

AP-111

AGWMR
(3 of 5)

2015

APPENDIX A

SEPARATE PHASE HYDROCARBON RECOVERY LOGS

APPENDIX A - RW-1 HYDROCARBON RECOVERY LOG
2/22/05 thru 12/2015

Measurement Date	Time	Quarter	Method	Status	Depth to Product (ft)	Depth to Water (ft)	Product Thickness Level ² (ft)	Product Bailed or Purged ² (gal)	Water Purged ² (gal)
2/22/2005	8:30	1st	NR	Start	32.46	36.5	4.04	14	NR
3/2/2005	7:45	1st	NR	Start	32.42	36.44	4.02	9	NR
3/8/2005	8:30	1st	NR	Start	31.92	36.35	4.43	15	NR
3/9/2005	830	1st	NR	Start	31.92	37.5	5.58	4	NR
3/11 to 3/18/05	NR	1st	NR	Start	NR	NR	NR	74	NR
3/18 to 3/23/05	NR	1st	Pump	Continue pumping	NR	NR	NR	48	NR
3/23 to 4/1/05	NR	1st	Pump	Continue pumping	NR	NR	NR	62	NR
4/1 To 4/4/05		2nd	Pump	Pump shutdown to measure	NR	NR	NR	27	NR
4/5/2005	11:30	2nd	Pump		34.75	38.92	4.17	NR	NR
4/4 to 4/15/05	11:00	2nd	Pump	Continue pumping	NR	NR	NR	50	NR
4-15 to 5-5-05	12:30	2nd	Pump	Continue pumping	NR	NR	NR	45	154
5-5 to 6-17-05	11:30	2nd	Pump	Continue pumping	NR	NR	NR	24	196
6/27/2005	14:30	2nd		Pump shutdown to measure	NR	NR	NR	NR	NR
6/28/2005	11:30	2nd			32.46	33.25	0.79	NR	NR
6/28/2005		2nd	Pump	Continue pumping	NR	NR	NR	NR	NR
6/17 to 7/8/2005	10:30	2nd	Pump	Continue pumping	NR	NR	NR	18	146
7/8 to 8/9/2005	13:30	3rd	Pump	Continue pumping	NR	NR	NR	28	350
8/9 to 9/16/2005	11:35	3rd			36.46	36.54	0.08	8	240
12/5/2005	13:15	4th			31.92	34.71	2.79	NR	NR
12/8/2005	14:00	4th	Pump	Start	NR	NR	NR	NR	NR
12/22/2005	15:30	4th		stop	NR	NR	NR	5	120
12/29/2005	14:00	4th	Bailer	Hand bailed	NR	NR	NR	0.5	4.5
3/16/2006	13:00	1st.			NR	NR	NR	NR	NR
3/16/2006	14:30	1st.	Pump	Start	32.23	34.48	2.25	NR	NR
3/23/2006	14:30	1st.		Stop	NR	NR	NR	NR	NR
3/27/2006	15:30	1st.	Pump	Start	NR	NR	NR	NR	NR
3/31/2006	11:30	1st.	Pump	Continue pumping	NR	NR	NR	7	174
4/3/2006	11:30	2nd		Stop	NR	NR	NR	1	38
4/4/2006	11:00	2nd			32.75	33.08	0.33	NR	NR
6/6/2006	13:00	2nd			32.39	34.54	2.15	NR	NR
6/8/2006	15:00	2nd	Pump	Start	NR	NR	NR	NR	NR
6/29/2006	10:00	2nd		Stop	NR	NR	NR	8	365
7/31/2006	11:45	3rd			33.06	33.48	0.42	NR	NR
7/31/2006	11:45	3rd	Pump	Start pump	NR	NR	NR	NR	NR
8/3/2006	14:20	3rd		Stopped pump	NR	NR	NR	2	87
8/8/2006	9:00	3rd	Pump	Start pump	NR	NR	NR	NR	NR
8/10/2006	15:30	3rd	Pump	Start pump	NR	NR	NR	NR	NR
8/22/2006	9:00	3rd		Stopped. Pulled pump	NR	NR	NR	4.9	373
8/22/2006	9:45	3rd	Pump	Start pump	33.1	33.4	0.3	NR	NR
12/21/2006	15:55	4th	Pump	Start pump	35.2	36	0.8	0.62	70

