	<0.5	<0.5	3.4
	11/03/16	8015D/300.0	3.4	34	<5.0	0.91	110	<0.5	<0.5	3.9
	09/12/16	8015D/300.0	3.9	28	<5.0	<0.5	81	<1.0	<1.0	19
	06/09/16	8015D	3.9	32	<5.0	NA	NA	NA	NA	NA
	03/01/16	8015D	3.6	24	<5.0	NA	NA	NA	NA	NA
	06/10/15	8015D	Not enough water to collect for this set.							
	03/16/15	8015D	3.8	16	<5.0	NA	NA	NA	NA	NA
04/11/14	8015D	27	78	<5.0	NA	NA	NA	NA	NA	
MKTf-22	11/28/17	8015D	2.4	13	<5	0.34	100	<1	<1	3.3
	10/03/17	8015D/300.0	2.5	13	<5	0.28	110	<2	<2	7.6
	06/08/17	8015D/300.0	3	14	<5	0.25	100	<1	<1	6
	03/08/17	8015D	3	23	<5	0.33	100	<1	<1	2
	11/01/16	8015D	2.1	26	<5.0	0.41	100	<0.1	<0.1	3.3
	09/10/16	8015D/300.0	2.7	17	<5.0	0.23	98	<1.0	<1.0	4.1
	06/10/16	8015D/300.0	2.5	27	<5.0	0.37	99	<1.0	<1.0	4.2
	02/25/16	8015D	2.7	24	<5.0	0.37	95	<1.0	<1.0	4.7
	11/09/15	8015D	1.6	14	<5.0	0.41	100	<0.1	<0.1	17
	08/20/15	8015D/300.0	<1.0	9.3	<5.0	<0.5	120	<1.0	<1.0	48
	06/09/15	8015D	2.5	15	<5.0	NA	NA	NA	NA	NA
	03/12/15	8015D	2.5	13	<5.0	NA	NA	NA	NA	NA
	11/17/14	8015D/300.0	1.6	6.8	<5.0	0.38	96	7.1	7.1	19
	04/10/14	8015D	2.6	10	<5.0	NA	NA	NA	NA	NA
	11/19/13	8015D	2.1	6.5	<5.0	NA	NA	NA	NA	NA
MKTf-23	06/10/16	8015D/300.0	710	38	<50	0.75	240	<1.0	<1.0	0.36
	02/25/16	8015D/300.0	56	32	<5.0	0.69	240	<1.0	<1.0	0.38
	11/9 & 10/2015	8015D/300.0	71	34	<5.0	1	250	<0.1	<0.1	14
	08/21/15	8015D/300.0	35	29	<5.0	0.57	300	<1.0	<1.0	<2.5
	06/09/15	8015D	23	32	<5.0	NA	NA	NA	NA	NA
	03/12/15	8015D	14	35	<5.0	NA	NA	NA	NA	NA
	11/17/14	8015D/300.0	7.7	26	<5.0	0.43	390	<1.0	<1.0	5.9
	09/23/14	8015D	14	23	<5.0	NA	NA	NA	NA	NA
	11/05/13	8015D	1.1	12	<5.0	NA	NA	NA	NA	NA
MKTf-24	11/20/17	8015D/300.0	1	28	<5	<0.5	560	<1	<1	34
	10/03/17	8015D/300.0	0.56	10	<5	<0.5	800	<1	<1	64
	06/05/17	8015D/300.0	1.8	23	<5	<0.1	620	<1	<1	43
	03/29/17	8015D	0.74	8.2	<5	<0.1	800	<1	<1	59
	10/28/16	8015D	1.1	30	<5.0	0.078	440	<1.0	<1.0	46
	09/07/16	8015D/300.0	1.2	19	<5.0	<0.1	630	<1.0	<1.0	51
	06/08/16	8015D/300.0	<1.0	14	<5.0	0.097	700	<1.0	<1.0	60
	02/22/16	8015D/300.0	1.5	29	<5.0	0.058	650	<1.0	<1.0	50
	11/04/15	8015D	<1.0	10	<5.0	<0.1	850	<1.0	<1.0	68
	08/20/15	8015D/300.0	<1.0	9.5	<5.0	<0.5	850	<1.0	<1.0	72
	06/10/15	8015D	<1.0	9.8	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	<1.0	9.2	<5.0	NA	NA	NA	NA	NA
	11/14/14	8015D/300.0	<1.0	5.7	<5.0	<1.0	630	<1.0	<1.0	72
	09/24/14	8015D	<1.0	6.3	<5.0	NA	NA	NA	NA	NA
	04/08/14	8015D	<1.0	4.2	<5.0	NA	NA	NA	NA	NA
	11/01/13	8015D	1.5	8.4	<5.0	NA	NA	NA	NA	NA

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250	NE	10	600
40 CFR 141.62 MCL			NE	NE	NE	4	NE	1	10	NE
NMED Tap Water (MARCH 2017)			NE	NE	NE	1.18	NE	1.97	31.59	NE
EPA RSL for Tap Water (MAY 2018)			NE	NE	NE	0.8	NE	2	32	NE
NMED SSG (MARCH 2017)			0.0452	0.055	0.0902	NE	NE	NE	NE	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-25	11/21/17	300.0/8015D	0.78	17	<5	<0.5	550	<0.5	<0.5	29
	09/25/17	8015D/300.0	1	16	<5	0.25	500	<1	<1	31
	06/05/17	300.0/8015D	1.2	8.4	<5	0.054	420	<1	<1	130
	03/29/17	300.0/8015D	0.95	7.8	<5	0.095	380	<1	<1	100
	11/01/16	300.0/8015D	0.88	10	<5.0	0.052	530	<1.0	<1.0	36
	09/09/16	300.0/8015D	0.94	7.1	<5.0	0.073	560	<1.0	<1.0	34
	06/09/16	8015D/300.0	0.89	13	<5.0	0.18	680	<1.0	<1.0	35
	02/23/16	300.0/8015D	1.1	14	<5.0	0.12	670	<1.0	<1.0	31
	11/05/15	300.0/8015D	1.2	12	<5.0	<0.1	750	<1.0	<1.0	35
	08/21/15	8015D/300.0	1.1	8.7	<5.0	<0.5	870	<1.0	<1.0	31
	06/10/15	8015D/300.0	<1.0	11	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	1.1	10	<5.0	NA	NA	NA	NA	NA
	11/14/14	8015D/300.0	<1.0	4.8	<5.0	<1.0	880	<1.0	<1.0	35
09/23/14	8015D	<1.0	5.8	<5.0	NA	NA	NA	NA	NA	
04/08/14	8015D	1.2	6.9	<5.0	NA	NA	NA	NA	NA	
MKTf-26	06/09/16	8015D/300.0	<1.0	1.5	<5.0	0.15	2300	<1.0	<1.0	230
	02/22/16	8015D/300.0	<1.0	1.5	<5.0	0.2	2000	11	11	210
	11/04/15	8015D/300.0	<1.0	2.3	<5.0	0.69	1000	<1.0	<1.0	94
	08/20/15	8015D/300.0	<1.0	1.5	<5.0	<0.5	1800	<1.0	<1.0	220
	06/10/15	8015D	<1.0	2.5	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	<1.0	2.5	<5.0	NA	NA	NA	NA	NA
	11/14/14	8015D/300.0	<1.0	2	<5.0	<1.0	1500	<2.0	<2.0	160
	09/24/14	8015D	<1.0	2.8	<5.0	NA	NA	NA	NA	NA
	04/08/14	8015D	<1.0	0.2	<5.0	NA	NA	NA	NA	NA
	11/01/13	8015D	<1.0	1.7	<5.0	NA	NA	NA	NA	NA
MKTf-27	11/20/17	8015D/300.0	<1	0.036	<5	<0.5	3200	0.51	0.51	290
	10/03/17	8015D/300.0	<1	0.013	<5	<0.5	2900	<2	<2	290
	06/05/17	8015D/300.0	<1	0.03	<5	0.27	3800	2.5	2.5	410
	03/29/17	8015D/300.0	<1	0.022	<5	<0.1	5000	3.7	3.7	600
	10/28/16	8015D/300.0	<1.0	0.034	<5.0	0.94	2200	1.4	1.4	410
	09/07/16	8015D/300.0	<1.0	0.068	<5.0	0.29	2600	<2.0	<2.0	400
	06/08/16	8015D/300.0	<0.001	0.084	<0.005	1.2	2800	1.1	1.1	350
	02/22/16	8015D/300.0	<1.0	<0.05	<5.0	0.8	2400	1	1	360
	11/04/15	8015D/300.0	<1.0	<0.05	<5.0	0.8	2700	<1.0	<1.0	450
	08/20/15	8015D/300.0	<1.0	0.064	<5.0	0.81	2700	<1.0	<1.0	330
	06/09/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	11/14/14	8015D/300.0	<1.0	<0.05	<5.0	<1.0	2500	<2.0	<2.0	470
	09/24/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	04/08/14	8015D	<1.0	<0.01	<5.0	NA	NA	NA	NA	NA
11/19/13	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	
MKTf-28	11/20/17	300.0/8015D	<1	<0.05	<5	1	410	1.9	1.9	180
	10/03/17	8015D/300.0	<1	<0.05	<5	0.95	390	1.6	1.6	150
	06/05/17	8015D/300.0	<1	<0.05	<5	0.85	420	1.2	1.2	160
	03/29/17	300.0/8015D	<1	<0.05	<5	0.87	410	1	1	160
	10/28/16	300.0/8015D	<1.0	<0.05	<5.0	1.3	370	1.1	1.1	130
	09/08/16	8015D/300.0	<1.0	0.023	<5.0	0.66	470	0.73	0.73	190
	06/08/16	8015D/300.0	<1.0	<0.05	<5.0	0.93	490	0.84	0.84	160
	02/23/16	300.0/8015D	<1.0	<0.05	<5.0	0.93	500	4.9	4.9	160
	11/04/15	300.0/8015D	<1.0	<0.05	<5.0	0.86	510	<1.0	<1.0	160
	08/20/15	8015D/300.0	<1.0	<0.05	<5.0	0.86	520	<1.0	<1.0	150
	06/09/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	11/14/14	8015D/300.0	<1.0	<0.05	<5.0	<1.0	540	<1.0	<1.0	260
	09/24/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250	NE	10	600
40 CFR 141.62 MCL			NE	NE	NE	4	NE	1	10	NE
NMED Tap Water (MARCH 2017)			NE	NE	NE	1.18	NE	1.97	31.59	NE
EPA RSL for Tap Water (MAY 2018)			NE	NE	NE	0.8	NE	2	32	NE
NMED SSG (MARCH 2017)			0.0452	0.055	0.0902	NE	NE	NE	NE	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-29	11/20/17	8015D/300.0	<1	<0.05	<5	0.63	150	<1	<1	780
	10/03/17	8015D/300.0	0.37	<0.05	<5	0.6	150	0.14	0.14	880
	06/05/17	8015D/300.0	1	<0.05	<5	0.68	150	<1	<1	670
	03/29/17	8015D/300.0	0.43	0.012	<5	0.75	100	<1	<1	640
	10/28/16	8015D/300.0	<1.0	<0.05	<5.0	1.1	80	<1.0	<1.0	560
	09/07/16	8015D/300.0	<1.0	0.029	<5.0	0.85	81	<1.0	<1.0	590
	06/09/16	8015D/300.0	<1.0	<0.05	<5.0	1.1	82	<1.0	<1.0	650
	02/02/16	8015D/300.0	<1.0	<0.05	<5.0	0.96	91	<1.0	<1.0	640
	11/04/15	8015D/300.0	<1.0	<0.05	<5.0	0.92	90	<1.0	<1.0	650
	08/20/15	8015D/300.0	<1.0	<0.05	<5.0	0.83	95	<1.0	<1.0	440
	06/10/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	09/24/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	04/09/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
MKTf-30	11/20/17	8015D/300.0	<1	0.075	<5	0.88	620	0.44	0.44	410
	10/03/17	8015D/300.0	<1	0.1	<5	0.79	630	<2	<2	510
	06/05/17	8015D/300.0	<1	0.048	<5	1	620	0.3	0.3	560
	03/29/17	8015D/300.0	<1	0.14	<5	0.8	740	0.24	0.24	360
	10/28/16	8015D/300.0	<1.0	0.14	<5.0	1.1	810	<1.0	<1.0	400
	09/07/16	8015D/300.0	<1.0	0.23	<5.0	0.79	970	<1.0	<1.0	330
	06/09/16	8015D/300.0	<1.0	0.095	<5.0	1.3	890	<1.0	<1.0	330
	02/23/16	8015D/300.0	<1.0	0.13	<5.0	1.1	1100	<1.0	<1.0	320
	11/04/15	8015D/300.0	<1.0	0.11	<5.0	0.99	1300	<1.0	<1.0	380
	08/20/15	8015D/300.0	<1.0	0.17	<5.0	0.79	1300	<1.0	<1.0	450
	06/10/15	8015D	<1.0	0.071	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	<1.0	0.053	<5.0	NA	NA	NA	NA	NA
	11/17/14	8015D/300.0	<1.0	0.054	<5.0	0.56	1400	<1.0	<1.0	730
	09/24/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
04/09/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	
MKTf-31	11/21/17	8015D/300.0	<1	0.23	<5	<0.5	890	<0.5	<0.5	76
	09/25/17	8015D/300.0	<1	0.2	<5	<0.5	770	<1	<1	76
	06/05/17	8015D/300.0	0.47	0.15	<5	<0.1	1200	<1	<1	98
	03/07/17	8015D/300.0	<1	0.19	<5	<0.1	1100	<1	<1	87
	10/31/16	8015D/300.0	<1.0	0.16	<5.0	<0.1	720	<2.0	<2.0	70
	09/08/16	8015D/300.0	<1.0	0.23	<5.0	<0.1	940	<1.0	<1.0	70
	06/09/16	8015D/300.0	<1.0	0.16	<5.0	<0.1	770	<1.0	<1.0	69
	02/23/16	8015D/300.0	<1.0	0.1	<5.0	<0.1	830	<1.0	<1.0	68
	11/04/15	8015D/300.0	1.3	0.086	<5.0	<0.1	850	<1.0	<1.0	69
	08/21/15	8015D/300.0	<1.0	0.1	<5.0	<0.5	890	<1.0	<1.0	71
	06/10/15	8015D	<1.0	0.11	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	<1.0	0.077	<5.0	NA	NA	NA	NA	NA
	11/17/14	8015D/300.0	<1.0	0.068	<5.0	<0.1	920	<1.0	<1.0	82
	09/23/14	8015D	<1.0	0.061	<5.0	NA	NA	NA	NA	NA
04/08/14	8015D	<1.0	0.11	<5.0	NA	NA	NA	NA	NA	
MKTf-32	11/27/17	8015D/300.0	<1	0.86	<5	<5	420	<1	<1	99
	09/25/17	8015D/300.0	<1	0.73	<5	0.32	420	<1	<1	100
	06/06/17	8015D/300.0	<1	0.71	<5	0.31	480	<1	<1	92
	03/07/17	8015D/300.0	<1	0.92	<5	0.17	400	<1	<1	91
	10/31/16	8015D/300.0	<1.0	0.92	<50	0.16	420	<1.0	<1.0	95
	09/09/16	8015D/300.0	<1.0	0.79	<5.0	0.18	460	<1.0	<1.0	91
	06/09/16	8015D/300.0	<1.0	0.81	<5.0	0.28	520	<1.0	<1.0	100
	02/24/16	8015D/300.0	<1.0	0.88	<5.0	0.28	450	<1.0	<1.0	91
	11/05/15	8015D/300.0	<1.0	0.57	<5.0	0.19	510	<1.0	<1.0	100
	08/21/15	8015D/300.0	<1.0	0.42	<5.0	<0.5	580	<1.0	<1.0	110
	06/09/15	8015D	<1.0	0.58	<5.0	NA	NA	NA	NA	NA
	03/12/15	8015D	<1.0	0.46	<5.0	NA	NA	NA	NA	NA
	11/17/14	8015D/300.0	<1.0	0.28	<5.0	0.27	610	<1.0	<1.0	100
	09/23/14	8015D	<1.0	0.23	<5.0	NA	NA	NA	NA	NA
04/09/14	8015D	<1.0	0.22	<5.0	NA	NA	NA	NA	NA	

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Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250	NE	10	600
40 CFR 141.62 MCL			NE	NE	NE	4	NE	1	10	NE
NMED Tap Water (MARCH 2017)			NE	NE	NE	1.18	NE	1.97	31.59	NE
EPA RSL for Tap Water (MAY 2018)			NE	NE	NE	0.8	NE	2	32	NE
NMED SSG (MARCH 2017)			0.0452	0.055	0.0902	NE	NE	NE	NE	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-33	11/28/17	8015D/300.0	<1	0.35	<5	0.23	96	0.32	0.32	250
	09/25/17	300.0/8015D	<1	0.26	<5	0.33	93	0.24	0.24	270
	06/08/17	8015D/300.0	<1	0.25	<5	0.17	92	0.21	0.21	290
	03/08/17	8015D/300.0	<1	0.3	<5	0.22	96	0.19	0.19	330
	11/01/16	8015D/300.0	<1.0	0.31	<5.0	0.29	87	<1.0	<1.0	320
	09/10/16	8015D/300.0	<1.0	5.2	<5.0	0.13	94	<1.0	<1.0	340
	06/10/16	300.0/8015D	<1.0	0.69	<5.0	0.3	100	<1.0	<1.0	340
	02/25/16	8015D/300.0	<1.0	0.35	<5.0	0.25	100	<1.0	<1.0	310
	11/09/15	8015D/300.0	<1.0	0.53	<5.0	0.34	99	<0.1	<0.1	290
	08/21/15	8015D/300.0	<1.0	0.47	<5.0	<0.5	95	<1.0	<1.0	260
	06/09/15	8015D	<1.0	0.42	<5.0	NA	NA	NA	NA	NA
	03/12/15	300.0/8015D	<1.0	0.35	<5.0	NA	NA	NA	NA	NA
	11/17/14	8015D/300.0	<1.0	0.36	<5.0	0.31	98	<1.0	<1.0	360
	09/23/14	8015D	<1.0	0.25	<5.0	NA	NA	NA	NA	NA
	04/09/14	8015D	<1.0	0.21	<5.0	NA	NA	NA	NA	NA
MKTf-34	12/01/17	300.0/8015D	<1	0.027	<5	0.54	270	8	8	230
	09/26/17	300.0/8015D	<1	<0.05	<5	0.29	280	7.6	7.6	220
	06/14/17	300.0/8015D	<1	<0.05	<5	<5	280	8.4	8.4	210
	03/01/17	300.0/8015D	<1	<0.05	<5	0.45	310	9	9	220
	11/08/16	300.0/8015D	<1.0	<0.05	<5.0	0.46	240	8.3	8.3	180
	09/13/16	300.0/8015D	<1.0	0.033	<5.0	0.42	300	9.1	9.1	200
	06/10/16	300.0/8015D	<1.0	<0.05	<5.0	0.52	370	7.7	7.7	130
	02/25/16	300.0/8015D	<1.0	<0.05	<5.0	0.53	380	18	18	110
	11/03/15	300.0/8015D	<1.0	<0.05	<5.0	0.46	370	<0.1	8.6	100
	08/18/15	8015D/300.0	<1.0	<0.05	<5.0	0.44	350	<0.1	8.6	100
	06/08/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	03/12/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	11/17/14	8015D/300.0	<1.0	<0.05	<5.0	0.54	400	6.6	6.6	73
	09/24/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	04/09/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
MKTf-35	11/30/17	8015D/300.0	0.92	0.47	<5	0.9	190	<1	<1	34
	09/27/17	8015D/300.0	1.7	0.57	<5	0.8	190	<1	<1	38
	06/14/17	8015D/300.0	2.1	0.6	<5	0.3	150	<1	<1	99
	03/01/17	8015D/300.0	2.1	0.73	<5	0.94	71	<1	<1	410
	11/03/16	8015D/300.0	<1.0	1.7	<5.0	0.82	54	<1.0	<1.0	310
	09/13/16	8015D/300.0	<1.0	2	<5.0	0.77	62	<1.0	<1.0	270
	06/10/16	8015D/300.0	<1.0	1.4	<5.0	0.79	51	<1.0	<1.0	210
	02/26/16	8015D/300.0	0.94	0.87	<5.0	0.45	65	<1.0	<1.0	99
	11/03/15	8015D/300.0	2.8	1.5	<5.0	0.79	100	<0.1	<0.1	16
	08/18/15	8015D/300.0	2.9	4.7	<5.0	0.73	110	<0.1	<0.1	20
	06/04/15	8015D	2.3	2.9	<5.0	NA	NA	NA	NA	NA
	03/17/15	8015D	6	3.7	<5.0	NA	NA	NA	NA	NA
	11/21/14	8015D	3.3	1.6	<5.0	NA	NA	NA	NA	NA
MKTf-36	11/30/17	8015D	12	31	<5	0.79	170	0.29	0.29	0.51
	09/27/17	8015D	24	31	<50	0.66	160	<1	<1	0.7
	06/14/17	8015D	14	34	<5	0.56	140	<1	<1	<2.5
	03/01/17	8015D	13	35	<5	0.6	140	<1	<1	<2.5
	11/08/16	8015D	11	40	<5.0	0.67	130	<1.0	<1.0	<2.5
	08/18/15	8015D	14	39	<5.0	0.6	140	<0.5	<0.5	<2.5
	06/04/15	8015D	13	30	<5.0	NA	NA	NA	NA	NA
	03/17/15	8015D	10	38	<5.0	NA	NA	NA	NA	NA
	11/21/14	8015D	6.8	25	<5.0	NA	NA	NA	NA	NA
MKTf-37	11/03/17	8015D/300.0	6.2	15	<5	0.16	180	<1	<1	12
	06/04/15	8015D	5.7	12	<5.0	NA	NA	NA	NA	NA
	03/17/15	8015D	4.5	11	<5.0	NA	NA	NA	NA	NA
	11/21/14	8015D	<1.0	8.7	<5.0	NA	NA	NA	NA	NA

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250	NE	10	600
40 CFR 141.62 MCL			NE	NE	NE	4	NE	1	10	NE
NMED Tap Water (MARCH 2017)			NE	NE	NE	1.18	NE	1.97	31.59	NE
EPA RSL for Tap Water (MAY 2018)			NE	NE	NE	0.8	NE	2	32	NE
NMED SSG (MARCH 2017)			0.0452	0.055	0.0902	NE	NE	NE	NE	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-38	11/30/17	8015D/300.0	<1	0.026	<5	0.9	210	1.2	1.2	250
	09/28/17	8015D/300.0	<1	0.03	<5	0.69	230	<0.5	<0.5	260
	06/21/17	8015D/300.0	<1	<0.05	<5	0.79	280	0.24	0.24	290
	03/14/17	8015D	<1	<0.05	<5	0.74	130	0.26	0.26	380
	11/01/16	8015D	<1.0	0.065	<5.0	0.82	200	0.14	8.8	320
	09/13/16	8015D/300.0	<1.0	0.09	<5.0	0.73	260	5	5	330
	06/08/16	8015D/300.0	<1.0	0.06	<5.0	0.7	270	9.9	9.9	360
	02/29/16	8015D/300.0	<1.0	0.14	<5.0	0.75	110	7.2	7.2	450
	11/09/15	8015D	<1.0	0.12	<5.0	0.91	210	<0.1	<0.01	400
	08/24/15	8015D/300.0	<1.0	0.099	<5.0	0.69	210	<0.1	3.2	390
	06/10/15	8015D	<1.0	0.2	<5.0	NA	NA	NA	NA	NA
	03/16/15	8015D	<1.0	0.33	<5.0	NA	NA	NA	NA	NA
	11/21/14	8015D	3.8	0.12	<5.0	NA	NA	NA	NA	NA
MKTf-39	11/28/17	8015D/300.0	14	0.9	<5	0.46	1900	0.36	0.36	<2.5
	09/28/17	8015D/300.0	28	0.37	<5	<0.5	3400	<0.5	<0.5	0.49
	06/08/17	8015D/300.0	56	0.73	<5	0.87	790	<1	<1	0.16
	03/14/17	8015D	28	1.5	<5	0.44	1000	<2	<2	0.23
	11/01/16	8015D	17	0.36	<5.0	0.97	1300	<0.5	<0.5	<2.5
	09/13/16	8015D/300.0	10	1.1	<5.0	0.26	1900	<2.0	<2.0	<10
	06/08/16	8015D/300.0	19	0.67	<5.0	0.54	2300	<2.0	<2.0	0.21
	03/03/16	8015D/300.0	13	0.46	<5.0	0.71	2900	<4.0	<4.0	4.2
	11/09/15	8015D	23	0.44	<5.0	<2.0	6400	<2.0	<0.1	<0.5
	08/23/15	8015D/300.0	13	0.93	<5.0	<0.5	9100	<4.0	<4.0	<2.5
	06/10/15	8015D	44	0.44	<5.0	NA	NA	NA	NA	NA
	03/16/15	8015D	6.2	0.21	<5.0	NA	NA	NA	NA	NA
	11/18/14	8015D	15	0.39	<5.0	NA	NA	NA	NA	NA
MKTf-40	11/21/17	8015D/300.0	<1	<0.05	<5	<0.5	4100	<2	<2	590
	09/25/17	8015D/300.0	<1	<0.05	<5	<0.5	3600	<4	<4	590
	06/05/17	8015D/300.0	<1	<0.05	<5	<2	4400	<4	<4	580
	03/07/17	8015D/300.0	<1	<0.05	<5	<0.1	4200	<4	<4	500
	10/31/16	8015D/300.0	<1.0	<0.05	<5.0	<2.0	3700	<4.0	<4.0	500
	09/08/16	8015D/300.0	<1.0	<0.05	<5.0	<2.0	5300	<4.0	<4.0	460
	06/09/16	8015D/300.0	<1.0	<0.05	<5.0	<2.0	5300	<4.0	<4.0	390
	02/23/16	8015D/300.0	<1.0	<0.05	<5.0	<0.1	4900	<10	<10	520
	11/04/15	8015D/300.0	<1.0	<0.05	<5.0	<0.1	4600	<1.0	<1.0	540
	08/21/15	8015D/300.0	<1.0	<0.05	<5.0	<0.5	3400	<4.0	<4.0	890
	06/10/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	11/21/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
MKTf-41	11/27/17	8015D/300.0	<1	<0.05	<5	<0.5	860	5.6	5.6	65
	09/25/17	8015D/300.0	<1	0.029	<5	0.47	810	5.3	5.3	65
	06/06/17	8015D/300.0	<1	<0.05	<5	0.24	910	5.4	5.4	66
	03/07/17	8015D/300.0	<1	<0.05	<5	0.32	800	3.9	3.9	64
	10/31/16	8015D/300.0	<1.0	<0.05	<5.0	0.26	730	5.4	5.4	64
	09/09/16	8015D/300.0	<1.0	<0.05	<5.0	0.29	910	5.7	5.7	60
	06/09/16	8015D/300.0	<1.0	<0.05	<5.0	0.51	750	5.6	5.6	71
	02/24/16	8015D/300.0	<1.0	<0.05	<5.0	0.47	790	4.7	4.7	74
	11/05/15	8015D/300.0	<1.0	<0.05	<5.0	0.35	830	4.2	4.2	68
	08/21/15	8015D/300.0	<1.0	<0.05	<5.0	<0.5	900	5.6	5.6	79
	06/09/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	03/12/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	11/18/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA

Table 1
Groundwater Analyses Summary

STANDARDS			PARAMETERS							
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	1.6	250	NE	10	600
40 CFR 141.62 MCL			NE	NE	NE	4	NE	1	10	NE
NMED Tap Water (MARCH 2017)			NE	NE	NE	1.18	NE	1.97	31.59	NE
EPA RSL for Tap Water (MAY 2018)			NE	NE	NE	0.8	NE	2	32	NE
NMED SSG (MARCH 2017)			0.0452	0.055	0.0902	NE	NE	NE	NE	NE
Well ID	DATE SAMPLED	METHOD								
MKTf-42	11/27/17	8015D/300.0	77	0.19	<5	<0.5	850	<1	<1	110
	09/25/17	8015D/300.0	72	0.21	<50	0.6	820	<1	<1	100
	06/06/17	8015D/300.0	72	0.15	<5	0.47	880	<1	<1	110
	03/07/17	8015D/300.0	79	0.14	<5	0.68	820	<1	<1	110
	10/31/16	8015D/300.0	62	0.11	<5.0	<0.5	900	<2.0	<2.0	110
	09/09/16	8015D/300.0	62	0.7	<5.0	0.43	880	<1.0	<1.0	110
	06/09/16	8015D/300.0	60	0.16	<5.0	0.68	890	<1.0	<1.0	130
	02/24/16	8015D/300.0	52	0.12	<5.0	0.69	860	<1.0	<1.0	120
	11/05/15	8015D/300.0	45	0.11	<5.0	0.6	870	<1.0	<1.0	120
	08/21/15	8015D/300.0	52	0.21	<5.0	0.62	930	<1.0	<1.0	130
	06/09/15	8015D	60	0.1	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	27	<0.5	<5.0	NA	NA	NA	NA	NA
11/18/14	8015D	44	<0.05	<5.0	NA	NA	NA	NA	NA	
MKTf-43	11/27/17	8015D/300.0	<1	<0.05	<5	<0.5	12000	14	14	1200
	09/25/17	8015D/300.0	<1	<0.05	<5	<0.5	9500	13	13	1100
	06/06/17	8015D/300.0	<1	<0.05	<5	<2	12000	23	23	980
	03/08/17	8015D/300.0	<1	<0.05	<5	<2	13000	25	25	1000
	10/31/16	8015D/300.0	<1.0	<0.05	<5.0	<2.0	19000	62	62	1300
	09/09/16	8015D/300.0	<1.0	0.026	<5.0	<2.0	16000	<10	<10	1800
	06/09/16	8015D/300.0	<1.0	<0.05	<5.0	<2.0	15000	<10	<10	1300
	02/24/16	8015D/300.0	<1.0	<0.05	<5.0	<2.0	15000	<10	<10	1200
	11/05/15	8015D/300.0	<1.0	<0.05	<5.0	<2.0	16000	<10	<10	1600
	08/21/15	8015D/300.0	<1.0	<0.05	<5.0	<2.0	17000	<10	<10	1700
	06/10/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	03/11/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	11/18/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
MKTf-44	11/28/17	8015D/300.0	<1	0.017	<5	<0.5	730	4.2	4.2	91
	09/25/17	8015D/300.0	<1	<0.05	<5	<0.5	1100	7	7	85
	06/05/17	8015D/300.0	<1	<0.05	<5	<0.1	1300	7.6	7.6	80
	03/08/17	8015D/300.0	<1	<0.05	<5	<0.1	3500	26	26	59
	11/01/16	8015D/300.0	<1.0	<0.05	<5.0	0.32	150	0.81	0.81	100
	09/09/16	8015D/300.0	<1.0	0.023	<5.0	0.36	310	1.8	1.8	97
	06/09/16	8015D/300.0	<1.0	<0.05	<5.0	0.29	610	3.6	3.6	96
	02/24/16	8015D/300.0	<1.0	<0.05	<5.0	0.45	270	1.1	1.1	100
	11/09/15	8015D/300.0	<1.0	<0.05	<5.0	0.56	91	<0.5	0.75	110
	08/17/15	8015D/300.0	<1.0	<0.1	<5.0	0.58	110	<1.0	<1.0	120
	06/10/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	03/12/15	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA
	11/21/14	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA

DEFINITIONS

NE = Not established

NA = Not analyzed

Bold and highlighted values represent values above the applicable standards

STANDARDS

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

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

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

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

NMED Soil Screening Guidance Volume 1, Table 6-4 (groundwater), (March 2017)

NOTES

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

Table 1
Groundwater Analyses Summary

PARAMETERS - TOTAL METALS																		
STANDARDS																		
WQCC 20NMAC 6.2.3103																		
40 CFR 141.62 MCL																		
NMED Tap Water (MARCH 2017)																		
EPA RSL for Tap Water (MAY 2018)																		
Well ID	DATE SAMPLED	METHOD	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)			
MKTf-1	02/24/16	200.7/200.8	0.02	3.3	<0.002	<0.006	<0.006	5.5	0.0011	2.2	0.0028	<0.005	<0.0002	0.00029	0.0099			
	11/04/15	200.7/200.8	<0.005	3	<0.002	<0.006	<0.006	8.3	0.0069	2.1	0.0082	<0.005	<0.0002	0.00061	0.016			
	08/21/15	200.7/200.8	0.0033	2.8	<0.002	<0.006	<0.006	8.7	0.0062	2.1	<0.01	<0.005	<0.0002	0.00078	0.014			
	06/09/15	200.7/200.8	0.0034	2.4	<0.002	0.0065	<0.006	8.1	0.0042	2.2	0.0045	<0.005	<0.0002	<0.0005	0.015			
	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	0.007	4.7	<0.002	0.035	0.038	35	0.074	4.1	0.0091	<0.005	<0.0002	<0.005	0.078			
	11/20/17	200.7/200.8	0.0034	0.26	<0.002	<0.006	<0.006	0.23	0.00062	0.6	<0.005	<0.005	<0.0002	0.036	<0.01			
MKTf-2	10/03/17	200.7/200.8	0.0054	0.34	<0.002	<0.006	0.004	3	0.002	0.91	0.0056	<0.005	<0.0002	NA	0.0085			
	03/16/17	200.7/200.8	0.004	0.35	<0.002	<0.006	<0.006	1.4	0.0017	0.74	0.0082	<0.005	<0.0002	0.024	0.0063			
	10/28/16	200.7/200.8	0.003	0.22	<0.002	<0.006	<0.006	1.5	0.0027	0.53	0.0048	<0.005	<0.0002	0.026	0.038			
	09/07/16	200.7/200.8	0.0041	0.32	<0.002	0.0054	0.0038	5.9	0.0089	0.65	0.0064	<0.005	<0.0002	0.038	0.018			
	06/10/16	200.7/200.8	0.0024	0.19	<0.002	0.0027	<0.006	2.6	0.0034	0.4	0.0046	<0.005	<0.0002	0.033	0.012			
	02/24/16	200.7/200.8	0.0045	0.73	<0.002	0.0098	0.018	14	0.023	1.1	0.0033	<0.005	<0.0002	0.063	0.057			
	11/04/15	200.7/200.8	0.0043	0.17	<0.002	<0.006	<0.006	0.25	0.0038	0.44	<0.05	<0.005	<0.0002	0.032	0.012			
	08/21/15	200.7/200.8	0.0044	0.28	<0.002	0.0073	0.0089	8.6	0.0088	0.81	0.0026	<0.005	<0.0002	0.05	0.033			
	06/09/15	200.7/200.8	0.0035	0.14	<0.002	<0.006	<0.006	1.6	0.0023	0.55	0.0028	<0.005	<0.0002	0.032	<0.01			
	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			
	11/14/14	200.7/200.8	0.0059	0.22	<0.002	<0.006	0.012	7	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	0.57	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	<0.006	4.2	<0.005	0.7	<0.005	<0.0002	0.056	0.017				
MKTf-4	11/28/17	200.7/200.8	0.015	3.5	<0.002	<0.006	<0.006	7	0.00041	1.3	0.0062	0.0013	NA	0.0019	<0.01			
	09/26/17	200.7/200.8	0.019	3.8	<0.002	<0.006	<0.006	9.4	0.0018	1.4	0.011	<0.005	<0.0002	NA	0.0045			
	06/08/17	200.7/200.8	0.011	3	<0.002	<0.006	<0.006	5	0.0012	1.5	0.012	<0.005	0.000067	0.0035	0.005			
	03/02/17	200.7/200.8	0.012	3.2	<0.002	<0.006	<0.006	8.2	0.0019	1.5	0.01	<0.005	0.00015	NA	0.0087			
	11/02/16	200.7/200.8	0.01	2.8	<0.002	<0.006	<0.006	4.6	0.00063	1.5	0.01	<0.005	<0.0002	0.0041	0.006			
	09/11/16	200.7/200.8	0.01	3.4	<0.002	<0.006	<0.006	6.7	0.003	1.5	0.014	<0.005	<0.0002	0.0028	0.0072			
	06/09/16	200.7/200.8	0.0089	3.1	<0.002	<0.006	<0.006	6.2	0.0019	1.7	0.0098	<0.005	<0.0002	0.0048	0.016			
	02/29/16	200.7/200.8	0.0081	3	<0.002	<0.006	<0.006	5.6	0.0036	1.5	0.0043	<0.005	<0.0002	0.0042	0.022			
	11/03/15	200.7/200.8	0.014	3.4	<0.002	<0.006	<0.006	16	0.0063	1.7	0.016	<0.005	<0.0002	0.0019	0.012			
	08/18/15	200.7/200.8	0.0085	3	<0.002	<0.006	0.0061	17	0.017	1.9	<0.01	<0.005	<0.0002	0.0042	0.025			
	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	0.006	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			

Table 1
Groundwater Analyses Summary

PARAMETERS - TOTAL METALS																
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)		
STANDARDS	WQCC 20NMAC 6.2.3103	0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.002	0.03	10		
	40 CFR 141.62 MCL	0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE		
	NMED Tap Water (MARCH 2017)	0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.00626	0.0592	5.96		
	EPA RSL for Tap Water (MAY 2018)	0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.004	6		
Well ID	DATE SAMPLED	METHOD														
MKTF-9	11/28/17	200.7/200.8	0.0067	0.65	<0.002	<0.006	<0.006	2.4	0.0014	3.8	<0.01	0.0025	NA	0.005	<0.01	
	09/28/17	200.7/200.8	0.004	0.61	<0.002	<0.006	0.0064	5.3	0.0043	4.8	0.0085	<0.005	<0.0002	NA	0.0072	
	06/12/17	200.7/200.8	0.0025	0.6	<0.002	<0.006	<0.006	3.5	0.0028	4.5	0.0081	0.00046	<0.0002	NA	0.003	
	03/15/17	200.7/200.8	0.0052	0.59	<0.002	<0.006	0.0065	5.2	0.0043	4.4	0.0072	<0.005	<0.0002	0.0036	0.0046	
	11/02/16	200.7/200.8	0.0028	0.47	<0.002	<0.006	<0.006	1.7	0.0016	3.6	0.0058	<0.005	<0.0002	0.0066	0.003	
	09/11/16	200.7/200.8	0.0033	0.52	<0.002	<0.006	<0.006	2.3	0.0019	3.8	0.0068	<0.005	<0.0002	0.0064	<0.01	
	06/09/16	200.7/200.8	0.0023	0.49	<0.002	<0.006	<0.006	2.1	0.0015	3.6	0.0047	<0.005	<0.0002	0.0069	<0.01	
	02/29/16	200.7/200.8	0.002	0.64	<0.002	<0.006	<0.006	4	0.004	4.2	0.0023	<0.005	<0.0002	0.0048	0.012	
	11/03/15	200.7/200.8	0.0045	0.71	<0.002	<0.006	<0.006	8.8	0.011	4.3	<0.05	<0.005	<0.0002	0.0051	0.019	
	08/18/15	200.7/200.8	0.0042	0.81	<0.002	<0.006	0.0089	7.7	0.015	3.7	<0.005	<0.005	<0.0002	0.0053	0.027	
	06/04/15	200.7/200.8	<0.005	0.34	<0.002	<0.006	<0.006	3.1	<0.005	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	11/28/17	200.7/200.8	0.0099	4.2	<0.002	<0.006	<0.006	9.8	0.00093	3	<0.01	0.0017	NA	<0.005	<0.01	
	09/28/17	200.7/200.8	0.007	4.1	<0.002	<0.006	0.0038	9	0.001	3	0.004	<0.005	<0.0002	NA	<0.01	
	06/08/17	200.7/200.8	0.0082	4.1	<0.002	<0.006	<0.006	8.3	0.0021	3.2	0.0039	<0.005	0.000065	0.00055	0.0083	
	03/02/17	200.7/200.8	0.014	4.7	<0.002	<0.006	<0.006	15	0.0051	3.5	0.0047	<0.005	0.00015	NA	0.0091	
	11/02/16	200.7/200.8	0.0096	6	<0.002	<0.006	<0.006	10	0.0011	5.2	0.0049	<0.005	<0.0002	0.00086	0.0044	
	09/11/16	200.7/200.8	0.0083	11	<0.002	<0.006	<0.006	26	0.0018	12	0.0058	<0.005	<0.0002	0.0012	0.0027	
	06/09/16	200.7/200.8	0.006	13	<0.002	<0.006	<0.006	36	0.002	15	0.0033	<0.005	<0.0002	0.0008	0.019	
	02/29/16	200.7/200.8	0.0086	16	<0.002	<0.006	<0.006	57	0.0027	21	0.002	<0.005	<0.0002	0.0015	0.014	
	11/03/15	200.7/200.8	0.0059	14	<0.002	<0.006	<0.006	61	0.0025	19	<0.05	<0.005	<0.0002	0.0019	0.032	
	08/18/15	200.7/200.8	0.038	15	<0.002	0.013	<0.006	64	0.58	22	<0.05	0.0003	0.063	0.49	0.15	
	06/04/15	200.7/200.8	0.015	19	<0.002	0.077	0.1	120	0.19	24	<0.01	<0.005	<0.0002	0.014	0.15	
	03/16/15	200.7/200.8	0.019	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	

Table 1
Groundwater Analyses Summary

PARAMETERS - TOTAL METALS																
STANDARDS			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)	
WQCC 20NMAC 6.2.3103			0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.002	0.03	10	
40 CFR 141.62 MCL			0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE	
NMED Tap Water (MARCH 2017)			0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.00626	0.0592	5.96	
EPA RSL for Tap Water (MAY 2018)			0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.004	6	
Well ID	DATE SAMPLED	METHOD														
MKTf-11	11/28/17	200.7/200.8	0.016	3	<0.002	<0.006	<0.006	<0.006	7.6	<0.0025	3.2	<0.005	0.0019	NA	0.0054	<0.01
	09/26/17	200.7/200.8	0.013	3.1	<0.002	<0.006	<0.006	<0.006	12	0.0034	3.3	0.0063	<0.005	<0.0002	NA	0.0086
	06/08/17	200.7/200.8	0.014	2.2	<0.002	<0.006	<0.006	<0.006	6.1	0.00084	2.7	0.0031	<0.005	0.000065	0.003	0.0055
	03/02/17	200.7/200.8	0.019	2.3	<0.002	<0.006	<0.006	<0.006	6.7	0.00063	3.1	0.0037	<0.005	0.00015	NA	0.0038
	11/02/16	200.7/200.8	0.014	2.7	<0.002	<0.006	<0.006	<0.006	8.4	0.0011	4	0.005	<0.002	0.0065	0.0065	0.017
	09/11/16	200.7/200.8	0.013	2.9	<0.002	<0.006	<0.006	<0.006	7.1	0.0011	4.1	0.0054	<0.002	0.0065	0.0065	0.012
	06/09/16	200.7/200.8	0.012	3.4	<0.002	<0.006	<0.006	<0.006	8.1	0.0013	4	0.0031	<0.002	0.0091	0.0091	0.016
	02/29/16	200.7/200.8	0.013	3.9	<0.002	<0.006	<0.006	<0.006	11	0.0027	6.4	0.0021	<0.002	0.0054	0.0054	0.018
	11/03/15	200.7/200.8	0.0078	3.8	<0.002	<0.006	<0.006	<0.006	15	0.0031	3.5	0.0054	<0.002	0.00073	0.00073	0.017
	08/18/15	200.7/200.8	0.0091	2.4	<0.002	<0.006	<0.006	<0.006	14	0.0071	4	0.003	<0.002	0.0026	0.0026	0.024
	06/04/15	200.7/200.8	0.0056	2.7	<0.002	<0.006	<0.006	<0.006	0.013	0.0027	3	<0.005	<0.002	<0.0025	<0.0025	0.013
	03/16/15	200.7/200.8	0.0086	1.9	<0.002	<0.006	<0.006	<0.006	10	0.0068	3.1	0.006	<0.002	0.0021	0.0021	0.024
	11/13/14	200.7/200.8	0.0087	1.7	<0.002	<0.006	<0.006	<0.006	5.8	<0.005	3.4	<0.005	<0.002	<0.005	<0.005	0.012
	09/15/14	200.7/200.8	0.0072	1.4	<0.002	<0.006	<0.006	<0.006	8.1	0.0062	3.1	0.0029	<0.002	0.0058	0.0058	0.021
	06/05/14	200.7/200.8	0.0063	1.2	<0.002	0.0061	<0.006	<0.006	8.8	0.0096	2.8	0.0055	<0.002	<0.005	<0.005	0.038
MKTf-13	03/15/17	200.7/200.8	0.0056	5	<0.002	<0.006	<0.006	18	0.0021	4.1	0.0075	<0.005	<0.0002	0.00073	0.00073	0.0048
MKTf-15	11/28/17	200.7/200.8	0.024	47	<0.002	<0.0006	<0.006	78	0.0037	25	0.0079	0.012	NA	<0.0025	<0.0025	<0.01
	06/08/17	200.7/200.8	0.0072	33	<0.002	0.0011	<0.006	65	0.0098	14	0.0081	<0.005	0.000074	0.0015	0.0015	0.032
	03/02/17	200.7/200.8	0.0045	29	<0.002	<0.006	<0.006	49	0.0097	9.6	0.0058	<0.005	0.00015	NA	0.0015	0.027
	11/02/16	200.7/200.8	0.0037	22	<0.002	<0.006	<0.006	34	0.006	6.8	0.0069	<0.005	<0.0002	<0.0025	<0.0025	0.28
	09/11/16	200.7/200.8	0.0022	23	<0.002	<0.006	<0.006	35	0.0059	7.7	0.0054	<0.005	<0.0002	<0.0025	<0.0025	0.018
	09/17/15	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	<0.01	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	<0.005	0.017
MKTf-16	11/29/17	200.7/200.8	0.019	2.9	<0.002	<0.006	<0.006	5.2	0.0012	2.3	0.011	0.0015	NA	0.0066	0.0066	0.0079
	09/26/17	200.7/200.8	0.016	2.7	<0.002	<0.002	0.0021	8.6	0.002	2.6	0.019	<0.005	0.000058	NA	0.0096	0.0096
	06/08/17	200.7/200.8	0.019	2.2	<0.002	0.0018	0.0022	3.4	0.0033	1.6	0.014	<0.005	0.000054	0.015	0.015	0.016
	03/14/17	200.7/200.8	0.014	1.9	<0.002	<0.006	0.0054	6.3	0.0058	1.7	0.0081	<0.005	NA	0.0024	0.0024	0.025
	11/03/16	200.7/200.8	0.015	0.67	<0.002	<0.006	0.0038	3.6	0.0034	0.86	0.01	<0.005	<0.0002	0.0077	0.0077	0.02
	09/12/16	200.7/200.8	0.014	0.72	<0.002	<0.006	<0.006	4.6	0.0029	0.96	0.014	<0.005	<0.0002	0.0067	0.0067	0.022
	02/29/16	200.7/200.8	0.0092	1.3	<0.002	<0.006	<0.006	6.5	0.0031	1.8	0.0049	<0.005	<0.0002	0.00066	0.00066	0.034
	11/03/15	200.7/200.8	0.018	3	<0.002	<0.006	<0.006	13	0.0027	3.9	0.021	<0.005	<0.0002	0.00053	0.00053	0.023
	08/23/15	200.7/200.8	0.014	3.9	<0.002	<0.006	<0.006	16	0.0012	5.5	<0.02	<0.005	<0.0002	<0.0005	<0.0005	0.01
	06/08/15	200.7/200.8	0.0097	2.2	<0.002	<0.006	0.0091	12	<0.0025	3.3	0.0072	<0.025	<0.0002	<0.0025	<0.0025	0.023
	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	<0.01	0.035
	11/18/14	200.7/200.8	0.01	1.1	<0.002	<0.006	<0.006	10	0.0042	1.3	<0.05	<0.005	<0.0002	0.0016	0.0016	0.05
	09/17/14	200.7/200.8	0.012	0.8	<0.002	<0.006	<0.006	<0.006	8.6	0.0031	1.2	<0.01	<0.002	<0.001	<0.001	0.034
	06/05/14	200.7/200.8	0.023	0.9	<0.002	<0.006	0.008	7.9	<0.005	1.2	0.013	<0.005	<0.0002	0.015	0.015	0.089

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STANDARDS			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)			
WQCC 20NMAC 6.2.3103			0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.002	0.03	10			
40 CFR 141.62 MCL			0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE			
NMED Tap Water (MARCH 2017)			0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.00626	0.0592	5.96			
EPA RSL for Tap Water (MAY 2018)			0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.004	6			
Well ID	DATE SAMPLED	METHOD																
MKTf-17	12/01/17	200.7/200.8	0.0041	0.62	<0.002	<0.006	<0.006	<0.006	1.9	0.00065	2.3	<0.01	0.0013	<0.0002	0.0046	<0.01		
	09/26/17	200.7/200.8	0.008	0.77	<0.002	<0.006	<0.006	<0.006	4.2	0.0014	2.9	0.0056	<0.005	<0.0002	NA	0.0044		
	06/14/17	200.7/200.8	0.008	0.56	<0.002	0.0022	<0.006	<0.006	3.8	0.0032	2.5	0.0029	<0.005	<0.0002	NA	0.03		
	03/15/17	200.7/200.8	0.0078	0.76	<0.002	<0.006	0.0052	6.5	0.0026	2.8	0.0035	<0.005	<0.0002	0.0057	0.0059			
	11/08/16	200.7/200.8	0.0064	0.6	<0.002	<0.006	<0.006	1.9	0.0013	2.8	0.0034	<0.005	<0.0002	0.0077	0.0068			
	09/13/16	200.7/200.8	0.007	0.58	<0.002	<0.006	<0.006	3.3	0.0031	2.8	0.0035	<0.005	0.000071	0.011	0.0061			
	02/26/16	200.7/200.8	0.0046	0.12	<0.002	<0.006	<0.006	0.98	0.00095	2.6	0.0012	<0.005	<0.0002	0.018	0.0056			
	11/03/15	200.7/200.8	0.02	12	<0.01	<0.006	<0.006	0.65	0.35	3.5	<0.02	<0.005	<0.0002	0.048	0.33			
	08/18/15	200.7/200.8	0.0052	0.2	<0.002	<0.006	0.0097	1.7	0.0037	2.9	<0.005	<0.005	<0.0002	0.018	0.011			
	06/08/15	200.7/200.8	<0.005	0.24	<0.002	<0.006	<0.006	2.6	0.0032	3.3	<0.005	<0.005	<0.0002	0.02	0.015			
	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			
	11/18/14	200.7/200.8	0.0051	0.21	<0.002	<0.006	<0.006	2	0.0031	3	<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			
MKTf-18	06/14/17	200.7/200.8	<0.005	2.4	<0.002	0.0048	0.0032	7	0.0088	2.3	0.0041	<0.005	<0.0002	NA	0.02			
	03/01/17	200.7/200.8	0.003	2.2	<0.002	<0.006	<0.006	4.9	0.0047	2.1	0.0039	<0.005	0.00015	NA	0.012			
	11/08/16	200.7/200.8	0.0033	1.7	<0.002	<0.006	<0.006	2.2	0.00041	1.8	0.0059	<0.005	<0.0002	0.0011	<0.01			
	09/13/16	200.7/200.8	0.0033	1.8	<0.002	<0.006	<0.006	3.3	0.0013	2	0.0049	<0.005	0.000064	0.0013	0.0037			
	06/10/16	200.7/200.8	0.0027	1.9	<0.002	<0.006	<0.006	2.5	0.0013	1.9	0.0057	<0.005	<0.0002	0.0012	<0.01			
	02/26/16	200.7/200.8	0.0022	2.3	<0.002	0.0043	0.0057	6.4	0.0064	2.1	0.0019	<0.005	<0.0002	0.0016	0.02			
	11/03/15	200.7/200.8	0.0088	12	<0.002	0.046	0.064	58	0.14	11	<0.01	<0.005	<0.001	0.015	0.19			
	08/18/15	200.7/200.8	0.018	24	<0.01	0.26	0.21	110	0.37	22	<0.01	<0.005	0.00025	0.037	0.54			
	06/08/15	200.7/200.8	<0.005	2.5	<0.002	<0.006	<0.006	5	<0.0025	1.8	<0.005	<0.005	<0.0002	<0.0025	<0.01			
	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	0.0016	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	0.0025	<0.005	<0.0002	0.0015	0.018			
	06/06/14	200.7/200.8	0.013	19	<0.01	0.11	0.12	81	0.29	17	0.013	<0.025	<0.0002	0.022	0.31			
	MKTf-19	12/01/17	200.7/200.8	0.0077	2	<0.002	<0.006	0.0056	14	0.01	2.3	<0.01	<0.005	<0.0002	0.0016	0.011		
09/26/17		200.7/200.8	0.015	2.4	<0.002	0.012	0.015	20	0.026	3.4	0.0077	<0.005	0.000042	NA	0.062			
06/14/17		200.7/200.8	0.014	2.2	<0.002	0.0059	0.01	17	0.022	3.3	<0.01	<0.005	0.000045	NA	0.1			
03/15/17		200.7/200.8	0.018	2.3	<0.002	0.0075	0.018	20	0.033	3.3	0.012	<0.005	<0.0002	0.0071	0.1			
11/08/16		200.7/200.8	0.013	2.2	<0.002	0.0088	0.015	33	0.033	2.6	0.0087	<0.005	<0.0002	0.0059	0.07			
09/13/16		200.7/200.8	0.015	2.1	<0.002	0.0057	0.0083	17	0.023	2.6	0.0079	<0.005	0.000073	0.0043	0.065			
06/10/16		200.7/200.8	0.016	2.6	<0.002	0.0082	0.012	19	0.038	3.3	0.011	<0.005	<0.0002	0.0079	0.077			
02/25/16		200.7/200.8	0.022	2.8	<0.002	0.012	0.018	23	0.069	3.9	0.019	<0.005	<0.001	0.025	0.01			
11/03/15		200.7/200.8	0.018	2.7	<0.002	<0.006	<0.006	13	0.046	3.4	0.01	<0.005	<0.0002	0.0077	0.096			
08/18/15		200.7/200.8	0.018	4.4	<0.002	0.044	0.06	64	0.14	6.3	0.0062	<0.005	<0.0002	0.024	0.22			
06/08/15	200.7/200.8	0.019	2.5	<0.002	0.024	0.017	28	0.035	4.2	<0.005	<0.005	<0.0002	0.0048	0.082				