RW-1 HYDROCARBON RECOVERY LOG - Continued

Measurement Date	Time	Quarter	Method	Status	Depth to Product (ft)	Depth to Water (ft)	Product Thickness Level ² (ft)	Product Bailed or Purged ² (gal)	Water Purged ² (gal)
2/21/2007	10:15	1st.	Pump	Start pump	33.42	34.6	1.18	0.63	53.5
6/5/2007	10:00	2nd		Compressor Down	32.42	32.71	0.29	NR	NR
6/5/2007	10:10	2nd		Hand Bailed	NR	NR	NR	0.05	9
6/6/2007	8:40	2nd		Hand bailed	NR	NR	NR	0.1	11
6/13/2007	14:00	2nd		Hand bailed	NR	NR	NR	0.1	12
6/14/2007	10:40	2nd		Hand bailed	NR	NR	NR	0.05	8
7/10/2007	10:08	3rd		Hand bailed	32.42	32.71	0.29	0.3	18
7/11/2007	9:25	3rd		Hand bailed	NR	NR	NR	0.21	NR
7/23/2007	10:00	3rd		Hand bailed	NR	NR	NR	0.1	NR
11/26/2007	10:50	4th		Hand bailed	30.76	36.45	5.69	0.18	37
2/18/2008	15:32	1st.		Hand Bailed - pump frozen	30.18	34.77	4.59	1.66	36
5/21/2008	14:10	2nd	Pump	Used Pump	30.33	34.57	4.24	1.39	51
9/12/2008 ¹	14:30	3rd		Bladder pump malfunctioned	30.03	34.59	4.56	Not Bailed	0
11/13/2008	13:00	4th	Pump	Used Pump	30.02	34.63	4.61	0.94	65
2/11/2009	14:05	1st.	Pump	Used Pump	30.21	31.72	1.51	0.29	90
5/5/2009	11:30	2nd	Pump	Used Pump	30.22	30.8	0.58	0.41	76
8/10/2009	9:22	3rd	Pump	Used Pump	30.69	31.02	0.33	0.89	98
10/28/2009	10:55	4th	Pump	Used Pump	30.56	30.75	0.19	0.19	74
3/3/2010	9:00	1st	Pump	Used Pump	30.89	31.05	0.16	0.21	31
6/3/2010	13:10	2nd	Pump	Used Pump	30.99	31.09	0.1	0.1	32
9/20/2010	14:00	3rd	Pump	Used Pump	29.91	30.06	0.15	0.25	34
11/3/2010	9:10	4th	Pump	Used Pump	30.89	31.01	0.12	0.1	31
3/9/2011	10:19	1st	Pump	Used Pump	30.04	30.15	0.11	0.12	40
6/27/2011	8:05	2nd	Pump	Used Pump	30.52	30.63	0.11	0.1	45
10/3/2011	15:07	Annual	Pump	Used Pump	30.81	30.9	0.09	0.11	42
11/8/2011	8:30	4th	Pump	Used Pump	30.77	30.85	0.08	0.09	38
3/15/2012	10:30	1st	Pump	Used Pump	29.31	29.34	0.03	0.02	22
6/4/2012	9:00	2nd	Pump	Used Pump	29.39	29.41	0.02	0.05	40
8/13/2012	10:30	3rd	Pump	Used Pump	29.54	30.13	0.59	0.4	40
10/8/2012	9:40	4th	Pump	Used Pump	29.28	30.18	0.9	0.5	35
3/26/2013	10:25	1st	Pump	Used Pump	29.11	32.6	3.49	0.028	24
6/17/2013	11:50	2nd	Pump	Used Pump	29.37	33.1	3.73	0.75	18
9/16/2013	11:05	3rd	Pump	Used Pump	28.75	33.09	4.34	0.8	19
11/12/2013	9:25	4th	Pump	Used Pump	28.73	33.11	4.38	0.75	25
3/7/2014	NR	1st	Pump	Used Pump	28.15	31.65	3.5	0.75	28
6/9/2014	NR	2nd	Pump	Used Pump	28.31	33.06	4.75	0.75	25
9/18/2014 ³	NR	3rd		Annual Sampling Only	28.05	Unknown			
11/13/2014	NR	4th	Pump	Used Pump	28.11	33.04	4.93	0.87	30
3/23/2015	3:00	1st	Pump	Pump	28.2	32.8	4.6	0.5	25
6/9/2015	4:25	2nd	Pump	Pump	27.7	32.1	4.4	0.75	15
8/23/2015 ³	10:10	3rd	Pump	Pump	28.08	30.02	1.94	None	None
10/29/2015	9:15	4th	Pump	Pump	27.65	30.1	2.45	0.75	14
					YTD TOTALS		105.18	471.258	3609