Table 1
Groundwater Analyses Summary

PARAMETERS - TOTAL METALS															
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)	
STANDARDS	WQCC 20NMAC 6.2.3103	0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.002	0.03	10	
	40 CFR 141.62 MCL	0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE	
	NMED Tap Water (MARCH 2017)	0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.00626	0.0592	5.96	
	EPA RSL for Tap Water (MAY 2018)	0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.004	6	
	Well ID	DATE SAMPLED	METHOD												
	MKTF-20	11/29/17	200.7/200.8	0.025	9.3	<0.002	<0.006	0.045	15	0.0086	0.0096	0.0018	NA	0.0025	0.06
		09/26/17	200.7/200.8	0.026	7.6	<0.002	0.0022	0.11	19	0.0083	0.033	<0.005	<0.0002	NA	0.35
		06/12/17	200.7/200.8	0.022	7.5	<0.002	<0.006	0.02	17	0.012	0.035	<0.005	<0.0002	NA	0.02
		03/14/17	200.7/200.8	0.025	11	<0.002	<0.006	0.036	22	0.013	0.018	NA	<0.0002	0.00085	0.097
		11/03/16	200.7/200.8	0.029	9.3	<0.002	<0.006	0.019	22	0.009	0.013	<0.005	<0.0002	0.0052	0.024
09/12/16		200.7/200.8	0.025	5.2	<0.002	<0.006	0.022	17	0.0072	0.0092	<0.005	<0.0002	0.0044	0.033	
06/09/16		200.7/200.8	0.038	4.6	<0.002	<0.006	0.09	17	0.019	0.0093	<0.005	0.000077	0.02	0.085	
03/16/15		200.7/200.8	0.025	2	<0.002	<0.006	0.016	11	0.0066	0.0046	<0.005	<0.0002	0.011	0.03	
11/18/14		200.7/200.8	0.017	4.5	<0.002	0.022	0.12	45	0.048	<0.005	<0.005	<0.0002	0.0066	0.19	
MKTF-21	11/28/17	200.7/200.8	0.023	4.4	<0.002	<0.006	0.0061	21	0.0013	0.0056	<0.005	NA	0.0047	0.07	
	09/26/17	200.7/200.8	0.01	2.8	<0.002	<0.006	0.0032	7.9	0.001	0.0098	<0.005	<0.0002	NA	0.091	
	06/21/17	200.7/200.8	0.018	4.1	<0.002	<0.006	0.01	43	0.0065	0.023	<0.005	<0.0002	0.0011	0.069	
	03/14/17	200.7/200.8	0.016	3.6	<0.002	<0.006	0.0052	29	0.0035	0.0064	<0.005	<0.0002	0.0013	0.045	
	11/03/16	200.7/200.8	0.021	4.3	<0.002	<0.006	<0.006	33	0.0033	0.0086	<0.005	<0.0002	0.0022	0.057	
	09/12/16	200.7/200.8	0.019	2.7	<0.002	<0.006	0.0064	24	0.0031	0.0085	<0.005	0.000053	0.001	0.048	
	06/10/15	200.7/200.8	Not enough water to collect samples												
03/16/15	200.7/200.8	0.02	4.9	<0.002	0.029	0.1	55	0.079	6.4	<0.01	<0.005	<0.0002	0.0066	0.44	
MKTF-22	11/28/17	200.7/200.8	<0.02	1.5	<0.002	<0.006	0.0043	7.9	0.0048	<0.005	0.0017	NA	0.0026	0.008	
	10/03/17	200.7/200.8	0.0024	1.8	<0.002	0.017	0.017	25	0.027	0.0022	<0.005	<0.0002	NA	0.034	
	06/08/17	200.7/200.8	0.0016	1.3	<0.002	0.0075	0.0061	10	0.01	0.0019	<0.005	0.000066	0.0033	0.015	
	03/08/17	200.7/200.8	0.0041	2	<0.002	0.01	0.015	17	0.029	0.0067	<0.005	<0.0002	NA	0.032	
	11/01/16	200.7/200.8	0.0044	1.7	<0.002	0.0062	0.0096	12	0.033	0.0047	<0.005	<0.0002	0.0041	0.02	
	09/10/16	200.7/200.8	0.0032	1.3	<0.002	0.0051	<0.006	8.8	0.0072	0.0045	<0.005	<0.0002	0.004	0.011	
	06/10/16	200.7/200.8	0.0025	2.2	<0.002	0.0062	<0.006	17	0.022	0.0039	<0.005	<0.0002	0.0047	0.033	
	02/25/16	200.7/200.8	0.0023	2	<0.002	0.012	0.013	20	0.035	0.0025	<0.005	<0.0002	0.0039	0.039	
	11/09/15	200.7/200.8	0.0036	1.4	<0.002	0.0099	0.019	18	0.029	<0.01	<0.005	<0.0002	0.0078	0.032	
	08/20/15	200.7/200.8	0.0076	5.6	<0.002	0.1	0.15	87	0.24	0.0074	<0.005	<0.0002	0.031	0.21	
	06/09/15	200.7/200.8	<0.005	2.2	<0.002	0.018	0.026	27	0.048	<0.005	<0.005	<0.0002	0.0053	0.057	
	03/12/15	200.7/200.8	<0.01	2.1	<0.002	0.018	0.015	21	0.035	<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	0.004	<0.005	<0.0002	0.0041	0.025	
	MKTF-23	06/10/16	200.7/200.8	0.013	0.8	<0.002	0.0029	<0.006	4.1	0.0094	0.0094	<0.005	<0.0002	0.0056	0.016
02/25/16		200.7/200.8	0.0094	0.67	<0.002	<0.006	<0.006	3.8	0.0025	0.0035	<0.005	<0.0002	0.0027	0.0054	
11/10/15		200.7/200.8	0.013	0.66	<0.002	<0.006	<0.006	0.29	0.0009	<0.02	<0.005	<0.0002	0.037	<0.01	
08/21/15		200.7/200.8	0.014	0.9	<0.002	0.0062	0.008	5.4	0.0088	<0.005	<0.005	<0.0002	0.032	0.022	
06/09/15		200.7/200.8	0.011	0.83	<0.002	<0.006	0.012	5.4	0.0093	<0.005	<0.005	<0.0002	0.011	0.027	
03/12/15		200.7/200.8	0.013	0.64	<0.002	<0.006	<0.006	5.2	0.0035	0.01	<0.005	<0.0002	0.0062	0.011	
11/17/14		200.7/200.8	0.011	0.49	<0.002	<0.006	<0.006	6.2	0.005	0.0067	<0.005	<0.0002	0.016	0.035	

Table 1
Groundwater Analyses Summary

PARAMETERS - TOTAL METALS																
STANDARDS																
WQCC 20NMAC 6.2.3103																
40 CFR 141.62 MCL																
NMED Tap Water (MARCH 2017)																
EPA RSL for Tap Water (MAY 2018)																
Well ID	DATE SAMPLED	METHOD	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)	
MKTf-27	11/20/17	200.7/200.8	0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.002	0.03	10	
	10/03/17	200.7/200.8	0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE	
	06/05/17	200.7/200.8	0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.00626	0.0592	5.96	
	03/29/17	200.7/200.8	0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.004	6	
	11/20/17	200.7/200.8	0.003	0.19	<0.002	<0.006	0.0084	6.1	0.0057	0.92	<0.01	0.0021	<0.0002	0.052	0.017	
	10/03/17	200.7/200.8	0.0048	0.1	<0.002	0.0019	0.0038	2.1	0.0024	0.4	0.013	<0.005	<0.0002	NA	0.013	
	06/05/17	200.7/200.8	0.0042	0.15	<0.002	0.004	0.0029	4.8	0.0053	0.63	0.011	<0.005	0.000056	0.07	0.017	
	03/29/17	200.7/200.8	0.015	0.26	<0.002	0.0054	<0.006	9.8	0.0096	1.5	0.022	<0.005	0.000071	0.097	0.032	
	10/28/16	200.7/200.8	0.0028	0.089	<0.002	<0.006	<0.006	1.5	0.0022	0.24	0.0088	<0.005	<0.0002	0.063	0.029	
	09/07/16	200.7/200.8	0.0035	0.12	<0.002	0.0035	<0.006	3.7	0.0051	0.58	0.01	<0.005	0.000062	0.06	0.017	
	06/08/16	200.7/200.8	0.0042	0.21	<0.002	0.0053	<0.006	9.6	0.011	0.93	0.011	<0.005	0.000086	0.059	0.041	
	02/22/16	200.7/200.8	0.0015	0.12	<0.002	0.0025	<0.006	3.6	0.0044	0.43	0.0034	<0.005	0.000095	0.063	0.02	
	11/04/15	200.7/200.8	<0.005	0.15	<0.002	<0.006	<0.006	7.4	0.0073	0.93	<0.02	<0.005	<0.0002	0.064	0.029	
	08/20/15	200.7/200.8	<0.005	0.18	<0.002	<0.006	<0.006	6.2	0.0064	0.7	0.0056	<0.005	<0.0002	0.071	0.027	
06/09/15	200.7/200.8	<0.01	0.13	<0.002	<0.006	<0.006	4.1	<0.005	0.58	<0.01	<0.005	<0.0002	0.067	0.023		
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-28	11/20/17	200.7/200.8	<0.01	0.054	<0.002	<0.006	<0.006	0.14	<0.0005	0.091	<0.01	<0.005	NA	0.13	0.0045	
	10/03/17	200.7/200.8	0.0051	0.07	<0.002	<0.006	0.004	1.4	0.0015	0.11	0.011	<0.005	<0.0002	NA	0.008	
	06/05/17	200.7/200.8	0.0048	0.076	<0.002	<0.006	0.0032	1.6	0.0016	0.078	0.012	<0.005	<0.0002	0.16	0.0057	
	03/29/17	200.7/200.8	0.0089	0.36	<0.002	0.0093	0.013	21	0.025	0.89	0.014	<0.005	0.000088	0.16	0.079	
	10/28/16	200.7/200.8	0.0044	0.13	<0.002	<0.006	0.0031	3.3	0.0056	0.18	0.013	<0.005	<0.001	0.15	0.015	
	09/08/16	200.7/200.8	0.0056	0.26	<0.002	0.0067	0.0094	11	0.014	0.44	0.013	<0.005	0.00011	0.14	0.049	
	06/08/16	200.7/200.8	0.0059	0.14	<0.002	<0.006	<0.006	4.7	0.0054	0.21	0.013	<0.005	<0.0002	0.15	0.018	
	02/23/16	200.7/200.8	0.0032	0.14	<0.002	0.0028	<0.006	3.7	0.0047	0.18	0.0043	<0.005	0.000069	0.16	0.018	
	11/04/15	200.7/200.8	<0.01	0.17	<0.002	<0.006	<0.006	7.4	0.0072	0.32	0.02	<0.005	<0.001	0.14	0.028	
	08/20/15	200.7/200.8	<0.01	0.18	<0.002	<0.006	0.0077	4.8	0.005	0.2	<0.01	<0.005	<0.0002	0.17	0.02	
	06/09/15	200.7/200.8	<0.01	0.19	<0.002	0.0064	<0.006	5.2	0.0051	0.2	<0.01	<0.005	<0.0002	0.16	0.022	
	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	<0.005	0.38	<0.05	<0.005	<0.0002	0.11	0.015	
	MKTf-29	11/20/17	200.7/200.8	0.0023	0.32	<0.002	<0.006	0.012	8	0.006	1.1	0.0023	<0.005	<0.0002	0.0094	0.016
10/03/17		200.7/200.8	0.002	0.11	<0.002	0.0036	0.0048	2.9	0.0021	0.73	0.0027	<0.005	<0.0002	NA	0.0085	
06/05/17		200.7/200.8	0.0022	0.22	<0.002	0.0073	0.0075	5.5	0.0038	0.74	0.0033	<0.005	0.000057	0.012	0.011	
03/29/17		200.7/200.8	0.0019	0.1	<0.002	0.004	0.0034	2.8	0.0016	0.47	0.0022	<0.005	<0.0002	0.012	0.0059	
10/28/16		200.7/200.8	0.0018	0.1	<0.002	<0.006	0.0039	1.6	0.002	0.47	0.002	<0.005	<0.0002	0.013	0.005	
09/07/16		200.7/200.8	0.0018	0.13	<0.002	<0.006	0.0044	2.6	0.0028	0.52	0.0022	<0.005	0.000066	0.011	0.0084	
06/09/16		200.7/200.8	0.0013	0.076	<0.002	<0.006	<0.006	1.5	2	0.44	0.0017	<0.005	0.000076	0.012	0.013	
02/23/16		200.7/200.8	0.0013	0.062	<0.002	<0.006	<0.006	0.9	0.0007	0.51	0.001	<0.005	0.000061	0.014	0.0044	
11/04/15		200.7/200.8	0.002	0.089	<0.002	<0.006	<0.006	1.3	0.0011	0.61	<0.005	<0.005	<0.0002	0.017	<0.01	
08/20/15		200.7/200.8	0.0021	0.17	<0.002	<0.006	0.011	3.9	0.0028	0.6	0.0022	<0.005	<0.0002	0.02	0.016	
06/10/15		200.7/200.8	<0.005	0.1	<0.002	<0.006	<0.006	2.4	<0.0025	0.41	<0.005	<0.005	<0.0002	0.02	0.011	
03/11/15		200.7/200.8	0.002	0.057	<0.002	<0.006	<0.006	0.81	<0.001	0.36	0.0023	<0.005	<0.0002	0.023	<0.01	

Table 1
Groundwater Analyses Summary

PARAMETERS - TOTAL METALS																
STANDARDS			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)	
WQCC 20NMAC 6.2.3103			0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.002	0.03	10	
40 CFR 141.62 MCL			0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE	
NMED Tap Water (MARCH 2017)			0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.00626	0.0592	5.96	
EPA RSL for Tap Water (MAY 2018)			0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.004	6	
Well ID	DATE SAMPLED	METHOD														
	11/17/14	200.7/200.8	<0.005	0.091	<0.002	<0.006	<0.006	2	0.0027	0.23	<0.01	<0.005	<0.0002	0.067	0.014	

Table 1
Groundwater Analyses Summary

PARAMETERS - TOTAL METALS																
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)	
STANDARDS	WQCC 20NMAC 6.2.3103		0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.002	0.03	10	
	40 CFR 141.62 MCL		0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE	
	NMED Tap Water (MARCH 2017)		0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.00626	0.0592	5.96	
	EPA RSL for Tap Water (MAY 2018)		0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.004	6	
	Well ID	DATE SAMPLED	METHOD													
	MKTf-36	11/30/17	200.7/200.8	0.0097	6.6	<0.002	<0.006	<0.006	17	0.0055	1.7	<0.01	<0.005	<0.0002	<0.005	0.052
		09/27/17	200.7/200.8	0.018	5.3	<0.002	0.0053	0.012	20	0.018	2	0.0035	<0.005	0.000047	NA	0.15
		06/14/17	200.7/200.8	0.012	4.7	<0.002	<0.006	<0.006	16	0.0084	1.9	0.0044	<0.005	<0.0002	NA	0.076
		03/01/17	200.7/200.8	0.013	5.8	<0.002	<0.006	<0.006	17	0.0092	2.1	0.0032	<0.005	0.00015	NA	0.066
		11/08/16	200.7/200.8	0.018	6.6	<0.002	<0.006	0.0068	18	0.01	1.9	0.0045	<0.005	<0.0002	0.00085	0.16
08/18/15		200.7/200.8	0.016	5.7	<0.002	<0.006	<0.006	21	0.017	2.7	<0.005	<0.005	<0.0002	0.0011	0.018	
06/04/15		200.7/200.8	0.017	6.8	<0.002	0.0096	0.0078	22	0.016	2.8	<0.005	<0.005	<0.0002	<0.0025	0.023	
MKTf-37	03/17/15	200.7/200.8	0.016	7	<0.002	<0.006	<0.006	22	0.015	2.8	0.0057	<0.005	<0.0002	0.0016	0.028	
	03/01/17	200.7/200.8	0.004	1.3	<0.002	<0.006	0.0038	11	0.027	1.5	0.0034	<0.005	0.00019	NA	0.027	
	11/03/16	200.7/200.8	0.0034	0.69	<0.002	<0.006	0.005	2.2	0.0046	0.55	0.0036	<0.005	<0.0002	0.025	0.015	
	08/19/15	200.7/200.9	0.0031	0.24	<0.002	<0.006	0.0092	5.7	0.024	1.7	<0.005	<0.005	<0.0002	0.02	0.074	
	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	
MKTf-38	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	
	11/30/17	200.7/200.8	0.00069	0.1	<0.002	<0.006	<0.006	1.7	0.0019	1.9	0.003	0.0021	<0.0002	0.027	<0.01	
	09/28/17	200.7/200.8	0.0025	0.21	<0.002	0.005	0.0064	3.5	0.0039	2.3	0.0047	<0.005	<0.0002	NA	0.01	
	06/21/17	200.7/200.8	0.0023	0.36	<0.002	0.0056	0.0067	6.6	0.0077	2.7	0.0032	<0.005	0.000041	0.026	0.019	
	03/14/17	200.7/200.8	0.0022	0.31	<0.002	<0.006	0.0031	5.8	0.0072	2.9	0.0041	<0.005	<0.0002	0.017	0.018	
	11/01/16	200.7/200.8	0.0022	0.12	<0.002	<0.006	<0.006	1.7	0.0033	3.3	0.0035	<0.005	<0.0002	0.014	0.0069	
	09/13/16	200.7/200.8	0.0025	0.075	<0.002	<0.006	<0.006	0.61	0.001	3	0.0047	<0.005	0.000065	0.014	0.0057	
	06/08/16	200.7/200.8	0.0022	0.23	<0.002	<0.006	<0.006	3	0.0035	3.8	0.0051	<0.005	<0.0002	0.014	0.025	
	02/29/16	200.7/200.8	0.0017	0.14	<0.002	<0.006	<0.006	2.3	0.0035	2.7	0.0024	<0.005	<0.0002	0.014	0.014	
	11/09/15	200.7/200.8	0.005	0.93	<0.002	0.0096	0.0093	11	0.02	4.2	<0.1	<0.005	<0.0002	0.02	0.035	
	08/24/15	200.7/200.8	0.0028	0.49	<0.002	0.0062	0.0077	7.2	0.0096	3.9	0.0038	<0.005	<0.0002	0.019	0.025	
MKTf-39	06/10/15	200.7/200.8	<0.005	0.43	<0.002	0.006	<0.006	6.4	0.008	3.7	<0.005	<0.005	<0.0002	0.022	0.022	
	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	
	11/28/17	200.7/200.8	0.0072	13	<0.002	<0.006	0.0066	13	0.0039	1.9	0.0061	0.0019	NA	<0.0025	0.0064	
	09/28/17	200.7/200.8	0.0046	35	<0.002	<0.006	0.0021	34	0.0026	5.5	0.016	<0.005	<0.0002	NA	0.0065	
	06/08/17	200.7/200.8	0.0042	6.7	<0.002	0.0043	0.0085	12	0.011	1.4	0.0098	<0.005	0.0001	0.00067	0.02	
	03/14/17	200.7/200.8	0.0058	6.4	<0.002	0.004	0.0089	11	0.012	1.4	<0.05	<0.005	0.000067	0.0011	0.022	
	11/01/16	200.7/200.8	0.0037	6.1	<0.002	<0.006	<0.006	8.7	0.0046	1.3	0.0084	<0.005	<0.0002	<0.0025	0.0093	
	09/13/16	200.7/200.8	0.0047	9.7	<0.002	<0.006	<0.006	12	0.0074	1.8	0.012	<0.005	0.000074	0.00048	0.014	
	06/08/16	200.7/200.8	0.0024	8.5	<0.002	<0.006	<0.006	12	0.012	1.8	0.0069	<0.005	0.000061	0.00092	0.028	
	03/03/16	200.7/200.8	<0.01	11	<0.002	<0.006	<0.006	13	0.01	1.9	0.0071	<0.005	<0.0002	0.00068	0.011	
	11/09/15	200.7/200.8	0.0056	33	<0.002	0.0088	0.037	45	0.049	5.2	<0.05	<0.005	0.00028	0.0038	0.076	
	08/23/15	200.7/200.8	<0.005	49	<0.002	<0.006	0.019	57	0.034	6.8	<0.01	<0.005	0.00027	0.0035	0.062	
	06/10/15	200.7/200.8	<0.005	58	<0.002	<0.006	<0.06	59	0.031	8	<0.005	<0.005	<0.0002	0.0029	0.042	
	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	

Table 1
Groundwater Analyses Summary

PARAMETERS - TOTAL METALS																
STANDARDS			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)	
WQCC 20NMAC 6.2.3103			0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.002	0.03	10	
40 CFR 141.62 MCL			0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.002	0.03	NE	
NMED Tap Water (MARCH 2017)			0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.00626	0.0592	5.96	
EPA RSL for Tap Water (MAY 2018)			0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.004	6	
Well ID	DATE SAMPLED	METHOD														
MKTf-40	11/21/17	200.7/200.8	<0.005	0.16	<0.002	<0.006	0.0074	4	0.0042	0.18	<0.005	0.0047	<0.0002	0.053	0.0085	
	09/25/17	200.7/200.8	0.0022	0.14	<0.002	<0.006	<0.006	2.5	0.0028	0.21	0.0071	<0.005	<0.0002	NA	0.0081	
	06/05/17	200.7/200.8	0.0038	0.15	<0.002	0.0018	<0.006	3.7	0.0052	0.13	0.0089	<0.005	0.000066	0.063	0.013	
	03/07/17	200.7/200.8	0.0047	0.22	<0.002	<0.006	<0.006	5.3	0.0081	0.2	0.012	<0.005	<0.0002	NA	0.018	
	10/31/16	200.7/200.8	0.0041	0.21	<0.002	0.0028	<0.006	5.3	0.0084	0.26	0.0082	<0.005	0.000055	0.06	0.019	
	09/08/16	200.7/200.8	0.0045	0.31	<0.002	0.0053	0.0057	10	0.029	0.49	0.013	<0.005	0.00012	0.059	0.043	
	06/09/16	200.7/200.8	0.0031	0.32	<0.002	<0.006	<0.006	5.5	0.0087	0.31	0.0095	<0.005	0.000096	0.058	0.022	
	02/23/16	200.7/200.8	<0.005	0.14	<0.002	<0.006	<0.006	2	0.0026	0.17	0.0031	<0.005	0.000068	0.064	0.0099	
	11/04/15	200.7/200.8	<0.005	0.26	<0.002	<0.006	<0.006	5.5	0.0066	0.32	<0.02	<0.005	<0.0002	0.06	0.024	
	08/21/15	200.7/200.8	<0.01	0.19	<0.002	<0.006	<0.006	3.4	<0.005	0.24	<0.01	<0.005	<0.0002	0.081	0.016	
	06/10/15	200.7/200.8	<0.005	0.24	<0.002	<0.006	<0.006	4	0.0052	0.21	<0.01	<0.005	<0.0002	0.075	0.021	
	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	11/27/17	200.7/200.8	<0.01	0.088	<0.002	<0.006	<0.006	1.3	0.0016	0.05	0.037	<0.005	<0.0002	0.015	<0.01	
	09/25/17	200.7/200.8	0.0053	0.092	<0.002	0.0022	<0.006	0.99	0.001	0.031	0.044	<0.005	0.000074	NA	<0.01	
	06/06/17	200.7/200.8	0.0063	0.14	<0.002	0.0038	0.004	4.6	0.0048	0.16	0.044	<0.005	0.000049	0.02	0.015	
	03/07/17	200.7/200.8	0.0081	0.12	<0.002	<0.006	<0.006	2.1	0.0032	0.1	0.047	<0.005	<0.0002	NA	0.0084	
	10/31/16	200.7/200.8	0.0064	0.094	<0.002	<0.006	<0.006	1.8	0.0029	0.088	0.045	<0.005	<0.0002	0.017	0.011	
	09/09/16	200.7/200.8	0.0061	0.12	<0.002	0.003	0.0031	2.5	0.0037	0.12	0.045	<0.005	<0.0002	0.015	0.018	
	06/09/16	200.7/200.8	0.0067	0.25	<0.002	0.0043	<0.006	7.3	0.01	0.3	0.046	<0.005	0.000094	0.021	0.029	
	02/24/16	200.7/200.8	0.0049	0.12	<0.002	0.0027	<0.006	2.4	0.0035	0.12	0.044	<0.005	<0.0002	0.022	0.013	
	11/05/15	200.7/200.8	<0.01	0.17	<0.002	<0.006	<0.006	4.3	0.0056	0.17	0.052	<0.005	<0.0002	0.025	0.019	
	08/21/15	200.7/200.8	<0.01	0.27	<0.002	0.0063	<0.006	9	0.012	0.35	0.044	<0.005	<0.0002	0.029	0.034	
	06/09/15	200.7/200.8	<0.005	0.16	<0.006	<0.006	<0.006	4.1	0.006	0.15	0.047	<0.005	<0.0002	0.031	0.016	
	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	11/27/17	200.7/200.8	0.0025	0.071	<0.002	<0.006	<0.006	0.44	<0.0025	0.21	<0.005	<0.005	<0.0002	0.011	<0.01	
	09/25/17	200.7/200.8	0.0032	0.061	<0.002	<0.006	<0.006	0.22	0.00023	0.2	0.0068	<0.012	0.000048	NA	<0.01	
	06/06/17	200.7/200.8	0.0029	0.082	<0.002	<0.006	0.0044	0.92	0.0014	0.25	0.0054	<0.005	0.000057	0.012	0.0029	
	03/07/17	200.7/200.8	0.0089	0.11	<0.002	<0.006	0.005	1.2	0.0023	0.26	0.012	<0.005	<0.0002	NA	0.006	
	10/31/16	200.7/200.8	0.0047	0.11	<0.002	<0.006	0.0052	1.3	0.0028	0.31	0.0095	<0.005	<0.0002	0.014	0.0078	
	09/09/16	200.7/200.8	0.0042	0.11	<0.002	<0.006	0.0054	0.8	0.0018	0.32	0.011	<0.005	<0.0002	0.017	0.0074	
	06/09/16	200.7/200.8	0.0038	0.12	<0.002	<0.006	<0.006	1.6	0.0032	0.43	0.0086	<0.005	0.000097	0.021	0.013	
	02/24/16	200.7/200.8	0.0026	0.092	<0.002	<0.006	0.01	0.89	0.0015	0.41	0.0035	<0.005	<0.0002	0.023	0.0061	
	11/05/15	200.7/200.8	<0.01	0.076	<0.002	<0.006	<0.006	0.49	0.00077	0.39	0.011	<0.005	<0.0002	0.027	<0.01	
	08/21/15	200.7/200.8	<0.005	0.097	<0.002	<0.006	<0.006	0.75	0.0012	0.36	0.0045	<0.005	<0.0002	0.032	0.014	
	06/09/15	200.7/200.8	<0.005	0.13	<0.002	<0.006	0.011	1.6	<0.0025	0.6	<0.005	<0.005	<0.0002	0.036	0.016	
	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	

Table 1
Groundwater Analyses Summary

PARAMETERS - TOTAL METALS																
STANDARDS																
WQCC 20NMAC 6.2.3103																
40 CFR 141.62 MCL																
NMED Tap Water (MARCH 2017)																
EPA RSL for Tap Water (MAY 2018)																
Well ID	DATE SAMPLED	METHOD														
MKTF-43	11/27/17	200.7/200.8														
	09/25/17	200.7/200.8														
	06/06/17	200.7/200.8														
	03/08/17	200.7/200.8														
	10/31/16	200.7/200.8														
	09/09/16	200.7/200.8														
	06/09/16	200.7/200.8														
	02/24/16	200.7/200.8														
	11/05/15	200.7/200.8														
	08/21/15	200./200.8														
	06/10/15	200.7/200.8														
	03/11/15	200.7/200.8														
MKTF-44	11/28/17	200.7/200.8														
	09/25/17	200.7/200.8														
	06/05/17	200.7/200.8														
	03/08/17	200.7/200.8														
	11/01/16	200.7/200.8														
	09/09/16	200.7/200.8														
	06/09/16	200.7/200.8														
	02/24/16	200.7/200.8														
	11/09/15	200.7/200.8														
	08/17/15	200.7/200.8														
	06/10/15	200.7/200.8														
	03/12/15	200.7/200.8														

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.

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

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

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

NOTES

Table 1
Groundwater Analyses Summary

PARAMETERS - DISSOLVED METALS													
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS													
WQCC 20NMAC 6.2.3103		0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.03	10
40 CFR 141.62 MCL		0.01	2	0.005	0.1	1.3	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (MARCH 2017)		0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0812	0.0987	0.0592	5.96
EPA RSL for Tap Water (MAY 2018)		0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.004	6
Well ID	DATE SAMPLED	METHOD											
MKTF-1	02/24/16	200.7/200.8	0.0018	3.2	<0.002	<0.006	5.2	<0.0025	2.1	<0.005	0.0046	0.00017	0.077
	11/04/15	200.7/200.8	<0.005	2.7	<0.002	<0.006	4.7	<0.0005	1.9	<0.005	0.0072	<0.0005	<0.01
	08/21/15	200.7/200.8	<0.005	2.4	<0.002	<0.006	4	<0.0025	1.9	<0.005	<0.005	<0.025	<0.01
	06/09/15	200.7/200.8	<0.005	2.3	<0.002	<0.006	4.7	<0.005	2.1	<0.005	0.0056	<0.005	<0.01
	03/11/15	200.7/200.8	<0.01	2	<0.002	<0.006	4.4	<0.001	1.9	<0.005	<0.02	<0.001	<0.01
	06/06/14	200.7/200.8	<0.005	1.4	<0.002	<0.006	4.7	<0.005	1.7	<0.005	0.013	<0.01	0.028
	11/20/17	200.7/200.8	0.0028	0.28	<0.002	<0.006	0.03	0.00035	0.56	<0.005	<0.005	0.036	0.0037
	10/03/17	200.7/200.8	0.0058	0.33	<0.002	<0.006	1.5	0.00018	0.92	<0.005	0.0081	NA	0.034
	03/16/17	200.7/200.8	0.0016	0.31	<0.002	<0.006	0.089	0.00025	0.67	<0.005	0.0029	0.024	0.015
	10/28/16	200.7/200.8	0.003	0.19	<0.002	<0.006	0.036	0.00059	0.47	<0.005	0.0064	0.024	<0.01
MKTF-2	09/07/16	200.7/200.8	0.0029	0.16	<0.002	<0.006	0.045	0.0015	0.39	<0.005	0.0061	0.035	0.0035
	06/10/16	200.7/200.8	0.0028	0.13	<0.002	<0.006	0.081	0.00049	0.33	<0.005	0.0061	0.033	0.0033
	02/24/16	200.7/200.8	0.0027	0.095	<0.002	<0.006	0.55	0.002	0.39	<0.005	0.0033	0.059	0.074
	11/04/15	200.7/200.8	0.0049	0.14	<0.002	<0.006	0.25	0.00065	0.44	<0.005	<0.005	0.03	<0.01
	08/21/15	200.7/200.8	0.0043	0.13	<0.002	<0.006	0.76	<0.0005	0.6	<0.005	0.0032	0.048	<0.01
	06/09/15	200.7/200.8	<0.005	0.12	<0.002	<0.006	0.21	<0.005	0.56	<0.005	<0.005	0.032	<0.01
	03/11/15	200.7/200.8	0.0047	0.13	<0.002	<0.006	0.11	<0.001	0.56	<0.005	0.0084	0.049	<0.01
	11/14/14	200.7/200.8	<0.01	0.13	<0.002	<0.006	2.2	<0.01	0.51	<0.005	<0.01	0.059	0.027
	09/18/14	200.7/200.8	<0.005	0.15	<0.002	<0.006	0.029	<0.001	0.59	<0.005	<0.005	0.012	0.041
	06/06/14	200.7/200.8	<0.005	0.13	<0.002	<0.006	0.34	<0.005	0.56	<0.005	0.012	0.056	0.01

Table 1
Groundwater Analyses Summary

PARAMETERS - DISSOLVED METALS													
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS													
WQCC 20NMAC 6.2.3103		0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.03	10
40 CFR 141.62 MCL		0.01	2	0.005	0.1	1.3	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (MARCH 2017)		0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0812	0.0987	0.0592	5.96
EPA RSL for Tap Water (MAY 2018)		0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.004	6
Well ID	DATE SAMPLED	METHOD											
MKTf-4	11/28/17	0.0098	3.1	<0.002	<0.006	<0.006	3.7	<0.0025	1.3	<0.005	<0.01	0.0017	<0.01
	09/26/17	0.17	3.7	<0.002	<0.006	<0.006	7.6	<0.0005	1.4	<0.005	<0.05	NA	0.034
	06/08/17	0.0097	2.9	<0.002	<0.006	0.0055	0.81	<0.0005	1.4	<0.005	0.0091	0.0034	0.011
	03/02/17	0.012	3	<0.002	<0.006	<0.006	4.8	<0.0005	1.4	<0.005	0.01	NA	0.026
	11/02/16	0.01	2.7	<0.002	<0.006	<0.006	1.7	<0.0005	1.4	<0.005	0.011	0.0031	0.0057
	09/11/16	0.011	2.6	<0.002	<0.006	<0.006	1.2	0.00033	1.4	<0.005	0.014	0.0037	0.003
	06/09/16	0.008	2.4	<0.002	<0.006	<0.006	2	<0.0005	1.4	<0.005	0.0085	0.0048	<0.01
	02/29/16	0.0085	2.8	<0.002	<0.006	<0.006	5.6	0.000044	1.5	<0.005	0.0061	0.0053	0.022
	11/03/15	0.012	3.1	<0.002	<0.006	<0.006	13	<0.0005	1.5	<0.005	<0.02	0.0023	<0.01
	08/18/15	<0.01	2.5	<0.002	<0.006	<0.006	8.7	<0.0025	1.6	<0.005	<0.01	0.0034	<0.01
	06/04/15	<0.01	2.2	<0.002	<0.006	<0.006	8.6	<0.01	1.6	<0.005	<0.01	<0.01	0.023
	03/16/15	0.0097	1.1	<0.002	<0.006	<0.006	2	<0.005	1.9	<0.005	<0.05	0.013	0.021
	11/13/14	0.006	1.3	<0.002	<0.006	<0.006	4.7	<0.005	1.8	<0.005	<0.005	0.013	0.01
	09/15/14	<0.01	0.78	<0.002	<0.006	<0.006	3.6	0.0013	1.7	<0.005	<0.01	0.018	<0.01
	06/04/14	0.0078	1.9	<0.002	<0.006	<0.006	2.5	<0.005	1.4	<0.005	0.022	<0.01	<0.01
MKTf-9	11/28/17	0.0023	0.61	<0.002	<0.006	<0.006	1.5	<0.0025	3.9	<0.005	<0.005	0.0046	<0.01
	09/28/17	0.0028	0.54	<0.002	<0.006	<0.006	3	<0.0005	4.5	<0.005	<0.02	NA	0.005
	06/12/17	0.0019	0.6	<0.002	<0.006	<0.006	2.3	0.00018	4.6	<0.005	0.0021	NA	0.015
	03/15/17	0.0035	0.57	<0.002	<0.006	<0.006	2.1	<0.0005	4.1	<0.005	0.0023	0.0033	0.051
	11/02/16	0.0028	0.4	<0.002	<0.006	<0.006	0.92	<0.0005	3.2	<0.005	0.0055	0.0065	0.27
	09/11/16	0.0032	0.52	<0.002	<0.006	<0.006	0.81	0.00023	3.7	<0.005	0.0075	0.005	<0.01
	06/09/16	0.0025	0.43	<0.002	<0.006	<0.006	1.1	<0.0005	3.5	<0.005	0.0053	0.0068	<0.01
	02/29/16	0.0022	0.55	<0.002	<0.006	<0.006	2.8	0.00021	3.9	<0.005	0.0031	0.0047	0.0087
	11/03/15	<0.005	0.5	<0.002	<0.006	<0.006	3.2	<0.0005	4.2	<0.005	<0.01	0.0036	<0.01
	08/18/15	<0.01	0.45	<0.002	<0.006	<0.006	2.4	<0.0025	4	<0.005	<0.01	0.0039	<0.01
	06/04/15	<0.01	0.31	<0.002	<0.006	<0.006	1.9	<0.01	3.2	<0.005	<0.01	<0.01	0.012
	03/16/15	<0.005	0.19	<0.002	<0.006	<0.006	1.4	<0.001	2.3	<0.005	<0.01	0.012	0.039
	11/14/14	<0.01	0.34	<0.002	<0.006	<0.006	2.4	<0.01	2.8	<0.005	<0.01	<0.01	0.017
	09/18/14	<0.01	0.32	<0.002	<0.006	<0.006	2.2	<0.001	2.6	<0.005	<0.01	0.012	<0.01
	06/05/14	<0.005	0.44	<0.002	<0.006	<0.006	3.4	<0.005	3.6	<0.005	0.014	<0.01	<0.01

Table 1
Groundwater Analyses Summary

PARAMETERS - DISSOLVED METALS													
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS													
WQCC 20NMAC 6.2.3103		0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.03	10
40 CFR 141.62 MCL		0.01	2	0.005	0.1	1.3	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (MARCH 2017)		0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0812	0.0987	0.0592	5.96
EPA RSL for Tap Water (MAY 2018)		0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.004	6
Well ID	DATE SAMPLED	METHOD											
MKTF-10	11/28/17	200.7/200.8	8.2	<0.0025	3	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.0025	<0.01
	09/28/17	200.7/200.8	7.5	<0.0005	2.8	<0.005	<0.0005	NA	0.0074	NA	0.0074	NA	0.01
	06/08/17	200.7/200.8	5.6	<0.0005	3.1	<0.005	<0.0005	0.0045	0.0045	0.00051	0.0045	0.00051	0.013
	03/02/17	200.7/200.8	13	0.00032	3.4	0.0009	0.0039	NA	0.0039	NA	0.0039	NA	0.02
	11/02/16	200.7/200.8	9.4	<0.005	5.2	<0.005	<0.005	0.0065	0.0046	0.00065	0.0046	0.00065	<0.01
	09/11/16	200.7/200.8	26	0.00086	12	<0.005	0.00091	0.00091	0.0066	0.00091	0.0066	0.00091	0.0029
	06/09/16	200.7/200.8	41	0.00022	16	<0.005	0.00049	0.0041	0.0041	0.00049	0.0041	0.00049	0.041
	02/29/16	200.7/200.8	54	<0.0025	20	<0.005	0.0015	0.0015	0.0042	0.0015	0.0042	0.0015	0.017
	11/03/15	200.7/200.8	50	<0.005	18	<0.005	<0.0005	0.0067	0.0067	<0.0005	0.0067	<0.0005	<0.01
	08/18/15	200.7/200.8	64	<0.0025	22	<0.005	<0.0025	<0.01	<0.01	<0.0025	<0.01	<0.0025	<0.01
	06/04/15	200.7/200.8	53	<0.01	18	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.034
	03/16/15	200.7/200.8	49	<0.001	17	<0.005	<0.001	0.0068	0.0068	<0.001	0.0068	<0.001	<0.01
	11/14/14	200.7/200.8	67	<0.01	24	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.018
	09/18/14	200.7/200.8	33	<0.001	14	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.001	<0.01
	06/06/14	200.7/200.8	18	<0.005	9.2	<0.005	<0.005	0.011	0.011	<0.01	0.011	<0.01	<0.01
MKTF-11	11/28/17	200.7/200.8	5.8	<0.0005	3	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	0.0056	<0.05
	09/26/17	200.7/200.8	6.8	<0.0005	3.1	<0.005	<0.0005	NA	0.0042	NA	0.0042	NA	0.03
	06/08/17	200.7/200.8	5.1	<0.0005	2.6	<0.005	<0.0005	0.003	0.0046	0.003	0.0046	0.003	0.011
	03/02/17	200.7/200.8	5.1	<0.0005	3	0.0014	<0.0005	NA	0.0035	NA	0.0035	NA	0.031
	11/02/16	200.7/200.8	5.4	<0.0005	3.6	<0.005	<0.0005	0.0059	0.0046	0.0059	0.0046	0.0059	0.0038
	09/12/16	200.7/200.8	4.6	<0.0005	3.8	<0.005	<0.0005	0.0062	0.0062	0.0044	0.0062	0.0044	<0.01
	06/09/16	200.7/200.8	4.3	<0.0005	3.5	<0.005	<0.0005	0.0084	0.0042	0.0084	0.0042	0.0084	<0.01
	02/29/16	200.7/200.8	8	0.00031	5.7	<0.005	0.00031	0.005	0.0046	0.005	0.0046	0.005	0.011
	11/03/15	200.7/200.8	12	<0.0005	3.6	<0.005	<0.0005	<0.0005	0.0064	<0.0005	0.0064	<0.0005	<0.01
	08/18/15	200.7/200.8	4	<0.0025	4	<0.005	<0.0025	0.0034	<0.01	0.0034	<0.01	0.0034	<0.01
	06/04/15	200.7/200.8	9.9	<0.01	3	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.018
	03/16/15	200.7/200.8	4.8	<0.001	2.9	<0.005	<0.001	0.008	0.008	0.0013	0.008	0.0013	<0.01
	11/13/14	200.7/200.8	3.4	<0.001	3.2	<0.005	<0.001	0.0051	0.0051	0.0033	0.0051	0.0033	0.019
	09/15/14	200.7/200.8	2.7	<0.001	2.4	<0.005	<0.001	<0.005	<0.005	0.004	<0.005	0.004	<0.01
	06/05/14	200.7/200.8	11	0.022	3.6	<0.005	<0.005	0.01	<0.01	<0.01	0.01	<0.01	0.036
MKTF-13	03/15/17	200.7/200.8	18	0.00023	3.9	<0.005	<0.0023	<0.01	<0.01	<0.01	<0.01	0.00034	0.034

Table 1
Groundwater Analyses Summary

PARAMETERS - DISSOLVED METALS													
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS													
WQCC 20NMAC 6.2.3103		0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.03	10
40 CFR 141.62 MCL		0.01	2	0.005	0.1	1.3	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (MARCH 2017)		0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0812	0.0987	0.0592	5.96
EPA RSL for Tap Water (MAY 2018)		0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.004	6
Well ID	DATE SAMPLED	METHOD											
MKTf-18	06/14/17	200.7/200.8	0.0029	1.9	<0.002	<0.006	0.0063	2.6	<0.0005	1.9	0.0025	NA	0.011
	03/01/17	200.7/200.8	0.0023	2	<0.002	<0.006	<0.006	1.4	<0.0005	1.9	0.0043	NA	0.024
	11/08/16	200.7/200.8	0.0025	1.7	<0.002	<0.006	<0.006	0.81	<0.0005	1.9	0.0053	0.001	<0.01
	09/13/16	200.7/200.8	0.0026	1.8	<0.002	<0.006	<0.006	0.89	<0.0005	2	0.0072	0.0012	<0.01
	06/10/16	200.7/200.8	0.0023	1.9	<0.002	<0.006	<0.006	1.5	<0.0005	1.9	0.0054	0.0011	<0.01
	02/26/16	200.7/200.8	0.002	2.1	<0.002	<0.006	<0.006	2.1	0.00039	1.9	0.0018	0.0012	0.011
	11/03/15	200.7/200.8	0.0031	2.5	<0.002	<0.006	<0.006	4.8	0.0053	1.9	<0.01	0.0012	<0.01
	08/18/15	200.7/200.8	<0.01	2	<0.002	<0.006	<0.006	1.2	<0.0025	1.7	<0.01	<0.0025	<0.01
	06/08/15	200.7/200.8	<0.005	2.5	<0.002	<0.006	<0.006	3.9	<0.002	1.8	<0.005	<0.002	<0.01
	03/17/15	200.7/200.8	<0.01	2.5	<0.002	<0.006	<0.006	3.8	<0.001	1.8	<0.01	<0.001	<0.01
	11/18/14	200.7/200.8	0.002	2.4	<0.002	<0.006	<0.006	3.4	<0.001	1.7	<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	1.7	<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	0.0086	<0.01	<0.01
MKTf-19	12/01/17	200.7/200.8	0.0091	1.5	<0.002	<0.006	<0.006	9.2	0.0017	2.1	<0.005	0.00089	<0.01
	09/26/17	200.7/200.8	0.014	1.6	<0.002	<0.006	<0.006	12	0.0016	3.1	0.0048	NA	0.021
	06/14/17	200.7/200.8	0.014	1.7	<0.002	<0.006	<0.006	10	0.0019	2.6	<0.02	NA	0.011
	03/15/17	200.7/200.8	0.015	1.7	<0.002	<0.006	<0.006	9	0.0022	2.4	<0.01	0.0021	0.031
	11/08/16	200.7/200.8	0.011	1.6	<0.002	<0.006	<0.006	8.5	0.0023	2.2	0.0075	0.0016	0.0091
	09/13/16	200.7/200.8	0.017	1.7	<0.002	<0.006	<0.006	10	0.0023	2.4	0.0082	0.00064	0.0044
	06/10/16	200.7/200.8	0.015	1.6	<0.002	<0.006	<0.006	9.7	0.0022	2.7	0.013	0.00045	0.0062
	02/25/16	200.7/200.8	0.015	1.7	<0.002	<0.006	<0.006	11	0.0034	3.1	0.0038	0.0006	0.0097
	11/03/15	200.7/200.8	0.018	1.7	<0.002	<0.006	<0.006	13	0.0016	3.4	<0.05	<0.0005	<0.01
	08/18/15	200.7/200.8	0.02	1.7	<0.002	<0.006	<0.006	14	0.0032	3.2	<0.01	<0.0025	0.02
	06/08/15	200.7/200.8	0.019	1.7	<0.002	<0.006	<0.006	12	<0.002	3.3	<0.01	<0.002	<0.01
	03/12/15	200.7/200.8	0.021	1.6	<0.002	<0.006	<0.006	9.5	0.0017	3.1	<0.02	<0.001	0.012
	11/18/14	200.7/200.8	0.022	1.6	<0.002	<0.006	<0.006	11	0.0019	3	<0.01	<0.001	0.018
MKTf-20	11/29/17	200.7/200.8	0.017	8.6	<0.002	<0.006	0.014	13	0.0033	3	<0.02	0.0023	0.0086
	09/26/17	200.7/200.8	0.02	8.5	<0.002	<0.006	<0.006	16	0.00097	3.8	<0.1	NA	0.027
	06/12/17	200.7/200.8	0.021	7.6	<0.002	<0.006	0.0037	17	0.0042	4.1	<0.05	NA	0.019
	03/14/17	200.7/200.8	0.019	12	<0.002	<0.006	<0.006	23	0.0023	7.2	<0.05	0.00053	0.041
	11/03/16	200.7/200.8	0.029	8.6	<0.002	<0.006	0.0073	20	0.009	8	0.013	0.0052	0.014
	09/12/16	200.7/200.8	0.027	4.7	<0.002	<0.006	0.0046	14	0.004	3.8	0.0079	0.0033	0.012
	06/09/16	200.7/200.8	0.034	3.3	<0.002	<0.006	0.022	12	0.012	3.9	0.0078	0.018	0.016
	06/08/15	200.7/200.8	0.012	1.5	<0.002	<0.006	<0.006	3.6	<0.005	2	<0.005	<0.005	0.045
	03/16/15	200.7/200.8	0.022	2	<0.002	<0.006	<0.006	8.6	0.0013	3.1	<0.01	0.0088	<0.01

Table 1
Groundwater Analyses Summary

PARAMETERS - DISSOLVED METALS													
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS													
WQCC 20NMAC 6.2.3103		0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.03	10
40 CFR 141.62 MCL		0.01	2	0.005	0.1	1.3	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (MARCH 2017)		0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0812	0.0987	0.0592	5.96
EPA RSL for Tap Water (MAY 2018)		0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.004	6
Well ID	DATE SAMPLED	METHOD											
MKTF-24	11/20/17	200.7/200.8	0.0025	0.26	<0.002	<0.006	0.24	0.0013	2.1	0.002	<0.005	0.013	0.0035
	10/03/17	200.7/200.8	0.0047	0.23	<0.002	<0.006	0.85	0.0006	1.6	<0.005	0.0094	NA	0.058
	06/05/17	200.7/200.8	0.0029	0.25	<0.002	<0.006	0.21	0.0012	2.1	<0.005	0.0052	0.017	0.015
	03/29/17	200.7/200.8	0.0031	0.29	<0.002	<0.006	0.55	0.0012	1.6	<0.005	0.0057	0.033	0.018
	10/28/16	200.7/200.8	0.0033	0.23	<0.002	<0.006	0.069	0.0012	2	<0.005	0.0064	0.017	<0.01
	09/07/16	200.7/200.8	0.0035	0.24	<0.002	<0.006	0.19	0.0015	1.9	<0.005	0.0063	0.02	0.0071
	06/08/16	200.7/200.8	0.0045	0.27	<0.002	<0.006	0.65	0.0019	1.9	<0.005	0.0084	0.027	<0.01
	02/22/16	200.7/200.8	0.0026	0.25	<0.002	<0.006	0.21	0.0012	1.9	<0.005	0.0031	0.023	0.012
	11/04/15	200.7/200.8	<0.005	0.26	<0.002	<0.006	0.41	0.0016	1.3	<0.005	0.0091	0.032	<0.01
	08/20/15	200.7/200.8	<0.005	0.31	<0.002	<0.006	4.1	0.0027	1.5	<0.005	<0.005	0.035	<0.01
	06/10/15	200.7/200.8	<0.005	0.29	<0.002	<0.006	0.69	<0.005	1.4	<0.005	0.0058	0.037	0.021
	03/11/15	200.7/200.8	<0.005	0.26	<0.002	<0.006	0.34	0.0015	1.2	<0.005	0.011	0.043	<0.01
	11/14/14	200.7/200.8	<0.005	0.29	<0.002	<0.006	4.4	<0.005	1.6	<0.005	<0.005	0.038	0.018
MKTF-25	11/21/17	200.7/200.8	0.0042	0.28	<0.002	<0.006	0.8	0.00022	2.4	<0.005	<0.005	0.024	<0.01
	09/25/17	200.7/200.8	0.0044	0.24	<0.002	<0.006	0.57	0.00039	2.4	<0.005	0.0047	NA	0.018
	06/05/17	200.7/200.8	0.0047	0.18	<0.002	<0.006	0.57	0.00027	2.3	<0.005	0.0044	0.027	0.014
	03/29/17	200.7/200.8	0.0054	0.27	<0.002	<0.006	0.56	0.00082	2.6	<0.005	0.0076	0.029	0.02
	11/01/16	200.7/200.8	0.0047	0.28	<0.002	<0.006	0.35	0.00031	2.5	<0.005	0.0067	0.037	0.035
	09/09/16	200.7/200.8	0.0058	0.31	<0.002	<0.006	0.11	0.0066	2.7	<0.005	0.0074	0.032	0.0089
	06/09/16	200.7/200.8	0.0049	0.32	<0.002	<0.006	0.47	0.001	2.9	<0.005	0.0096	0.03	<0.01
	02/23/16	200.7/200.8	0.0036	0.28	<0.002	<0.006	0.46	0.00027	2.9	<0.005	0.0033	0.03	0.013
	11/05/15	200.7/200.8	<0.005	0.34	<0.002	<0.006	0.4	0.0017	3.2	<0.005	0.0078	0.03	<0.01
	08/21/15	200.7/200.8	0.0043	0.35	<0.002	<0.006	0.57	0.00051	3.3	<0.005	<0.01	0.034	<0.01
	06/10/15	200.7/200.8	<0.005	0.32	<0.002	<0.006	0.64	<0.005	3.2	<0.005	0.005	0.033	0.016
	03/11/15	200.7/200.8	<0.01	0.26	<0.002	<0.006	0.2	<0.001	3.2	<0.005	<0.02	0.038	0.017
	11/14/14	200.7/200.8	<0.005	0.28	<0.002	<0.006	0.21	<0.005	3.1	<0.005	<0.005	0.03	0.1
MKTF-26	06/09/16	200.7/200.8	0.0094	0.074	<0.002	<0.006	0.48	0.00096	0.7	<0.005	0.033	0.085	0.004
	02/22/16	200.7/200.8	0.0024	0.12	<0.002	<0.006	0.38	0.0013	0.91	<0.005	0.0031	0.042	0.048
	11/04/15	200.7/200.8	<0.005	0.14	<0.002	<0.006	0.35	0.0011	1	<0.005	0.0075	0.062	<0.01
	08/20/15	200.7/200.8	<0.005	0.1	<0.002	<0.006	0.57	<0.0025	1.1	<0.005	<0.005	0.092	<0.01
	06/10/15	200.7/200.8	<0.005	0.14	<0.002	<0.006	0.86	<0.005	1.2	<0.005	<0.005	0.063	0.036
	03/11/15	200.7/200.8	<0.01	0.17	<0.002	<0.006	0.85	<0.001	1.4	<0.005	<0.01	0.045	0.068
	11/14/14	200.7/200.8	<0.01	0.13	<0.002	<0.006	0.18	<0.01	1.4	<0.005	<0.01	0.066	0.014