RW-1 HYDROCARBON RECOVERY LOG - Continued

Measurement Date	Time	Quarter	Method	Status	Depth to Product (ft)	Depth to Water (ft)	Product Thickness Level ² (ft)	Product Bailed or Purged ² (gal)	Water Purged ² (gal)
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NOTES:

FT - Feet

NR - Not recorded

Gal - Gallon

YTD -Year to date

1) Bladder pump has torn diaphragm. Pump non-repairable. Ordered new pump

2) Measurements given are estimated values based on the technicians interpretation and should not be viewed as accurate.

3) Annual Samples collected - no purging done at this time.

APPENDIX A
ESTIMATED YEAR TO DATE SUMMARY 1995 THRU 2015

RW-1

Year	Product Thickness Level ¹ (ft)	Product Bailed/Purged ¹ (gal)	Water Purged ¹ (gal)
2005	25.9	431.5	1210.5
2006	6.25	23.52	1107
2007	7.45	1.72	148.5
2008	18	3.99	152
2009	2.6	1.78	338
2010	0.53	0.66	128
2011	0.39	0.42	165
2012	1.54	0.97	137
2013	1.54	6.698	86
2014	2.37	2.37	83
2015	13.39	2	54
TOTAL	79.96	475.628	3609

RW-5

Year	Product Thickness Level ¹ (ft)	Product Bailed/Purged ¹ (gal)	Water Purged ¹ (gal)
2005	4.22	17	NR
2006	1.52	1.75	NR
2007	4.33	7.25	NR
2008	3.35	0.43	68
2009	0.07	0.05	15
2010	0	0	0
2011	0	0	71
2012	0	0	50
2013	0	0	55
2014	0	0	51
2015	0	0	48
TOTAL	13.49	26.48	358

RW-6

Year	Product Thickness Level ¹ (ft)	Product Bailed/Purged ¹ (gal)	Water Purged ¹ (gal)
2005	4.73	17	NR
2006	3.12	4.75	NR
2007	3.88	12.28	NR
2008	2.95	0.37	68
2009	0.8	0.22	57
2010	0.65	0.15	60
2011	0.12	0.22	110
2012	0	0	67
2013	0	0	70
2014	0	0	51
2015	0	0	54
TOTAL	16.25	34.99	537

NOTES:

NR - Not recorded

1) Measurements given are estimated values based on the technicians interpretation and should not be viewed as accurate.