Table 1
Groundwater Analyses Summary

PARAMETERS - DISSOLVED METALS													
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS													
WQCC 20NMAC 6.2.3103		0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.03	10
40 CFR 141.62 MCL		0.01	2	0.005	0.1	1.3	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (MARCH 2017)		0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0812	0.0987	0.0592	5.96
EPA RSL for Tap Water (MAY 2018)		0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.004	6
Well ID	DATE SAMPLED	METHOD											
MKTf-27	11/20/17	200.7/200.8	<0.005	0.069	<0.002	<0.006	0.0047	0.1	<0.0025	0.0033	<0.005	0.046	0.0044
	10/03/17	200.7/200.8	0.0037	0.067	<0.002	<0.006	<0.006	0.018	<0.0025	<0.005	0.012	NA	0.033
	06/05/17	200.7/200.8	0.0033	0.071	<0.002	<0.006	<0.006	0.058	<0.0025	<0.005	0.011	0.058	0.018
	03/29/17	200.7/200.8	0.004	0.097	<0.002	<0.006	<0.006	0.034	<0.0025	<0.005	0.015	0.077	0.022
	10/28/16	200.7/200.8	0.0033	0.065	<0.002	<0.006	<0.006	0.039	<0.0025	<0.005	0.0095	0.059	<0.01
	09/07/16	200.7/200.8	0.003	0.067	<0.002	<0.006	<0.006	0.083	0.00063	<0.005	0.0092	0.055	0.0034
	06/08/16	200.7/200.8	0.0036	0.074	<0.002	<0.006	<0.006	0.4	0.0025	<0.005	0.014	0.056	0.007
	02/22/16	200.7/200.8	0.00096	0.063	<0.002	<0.006	<0.006	0.084	0.00041	<0.005	0.0039	0.061	0.012
	11/04/15	200.7/200.8	<0.005	0.078	<0.002	<0.006	<0.006	0.12	<0.005	<0.005	<0.02	0.066	<0.01
	08/20/15	200.7/200.8	<0.005	0.092	<0.002	<0.006	<0.006	1.8	<0.0025	<0.005	<0.01	0.069	<0.01
	06/09/15	200.7/200.8	<0.005	0.083	<0.002	<0.006	<0.006	0.56	<0.005	<0.005	0.0075	0.067	0.01
	03/11/15	200.7/200.8	<0.01	0.086	<0.002	<0.006	<0.006	0.15	<0.01	<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	<0.005	<0.01	0.075	0.03
MKTf-28	11/20/17	200.7/200.8	<0.01	0.087	<0.002	<0.006	0.0053	2.9	0.0029	<0.005	<0.01	0.15	0.0066
	10/03/17	200.7/200.8	0.0042	0.049	<0.002	0.0016	<0.006	<0.02	<0.0005	<0.005	0.015	NA	0.049
	06/05/17	200.7/200.8	0.004	0.046	<0.002	<0.006	0.01	0.023	<0.0005	<0.005	0.0086	0.13	0.019
	03/29/17	200.7/200.8	0.0029	0.049	<0.002	<0.006	<0.006	0.11	0.00042	<0.005	0.0081	0.16	0.016
	10/28/16	200.7/200.8	0.0047	0.061	<0.002	<0.006	<0.006	0.049	0.00022	<0.005	0.012	0.16	<0.01
	09/08/16	200.7/200.8	0.0039	0.061	<0.002	<0.006	<0.006	0.12	0.00087	<0.005	0.012	0.14	<0.01
	06/08/16	200.7/200.8	0.0054	0.074	<0.002	<0.006	<0.006	0.14	0.00076	<0.005	0.015	0.15	0.012
	02/23/16	200.7/200.8	0.0026	0.069	<0.002	<0.006	<0.006	0.064	0.00039	<0.005	0.0061	0.16	0.027
	11/04/15	200.7/200.8	<0.01	0.08	<0.002	<0.006	<0.006	0.081	<0.0005	<0.005	<0.05	0.15	<0.01
	08/20/15	200.7/200.8	<0.005	0.082	<0.002	<0.006	<0.006	0.19	<0.0025	<0.005	0.0081	0.15	<0.01
	06/09/15	200.7/200.8	<0.005	0.087	<0.002	<0.006	<0.006	0.062	<0.005	<0.005	0.012	0.16	0.031
	03/11/15	200.7/200.8	<0.01	0.09	<0.002	<0.006	<0.006	0.075	<0.001	<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	0.63	<0.005	<0.005	<0.02	0.12	0.038

Table 1
Groundwater Analyses Summary

PARAMETERS - DISSOLVED METALS													
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS	WQCC 20NMAC 6.2.3103	0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.03	10
	40 CFR 141.62 MCL	0.01	2	0.005	0.1	1.3	NE	0.015	NE	NE	0.05	0.03	NE
	NMED Tap Water (MARCH 2017)	0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0812	0.0987	0.0592	5.96
	EPA RSL for Tap Water (MAY 2018)	0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.004	6

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Groundwater Analyses Summary

PARAMETERS - DISSOLVED METALS														
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)	
STANDARDS	WQCC 20NMAC 6.2.3103	0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.03	10	
	40 CFR 141.62 MCL	0.01	2	0.005	0.1	1.3	NE	0.015	NE	NE	0.05	0.03	NE	
	NMED Tap Water (MARCH 2017)	0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0812	0.0987	0.0592	5.96	
	EPA RSL for Tap Water (MAY 2018)	0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.004	6	
	MKTF-33	11/28/17	200.7/200.8	0.00071	0.04	<0.002	<0.006	<0.02	<0.0005	0.28	<0.005	<0.005	0.032	0.0051
		09/25/17	200.7/200.8	<0.005	0.037	<0.002	<0.006	<0.02	<0.0005	0.19	<0.005	0.002	NA	0.014
		06/08/17	200.7/200.8	0.0011	0.04	<0.002	<0.006	0.029	0.00019	0.042	<0.005	0.0023	0.035	0.012
		03/08/17	200.7/200.8	0.0014	0.04	<0.002	<0.006	0.032	0.00025	0.2	<0.005	0.0028	NA	0.029
		11/01/16	200.7/200.8	0.0011	0.041	<0.002	<0.006	<0.02	<0.0005	0.13	<0.005	0.0028	0.038	0.017
		09/10/16	200.7/200.8	0.0011	0.043	<0.002	<0.006	0.02	0.00023	0.13	<0.005	0.0035	0.037	<0.01
		06/10/16	200.7/200.8	0.0017	0.04	<0.002	<0.006	0.014	<0.0005	0.031	<0.005	0.004	0.038	0.011
		02/25/16	200.7/200.8	0.00079	0.047	<0.002	<0.006	0.045	0.00011	0.16	<0.005	0.0018	0.04	0.017
	11/09/15	200.7/200.8	<0.005	0.062	<0.002	<0.006	0.071	0.00059	0.24	<0.005	<0.005	0.04	<0.01	
	08/21/15	200.7/200.8	<0.005	0.054	<0.002	<0.006	<0.02	<0.0005	0.28	<0.005	0.0024	0.042	<0.01	
	06/09/15	200.7/200.8	<0.005	0.055	<0.002	<0.006	<0.02	<0.002	0.14	<0.005	<0.005	0.044	0.028	
	03/12/15	200.7/200.8	<0.01	0.061	<0.002	<0.006	0.026	<0.001	0.28	<0.005	<0.01	0.045	0.017	
	11/17/14	200.7/200.8	<0.005	0.064	<0.002	<0.006	0.061	<0.001	0.24	<0.005	<0.005	0.045	0.016	
MKTF-34	12/01/17	200.7/200.8	<0.005	0.063	<0.002	<0.006	<0.02	<0.0025	<0.002	<0.005	<0.005	0.036	0.0082	
	09/26/17	200.7/200.8	0.0025	0.06	<0.002	0.0015	<0.02	<0.0005	0.00062	<0.005	<0.02	NA	0.034	
	06/14/17	200.7/200.8	0.0015	0.072	<0.002	<0.006	0.033	<0.0005	0.00099	<0.005	<0.02	NA	0.01	
	03/01/17	200.7/200.8	0.0025	0.079	<0.002	<0.006	<0.02	<0.0005	0.00076	<0.005	0.0045	NA	0.028	
	11/08/16	200.7/200.8	0.003	0.057	<0.002	<0.006	<0.02	<0.0005	0.00035	<0.005	0.0077	0.036	0.0031	
	09/13/16	200.7/200.8	0.0042	0.11	<0.002	<0.006	<0.02	<0.0005	0.00053	<0.005	0.016	0.037	0.0032	
	06/10/16	200.7/200.8	0.0046	0.1	<0.002	<0.006	0.041	<0.0025	0.0017	<0.005	0.018	0.03	0.0037	
	02/25/16	200.7/200.8	0.0032	0.13	<0.002	<0.006	0.017	0.00013	0.001	<0.005	0.01	0.03	0.012	
	01/03/15	200.7/200.8	<0.005	0.12	<0.002	<0.006	<0.02	<0.0005	<0.002	<0.005	<0.02	0.027	<0.01	
	08/18/15	200.7/200.8	<0.01	0.13	<0.002	<0.006	<0.02	<0.0025	<0.002	<0.005	<0.01	0.027	<0.01	
	06/08/15	200.7/200.8	<0.005	0.14	<0.002	<0.006	0.11	<0.002	0.0059	<0.005	<0.01	0.029	0.018	
	03/12/15	200.7/200.8	<0.01	0.12	<0.002	<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	<0.02	<0.001	0.0041	<0.005	<0.02	0.027	0.051	

Table 1
Groundwater Analyses Summary

PARAMETERS - DISSOLVED METALS													
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS													
WQCC 20NMAC 6.2.3103		0.1	1	0.01	0.05	1	1	0.05	0.2	0.05	0.05	0.03	10
40 CFR 141.62 MCL		0.01	2	0.005	0.1	1.3	NE	0.015	NE	NE	0.05	0.03	NE
NMED Tap Water (MARCH 2017)		0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0812	0.0987	0.0592	5.96
EPA RSL for Tap Water (MAY 2018)		0.000052	0.38	0.0092	NE	0.8	14	0.015	0.43	0.094	0.1	0.004	6
Well ID	DATE SAMPLED	METHOD											
MKTf-38	11/30/17	200.7/200.8	<0.005	0.031	<0.002	<0.006	<0.006	<0.0025	1.8	<0.005	<0.005	0.026	<0.01
	09/28/17	200.7/200.8	0.0017	0.03	<0.002	<0.006	<0.006	<0.0005	2.1	<0.005	0.0041	NA	0.044
	06/21/17	200.7/200.8	0.0026	0.041	<0.002	<0.006	<0.006	0.00027	2.5	<0.005	0.0043	0.024	0.011
	03/14/17	200.7/200.8	0.0011	0.037	<0.002	<0.006	<0.006	0.00031	2.6	<0.005	0.003	0.015	0.029
	11/01/16	200.7/200.8	0.0014	0.044	<0.002	<0.006	<0.006	<0.0005	3.3	<0.005	0.004	0.013	<0.01
	09/13/16	200.7/200.8	0.0018	0.039	<0.002	<0.006	<0.006	<0.0005	3.1	<0.005	0.0053	0.013	0.004
	06/08/16	200.7/200.8	0.0013	0.031	<0.002	<0.006	<0.006	<0.0005	2.8	<0.005	0.0057	0.013	0.0074
	02/29/16	200.7/200.8	0.0014	0.03	<0.002	<0.006	<0.006	0.000047	2.3	<0.005	0.0033	0.012	0.012
	11/09/15	200.7/200.8	<0.005	0.066	<0.002	<0.006	<0.006	0.001	3.4	<0.005	<0.05	0.019	<0.01
	08/24/15	200.7/200.8	0.0019	0.066	<0.002	<0.006	<0.006	<0.0005	3	<0.005	0.0033	0.023	<0.01
	06/10/15	200.7/200.8	<0.005	0.074	<0.002	<0.006	<0.006	<0.005	3.1	<0.005	<0.005	0.021	0.021
	03/16/15	200.7/200.8	<0.01	0.14	<0.002	<0.006	<0.006	<0.001	3.1	<0.005	<0.01	0.025	0.096
MKTf-39	11/28/17	200.7/200.8	0.0027	12	<0.002	<0.006	<0.006	<0.0025	2	<0.005	0.0099	<0.0025	<0.01
	09/28/17	200.7/200.8	0.0042	34	<0.002	<0.006	<0.006	<0.0025	5.2	<0.005	0.013	NA	0.034
	06/08/17	200.7/200.8	0.0051	6.7	<0.002	<0.006	<0.006	0.00087	1.3	<0.005	0.016	0.00013	0.084
	03/14/17	200.7/200.8	0.0032	5.6	<0.002	<0.006	<0.006	0.00032	1.2	<0.005	0.0088	0.000079	0.022
	11/01/16	200.7/200.8	0.0036	6	<0.002	<0.006	<0.006	0.00045	1.2	<0.005	0.01	0.000078	<0.01
	09/13/16	200.7/200.8	0.0047	8.9	<0.002	<0.006	<0.006	0.00038	1.7	<0.005	0.016	0.000071	0.0031
	06/08/16	200.7/200.8	0.0024	7.5	<0.002	<0.006	<0.006	0.0013	1.2	<0.005	0.0061	0.00011	<0.01
	03/03/16	200.7/200.8	0.0017	11	<0.002	<0.006	<0.006	0.00039	1.7	<0.005	0.0066	0.000093	0.0092
	11/09/15	200.7/200.8	<0.005	30	<0.002	<0.006	<0.006	<0.005	3.9	<0.005	<0.02	<0.005	<0.01
	08/23/15	200.7/200.8	<0.005	44	<0.002	<0.006	<0.006	<0.0025	5.8	<0.005	<0.01	<0.0025	0.023
	06/10/15	200.7/200.8	<0.01	67	<0.002	<0.006	<0.006	<0.01	8.8	<0.005	<0.01	<0.01	0.012
	03/16/15	200.7/200.8	<0.01	21	<0.002	<0.006	<0.006	<0.005	7	<0.005	0.011	0.0099	<0.01
MKTf-40	11/21/17	200.7/200.8	0.0046	0.076	<0.002	<0.006	<0.006	<0.0025	0.021	0.0056	<0.01	0.052	<0.01
	09/25/17	200.7/200.8	0.0026	0.072	<0.002	<0.006	<0.006	<0.0025	0.052	<0.005	0.0082	NA	0.012
	06/05/17	200.7/200.8	0.0023	0.079	<0.002	<0.006	0.0081	<0.0025	0.09	<0.005	0.0075	0.058	0.018
	03/07/17	200.7/200.8	0.0029	0.097	<0.002	<0.006	<0.006	<0.0025	0.04	<0.005	0.01	NA	0.02
	10/31/16	200.7/200.8	0.0039	0.1	<0.002	<0.006	<0.006	<0.0025	0.11	<0.005	0.012	0.06	0.0029
	09/08/16	200.7/200.8	0.0023	0.11	<0.002	<0.006	<0.006	<0.0025	0.052	<0.005	0.0096	0.059	0.0031
	06/09/16	200.7/200.8	<0.05	0.13	<0.002	<0.006	<0.006	<0.0025	0.18	<0.005	0.019	0.058	<0.01
	02/23/16	200.7/200.8	<0.01	0.064	<0.002	<0.006	<0.006	0.00053	0.041	<0.005	<0.01	0.077	0.016
	11/04/15	200.7/200.8	<0.005	0.15	<0.002	<0.006	<0.006	<0.0025	0.23	<0.005	<0.02	0.06	<0.01
	08/21/15	200.7/200.8	<0.005	0.086	<0.002	<0.006	<0.006	<0.0025	0.18	<0.005	0.0078	0.087	<0.01
	06/10/15	200.7/200.8	<0.005	0.16	<0.002	<0.006	<0.006	<0.005	0.15	<0.005	0.0096	0.069	0.022
	03/11/15	200.7/200.8	<0.01	0.19	<0.002	<0.006	<0.006	<0.01	0.2	<0.005	0.02	0.07	<0.01

Table 1

Groundwater Analyses Summary

STANDARDS			PARAMETERS																								
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a) anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2- ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzo furan (mg/L)	1,4- Dichlorob enzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	Penta chloro phenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)	
WellID	DATE SAMPLED	METHOD																									
MKTf-1	02/24/16	8270C	0.0099	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.0093	<0.01	0.026	<0.01	0.052	<0.01	0.03	0.022	0.038	0.046	0.088	<0.01	0.012	0.012	0.005	NE	NE	NE
	11/04/15	8270C	0.011	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.068	<0.01	0.068	<0.01	0.2	<0.01	0.087	0.049	0.07	0.12	0.012	0.036	0.036	NE	NE	NE	
	08/21/15	8270c	0.014	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.046	<0.01	0.046	<0.01	0.14	<0.01	0.03	0.054	0.05	0.1	0.022	0.031	0.022	NE	NE	NE	
	06/09/15	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.08	<0.01	0.08	<0.01	0.34	<0.01	0.076	0.076	0.035	0.19	0.022	0.031	0.022	NE	NE	NE	
	03/11/15	8270C	0.018	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.051	<0.01	0.051	<0.01	0.12	<0.01	0.061	0.061	0.035	0.09	0.023	0.023	0.023	NE	NE	NE	
	06/06/14	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	0.05	<0.01	0.31	<0.01	0.06	0.031	0.031	0.31	0.028	0.019	0.019	NE	NE	NE	
MKTf-2	11/20/17	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0047	<0.01	0.0093	<0.01	0.03	<0.01	0.03	<0.010	0.0064	0.011	0.017	<0.02	<0.01	0.014	<0.01	<0.01	<0.01	
	10/03/17	8270C	<0.01	0.013	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	0.003	<0.01	0.0097	<0.01	0.0097	<0.01	<0.01	<0.01	0.005	<0.02	0.016	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.0033	<0.01	0.011	<0.01	0.03	<0.01	0.03	<0.01	0.013	0.013	0.038	<0.02	0.019	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	0.0071	0.0027	<0.01	0.0068	<0.01	<0.01	<0.01	0.006	<0.01	0.006	<0.01	<0.01	<0.01	0.0046	<0.02	0.016	<0.01	<0.01	<0.01		
	8270C	0.004	0.007	0.0028	0.0083	0.0043	0.0043	0.0027	<0.01	0.0034	<0.01	<0.01	0.0054	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.0051	<0.05	0.0067	<0.05	<0.01	<0.01		
	8270C	<0.05	<0.1	<0.01	<0.1	0.018	0.018	0.018	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
MKTf-4	04/08/14	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	11/28/17	8270C	0.0068	<0.02	<0.01	<0.01	<0.01	<0.01	0.021	<0.01	<0.01	0.0054	<0.01	0.16	0.0081	0.16	0.19	<0.01	<0.01	0.27	<0.02	0.0068	0.0043	<0.01	<0.01		
	8270C	0.0048	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.019	<0.01	<0.01	0.0049	<0.01	0.18	0.0074	0.18	0.22	<0.01	<0.01	0.3	<0.02	0.0063	<0.01	<0.01	<0.01		
	8270C	0.0052	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	0.0054	<0.01	0.14	0.0048	0.14	0.15	<0.01	<0.01	0.24	<0.02	0.0064	<0.01	<0.01	<0.01		
	8270C	0.0061	<0.01	<0.01	<0.02	<0.01	0.0071	<0.01	0.02	<0.01	<0.01	0.0038	<0.01	0.12	0.0061	0.12	0.16	<0.01	<0.01	0.27	<0.02	0.0061	<0.01	<0.01	<0.01		
	8270C	0.0055	<0.02	<0.02	<0.02	<0.01	0.0068	<0.01	0.0025	0.0073	<0.01	0.0043	<0.01	0.15	0.0082	0.15	0.17	<0.01	<0.01	0.25	0.008	0.0026	<0.01	<0.01	<0.01		
	8270C	0.0049	<0.01	<0.02	<0.02	<0.02	0.0036	0.0036	<0.01	0.017	0.0049	0.0025	<0.01	0.14	0.0052	0.14	0.16	<0.01	<0.01	0.22	0.0071	0.0037	0.0037	0.0033			
	8270C	<0.05	<0.1	<0.02	<0.1	0.018	0.018	0.018	<0.01	0.018	0.028	<0.05	<0.05	0.13	0.0075	0.13	0.13	<0.05	<0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	0.026	<0.01	<0.01	0.008	<0.01	0.17	0.0075	0.17	0.19	<0.01	<0.01	0.33	0.0086	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	0.019	<0.01	<0.01	<0.01	<0.01	0.15	<0.01	0.15	0.16	<0.01	<0.01	0.27	<0.01	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	0.021	<0.01	<0.01	<0.01	<0.01	0.15	<0.01	0.15	0.096	<0.01	<0.01	0.26	<0.01	<0.01	<0.01	<0.01	<0.01		
	8270C	<0.01.																									

Table 1
Groundwater Analyses Summary

STANDARDS				PARAMETERS																								
WQCC 20NMAC 6.2.3103				Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a) anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzo furan (mg/L)	1,4-Dichlorob enzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	Penta chloro phenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)	
40 CFR 141.62 MCL				NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
NMED Tap Water (MARCH 2017)				0.535	NE	0.00012	NE	NE	0.0556	NE	NE	NE	NE	0.302	0.612	0.354	0.288	0.0114	0.036	0.035	NE	0.00165	0.0004	0.17	5.76	0.117	NE	
EPA RSL for Tap Water (MAY 2018)				0.53	0.013	0.00003	75	2	0.0056	0.0016	NE	0.2	0.0079	0.00048	NE	0.36	0.29	0.0011	0.036	0.93	0.93	0.00017	0.000041	NE	5.8	0.12	0.02	
WellID	DATE SAMPLED	METHOD																										
MKTf-21	11/28/17	8270C		<0.1	<0.1	<0.1	0.07	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	0.12	<0.1	<0.1	
	09/26/17	8270C		<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	0.0071	<0.01	0.0093	<0.01	0.047	<0.02	<0.01	0.031	<0.01	<0.01	
	06/21/17	8270C		<0.01	<0.01	<0.01	<0.02	<0.01	0.0052	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	0.038	<0.01	0.008	0.0049	0.021	0.15	0.017	<0.02	<0.01	0.06	<0.01	<0.01	
	03/14/17	8270c		<0.05	<0.05	<0.05	0.033	<0.05	0.035	<0.05	<0.05	0.017	<0.05	<0.1	<0.05	0.021	<0.05	<0.05	<0.05	<0.05	0.03	0.02	<0.1	<0.05	0.036	<0.05	<0.05	
	11/03/16	8270c		<0.1	<0.1		0.11	<0.1	0.064	0.027	<0.1	0.081	<0.1	<0.1	<0.1	0.03	<0.1	<0.1	<0.1	<0.1	0.03	0.049	<0.2	<0.1	0.03	<0.1	<0.05	
	09/12/16	8270C		<0.1	<0.1		0.063	<0.1	0.056		<0.1	0.035			0.029	<0.1	<0.1	<0.1	<0.1	<0.1	0.42	0.024	<0.1	<0.1	0.08			
	03/01/16	8270C		<0.01	<0.01		0.036	<0.01	<0.01		<0.01				0.0057	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	<0.01	<0.01	0.037	<0.01	<0.01		
	06/10/15	8270C		<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	<0.01	0.11	<0.01	<0.01	0.035				
	03/16/15	8270C		<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	<0.01	0.069	<0.01	<0.01	0.038				
	04/11/14	8270C		<0.012	<0.012		<0.025	<0.012	<0.012		<0.012				0.1	<0.012	<0.012	0.069	0.11	<0.14	0.1	0.27	<0.012	<0.012	0.013			
MKTf-22	11/28/17	8270C		<0.01	<0.01	<0.01	0.015	<0.01	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0053	0.058	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.022	<0.01	<0.01	
	10/03/17	8270C		<0.01	<0.01	<0.01	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.075	<0.01	<0.01	<0.01	0.028	<0.02	<0.01	0.014	<0.01	<0.01	
	06/08/17	8270C		<0.01	<0.01	<0.01	0.014	<0.01	0.0055	<0.01	<0.01	0.0052	<0.01	<0.01	<0.01	<0.01	<0.01	0.047	<0.01	<0.01	<0.01	0.027	<0.02	<0.01	0.02	<0.01	<0.01	
	03/08/17	8270C		<0.01	<0.01	<0.01	0.011	<0.01	0.0068	<0.01	0.0046	0.0035	<0.01	<0.01	<0.01	<0.01	0.003	0.044	0.0086	<0.01	0.0025	0.031	<0.02	<0.01	0.0095	<0.01	<0.01	
	11/01/16	8270C		0.0038	<0.01		0.018	<0.01	0.0068		0.0049	0.0073	<0.01	<0.01	<0.01	0.0037	0.0057	0.07	0.013	<0.01	<0.01	0.023	<0.01	<0.01	0.023	<0.01	<0.01	
	09/10/16	8270C		<0.01	<0.01		0.011	<0.01	0.003		0.0024	0.0034	<0.01	<0.01	<0.01	<0.01	<0.01	0.039	0.005	<0.01	<0.01	0.023	<0.01	<0.01	0.0077			
	06/10/16	8270C		<0.0039	<0.01		<0.02	<0.01	0.0046		0.0053	0.0091			0.003	<0.01	<0.01	<0.01	0.067	0.011	<0.01	<0.01	0.046	<0.01	<0.01	0.019		
	02/25/16	8270C		<0.01	<0.01		<0.02	<0.01	<0.01		<0.01				<0.01	<0.01	<0.01	0.042	<0.01	<0.01	<0.01	0.029	<0.01	<0.01	<0.01	<0.01	<0.01	
	11/09/15	8270C		<0.01	<0.01		<0.02	<0.01	<0.01		<0.01				<0.01	<0.01	<0.01	0.04	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	0.01			
	08/20/15	8270C		<0.01	<0.01		<0.02	<0.01	<0.01		<0.01				<0.01	<0.01	<0.01	0.018	<0.01	<0.01	<0.01	0.014	<0.01	<0.01	0.014	<0.01	<0.01	
06/09/15	8270C		<0.01	<0.01		<0.02	<0.01	<0.01		<0.01				<0.01	<0.01	<0.01	0.062	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	0.018				
03/12/15	8270C		<0.01	<0.01		<0.02	<0.01	<0.01		<0.01				<0.01	<0.01	<0.01	0.066	<0.01	<0.01	<0.01	0.016	<0.01	<0.01	0.014				
11/17/14	8270C		<0.01	<0.01		<0.02	<0.01	0.013		<0.01				<0.01	<0.01	<0.01	0.045	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01		
04/10/14	8270C		<0.01	<0.01		<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.045	<0.01	<0.01	<0.02	0.013	<0.01	<0.01	<0.01	<0.01	<0.01		
MKTf-23	06/10/16	8270C		<0.05	<0.01		<0.1	<0.01	<0.05		<0.05	0.03			<0.05	<0.05	0.38	7.8	5.6	<0.05	<0.05	2.3	<0.05	0.72	<0.05			
	02/25/16	8270C		<0.01	<0.01		<0.02	<0.01	<0.01		<0.01				0.11	0.011	0.011	0.22	0.23	0.37	0.024	0.23	0.029	0.029	0.017			
	11/09/15	8270C		<0.01	<0.01		<0.02	<0.01	<0.01		<0.01				0.065	0.013	0.013	0.17	0.21	0.06	0.054	0.23	0.022	0.036				
	08/21/15	8270C		<0.01	<0.01		<0.02	<0.01	<0.01		<0.01				<0.01	<0.01	<0.01	<0.01	0.14	0.19	0.061	0.047	0.27	0.016	<0.01	<0.01		
	06/09/15	8270C		<0.01	<0.01		<0.02	<0.01	<0.01		<0.01				0.12	<0.01	<0.01	0.11	0.14	0.071	0.064	0.2	<0.01	<0.01	0.034			
	03/12/15	8270C		<0.01	<0.01		<0.02	<0.01	<0.01		<0.01				0.094	<0.01	<0.01											

Table 1
Groundwater Analyses Summary

PARAMETERS																											
STANDARDS																											
WQCC 20NMAC 6.2.3103																											
40 CFR 141.62 MCL																											
NMED Tap Water (MARCH 2017)																											
EPA RSL for Tap Water (MAY 2018)																											
Well ID	DATE SAMPLED	METHOD	Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a)anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Butyl benzyl phthalate (mg/L)	Carbazole (mg/L)	Di-n-octyl phthalate (mg/L)	Dibenzofuran (mg/L)	1,4-Dichlorobenzene (mg/L)	Dimethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methylnaphthalene (mg/L)	2-Methylnaphthalene (mg/L)	2-Methylphenol (mg/L)	3+4-Methylphenol (mg/L)	Naphthalene (mg/L)	Penta chlorophenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)	
MKTf-44	11/28/17	8270C	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	
	09/25/17	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	0.024	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01		
	06/05/17	8270C	<0.01	<0.01	<0.01	0.007	<0.01	0.0067	<0.01	<0.01	0.0047	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01		
	03/08/17	8270C	<0.01	<0.01	<0.01	0.0062	<0.01	0.008	<0.01	<0.01	0.0036	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01		
	11/01/16	8270C	<0.01	<0.01	<0.01	0.11	<0.01	0.066	0.027	<0.01	0.075	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	09/09/16	8270C	<0.01	<0.01	<0.01	0.0065	<0.01	0.0035	<0.01	<0.01	<0.01	0.0051	<0.01	0.003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	06/09/16	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	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	02/24/16	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	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	11/09/15	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	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	08/17/15	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	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	06/10/15	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	<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	<0.01	<0.01	<0.02	<0.01	<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	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01		

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

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

NOTES

Table 1
Groundwater Analyses Summary

PARAMETERS																					
STANDARDS																					
Well ID																					
DATE SAMPLED																					
METHOD																					
MKTF-1	09/07/16	8260B/8011/504.1/EDB	0.039	<0.01	0.0039	0.017	0.01	0.012	<0.04	0.01	<0.015	0.0074	<0.015	<0.005	<0.01	<0.005	<0.015	0.016	0.015	0.048	0.019
	02/24/16	8260B	0.66	0.03	0.0091	<0.05	0.11	0.067	0.035	0.16	<0.02	<0.05	<0.015	<0.005	<0.01	<0.005	<0.015	0.026	0.026	0.06	0.025
	11/04/15	8260B	0.71	0.054	<0.005		0.091	0.062	0.032	<0.05	0.032	<0.05	<0.005	<0.01	<0.005	<0.015	0.037	0.037	0.074	0.046	
	08/21/15	8260B	0.65	0.057	<0.005		0.081	0.044	<0.02	<0.05	<0.02	<0.05	<0.005	<0.01	<0.005	<0.03	0.042	0.042	0.065	0.051	
	06/09/15	8260B	0.67	0.13	<0.05		<0.1	<0.2	<0.2	<0.5	<0.2	<0.5	<0.005	<0.01	<0.005	<0.03	<0.05	<0.05	0.056	<0.05	
	03/11/15	8260B	0.59	0.1	<0.05		<0.1	<0.2	<0.2	<0.5	<0.2	<0.5	<0.005	<0.01	<0.005	<0.03	<0.05	<0.05	0.066	0.058	
	06/06/14	8260B	1.1	0.27	<0.05		0.3	<0.2	<0.2	<0.5	<0.2	<0.5	<0.005	<0.01	<0.005	<0.03	<0.05	<0.05	0.094	<0.05	
MKTF-2	11/20/17	8260B	0.2	0.003	0.0033	<0.005	0.027	0.031	0.0015	0.0074	<0.015	0.0074	<0.015	<0.005	<0.01	<0.005	<0.015	0.016	0.016	0.047	0.021
	10/03/17	8260B	0.053	<0.005	0.0035	<0.005	0.0067	0.0095	<0.02	<0.05	<0.02	<0.05	<0.015	<0.005	<0.01	<0.005	<0.015	0.017	0.017	0.045	0.021
	03/16/17	8260B/8011/504.1/EDB	0.36	0.024	<0.01	<0.01	0.044	0.031	0.0058	0.016	0.0058	0.016	<0.03	<0.01	<0.02	<0.01	<0.03	0.024	0.062	0.062	0.026
	10/28/16	8260B/8011/504.1/EDB	0.02	<0.01	0.0072	0.000044	0.0016	0.0045	<0.04	<0.1	<0.04	<0.1	<0.03	<0.01	<0.02	<0.01	<0.03	0.017	0.062	0.062	0.037
	09/07/16	8260B	0.039	<0.01	0.0039	<0.001	0.01	0.012	<0.04	0.01	<0.04	0.01	0.0036	<0.005	<0.01	<0.005	<0.015	0.015	0.048	0.019	0.019
	06/10/16	8260B	0.13	0.0097	<0.005		0.025	0.015	0.0028	<0.05	0.0028	<0.05	<0.005	<0.01	<0.005	<0.015	0.012	0.012	0.046	0.018	0.018
	02/24/16	8260B	0.0013	<0.005	0.015		<0.01	<0.02	<0.02	0.0046	<0.02	0.0046	<0.005	<0.01	<0.005	<0.015	0.0058	0.0058	0.058	0.11	0.11
	11/04/15	8260B	0.0087	<0.001	0.0048		0.0024	0.0042	<0.004	<0.01	<0.004	<0.01	<0.005	<0.01	<0.005	<0.015	0.013	0.013	0.066	0.03	0.03
	08/21/15	8260B	0.0017	<0.001	0.0091		0.0036	<0.004	<0.004	<0.01	<0.004	<0.01	<0.005	<0.01	<0.005	<0.015	0.01	0.01	0.062	0.059	0.059
	06/09/15	8260B	0.04	<0.001	0.0041		0.0066	0.0058	<0.004	<0.01	<0.004	<0.01	<0.005	<0.01	<0.005	<0.015	0.0099	0.0099	0.054	0.026	0.026
	03/11/15	8260B	0.0051	<0.002	0.0045		<0.004	<0.008	<0.008	<0.02	<0.008	<0.02	<0.005	<0.01	<0.005	<0.015	0.0093	0.0093	0.05	0.031	0.031
	11/14/14	8260B	0.0021	<0.001	0.016		<0.002	<0.004	<0.004	<0.01	<0.004	<0.01	<0.005	<0.01	<0.005	<0.015	0.011	0.011	0.075	0.078	0.078
	09/18/14	8260B	0.14	<0.005	0.0051		0.017	0.037	<0.02	<0.05	<0.02	<0.05	<0.005	<0.01	<0.005	<0.015	0.03	0.03	0.098	0.024	0.024
	06/06/14	8260B	0.031	0.0019	0.0081		0.0049	<0.004	<0.004	0.012	<0.004	0.012	<0.005	<0.01	<0.005	<0.015	0.011	0.011	0.07	0.041	0.041
04/08/14	8260B	0.0035	<0.002	0.0068		<0.004	<0.008	<0.008	<0.02	<0.008	<0.02	<0.005	<0.01	<0.005	<0.015	0.0052	0.0052	0.041	0.034	0.034	
MKTF-4	11/28/17	8260B	0.58	0.11	<0.005	<0.005	0.42	0.25	0.26	0.016	<0.015	<0.015	<0.015	<0.005	<0.01	<0.005	<0.015	0.0061	<0.005	0.0057	0.0087
	09/26/17	8260B	0.57	0.11	<0.005	<0.005	0.45	0.26	0.26	<0.05	<0.015	<0.015	<0.015	<0.005	<0.01	<0.005	<0.015	0.0052	<0.005	0.0034	0.0058
	06/08/17	8260B	0.47	0.08	<0.005	<0.005	0.33	0.18	0.15	0.023	<0.015	<0.015	<0.015	<0.005	<0.01	<0.005	<0.015	0.0059	<0.005	0.0063	0.013
	03/02/17	8260B	0.49	0.088	0.0025	<0.005	0.37	0.2	0.2	<0.05	<0.015	<0.015	<0.015	<0.005	<0.01	<0.005	<0.015	0.0048	0.0046	0.0046	0.0075
	11/02/16	8260B	0.37	0.063	0.0023	<0.005	0.3	0.19	0.16	<0.05	<0.015	<0.015	<0.015	<0.005	<0.01	<0.005	<0.015	0.0055	0.01	0.01	0.014
	09/11/16	8260B	0.43	0.069	0.0026	<0.005	0.39	0.22	0.22	<0.05	<0.015	<0.015	<0.015	<0.005	<0.01	<0.005	<0.015	0.01	0.0062	0.0062	0.012
	06/09/16	8260B	0.37	0.057	<0.01		0.28	0.17	0.14	<0.1	<0.05	<0.05	<0.005	<0.01	<0.005	<0.015	0.0077	0.012	0.012	0.021	0.021
	02/29/16	8260B	0.37	0.058	0.0016		0.34	0.18	0.18	0.027	<0.05	<0.05	<0.005	<0.01	<0.005	<0.015	0.0055	0.0059	0.0059	0.014	0.014
	11/03/15	8260B	0.43	0.053	<0.01		0.34	0.21	0.18	<0.1	<0.05	<0.05	<0.005	<0.01	<0.005	<0.015	<0.01	<0.01	<0.01	0.02	0.02
	08/18/15	8260B	0.27	0.026	<0.005		0.24	0.14	0.085	<0.05	<0.015	<0.015	<0.015	<0.005	<0.01	<0.005	<0.015	0.013	0.0075	0.0075	0.016
	06/04/15	8260B	0.27	0.023	<0.01		0.22	0.14	0.086	<0.1	<0.05	<0.05	<0.005	<0.01	<0.005	<0.015	<0.01	<0.01	<0.01	0.022	0.022
	03/16/15	8260B	0.2	0.024	<0.01		0.17	0.096	0.089	<0.1	<0.05	<0.05	<0.005	<0.01	<0.005	<0.015	<0.01	<0.01	0.019	0.032	0.032
	11/13/14	8260B	0.2	0.019	<0.01		0.13	0.095	0.08	<0.1	<0.05	<0.05	<0.005	<0.01	<0.005	<0.015	0.014	0.014	0.037	0.059	0.059
	09/15/14	8260B	0.096	0.012	<0.005		0.092	0.041	0.033	<0.05	<0.004	<0.05	<0.005	<0.01	<0.005	<0.015	0.014	0.014	0.037	0.074	0.074
06/04/14	8260B	0.27	0.049	<0.01		0.31	0.13	0.17	<0.1	<0.05	<0.05	<0.005	<0.01	<0.005	<0.015	<0.01	<0.01	0.011	0.021	0.021	
04/11/14	8260B	0.51	0.094	<0.02		0.43	0.18	0.28	<0.2	<0.05	<0.02	<0.005	<0.01	<0.005	<0.015	<0.02	<0.02	<0.02	0.028	0.028	

Table 1
Groundwater Analyses Summary

PARAMETERS																			
STANDARDS																			
Well ID																			
DATE SAMPLED																			
METHOD																			
MKTf-9																			
	1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2-Dibro moethane (EDB) (mg/L)	Naphtha-lene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Bromo methane (mg/L)	2-Butanone (Methyl ethyl ketone) (mg/L)	Chloro benzene (mg/L)	Chloroethane (mg/L)	Chloro-form (mg/L)	Chloro-methane (mg/L)	cis-1,2-DCE (mg/L)	1,4-Dichloro benzene (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)	
	NE	NE	0.01	0.0001	NE	NE	NE	NE	NE	NE	NE	NE	0.1	NE	0.005	NE	0.025	0.005	
	NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	NE	NE	NE	0.08	NE	0.07	0.075	NE	0.007	
	NE	NE	0.0017	0.0000747	0.00165	0.114	0.035	14.1	0.00754	5.56	0.0776	20.9	0.00229	0.0203	0.0365	0.00482	0.0275	0.284	
	0.056	0.06	0.00017	0.0000075	0.00017	0.0011	0.036	14	0.0075	5.6	0.078	21	0.00022	0.19	NE	0.00048	0.0028	0.28	
	0.093	0.0028	<0.01	<0.01	0.057	0.08	0.016	<0.1	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.017	<0.01	0.019	0.03	
	0.095	<0.01	<0.01	<0.01	0.083	0.098	0.016	<0.1	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.0096	<0.01	0.0098	0.013	
	0.087	0.0013	<0.01	<0.01	0.062	0.091	0.013	<0.1	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.013	<0.01	0.014	0.017	
	0.078	0.0017	<0.01	<0.01	0.051	0.08	0.01	0.013	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.02	<0.01	0.019	0.021	
	0.043	<0.01	<0.01	<0.01	0.029	0.064	0.0056	<0.1	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.027	0.028	0.025	0.025	
	0.053	<0.01	<0.01	<0.01	0.039	0.076	0.0075	<0.1	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.032	0.022	0.024	0.024	
	0.058	0.00075	<0.001	<0.001	0.035	0.083	0.011	0.013	0.0056	0.0056	0.032	0.03	0.027	0.036	0.03	0.029	0.036	0.032	
	0.065	<0.01	<0.01	<0.01	0.041	0.082	0.014	0.01	<0.1	<0.1	<0.01	<0.02	<0.01	<0.03	0.027	0.027	0.026	0.036	
	0.073	<0.001	<0.001	<0.01	0.041	0.081	0.014	<0.01	<0.05	<0.05	<0.01	<0.02	<0.01	<0.03	0.03	0.027	0.027	0.036	
	0.05	<0.005	<0.005	<0.005	0.029	0.08	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01	<0.02	<0.01	0.027	0.026	0.026	0.036	
	0.033	<0.005	<0.005	<0.005	0.015	0.051	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01	<0.02	<0.01	0.03	0.028	0.028	0.055	
	0.018	<0.005	<0.005	<0.005	0.011	0.03	<0.04	<0.1	<0.05	<0.1	<0.1	<0.02	<0.01	<0.03	0.036	0.034	0.035	0.068	
	0.087	<0.01	<0.01	<0.01	0.043	0.11	<0.04	<0.1	<0.05	<0.1	<0.1	<0.02	<0.01	<0.03	0.024	0.035	0.028	0.065	
	0.038	<0.01	<0.01	<0.01	0.03	0.042	<0.04	<0.1	<0.05	<0.1	<0.1	<0.02	<0.01	<0.03	0.021	0.028	0.026	0.041	
0.083	<0.01	<0.1	<0.1	0.068	0.089	<0.04	<0.1	<0.05	<0.1	<0.1	<0.02	<0.01	<0.03	0.014	0.026	0.026	0.046		
0.074	<0.005	<0.005	<0.005	0.044	0.062	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.01	<0.03	0.012	0.024	0.024	0.046		
MKTf-10																			
	1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2-Dibro moethane (EDB) (mg/L)	Naphtha-lene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Bromo methane (mg/L)	2-Butanone (Methyl ethyl ketone) (mg/L)	Chloro benzene (mg/L)	Chloroethane (mg/L)	Chloro-form (mg/L)	Chloro-methane (mg/L)	cis-1,2-DCE (mg/L)	1,4-Dichloro benzene (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)	
	1	0.25	<0.1	<0.1	0.24	0.11	0.13	<1	<0.3	<1	<0.1	0.067	<0.1	<0.3	0.051	<0.1	<0.1	<0.1	
	0.92	0.21	<0.1	<0.1	0.23	0.098	0.097	<1	<0.3	<1	<0.1	<0.2	<0.1	<0.3	0.053	<0.1	<0.1	<0.1	
	0.93	0.22	<0.1	<0.1	0.17	0.066	0.075	<1	<0.3	<1	<0.1	0.077	<0.1	<0.3	0.045	<0.1	<0.1	<0.1	
	0.98	0.22	<0.1	<0.1	0.23	0.064	0.066	<1	<0.3	<1	<0.1	<0.2	<0.1	<0.3	0.043	<0.1	<0.1	<0.1	
	0.85	0.2	<0.1	<0.1	0.24	0.1	0.1	<1.0	<0.3	0.69	<0.1	<0.2	<0.1	<0.3	0.026	<0.01	<0.01	<0.01	
	0.84	0.2	<0.1	<0.1	0.35	0.15	0.16	<1.0	<0.3	1.3	<0.1	<0.2	<0.1	<0.3	0.032	<0.05	<0.05	<0.05	
	0.9	0.2	<0.02	<0.01	0.22	0.067	0.088	0.29	0.69	0.69	<0.1	<0.2	<0.1	<0.3	0.023	0.039	0.039	0.0071	
	0.9	0.2	<0.1	<0.1	0.21	0.074	0.087	0.16	0.68	0.68	<0.1	0.039	<0.1	<0.3	0.023	0.031	0.07	<0.1	
	0.85	0.21	<0.05	<0.05	0.17	<0.2	<0.2	<0.5	<0.5	<0.5	<0.1	<0.2	<0.1	<0.3	0.057	0.078	<0.05	<0.05	
	0.88	0.22	<0.05	<0.05	0.23	<0.2	<0.2	0.52	1.6	1.6	<0.1	<0.2	<0.1	<0.3	<0.05	0.067	<0.05	<0.05	
	0.79	0.21	<0.05	<0.05	0.19	<0.2	<0.2	<0.5	<0.5	1.3	<0.1	<0.2	<0.1	<0.3	<0.05	0.06	<0.05	<0.05	
	0.96	0.24	<0.05	<0.05	0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.1	<0.2	<0.1	<0.3	<0.05	0.078	<0.02	<0.02	
	1.5	0.57	<0.02	<0.02	0.36	0.24	0.38	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.3	0.066	0.039	<0.05	<0.05	
	0.5	0.11	<0.05	<0.05	0.13	<0.2	<0.2	<0.5	<0.5	2.8	2.8	<0.1	<0.2	<0.1	<0.3	0.057	<0.05	<0.05	
	0.27	0.065	<0.01	<0.01	0.079	<0.04	<0.04	0.21	0.21	1.8	1.8	<0.1	<0.2	<0.1	0.033	0.051	<0.01	<0.01	
	0.96	0.21	<0.05	<0.05	0.2	<0.2	<0.2	1.2	1.2	1	<0.1	<0.2	<0.1	<0.3	<0.05	<0.05	<0.05	<0.05	
	MKTf-11																		
		1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2-Dibro moethane (EDB) (mg/L)	Naphtha-lene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Bromo methane (mg/L)	2-Butanone (Methyl ethyl ketone) (mg/L)	Chloro benzene (mg/L)	Chloroethane (mg/L)	Chloro-form (mg/L)	Chloro-methane (mg/L)	cis-1,2-DCE (mg/L)	1,4-Dichloro benzene (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)
0.33		0.063	<0.02	<0.02	0.065	0.018	0.018	0.094	<0.06	0.15	<0.02	0.023	<0.02	<0.06	<0.02	<0.02	0.04	<0.02	
0.34		0.072	<0.02	<0.02	0.075	0.023	0.02	0.042	<0.06	0.2	<0.02	0.017	<0.02	<0.06	<0.02	<0.02	0.025	<0.02	
0.21		0.044	<0.02	<0.02	0.035	0.016	0.014	0.05	<0.06	0.13	<0.02	0.024	<0.02	<0.06	<0.02	<0.02	0.053	<0.02	
0.33		0.058	<0.02	<0.02	0.055	0.018	0.014	<0.2	<0.06	<0.2	<0.02	<0.04	<0.02	<0.06	<0.02	<0.02	0.055	<0.02	
0.25		0.049	<0.05	<0.05	0.048	<0.2	0.2	<0.5	<0.5	0.22	<0.02	<0.1	<0.02	<0.06	<0.05	<0.05	0.057	<0.05	
0.25		0.045	<0.05	<0.05	0.05	0.021	0.014	<0.5	<0.5	0.27	<0.02	<0.1	<0.02	<0.06	<0.05	<0.05	0.053	<0.05	
0.29		0.052	<0.01	<0.01	0.053	0.019	0.016	0.2	<0.06	0.17	<0.02	<0.1	<0.02	<0.06	<0.01	<0.01	0.064	<0.01	
0.31		0.059	<0.1	<0.1	0.062	0.048	0.048	<1.0	<0.06	<1.0	<0.02	0.024	<0.02	<0.06	<0.1	<0.1	0.06	<0.01	
0.57		0.14	<0.05	<0.05	<0.1	<0.2	<0.2	<0.5	<0.5	<0.5	<0.02	<0.1	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	
0.23		0.046	<0.02	<0.02	0.054	<0.08	<0.08	<0.2	<0.06	<0.2	<0.02	<0.1	<0.02	<0.06	<0.02	<0.02	0.063	<0.02	
0.57		0.14	<0.02	<0.02	0.11	<0.08	<0.08	<0.2	<0.06	0.43	<0.02	<0.1	<0.02	<0.06	<0.02	<0.02	0.031	<0.02	
0.51		0.11	<0.02	<0.02	0.093	<0.08	<0.08	<0.2	<0.06	<0.2	<0.02	<0.1	<0.02	<0.06	<0.02	<0.02	0.048	<0.02	
0.4		0.06	<0.02	<0.02	0.058	<0.08	<0.08	<0.2	<0.06	<0.2	<0.02	<0.1	<0.02	<0.06	<0.2	<0.2	0.047	<0.02	
0.36		0.058</																	

Table 1
Groundwater Analyses Summary

PARAMETERS																			
STANDARDS		1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2-Dibromo methane (EDB) (mg/L)	Napththalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Bromo methane (mg/L)	(Methyl ethyl ketone) 2-Butanone (mg/L)	Chloro benzene (mg/L)	Chloroethane (mg/L)	Chloroform (mg/L)	Chloromethane (mg/L)	cis-1,2-DCE (mg/L)	1,4-Dichloro benzene (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)
WQCC 20NMAC 6.2.3103		NE	NE	0.01	0.0001	NE	NE	NE	NE	NE	NE	NE	NE	0.1	NE	0.005	NE	0.025	0.005
40 CFR 141.62 MCL		NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	NE	NE	NE	0.08	NE	0.07	0.075	NE	0.007
NMED Tap Water (MARCH 2017)		NE	NE	0.0017	0.0000747	0.00165	0.114	0.035	14.1	0.00754	5.56	0.0776	20.9	0.00229	0.0203	0.0365	0.00482	0.0275	0.284
EPA RSL for Tap Water (MAY 2018)		0.056	0.06	0.00017	0.0000075	0.00017	0.0011	0.036	14	0.0075	5.6	0.078	21	0.00022	0.19	NE	0.00048	0.0028	0.28
Well ID	DATE SAMPLED	METHOD																	
	06/05/14	8260B	0.27	<0.005		0.066	<0.02	<0.02	0.29		0.17					0.016		0.053	<0.005
	04/11/14	8260B	0.41	<0.05		<0.1	<0.2	<0.2	<0.5		<0.5					<0.05		0.065	<0.05

Table 1
Groundwater Analyses Summary

PARAMETERS													
STANDARDS													
WQCC 20NMAC 6.2.3103													
40 CFR 141.62 MCL													
NMED Tap Water (MARCH 2017)													
EPA RSL for Tap Water (MAY 2018)													
Well ID	DATE SAMPLED	METHOD											
MKTF-13	03/15/17	8260B											
MKTF-15	11/28/17	8260B											
	06/08/17	8260B	0.72	0.21	0.17	0.21	0.11	0.13	0.03	<0.01	<0.01	<0.03	<0.01
	03/02/17	8260B	0.79	0.25	0.18	0.052	<0.4	<0.4	0.2	<0.1	<0.1	<0.3	<0.1
	11/02/16	8260B	0.75	0.21	0.23	0.078	<0.4	0.032	<1	<0.3	<0.1	<0.3	<0.1
	09/11/16	8260B	0.63	0.19	0.21	0.097	<0.2	<0.2	0.4	<0.05	<0.05	<0.3	<0.1
	09/17/14	8260B	0.57	0.17	0.27	0.086	0.015	0.014	1.2	<0.5	<0.05	<0.05	<0.05
	06/05/14	8260B	0.66	0.18	0.24	0.12	<0.2	<0.2	<0.5	<0.05	<0.05	<0.05	<0.05
	04/10/14	8260B	0.33	0.095	0.11	0.08	0.03	0.035	0.29	<0.005	<0.005	<0.005	<0.005
MKTF-16	11/29/17	8260B	0.69	0.19	0.19	0.16	0.066	0.072	<1	<0.3	<0.1	<0.3	<0.1
	09/26/17	8260B	0.75	0.2	0.18	0.17	0.053	0.057	<1	<0.3	<0.1	<0.3	<0.1
	06/08/17	8260B	0.44	0.18	0.23	0.12	0.046	0.051	<1	<0.3	<0.1	<0.3	<0.1
	03/14/17	8260B	0.75	0.23	0.21	0.14	0.056	0.062	<1	<0.3	<0.1	<0.3	<0.1
	11/03/16	8260B	0.56	0.21	0.27	0.17	0.056	0.057	<1.0	<0.1	<0.1	<0.1	<0.1
	09/12/16	8260B	0.78	0.27	0.24	0.23	0.052	0.06	<1.0	<0.1	<0.1	<0.1	<0.1
	06/09/16	8260B	0.73	0.24	0.24	0.17	0.046	0.055	<0.2	<0.0084	<0.1	<0.1	<0.1
	02/29/16	8260B	0.69	0.24	0.33	0.14	0.057	0.063	<1.0	<0.1	<0.1	<0.1	<0.1
	11/03/15	8260B	1.1	0.33	0.32	0.2	<0.2	<0.2	<0.5	<0.05	<0.05	<0.05	<0.05
	08/23/15	8260B	0.89	0.32	0.27	0.2	<0.4	<0.4	<1.0	<0.1	<0.1	<0.1	<0.1
MKTF-17	12/01/17	8260B	<0.005	<0.005	<0.005	0.0035	<0.02	<0.02	<0.05	<0.005	<0.005	<0.015	<0.005
	09/26/17	8260B	0.00073	<0.005	<0.005	0.0079	0.012	<0.02	<0.05	<0.005	<0.005	<0.015	<0.005
	06/14/17	8260B	0.075	<0.005	<0.005	0.032	0.025	0.0016	<0.05	<0.005	<0.005	<0.015	<0.005
	03/15/17	8260B	0.034	0.0035	<0.01	0.011	0.0072	0.0047	0.018	<0.01	<0.01	<0.03	<0.01
	11/08/16	8260B	0.0017	<0.005	<0.005	0.021	0.01	0.003	<0.05	<0.005	<0.005	<0.005	<0.005
	09/13/16	8260B	0.012	<0.01	<0.01	0.014	0.013	<0.04	<0.1	<0.01	<0.01	<0.01	<0.01
	06/10/16	8260B	0.23	0.0046	<0.001	0.094	0.035	0.007	0.04	<0.001	<0.001	<0.001	<0.001
	02/26/16	8260B	0.0024	<0.005	<0.005	0.0025	<0.02	<0.02	<0.05	<0.005	<0.005	<0.005	<0.005
	11/03/15	8260B	<0.02	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.002	<0.002	<0.002	<0.002
	08/18/15	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.001	<0.001	<0.001	<0.001
MKTF-17	06/08/15	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.001	<0.001	<0.001	<0.001
	03/12/15	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.001	<0.001	<0.001	<0.001
	11/18/14	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.001	<0.001	<0.001	<0.001
	09/18/14	8260B	<0.01	<0.01	<0.01	<0.02	<0.04	<0.04	<0.1	<0.01	<0.01	<0.01	<0.01
	06/06/14	8260B	0.064	<0.01	<0.01	<0.02	<0.04	<0.04	<0.1	<0.01	<0.01	<0.01	<0.01
	04/09/14	8260B	0.074	<0.01	<0.01	0.032	<0.04	<0.04	<0.1	<0.01	<0.01	<0.01	<0.01