APPENDIX A - RW-5 HYDROCARBON RECOVERY LOG
2/22/05 thru 12/2015

Measurement Date	Time	Quarter	Method	Status	Depth to Product (ft)	Depth to Water (ft)	Product Thickness Level ' (ft)	Product Bailed/Purged ' (gal)	Water Purged ' (gal)
2/22/2005	14:15	1st	Bailer	Start	32.92	34.01	1.09	4.5	NR
3/3/2005	14:00	1st	Bailer	Start	33.08	33.42	0.34	6	NR
6/24/2005	9:00	2nd	Bailer	Start	32.96	34.04	1.08	2.5	NR
9/16/2005	9:20	3rd	Bailer	Start	32.83	33.85	1.02	2.5	NR
12/5/2005	14:00	4th	Bailer	Start	32.52	33.21	0.69	1.5	NR
3/16/2006	14:50	1st	Bailer	Start	32.58	33	0.42	1	NR
7/26/2006	14:35	2nd	Bailer	Start	32.9	33.31	0.41	0.5	NR
10/16/2006	09:15	4th	Bailer	Start	32.73	33.42	0.69	0.25	NR
2/13/2007	09:00	1st	Bailer	Start	32.17	33.95	1.78	0.5	NR
4/30/2007	11:20	2nd	Bailer	Start	33	33.83	0.83	2.5	NR
7/10/2007	10:15	3rd	Bailer	Start	33.1	33.92	0.82	2.5	NR
11/26/2007	08:00	4th	Bailer	Start	33.01	33.91	0.9	1.75	NR
2/18/2008	15:15	1st	Bailer	Start	33.19	33.95	0.76	0.19	20
5/21/2008	14:20	2nd	Bailer	Start	32.77	33.84	1.07	0.14	18
9/12/2008	14:30	3rd	Bailer	Start	32.62	32.85	0.23	0.05	15
11/3/2008	14:00	4th	Bailer	Start	31.05	32.34	1.29	0.05	15
2/11/2009	13:40	1st	Bailer	Start	32.08	32.15	0.07	0.05	15
5/5/2009	10:02	2nd	Bailer	Start	0	31.91	0	0	0
8/10/2009	9:50	3rd	Bailer	Start	0	31.94	0	0	0
10/28/2009	10:45	4th	Bailer	Start	0	31.71	0	0	0
3/3/2010	9:35	1st	Bailer	Start	0	31.63	0	0	0
6/3/2010	13:40	2nd	Bailer	Start	0	31.37	0	0	0
9/20/2010	14:24	3rd	Bailer	Start	0	31.94	0	0	0
11/3/2010	9:30	4th	Bailer	Start	0	31.94	0	0	0
3/9/2011	10:29	1st	Bailer	Start	0	30.05	0	0	20
6/27/2011	8:40	2nd	Bailer	Start	0	28.96	0	0	20
10/4/2011	8:15	3rd	Bailer	Start	0	29.89	0	0	14
11/8/2011	9:20	4th	Bailer	Start	0	29.85	0	0	17
3/15/2012	9:50	1st	Bailer	Start	0	29.32	0	0	15
6/4/2012	9:20	2nd	Bailer	Start	0	29.37	0	0	10
8/13/2012	10:50	3rd	Bailer	Start	0	29.49	0	0	10
10/8/2012	10:10	4th	Bailer	Start	0	29.58	0	0	15
3/26/2013	9:10	2nd	Bailer	Start	0	29.45	0	0	10
6/17/2013	10:20	2nd	Bailer	Start	0	29.44	0	0	14
9/16/2013	9:30	3rd	Bailer	Start	0	28.98	0	0	15
11/12/2013	9:50	4th	Bailer	Start	0	28.96	0	0	16
3/17/2014	NR	1st	Bailer	Start	0	27.92	0	0	15
6/9/2014	NR	2nd	Bailer	Start	0	28.8	0	0	20

RW-5 HYDROCARBON RECOVERY LOG - Continued

Measurement Date	Time	Quarter	Method	Status	Depth to Product (ft)	Depth to Water (ft)	Product Thickness Level ¹ (ft)	Product Bailed/Purged ¹ (gal)	Water Purged ¹ (gal)
9/18/2014 ²	NR	3rd	Bailer	Start	0	28.81	0	0	0
11/13/2014	NR	4th	Bailer	Start	0	28.77	0	0	16
3/23/2015	3:15	1st	N/A	N/A	0	29.1	0	0	0
6/9/2015	4:10	2nd	Bailer	Start	0	28.8	0	0	15
8/23/2015	9:25	3rd	Bailer	Start	0	29.08	0	0	16
10/29/2015	1:35	4th	Bailer	Start	0	27.94	0	0	17
YTD TOTALS							13.49	26.48	358

NOTES:

FT - Feet

NR - Not recorded

Gal - Gallon

YTD - Year to Date

1) Measurements given are estimated values based on the technicians interpretation.