Table 1
Groundwater Analyses Summary

PARAMETERS													
STANDARDS													
WQCC 20NMAC 6.2.3103													
40 CFR 141.62 MCL													
NMED Tap Water (MARCH 2017)													
EPA RSL for Tap Water (MAY 2018)													
Well ID	DATE SAMPLED	METHOD											
MKTf-18	06/14/17	8260B	<0.002	<0.002	<0.001	0.0001	NE	NE	NE	NE	NE	0.1	NE
	03/01/17	8260B	0.0013	<0.001	0.00047	0.00005	NE	NE	NE	NE	NE	0.08	NE
	11/08/16	8260B	0.00078	<0.001	0.00042		NE	NE	NE	NE	NE	0.00229	NE
	09/13/16	8260B	0.0011	0.00015	<0.001	0.0000747	0.00165	0.114	0.035	20.9	0.00229	0.0203	0.0365
	06/10/16	8260B	0.004	0.0004	<0.001	0.0000075	0.00017	0.0011	0.036	21	0.00022	0.19	NE
	02/26/16	8260B	0.014	0.0012	<0.001								
	11/03/15	8260B	0.051	0.0072	<0.002								
	08/18/15	8260B	0.047	0.009	<0.001								
	06/08/15	8260B	0.051	0.012	<0.001								
	03/17/15	8260B	0.065	0.019	<0.005								
	11/18/14	8260B	0.096	0.023	<0.005								
	09/18/14	8260B	0.095	0.025	<0.005								
	06/06/14	8260B	0.088	0.029	<0.005								
	04/14/14	8260B	0.091	0.024	<0.005								
MKTf-19	12/01/17	8260B	0.72	0.1	<0.01	<0.01	0.6	0.27	0.34	<0.02	<0.01	<0.01	<0.01
	09/26/17	8260B	0.53	0.067	<0.01	<0.01	0.44	0.17	0.23	<0.01	<0.01	<0.01	<0.01
	06/14/17	8260B	0.6	0.087	<0.01	<0.01	0.41	0.19	0.23	<0.01	<0.01	<0.01	<0.01
	03/15/17	8260B	0.66	0.098	<0.02	<0.02	0.43	0.17	0.2	<0.02	<0.02	<0.02	<0.02
	11/08/16	8260B	0.63	0.11	0.007	<0.02	0.51	0.22	0.26	<0.2	<0.2	<0.06	<0.02
	09/13/16	8260B	0.62	0.1	<0.02	<0.02	0.45	0.18	0.25	<0.2	<0.2	<0.01	<0.01
	06/10/16	8260B	0.58	0.079	<0.01	<0.01	0.41	0.15	0.21	<0.1	<0.1	<0.1	<0.1
	02/25/16	8260B	0.68	0.082	<0.02	<0.02	0.55	0.25	0.35	<0.2	<0.2	<0.02	<0.02
	11/03/15	8260B	0.53	0.094	<0.01		0.43	0.17	0.27	<0.1	<0.1	<0.01	<0.01
	08/18/15	8260B	0.52	0.073	<0.01		0.49	0.23	0.38	<0.1	<0.1	<0.01	<0.01
	06/08/15	8260B	0.42	0.055	<0.01		0.34	0.15	0.23	<0.1	<0.1	<0.01	<0.01
	03/12/15	8260B	0.39	0.047	<0.01		0.38	0.17	0.25	<0.1	<0.1	<0.01	<0.01
	11/18/14	8260B	0.83	0.11	<0.05		0.58	0.41	0.54	<0.5	<0.5	<0.01	<0.01
	09/24/14	8260B	0.69	0.11	<0.05		0.5	0.22	0.36	<0.5	<0.5	<0.05	<0.05
	04/09/14	8260B	0.59	0.099	<0.05		0.43	<0.2	0.3	<0.5	<0.5	<0.05	<0.05
MKTf-20	11/29/17	8260B	1.4	0.41	<0.1	<0.1	0.27	0.09	0.1	<1	<0.3	<0.1	<0.1
	09/26/17	8260B	1.3	0.41	<0.1	<0.1	0.27	0.055	0.06	<1	<0.3	<0.1	<0.1
	06/12/17	8260B	1.6	0.48	<0.1	<0.1	0.29	0.058	0.049	<1	<0.3	<0.1	<0.1
	03/14/17	8260B	1.2	0.42	<0.1	<0.1	0.12	0.083	0.078	<1	<0.3	<0.1	<0.1
	11/03/16	8260B	1.2	0.35	<0.1	<0.1	0.19	0.073	0.079	<1.0	<0.3	<0.1	<0.1
	09/12/16	8260B	1.3	0.41	<0.1	<0.1	0.23	0.053	0.062	<1.0	<0.1	<0.1	<0.1
	06/09/16	8260B	0.97	0.31	<0.01	<0.01	0.14	0.04	0.049	0.047	<0.01	<0.01	<0.01
	03/01/16	8260B	1.2	0.38	<0.05	<0.05	0.14	0.037	0.051	<0.5	<0.05	<0.05	<0.05
	06/08/15	8260B	0.94	0.34	<0.05		0.1	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05
	03/16/15	8260B	1.3	0.39	<0.05		0.21	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05
	11/18/14	8260B	1.8	0.53	<0.5		0.16	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5
	04/11/14	8260B	1.9	0.5	<0.05		0.3	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05

Table 1
Groundwater Analyses Summary

STANDARDS		PARAMETERS																			
WQCC 20NMAC 6.2.3103		1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2-Dibro moethane (EDB) (mg/L)	Naphtha- lene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Bromo methane (mg/L)	2-Butanone (Methyl ethyl ketone) (mg/L)	Chloro benzene (mg/L)	Chloroethane (mg/L)	Chloro- form (mg/L)	Chloro- methane (mg/L)	cis-1,2-DCE (mg/L)	1,4-Dichloro benzene (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)		
40 CFR 141.62 MCL		NE	NE	0.01	0.0001	NE	NE	NE	NE	NE	NE	NE	NE	0.1	NE	NE	NE	NE	NE		
NMED Tap Water (MARCH 2017)		NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	NE	NE	NE	0.08	NE	0.07	0.075	NE	0.007		
EPA RSL for Tap Water (MAY 2018)		NE	NE	0.0017	0.0000747	0.00165	0.114	0.035	14.1	0.00754	5.56	0.0776	20.9	0.00229	0.0203	0.0365	0.00482	0.0275	0.284		
		0.056	0.06	0.00017	0.0000075	0.00017	0.0011	0.036	14	0.0075	5.6	0.078	21	0.00022	0.19	NE	0.00048	0.0028	0.28		
Well ID	DATE SAMPLED	METHOD																			
MKTf-21	11/28/17	8260B	0.29	0.097	<0.05	<0.05	0.061	<0.2	<0.2	<0.5	<0.15	<0.5	<0.1	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05		
	09/26/17	8260B	0.29	0.089	<0.05	<0.05	0.045	0.016	0.018	<0.15	<0.15	<0.5	<0.1	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05		
	06/21/17	8260B	0.34	0.12	<0.05	<0.05	0.045	<0.2	<0.2	<0.15	<0.15	<0.5	<0.1	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05		
	03/14/17	8260B	0.26	0.096	<0.05	<0.05	0.032	0.02	0.021	<0.15	<0.15	<0.5	<0.1	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05		
	11/03/16	8260B	0.23	0.096	<0.05	<0.05	0.047	<0.2	<0.2	<0.5	<0.15	<0.5	<0.1	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05		
	09/12/16	8260B	0.24	0.11	<0.05	<0.05	0.03	0.015	0.014	<0.5	<0.15	<0.5	<0.1	<0.05	<0.15	<0.05	<0.05	<0.05	<0.05		
	06/09/16	8260B	0.14	0.066	<0.01	<0.01	0.019	0.01	0.012	0.17	0.11	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	03/01/16	8260B	0.14	0.067	<0.01	<0.01	0.016	0.0067	0.0072	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	06/10/15	8260B	0.11	0.047	<0.01	<0.01	<0.02	<0.04	<0.04	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	03/16/15	8260B	0.11	0.051	<0.01	<0.01	<0.02	<0.04	<0.04	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	04/11/14	8260B	2.2	0.6	<0.05	<0.05	0.49	<0.2	<0.2	<0.5	<0.5	<0.5	<0.1	<0.05	<0.5	<0.5	<0.05	<0.05	<0.05		
	MKTf-22	11/28/17	8260B	0.0094	0.0017	<0.01	<0.01	0.033	0.089	0.086	0.023	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.008	<0.01	<0.01	0.0062
		10/03/17	8260B	0.015	<0.01	<0.01	<0.01	0.059	0.1	0.01	0.021	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.0061	<0.01	0.0041	0.0051
		06/08/17	8260B	0.004	0.0014	<0.01	<0.01	0.032	0.058	0.0071	0.021	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.0094	<0.01	<0.01	0.009
03/08/17		8260B	0.012	0.0022	<0.01	<0.01	0.07	0.09	0.016	0.034	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.0083	<0.01	0.0017	0.0086	
11/01/16		8260B	0.015	0.0019	<0.01	<0.01	0.07	0.094	0.016	<0.1	<0.1	<0.1	<0.01	<0.02	<0.01	<0.03	0.0066	<0.01	<0.01	0.0068	
09/10/16		8260B	0.015	<0.02	<0.02	<0.02	0.078	0.088	0.014	<0.2	<0.2	<0.2	<0.01	<0.02	<0.01	<0.03	0.011	<0.02	<0.02	0.0094	
06/10/16		8260B	0.025	0.0017	<0.01	<0.01	0.073	0.088	0.016	0.082	<0.03	0.031	<0.01	<0.02	<0.01	<0.03	0.008	<0.01	<0.01	0.0069	
02/25/16		8260B	0.043	<0.02	0.003	<0.02	0.073	0.11	0.017	<0.2	<0.2	<0.2	<0.01	<0.02	<0.01	<0.03	0.0077	<0.02	<0.02	0.004	
11/09/15		8260B	0.029	<0.02	<0.02	<0.02	<0.04	<0.08	<0.08	<0.2	<0.2	<0.2	<0.01	<0.02	<0.01	<0.03	<0.02	<0.02	<0.2	<0.2	
08/20/15		8260B	<0.02	<0.02	<0.02	<0.02	<0.04	<0.08	<0.08	<0.2	<0.2	<0.2	<0.01	<0.02	<0.01	<0.03	<0.02	<0.02	<0.02	<0.02	
06/09/15		8260B	0.053	<0.02	<0.02	<0.02	<0.04	0.08	<0.08	<0.2	<0.2	<0.2	<0.01	<0.02	<0.01	<0.03	<0.02	<0.02	<0.02	<0.02	
03/12/15		8260B	0.058	<0.02	<0.02	<0.02	<0.04	0.099	<0.08	<0.2	<0.2	<0.2	<0.01	<0.02	<0.01	<0.03	<0.02	<0.02	<0.02	<0.02	
11/17/14		8260B	<0.01	<0.01	<0.01	<0.01	<0.02	0.058	<0.04	<0.1	<0.1	<0.1	<0.01	<0.02	0.01	0.015	0.01	0.015	<0.01	<0.01	
04/10/14		8260B	0.089	<0.01	<0.01	<0.01	<0.02	0.048	<0.04	<0.1	<0.1	<0.1	<0.01	<0.02	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	
MKTf-23	06/10/16	8260B	1.5	0.52	<0.01	<0.01	0.28	0.14	0.19	<0.1	<0.1	<0.1	<0.01	<0.02	<0.01	0.034	<0.01	0.096	0.056	0.056	
	02/25/16	8260B	1.3	0.35	0.0053		0.24	0.085	0.11	0.042						0.036		0.11	0.058	0.049	
	11/09/15	8260B	1.4	0.38	<0.02		0.39	0.14	0.21	<0.2	<0.2	<0.2	<0.01	<0.02		0.049		0.11	0.049	0.049	
	08/21/15	8260B	0.92	0.24	<0.02		0.16	<0.08	<0.08	<0.2	<0.2	<0.2	<0.01	<0.02		0.045		0.13	0.054	0.054	
	06/09/15	8260B	1.1	0.28	<0.01		0.22	0.079	0.12	<0.1	<0.1	<0.1	<0.01	<0.02		0.042		0.13	0.062	0.062	
	03/12/15	8260B	1.4	0.38	<0.01		0.3	0.097	0.14	<0.1	<0.1	<0.1	<0.01	<0.02		0.055		0.12	0.053	0.053	
	11/17/14	8260B	0.89	0.22	<0.01		0.15	0.074	0.11	<0.1	<0.1	<0.1	<0.01	<0.02		0.043		0.15	0.064	0.064	
	09/23/14	8260B	0.54	0.15	<0.01		0.1	<0.04	0.041	<0.1	<0.1	<0.1	<0.01	<0.02		0.029		0.092	0.047	0.047	
	MKTf-24	11/20/17	8260B	0.0039	0.0022	0.0056	<0.01	0.0057	0.0081	<0.04	0.016	<0.03	<0.1	<0.01	<0.02	<0.01	<0.03	0.019	<0.01	0.072	0.024
		10/03/17	8260B	<0.02	<0.02	0.0099	<0.02	<0.04	<0.08	<0.08	<0.2	<0.06	<0.2	<0.02	<0.04	<0.02	<0.06	0.018	<0.02	0.072	0.035
		06/05/17	8260B/8011/504.1/EDB	0.0042	0.0026	<0.02	<0.02	0.0094	0.011	<0.08	<0.2	<0.06	<0.2	<0.02	<0.04	<0.02	<0.06	0.029	<0.02	0.088	0.039
		03/29/17	8260B	<0.02	<0.02	0.01	<0.02	<0.04	<0.08	<0.08	<0.2	<0.06	<0.2	<0.02	<0.04	<0.02	<0.06	0.022	<0.02	0.079	0.035
		10/28/16	8260B	0.01	<0.02	0.0079	<0.02	<0.04	0.0052	<0.08	<0.2	<0.06	<0.2	<0.02	<0.04	<0.02	<0.06	0.035		0.088	0.045
		09/07/16	8260B/8011/504.1/EDB	0.0093	<0.02	<0.02	0.031	<0.04	0.0093	<0.08	<0.2	<0.06	<0.2	<0.02	<0.04	<0.02	<0.06	0.027	0.094	0.042	0.042
06/08/16		8260B	0.0032	0.00075	<0.005	<0.005	0.004	0.0038	<0.02	0.044	<0.02	0.012	<0.02	<0.04	<0.02	<0.06	0.028	0.092	0.046	0.046	
02/22/16		8260B	0.0072	<0.02	0.0081	<0.02	0.014	0.011	<0.08	<0.2	<0.06	<0.2	<0.02	<0.04	<0.02	<0.06	0.032	0.093	0.051	0.051	
11/04/15		8260B	<0.02	<0.02	<0.02	<0.02	<0.04	<0.08	<0.08	<0.2	<0.06	<0.2	<0.02	<0.04	<0.02	<0.06	0.034	0.12	0.046	0.046	
08/20/15		8260B	<0.02	<0.02	<0.02	<0.02	<0.04	<0.08	<0.08	<0.2	<0.06	<0.2	<0.02	<0.04	<0.02	<0.06	0.028	0.11	0.049	0.049	
06/10/15		8260B	<0.005	<0.005	0.0083		<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.02	<0.04	<0.02	<0.06	0.036	0.12	0.058	0.058	
03/11/15		8260B	<0.005	<0.005	0.007		<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.02	<0.04	<0.02	<0.06	0.035	0.1	0.051	0.051	
11/14/14		8260B	0.0027	<0.001	0.0096		<0.002	0.0046	<0.004	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.03	0.039	0.15	0.058	0.058	

Table 1
Groundwater Analyses Summary

PARAMETERS																	
STANDARDS																	
Well ID																	
DATE SAMPLED																	
METHOD																	
1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2-Dibro moethane (EDB) (mg/L)	Naphtha-lene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Bromo methane (mg/L)	2-Butanone (Methyl ethyl ketone) (mg/L)	Chloro benzene (mg/L)	Chloroethane (mg/L)	Chloro-form (mg/L)	Chloro-methane (mg/L)	cis-1,2-DCE (mg/L)	1,4-Dichloro benzene (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)
NE	NE	0.01	0.0001	NE	NE	NE	NE	NE	NE	NE	NE	0.1	NE	0.005	NE	0.025	0.005
NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	NE	NE	NE	0.08	NE	0.07	0.075	NE	0.007
NE	NE	0.0017	0.0000747	0.00165	0.114	0.035	14.1	0.00754	5.56	0.0776	20.9	0.00229	0.0203	0.0365	0.00482	0.0275	0.284
0.056	0.06	0.00017	0.0000075	0.00017	0.0011	0.036	14	0.0075	5.6	0.078	21	0.00022	0.19	NE	0.00048	0.0028	0.28
MKTF-31	11/21/17	0.022	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	0.0016	<0.001	0.035	0.067
	09/25/17	0.025	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.00052	<0.003	0.0017	<0.001	0.041	0.08
	06/05/17	0.022	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.00047	<0.003	0.0017	<0.001	0.036	0.07
	03/07/17	0.02	<0.001	<0.002	<0.004	<0.004	0.0026	<0.003	<0.01	<0.001	<0.002	0.00045	<0.003	0.0018	<0.001	0.035	0.07
	10/31/16	0.021	0.0035	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.00041	0.0016	0.0016	<0.001	0.031	0.057
	09/08/16	0.024	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.00029	0.0014	0.0014	0.033	0.069	
	06/09/16	0.022	0.0000067	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	0.002	0.002	0.037	0.066	
	02/23/16	0.023	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.0004	0.0016	0.0016	0.034	0.057	
	11/04/15	0.022	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.0021	0.0021	0.0021	0.033	0.057	
	08/21/15	0.018	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.0017	0.0017	0.0017	0.028	0.047	
	06/10/15	0.018	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	0.0017	0.0017	0.029	0.053	
	03/11/15	0.014	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.0016	0.0016	0.0016	0.021	0.04	
	03/11/15	0.014	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.0016	0.0016	0.0016	0.021	0.04	
	11/17/14	0.016	<0.002	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.0018	0.0018	0.0018	0.029	0.034	
	09/23/14	0.013	<0.002	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.0018	0.0018	0.0018	0.022	0.041	
	04/08/14	0.021	<0.002	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.0016	0.0016	0.0016	0.028	0.059	
MKTF-32	11/27/17	0.016	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	0.0016	<0.001	0.014	0.023
	09/25/17	0.017	<0.001	0.00098	0.0013	0.0013	0.0049	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	0.0017	<0.001	0.016	0.029
	06/06/17	0.019	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	0.002	<0.001	0.019	0.038
	03/07/17	0.018	<0.001	<0.002	<0.004	<0.004	0.0024	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	0.0019	<0.001	0.018	0.035
	10/31/16	0.02	<0.01	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	0.0016	<0.001	0.015	0.03
	09/09/16	0.017	<0.01	<0.004	<0.008	<0.008	<0.02	<0.003	<0.02	<0.002	<0.006	<0.006	<0.006	0.0015	<0.001	0.012	0.026
	06/09/16	0.026	<0.01	<0.004	<0.008	<0.008	<0.02	<0.003	<0.02	<0.002	<0.006	<0.006	<0.006	0.0021	<0.001	0.023	0.046
	02/24/16	0.019	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.002	<0.003	<0.003	<0.003	0.0016	<0.001	0.017	0.028
	11/05/15	0.027	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.002	<0.006	<0.006	<0.006	0.002	<0.001	0.021	0.039
	08/21/15	0.022	<0.002	<0.004	<0.008	<0.008	<0.02	<0.003	<0.02	<0.002	<0.006	<0.006	<0.006	<0.02	<0.001	0.019	0.038
	06/09/15	0.022	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.001	0.0015	<0.001	0.018	0.036
	03/12/15	0.025	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.001	0.0013	<0.001	0.019	0.048
	11/17/14	0.028	<0.002	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	0.013 ¹	0.013 ¹	0.0012	<0.001	0.024	0.041
	09/23/14	0.029	<0.005	<0.01	<0.02	<0.02	<0.05	<0.003	<0.05	<0.001	<0.002	<0.005	<0.005	<0.005	<0.005	0.023	0.054
	04/09/14	0.03	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.022	0.036
MKTF-33	11/28/17	<0.001	<0.001	<0.002	<0.004	<0.004	0.0027	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001
	09/25/17	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001
	06/08/17	<0.001	<0.001	<0.002	<0.004	<0.004	0.0037	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001
	03/08/17	<0.001	<0.001	<0.002	<0.004	<0.004	0.0016	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001
	11/01/16	0.00034	<0.001	0.00073	0.00069	0.00076	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	09/10/16	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/10/16	0.00018	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.001	<0.001	0.00014	<0.001	<0.001
	02/25/16	<0.001	0.0002	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.001	<0.001	0.00037	<0.001	<0.001
	11/09/15	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	08/21/15	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.01	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.	

Table 1
Groundwater Analyses Summary

PARAMETERS																			
STANDARDS		1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	1,2-Dibro moethane (EDB) (mg/L)	Naphtha-lene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Bromo methane (mg/L)	(Methyl ethyl ketone) 2-Butanone (mg/L)	Chloro benzene (mg/L)	Chloroethane (mg/L)	Chloro-form (mg/L)	Chloro-methane (mg/L)	cis-1,2-DCE (mg/L)	1,4-Dichloro benzene (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)
WQCC 20NMAC 6.2.3103		NE	NE	0.01	0.0001	NE	NE	NE	NE	NE	NE	NE	NE	0.1	NE	0.005	NE	0.025	0.005
40 CFR 141.62 MCL		NE	NE	0.005	0.00005	NE	NE	NE	NE	NE	NE	NE	NE	0.08	NE	0.07	0.075	NE	0.007
NMED Tap Water (MARCH 2017)		NE	NE	0.0017	0.0000747	0.00165	0.114	0.035	14.1	0.00754	5.56	0.0776	20.9	0.00229	0.0203	0.0365	0.00482	0.0275	0.284
EPA RSL for Tap Water (MAY 2018)		0.056	0.06	0.00017	0.0000075	0.00017	0.0011	0.036	14	0.0075	5.6	0.078	21	0.00022	0.19	NE	0.00048	0.0028	0.28
Well ID	DATE SAMPLED	METHOD																	
MKTf-41	11/27/17	8260B	<0.001	<0.001	0.0028	<0.001	<0.002	<0.004	0.0017	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	0.0034	0.0053
	09/25/17	8260B	<0.001	<0.001	0.0027	<0.001	0.0003	0.00039	0.0034	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	0.0034	0.0043
	06/06/17	8260B/8011/504.1/EDB	<0.001	<0.001	0.0027	<0.001	<0.002	<0.004	<0.004	0.0039	<0.003	<0.001	<0.002	<0.002	<0.003	<0.001	<0.001	0.0034	0.0048
	03/07/17	8260B	<0.001	<0.001	0.0026	<0.001	<0.002	<0.004	<0.004	0.001	<0.003	<0.001	<0.002	<0.002	<0.003	<0.001	<0.001	0.0036	0.0053
	10/31/16	8260B	<0.001	<0.001	0.0024	<0.01	<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	0.00014		<0.001		0.0027	0.0034
	09/09/16	8260B/8011/504.1/EDB	<0.001	<0.001	0.0024	<0.01	<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	0.0026	0.0041
	06/09/16	8260B	<0.001	<0.001	0.0022	<0.00001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	0.0031	0.0038
	02/24/16	8260B	<0.001	<0.001	0.0019	<0.001	<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	0.0018	0.0021
	11/05/15	8260B	<0.001	<0.001	0.0023		<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	0.0017	0.0019
	08/21/15	8260B	<0.001	<0.001	0.0013		<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	0.0018	0.0021
06/09/15	8260B	<0.001	<0.001	0.0013		<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	0.0017	0.0019	
03/12/15	8260B	<0.001	<0.001	0.0013		<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	0.0018	0.0016	
11/18/14	8260B	<0.001	<0.001	0.002		<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	0.0036	0.0038	
MKTf-42	11/27/17	8260B	0.011	0.0052	0.0013	<0.001	0.037	0.016	0.014	<0.003	0.0071	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	0.00023
	09/25/17	8260B	0.018	0.0065	0.0017	<0.001	0.062	0.035	0.037	<0.003	0.01	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	0.00019
	06/06/17	8260B	0.0047	0.0024	0.0015	<0.001	0.016	0.016	0.0052	<0.003	0.0099	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001
	03/07/17	8260B	0.004	0.0034	0.0013	<0.001	0.024	0.019	0.0073	<0.003	0.009	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001
	10/31/16	8260B	0.0083	0.005	0.0011		0.032	0.028	0.013	<0.003	<0.01	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	09/09/16	8260B	0.0066	0.0029	0.00098	<0.001	0.026	0.013	0.0083	<0.003	0.0083	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/09/16	8260B	<0.001	<0.001	<0.001	0.00012	<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	02/24/16	8260B	0.0066	0.0038	0.00079	<0.001	0.028	0.016	0.011	0.023	0.0016	0.0056	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	11/05/15	8260B	0.0083	0.005	0.0011		0.032	0.028	0.013	0.014	<0.01	<0.01	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	08/21/15	8260B	0.006	0.0041	<0.001		0.021	0.016	0.0079	0.014	<0.01	<0.01	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
06/09/15	8260B	0.0034	0.0028	<0.001		0.009	0.0075	0.0042	<0.01	<0.01	<0.01	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
03/11/15	8260B	0.0039	0.0026	<0.001		0.014	0.0075	0.0061	0.01	<0.01	<0.01	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
11/18/14	8260B	0.027	<0.01	<0.01		0.035	0.073	0.058	<0.1	<0.1	<0.1	<0.002	<0.002	<0.001	<0.001	<0.001	<0.01	<0.01	
MKTf-43	11/27/17	8260B	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	0.0036	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001
	09/25/17	8260B	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	0.0091	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001
	06/06/17	8260B	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	0.0054	<0.003	<0.01	<0.001	<0.002	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001
	03/08/17	8260B	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	0.0037	<0.003	<0.01	<0.001	<0.002	0.00016	<0.003	<0.001	<0.001	<0.001	<0.001
	10/31/16	8260B	0.0053	0.0027	0.0011	<0.001	0.024	0.0072	0.03		0.01	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	09/09/16	8260B	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.01		<0.01	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/09/16	8260B	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	<0.01		<0.01	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	02/24/16	8260B	<0.001	<0.001	<0.001	<0.001	<0.002	<0.004	0.0023		<0.01	<0.001	<0.002	0.00018	<0.001	<0.001	<0.001	<0.001	<0.001
	11/05/15	8260B	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	08/21/15	8260B	<0.001	<0.001	<0.001		<0.002	0.0059	<0.004	<0.01	<0.003	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
06/10/15	8260B	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
03/11/15	8260B	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
11/18/14	8260B	<0.001	<0.001	<0.001		<0.002	<0.004	<0.004	<0.01	<0.003	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	

Table 1
Groundwater Analyses Summary

PARAMETERS													
STANDARDS													
WQCC 20NMAC 6.2.3103													
40 CFR 141.62 MCL													
NMED Tap Water (MARCH 2017)													
EPA RSL for Tap Water (MAY 2018)													
Well ID	DATE SAMPLED	METHOD											
MKTf-44	11/28/17	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	0.0021	<0.003	<0.001	<0.003	<0.001
	09/25/17	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	0.0026	<0.001	<0.001	<0.003	<0.001
	06/05/17	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	0.0038	<0.001	<0.001	<0.003	<0.001
	03/08/17	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	0.0017	<0.001	<0.001	<0.003	<0.001
	11/01/16	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.01	<0.001	<0.001
	09/09/16	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.01	<0.001	<0.001
	06/09/16	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.01	<0.001	<0.001
	02/24/16	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.01	<0.001	<0.001
	11/09/15	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.01	<0.001	<0.001
	08/17/15	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.01	<0.001	<0.001
	06/10/15	8260B	<0.002	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	<0.02	<0.002	<0.002
	03/12/15	8260B	<0.002	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	<0.02	<0.002	<0.002
	11/21/14	8260B	<0.002	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	<0.02	<0.002	<0.002

DEFINITIONS

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

STANDARDS

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

NOTES

Table 1
Groundwater Analyses Summary

PARAMETERS																		
1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4-Isopropyl toluene (mg/L)	4-Methyl-2-pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4-Trichloroben zene (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)		
STANDARDS																		
WQCC 20NMAC 6.2.3103		NE	NE	NE	0.1	NE	NE	NE	NE	NE	0.02	NE	0.06	0.01	NE	0.001		
40 CFR 141.62 MCL		0.005	NE	NE	0.005	NE	NE	NE	0.1	NE	0.005	0.07	0.2	0.005	0.005	0.002		
NMED Tap Water (MARCH 2017)		0.00438	NE	1.24	0.106	NE	NE	NE	1.21	NE	0.0403	0.00398	8	0.000415	0.00259	0.00030		
EPA RSL for Tap Water (MAY 2018)		0.00085	0.038	NE	0.011	1	0.66	2	1.2	0.69	0.011	0.0012	8	0.00028	0.00049	0.000019		
Well ID	DATE SAMPLED																	
	06/05/14		0.029	<0.005		<0.015	0.068	0.0078			<0.005		0.014	<0.005	<0.005	0.018		
	04/11/14		<0.05	<0.05		<0.15	0.097	<0.05			<0.05		<0.05	<0.05	<0.05	<0.05		

Table 1
Groundwater Analyses Summary

PARAMETERS																
1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4- Isopropyl toluene (mg/L)	4-Methyl-2- pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4- Trichloroben zene (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)
STANDARDS																
WQCC 20NMAC 6.2.3103																
40 CFR 141.62 MCL																
NMED Tap Water (MARCH 2017)																
EPA RSL for Tap Water (MAY 2018)																
Well ID	DATE SAMPLED	METHOD														
MKTF-13	03/15/17	8260B														
MKTF-15	11/28/17	8260B	<1	<1	<0.3	0.031	0.17	0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.018
	06/08/17	8260B	<1	<1	<0.3	0.023	0.19	0.027	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	03/02/17	8260B	<1	<1	<0.3	<0.3	0.16	0.039	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.045
	11/02/16	8260B	0.12	0.017	0.06	0.019	0.15	0.023			<0.05		<0.05	<0.05	<0.05	0.024
	09/11/16	8260B	0.12	<0.05	0.083	<0.15	0.14	0.0078			<0.05		<0.05	<0.05	<0.05	<0.05
	09/17/14	8260B	0.068	<0.05		<0.15	0.14	<0.05			<0.05		<0.05	<0.05	<0.05	<0.05
	06/05/14	8260B	0.059	0.0059		<0.015	0.097	0.012			<0.005		<0.005	<0.005	<0.005	<0.005
	04/10/14	8260B	0.053	<0.01		<0.03	0.094	0.012			<0.01		<0.01	<0.01	<0.01	<0.01
MKTF-16	11/29/17	8260B	<1	<1	<0.3	<0.3	0.067	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	09/26/17	8260B	<1	<1	<0.3	<0.3	0.088	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	06/08/17	8260B	<1	<1	<0.3	<0.3	0.031	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	03/14/17	8260B	<1	<1	<0.3	<0.3	0.086	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	11/03/16	8260B	0.015	<0.1		<0.3	0.052	<0.1			<0.1		<0.1	<0.1	<0.1	<0.1
	09/12/16	8260B	0.019	<0.1		<0.3	0.082	<0.1			<0.1		<0.1	<0.1	<0.1	<0.1
	06/09/16	8260B	0.022	0.005		0.016	0.067	0.0059			<0.02		<0.02	<0.02	<0.02	<0.02
	02/29/16	8260B	<0.1	<0.1		<0.3	0.059	<0.1			<0.1		<0.1	<0.1	<0.1	<0.1
	11/03/15	8260B	<0.05	<0.05		<0.15	0.092	<0.05			<0.05		<0.05	<0.05	<0.05	<0.05
	08/23/15	8260B	<0.1	<0.1		<0.3	0.11	<0.1			<0.1		<0.1	<0.1	<0.1	<0.1
	06/08/15	8260B	<0.05	<0.05		<0.15	0.084	<0.05			<0.05		<0.05	<0.05	<0.05	<0.05
	03/16/15	8260B	<0.05	<0.05		<0.15	0.11	<0.05			<0.05		<0.05	<0.05	<0.05	<0.05
	11/18/14	8260B	<0.05	<0.05		<0.15	0.09	<0.05			<0.05		<0.05	<0.05	<0.05	<0.05
	09/17/14	8260B	<0.05	<0.05		<0.15	0.12	<0.05			<0.05		<0.05	<0.02	<0.05	<0.05
06/05/14	8260B	<0.05	<0.05		<0.15	0.15	<0.05			<0.05		<0.05	<0.05	<0.05	<0.05	
04/10/14	8260B	0.053	<0.02		<0.06	0.099	<0.02			<0.02		<0.02	<0.02	<0.02	<0.02	
MKTF-17	12/01/17	8260B	<0.005	<0.05	<0.015	0.0016	0.016	0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	09/26/17	8260B	<0.005	<0.05	<0.015	0.0049	0.11	0.0087	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	06/14/17	8260B	<0.005	<0.05	<0.015	0.0035	0.077	0.0059	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	03/15/17	8260B	<0.01	<0.1	<0.03	0.0018	0.016	0.0022	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	11/08/16	8260B	0.02	0.0023		0.0027	0.032	0.0035	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
	09/13/16	8260B	0.033	0.0034		0.0039	0.05	0.0054	0.0031		<0.01		<0.01	<0.01	<0.01	<0.01
	06/10/16	8260B	0.023	0.002		0.0016	0.043	0.0029			<0.001		<0.001	<0.001	<0.001	<0.001
	02/26/16	8260B	<0.005	0.001		<0.015	<0.005	<0.005			<0.005		<0.005	<0.005	<0.005	<0.005
	11/03/15	8260B	0.022	0.0024		<0.006	0.041	0.005			<0.002		<0.002	<0.002	<0.002	<0.002
	08/18/15	8260B	0.019	0.0019		<0.003	0.034	0.0026			<0.001		<0.001	<0.001	<0.001	<0.001
	06/08/15	8260B	0.0011	<0.001		<0.003	0.0014	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	03/12/15	8260B	<0.001	0.0012		<0.003	<0.001	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	11/18/14	8260B	0.0091	0.003		<0.003	0.013	0.0021			<0.001		<0.001	<0.001	<0.001	<0.001
	09/18/14	8260B	0.029	<0.01		<0.03	0.066	<0.01			<0.01		<0.01	<0.01	<0.01	<0.01
06/06/14	8260B	0.03	<0.01		<0.03	0.06	<0.01			<0.01		<0.01	<0.01	<0.01	<0.01	
04/09/14	8260B	0.037	<0.01		<0.03	0.096	0.01			<0.01		<0.01	<0.01	<0.01	<0.01	

Table 1
Groundwater Analyses Summary

PARAMETERS																
1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4- Isopropyl toluene (mg/L)	4-Methyl-2- pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4- Trichloroben zene (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)
STANDARDS																
WQCC 20NMAC 6.2.3103																
40 CFR 141.62 MCL																
NMED Tap Water (MARCH 2017)																
EPA RSL for Tap Water (MAY 2018)																
Well ID	DATE SAMPLED	METHOD														
MKTf-21	11/28/17	8260B	<0.05	<0.5	<0.15	<0.15	0.029	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	09/26/17	8260B	<0.05	<0.5	<0.15	<0.15	0.033	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	06/21/17	8260B	<0.05	<0.5	<0.15	<0.15	0.031	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	03/14/17	8260B	<0.05	<0.5	<0.15	<0.15	0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	11/03/16	8260B	<0.5	0.0085	<0.15	<0.15	0.019	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	09/12/16	8260B	<0.5	0.0082	<0.15	<0.15	0.021	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	06/09/16	8260B	<0.1	0.0074	<0.15	0.0066	0.013	0.0016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	03/01/16	8260B	0.026	0.0027	<0.01	0.0017	0.0069	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	06/10/15	8260B	<0.01	<0.01	<0.01	<0.03	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	03/16/15	8260B	<0.01	<0.01	<0.03	<0.03	0.016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	04/11/14	8260B	0.1	<0.05	<0.15	<0.15	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MKTf-22	11/28/17	8260B	<0.01	<0.1	<0.03	<0.03	0.011	0.023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10/03/17	8260B	<0.01	<0.1	0.0033	0.013	0.042	0.0066	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	06/08/17	8260B	<0.01	<0.1	<0.03	0.0051	0.013	0.0027	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	03/08/17	8260B	<0.01	<0.1	<0.03	0.015	0.05	0.0076	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	11/01/16	8260B	0.018	0.0041	0.013	0.013	0.044	0.0078	0.0021		<0.01	0.003	<0.01	<0.01	<0.01	<0.01
	09/10/16	8260B	0.018	<0.02	0.0085	0.085	0.043	0.0042			<0.02		<0.02	<0.02	<0.02	<0.02
	06/10/16	8260B	0.021	0.0038	0.014	0.014	0.051	0.0074			<0.01		<0.01	<0.01	<0.01	<0.01
	02/25/16	8260B	0.02	0.0037	0.013	0.013	0.05	0.0071			<0.02		<0.02	<0.02	<0.02	<0.02
	11/09/15	8260B	<0.02	<0.02	<0.06	<0.06	0.032	<0.02			<0.02		<0.02	<0.02	<0.02	<0.02
	08/20/15	8260B	<0.02	<0.02	<0.06	<0.06	<0.02	<0.02			<0.02		<0.02	<0.02	<0.02	<0.02
	06/09/15	8260B	<0.02	<0.02	<0.06	<0.06	0.033	<0.02			<0.02		<0.02	<0.02	<0.02	<0.02
	03/12/15	8260B	<0.02	<0.02	<0.06	<0.06	0.031	<0.02			<0.02		<0.02	<0.02	<0.02	<0.02
	11/17/14	8260B	<0.01	<0.01	<0.03	0.013	0.013	<0.01			<0.01		<0.01	<0.01	<0.01	<0.01
	04/10/14	8260B	0.015	<0.01	<0.03	0.033	0.033	<0.01			<0.01		<0.01	<0.01	<0.01	<0.01
MKTf-23	06/10/16	8260B	0.033	0.02	0.074	0.065	0.022	0.022			0.0015		0.016	<0.01	0.0043	<0.01
	02/25/16	8260B	0.029	0.0097	0.017	0.048	0.01	0.01			<0.02		0.014	<0.02	<0.02	<0.02
	11/09/15	8260B	0.048	<0.02	<0.06	0.092	<0.02	<0.02			<0.02		0.027	<0.02	<0.02	<0.02
	08/21/15	8260B	0.029	<0.02	<0.06	0.054	<0.02	<0.02			<0.02		0.031	<0.02	<0.02	<0.02
	06/09/15	8260B	0.41	<0.01	<0.03	0.073	0.01	0.01			<0.01		0.034	<0.01	<0.01	<0.01
MKTf-23	03/12/15	8260B	0.044	<0.01	<0.03	0.093	0.01	0.01			<0.01		0.049	<0.01	<0.01	<0.01
	11/17/14	8260B	0.034	<0.01	<0.03	0.066	<0.01	<0.01			<0.01		0.024	<0.01	<0.01	0.022
	09/23/14	8260B	0.026	<0.01	<0.03	0.058	<0.01	<0.01			<0.01		0.024	<0.01	<0.01	<0.01
	11/20/17	8260B	0.042	0.0015	<0.03	0.014	0.091	0.0079	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.031
	10/03/17	8260B	0.019	<0.02	<0.06	0.0046	0.034	0.0031	<0.02	<0.02	<0.02	<0.02	0.0043	<0.02	<0.02	0.018
MKTf-24	06/05/17	8260B/8011/504.1/EDB	<0.02	<0.2	<0.06	0.015	0.089	0.0088	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.027
	03/29/17	8260B	<0.02	<0.2	<0.06	<0.06	0.018	0.0069	<0.02	<0.02	<0.02	<0.02	0.0031	<0.02	<0.02	0.016
	10/28/16	8260B	0.039	<0.02	0.017	0.093	0.012	0.012			<0.02		<0.02	<0.02	<0.02	<0.02
	09/07/16	8260B/8011/504.1/EDB	0.035	<0.02	0.015	0.065	0.011	0.0032			<0.02		0.0035	<0.02	<0.02	<0.02
	06/08/16	8260B	0.013	<0.005	0.0042	0.022	0.0032	0.0005			<0.005		0.0036	0.0014	0.0043	0.0049
	02/22/16	8260B	0.037	<0.02	0.014	0.094	<0.02	<0.02			<0.02		<0.02	<0.02	<0.02	<0.02
	11/04/15	8260B	<0.02	<0.02	<0.06	0.033	<0.02	<0.02			<0.02		<0.02	<0.02	<0.02	<0.02
	08/20/15	8260B	<0.02	<0.02	<0.06	0.028	<0.02	<0.02			<0.02		<0.02	<0.02	<0.02	<0.02
	06/10/15	8260B	0.011	<0.005	<0.015	0.016	<0.005	<0.005			<0.005		0.011	<0.005	<0.005	<0.005
	03/11/15	8260B	0.016	<0.005	<0.015	0.024	<0.005	<0.005			<0.005		0.01	<0.005	<0.005	<0.005
	11/14/14	8260B	0.018	<0.001	0.0058	0.028	0.028	0.004			<0.001		0.0046	0.0011	0.0049	0.014

Table 1
Groundwater Analyses Summary

PARAMETERS																		
1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4-Isopropyl toluene (mg/L)	4-Methyl-2-pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4-Trichloroben zene (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)		
STANDARDS																		
WQCC 20NMAC 6.2.3103		NE	NE	NE	0.1	NE	NE	NE	NE	NE	0.02	NE	0.06	0.01	NE	0.001		
40 CFR 141.62 MCL		0.005	NE	NE	0.005	NE	NE	NE	0.1	NE	0.005	0.07	0.2	0.005	0.005	0.002		
NMED Tap Water (MARCH 2017)		0.00438	NE	1.24	0.106	NE	NE	NE	1.21	NE	0.0403	0.00398	8	0.000415	0.00259	0.00030		
EPA RSL for Tap Water (MAY 2018)		0.00085	0.038	NE	0.011	1	0.66	2	1.2	0.69	0.011	0.0012	8	0.00028	0.00049	0.000019		
Well ID	DATE SAMPLED	METHOD																
	09/24/14		0.024	<0.002		0.0087	0.039	0.0065			<0.002		<0.002	<0.002	0.005	<0.003		
	04/08/14		0.02	<0.001		0.0091	0.038	0.005			0.0019		0.021	0.0014	0.0052	<0.001		

Table 1
Groundwater Analyses Summary

PARAMETERS																
1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4- Isopropyl toluene (mg/L)	4-Methyl-2- pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4- Trichloroben zene (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)
NE	NE	NE	NE	NE	0.1	NE	NE	NE	NE	NE	0.02	NE	0.06	0.01	NE	0.001
0.005	NE	NE	NE	NE	0.005	NE	NE	NE	0.1	NE	0.005	0.07	0.2	0.005	0.005	0.002
0.00438	NE	0.447	NE	1.24	0.106	NE	NE	NE	1.21	NE	0.0403	0.00398	8	0.000415	0.00259	0.00030
0.00085	0.038	NE	NE	6.3	0.011	1	0.66	2	1.2	0.69	0.011	0.0012	8	0.00028	0.00049	0.000019
MKTF-25	11/21/17	8260B	<0.005	0.00053	<0.05	<0.015	0.014	0.057	<0.005	<0.005	0.0019	<0.005	0.016	0.0012	0.021	0.0032
	09/25/17	8260B	<0.001	0.00089	<0.01	<0.003	0.015	0.057	0.00017	0.00012	0.0023	<0.001	0.02	0.0012	0.027	0.0031
	06/05/17	8260B/8011/504.1/EDB	<0.005	<0.005	<0.05	<0.015	0.0083	0.019	<0.005	<0.005	0.00076	<0.005	0.017	0.0013	0.019	0.00096
	03/29/17	8260B	<0.005	<0.005	<0.05	<0.015	0.011	0.025	<0.005	<0.005	0.00084	<0.005	0.021	0.0013	0.017	0.0027
	11/01/16	8260B		<0.005			0.008	0.028			0.0027		0.014	<0.01	0.018	<0.01
	09/09/16	8260B/8011/504.1/EDB		<0.01			0.009	0.032			0.0021		0.0059	<0.01	0.011	0.0059
	06/09/16	8260B		0.0024			0.029	0.086			0.006		0.064	<0.01	0.064	0.0066
	02/23/16	8260B		<0.005			0.016	0.055			0.0023		0.046	0.0014	0.029	0.0034
	11/05/15	8260B		<0.005			0.016	0.044			<0.005		0.045	<0.005	0.036	<0.005
	08/21/15	8260B		<0.005			<0.015	0.057			<0.005		0.061	<0.005	0.037	<0.005
	06/10/15	8260B		<0.005			<0.015	0.042			<0.005		0.05	<0.005	0.029	<0.005
	03/11/15	8260B		<0.005			0.016	0.051			<0.005		0.053	<0.005	0.031	<0.005
	11/14/14	8260B		<0.005			<0.015	0.037			<0.005		0.023	<0.005	0.027	0.046
	09/23/14	8260B		<0.01			<0.03	0.041			<0.01		0.03	<0.01	0.024	<0.01
	04/08/14	8260B		<0.002			0.014	0.039			0.0033		0.076	<0.002	0.03	<0.002
MKTF-26	06/09/16	8260B	0.0022	<0.005	<0.015	<0.015	0.0015	<0.005			<0.005		0.0012	0.0015	0.0031	0.0086
	02/22/16	8260B	0.0012	<0.005	0.0011	0.0011	<0.015	<0.005			<0.005		<0.005	0.0013	0.0023	0.0071
	11/04/15	8260B	<0.005	<0.005			<0.015	<0.005			<0.005		<0.005	<0.005	<0.005	0.0076
	08/20/15	8260B	<0.005	<0.005			<0.015	<0.005			<0.005		<0.005	<0.005	<0.005	0.0063
	06/10/15	8260B	<0.005	<0.005			<0.015	<0.005			<0.005		<0.005	<0.005	<0.005	0.0068
	03/11/15	8260B	<0.005	<0.005			<0.015	<0.005			<0.005		<0.005	<0.005	<0.005	<0.005
	11/14/14	8260B	<0.005	<0.005			<0.015	<0.005			<0.005		<0.005	<0.005	<0.005	0.017
	09/24/14	8260B	0.0073	<0.001	<0.003	<0.003	0.005	<0.005			<0.001		0.0025	0.0011	0.0017	<0.001
	04/08/14	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001			<0.001		0.0017	0.0014	0.0029	<0.001
MKTF-27	11/20/17	8260B	<0.0014	<0.001	<0.01	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	10/03/17	8260B	<0.001	<0.001	<0.01	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/05/17	8260B	<0.001	<0.001	<0.01	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	03/29/17	8260B	<0.001	<0.001	<0.01	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	10/28/16	8260B	0.00024	<0.001			<0.003	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	09/07/16	8260B	0.00041	<0.001			<0.003	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	06/08/16	8260B	<0.001	<0.001			<0.003	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	02/22/16	8260B	0.00019	<0.001			<0.003	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	11/04/15	8260B		<0.001			<0.003	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	08/20/15	8260B		<0.001			<0.003	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	06/09/15	8260B		<0.001			<0.003	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	03/11/15	8260B		<0.001			<0.003	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	11/14/14	8260B		<0.001			<0.003	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	09/24/14	8260B		<0.001			<0.003	<0.001			<0.001		<0.001	<0.001	<0.001	<0.001
	04/08/14	8260B		<0.002			<0.006	<0.002			<0.001		<0.002	<0.002	<0.002	<0.001

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PARAMETERS																
1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4- Isopropyl toluene (mg/L)	4-Methyl-2- pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4- Trichloroben zene (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)
NE	NE	NE	NE	NE	0.1	NE	NE	NE	NE	NE	0.02	NE	0.06	0.01	NE	0.001
0.005	NE	NE	NE	NE	0.005	NE	NE	NE	0.1	NE	0.005	0.07	0.2	0.005	0.005	0.002
0.00438	NE	0.447	NE	1.24	0.106	NE	NE	NE	1.21	NE	0.0403	0.00398	8	0.000415	0.00259	0.00030
0.00085	0.038	NE	NE	6.3	0.011	1	0.66	2	1.2	0.69	0.011	0.0012	8	0.00028	0.00049	0.000019
MKTF-31	11/21/17	8260B	<0.01	<0.01	0.00029	0.00017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0046	0.0024	0.0041	0.00029
	09/25/17	8260B	<0.01	<0.01	<0.003	0.00035	<0.001	0.00054	<0.001	<0.001	<0.001	<0.001	0.0053	0.0027	0.0048	<0.001
	06/05/17	8260B	<0.01	<0.01	<0.003	0.00024	<0.001	0.00036	<0.001	<0.001	<0.001	<0.001	0.0051	0.0023	0.0043	<0.001
	03/07/17	8260B	<0.01	<0.01	<0.003	0.00027	<0.001	0.00035	<0.001	<0.001	<0.001	<0.001	0.0047	0.0022	0.0041	<0.001
	10/31/16	8260B	0.00071	<0.001	0.00032	0.00032	<0.001	0.00037	<0.001	<0.001	<0.001	<0.001	0.0048	0.0022	0.0037	<0.001
	09/08/16	8260B	0.0016	<0.001	<0.003	<0.003	<0.001	0.00066	<0.001	<0.001	<0.001	<0.001	0.0056	0.0024	0.0038	<0.001
	06/09/16	8260B	0.00094	<0.001	0.00026	0.00042	<0.001	0.00042	<0.001	<0.001	<0.001	<0.001	0.0055	0.0024	0.004	<0.001
	02/23/16	8260B	0.00084	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0056	0.0024	0.0036	0.00026
	11/04/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.005	0.0021	0.0035	<0.001
	08/21/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0048	0.0017	0.0032	<0.001
	06/10/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0049	0.0016	0.0031	<0.001
	03/11/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0039	0.0015	0.0025	<0.001
	11/17/14	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0039	0.0016	0.0024	0.0019
	09/23/14	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0037	0.0016	0.0024	<0.001
	04/08/14	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0058	0.0018	0.003	<0.001
MKTF-32	11/27/17	8260B	<0.01	<0.01	<0.003	<0.003	<0.001	0.00066	<0.001	<0.001	<0.001	<0.001	0.00029	0.0012	0.00019	<0.001
	09/25/17	8260B	<0.01	<0.01	<0.003	<0.003	<0.001	0.00079	<0.001	<0.001	<0.001	<0.001	0.00047	0.0014	0.0003	<0.001
	06/06/17	8260B/8011/504.1/EDB	<0.01	<0.01	<0.003	<0.003	<0.001	0.00063	<0.001	<0.001	<0.001	<0.001	0.00057	0.0014	0.00026	<0.001
	03/07/17	8260B	<0.01	<0.01	<0.003	<0.003	<0.001	0.00081	<0.001	<0.001	<0.001	<0.001	0.00058	0.0014	0.00024	<0.001
	10/31/16	8260B	0.00022	<0.001	<0.003	<0.003	<0.001	0.00086	<0.001	<0.001	<0.001	<0.001	0.00047	0.0016	<0.001	<0.001
	09/09/16	8260B/8011/504.1/EDB	0.00027	<0.002	<0.006	<0.006	<0.002	0.0011	<0.002	<0.002	<0.002	<0.002	0.00061	0.0011	<0.002	<0.002
	06/09/16	8260B	0.00054	<0.002	<0.006	<0.006	<0.002	0.001	<0.002	<0.002	<0.002	<0.002	0.0012	0.0019	<0.002	<0.002
	02/24/16	8260B	0.0021	<0.001	0.00017	0.00093	<0.001	0.00093	<0.001	<0.001	<0.001	<0.001	0.00055	0.0016	<0.001	<0.001
	11/05/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	0.0015	<0.001	<0.001	<0.001	<0.001	0.0011	0.0022	<0.001	<0.001
	08/21/15	8260B	<0.002	<0.002	<0.006	<0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
	06/09/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0021	<0.001	<0.001
	03/12/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	0.0017	<0.001	<0.001
	11/17/14	8260B	0.0011	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	0.0025	<0.001	<0.001
	09/23/14	8260B	<0.005	<0.005	<0.015	<0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	04/09/14	8260B	0.0025	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0023	<0.001	<0.001
MKTF-33	11/28/17	8260B	<0.01	<0.01	<0.003	<0.003	<0.001	0.00021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	09/25/17	8260B	<0.01	<0.01	<0.003	<0.003	<0.001	0.00029	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/08/17	8260B	<0.01	<0.01	<0.003	<0.003	<0.001	0.00033	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	03/08/17	8260B	<0.01	<0.01	<0.003	<0.003	<0.001	0.00047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	11/01/16	8260B	<0.001	<0.002	<0.003	0.00042	0.00044	0.00095	0.00028	<0.001	0.00018	<0.001	<0.001	<0.001	<0.001	<0.001
	09/10/16	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	0.00081	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/10/16	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	0.0006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	02/25/16	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	0.0016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	11/09/15	8260B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	08/21/15	8260B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/09/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	03/12/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	11/17/14	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	09/23/14	8260B	<0.005	<0.005	<0.015	<0.015	<0.005	<0.005								