2) Annual grab samples collected - no purging of well at this time.

APPENDIX A - RW-6 HYDROCARBON RECOVERY LOG
2/22/05 thru 12/2015

Measurement Date	Time	Quarter	Method	Status	Depth to Product (ft)	Depth to Water (ft)	Product Thickness Level ¹ (ft)	Product Bailed/Purged ¹ (gal)	Water Purged ¹ (gal)
2/22/2005	14:30	1st	Bailer	Start	33.12	34.5	1.38	4.5	NR
3/3/2005	14:00	2nd	Bailer	Start	33.15	34	0.85	6	NR
6/24/2005	11:00	2nd	Bailer	Start	33.31	34.46	1.15	3.5	NR
9/16/2005	10:20	3rd	Bailer	Start	32.98	34.33	1.35	3	NR
3/16/2006	12:45	1st	Bailer	Start	32.67	33.75	1.08	2.5	NR
7/26/2006	15:00	2nd	Bailer	Start	33	34.12	1.12	1.5	NR
10/16/2006	09:55	4th	Bailer	Start	33.71	34.63	0.92	0.75	NR
2/13/2007	09:50	1st	Bailer	Start	33.29	34.5	1.21	0.75	NR
4/30/2007	11:25	2nd	Bailer	Start	34.42	34.58	0.16	0.25	NR
7/10/2007	10:08	3rd	Bailer	Start	33.29	34.58	1.29	6.78	NR
11/28/2007	08:10	4th	Bailer	Start	33.25	34.47	1.22	4.5	NR
2/18/2008	15:11	1st	Bailer	Start	33.44	34.35	0.91	0.11	20
5/21/2008	14:30	2nd	Bailer	Start	33.02	34.12	1.1	0.13	18
9/12/2008	14:35	3rd	Bailer	Start	32.12	32.83	0.71	0.09	15
11/3/2008	14:35	4th	Bailer	Start	32.46	32.69	0.23	0.04	15
2/11/2009	13:30	1st	Bailer	Start	32.19	32.35	0.16	0.12	15
5/5/2009	9:45	2nd	Bailer	Start	32.08	32.26	0.18	0.04	15
8/10/2009	9:55	3rd	Bailer	Start	32.04	32.28	0.24	0.03	15
10/28/2009	10:55	4th	Bailer	Start	31.81	32.03	0.22	0.03	12
3/3/2010	9:40	1st	Bailer	Start	31.78	32.01	0.23	0.05	15
6/3/2010	13:45	2nd	Bailer	Start	31.61	31.7	0.09	0.05	15
9/20/2010	14:30	3rd	Bailer	Start	32.04	32.28	0.24	0.03	15
11/3/2010	9:35	4th	Bailer	Start	32.01	32.1	0.09	0.02	15
3/9/2011	10:34	1st	Bailer	Start	30.24	30.26	0.02	0.04	25
6/27/2011	9:25	2nd	Bailer	Start	30.11	30.15	0.04	0.04	30
10/4/2011	9:05	3rd	Bailer	Start	29.91	29.94	0.03	0.09	30
11/8/2011	9:45	4th	Bailer	Start	29.90	29.93	0.03	0.05	25
3/15/2012	9:55	1st	Bailer	Start	0	29.46	0	0	17
6/4/2012	9:25	2nd	Bailer	Start	0	29.54	0	0	20
8/13/2012	11:00	3rd	Bailer	Start	0	29.57	0	0	15
10/8/2012	10:15	4th	Bailer	Start	0	29.62	0	0	15
3/26/2013	9:15	1st	Bailer	Start	0	29.59	0	0	20
6/17/2013	10:25	2nd	Bailer	Start	0	29.52	0	0	15
9/16/2013	10:10	3rd	Bailer	Start	0	29.13	0	0	20
11/12/2013	9:50	4th	Bailer	Start	0	29.1	0	0	15
3/17/2014	NR	1st	Bailer	Start	0	27.92	0	0	15
6/9/2014	NR	2nd	Bailer	Start	0	28.8	0	0	20
9/18/2014 ²	NR	3rd	Bailer	Start	0	28.81	0	0	0
11/13/2014	NR	4th	Bailer	Start	0	28.77	0	0	16
3/23/2015	3:15	1st	N/A	N/A	0	29.18	0	0	0
6/9/2015	4:12	2nd	Bailer	Start	0	28.68	0	0	15
8/23/2015	9:27	3rd	Bailer	Start	0	29.06	0	0	20
10/29/2015	3:37	4th	Bailer	Start	0	27.97	0	0	19
					YTD TOTALS		16.25	34.99	537