Table 1
Groundwater Analyses Summary

PARAMETERS																
1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4- Isopropyl toluene (mg/L)	4-Methyl-2- pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4- Trichloroben zene (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)
NE	NE	NE	NE	NE	0.1	NE	NE	NE	NE	NE	0.02	NE	0.06	0.01	NE	0.001
0.005	NE	NE	NE	NE	0.005	NE	NE	NE	0.1	NE	0.005	0.07	0.2	0.005	0.005	0.002
0.00438	NE	0.447	NE	1.24	0.106	NE	NE	NE	1.21	NE	0.0403	0.00398	8	0.000415	0.00259	0.00030
0.00085	0.038	NE	NE	6.3	0.011	1	0.66	2	1.2	0.69	0.011	0.0012	8	0.00028	0.00049	0.000019
MKTF-34	12/01/17	8260B	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	0.00014	<0.001	<0.001	<0.001	0.0026	<0.001
	09/26/17	8260B	<0.001	<0.01	0.00014	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0019	<0.001
	06/14/17	8260B	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001
	03/01/17	8260B	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0022	<0.001
	11/08/16	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	0.00022	<0.001	<0.001	<0.001	0.0048	<0.001
	09/13/16	8260B	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0019	<0.001
	06/10/16	8260B	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001
	02/25/16	8260B	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	<0.001
	11/03/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0023	<0.001
	08/18/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0019	<0.001
	06/08/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0017	<0.001
	03/12/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001
	11/17/14	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	<0.001
	09/24/14	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0022	<0.001
	04/09/14	8260B	<0.002	<0.001	<0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0029	<0.002
MKTF-35	11/30/17	8260B	<0.001	<0.01	<0.003	<0.003	0.00026	0.0015	<0.001	0.00024	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	09/27/17	8260B	<0.001	<0.01	<0.003	<0.003	0.00013	0.0012	<0.001	0.00014	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/14/17	8260B/8011/504.1/EDB	<0.001	<0.01	0.00011	0.00019	0.0027	0.0014	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	03/01/17	8260B	<0.001	<0.01	0.00016	<0.003	0.0038	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	11/06/16	8260B	0.0039	0.00049	0.00045	0.00045	0.011	0.0021	<0.001	0.00025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	09/13/16	8260B/8011/504.1/EDB	0.0012	0.00029	0.00032	0.00032	0.0025	0.0014	0.00025	0.00018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/10/16	8260B	0.0018	0.00041	0.00053	0.00053	0.0045	0.0019	0.00019	0.00019	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	02/26/16	8260B	0.0034	<0.005	0.0034	0.0016	0.012	0.0024	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	11/03/15	8260B	0.0055	<0.001	<0.003	<0.003	0.016	0.0026	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	08/18/15	8260B	0.01	<0.005	<0.015	<0.015	0.036	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	06/04/15	8260B	0.0084	<0.001	<0.003	<0.003	0.022	0.0017	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	03/17/15	8260B	0.0082	<0.001	<0.003	<0.003	0.035	0.0018	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	11/21/14	8260B	0.0051	<0.001	<0.0061	0.0061	0.028	0.0027	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MKTF-36	11/30/17	8260B	0.04	<0.05	<0.15	0.018	0.083	0.011	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	09/27/17	8260B	0.032	<0.05	<0.15	0.011	0.067	0.0064	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	06/14/17	8260B	0.028	<0.05	<0.15	0.0076	0.085	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	03/01/17	8260B	0.031	<0.05	<0.15	<0.15	0.078	0.018	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	11/08/16	8260B	0.028	<0.01	<0.08	0.008	0.064	0.0058	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	08/18/15	8260B	0.033	<0.01	<0.03	<0.03	0.073	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	06/04/15	8260B	0.044	<0.02	<0.06	<0.06	0.091	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
	03/17/15	8260B	0.03	<0.01	<0.03	<0.03	0.081	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	11/21/14	8260B	0.041	<0.1	<0.027	<0.027	0.099	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	11/03/16	8260B	0.073	0.0055	0.027	0.027	0.078	0.011	<0.01	<0.01	<0.01	<0.01	0.0081	<0.01	0.2	<0.01
	11/03/16	8260B	0.073	0.0055	0.027	0.027	0.078	0.011	<0.01	<0.01	<0.01	<0.01	0.0081	<0.01	0.2	<0.01
	08/19/15	8260B	0.2	0.017	0.11	0.18	0.18	0.035	<0.02	<0.02	<0.02	<0.02	1.013	<0.02	1.27	<0.02
	06/04/15	8260B	0.15	0.021	0.14	0.19	0.19	0.045	<0.01	<0.01	<0.01	<0.01	0.019	<0.01	0.17	<0.01
	03/17/15	8260B	0.047	0.0045	0.02	0.056	0.0073	0.0073	<0.001	<0.001	<0.001	<0.001	0.0087	0.0022	0.12	<0.001
	11/21/14	8260B	0.078	0.0048	0.026	0.026	0.082	0.011	<0.001	<0.001	<0.001	<0.001	<0.001	0.0017	0.3	<0.001

Table 1
Groundwater Analyses Summary

PARAMETERS																			
1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4- Isopropyl toluene (mg/L)	4-Methyl-2- pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4- Trichloroben zene (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)			
NE	NE	NE	NE	NE	0.1	NE	NE	NE	NE	NE	0.02	NE	0.06	0.01	NE	0.001			
0.005	NE	NE	NE	NE	0.005	NE	NE	NE	0.1	NE	0.005	0.07	0.2	0.005	0.005	0.002			
0.00438	NE	0.447	NE	1.24	0.106	NE	NE	NE	1.21	NE	0.0403	0.00398	8	0.000415	0.00259	0.00030			
0.00085	0.038	NE	NE	6.3	0.011	1	0.66	2	1.2	0.69	0.011	0.0012	8	0.00028	0.00049	0.000019			
MKTF-41	11/27/17	8260B	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	09/25/17	8260B	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	06/06/17	8260B/8011/504.1/EDB	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	03/07/17	8260B	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	10/31/16	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	09/09/16	8260B/8011/504.1/EDB	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	06/09/16	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	02/24/16	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	11/05/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	08/21/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	06/09/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	03/12/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	11/18/14	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
MKTF-42	11/27/17	8260B	0.00073	0.0037	<0.003	0.00037	0.00083	0.00026	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	09/25/17	8260B	0.0011	0.002	<0.003	0.00059	0.0017	0.00046	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	06/06/17	8260B	0.00034	0.0032	<0.003	<0.003	0.00037	0.00017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	03/07/17	8260B	0.00034	0.0031	<0.003	<0.003	0.00028	0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	10/31/16	8260B	<0.001	0.0011	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	09/09/16	8260B	0.00058	0.0018	0.0032	<0.003	0.00072	0.00041	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	06/09/16	8260B	<0.001	<0.001	<0.01	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	02/24/16	8260B	0.00031	0.0011	0.0018	<0.003	0.00039	0.00017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	11/05/15	8260B	<0.001	0.0011	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	08/21/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	06/09/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	03/11/15	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	11/18/14	8260B	<0.01	<0.01	<0.003	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
MKTF-43	11/27/17	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	09/25/17	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	06/06/17	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	03/08/17	8260B	<0.001	<0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	10/31/16	8260B	0.00054	0.0023	<0.003	<0.003	0.00068	0.00034	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	09/09/16	8260B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	06/09/16	8260B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	02/24/16	8260B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	11/05/15	8260B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	08/21/15	8260B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	06/10/15	8260B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	03/11/15	8260B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
	11/18/14	8260B	<0.001	0.0036	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			

Table 1
Groundwater Analyses Summary

		PARAMETERS																
		1,2-Dichloro propane (mg/L)	2-Hexanone (mg/L)	Isopropyl benzene (mg/L)	4-Isopropyl toluene (mg/L)	4-Methyl-2-pentanone (mg/L)	Methylene Chloride (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Styrene (mg/L)	tert-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,2,4-Trichlorobenzene (mg/L)	1,1,1-Trichloro ethane (mg/L)	1,1,2-Trichloro ethane (mg/L)	Trichloro ethene (TCE) (mg/L)	Vinyl Chloride (mg/L)
STANDARDS																		
WQCC 20NMAC 6.2.3103		NE	NE	NE	NE	NE	0.1	NE	NE	NE	NE	NE	0.02	NE	0.06	0.01	NE	0.001
40 CFR 141.62 MCL		0.005	NE	NE	NE	NE	0.005	NE	NE	NE	0.1	NE	0.005	0.07	0.2	0.005	0.005	0.002
NMED Tap Water (MARCH 2017)		0.00438	NE	0.447	NE	1.24	0.106	NE	NE	NE	1.21	NE	0.0403	0.00398	8	0.000415	0.00259	0.00030
EPA RSL for Tap Water (MAY 2018)		0.00085	0.038	NE	NE	6.3	0.011	1	0.66	2	1.2	0.69	0.011	0.0012	8	0.00028	0.00049	0.000019
Well ID	DATE SAMPLED	METHOD																
MKTf-44	11/28/17	8260B	<0.001	<0.001	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	09/25/17	8260B	<0.001	<0.001	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/05/17	8260B	<0.001	<0.001	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	03/08/17	8260B	<0.001	<0.001	<0.001	<0.01	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	11/01/16	8260B	<0.001	<0.001	<0.001		<0.003	<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	09/09/16	8260B	<0.001	<0.001	<0.001		<0.003	<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/09/16	8260B	<0.001	<0.001	<0.001		<0.003	<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	02/24/16	8260B	<0.001	<0.001	<0.001		<0.003	<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	11/09/15	8260B	<0.001	<0.001	<0.001		<0.003	<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	08/17/15	8260B	<0.001	<0.001	<0.001		<0.003	<0.003	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	06/10/15	8260B	<0.002	<0.002	<0.002		<0.006	<0.006	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
	03/12/15	8260B	<0.002	<0.002	<0.002		<0.006	<0.006	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
	11/21/14	8260B	<0.002	<0.002	<0.002		<0.006	<0.006	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

DEFINITIONS

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

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water
a) Human Health Standards; b) Other Standards for
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
NMED Risk Assessment Guidance for Investigations and

NOTES

TABLE 2
FLUID LEVEL MEASUREMENTS

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
11/14/13	01/21/14	MKTF-01	02/07/18	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	5.05	0.35	5.40	6,915.27	6915.55	5 - 15	Chinle/Alluvium Interface
			04/25/18	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.32	17.35	6.22	0.30	6.52	6,914.15	6914.39	5 - 15	Chinle/Alluvium Interface
			08/15/18	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.40	17.27	6.40	0.31	6.71	6,913.96	6914.21	5 - 15	Chinle/Alluvium Interface
			11/27/18	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	5.50	0.37	5.87	6,914.80	6915.10	5 - 15	Chinle/Alluvium Interface
11/14/13	01/21/14	MKTF-02	02/06/18	4.00	6,915.00	6,917.45	6,917.18	2.45	6,897.11	20.34	ND	NA	7.44	6,910.01	NA	7 - 17	Chinle/Alluvium Interface
			04/25/18	4.00	6,915.00	6,917.45	6,917.18	2.45	6,897.09	20.36	ND	NA	7.95	6,909.50	NA	7 - 17	Chinle/Alluvium Interface
			08/15/18	4.00	6,915.00	6,917.45	6,917.18	2.45	6,897.02	20.43	ND	NA	8.40	6,909.05	NA	7 - 17	Chinle/Alluvium Interface
			11/27/18	4.00	6,915.00	6,917.45	6,917.18	2.45	6,897.10	20.35	ND	NA	8.40	6,909.05	NA	7 - 17	Chinle/Alluvium Interface
11/07/13	01/21/14	MKTF-03	02/08/18	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	7.40	0.85	8.25	6,923.44	6924.12	3 - 18	Chinle/Alluvium Interface
			04/25/18	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	7.30	0.92	8.22	6,923.47	6924.21	3 - 18	Chinle/Alluvium Interface
			08/16/18	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.16	18.53	7.30	0.95	8.25	6,923.44	6924.20	3 - 18	Chinle/Alluvium Interface
			11/19/18	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	6.85	1.00	7.85	6,923.84	6924.64	3 - 18	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-04	02/14/18	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.20	22.37	ND	NA	9.85	6,923.72	NA	10 - 22	Chinle/Alluvium Interface
			04/25/18	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.28	22.29	ND	NA	9.70	6,923.87	NA	10 - 22	Chinle/Alluvium Interface
			08/16/18	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.18	22.39	ND	NA	9.70	6,923.87	NA	10 - 22	Chinle/Alluvium Interface
			11/19/18	4.00	6,933.90	6,933.57	6,933.24	-0.33	6,911.27	22.30	ND	NA	8.39	6,925.18	NA	10 - 22	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-05	02/08/18	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	14.78	0.42	15.20	6,927.02	6927.36	4 - 14	Chinle/Alluvium Interface
			04/25/18	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.52	17.70	14.96	0.23	15.19	6,927.03	6927.21	4 - 14	Chinle/Alluvium Interface
			08/16/18	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	14.61	0.19	14.80	6,927.42	6927.57	4 - 14	Chinle/Alluvium Interface
			11/19/18	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	14.62	0.21	14.83	6,927.39	6927.56	4 - 14	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-06	02/08/18	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	17.14	1.38	18.52	6,928.29	6929.39	8 - 20	Chinle/Alluvium Interface
			04/25/18	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.09	23.72	17.29	1.32	18.61	6,928.20	6929.26	8 - 20	Chinle/Alluvium Interface
			08/16/18	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.02	23.79	16.83	1.17	18.00	6,928.81	6929.75	8 - 20	Chinle/Alluvium Interface
			11/19/18	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.85	1.16	18.01	6,928.80	6929.73	8 - 20	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-07	02/08/18	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	11.33	1.22	12.55	6,934.63	6935.61	4 - 14	Chinle/Alluvium Interface
			04/25/18	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.60	17.58	10.84	1.18	12.02	6,935.16	6936.10	4 - 14	Chinle/Alluvium Interface
			08/16/18	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.71	17.47	11.42	1.08	12.50	6,934.68	6935.54	4 - 14	Chinle/Alluvium Interface
			11/27/18	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	12.35	1.17	13.52	6,933.66	6934.60	4 - 14	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-08	02/08/18	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	13.29	0.34	13.63	6,933.46	6933.73	8 - 18	Chinle/Alluvium Interface
			04/25/18	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.15	21.94	13.00	0.33	13.33	6,933.76	6934.02	8 - 18	Chinle/Alluvium Interface
			08/16/18	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	12.96	0.39	13.35	6,933.74	6934.05	8 - 18	Chinle/Alluvium Interface
			11/27/18	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	13.41	0.39	13.80	6,933.29	6933.60	8 - 18	Chinle/Alluvium Interface
11/11/13	01/21/14	MKTF-09	02/14/18	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.76	22.74	ND	NA	13.76	6,932.74	NA	7 - 19	Chinle/Alluvium Interface
			04/25/18	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.81	22.69	ND	NA	13.42	6,933.08	NA	7 - 19	Chinle/Alluvium Interface
			08/16/18	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.76	22.74	ND	NA	13.49	6,933.01	NA	7 - 19	Chinle/Alluvium Interface
			11/27/18	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.75	22.75	ND	NA	13.81	6,932.69	NA	7 - 19	Chinle/Alluvium Interface
10/31/13	01/21/14	MKTF-10	02/14/18	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.06	16.10	ND	NA	7.30	6,929.86	NA	7 - 17	Chinle/Alluvium Interface
			04/25/18	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.11	16.05	ND	NA	7.05	6,930.11	NA	7 - 17	Chinle/Alluvium Interface
			08/16/18	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,920.88	16.28	ND	NA	7.08	6,930.08	NA	7 - 17	Chinle/Alluvium Interface
			11/19/18	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.25	6,929.91	NA	7 - 17	Chinle/Alluvium Interface

TABLE 2
FLUID LEVEL MEASUREMENTS

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
10/31/13	01/21/14	MKTF-11	02/08/18	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.03	18.31	ND	NA	7.87	6,923.47	NA	8 - 18	Chinle/Alluvium Interface
			04/25/18	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,912.95	18.39	ND	NA	7.85	6,923.49	NA	8 - 18	Chinle/Alluvium Interface
			08/16/18	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,912.86	18.48	ND	NA	7.48	6,923.86	NA	8 - 18	Chinle/Alluvium Interface
			11/19/18	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	7.20	6,924.14	NA	8 - 18	Chinle/Alluvium Interface
11/07/13	01/21/14	MKTF-12	02/07/18	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	19.11	0.17	19.28	6,922.83	6922.97	12 - 22	Chinle/Alluvium Interface
			04/26/18	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.53	25.58	19.11	0.12	19.23	6,922.88	6922.98	12 - 22	Chinle/Alluvium Interface
			08/15/18	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	19.01	0.19	19.20	6,922.91	6923.06	12 - 22	Chinle/Alluvium Interface
			11/27/18	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	18.40	0.14	18.54	6,923.57	6923.68	12 - 22	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-13	02/07/18	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	13.77	0.01	13.78	6,921.40	6921.41	8 - 18	Chinle/Alluvium Interface
			04/26/18	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.52	21.66	ND	NA	13.75	6,921.43	NA	8 - 18	Chinle/Alluvium Interface
			08/15/18	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.63	21.55	ND	NA	13.68	6,921.50	NA	8 - 18	Chinle/Alluvium Interface
			11/27/18	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	ND	NA	12.72	6,922.46	NA	8 - 18	Chinle/Alluvium Interface
11/12/13	01/21/14	MKTF-14	02/07/18	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	6.98	0.41	7.39	6,920.63	6920.96	4 - 14	Chinle/Alluvium Interface
			04/26/18	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.59	17.43	7.01	0.38	7.39	6,920.63	6920.93	4 - 14	Chinle/Alluvium Interface
			08/15/18	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.57	17.45	6.95	0.35	7.30	6,920.72	6921.00	4 - 14	Chinle/Alluvium Interface
			11/27/18	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	6.26	0.39	6.65	6,921.37	6921.68	4 - 14	Chinle/Alluvium Interface
10/29/13	01/21/14	MKTF-15	02/08/18	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	12.40	0.07	12.47	6,931.01	6931.07	9 - 19	Chinle/Alluvium Interface
			04/25/18	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.08	19.40	ND	NA	12.20	6,931.28	NA	9 - 19	Chinle/Alluvium Interface
			08/16/18	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,923.98	19.50	ND	NA	12.40	6,931.08	NA	9 - 19	Chinle/Alluvium Interface
			11/19/18	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	12.57	0.13	12.70	6,930.78	6930.88	9 - 19	Chinle/Alluvium Interface
11/07/13	01/21/14	MKTF-16	02/14/18	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.48	14.10	ND	NA	8.80	6,941.78	NA	4 - 14	Chinle/Alluvium Interface
			04/25/18	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.62	13.96	ND	NA	8.35	6,942.23	NA	4 - 14	Chinle/Alluvium Interface
			08/16/18	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.50	14.08	ND	NA	8.55	6,942.03	NA	4 - 14	Chinle/Alluvium Interface
			11/29/18	2.00	6,951.00	6,950.58	6,950.58	-0.42	6,936.48	14.10	ND	NA	9.54	6,941.04	NA	4 - 14	Chinle/Alluvium Interface
11/14/13	01/21/14	MKTF-17	02/15/18	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.08	24.68	ND	NA	11.65	6,934.11	NA	14 - 24	Chinle/Alluvium Interface
			04/26/18	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.21	24.55	ND	NA	12.28	6,933.48	NA	14 - 24	Chinle/Alluvium Interface
			08/15/18	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.08	24.68	ND	NA	12.50	6,933.26	NA	14 - 24	Chinle/Alluvium Interface
			11/27/18	2.00	6,945.79	6,945.76	6,945.64	-0.03	6,921.11	24.65	ND	NA	13.65	6,932.11	NA	14 - 24	Chinle/Alluvium Interface
11/15/13	01/21/14	MKTF-18	02/15/18	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,923.85	26.80	ND	NA	6.47	6,944.18	NA	17 - 27	Chinle/Alluvium Interface
			04/26/18	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,923.95	26.70	ND	NA	8.22	6,942.43	NA	17 - 27	Chinle/Alluvium Interface
			08/16/18	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,923.20	27.45	ND	NA	7.12	6,943.53	NA	17 - 27	Chinle/Alluvium Interface
			11/27/18	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	7.94	6,942.71	NA	17 - 27	Chinle/Alluvium Interface
11/05/13	04/30/14	MKTF-19	02/15/18	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,926.22	18.45	ND	NA	12.00	6,932.67	NA	10 - 20	Chinle/Alluvium Interface
			04/26/18	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,926.48	18.19	ND	NA	12.05	6,932.62	NA	10 - 20	Chinle/Alluvium Interface
			08/15/18	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,925.37	19.30	ND	NA	12.20	6,932.47	NA	10 - 20	Chinle/Alluvium Interface
			11/27/18	2.00	6,944.89	6,944.67	6,944.34	-0.22	6,926.47	18.20	ND	NA	12.37	6,932.30	NA	10 - 20	Chinle/Alluvium Interface
02/10/14	04/30/14	MKTF-20	02/14/18	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,942.23	9.55	ND	NA	7.45	6,944.33	NA	2 - 10	Chinle/Alluvium Interface
			04/25/18	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,942.28	9.50	ND	NA	6.90	6,944.88	NA	2 - 10	Chinle/Alluvium Interface
			08/16/18	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,942.22	9.56	ND	NA	7.20	6,944.58	NA	2 - 10	Chinle/Alluvium Interface
			11/29/18	4.00	6,951.89	6,951.78	6,951.17	-0.11	6,942.20	9.58	ND	NA	7.52	6,944.26	NA	2 - 10	Chinle/Alluvium Interface

TABLE 2
FLUID LEVEL MEASUREMENTS

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
02/10/14	04/30/14	MKTF-21	02/14/18	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,943.77	8.80	ND	NA	6.88	6,945.69	NA	2 - 10	Chinle/Alluvium Interface
			04/25/18	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,943.82	8.75	ND	NA	6.32	6,946.25	NA	2 - 10	Chinle/Alluvium Interface
			08/16/18	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,943.77	8.80	ND	NA	6.05	6,946.52	NA	2 - 10	Chinle/Alluvium Interface
			11/29/18	4.00	6,952.68	6,952.57	6,952.00	-0.11	6,943.76	8.81	ND	NA	7.52	6,945.05	NA	2 - 10	Chinle/Alluvium Interface
11/08/13	04/30/14	MKTF-22	02/07/18	2.00	6,939.76	6,942.31	6,938.57	2.55	6,906.71	35.60	ND	NA	25.50	6,916.81	NA	22 - 32	Chinle/Alluvium Interface
			04/26/18	2.00	6,939.76	6,942.31	6,938.57	2.55	6,906.80	35.51	ND	NA	25.40	6,916.91	NA	22 - 32	Chinle/Alluvium Interface
			08/15/18	2.00	6,939.76	6,942.31	6,938.57	2.55	6,906.69	35.62	ND	NA	25.80	6,916.51	NA	22 - 32	Chinle/Alluvium Interface
			11/27/18	2.00	6,939.76	6,942.31	6,938.57	2.55	6,906.71	35.60	ND	NA	25.57	6,916.74	NA	22 - 32	Chinle/Alluvium Interface
11/04/13	04/30/14	MKTF-23	02/07/18	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	14.11	0.09	14.20	6,915.78	6915.85	7 - 17	Chinle/Alluvium Interface
			04/26/18	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.71	20.27	14.07	0.02	14.09	6,915.89	6915.91	7 - 17	Chinle/Alluvium Interface
			08/15/18	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.60	20.38	15.48	0.10	15.58	6,914.40	6914.48	7 - 17	Chinle/Alluvium Interface
			11/27/18	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	14.20	0.04	14.24	6,915.74	6915.77	7 - 17	Chinle/Alluvium Interface
10/29/13	04/30/14	MKTF-24	02/06/18	2.00	6,926.07	6,928.72	6,924.62	2.65	6,897.89	30.83	ND	NA	21.60	6,907.12	NA	18 - 28	Chinle/Alluvium Interface
			04/25/18	2.00	6,926.07	6,928.72	6,924.62	2.65	6,897.94	30.78	ND	NA	21.76	6,906.96	NA	18 - 28	Chinle/Alluvium Interface
			08/15/18	2.00	6,926.07	6,928.72	6,924.62	2.65	6,897.87	30.85	ND	NA	22.65	6,906.07	NA	18 - 28	Chinle/Alluvium Interface
			11/14/18	2.00	6,926.07	6,928.72	6,924.62	2.65	6,897.90	30.82	ND	NA	23.30	6,905.42	NA	18 - 28	Chinle/Alluvium Interface
10/30/13	04/30/14	MKTF-25	02/05/18	2.00	6,913.35	6,916.19	6,911.79	2.84	6,896.64	19.55	ND	NA	11.20	6,904.99	NA	6 - 16	Chinle/Alluvium Interface
			04/25/18	2.00	6,913.35	6,916.19	6,911.79	2.84	6,896.69	19.50	ND	NA	11.18	6,905.01	NA	6 - 16	Chinle/Alluvium Interface
			08/15/18	2.00	6,913.35	6,916.19	6,911.79	2.84	6,896.41	19.78	ND	NA	12.36	6,903.83	NA	6 - 16	Chinle/Alluvium Interface
			11/14/18	2.00	6,913.35	6,916.19	6,911.79	2.84	6,896.39	19.80	ND	NA	13.35	6,902.84	NA	6 - 16	Chinle/Alluvium Interface
10/30/13	04/30/14	MKTF-26	02/07/18	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	8.53	0.83	9.36	6,905.95	6906.61	4 - 14	Chinle/Alluvium Interface
			04/25/18	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.26	17.05	8.56	0.81	9.37	6,905.94	6906.59	4 - 14	Chinle/Alluvium Interface
			08/15/18	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.14	17.17	8.73	0.84	9.57	6,905.74	6906.41	4 - 14	Chinle/Alluvium Interface
			11/14/18	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	8.45	1.45	9.90	6,905.41	6906.57	4 - 14	Chinle/Alluvium Interface
10/30/13	04/30/14	MKTF-27	02/06/18	2.00	6,915.36	6,917.90	6,914.18	2.54	6,903.18	14.72	ND	NA	6.25	6,911.65	NA	1 - 12	Chinle/Alluvium Interface
			04/25/18	2.00	6,915.36	6,917.90	6,914.18	2.54	6,903.28	14.62	ND	NA	6.34	6,911.56	NA	1 - 12	Chinle/Alluvium Interface
			08/15/18	2.00	6,915.36	6,917.90	6,914.18	2.54	6,903.18	14.72	ND	NA	6.15	6,911.75	NA	1 - 12	Chinle/Alluvium Interface
			11/14/18	2.00	6,915.36	6,917.90	6,914.18	2.54	6,903.18	14.72	ND	NA	6.31	6,911.59	NA	1 - 12	Chinle/Alluvium Interface
04/02/14	04/30/14	MKTF-28	02/06/18	2.00	6,918.67	6,921.52	6,917.51	2.85	6,905.39	16.13	ND	NA	6.73	6,914.79	NA	3 - 13	Chinle/Alluvium Interface
			04/25/18	2.00	6,918.67	6,921.52	6,917.51	2.85	6,905.48	16.04	ND	NA	6.98	6,914.54	NA	3 - 13	Chinle/Alluvium Interface
			08/15/18	2.00	6,918.67	6,921.52	6,917.51	2.85	6,905.37	16.15	ND	NA	4.45	6,917.07	NA	3 - 13	Chinle/Alluvium Interface
			11/14/18	2.00	6,918.67	6,921.52	6,917.51	2.85	6,905.39	16.13	ND	NA	6.12	6,915.40	NA	3 - 13	Chinle/Alluvium Interface
04/02/14	04/30/14	MKTF-29	02/06/18	2.00	6,898.83	6,901.62	6,897.67	2.79	6,878.81	22.81	ND	NA	1.93	6,899.69	NA	10 - 20	Chinle/Alluvium Interface
			04/25/18	2.00	6,898.83	6,901.62	6,897.67	2.79	6,878.85	22.77	ND	NA	2.12	6,899.50	NA	10 - 20	Chinle/Alluvium Interface
			08/15/18	2.00	6,898.83	6,901.62	6,897.67	2.79	6,878.80	22.82	ND	NA	3.92	6,897.70	NA	10 - 20	Chinle/Alluvium Interface
			11/14/18	2.00	6,898.83	6,901.62	6,897.67	2.79	6,878.82	22.80	ND	NA	4.09	6,897.53	NA	10 - 20	Chinle/Alluvium Interface
04/01/14	04/30/14	MKTF-30	02/06/18	2.00	6,898.10	6,900.80	6,896.68	2.70	6,877.60	23.20	ND	NA	14.20	6,886.60	NA	10 - 20	Chinle/Alluvium Interface
			04/25/18	2.00	6,898.10	6,900.80	6,896.68	2.70	6,877.70	23.10	ND	NA	13.79	6,887.01	NA	10 - 20	Chinle/Alluvium Interface
			08/15/18	2.00	6,898.10	6,900.80	6,896.68	2.70	6,877.60	23.20	ND	NA	14.65	6,886.15	NA	10 - 20	Chinle/Alluvium Interface
			11/14/18	2.00	6,898.10	6,900.80	6,896.68	2.70	6,877.61	23.19	ND	NA	15.15	6,885.65	NA	10 - 20	Chinle/Alluvium Interface

TABLE 2
FLUID LEVEL MEASUREMENTS

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
04/01/14	04/30/14	MKTF-31	02/05/18	2.00	6,904.26	6,906.87	6,903.11	2.61	6,887.56	19.31	ND	NA	7.90	6,898.97	NA	6 - 21	Chinle/Alluvium Interface
			04/25/18	2.00	6,904.26	6,906.87	6,903.11	2.61	6,887.61	19.26	ND	NA	7.73	6,899.14	NA	6 - 21	Chinle/Alluvium Interface
			08/15/18	2.00	6,904.26	6,906.87	6,903.11	2.61	6,887.52	19.35	ND	NA	8.25	6,898.62	NA	6 - 21	Chinle/Alluvium Interface
			11/14/18	2.00	6,904.26	6,906.87	6,903.11	2.61	6,887.57	19.30	ND	NA	8.44	6,898.43	NA	6 - 21	Chinle/Alluvium Interface
03/31/14	04/30/14	MKTF-32	02/07/18	2.00	6,908.44	6,911.11	6,907.16	2.67	6,883.36	27.75	ND	NA	13.70	6,897.41	NA	9 - 24	Chinle/Alluvium Interface
			04/25/18	2.00	6,908.44	6,911.11	6,907.16	2.67	6,883.45	27.66	ND	NA	13.48	6,897.63	NA	9 - 24	Chinle/Alluvium Interface
			08/15/18	2.00	6,908.44	6,911.11	6,907.16	2.67	6,883.34	27.77	ND	NA	14.00	6,897.11	NA	9 - 24	Chinle/Alluvium Interface
			11/14/18	2.00	6,908.44	6,911.11	6,907.16	2.67	6,883.36	27.75	ND	NA	14.10	6,897.01	NA	9 - 24	Chinle/Alluvium Interface
04/03/14	04/30/14	MKTF-33	02/07/18	2.00	6,936.59	6,939.75	6,936.59	3.16	6,906.55	33.20	ND	NA	22.65	6,917.10	NA	20 - 30	Chinle/Alluvium Interface
			04/26/18	2.00	6,936.59	6,939.75	6,936.59	3.16	6,906.64	33.11	ND	NA	22.55	6,917.20	NA	20 - 30	Chinle/Alluvium Interface
			08/15/18	2.00	6,936.59	6,939.75	6,936.59	3.16	6,906.52	33.23	ND	NA	22.85	6,916.90	NA	20 - 30	Chinle/Alluvium Interface
			11/27/18	2.00	6,936.59	6,939.75	6,936.59	3.16	6,906.53	33.22	ND	NA	22.72	6,917.03	NA	20 - 30	Chinle/Alluvium Interface
03/31/14	04/30/14	MKTF-34	02/15/18	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.64	27.71	ND	NA	18.80	6,926.55	NA	9 - 24	Chinle/Alluvium Interface
			04/26/18	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.75	27.60	ND	NA	18.63	6,926.72	NA	9 - 24	Chinle/Alluvium Interface
			08/15/18	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.65	27.70	ND	NA	18.58	6,926.77	NA	9 - 24	Chinle/Alluvium Interface
			11/27/18	2.00	6,942.42	6,945.35	3,943.52	2.93	6,917.65	27.70	ND	NA	18.95	6,926.40	NA	9 - 24	Chinle/Alluvium Interface
11/19/14	12/16/14	MKTF-35	02/15/18	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.18	16.47	ND	NA	8.70	6,942.95	NA	6 - 16	Chinle/Alluvium Interface
			04/26/18	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.25	16.40	ND	NA	8.53	6,943.12	NA	6 - 16	Chinle/Alluvium Interface
			08/16/18	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.17	16.48	ND	NA	8.70	6,942.95	NA	6 - 16	Chinle/Alluvium Interface
			11/27/18	2.00	6,951.90	6,951.65	6,951.25	-0.25	6,935.20	16.45	ND	NA	9.10	6,942.55	NA	6 - 16	Chinle/Alluvium Interface
11/19/14	12/16/14	MKTF-36	02/15/18	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.67	15.45	ND	NA	6.86	6,943.26	NA	5 15	Chinle/Alluvium Interface
			04/26/18	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.72	15.40	ND	NA	6.56	6,943.56	NA	5 15	Chinle/Alluvium Interface
			09/05/18	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.69	15.43	ND	NA	6.52	6,943.60	NA	5 15	Chinle/Alluvium Interface
			11/29/18 ⁵	2.00	6,950.67	6,950.12	6,949.87	-0.55	6,934.67	15.45	ND	NA	NA	NA	NA	5 15	Chinle/Alluvium Interface
11/18/14	12/16/14	MKTF-37	02/15/18	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.27	24.60	8.96	0.04	9.00	6,949.87	6949.90	4 - 24	Chinle/Alluvium Interface
			04/26/18	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.33	24.54	ND	NA	8.52	6,950.35	NA	4 - 24	Chinle/Alluvium Interface
			08/16/18	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.28	24.59	ND	NA	8.70	6,950.17	NA	4 - 24	Chinle/Alluvium Interface
			11/27/18	2.00	6,959.07	6,958.87	6,958.62	-0.20	6,934.27	24.60	9.40	0.12	9.52	6,949.35	6949.45	4 - 24	Chinle/Alluvium Interface
11/20/14	12/16/14	MKTF-38	02/12/18	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.59	20.30	ND	NA	8.40	6,946.49	NA	5 - 20	Chinle/Alluvium Interface
			04/25/18	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.61	20.28	ND	NA	7.79	6,947.10	NA	5 - 20	Chinle/Alluvium Interface
			08/16/18	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.62	20.27	ND	NA	8.05	6,946.84	NA	5 - 20	Chinle/Alluvium Interface
			11/19/18	2.00	6,955.17	6,954.89	6,954.54	-0.28	6,934.60	20.29	ND	NA	8.99	6,945.90	NA	5 - 20	Chinle/Alluvium Interface
11/14/14	12/16/14	MKTF-39	02/08/18	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.55	15.20	ND	NA	8.18	6,945.57	NA	5 - 15	Chinle/Alluvium Interface
			04/25/18	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.62	15.13	ND	NA	7.82	6,945.93	NA	5 - 15	Chinle/Alluvium Interface
			08/16/18	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.55	15.20	ND	NA	8.30	6,945.45	NA	5 - 15	Chinle/Alluvium Interface
			11/19/18	2.00	6,953.97	6,953.75	6,953.12	-0.22	6,938.57	15.18	ND	NA	9.00	6,944.75	NA	5 - 15	Chinle/Alluvium Interface
11/13/14	12/16/14	MKTF-40	02/05/18	2.00	6,891.35	6,894.33	6,890.48	2.98	6,870.71	23.62	ND	NA	13.18	6,881.15	NA	5 - 20	Chinle/Alluvium Interface
			04/25/18	2.00	6,891.35	6,894.33	6,890.48	2.98	6,870.80	23.53	ND	NA	12.94	6,881.39	NA	5 - 20	Chinle/Alluvium Interface
			08/15/18	2.00	6,891.35	6,894.33	6,890.48	2.98	6,870.79	23.54	ND	NA	12.74	6,881.59	NA	5 - 20	Chinle/Alluvium Interface
			11/14/18	2.00	6,891.35	6,894.33	6,890.48	2.98	6,870.71	23.62	ND	NA	13.64	6,880.69	NA	5 - 20	Chinle/Alluvium Interface

TABLE 2
FLUID LEVEL MEASUREMENTS

Date of Installation	Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
11/14/14	12/16/14	MKTF-41	02/07/18	2.00	6,891.11	6,893.64	6,889.80	2.53	6,853.92	39.72	ND	NA	20.23	6,873.41	NA	22 - 37	Chinle/Alluvium Interface
			04/25/18	2.00	6,891.11	6,893.64	6,889.80	2.53	6,853.73	39.91	ND	NA	19.97	6,873.67	NA	22 - 37	Chinle/Alluvium Interface
			08/15/18	2.00	6,891.11	6,893.64	6,889.80	2.53	6,853.90	39.74	ND	NA	20.26	6,873.38	NA	22 - 37	Chinle/Alluvium Interface
			11/14/18	2.00	6,891.11	6,893.64	6,889.80	2.53	6,853.93	39.71	ND	NA	20.51	6,873.13	NA	22 - 37	Chinle/Alluvium Interface
11/12/14	12/16/14	MKTF-42	02/07/18	2.00	6,890.42	6,892.95	6,888.75	2.53	6,860.05	32.90	ND	NA	17.41	6,875.54	NA	10 - 30	Chinle/Alluvium Interface
			04/25/18	2.00	6,890.42	6,892.95	6,888.75	2.53	6,859.87	33.08	ND	NA	17.13	6,875.82	NA	10 - 30	Chinle/Alluvium Interface
			08/15/18	2.00	6,890.42	6,892.95	6,888.75	2.53	6,859.75	33.20	ND	NA	16.77	6,876.18	NA	10 - 30	Chinle/Alluvium Interface
			11/14/18	2.00	6,890.42	6,892.95	6,888.75	2.53	6,859.77	33.18	ND	NA	16.94	6,876.01	NA	10 - 30	Chinle/Alluvium Interface
11/11/14	12/16/14	MKTF-43	02/07/18	2.00	6,874.12	6,876.90	6,873.22	2.78	6,861.52	15.38	ND	NA	6.43	6,870.47	NA	2 - 12	Chinle/Alluvium Interface
			04/25/18	2.00	6,874.12	6,876.90	6,873.22	2.78	6,861.60	15.30	ND	NA	5.05	6,871.85	NA	2 - 12	Chinle/Alluvium Interface
			08/15/18	2.00	6,874.12	6,876.90	6,873.22	2.78	6,861.49	15.41	ND	NA	2.66	6,874.24	NA	2 - 12	Chinle/Alluvium Interface
			11/14/18	2.00	6,874.12	6,876.90	6,873.22	2.78	6,861.52	15.38	ND	NA	5.42	6,871.48	NA	2 - 12	Chinle/Alluvium Interface
11/11/14	12/16/14	MKTF-44	02/07/18	2.00	6,867.41	6,869.95	6,866.06	2.54	6,818.79	51.16	ND	NA	37.56	6,832.39	NA	38 - 48	Chinle/Alluvium Interface
			04/25/18	2.00	6,867.41	6,869.95	6,866.06	2.54	6,818.87	51.08	ND	NA	36.72	6,833.23	NA	38 - 48	Chinle/Alluvium Interface
			08/15/18	2.00	6,867.41	6,869.95	6,866.06	2.54	6,818.75	51.20	ND	NA	35.70	6,834.25	NA	38 - 48	Chinle/Alluvium Interface
			11/14/18	2.00	6,867.41	6,869.95	6,866.06	2.54	6,818.79	51.16	ND	NA	26.42	6,843.53	NA	38 - 48	Chinle/Alluvium Interface
Pre-existing	12/16/14	MKTF-45	02/15/18	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.35	30.24	13.09	0.15	13.24	6,936.35	6936.47	Unknown	Chinle/Alluvium Interface
			04/26/18	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.31	30.28	12.87	0.43	13.30	6,936.29	6936.63	Unknown	Chinle/Alluvium Interface
			08/16/18	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.26	30.33	13.15	0.43	13.58	6,936.01	6936.35	Unknown	Chinle/Alluvium Interface
			11/27/18	4.00	6,948.63	6,949.59	6,948.27	0.96	6,919.35	30.24	13.60	0.55	14.15	6,935.44	6935.88	Unknown	Chinle/Alluvium Interface

DEFINITIONS:

DTB - Depth to Bottom

DTW - Depth to Water

ND - Not Dectected

NA - Not Applicable

SPH - Separate Phase Hydrocarbon

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

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

Dry indicates no water was detected in the well.

NOTES:

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

2) "ND" indicates no detectable SPH level.

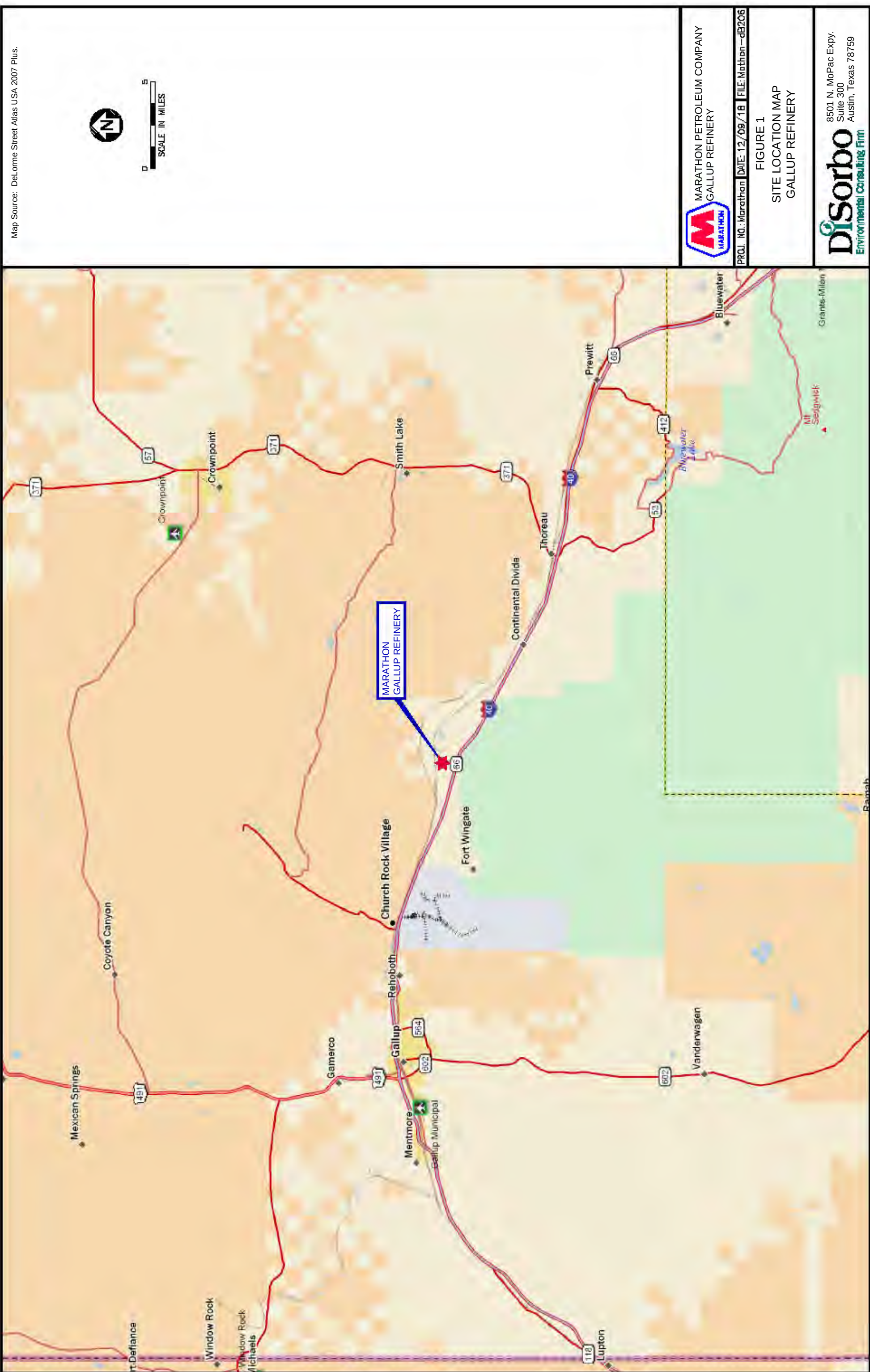
3) Depth to SPH - Depth to Water Measurement = SPH Column Thickness.

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

5) Not able to locate well.

Figures

- Figure 1 Site Location Map**
- Figure 2 Map of 2013 Hydrocarbon Seep Investigation Locations**
- Figure 3 Potentiometric Map**
- Figure 4 Benzene Concentration Map**
- Figure 5 MTBE Concentration Map**
- Figure 6 Separate Phase Hydrocarbon Thickness Map**
- Figure 7 Proposed Monitoring Well Locations**
-
-



Map Source: Delorme Street Atlas USA 2007 Plus.



MARATHON PETROLEUM COMPANY
GALLUP REFINERY

PROJ. NO.: Marathon

DATE: 12/09/18

FILE: Marathon-dB206

FIGURE 1
SITE LOCATION MAP
GALLUP REFINERY



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



QUADRANGLE LOCATION

LEGEND

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



MARATHON PETROLEUM COMPANY
GALLUP REFINERY

PROJ. NO.: Marathon | DATE: 09/22/18 | FILE: Mathon-dB45

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





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



MARATHON PETROLEUM COMPANY
GALLUP REFINERY

PROJ. NO.: Marathon | DATE: 1/28/19 | FILE: Mathon-dB209

FIGURE 4
BENZENE
CONCENTRATION MAP
3RD QUARTER 2017



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



QUADRANGLE LOCATION

LEGEND

SB01

TEMPORARY WELL LOCATION
(PLUGGED)

S01

TEMPORARY SUMP

MONITORING WELL LOCATION
(PERMANENT WELL)

3.3

BENZENE CONCENTRATION (mg/l)

SPH

SCREENING LEVEL = 0.005 mg/l

SEPARATE PHASE HYDROCARBON
ISOCONTOUR OF BENZENE
CONCENTRATION (mg/l)



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



MARATHON PETROLEUM COMPANY
GALLUP REFINERY

PROJ. NO.: Marathon | DATE: 1/29/19 | FILE: Mathon-dB210

FIGURE 5
MTBE
CONCENTRATION MAP
3RD QUARTER 2017



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



QUADRANGLE LOCATION

- LEGEND
- SB01



TEMPORARY WELL LOCATION
(PLUGGED)
- S01



TEMPORARY SUMP
- 

MONITORING WELL LOCATION
(PERMANENT WELL)
- 2.3

MTBE CONCENTRATION (mg/l)
- SPH

SCREENING LEVEL = 0.143 mg/l
- 

SEPARATE PHASE HYDROCARBON
ISOCONTOUR OF MTBE
CONCENTRATION (mg/l)





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



MARATHON PETROLEUM COMPANY
GALLUP REFINERY

PROJ. NO.: Marathon | DATE: 1/29/19 | FILE: Mathon--dB211

FIGURE 6
SEPARATE PHASE HYDROCARBON
THICKNESS MAP
3RD QUARTER 2017



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



QUADRANGLE LOCATION

LEGEND

- 

SB01
TEMPORARY WELL LOCATION
(PLUGGED)
- 

S01
TEMPORARY SUMP
- 

MKTF-40
MONITORING WELL LOCATION
(PERMANENT WELL)
- 

0.33
SEPARATE PHASE HYDROCARBON THICKNESS (FT)
- 

ISOCONTOUR OF SEPARATE PHASE HYDROCARBON
THICKNESS (FT)



Appendix A

Boring Logs



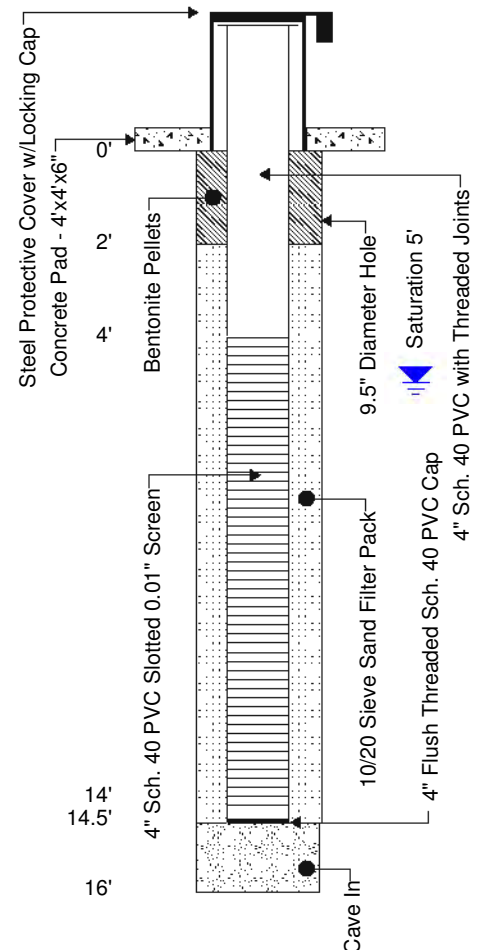
WELL INSTALLATION

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

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

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

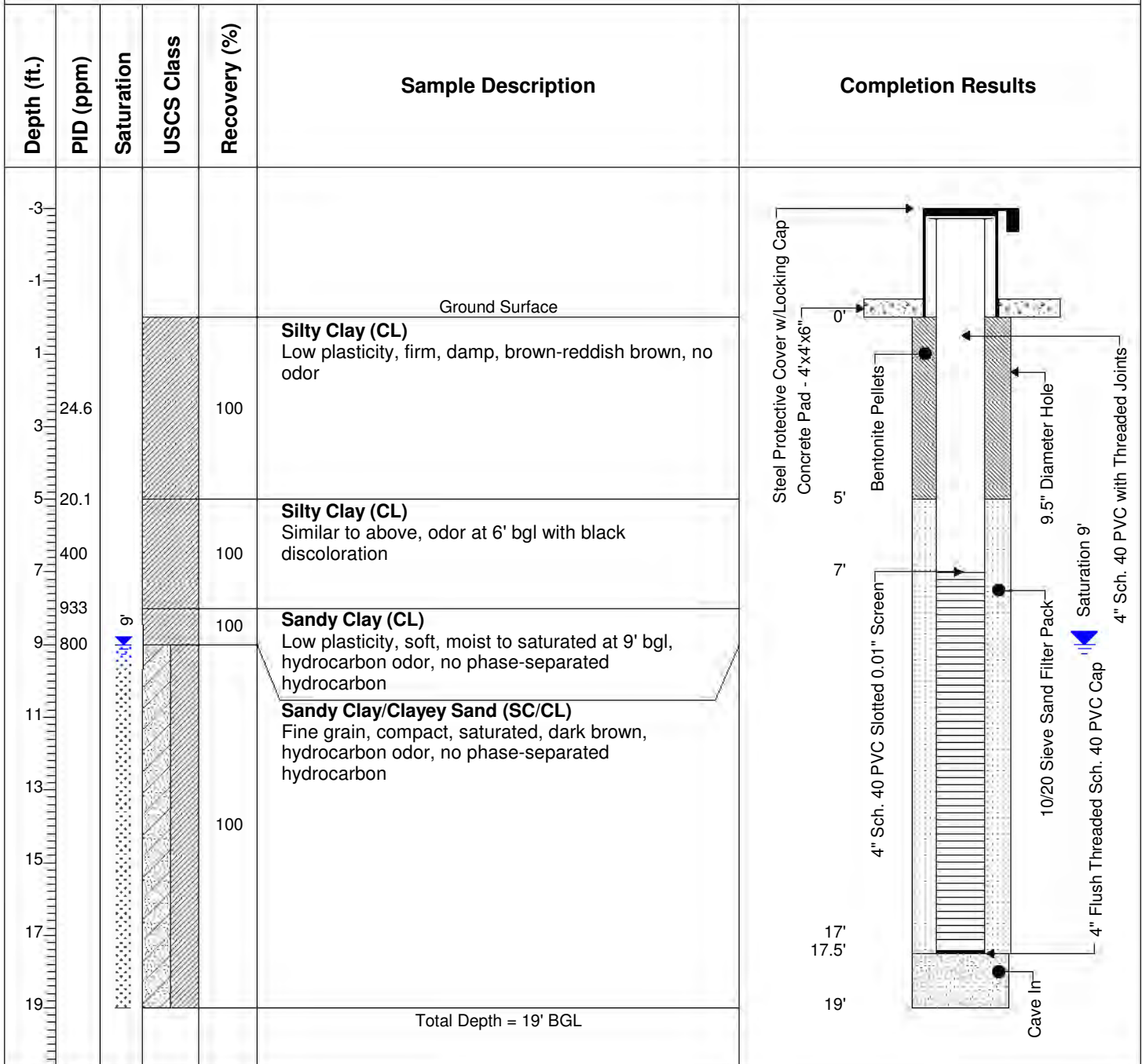
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1				100	Silty Clay (CL) Low plasticity, soft, damp, reddish brown to brown, no odor	
3						
5		5'				
7				100	Silty Clay/Clayey Silt (CL/ML) Low plasticity, very soft, moist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



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

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

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





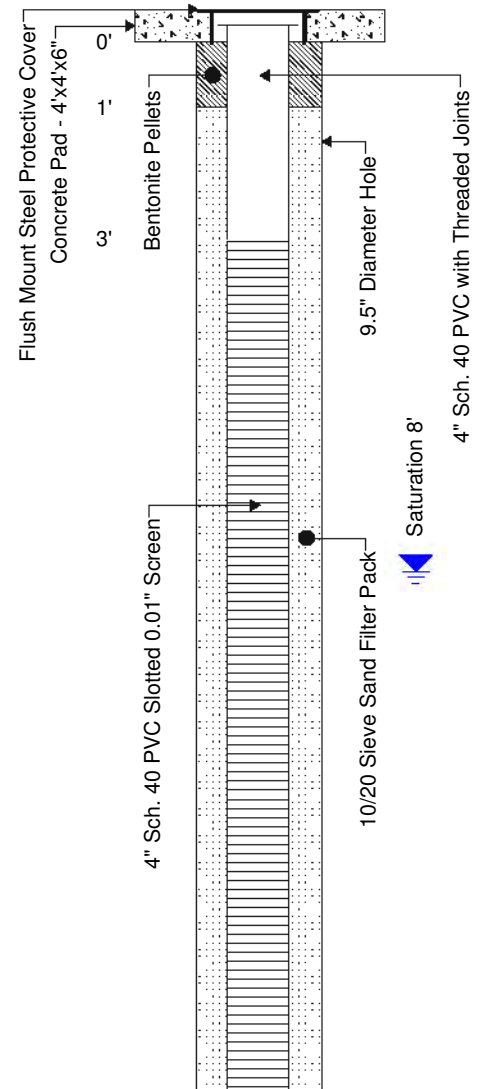
WELL INSTALLATION

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

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

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

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



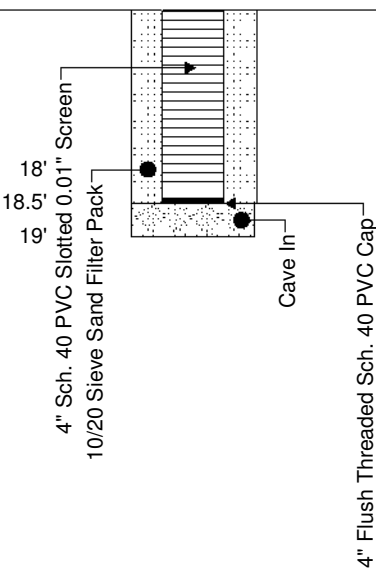


WELL INSTALLATION

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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17				10	Silty Sand/Silty Clay (SM/CL) Low plasticity, firm, moist, brown, faint odor, no phase-separated hydrocarbon	
19	225			80	Silty Clay (CL) Poor recovery	
					Clay (CH) High plasticity, very dense, damp, light reddish brown, faint odor	
Total Depth = 19' BGL						
21						
23						
25						
27						
29						
31						

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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	10.2		Fill (Silt/Gravel)	90	Low plasticity, very dense, dry, light brown, no odor	
3	11.7		Fill (Silt/Gravel)	80	Similar to above, black, dense at base, no odor	
5	16		Silty Clay (CL)	90	Low plasticity, stiff, damp, reddish brown, no odor, calcareous	
7	26		Gravelly Sandy Clay (CL)	90	Low plasticity, loose to firm, damp, brown, no odor	
9	708		Silty Clay (CL)	70	Low plasticity, very soft, damp, reddish brown, hydrocarbon odor	
11	369		Clay (CH)	80	High plasticity, firm, damp, reddish brown, hydrocarbon odor	
13	660		Sandy Clay/Clayey Sand (SC/CL)	90	Low plasticity, fine grain, soft, damp, reddish brown, hydrocarbon odor	
15	85	14'	Sandy Clay (SC)	90	Similar to above, saturated sand seams, hydrocarbon odor, brown	

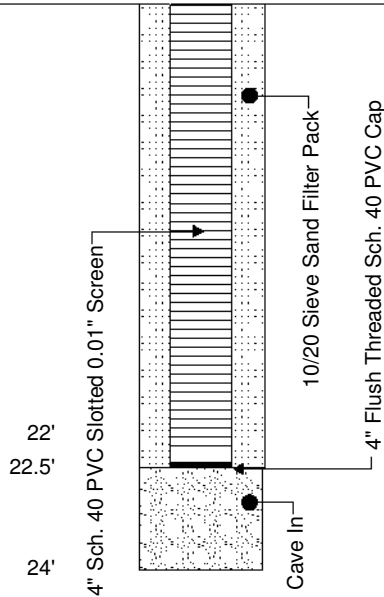


WELL INSTALLATION

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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17	64			70	Sandy Clay (SC) Similar to above, moist to saturated, hydrocarbon odor, brown	
19	33			90	Sandy Clay (SC) Low plasticity, fine grain, soft, moist to saturated, light reddish brown, hydrocarbon odor, gravelly at base Silty Clay (CL) Low plasticity, stiff, damp, light reddish brown grading to yellowish/greenish gray, becomes more silty at base	
21						
23						
25					Total Depth = 24' BGL	
27						
29						
31						

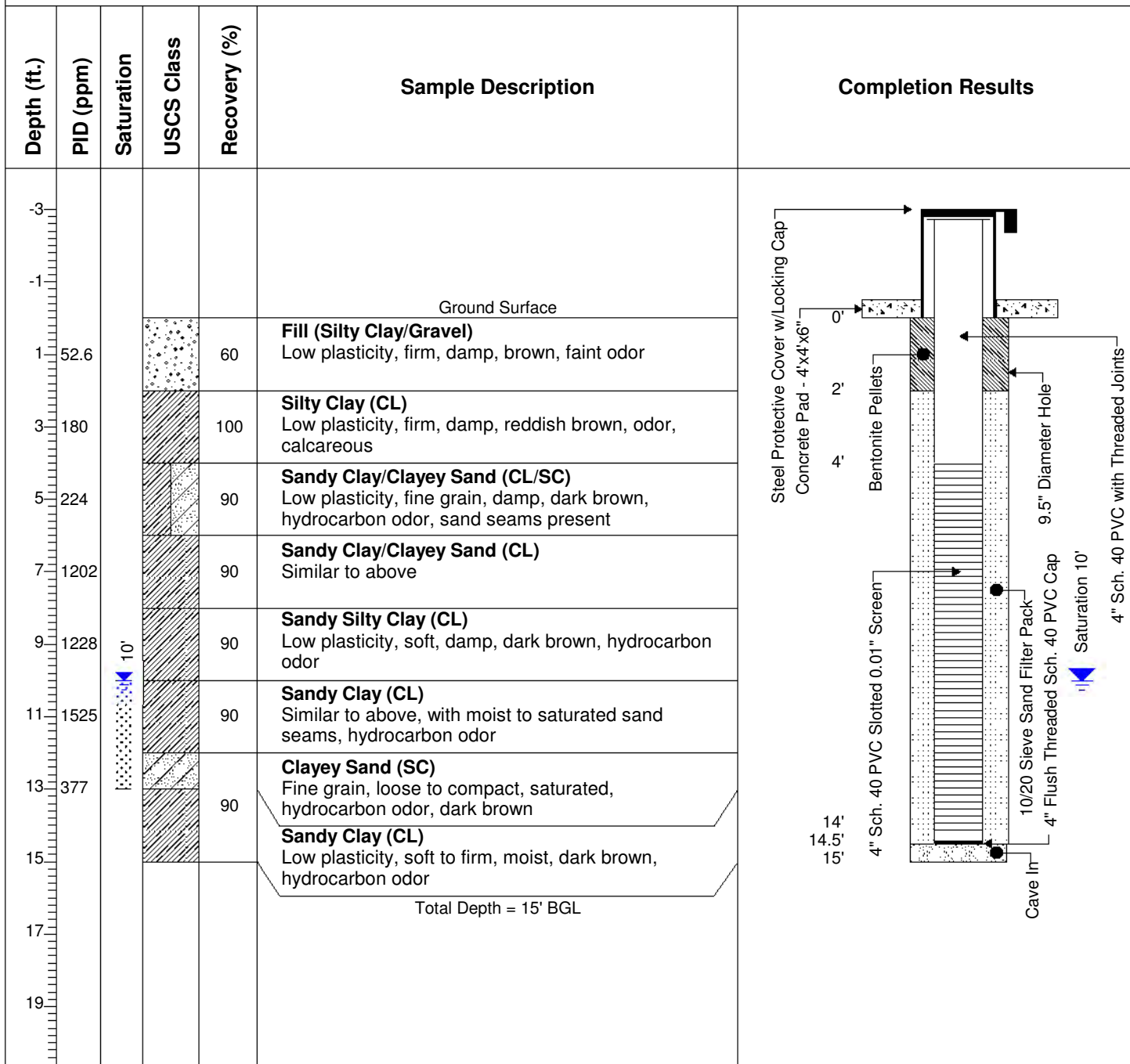


WELL INSTALLATION

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

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

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





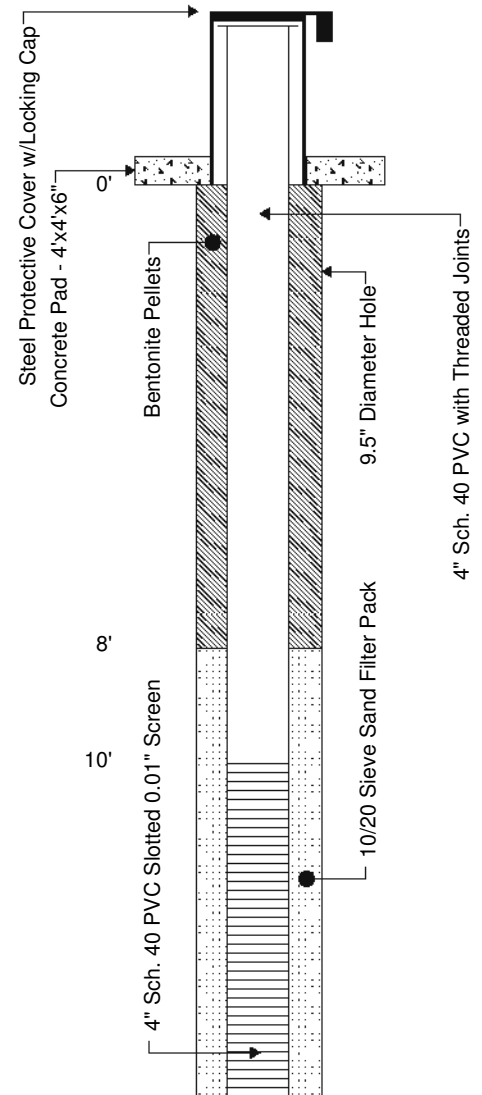
WELL INSTALLATION

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

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

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

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



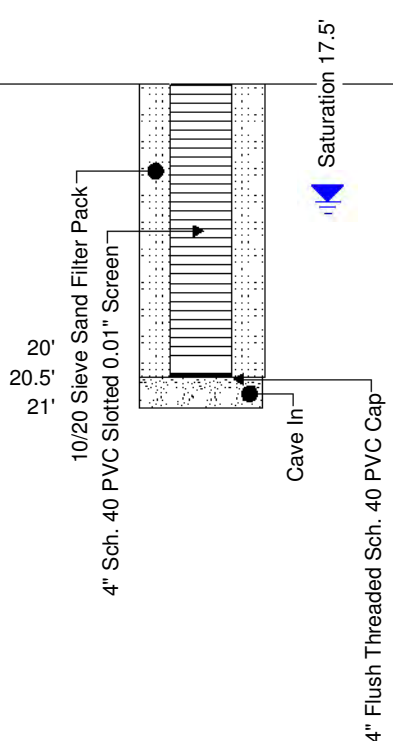


WELL INSTALLATION

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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
1115		17.5'		100	Sandy Silty Clay (CL) Similar to above, moist, oily, hydrocarbon odor	
17				100	Gravelly Sandy Clay (CL) Low plasticity, firm, moist, oily, 1" gravel, strong hydrocarbon odor	
19				100	Clayey Gravel Sand (SC) Fine to medium grain, loose, saturated, phase-separated hydrocarbon present, black, hydrocarbon odor	
225				100	Sandy Clay (CL) Low plasticity, firm, moist, black hydrocarbon odor	
21					Total Depth = 21' BGL	
23						
25						
27						
29						
31						
33						

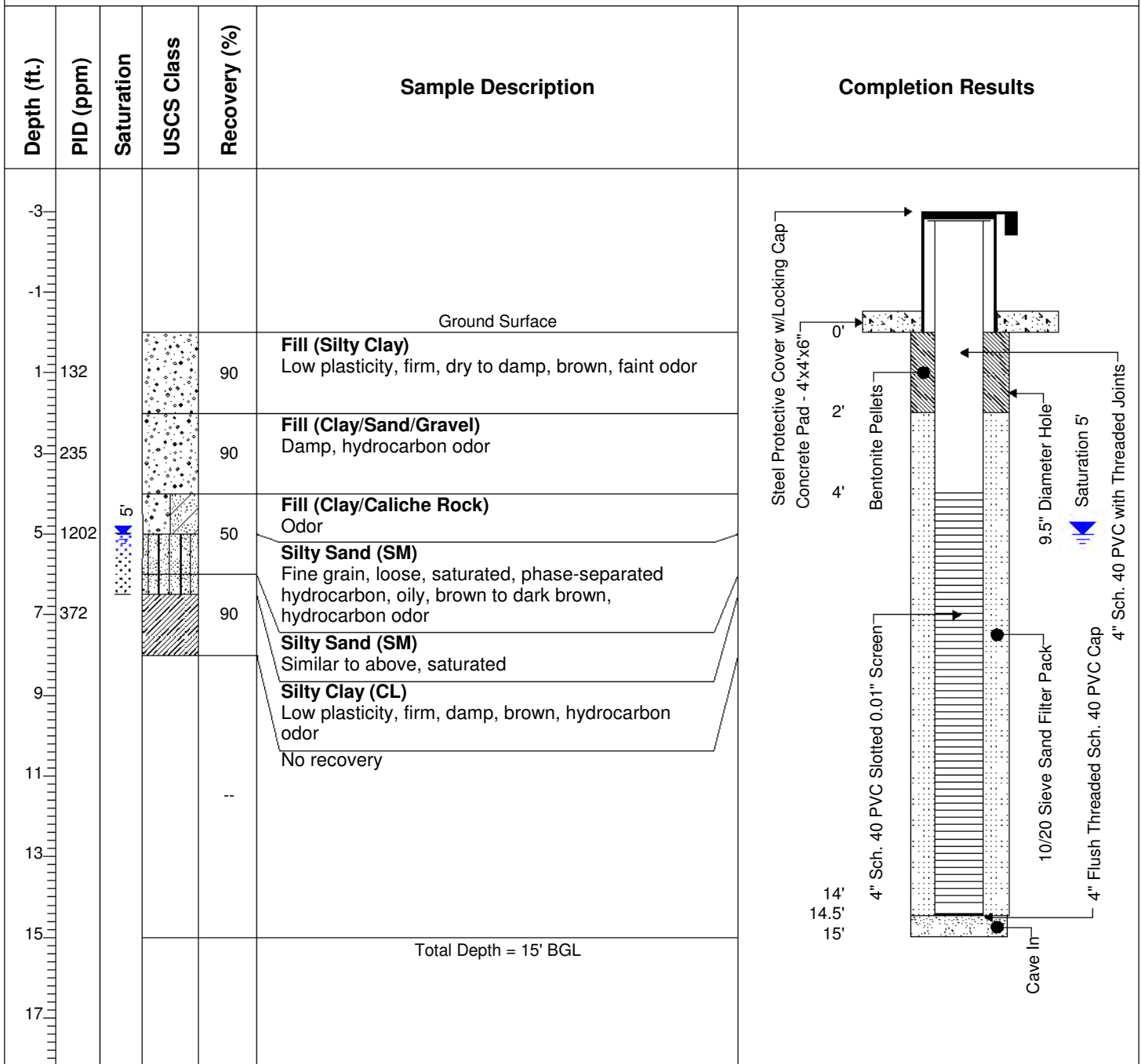


WELL INSTALLATION

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

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

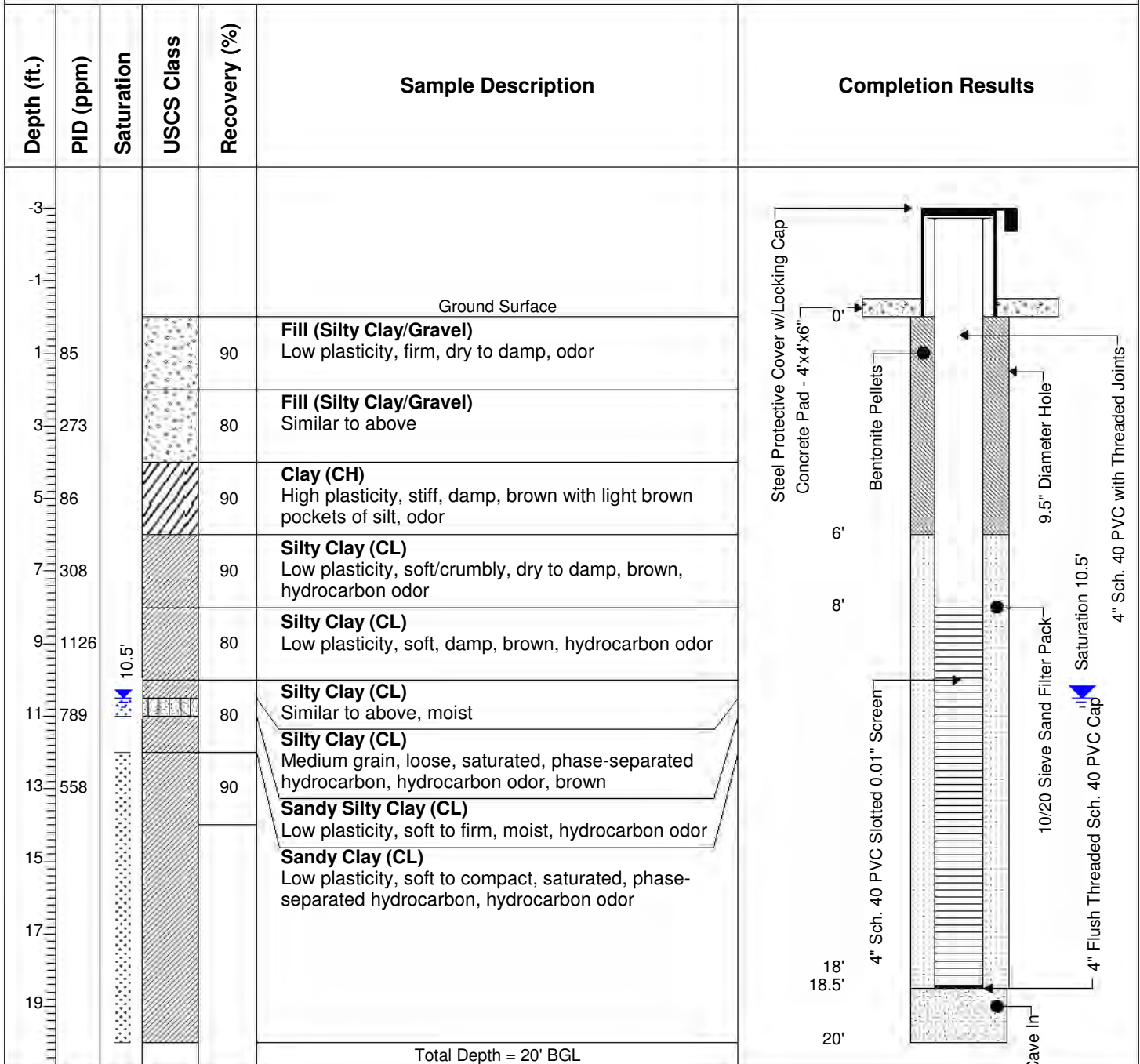
Well No.: MKTF-07
Start Date: 11/11/2013
Finish Date: 11/11/2013



Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.302' W 108°25.716'; Boring ID - SB11

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

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



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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3					Ground Surface	Steel Protective Cover w/Locking Cap Concrete Pad - 4'x4'x6" Bentonite Pellets 9.5" Diameter Hole 4" Sch. 40 PVC with Threaded Joints 10/20 Sieve Sand Filter Pack Saturation 12' 4" Sch. 40 PVC Slotted 0.01" Screen
1	21.9			90	Fill (Silty Clay) Low plasticity, stiff, dry to damp, no odor, brown	
3	32.7			90	Fill (Silty Clay) Similar to above, gravel	
5	36.1			90	Silty Clay (CL) Low plasticity, soft, damp, brown, faint odor	
7	37			90	Silty Clay (CL) Similar to above	
9	533			90	Silty Clay (CL) Similar to above	
11	314			90	Sandy Clay (CL) Similar to above, increase in sand and moisture	
13	651			90	Sandy Clay (CL) Similar to above, moist, hydrocarbon odor, dark brown	
15	587			90	Sandy Clay/Clayey Sand (CL/SC) Fine to medium grain, compact, moist to saturated, hydrocarbon odor	
					Sandy Clay/Clayey Sand (CL/SC) Similar to above, saturated, sheen observed on split spoon, black, hydrocarbon odor	



WELL INSTALLATION

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

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

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

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



WELL INSTALLATION

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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	90			90	Fill (Silt/Gravel) Low plasticity, loose, dry, light brown	
3	14			90	Fill (Silty Clay/Gravel) Similar to above	
5	431			90	Silty Clay (CL) Low plasticity, stiff, dry, reddish brown, odor, calcareous	
7	448			60	Sand (SP) Fine grain, loose, dry, reddish brown, odor	
9	654	9		60	Sand (SP) Similar to above, saturated at 9' bgl, phase-separated hydrocarbon, hydrocarbon odor	
11	1559			90	Clayey Sand (SC) Fine grain, soft, saturated, phase-separated hydrocarbon, brown to black, hydrocarbon odor	
13	713			90	Clayey Sand/Sandy Clay (SC/CL) Low plasticity, firm to stiff, moist to saturated, hydrocarbon odor, dark brown	
15				90		
17						
17.5						
18					Total Depth = 18' BGL	
19						
21						

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

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

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

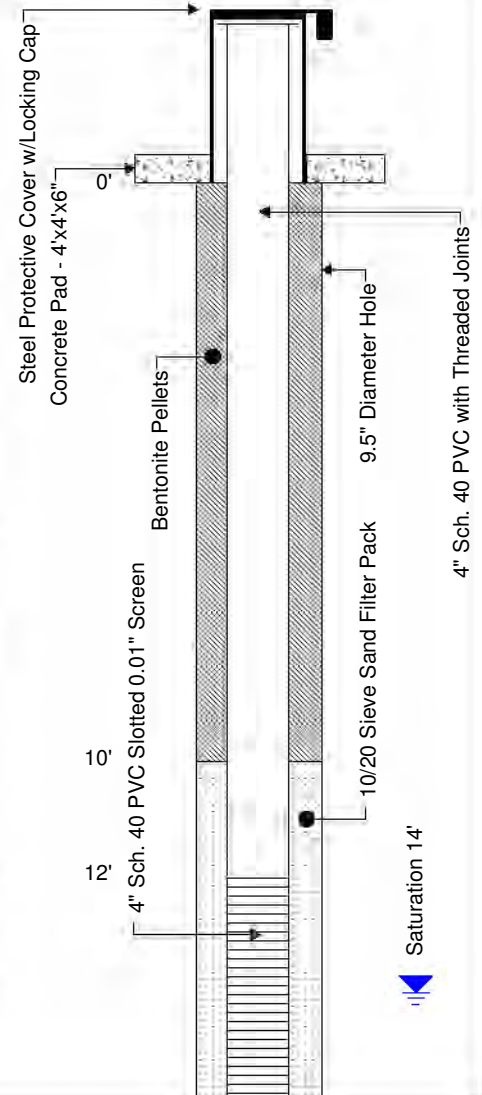
Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1	14			60	Fill (Silty Clay/Gravel) Low plasticity, stiff, dry, light brown	
3	36			70	Fill (Silty Clay) Similar to above	
5	80			90	Silty Clay (CL) Low plasticity, firm, damp, brown,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

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

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

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

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



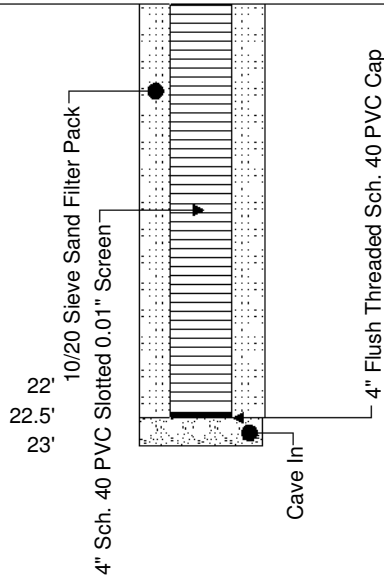


WELL INSTALLATION

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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
17	319			70	Sandy Clay (CL) Similar to above, moist, hydrocarbon odor	
19	400			-	Sandy Clay (CL) Similar to above, moist, hydrocarbon odor	
21	532			-	Sandy Clay/Clayey Sand (CL) Very fine grain, compact, moist to saturated, sheen observed in split spoon, hydrocarbon odor	
23					Total Depth = 23' BGL	
25						
27						
29						
31						
33						

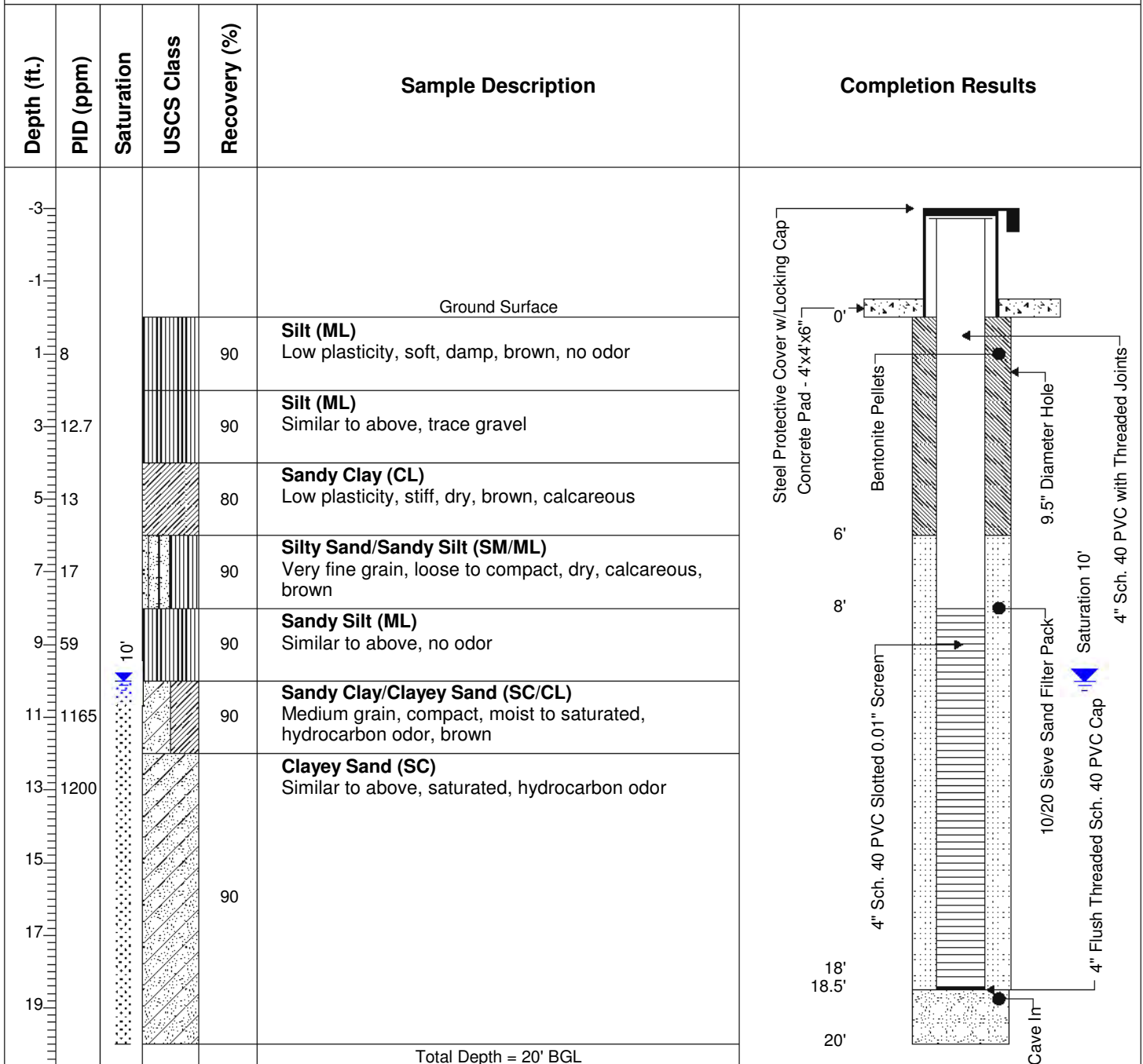


WELL INSTALLATION

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

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

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





WELL INSTALLATION

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

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

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

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

Steel Protective Cover w/Locking Cap

Concrete Pad - 4'x4'x6"

Bentonite Pellets

9.5" Diameter Hole

Saturation 6"

4" Sch. 40 PVC with Threaded Joints

4" Sch. 40 PVC Slotted 0.01" Screen

10/20 Sieve Sand Filter Pack

4" Flush Threaded Sch. 40 PVC Cap

Cave In



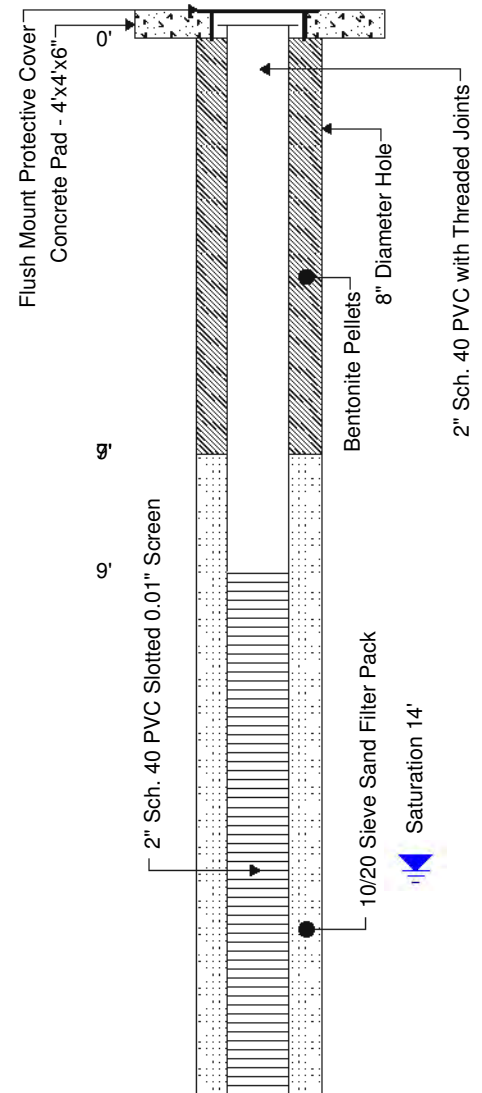
WELL INSTALLATION

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

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

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

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





WELL INSTALLATION

Well No.: MKTF-15

Start Date: 10/29/2013 09:30

Finish Date: 10/29/2013 12:15

Client: Western Refining Southwest, Inc.

Site: Gallup Refinery - Seep West of Tank 102

Job No.: UEC01809

Geologist: Tracy Payne

Driller: Enviro-Drill, Inc.

Drilling Rig: CME 75

Drilling Method: Hollow Stem Augers

Sampling Method: Five-Foot Core Barrel

Comments: N 35°29.343' W 108°25.708'; Boring ID - SB31

Total Depth: 22' bgl

Ground Water: Saturated @ 14' bgl

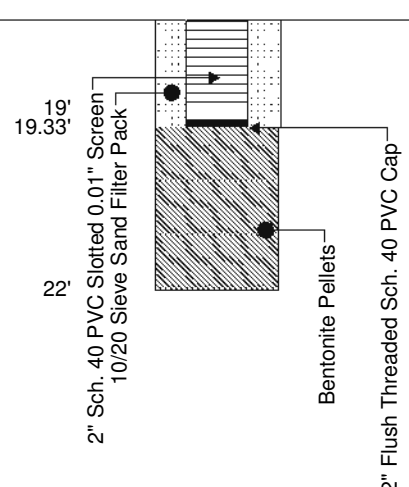
Elev., TOC (ft. msl): 6943.48

Elev., PAD (ft. msl): 6943.74

Elev., GL (ft. msl): --

Site Coordinates:

N 1,633,845.57 E 2,545,934.58

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
19				90	Sandy Silt/Silty Sand (ML/SM) Fine grain, loose to compact, moist to saturated, hydrocarbon odor, dark brown to black	
					Sandy Silt/Silty Sand (ML/SM) Similar to above, saturated in silty sand lenses, hydrocarbon odor	
21				90	Silty Clay (CL) Low plasticity, firm, damp, brown, faint odor	
					Silty Clay (CL) Similar to above, odor	
23					Total Depth = 22' BGL	
25						
27						
29						
31						
33						
35						



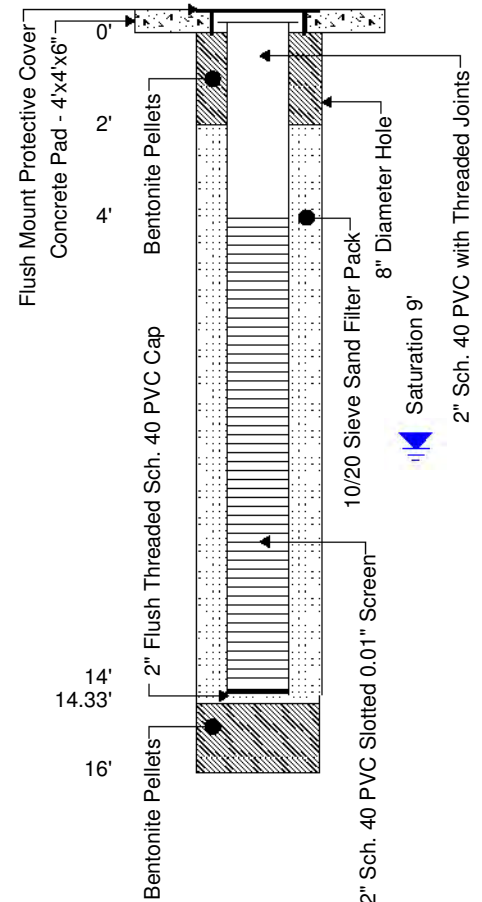
WELL INSTALLATION

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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-1					Ground Surface	
1				0	Fill (Clay/Gravel) No recovery	
3	469			10	Fill (Clay/Gravel) Similar to above	
5				0	Fill (Clay/Gravel) Similar to above	
7				0	Fill (Clay/Gravel) Similar to above	
9	1445	9'		90	Fill (Clay/Gravel) Saturated at 9' bgl, black discoloration, hydrocarbon odor	
11	1255			90	Gravelly Sand (SW) High plasticity, firm, damp, dark brown, hydrocarbon odor	
13	1412			40	Clayey Sand (SC) Similar to above, hydrocarbon odor	
15	439			80	Clayey Sand (SC) Moderate plasticity, firm, damp, brown, hydrocarbon odor	
17					Total Depth = 16' BGL	



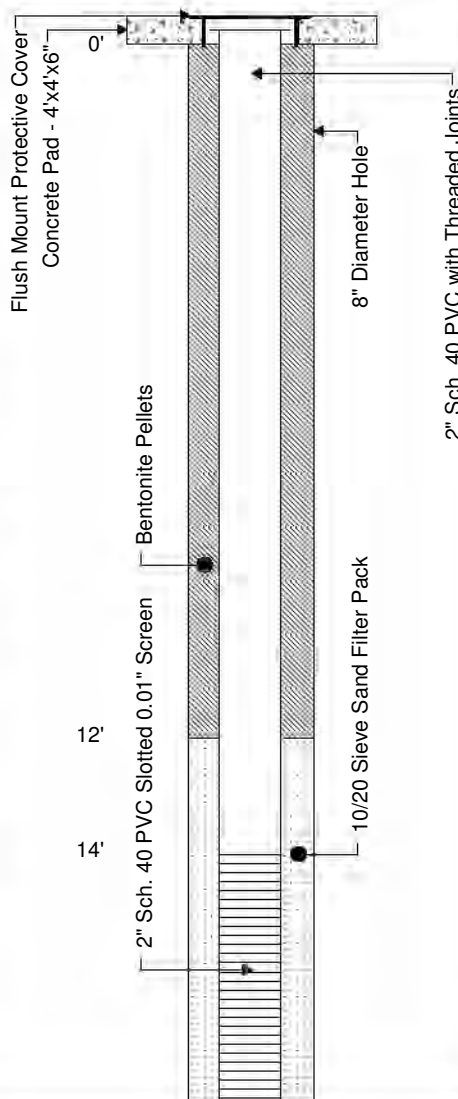


WELL INSTALLATION

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

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

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

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



WELL INSTALLATION

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

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

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

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

WELL INSTALLATION

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

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

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

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

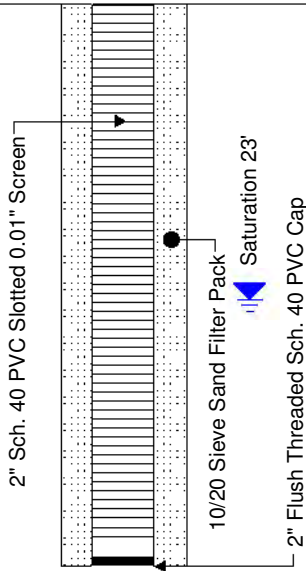
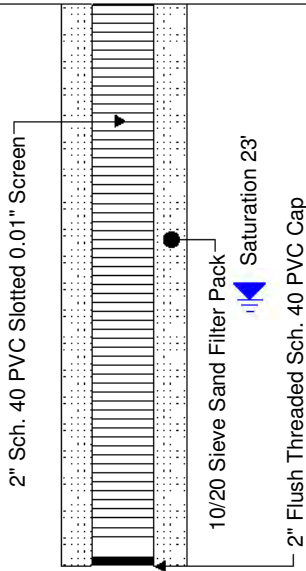


WELL INSTALLATION

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

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

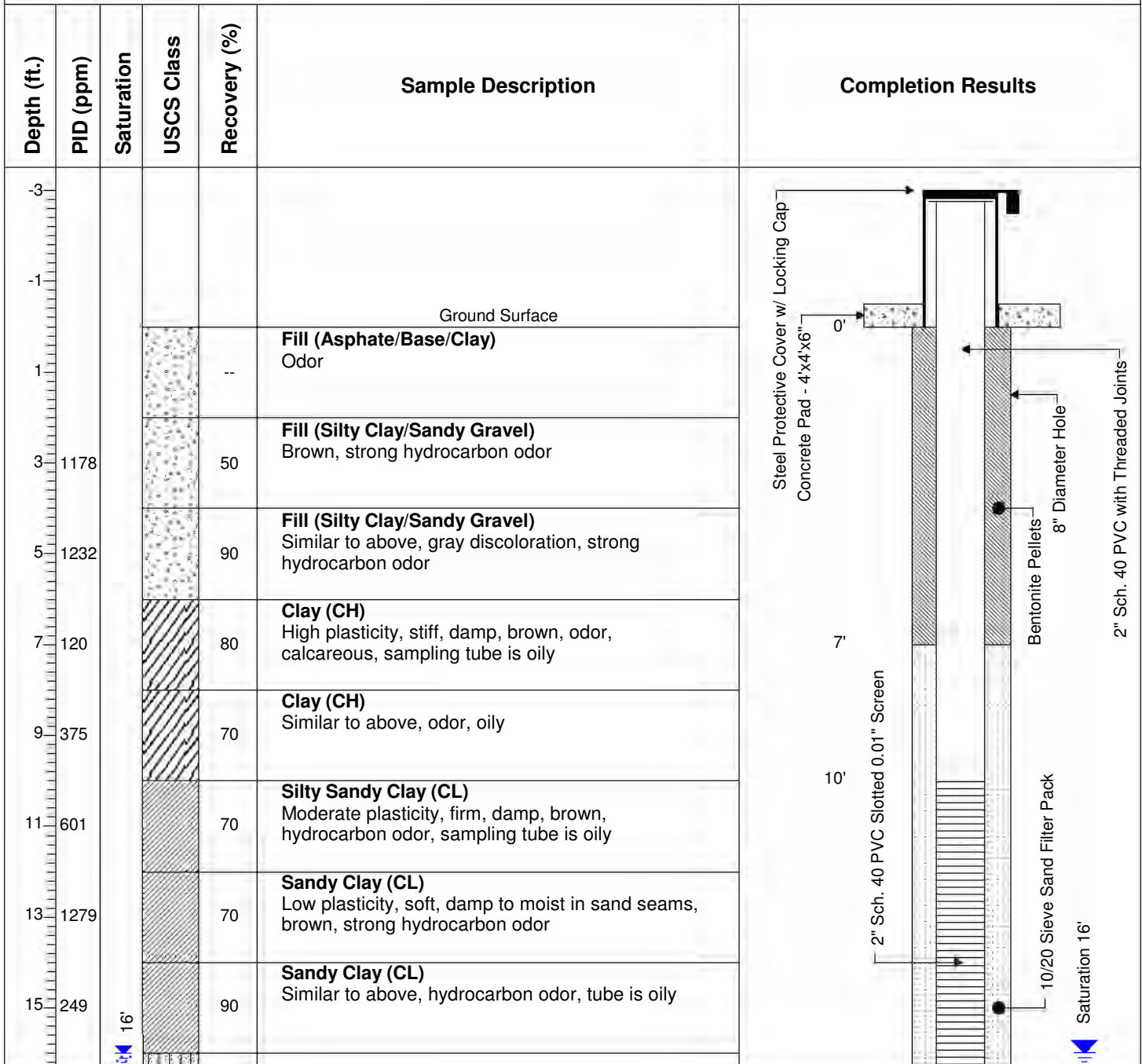
Well No.: MKTF-18
Start Date: 11/15/2013 10:00
Finish Date: 11/15/2013 15:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
112				30	Clay (CH) High plasticity, firm, damp, brown, faint odor	
20				20	Clay (CH) Similar to above	
55						
22				80	Clay (CH) Similar to above	
323					Sandy Clay/Clayey Sand (SC/CL) Fine grain, compact, very moist to saturated, brown, hydrocarbon present	
24				90	Clayey Sand (SC) Similar to above, saturated	
26					Sandy Clay (CL) Low plasticity, firm, damp, hydrocarbon odor, greenish gray	
28					Total Depth = 27' BGL	
30						
32						
34						
36						

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

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

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



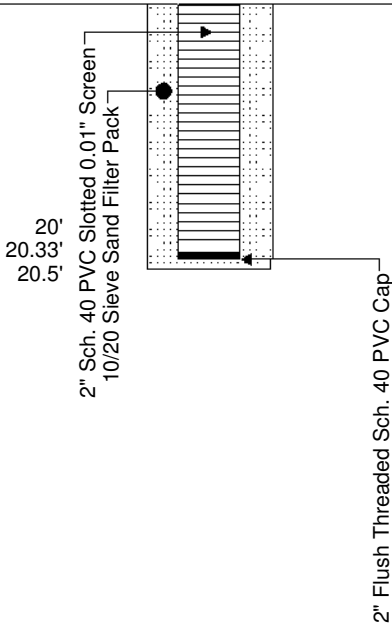


WELL INSTALLATION

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

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

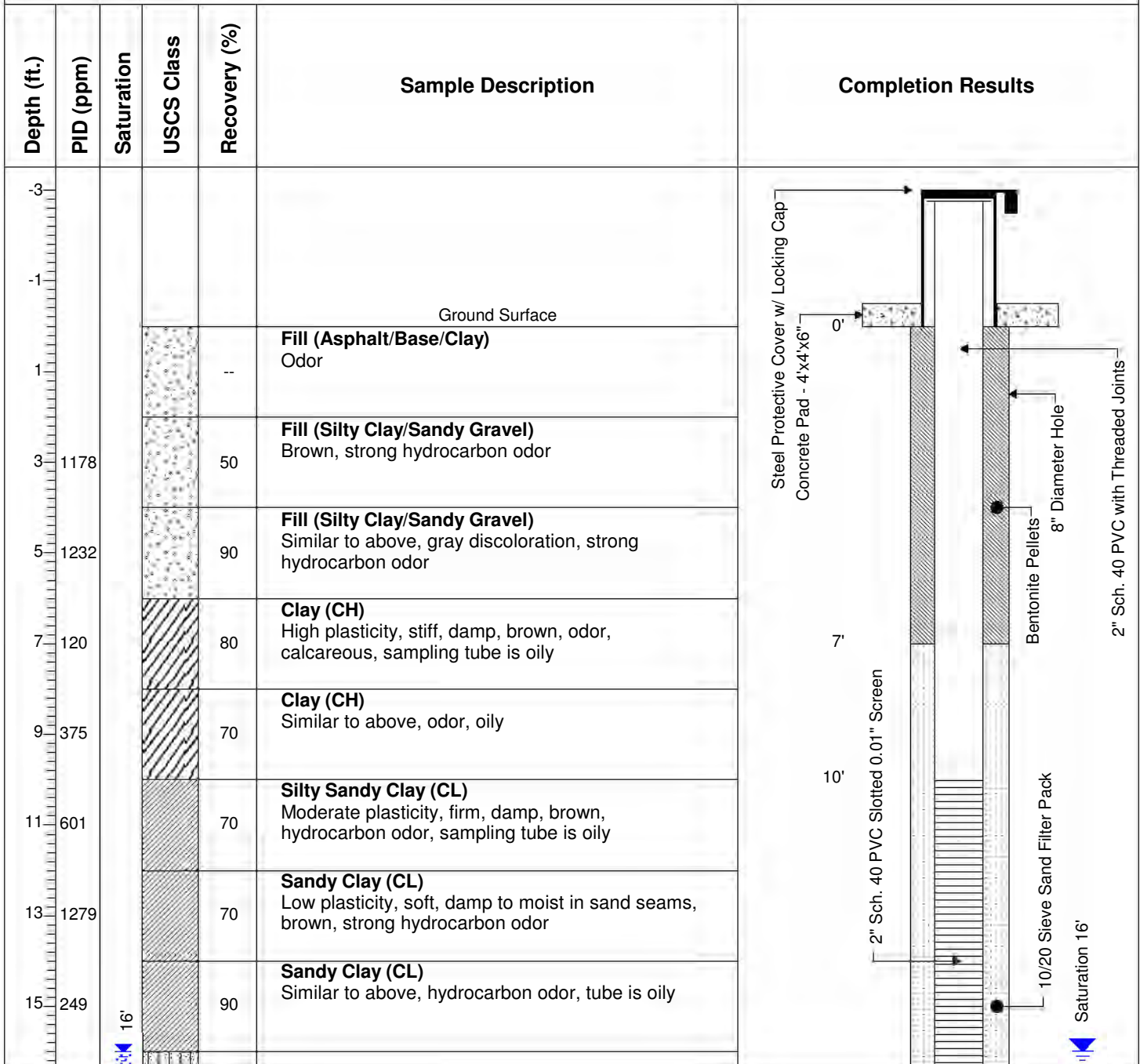
Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
18				90	Silty Sand (SM) Fine grain, loose, saturated, oily/phase-separated hydrocarbon, hydrocarbon odor, clay at base	
20				90	Silty Sand (SM) Similar to above	
					Total Depth = 20' BGL	
22						
24						
26						
28						
30						
32						
34						

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

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

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



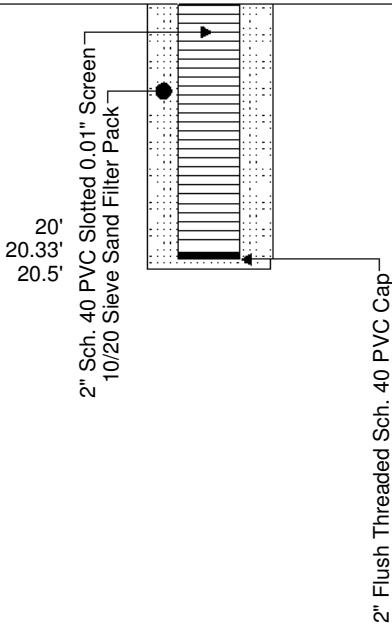


WELL INSTALLATION

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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
18				90	Silty Sand (SM) Fine grain, loose, saturated, oily/phase-separated hydrocarbon, hydrocarbon odor, clay at base	
20				90	Silty Sand (SM) Similar to above	
					Total Depth = 20' BGL	
22						
24						
26						
28						
30						
32						
34						



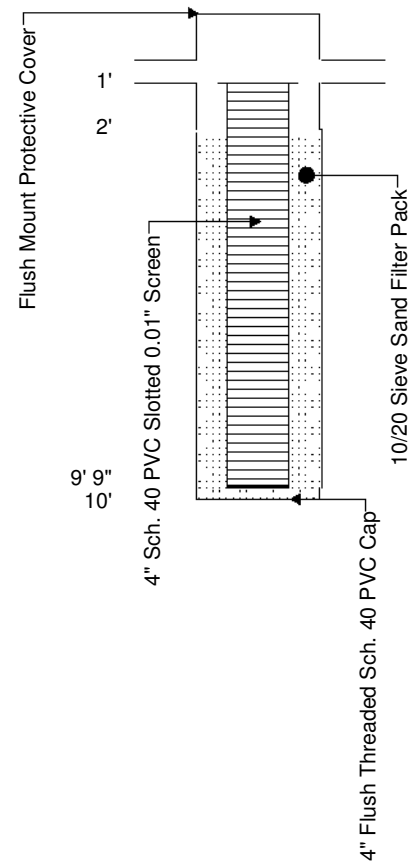
WELL INSTALLATION

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

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

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

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





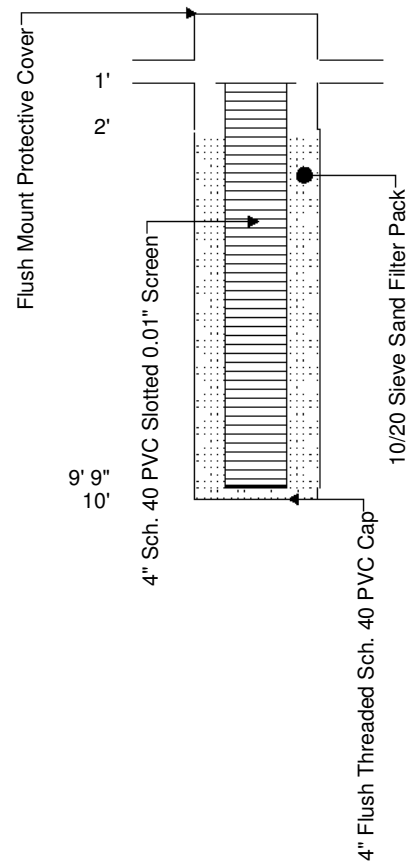
WELL INSTALLATION

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

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

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

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





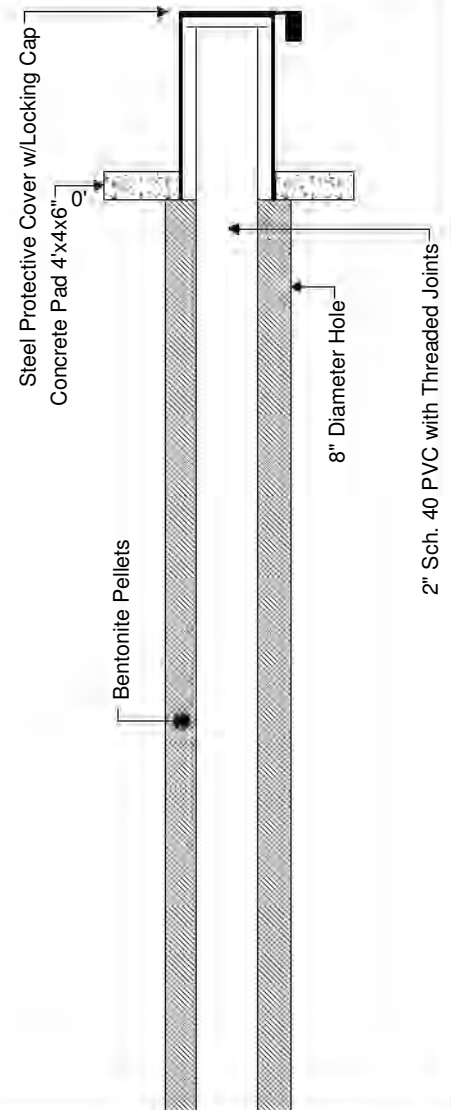
WELL INSTALLATION

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

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

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

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



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

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

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

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

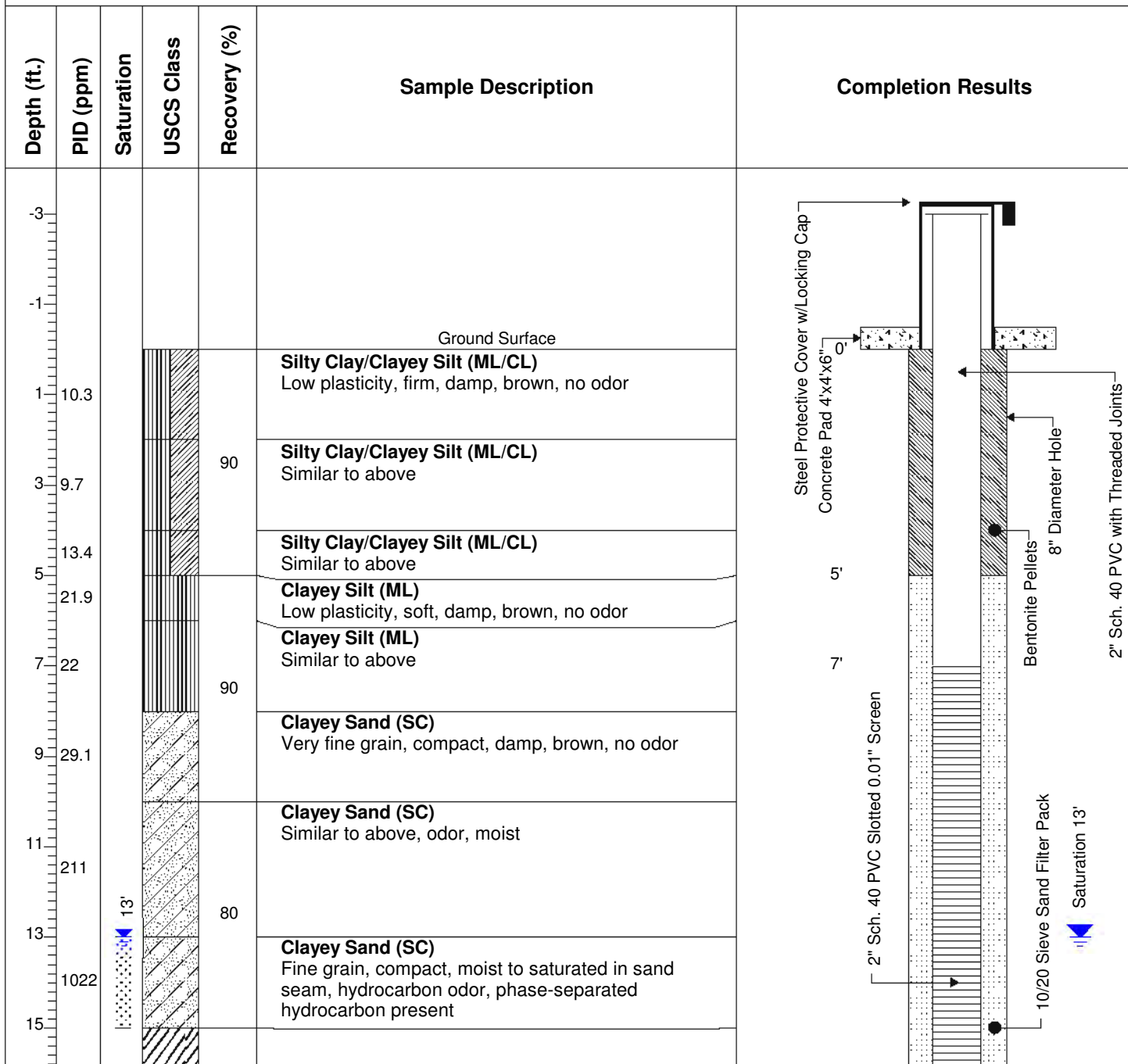


WELL INSTALLATION

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

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

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



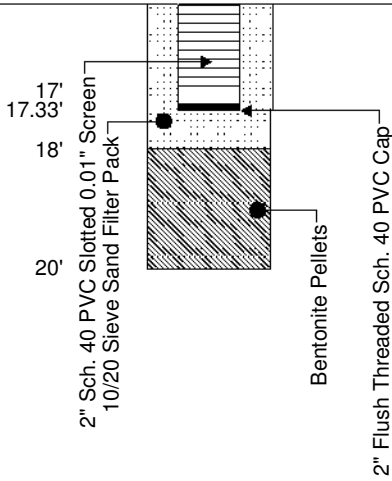


WELL INSTALLATION

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

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

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

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



WELL INSTALLATION

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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1						
1	14.1			90	Ground Surface Silt/Silty Sand (ML/SM) Very fine to fine grain, loose, dry, brown	
3	11.2			10	Silty Sand (SM) Fine grain, compact/very dense, damp, brown	
5	12.5			90	Silty Sandy Clay (CL) Low plasticity, very dense, damp, brown	
7	11.8			90	Silty Sandy Clay (CL) Similar to above	
9	14.8			60	Silty Sandy Clay (CL) Similar to above	
11	12.5			90	Silty Sandy Clay (CL) Similar to above	
13	12.8			90	Silty Sandy Clay (CL) Similar to above	
15	13.4			90	Clay (CH) High plasticity, firm, damp, brown, trace silt, no odor	

Diagram illustrating the well completion details. The well is lined with 2" Sch. 40 PVC with Threaded Joints. The casing is surrounded by an 8" Diameter Hole. The completion includes a Steel Protective Cover w/Locking Cap and a Concrete Pad 4'x4'x6". Bentonite Pellets are shown at the bottom of the well.