NOTES:

FT - Feet

NR - Not recorded

Gal - Gallon

YTD - Year to Date

1) Measurements given are estimated values based on the technicians interpretation.

2) Annual grab samples collected - no purging of well at this time.

APPENDIX B

FIELD INSPECTION LOGS

WESTERN REFINING - GALLUP REFINERY
1st QTR 2015

OW-13		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/9/2015	(1)	1139	7.82	12.85	0.960	0.812	0.63	14.3	-141.7
GAUGE TIME	1010	(2)	1141	7.90	12.85	0.960	0.812	0.63	6.4	-143.3
DTB (feet)										
Depth to Bottom	99.15	(3)	1143	7.94	12.86	0.960	0.813	0.63	4.4	-144.4
DEDICATED PUMP	Y	(4)	1145	7.95	12.86	0.960	0.812	0.63	3.7	-145.0
DTW (feet)	21.92	WEATHER CONDITIONS Clear, 0-5 mph, 30-35 deg F								
Depth to Water	77.23									
DTB - DTW	0.740									
Capacity per foot	114.30									
2 Well Volumes		WATER APPEARANCE Clear, no odor								
PURGE DATE	3/9/2015									
PURGE TIME	1013									
SAMPLE DAY	3/9/2015									
SAMPLE TIME	1145									
PUMP DEPTH	80 ft									
DTW (feet)	NA									
at end of Purging										

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

OW-14		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/9/2015	(1)	950	6.32	13.57	1.756	1.460	1.16	190.5	-235.9
GAUGE TIME	0930	(2)	952	6.91	13.67	1.760	1.460	1.16	17.0	-209.6
DTB (feet)										
Depth to Bottom	46.52	(3)	954	7.00	13.67	1.759	1.460	1.16	14.7	-202.0
DEDICATED PUMP	Y	(4)	956	7.03	13.68	1.760	1.460	1.16	11.0	-199.8
DTW (feet)	23.95	WEATHER CONDITIONS Clear, 0-5 mph, 30-35 deg F								
Depth to Water	22.57									
DTB - DTW	0.740									
Capacity per foot	33.40									
2 Well Volumes		WATER APPEARANCE Clear, no odor								
PURGE DATE	3/9/2015									
PURGE TIME	0935									
SAMPLE DAY	3/9/2015									
SAMPLE TIME	0958									
PUMP DEPTH	30 ft									
DTW (feet)	NA									
at end of Purging										

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Dedicated pumps

Signature:

 Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
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OW-29		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/9/2015	(1)	907	6.92	12.60	1.425	1.214	0.96	20.4	-120.5
GAUGE TIME	0830	(2)	909	7.01	12.62	1.428	1.216	0.96	15.5	-122.1
DTB (feet)										
Depth to Bottom	51.08	(3)	911	7.06	12.61	1.429	1.217	0.96	13.0	-122.4
DEDICATED PUMP	Y	(4)	913	7.08	12.72	1.434	1.218	0.96	9.7	-122.5
DTW (feet)		WEATHER CONDITIONS Clear, 0-5 mph, 30-35 deg F								
Depth to Water	18.67									
DTB - DTW	32.41									
Capacity per foot	0.650									
2 Well Volumes	42.13									
PURGE DATE	3/9/2015	WATER APPEARANCE Clear, No odor detected								
PURGE TIME	0848									
SAMPLE DAY	3/9/2015									
SAMPLE TIME	0915									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