WELL INSTALLATION

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

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

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

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



WELL INSTALLATION

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

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

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

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	10.9			60	Fill (Silty Clay/Gravel) Low plasticity, stiff, damp, brown, no odor	
3	14.5			70	Fill (Silty Clay/Gravel) Similar to above	
5	12.9			20	Silty Clay (CL) Low plasticity, stiff, damp, brown	
7	14.5			70	Silty Clay (CL) Similar to above	
9	21.1			60	Gravelly Sand (SW) Fine to medium grain, loose, brown, saturated, odor	
11				80	Gravelly Sand (SW) Fine to medium grain, compact, brown, very moist to saturated, odor	
13				70	Clayey Sand (SC) Fine grain, compact, brown, moist to saturated in sand seams, odor	
15				80	Clayey Sand (SC) Similar to above, odor	
17					Total Depth = 16' BGL	
19						

Steel Protective Cover w/ Locking Cap

Concrete Pad 4'x4'x6"

Bentonite Pellets

2" Sch. 40 PVC with Threaded Joints

10/20 Sieve Sand Filter Pack

2" Flush Threaded Sch. 40 PVC Cap

2" Sch. 40 PVC Slotted 0.01" Screen

16' 16.33'

Saturation 8"

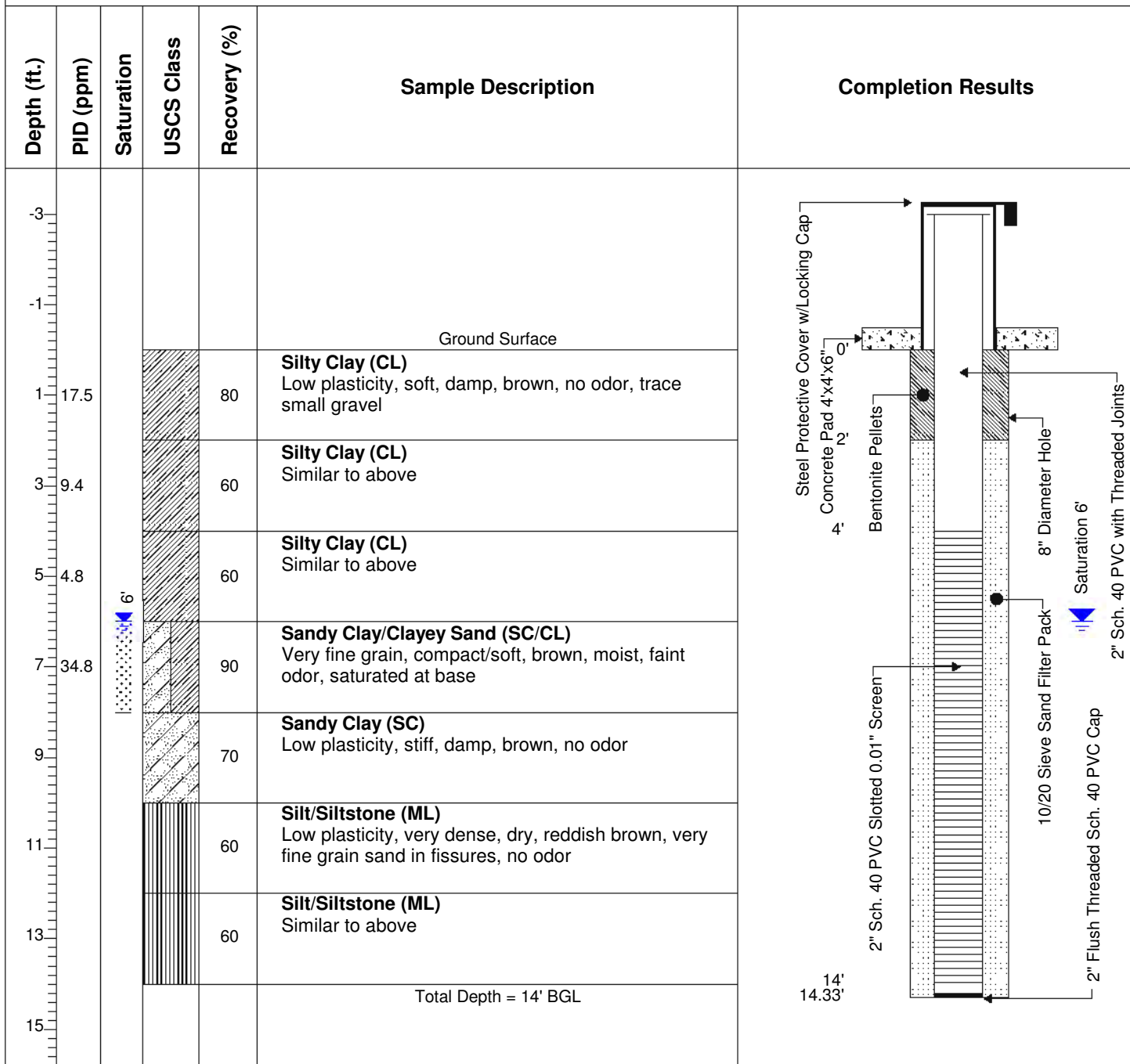


WELL INSTALLATION

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

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

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





WELL INSTALLATION

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

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

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

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



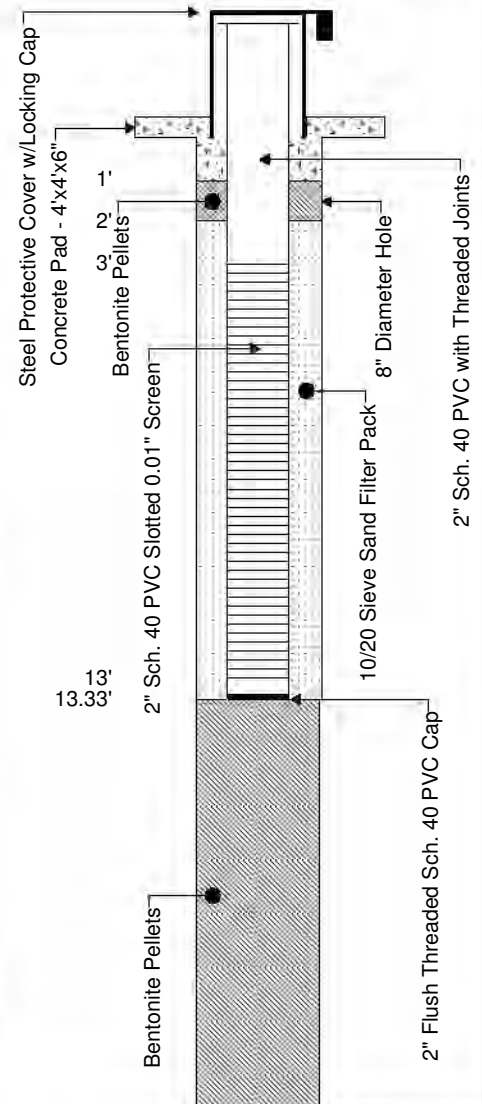
WELL INSTALLATION

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

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

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

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





WELL INSTALLATION

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

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

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

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

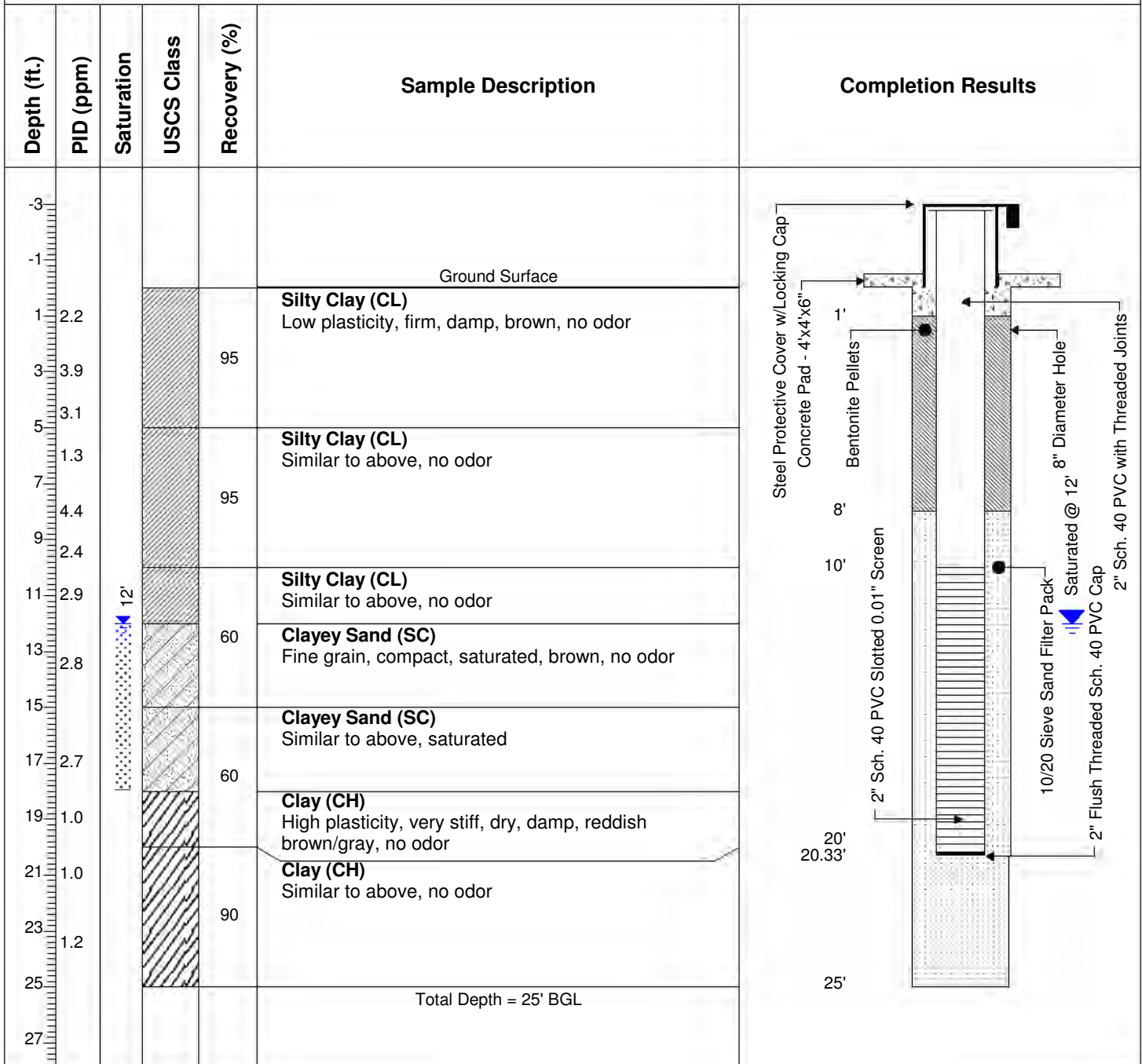
Bentonite Pellets

30'

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

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

Well No.: MKTF-29
Start Date: 4/2/2014 08:30
Finish Date: 4/2/2014 11:15



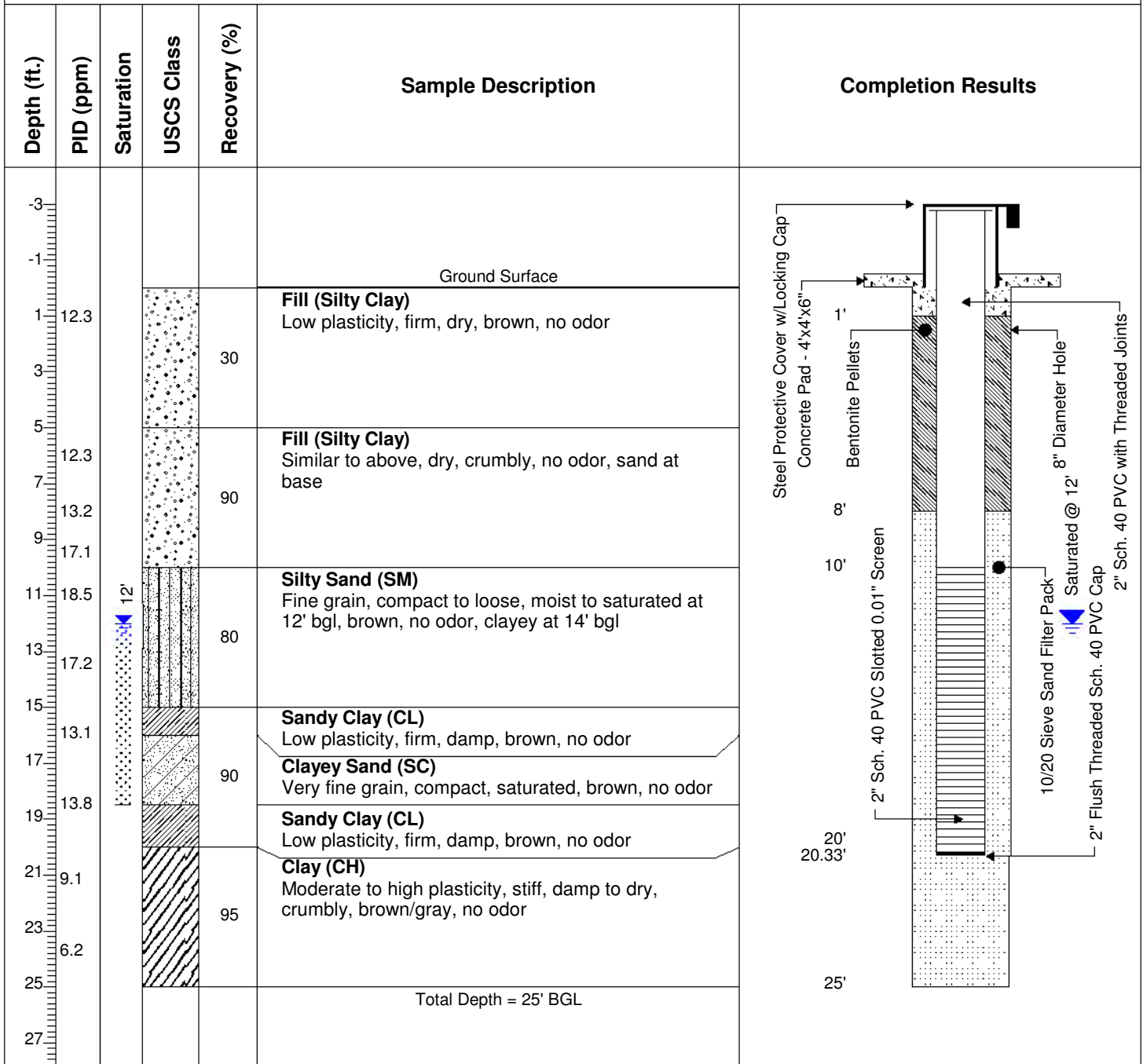


WELL INSTALLATION

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

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

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



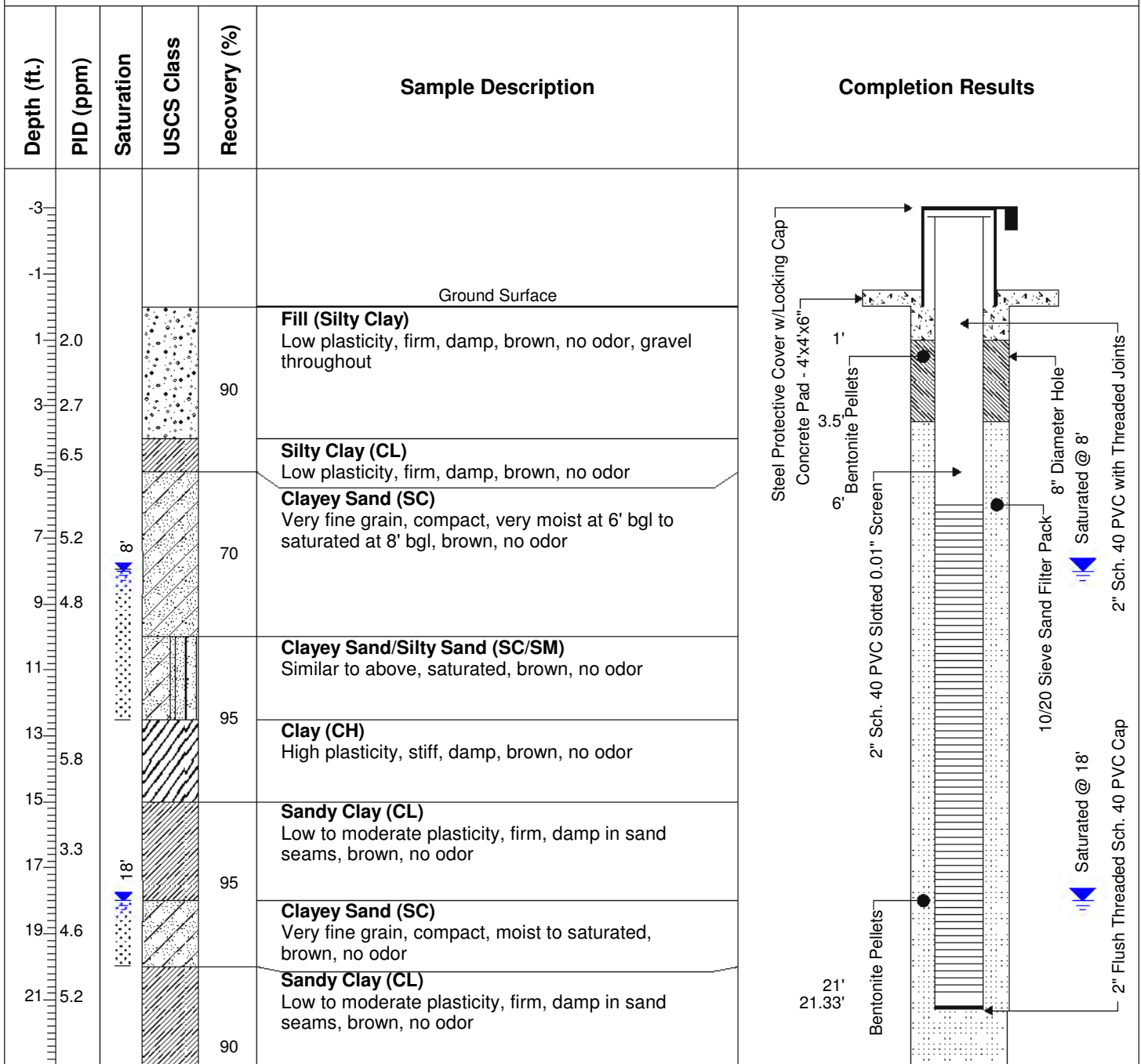


WELL INSTALLATION

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

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

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





WELL INSTALLATION

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

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

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

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



WELL INSTALLATION

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

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

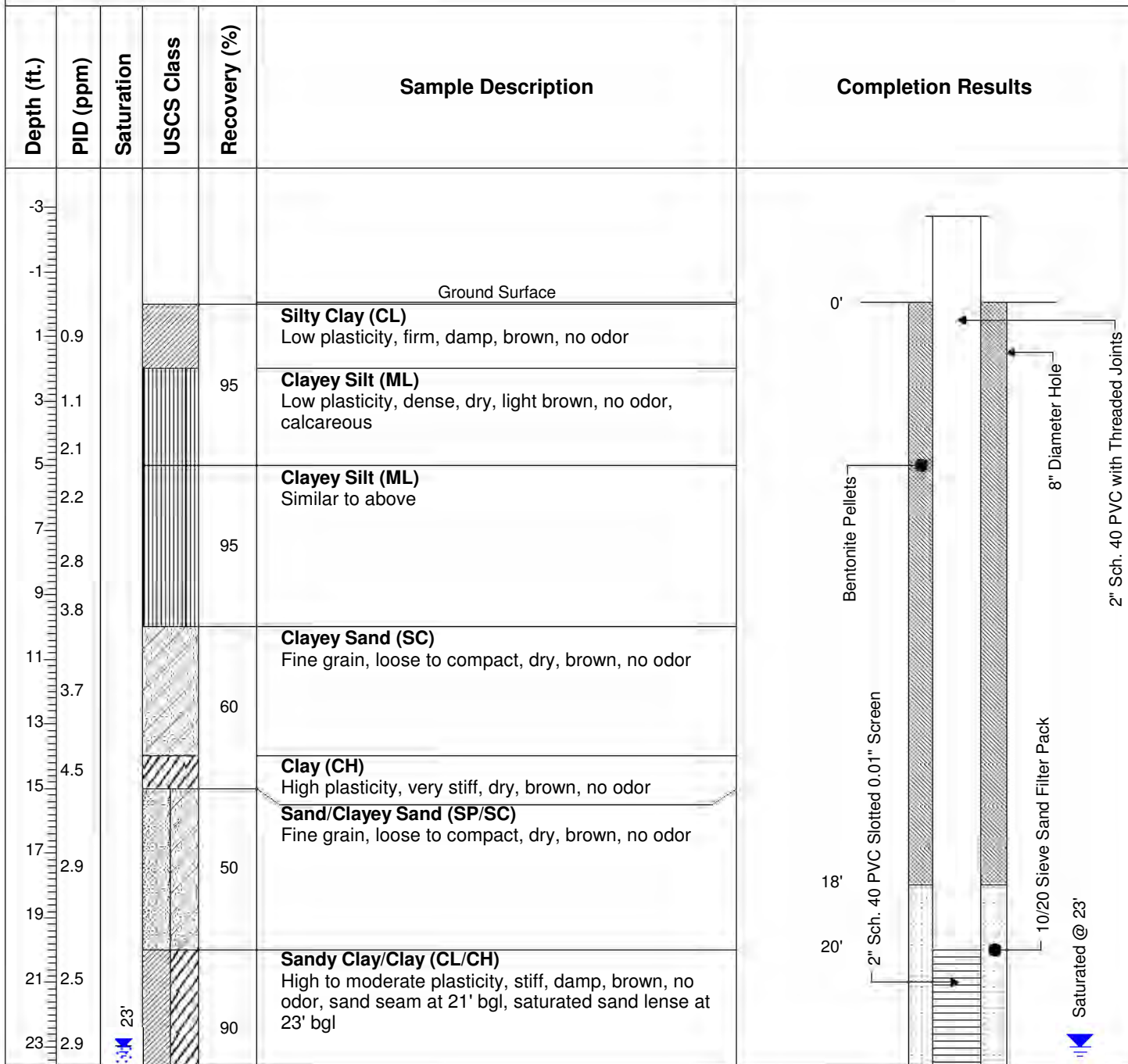
Well No.: MKTF-32
Start Date: 3/31/2014 14:40
Finish Date: 3/31/2014 16:30

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3						
-1					Ground Surface	
1	16.3			95	Clayey Silt (ML) Low plasticity, firm, dry, brown, no odor	
3	10.0					
5	8.7					
7	10.1			100	Clayey Silt/Silty Clay (ML/CL) Low plasticity, firm, dry, brown, no odor	
9	9.1					
11	13.6				Silty Clay (CL) Similar to above, damp, no odor	
13	9.3			90	Sandy Clay/Clayey Sand (SC/CL) Low plasticity, very fine grain, brown, moist, saturated at 10-11', bgl and 12.5-13.5' bgl, no odor	
15	10.9					
17	10.6			80	Silty Clay/Clay (CH) Moderate to high plasticity, firm to stiff, damp, brown, no odor	
19	14.1					
21	12.6			80	Clay (CH) Similar to above	
23						
25	10.4				Sandy Clay (SC) Moderate plasticity, firm, moist in sand seams, brown, no odor	
27					Silty Clay (CL) Low plasticity, stiff gray to greenish gray, gravelly at base, damp, no odor	
Total Depth = 25' BGL						

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

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

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





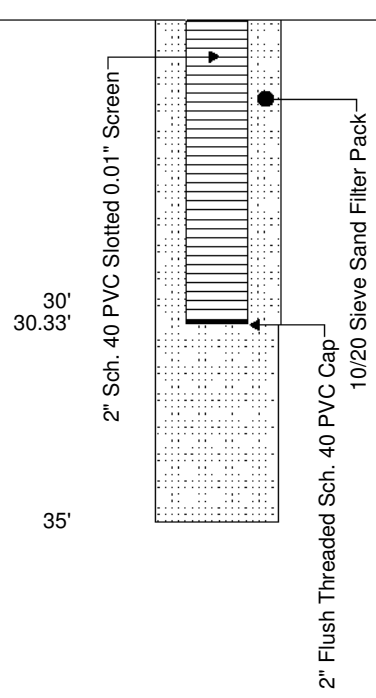
WELL INSTALLATION

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

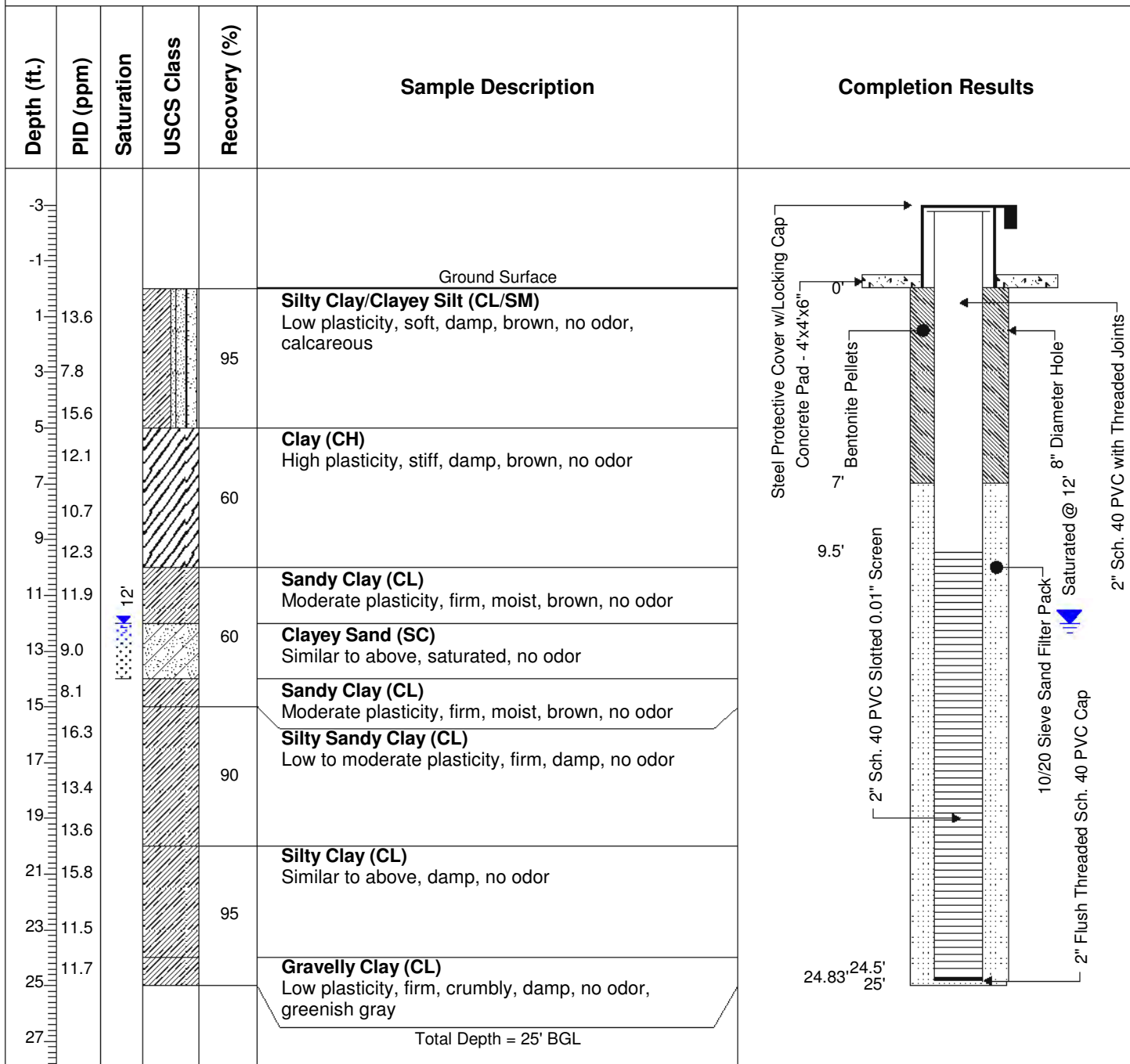
Total Depth: 35' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6939.75
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): 6936.59
Site Coordinates:
N 1633261.99 **E** 2545318.27

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

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



WELL INSTALLATION



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

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

MKTF-35

(Sheet 1 of 1)

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

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results MKTF-35
							DESCRIPTION	
-2								
-1								
0					100		ASPHALT/BASE,	Flush Mount Completion 2'x2'x6"
1	4.5			CL	100		SILTY CLAY, low, very stiff, damp, brown,	
2								
3	46.6			CL	20		SILTY CLAY, SIMILAR TO ABOVE (STA), odor, gravel present,	Bentonite Pellets
4								2" Sch 40 PVC Casing Threaded Joints
5	95			CL/SP	90		SILTY CLAY/SAND/GRAVEL, low, damp, reddish brown, odor, very coarse grain sand, 1/4" to 1" gravel, odor,	
6								
7	64			CL	80		SILTY CLAY, low, firm, damp, reddish brown, odor, occasional gravel,	
8								
9	78			CL/SP	90		SILTY CLAY/SAND/GRAVEL, SIMILAR TO 4-6', damp to moist, odor,	
10		▼						
11	1790			CL/SP	90		SILTY CLAY/SAND/GRAVEL, SIMILAR TO ABOVE (STA), saturated, hydrocarbon (hc) odor,	10/20 Sieve Sand Filter Pack
12				CL	90		SILTY CLAY, low, stiff, damp, reddish brown, light grey clay @ base, hc odor,	2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
13	2400			CL/SC	90		SILTY CLAY/SANDY CLAY, low, firm to stiff, damp, grey, hc odor, sand/silt varies across interval,	
14								
15	745			CL	50		SANDY GRAVELLY CLAY, STA, damp, grey, brown @ base, hc odor,	
16								
17	37			CL	90		CLAY, mod, very stiff, damp, brown and grey, faint odor.	2" Flush Threaded Sch 40 PVC Cap
18								
19								

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

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

MKTF-36

(Sheet 1 of 1)

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

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results MKTF-36
							DESCRIPTION	
-2								
-1								
0					100		ASPHALT/BASE,	Flush Mount Completion 2'x2'x6"
1	812			CL	90		SANDY CLAY, low, stiff, dry, tan, no odor, gravel throughout,	Bentonite Pellets
2								
3	276			CL	60		SILTY CLAY, low, very stiff, dry, brown, hydrocarbon (hc) odor,	2" Sch 40 PVC Casing Threaded Joints
4								
5	1700			CL	60		SILTY CLAY, SIMILAR TO ABOVE (STA), trace sand/gravel, hc odor,	
6								
7	2411			CL/SP	90		SILTY CLAY/SAND/GRAVEL, low, firm, damp, tan, very coarse sand, 1/4" to 1" gravel, hc odor, moist to very moist in seams,	
8								
9	2278			CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, moist, fluid in top of sampling spoon, strong hc odor, trace phase separated hydrocarbon (psh),	
10		▼						10/20 Sieve Sand Filter Pack
11	1879			CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, saturated, psh,	2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
12				CL/SP	90		SILTY CLAY/SAND/GRAVEL, STA, saturated, psh,	
13	405			CL	90		SILTY CLAY, low, stiff, damp, brown, hc odor,	
14							SILTY CLAY, STA, damp, hc odor.	
15	450			CL	90			2" Flush Threaded Sch 40 PVC Cap
16								

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

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

MKTF-37

(Sheet 1 of 1)

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

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results MKTF-37
							DESCRIPTION	
-2								
-1								
0								
1	69				40		ASPHALT/GRAVEL BASE, CLAY, very stiff, brown, damp, faint odor,	
2								
3	367		CL		50		SILTY CLAY, low, very stiff, brown, damp, odor, gravel present,	
4								
5	355		CL/SP		60		SILTY CLAY/SAND/GRAVELLY, low to firm, damp, brown with sand/gravel, odor,	
6								
7	1790		CL/SP		80		SILTY CLAY/SAND/GRAVELLY, SIMILAR TO ABOVE (STA), odor,	
8								
9	2140		CL		90		SILTY CLAY, low, soft, moist to very moist, brown, strong odor,	
10			SW/GW		90		SANDY GRAVEL/GRAVELLY SAND, coarse to very coarse grain, compact, very moist, odor, tan,	
11	404		CL/SP		90		SILTY CLAY/SAND/GRAVEL, low to firm, damp, brown with coarse sand & gravel, odor,	
12								
13	454		CL		20		SANDY CLAY, low, soft, damp, odor, light grey, gravel @ base,	
14								
15	660		CL		50		SANDY CLAY, low, very stiff, damp, odor, light grey,	
16								
17	340		CL		30		SANDY CLAY, STA,	
18								
19	344		CL		30		SANDY CLAY, STA,	
20								
21	421		CL		60		SANDY CLAY, STA,	
22			SH		60		SHALE, CLAYEY, light purple, damp, very stiff, odor,	
23	375		SH		30		SHALE, STA,	
24								
25								

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

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

MKTF-38

(Sheet 1 of 1)

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

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	Completion Results
DESCRIPTION							MKTF-38	
-2								
-1								
0					100			
1	217			CL/SP	90			Flush Mount Completion 2"x2"x6"
2								Bentonite Pellets
3	70			CL/SP	90			2" Sch 40 PVC Casing Threaded Joints
4								
5	42			CL/SP	90			
6								
7	20			CL/SP	90			
8		▼						
9	9			CL/SP	90			
10								
11	7			GW	90			
12				CL	90			
13				GW	90			10/20 Sieve Sand Filter Pack
14	8							2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
15								
16	6			GW	10			
17								
18	4			CL	50			
19								
20	5			CL	60			2" Flush Threaded Sch 40 PVC Cap
21								

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

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

MKTF-39

(Sheet 1 of 1)

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

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

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

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

MKTF-40

(Sheet 1 of 1)

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

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Saturation ▼ Saturation	DESCRIPTION	Completion Results
-2									MKTF-40 Steel Protective Cover Concrete Pad - 4'x4'x6" 2" Sch 40 PVC Casing Threaded Joints Bentonite Pellets 10/20 Sieve Sand Filter Pack 2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints 2" Flush Threaded Sch 40 PVC Cap
-1									
0								CLAY, mod, stiff, damp, brown, no odor, gravel,	
1	0.8			CL	100			CLAY, SIMILAR TO ABOVE (STA), gravel,	
2									
3	0.1			CL	90			CLAY, STA,	
4									
5	0.7			CL	80			SANDY CLAY, low, firm to soft, damp, brown, no odor, moist 7-8' ,	
6									
7	1.8			CL	90			SANDY CLAY, STA, damp to moist,	
8									
9	2.0			CL	70			SANDY CLAY/CLAYEY SAND, STA, moist to saturated in clayey sand seams, no odor,	
10		▼							
11	0.6			CL/SC	90			SANDY SILTY CLAY, low, stiff, damp, brown, no odor, moist to saturated in sand seams,	
12									
13	1.5			CL	20			SANDY CLAY/CLAYEY SAND, low, firm to soft, moist to saturated in clayey sand seams,	
14									
15	2.2			CL/SC	80			SANDY CLAY/CLAYEY SAND, STA, moist to saturated,	
16									
17	2.2			CL/SC	80			SILTY CLAY, low, very stiff, damp, reddish brown and grey, no odor,	
18				CL	90			SILTY CLAY, STA,	
19	2.5			CL	80				
20									
21	2.6			CL	50			SILTY CLAY, STA,	
22									
23									

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

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

MKTF-41

(Sheet 1 of 2)

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

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

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

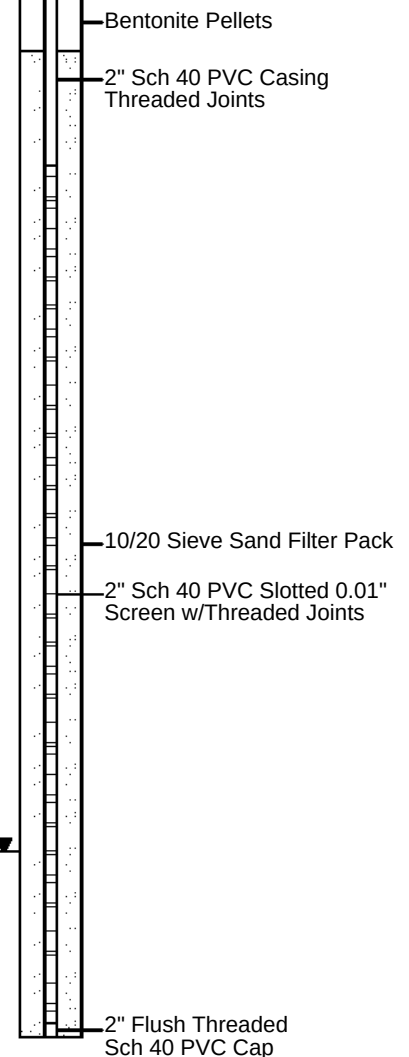
Geologist : Tracy Payne
Driller : C. Ortiz
Drilling Rig : CME 75
Drilling Method : Hollow Stem Auger 7.5"
Sampling Method : Split Spoon 2" Dia, 2' Long
Comments :
Total Depth : 37.25'
Ground Water : 34'
Start Date : 11/13/2014
Finish Date : 11/14/2014

MKTF-41

(Sheet 2 of 2)

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

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



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

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

MKTF-42

(Sheet 1 of 1)

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

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

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

DiSorbo Consulting, LLC

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

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

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

MKTF-43

(Sheet 1 of 1)

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

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	Water Level Depth to water - 6.95 ftboc 11-18-14 (not known to be static)	DESCRIPTION	Completion Results
-2									MKTF-43
-1									Steel Protective Cover
0									2" Sch 40 PVC Casing Threaded Joints
1	3.6			CH	100			CLAY, high, stiff, damp, brown, no odor,	Concrete Pad - 4'x4'x6" Bentonite Pellets
2									
3	4.6			CH	50			CLAY, SIMILAR TO ABOVE (STA), moist in seams,	
4									
5	4.2			CH	90			CLAY, STA, moist in seams,	2" Sch 40 PVC Slotted 0.01" Screen w/Threaded Joints
6									
7	4.6			CH	90			CLAY, STA, reddish brown,	10/20 Sieve Sand Filter Pack
8									
9	4.0			CL	90			SILTY CLAY, low, soft, damp, reddish brown, crumbly, no odor, trace grey clay @ 9.5',	
10									
11	3.3			CL	80			SILTY CLAY, STA, stiff,	
12									
13	3.8			CL	60			SILTY CLAY, STA, very stiff,	2" Flush Threaded Sch 40 PVC Cap
14									
15	3.8			CL	80			SILTY CLAY, STA, very stiff, calcareous,	
16									
17	2.9			CL	80			SILTY CLAY, STA,	
18									
19	3.1			CL	50			SILTY CLAY, STA,	
20									
21	3.1			CL	60			SILTY CLAY, STA,	Bentonite Pellets
22									
23	3.2			CL	10			SILTY CLAY, STA,	
24									
25	3.3			CL	30			SILTY CLAY, STA, sandstone seam 24.50',	
26									
27	3.2			CL	30			SILTY CLAY, STA.	
28									
29									

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Austin, Texas 78759
512-693-4190

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

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

MKTF-44

(Sheet 1 of 2)

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

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Water Level Depth to water - 48.80 fbtoc 11-17-14 (not known to be static)	DESCRIPTION	Completion Results	
								MKTF-44	
-2									
-1									
0									Steel Protective Cover
1	6.3			CH	100	CLAY, high, very stiff, damp, brown, no odor,			Concrete Pad - 4'x4'x6"
2									
3	8.3			CH	80	CLAY, SIMILAR TO ABOVE (STA),			
4									
5	8.2			CH	70	CLAY, STA,			
6									
7	8.6			CH	90	CLAY, STA,			
8									
9	8.2			CH	80	CLAY, STA,			
10									
11	7.9			CH	90	CLAY, STA, trace silt,			
12									
13	7.8			CH	90	CLAY, high, very stiff, damp, brown, no odor,			
14									
15	6.5			CH	10	CLAY, STA,			
16									
17	7.1			CH	80	CLAY, STA,			
18									
19	7.6			CL	70	SANDY SILTY CLAY, low, stiff, damp, light brown, no odor, gravel @ base, soft/crumbly 19-19.5' with lesser amount of clay,			
20									
21	5.5			CL	80	SILTY CLAY, STA with sand seams/sandstone fro 20.5-22, dry, crumbly,			
22									
23	6.4			CL	80	SANDY SILTY CLAY, low, stiff, dry to damp, light brown, no odor,			
24									
25	4.8			CL		GRAVELLY CLAY, STA, with gravel,			

Steel Protective Cover

Concrete Pad - 4'x4'x6"

2" Sch 40 PVC Casing Threaded Joints

Grout

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

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

MKTF-44

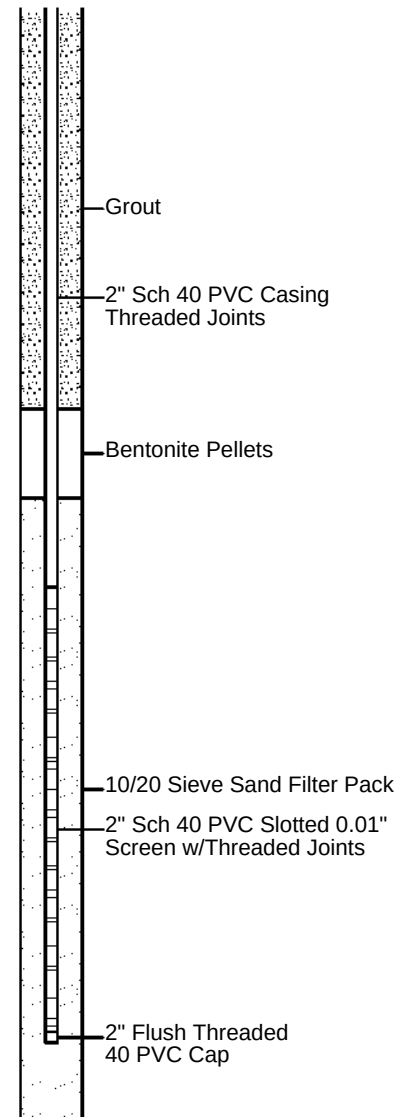
(Sheet 2 of 2)

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

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

Completion Results

MKTF-44



1010 Travis Street
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DiSorbo Consulting, LLC

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512-693-4190

Appendix B

Investigation Derived Waste Management Plan

Investigation Derived Waste (IDW) Management Plan

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

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

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

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



SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT
Hazardous Waste Bureau

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



BUTCH TONGATE
Cabinet Secretary
BRUCE YURDIN
Acting Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

November 13, 2018

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

**RE: APPROVAL
EXTENSION REQUEST FOR SUBMITTAL OF REVISIONS TO 2016
HYDROCARBON SEEP INTERIM MEASURES REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-15-002**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) has received the Western Refining Southwest, Inc., Gallup Refinery (the Permittee) extension request letter (Request) dated October 31, 2018 and received November 7, 2018. NMED's Disapproval regarding the *2016 Hydrocarbon Seep Interim Measures Report*, dated February 1, 2018 required submittal of a revised Report no later than October 1, 2018. The due date specified in the Request was September 30, 2018; however, the correct date was October 1, 2018. The due date passed prior to the submittal of this Request. The Permittee must submit extension requests prior to the due date. The Permittee requests to extend the due date for submittal of the revised report until December 31, 2018.

Section I.M (Provisions Governing Extensions of Time) of the 2009 RCRA Permit states that "the Permittee may seek an extension of time in wish to perform a requirement of this Permit, for good cause ... " The Permittee requests an extension to "gather the data necessary to respond to NMED comments." NMED hereby grants the extension request.

Mr. Moore
November 13, 2018
Page 2

If you have any questions regarding this correspondence, please contact Michiya Suzuki at (505) 476-6059.

Sincerely,

A handwritten signature in blue ink, appearing to read "John E. Kielling", with a large, stylized loop at the end.

John E. Kielling
Chief
Hazardous Waste Bureau

cc: K. Van Horn NMED HWB
M. Suzuki NMED HWB
C. Chavez OCD
L. King EPA Region 6

File: Reading File and WRG 2018 File
HWB-WRG-15-002

November 7, 2018

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

**RE: RESPONSE TO DISAPPROVAL
HYDROCARBON SEEP INTERIM MEASURES 2018 2ND QUARTER STATUS REPORT
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-18-006**

Dear Mr. Kieling:

Western Refining Southwest, Inc. ("Western") (aka Marathon Petroleum Company, LP) is in receipt of your letter of October 5, 2018, which provided comments on the referenced report, dated July 30, 2018. The following responses address each of your comments and provide a cross-reference to associated revisions to the Report.

In addition, your letter notes that responses had not yet been received by NMED on October 5, 2018 (date of your letter) to address previous comments in the March 2, 2018 and May 25, 2018 *Approval with Modifications* letters. The response to the March 2, 2018 letter was submitted on September 30, 2018 and the response to the May 25, 2018 letter was provided on October 25, 2018.

NMED Comment 1

In the *Activities Conducted During Second Quarter 2018* Section, the Permittee states, "[r]ecovery was discontinued at the retention ditch, which was previously excavated north of the standpipes (S1-S6), as product was no longer observed to be entering the retention ditch." The Report includes a table showing the recovery volumes from the retention ditch. According to the table, 20 gallons of oil were recovered from the retention ditch at the last pumping event of the 2018 1st quarter (March 22, 2018). The volume of recovered oil (20 gallons) was consistent with the recovery volumes previously recorded. During the entire 2018 2nd quarter, the recovery volumes for water/oil mixture and oil were recorded as zero, indicating that no pumping event took place. The sudden disappearance of oil in the 2018 2nd quarter must be documented by photographs of the retention ditch showing groundwater without a visible oil sheen. Include the photographs in the revised Report. In addition, discuss whether the Permittee intends to keep the recovery ditch open in the future in the revised Report.

Gallup Refinery Response: Photographs of the retention ditch and nearby area have been included with the revised Report. The current plan is to leave the retention ditch open to monitor whether any recoverable hydrocarbons return to the ditch. As NMED notes below, there may be temporary conditions causing the product to not enter the ditch that may chance again in the future.

NMED Comment 2

In the *Activities Conducted During Second Quarter 2018* Section, the Permittee states, "[a]pproximately 9 gallons of [separate phase hydrocarbons] SPH and 28,491 gallons of groundwater

were recovered during the second quarter, which represents a significant reduction of SPH from 153 gallons recovered during the last quarter (1st Qtr 2018)," and "[t]he reduction in the volumes of SPH recovered in the second quarter of 2018 as compared to the previous quarterly volumes is not attributed to any changes in the methods used to estimate the recovery volumes." The reduction of recovered SPH volume may be caused by (1) apparent reduction of SPH within the soil matrix or (2) changes in the depth to groundwater (DTW). The SPH column will appear thinner when groundwater elevations increase while SPH column will appear thicker when groundwater elevations decrease. The recoverable SPH volume will easily fluctuate depending on the DTW; however, SPH volume present within soil matrix is often unchanged. In the revised Report, include a table that compares the measured DTW for monitoring wells located in the vicinity of the standpipes and retention ditch during 1st, 2nd and 3rd quarters of 2018.

Gallup Refinery Response: A table has been included that shows fluid level measurements (2016 through 3rd Quarter 2018) for MKTF wells in the area of the sumps and retention ditch that have contained SPH. The data is also presented in a graph. Overall, the measured thickness of SPH has decreased in most wells with the exception of MKTF-06, which showed a decrease through March 2017 and then an increase with the thickness stabilizing in February 2018. Measurable SPH first appears in September 2016 in MKTF-26 and then decreases by March 2017 with measurements stable since that time without a noticeable decline. Also presented is the potentiometric surface measured in the same wells. In some cases, there does appear to a possible correlation between the potentiometric surface and the measured SPH thickness, such as shown in well MKTF-06, where the measured SPH thickness increase as the potentiometric surface decreases.

NMED Comment 3

In the *Activities Conducted During Second Quarter 2018* Section, the Permittee states, "[n]ew dye tracer test were conducted related to an assessment of the sanitary lagoon, which is located west of the hydrocarbon seep area, and this information is presented under [separate] cover, as it was not focused on the hydrocarbon seeps." Provide a reference to the document that reports the results of new dye tracer test in a response letter. The hydrocarbon seep area may coincide with the location of the underground sewer pipe extending to the sanitary lagoon. The pipe may be a conduit for SPH. Propose to investigate whether the hydrocarbon seep area coincides with the location of the underground sewer pipe in the revised Report.

Gallup Refinery Response: The referenced document is the February 1, 2018 letter with reference to *Sanitary Lagoon Investigation*. NMED has already requested an Investigation Work Plan for the Sanitary Lagoon Area, including the underground sewer pipeline. The Investigation Work Plan was first submitted to NMED in May 2018, revised per NMED comments received in August 2018, and subsequently resubmitted in October 2018. We believe that implementation of that Investigation Work Plan will address this comment.

NMED Comment 4

In the *Activities Planned for Third Quarter 2018* Section, the Permittee states, "Western will continue current recovery operations at the standpipe sumps and the retention ditch, if hydrocarbons are present, using a vacuum truck to pump SPH and groundwater from each of the sumps and the downstream retention ditch." NMED has not received recent data regarding SPH levels in the MKTF wells. Discuss any correlation between the reduction in recovery volume and groundwater and SPH

levels in the MKTF wells during 1st, 2nd and 3rd quarters of 2018 in the revised Report. If SPH levels remains unchanged in the MKTF wells while the recoverable SPH volume significantly changes in the standpipes and retention ditch, a work plan that addresses alternate method for recovering SPH is warranted. Propose to submit the work plan in the revised Report, as necessary.

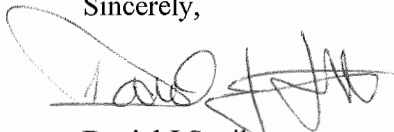
Gallup Refinery Response: A table showing the fluid level measurements in the nearby MKTF wells has been included to address comment No. 2 above. A discussion on any correlation between the reduction in recovery volumes and fluid levels is included in the first bulleted text of the revised quarterly report.

You will please find enclosed a revised Report submitted as two bound hard copies and an electronic version. In addition a red-line strikeout version in electronic format showing where all revisions have been made is included on a CD. If you have questions or comments, please contact Brian Moore at 505-726-3745.

Certification

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

Sincerely,



Daniel J Statile
VP Refining

cc K. Van Horn NMED HWB
C. Chavez OCD

**QUARTERLY STATUS REPORT
HYDROCARBON SEEP INTERIM MEASURES
WESTERN REFINING SOUTHWEST, INC – GALLUP REFINERY
Second Quarter 2018 (Revised November 2018)**

Activities conducted during second quarter 2018

- Source Control – Western continued to remove separate-phase hydrocarbon (SPH) and groundwater from the standpipe sumps (S1 - S6). Approximately 9 gallons of SPH and 28,491 gallons of groundwater were recovered during the second quarter, which represents a significant reduction in SPH from 153 gallons recovered during the last quarter (1st Qtr 2018). The percent of SPH recovered of the total volume was approximately, 0.03% which is significantly less than the previous quarter of 0.16%. This represents a fairly continuous reduction in the amount of SPH recovered since 2016. Recovery was discontinued at the retention ditch, which was previously excavated north of the standpipes (S1-S6), as product was no longer observed to be entering the retention ditch.

The reduction in the volumes of SPH recovered in the second quarter of 2018 as compared to the previous quarterly volumes is not attributed to any changes in the methods used to estimate the recovery volumes. The reduction in recovery volumes as compared to previous quarters is reflected the measured SPH thickness in nearby monitoring wells (see the enclosed table and graphs showing fluid level measurements). For example, the SPH thickness in MKTF-01, which is immediately west of the sumps, was measured at 1.5 feet in September 2016 vs. 0.30 feet in April 2018. Up-gradient of sumps, at MKTF-03, the measured SPH thickness decreased from 4.28 feet in June 2016 to 0.92 feet in April 2018. Further away from the sumps and retention ditch, the reduction in measured SPH has been less apparent, such as in well MKTF-05, where the SPH thickness reduced from maximum measurements of 0.77 feet in October 2016 and November 2017 to 0.23 feet in April 2018. Obviously, individual measurements of SPH in any given monitoring well may be influenced by fluctuations in the potentiometric surface in addition to any effects of hydrocarbon recovery at the sumps and/or retention ditch.

- Camera Surveys – Western is evaluating the reliance upon dye tracer tests instead of more camera surveys, as earlier camera surveys were not as useful as tracer tests in locating leaks from subsurface pipelines.
- Dye Tracer Tests – Western previously conducted dye tracer tests at several locations near the Truck Loading Rack. The earlier test methods and results were reviewed to determine if it is possible to refine the earlier tests by locating additional points where a tracer may be introduced to the wastewater pipelines/sump. New dye tracer tests were conducted related to an assessment of the sanitary lagoon, which is located west of the hydrocarbon seep area, and this information is presented under separate cover (letter dated February 1, 2018 with reference to *Sanitary Lagoon Investigation*), as it was not focused on the hydrocarbon seeps.
- Photos of the retention ditch are included that show hydrocarbon staining on the vegetation surrounding the ditch but no significant accumulation of hydrocarbon on the water surface.

- A table is included that shows fluid level measurements (2016 through 3rd Quarter 2018) for MKTF wells in the area of the sumps and retention ditch that have contained SPH. The data is also presented in a graph. Overall, the measured thickness of SPH has decreased in most wells with the exception of MKTF-06, which showed a decrease through March 2017 and then an increase with the thickness stabilizing in February 2018. Measurable SPH first appears in September 2016 in MKTF-26 and then decreases by March 2017 with measurements stable since that time without a noticeable decline. Also presented is the potentiometric surface measured in the same wells. In some cases, there does appear to be a possible correlation between the potentiometric surface and the measured SPH thickness, such as shown in well MKTF-06, where the measured SPH thickness increases as the potentiometric surface decreases.

Activities planned for third quarter 2018

- Source Control – Western will continue current recovery operations at the standpipe sumps and the retention ditch, if hydrocarbons are present, using a vacuum truck to pump SPH and groundwater from each of the sumps and the downstream retention ditch.

PHOTOS OF RETENTION DITCH LOCATED NORTH OF HYDROCARBON SEEP

PHOTOS PROGRESS FROM LOWER (NORTHERN) END TO HIGHEST (SOUTHERN) END OF DITCH



Photo of lowermost (northern) end of retention ditch. Oil stained vegetation shown around edges of ditch but no recoverable product on water.



Looking south along retention ditch, midway between north and south ends. Some hydrocarbon staining along perimeter of ditch, but very little hydrocarbon present on water. Location of concentrated hydrocarbon discharge at upper (southern) end of this ponded area.



Photo of location with concentrated discharge of hydrocarbons midway along retention ditch. Looking west, midway along retention ditch.



Photo of pond along retention ditch immediately downstream from concentrated hydrocarbon discharge point. Photo taken looking north. Very little potentially recoverable hydrocarbon present on water.



Uppermost (southern) end of retention ditch looking north.

MKTF WELLS FLUID LEVEL MEASUREMENTS
MARATHON PETROLEUM COMPANY - GALLUP REFINERY

Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
01/21/14	MKTF-01	2/24/2016	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	ND	NA	5.84	6,914.83	NA	5 - 15	
		6/10/2016	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	7.02	1.16	8.18	6,912.49	6913.42	5 - 15	
		9/7/2016	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	7.12	1.50	8.62	6,912.05	6913.25	5 - 15	
		10/28/2016	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	7.53	1.35	8.88	6,911.79	6912.87	5 - 15	
		03/14/17	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	4.65	0.16	4.81	6,915.86	6915.99	5 - 15	Chinle/Alluvium Interface
		06/07/17	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	4.89	0.53	5.42	6,915.25	6915.67	5 - 15	Chinle/Alluvium Interface
		10/03/17	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	6.20	0.36	6.56	6,914.11	6914.40	5 - 15	Chinle/Alluvium Interface
		11/20/17	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	4.62	0.33	4.95	6,915.72	6915.98	5 - 15	Chinle/Alluvium Interface
		02/07/18	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	5.05	0.35	5.40	6,915.27	6915.55	5 - 15	Chinle/Alluvium Interface
		04/25/18	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	6.22	0.30	6.52	6,914.15	6914.39	5 - 15	Chinle/Alluvium Interface
01/21/14	MKTF-02	08/15/18	4.00	6,918.28	6,920.67	6,920.67	2.39	6,903.25	17.42	6.40	0.31	6.71	6,913.96	6914.21	5 - 15	Chinle/Alluvium Interface
		2/24/2016	4.00	6,915.00	6,917.45	6,917.18	2.45	6,896.97	20.48	ND	NA	7.22	6,910.23	NA	7 - 17	
		6/10/2016	4.00	6,915.00	6,917.45	6,917.18	2.45	6,896.97	20.48	ND	NA	8.09	6,909.36	NA	7 - 17	
		9/7/2016	4.00	6,915.00	6,917.45	6,917.18	2.45	6,896.97	20.48	ND	NA	8.28	6,909.17	NA	7 - 17	
		10/28/2016	4.00	6,915.00	6,917.45	6,917.18	2.45	6,896.97	20.48	ND	NA	8.55	6,908.90	NA	7 - 17	
		03/16/17	4.00	6,915.00	6,917.45	6,917.18	2.45	6,896.97	20.48	ND	NA	7.34	6,910.11	NA	7 - 17	Chinle/Alluvium Interface
		06/07/17	4.00	6,915.00	6,917.45	6,917.18	2.45	6,896.97	20.48	7.10	0.01	7.11	6,910.34	6910.35	7 - 17	Chinle/Alluvium Interface
		10/03/17	4.00	6,915.00	6,917.45	6,917.18	2.45	6,896.97	20.48	ND	NA	6.67	6,910.78	NA	7 - 17	Chinle/Alluvium Interface
		11/20/17	4.00	6,915.00	6,917.45	6,917.18	2.45	6,897.10	20.35	ND	NA	7.00	6,910.45	NA	7 - 17	Chinle/Alluvium Interface
		02/06/18	4.00	6,915.00	6,917.45	6,917.18	2.45	6,897.10	20.35	ND	NA	7.44	6,910.01	NA	7 - 17	Chinle/Alluvium Interface
01/21/14	MKTF-03	04/25/18	4.00	6,915.00	6,917.45	6,917.18	2.45	6,897.10	20.35	ND	NA	7.95	6,909.50	NA	7 - 17	Chinle/Alluvium Interface
		08/15/18	4.00	6,915.00	6,917.45	6,917.18	2.45	6,897.10	20.35	ND	NA	8.40	6,909.05	NA	7 - 17	Chinle/Alluvium Interface
		2/24/2016	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	8.30	0.10	8.40	6,923.29	6923.37	3 - 18	Chinle/Alluvium Interface
		6/10/2016	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	7.55	4.28	11.83	6,919.86	6923.28	3 - 18	Chinle/Alluvium Interface
		9/7/2016	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	7.92	2.40	10.32	6,921.37	6923.29	3 - 18	Chinle/Alluvium Interface
		10/28/2016	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	8.30	1.10	9.40	6922.29	6923.17	3 - 18	Chinle/Alluvium Interface
		03/02/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	6.42	1.17	7.59	6,924.10	6925.04	3 - 18	Chinle/Alluvium Interface
		06/07/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	6.95	1.30	8.25	6,923.44	6924.48	3 - 18	Chinle/Alluvium Interface
		09/26/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	6.35	0.80	7.15	6,924.54	6925.18	3 - 18	Chinle/Alluvium Interface
		11/28/17	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	7.00	0.95	7.95	6923.74	6924.50	3 - 18	Chinle/Alluvium Interface
01/21/14		02/08/18	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	7.40	0.85	8.25	6923.44	6924.12	3 - 18	Chinle/Alluvium Interface
		04/25/18	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	7.30	0.92	8.22	6923.47	6924.21	3 - 18	Chinle/Alluvium Interface
		08/16/18	4.00	6,931.73	6,931.69	6,930.85	-0.04	6,913.24	18.45	7.30	0.95	8.25	6923.44	6924.20	3 - 18	Chinle/Alluvium Interface

MKTF WELLS FLUID LEVEL MEASUREMENTS
MARATHON PETROLEUM COMPANY - GALLUP REFINERY

Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
01/21/14	MKTF-05	2/24/2016	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.33	0.29	13.62	6,928.60	6928.83	4 - 14	Chinle/Alluvium Interface
		6/10/2016	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.79	0.46	14.25	6,927.97	6928.34	4 - 14	Chinle/Alluvium Interface
		9/7/2016	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.01	0.49	13.50	6,928.72	6929.11	4 - 14	Chinle/Alluvium Interface
		10/28/2016	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.98	0.77	14.75	6,927.47	6928.09	4 - 14	Chinle/Alluvium Interface
		03/02/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.33	0.29	13.62	6,928.60	6928.83	4 - 14	Chinle/Alluvium Interface
		06/07/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.79	0.46	14.25	6,927.97	6928.34	4 - 14	Chinle/Alluvium Interface
		09/26/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.01	0.49	13.50	6,928.72	6929.11	4 - 14	Chinle/Alluvium Interface
		11/28/17	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	13.98	0.77	14.75	6,927.47	6928.09	4 - 14	Chinle/Alluvium Interface
		02/08/18	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	14.78	0.42	15.20	6,927.02	6927.36	4 - 14	Chinle/Alluvium Interface
		04/25/18	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	14.96	0.23	15.19	6,927.03	6927.21	4 - 14	Chinle/Alluvium Interface
		08/16/18	4.00	6,939.49	6,942.22	6,941.95	2.73	6,924.47	17.75	14.61	0.19	14.80	6,927.42	6927.57	4 - 14	Chinle/Alluvium Interface
		2/24/2016			6,946.81	6,946.63	6,946.81	6,923.04	23.77	18.30	0.97	19.27	6,927.54	6928.32	8 - 20	Chinle/Alluvium Interface
		6/10/2016			6,946.81	6,946.63	6,946.81	6,923.04	23.77	18.02	0.94	18.96	6,927.85	6928.60	8 - 20	Chinle/Alluvium Interface
		9/7/2016			6,946.81	6,946.63	6,946.81	6,923.04	23.77	17.40	1.08	18.48	6,928.33	6929.19	8 - 20	Chinle/Alluvium Interface
01/21/14	MKTF-06	10/28/2016			6,946.81	6,946.63	6,946.81	6,923.04	23.77	18.04	0.74	18.78	6,928.03	6928.62	8 - 20	Chinle/Alluvium Interface
		03/15/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	15.95	0.10	16.05	6,930.76	6930.84	8 - 20	Chinle/Alluvium Interface
		06/12/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.60	0.64	17.24	6,929.57	6930.08	8 - 20	Chinle/Alluvium Interface
		09/26/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.01	0.71	16.72	6,930.09	6930.66	8 - 20	Chinle/Alluvium Interface
		11/28/17	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.55	1.15	17.70	6,929.11	6930.03	8 - 20	Chinle/Alluvium Interface
		02/08/18	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	17.14	1.38	18.52	6,928.29	6929.39	8 - 20	Chinle/Alluvium Interface
		04/25/18	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	17.29	1.32	18.61	6,928.20	6929.26	8 - 20	Chinle/Alluvium Interface
		08/16/18	4.00	6,944.24	6,946.81	6,946.63	2.57	6,923.04	23.77	16.83	1.17	18.00	6,928.81	6929.75	8 - 20	Chinle/Alluvium Interface
		2/24/2016			6,947.18	6,947.06	6,947.18	6,929.56	17.62	12.65	2.88	15.53	6,931.65	6933.95	4 - 14	Chinle/Alluvium Interface
		6/10/2016			6,947.18	6,947.06	6,947.18	6,929.56	17.62	12.01	2.59	14.60	6,932.58	6934.65	4 - 14	Chinle/Alluvium Interface
		9/7/2016			6,947.18	6,947.06	6,947.18	6,929.56	17.62	12.20	2.41	14.61	6,932.57	6934.50	4 - 14	Chinle/Alluvium Interface
		10/28/2016			6,947.18	6,947.06	6,947.18	6,929.56	17.62	12.90	1.98	14.88	6,932.30	6933.88	4 - 14	Chinle/Alluvium Interface
		03/15/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	10.63	1.97	12.60	6,934.58	6936.16	4 - 14	Chinle/Alluvium Interface
		06/12/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	10.20	1.30	11.50	6,935.68	6936.72	4 - 14	Chinle/Alluvium Interface
01/21/14	MKTF-07	09/26/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	9.80	1.30	11.10	6,936.08	6937.12	4 - 14	Chinle/Alluvium Interface
		11/28/17	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	10.40	1.40	11.80	6,935.38	6936.50	4 - 14	Chinle/Alluvium Interface
		02/08/18	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	11.33	1.22	12.55	6,934.63	6935.61	4 - 14	Chinle/Alluvium Interface
		04/25/18	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	10.84	1.18	12.02	6,935.16	6936.10	4 - 14	Chinle/Alluvium Interface
		08/16/18	4.00	6,944.40	6,947.18	6,947.06	2.78	6,929.56	17.62	11.42	1.08	12.50	6,934.68	6935.54	4 - 14	Chinle/Alluvium Interface
		2/24/2016			6,947.18	6,947.06	6,947.18	6,929.56	17.62	12.65	2.88	15.53	6,931.65	6933.95	4 - 14	Chinle/Alluvium Interface
		6/10/2016			6,947.18	6,947.06	6,947.18	6,929.56	17.62	12.01	2.59	14.60	6,932.58	6934.65	4 - 14	Chinle/Alluvium Interface
		9/7/2016			6,947.18	6,947.06	6,947.18	6,929.56	17.62	12.20	2.41	14.61	6,932.57	6934.50	4 - 14	Chinle/Alluvium Interface

MKTF WELLS FLUID LEVEL MEASUREMENTS
MARATHON PETROLEUM COMPANY - GALLUP REFINERY

Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
01/21/14	MKTF-08	2/24/2016			6,947.09	6,942.67	6,947.09	6,925.11	21.98	13.85	0.75	14.60	6,932.49	6933.09	8 - 18	Chinle/Alluvium Interface
		6/10/2016			6,947.09	6,942.67	6,947.09	6,925.11	21.98	13.48	0.70	14.18	6,932.91	6933.47	8 - 18	Chinle/Alluvium Interface
		9/7/2016			6,947.09	6,942.67	6,947.09	6,925.11	21.98	13.63	0.66	14.29	6,932.80	6933.33	8 - 18	Chinle/Alluvium Interface
		10/28/2016			6,947.09	6,942.67	6,947.09	6,925.11	21.98	13.84	1.48	15.32	6,931.77	6932.95	8 - 18	Chinle/Alluvium Interface
		03/15/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	11.99	0.61	12.60	6,934.49	6934.98	8 - 18	Chinle/Alluvium Interface
		06/12/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	11.98	0.42	12.40	6,934.69	6935.03	8 - 18	Chinle/Alluvium Interface
		09/26/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	12.15	0.45	12.60	6,934.49	6934.85	8 - 18	Chinle/Alluvium Interface
		11/28/17	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	12.68	0.52	13.20	6,933.89	6934.31	8 - 18	Chinle/Alluvium Interface
		02/08/18	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	13.29	0.34	13.63	6,933.46	6933.73	8 - 18	Chinle/Alluvium Interface
		04/25/18	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	13.00	0.33	13.33	6,933.76	6934.02	8 - 18	Chinle/Alluvium Interface
		08/16/18	4.00	6,944.02	6,947.09	6,942.67	3.07	6,925.11	21.98	12.96	0.39	13.35	6,933.74	6934.05	8 - 18	Chinle/Alluvium Interface
		2/24/2016			6,946.50	6,945.90	6,946.50	6,923.80	22.70	ND	NA	14.15	6,932.35	NA	7 - 19	Chinle/Alluvium Interface
		6/10/2016			6,946.50	6,945.90	6,946.50	6,923.80	22.70	ND	NA	13.92	6,932.58	NA	7 - 19	Chinle/Alluvium Interface
01/21/14	MKTF-09	9/7/2016			6,946.50	6,945.90	6,946.50	6,923.80	22.70	ND	NA	14.20	6,932.30	NA	7 - 19	Chinle/Alluvium Interface
		10/28/2016			6,946.50	6,945.90	6,946.50	6,923.80	22.70	ND	NA	14.10	6,932.40	NA	7 - 19	Chinle/Alluvium Interface
		03/15/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.80	22.70	ND	NA	12.64	6,933.86	NA	7 - 19	Chinle/Alluvium Interface
		06/12/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.80	22.70	ND	NA	12.64	6,933.86	NA	7 - 19	Chinle/Alluvium Interface
		09/28/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.80	22.70	ND	NA	12.69	6,933.81	NA	7 - 19	Chinle/Alluvium Interface
		11/29/17	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.75	22.75	ND	NA	13.15	6,933.35	NA	7 - 19	Chinle/Alluvium Interface
		02/14/18	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.75	22.75	ND	NA	13.76	6,932.74	NA	7 - 19	Chinle/Alluvium Interface
		04/25/18	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.75	22.75	ND	NA	13.42	6,933.08	NA	7 - 19	Chinle/Alluvium Interface
		08/16/18	4.00	6,943.57	6,946.50	6,945.90	2.93	6,923.75	22.75	ND	NA	13.49	6,933.01	NA	7 - 19	Chinle/Alluvium Interface
		2/24/2016	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	8.60	6,928.56	NA	7 - 17	Chinle/Alluvium Interface
		6/10/2016	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	8.20	6,928.96	NA	7 - 17	Chinle/Alluvium Interface
		9/7/2016	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	8.45	6,928.71	NA	7 - 17	Chinle/Alluvium Interface
		10/28/2016	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	8.25	6,928.91	NA	7 - 17	Chinle/Alluvium Interface
		03/02/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.47	6,929.69	NA	7 - 17	Chinle/Alluvium Interface
01/21/14	MKTF-10	06/07/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.02	6,930.14	NA	7 - 17	Chinle/Alluvium Interface
		09/27/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	6.78	6,930.38	NA	7 - 17	Chinle/Alluvium Interface
		11/29/17	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.00	6,930.16	NA	7 - 17	Chinle/Alluvium Interface
		02/14/18	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.30	6,929.86	NA	7 - 17	Chinle/Alluvium Interface
		04/25/18	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.05	6,930.11	NA	7 - 17	Chinle/Alluvium Interface
		08/16/18	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	7.08	6,930.08	NA	7 - 17	Chinle/Alluvium Interface
		2/24/2016	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	8.60	6,928.56	NA	7 - 17	Chinle/Alluvium Interface
		6/10/2016	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	8.20	6,928.96	NA	7 - 17	Chinle/Alluvium Interface
		9/7/2016	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	8.45	6,928.71	NA	7 - 17	Chinle/Alluvium Interface
		10/28/2016	4.00	6,937.51	6,937.16	6,936.63	-0.35	6,921.17	15.99	ND	NA	8.25	6,928.91	NA	7 - 17	Chinle/Alluvium Interface

MKTF WELLS FLUID LEVEL MEASUREMENTS
MARATHON PETROLEUM COMPANY - GALLUP REFINERY

Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
01/21/14	MKTF-11	2/24/2016	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	8.80	6,922.54	NA	8 - 18	Chinle/Alluvium Interface
		6/10/2016	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	8.66	6,922.68	NA	8 - 18	Chinle/Alluvium Interface
		9/7/2016	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	8.70	6,922.64	NA	8 - 18	Chinle/Alluvium Interface
		10/28/2016	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	8.65	6,922.69	NA	8 - 18	Chinle/Alluvium Interface
		03/02/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	6.96	6,924.38	NA	8 - 18	Chinle/Alluvium Interface
		06/07/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	7.39	6,923.95	NA	8 - 18	Chinle/Alluvium Interface
		09/26/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	6.70	6,924.64	NA	8 - 18	Chinle/Alluvium Interface
		11/29/17	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	8.00	6,923.34	NA	8 - 18	Chinle/Alluvium Interface
		02/08/18	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	7.87	6,923.47	NA	8 - 18	Chinle/Alluvium Interface
		04/25/18	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	7.85	6,923.49	NA	8 - 18	Chinle/Alluvium Interface
		08/16/18	4.00	6,931.61	6,931.34	6,930.86	-0.27	6,913.20	18.14	ND	NA	7.48	6,923.86	NA	8 - 18	Chinle/Alluvium Interface
		2/24/2016	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	19.80	0.65	20.45	6,921.66	6922.18	12 - 22	Chinle/Alluvium Interface
		6/10/2016	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	18.23	1.32	19.55	6,922.56	6923.62	12 - 22	Chinle/Alluvium Interface
01/21/14	MKTF-12	9/7/2016	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	19.23	0.32	19.55	6,922.56	6922.82	12 - 22	Chinle/Alluvium Interface
		10/28/2016	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	19.33	0.29	19.62	6,922.49	6922.72	12 - 22	Chinle/Alluvium Interface
		03/15/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	17.75	0.06	17.81	6,924.30	6924.35	12 - 22	Chinle/Alluvium Interface
		06/07/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	18.60	0.19	18.79	6,923.32	6923.47	12 - 22	Chinle/Alluvium Interface
		10/03/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	17.30	0.13	17.43	6,924.68	6924.78	12 - 22	Chinle/Alluvium Interface
		11/27/17	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	18.43	0.13	18.56	6,923.55	6923.65	12 - 22	Chinle/Alluvium Interface
		02/07/18	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	19.11	0.17	19.28	6,922.83	6922.97	12 - 22	Chinle/Alluvium Interface
		04/25/18	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	19.11	0.12	19.23	6,922.88	6922.98	12 - 22	Chinle/Alluvium Interface
		08/15/18	4.00	6,939.70	6,942.11	6,941.88	2.41	6,916.51	25.60	19.01	0.19	19.20	6,922.91	6923.06	12 - 22	Chinle/Alluvium Interface
		2/24/2016	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	14.42	0.87	15.29	6,919.89	NA	8 - 18	Chinle/Alluvium Interface
		6/10/2016	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	12.99	1.20	14.19	6,920.99	NA	8 - 18	Chinle/Alluvium Interface
		9/7/2016	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	13.88	0.98	14.86	6,920.32	NA	8 - 18	Chinle/Alluvium Interface
		10/28/2016	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	14.01	0.96	14.97	6,920.21	NA	8 - 18	Chinle/Alluvium Interface
		03/15/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	ND	NA	12.60	6,922.58	NA	8 - 18	Chinle/Alluvium Interface
01/21/14	MKTF-13	06/07/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	13.35	0.06	13.41	6,921.77	6921.82	8 - 18	Chinle/Alluvium Interface
		10/03/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	11.91	0.03	11.94	6,923.24	6923.26	8 - 18	Chinle/Alluvium Interface
		11/27/17	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	13.14	0.01	13.15	6,922.03	6922.04	8 - 18	Chinle/Alluvium Interface
		02/07/18	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	13.77	0.01	13.78	6,921.40	6921.41	8 - 18	Chinle/Alluvium Interface
		04/25/18	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	ND	NA	13.25	6,921.93	NA	8 - 18	Chinle/Alluvium Interface
		08/15/18	4.00	6,933.67	6,935.18	6,934.83	1.51	6,913.93	21.25	ND	NA	13.68	6,921.50	NA	8 - 18	Chinle/Alluvium Interface

MKTF WELLS FLUID LEVEL MEASUREMENTS
MARATHON PETROLEUM COMPANY - GALLUP REFINERY

Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
01/21/14	MKTF-14	2/24/2016	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	7.81	0.44	8.25	6,919.77	6920.12	4 - 14	Chinle/Alluvium Interface
		6/10/2016	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	7.13	2.33	9.46	6,918.56	6920.42	4 - 14	Chinle/Alluvium Interface
		9/7/2016	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	7.31	1.69	9.00	6,919.02	6920.37	4 - 14	Chinle/Alluvium Interface
		10/28/2016	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	7.45	1.10	8.55	6,919.47	6920.35	4 - 14	Chinle/Alluvium Interface
		03/08/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	5.77	0.98	6.75	6,921.27	6922.05	4 - 14	Chinle/Alluvium Interface
		06/07/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	6.68	0.84	7.52	6,920.50	6921.17	4 - 14	Chinle/Alluvium Interface
		10/03/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	5.70	0.41	6.11	6,921.91	6922.24	4 - 14	Chinle/Alluvium Interface
		11/27/17	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	6.56	0.37	6.93	6,921.09	6921.39	4 - 14	Chinle/Alluvium Interface
		02/07/18	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	6.98	0.41	7.39	6,920.63	6920.96	4 - 14	Chinle/Alluvium Interface
		04/26/18	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	7.01	0.38	7.39	6,920.63	6920.93	4 - 14	Chinle/Alluvium Interface
		08/15/18	4.00	6,925.65	6,928.02	6,927.80	2.37	6,910.56	17.46	6.95	0.35	7.30	6,920.72	6921.00	4 - 14	Chinle/Alluvium Interface
		2/24/2016	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	12.23	0.17	12.40	6,931.08	NA	9 - 19	Chinle/Alluvium Interface
		6/10/2016	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	12.60	0.22	12.82	6,930.66	NA	9 - 19	Chinle/Alluvium Interface
		9/7/2016	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	ND	13.00	6,930.48	NA	9 - 19	Chinle/Alluvium Interface
01/21/14	MKTF-15	10/28/2016	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	ND	12.90	6,930.58	NA	9 - 19	Chinle/Alluvium Interface
		03/02/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	12.15	6,931.33	NA	9 - 19	Chinle/Alluvium Interface
		06/07/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	11.93	6,931.55	NA	9 - 19	Chinle/Alluvium Interface
		09/26/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	12.00	0.10	12.10	6,931.38	6931.46	9 - 19	Chinle/Alluvium Interface
		11/29/17	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	12.13	6,931.35	NA	9 - 19	Chinle/Alluvium Interface
		02/08/18	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	12.40	0.07	12.47	6,931.01	6931.07	9 - 19	Chinle/Alluvium Interface
		04/25/18	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	12.20	6,931.28	NA	9 - 19	Chinle/Alluvium Interface
		08/16/18	2.00	6,943.74	6,943.48	6,943.19	-0.26	6,924.00	19.48	ND	NA	12.40	6,931.08	NA	9 - 19	Chinle/Alluvium Interface
		03/14/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	8.34	6,942.31	NA	17 - 27	Chinle/Alluvium Interface
		06/07/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	11.85	6,938.80	NA	17 - 27	Chinle/Alluvium Interface
		09/26/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	7.75	6,942.90	NA	17 - 27	Chinle/Alluvium Interface
		11/28/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	7.50	6,943.15	NA	17 - 27	Chinle/Alluvium Interface
		03/01/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	7.81	6,942.84	NA	17 - 27	Chinle/Alluvium Interface
		06/14/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	6.30	6,944.35	NA	17 - 27	Chinle/Alluvium Interface
01/21/14	MKTF-18	09/27/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	6.35	0.02	6.37	6,944.28	6944.30	17 - 27	Chinle/Alluvium Interface
		11/30/17	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	6.29	0.01	6.30	6,944.35	6944.36	17 - 27	Chinle/Alluvium Interface
		02/15/18	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	6.47	6,944.18	NA	17 - 27	Chinle/Alluvium Interface
		04/26/18	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	8.22	6,942.43	NA	17 - 27	Chinle/Alluvium Interface
		08/16/18	2.00	6,950.97	6,950.65	6,950.17	-0.32	6,925.27	25.38	ND	NA	7.12	6,943.53	NA	17 - 27	Chinle/Alluvium Interface

MKTF WELLS FLUID LEVEL MEASUREMENTS
MARATHON PETROLEUM COMPANY - GALLUP REFINERY

Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists
04/30/14	MKTF-23	02/25/16	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	ND	NA	14.67	6,915.31	NA	7 - 17	Chinle/Alluvium Interface
		06/10/16	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	ND	NA	14.64	6,915.34	NA	7 - 17	Chinle/Alluvium Interface
		09/10/16	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	15.04	0.11	15.15	6,914.83	6914.92	7 - 17	Chinle/Alluvium Interface
		11/01/16	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	14.80	0.12	14.92	6,915.06	6915.16	7 - 17	Chinle/Alluvium Interface
		03/08/17	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	ND	NA	14.20	6,915.78	NA	7 - 17	Chinle/Alluvium Interface
		06/07/17	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	14.20	0.70	14.90	6,915.08	6915.64	7 - 17	Chinle/Alluvium Interface
		10/03/17	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	14.19	0.06	14.25	6,915.73	6915.78	7 - 17	Chinle/Alluvium Interface
		11/27/17	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	13.93	0.01	13.94	6,916.04	6916.05	7 - 17	Chinle/Alluvium Interface
		02/07/18	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	14.11	0.09	14.20	6,915.78	6915.85	7 - 17	Chinle/Alluvium Interface
		04/26/18	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	14.07	0.02	14.09	6,915.89	6915.91	7 - 17	Chinle/Alluvium Interface
04/30/14	MKTF-24	08/15/18	2.00	6,927.23	6,929.98	6,925.79	2.75	6,909.62	20.36	15.48	0.10	15.58	6,914.40	6914.48	7 - 17	Chinle/Alluvium Interface
		02/25/16	2.00	6,926.07	6,928.72	6,924.62	2.65	6,898.25	30.47	ND	NA	21.34	6,907.38	NA	18 - 28	Chinle/Alluvium Interface
		06/10/16	2.00	6,926.07	6,928.72	6,924.62	2.65	6,898.25	30.47	ND	NA	21.23	6,907.49	NA	18 - 28	Chinle/Alluvium Interface
		09/10/16	2.00	6,926.07	6,928.72	6,924.62	2.65	6,898.25	30.47	ND	NA	22.69	6,906.03	NA	18 - 28	Chinle/Alluvium Interface
		11/01/16	2.00	6,926.07	6,928.72	6,924.62	2.65	6,898.25	30.47	ND	NA	22.34	6,906.38	NA	18 - 28	Chinle/Alluvium Interface
		03/06/17	2.00	6,926.07	6,928.72	6,924.62	2.65	6,898.25	30.47	ND	NA	20.61	6,908.11	NA	18 - 28	Chinle/Alluvium Interface
		06/05/17	2.00	6,926.07	6,928.72	6,924.62	2.65	6,898.25	30.47	ND	NA	21.07	6,907.65	NA	18 - 28	Chinle/Alluvium Interface
		10/03/17	2.00	6,926.07	6,928.72	6,924.62	2.65	6,898.25	30.47	ND	NA	21.52	6,907.20	NA	18 - 28	Chinle/Alluvium Interface
		11/20/17	2.00	6,926.07	6,928.72	6,924.62	2.65	6,897.90	30.82	ND	NA	21.53	6,907.19	NA	18 - 28	Chinle/Alluvium Interface
		02/06/18	2.00	6,926.07	6,928.72	6,924.62	2.65	6,897.90	30.82	ND	NA	21.60	6,907.12	NA	18 - 28	Chinle/Alluvium Interface
04/30/14	MKTF-26	04/25/18	2.00	6,926.07	6,928.72	6,924.62	2.65	6,897.90	30.82	ND	NA	21.76	6,906.96	NA	18 - 28	Chinle/Alluvium Interface
		08/15/18	2.00	6,926.07	6,928.72	6,924.62	2.65	6,897.90	30.82	ND	NA	22.65	6,906.07	NA	18 - 28	Chinle/Alluvium Interface
		02/25/16	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	ND	NA	8.17	6,907.14	NA	4 - 14	Chinle/Alluvium Interface
		06/10/16	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	ND	NA	9.60	6,905.71	NA	4 - 14	Chinle/Alluvium Interface
		09/10/16	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	9.44	1.37	10.81	6,904.50	6905.60	4 - 14	Chinle/Alluvium Interface
		11/01/16	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	9.36	1.39	10.75	6,904.56	6905.67	4 - 14	Chinle/Alluvium Interface
		03/06/17	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	7.44	0.75	8.19	6,907.12	6907.72	4 - 14	Chinle/Alluvium Interface
		06/05/17	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	8.03	0.96	8.99	6,906.32	6907.09	4 - 14	Chinle/Alluvium Interface
		10/03/17	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	7.77	0.83	8.60	6,906.71	6907.37	4 - 14	Chinle/Alluvium Interface
		11/20/17	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	8.09	0.84	8.93	6,906.38	6907.05	4 - 14	Chinle/Alluvium Interface
04/30/14	MKTF-26	02/07/18	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	8.53	0.83	9.36	6,905.95	6906.61	4 - 14	Chinle/Alluvium Interface
		04/25/18	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	8.56	0.81	9.37	6,905.94	6906.59	4 - 14	Chinle/Alluvium Interface
		08/15/18	2.00	6,912.55	6,915.31	6,911.35	2.76	6,898.16	17.15	8.73	0.84	9.57	6,905.74	6906.41	4 - 14	Chinle/Alluvium Interface

MKTF WELLS FLUID LEVEL MEASUREMENTS
MARATHON PETROLEUM COMPANY - GALLUP REFINERY

Date of Survey ¹	Well ID Number	Inspection or Sample Date	Casing Diameter (Inch)	Ground Level Elevations (ft)	Well Casing Rim Elevations (ft)	Ground Elevation Inside Steel Sleeve (ft)	Stick-up length (ft)	Well Casing Bottom Elevation (ft)	Total Well Depth (ft)	Depth to ² SPH (ft)	SPH ³ Column Thickness (ft)	Depth to Water (ft)	Ground water Elevation (ft)	Corrected ⁴ Water Table Elevation (Factor 0.8) (ft)	Screened Interval Depth Top to Bottom (ft)	Stratigraphic unit in which screen exists

DEFINITIONS:

- DTB - Depth to Bottom
- DTW - Depth to Water
- ND - Not Dectected
- NA - Not Applicable
- SPH - Separate Phase Hydrocarbons
- Negative number in Stick up Length column indicates well is flush mount and located at or below ground level
- Depth to Water Column - if a measurement of 0.00 is indicated - means water level is at top of casing - Full.
- Dry indicates no water was detected in the well.

NOTES:

- 1) Wells surveyed by a licensed professional surveyor-Hammon Enterprises, Inc. (HEI)
- 2) "0" indicates no SPH level.
- 3) Depth to SPH - Depth to Water Measurement = SPH Column Thickness.
- 4) Corrected Water Table Elevaton applies only if SPH thickness column measurement exists. (0.8 X SPH thickness + Groundwater Elevation)
- 5) 10/3/17 - Samples collected after end of third quarter due to rain storms and monitor well accessibility

QUARTERLY STATUS REPORT
HYDROCARBON SEEP INTERIM MEASURES
WESTERN REFINING SOUTHWEST, INC – GALLUP REFINERY
Second Quarter 2018 [\(Revised November 2018\)](#)

Activities conducted during second quarter 2018

- Source Control – Western continued to remove separate-phase hydrocarbon (SPH) and groundwater from the standpipe sumps (S1 - S6). Approximately 9 gallons of SPH and 28,491 gallons of groundwater were recovered during the second quarter, which represents a significant reduction in SPH from 153 gallons recovered during the last quarter (1st Qtr 2018). The percent of SPH recovered of the total volume was approximately, 0.03% which is significantly less than the previous quarter of 0.16%. This represents a fairly continuous reduction in the amount of SPH recovered since 2016. Recovery was discontinued at the retention ditch, which was previously excavated north of the standpipes (S1-S6), as product was no longer observed to be entering the retention ditch.

The reduction in the volumes of SPH recovered in the second quarter of 2018 as compared to the previous quarterly volumes is not attributed to any changes in the methods used to estimate the recovery volumes. [The reduction in recovery volumes as compared to previous quarters is reflected the measured SPH thickness in nearby monitoring wells \(see the enclosed table and graphs showing fluid level measurements\). For example, the SPH thickness in MKTF-01, which is immediately west of the sumps, was measured at 1.5 feet in September 2016 vs. 0.30 feet in April 2018. Up-gradient of sumps, at MKTF-03, the measured SPH thickness decreased from 4.28 feet in June 2016 to 0.92 feet in April 2018. Further away from the sumps and retention ditch, the reduction in measured SPH has been less apparent, such as in well MKTF-05, where the SPH thickness reduced from maximum measurements of 0.77 feet in October 2016 and November 2017 to 0.23 feet in April 2018. Obviously, individual measurements of SPH in any given monitoring well may be influenced by fluctuations in the potentiometric surface in addition to any effects of hydrocarbon recovery at the sumps and/or retention ditch.](#)

- Camera Surveys – Western is evaluating the reliance upon dye tracer tests instead of more camera surveys, as earlier camera surveys were not as useful as tracer tests in locating leaks from subsurface pipelines.
- Dye Tracer Tests – Western previously conducted dye tracer tests at several locations near the Truck Loading Rack. The earlier test methods and results were reviewed to determine if it is possible to refine the earlier tests by locating additional points where a tracer may be introduced to the wastewater pipelines/sump. New dye tracer tests were conducted related to an assessment of the sanitary lagoon, which is located west of the hydrocarbon seep area, and this information is presented under separate cover, [\(letter dated February 1, 2018 with reference to Sanitary Lagoon Investigation\)](#), as it was not focused on the hydrocarbon seeps.
- Photos of the retention ditch are included that show hydrocarbon staining on the vegetation surrounding the ditch but ~~not~~ no significant accumulation of hydrocarbon on the water surface.

- A table is included that shows fluid level measurements (2016 through 3rd Quarter 2018) for MKTF wells in the area of the sumps and retention ditch that have contained SPH. The data is also presented in a graph. Overall, the measured thickness of SPH has decreased in most wells with the exception of MKTF-06, which showed a decrease through March 2017 and then an increase with the thickness stabilizing in February 2018. Measurable SPH first appears in September 2016 in MKTF-26 and then decreases by March 2017 with measurements ~~stabil since that time without a noticeable decline~~ stabil since that time without a noticeable decline. Also presented is the potentiometric surface measured in the same wells. In some cases, there does appear to a possible correlation between the potentiometric surface and the measured SPH thickness, such as shown in well MKTF-06, where the measured SPH thickness increase as the potentiometric surface decreases.

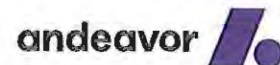
Formatted: Indent: Left: 0.5", No bullets or numbering

Activities planned for third quarter 2018

- Source Control – Western will continue current recovery operations at the standpipe sumps and the retention ditch, if hydrocarbons are present, using a vacuum truck to pump SPH and groundwater from each of the sumps and the downstream retention ditch.

Andeavor
I-40 Exit 39
Jamestown, NM 87347

505 722 3833
andeavor.com



Hand delivered – September 19, 2018

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

RE: INVESTIGATIVE WORK PLAN FOR UPGRADIENT MKTF WELLS
WESTERN REFINING SOUTHWEST INC, GALLUP REFINERY
EPA ID# NMD000333211
HWB-WRG-15-002

Dear Sir:

Western Refining Southwest, Inc., Gallup Refinery ("Gallup Refinery") is in receipt of your letter dated February 1, 2018, which the New Mexico Environment Department (NMED) solicited responses to comments (RTC) regarding its review of the Gallup Refinery's *Revised Interim Measures Report Hydrocarbon Seep Area* (submitted July 8, 2016). This Investigation Work Plan has been prepared pursuant to Comment 10 and 24 shown below for reference.

NMED Comment 10

On page 2-12, the Permittee states, "[f]igure 10 shows the distribution of benzene with two apparent source areas. The highest concentrations appear to originate in the area where the leak was identified in the wastewater line near the Bundle Cleaning Pad and a second area of high concentrations is located near the trucking loading rack." The benzene concentration in the groundwater sample collected from well MKTF-16, located approximately 30 feet west of the replaced sewer line, has been steadily increasing since October 2013. Table 2 indicates that the benzene concentration in the groundwater sample collected from well MKTF-16 was 9.9 mg/Lin November 2013 and 28 mg/Lin November 2015. The increasing trend of benzene concentrations in the groundwater samples obtained from well MKTF-16 suggests a possibility of another release near the replaced sewer. Submit a work plan to investigate and address increasing benzene concentrations in the vicinity of the replaced sewer.

NMED Comment 24

On page 15 of the correspondence dated July 28, 2016, the Permittee's response to NMED Comment 22 states, "[t]he groundwater plume has been delineated with the exception to the north in the vicinity of Tank 102 and efforts to identify primary sources are on-going." Based upon the data, this statement is not accurate; it is inconclusive how far benzene, dissolved iron, naphthalene, and 1, 2, 4-trimethylbenzene plumes extend to the south from MKTF-35 and to the east from MKTF-37 and MKTF-39 on Figure 10, 12, 14, and 15, respectively. Also, the screened intervals in many MKTF wells are submerged below the water table; therefore, they are inappropriate for SPH plume delineation. Submit a work plan to propose to install three additional monitoring wells; one to the south of MKTF-35, and two to the east of MKTF-37 and MKTF-39, respectively, and propose to investigate the subsurface and groundwater north of Tank 102.

Gallup Refinery is submitting two hard copies and an electronic format via CD. Also, the New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division (OCD) has been provided a copy of this information for their consideration.

Andeavor
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Jamestown, NM 87347

505 722 3833
andeavor.com



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

Certification

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Daniel Statile", is written over the word "Sincerely,".

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

Enclosure

cc: C. Chavez (OCD via electronic submittal)



State of New Mexico
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

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

SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor



BUTCH TONGATE
Cabinet Secretary
J. C. BORREGO
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

May 25, 2018

Jessica L. O'Brien
Environmental Supervisor
Western Refining, Southwest Inc., Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

**RE: APPROVAL WITH MODIFICATIONS
HYDROCARBON SEEP INTERIM MEASURES 2016 3rd, 2017 3rd AND
2018 1ST QUARTERS STATUS REPORTS
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-16-007
HWB-WRG-17-009
HWB-WRG-18-003**

Dear Ms. O'Brien:

The New Mexico Environment Department (NMED) has reviewed the *Hydrocarbon Seep Interim Measures 2016 3rd Quarter Status Report* (2016 Report), dated October 24, 2016, the *2017 3rd Quarter Status Report* (2017 Report), dated October 24, 2017 and the *2018 1st Quarter Status Report* (2018 Report), dated May 1, 2018, submitted on behalf of Western Refining Southwest Inc., Gallup Refinery (the Permittee). NMED hereby issues this Approval with Modifications.

This Approval with Modifications addresses the quarterly status reports submitted for the 2016 3rd Quarter, 2017 3rd Quarter and 2018 1st Quarter monitoring and updates on the hydrocarbon seep interim measures. Many of the comments apply to all of the Reports; therefore, NMED is providing comments for the Reports simultaneously. The Permittee must make all required changes presented in this letter to all future reports.

In addition, the Permittee has not yet provided a response letter to address comments in the *Approval with Modifications letter for Hydrocarbon Seep Interim Measures 2017 4th Quarter Status Report*, dated March 2, 2018. Therefore, Comments 1 and 4 in the March 2, 2018 letter carry over and apply to all future reports as well. The Permittee must address the following comments.

Comment 1

Comment 22 of the April 26, 2016 *Disapproval* letter states, “[b]ecause the investigation is not yet complete, the Permittee must revise the Report to propose providing quarterly status reports regarding product recovery, planned additional measures and efforts to address leaking pipes or tanks at the Main Truck Loading Racks.” The status reports were not submitted for the first and second quarters of 2017. The Permittee must submit a quarterly status report for NMED’s review within 30 days after the end of each quarter. Acknowledge the requirement in a response letter.

Comment 2

In *Stand Pipes Recovery Records*, the volume of recovered hydrocarbons from the recovery stand pipes is tabulated. The volume of recovered hydrocarbons recorded was notably higher between July 6, 2016 to May 24, 2017 in comparison to the recorded volumes before July 6, 2016 and after May 24, 2017. The Permittee explained that the cause of the increase was due to a change in vacuum truck operators in the 2016 Report. Provide a more detailed explanation regarding the variance in the techniques utilized by the operators in the response letter. Also confirm that the recovered volumes have been accurately recorded by the operators.

Comment 3

In the 2016 Report, the Permittee states, “[t]he volume of soils removed was 38.36 tons and the waste manifests are attached.” However, the waste manifests were not attached to the 2016 Report. Provide a reference to the waste manifests, if they have already been submitted to NMED; otherwise, provide copies of the manifests. In addition, the Permittee transported the soils to a Class D landfill (Waste Management’s Painted Desert Landfill). The soils may have contained listed hazardous waste based on the waste streams conveyed in the sewer system. Provide the results of the waste characterization for the soils in the response letter.

Comment 4

In the 2016 Report, the Permittee states, “[a]dditional 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.” In the 2017 Report, recovery volumes from the retention ditch are tabulated since April 1, 2016; clarify whether the reference to the installation of additional sumps is equivalent to the installation of the retention ditch; otherwise, provide a reason for the variance in construction between additional sumps or a retention ditch, and state whether the retention ditch is an open ditch. Provide information pertaining to the additional sumps in the response letter. In addition, explain the benefits of additional sumps relative to other oil recovery technologies that may be used at the site in the response letter.

Comment 5

In the 2018 Report, the Permittee states, “[i]t appears that the recovery volumes have returned to similar volumes observed from May 2017 through July 2017.” The volumes of separate phase hydrocarbon (SPH) recovered from stand pipes from May 2017 through July 2017 was 1,464 gallons and first quarter 2018 was 153 gallons. The recovery volumes are not similar between the time periods. Therefore, the statement is not correct. A reduction in the SPH recovery volumes during the first quarter of 2018 is apparent in both stand pipes and retention ditch compared to the recovery volumes in the fourth quarter 2017. Ensure that all future status reports include accurate statements.

Comment 6

In the 2018 Report, the Permittee states, “[t]here is no clear evidence to relate the possibly temporary increase to the March 2017 Sour Naphtha release, which occurred to the southeast, but that is the only known release in the area around the same time.” Less than five barrels of Sour Naphtha release was initially reported in March 2017. Therefore, the release likely did not significantly affect the recovery volumes. Releases that occurred prior to 2017 may be the cause of the increase. Provide a table showing all relevant releases that took place in 2016. Include details of the releases (e.g., date, location, volume of releases) in the table. If a relevant release is not found, unidentified sewer leaks may be a source. In this case, SPH recovery may repeatedly increase from time to time without any specific known cause. When the fraction of SPH in the sewer stream increases, the SPH recovery volume also may increase. As stated in Comment 4 in the March 2, 2018 letter, all potential on-going leaks and potential sources of releases to the environment must be investigated in a timely manner. Whenever an increase in SPH recovery volume is observed in the future, collect a SPH sample for fingerprint analysis to investigate whether the release can be traced to a specific source.

Comment 7

In the 2018 Report, the Permittee states, “Western is evaluating the reliance upon dye tests instead of more camera surveys, as earlier camera surveys were not as useful tracer tests in locating leaks from subsurface pipelines.” If dye test is selected for the investigation of on-going leaks within the sewer system, the Permittee must submit a work plan that provides more detail regarding the proposed method no less than 90 days prior to conducting the test. Previous dye tests were deficient as addressed in the comments from the February 1, 2018 letter. Ensure that NMED’s comments are addressed in any future work plan. Comment 4 in the March 2, 2018 letter states, “[i]f the [dye tracer] test can be conducted, the Permittee must include a proposal for the dye test in any future 2018 reports. If not, the Permittee must provide a more detailed explanation why the test cannot be conducted from other release location in a response letter.” Comment 4 only requires an investigation for the possibility of releasing dye tracer from alternative locations other than the immediate sump area; it does not refer to a work plan for dye tracer testing itself. A separate work plan for any future dye tracer testing is required.

The Permittee must address all comments in this Approval with Modifications, and submit a response letter, cross-referencing NMED's numbered comments by **October 30, 2018**. The work plan for dye tracer testing must be submitted by **September 30, 2018**.

Ms. O'Brien
May 25, 2018
Page 4

If you have questions regarding this Approval with Modifications, please contact Michiya Suzuki of my staff at 505-476-6059.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: K. Van Horn NMED HWB
M. Suzuki NMED HWB
C. Chavez OCD
L. King EPA Region 6

File: Reading File and WRG 2018 File
HWB-WRG-16-007
HWB-WRG-17-009
HWB-WRG-18-003