OW-30		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
		(1)	1226	7.24	12.87	1.498	1.267	1.00	15.3	-148.9
		(2)	1228	7.25	12.74	1.493	1.267	1.00	10.1	-149.5
		(3)	1230	7.24	12.67	1.492	1.268	1.00	8.4	-149.4
GAUGE DATE	3/9/2015	(4)	1232	7.27	13.33	0.024	0.020	0.01	40.3	-139.8
GAUGE TIME	1205	WEATHER CONDITIONS Clear, 0-5 mph, 50-55 deg F								
DTB (feet)	49.90									
Depth to Bottom	23.25									
DEDICATED PUMP	Y									
DTW (feet)	26.65									
Depth to Water	0.650									
DTB - DTW	34.65									
Capacity per foot										
2 Well Volumes										
PURGE DATE	3/9/2015	WATER APPEARANCE Clear, No odor detected								
PURGE TIME	1210									
SAMPLE DAY	3/9/2015									
SAMPLE TIME	1230									
PUMP DEPTH	38 ft									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Began with purge. Pumped approximately 50 gals. Collected water samples, labeled and placed on ice in cooler. Purge water collected labeled 55 gal drum to be disposed of at the bundle pad upstream of the NAPIS .

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Dedicated pumps

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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OW-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/9/2015	(1)	1602	7.91	12.83	1.029	0.871	0.680	4.6	-172.3
GAUGE TIME	1505	(2)	1604	7.93	12.77	1.026	0.871	0.670	3.6	-173.7
DTB (feet)										
Depth to Bottom	94.55	(3)	1606	7.94	12.76	1.026	0.871	0.670	2.9	-175.1
DEDICATED PUMP	Y	(4)	1608	7.95	12.76	1.026	0.870	0.670	2.6	-176.2
DTW (feet)		WEATHER CONDITIONS Clear, 0-5 mph, 50-55 deg F								
Depth to Water	0.00									
DTB - DTW	94.55									
Capacity per foot	0.740									
2 Well Volumes	139.93									
PURGE DATE	3/9/2015	WATER APPEARANCE Clear to cloudy, brown								
PURGE TIME	1508									
SAMPLE DAY	3/9/2015									
SAMPLE TIME	1615									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Water level full (to top of casing).

OW-10		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
		(1)	1445	7.85	12.60	2.886	2.458	2.01	6	-161.2
		(2)	1447	7.85	12.60	2.913	2.481	2.03	4.9	-161.8
		(3)	1449	7.87	12.60	2.972	2.531	2.07	4.4	-162.8
GAUGE DATE	3/9/2015	(4)	1451	7.85	12.60	3.085	2.628	2.16	4.1	-163.3
GAUGE TIME	1355	WEATHER CONDITIONS Clear, 5-10 mph, 40-45 deg F								
DTB (feet)	60.33									
Depth to Bottom	Y									
DTW (feet)	0.96									
Depth to Water	59.37									
DTB - DTW	59.37	WATER APPEARANCE Clear, no odor detected.								
Capacity per foot	0.740									
2 Well Volumes	87.87									
PURGE DATE	3/9/2015									
PURGE TIME	1400									
SAMPLE DAY	3/9/2015									
SAMPLE TIME	1445									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
bailer.

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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NAPIS-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)	1121	8.49	18.89	3.885	2.859	2.35	71.8	-205.6
GAUGE TIME	1025	(2)	1123	8.40	18.75	3.893	2.873	2.37	64.0	-203.4
DTB (feet)										
Depth to Bottom	30.42	(3)	1125	8.36	18.67	3.896	2.881	2.37	61.2	-202.1
DEDICATED PUMP	N	(4)	1127	8.34	18.69	3.899	2.881	2.37	59.9	-201.2
DTW (feet)	9.59	WEATHER CONDITIONS Clear, 0-5 mph								
Depth to Water	9.59									
DTB - DTW	20.83									
Capacity per foot	0.163									
2 Well Volumes	6.79	WATER APPEARANCE Clear with slight yellow tint, end of bail turned brownish								
PURGE DATE	3/10/2015									
PURGE TIME	1120									
SAMPLE DAY	3/10/2015									
SAMPLE TIME	1130									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	Dry									

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer, bailed approx. 4.5 gallons. Collected purged water in a container and disposed of at the bundle pad.

KA-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
		(1)	1111	8.39	22.27	1.587	1.088	0.85	97.3	-236.3
		(2)	1113	8.28	23.30	1.581	1.063	0.82	39.7	-209.1
		(3)	1115	8.19	23.00	1.567	1.059	0.82	40.9	-207.1
GAUGE DATE	3/10/2015									
GAUGE TIME	1023	(4)								
DTB (feet)	23.20									
Depth to Bottom										
DEDICATED PUMP										
DTW (feet)										
Depth to Water										
DTB - DTW	8.24	WEATHER CONDITIONS								
Capacity per foot	14.96									
2 Well Volumes	0.163									
	4.88									
PURGE DATE	3/10/2015	Clear, 0-5 mph								
PURGE TIME										
SAMPLE DAY	3/10/2015									
SAMPLE TIME	1115									
PUMP DEPTH	NA									
DTW (feet)		WATER APPEARANCE								
at end of Purging	NA									
		Clear with slight yellow tint								

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer, bailed approx. 4.5 gallons. Collected purged water in a container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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NAPIS-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)	1333	8.76	14.94	1.354	1.089	0.85	253.6	-210.9
GAUGE TIME	1320	(2)	1335	8.74	11.42	1.308	1.148	0.90	34.7	-204.1
DTB (feet)										
Depth to Bottom	13.53	(3)	1337	8.82	11.36	1.306	1.148	0.90	27.4	-198.9
DEDICATED PUMP	N	(4)	1339	8.77	11.35	1.307	1.149	0.90	27.4	-195.3
DTW (feet)	6.90	WEATHER CONDITIONS Clear, 5-10 mph								
Depth to Water	6.63									
DTB - DTW	0.163									
Capacity per foot	2.16									
2 Well Volumes										
PURGE DATE	3/10/2015	WATER APPEARANCE Clear, no odor detected								
PURGE TIME										
SAMPLE DAY	3/10/2015									
SAMPLE TIME	1340									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Used new bailer for purging and collecting samples. Purged water collected in a plastic container and disposed of at the bundle pad.

NAPIS-2		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)	1054	7.95	22.33	2.00	1.369	1.08	188.9	-250.3
GAUGE TIME	1020	(2)	1056	8.00	21.88	2.04	1.410	1.11	19.4	-240.6
DTB (feet)										
Depth to Bottom	13.61	(3)	1058	8.00	21.43	2.04	1.421	1.12	14.8	-234.2
DEDICATED PUMP	N	(4)	1100	8.00	21.19	2.03	1.423	1.12	14.9	-232.5
DTW (feet)	8.44	WEATHER CONDITIONS Clear, 5-10 mph								
Depth to Water	5.17									
DTB - DTW	0.163									
Capacity per foot	1.69									
2 Well Volumes										
PURGE DATE	3/10/2015	WATER APPEARANCE Clear with slight yellow tint								
PURGE TIME										
SAMPLE DAY	3/10/2015									
SAMPLE TIME	1100									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer, bailed approx. 4.5 gallons. Collected purged water in a container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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OAPIS-1		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)
GAUGE DATE	3/10/2015	(1)							
GAUGE TIME	0912	(2)							
DTB (feet)									
Depth to Bottom	28.30	(3)							
DEDICATED PUMP	N	(4)							
DTW (feet)		WEATHER CONDITIONS Clear 0-5 mph, 20-25 Deg F							
Depth to Water	11.84								
DTB - DTW	16.46								
Capacity per foot	0.163								
3 Well Volumes	5.37								
PURGE DATE	3/10/2015	WATER APPEARANCE Clear with slight yellow tint, slight odor detected							
PURGE TIME	0915								
SAMPLE DAY	3/10/2015								
SAMPLE TIME	0937								
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging									

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in a plastic container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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GWM-2		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)								
GAUGE TIME	0818	(2)								
DTB (feet)	18.81	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS							
DTW (feet)	None - dry									
Depth to Water										
DTB - DTW										
Capacity per foot	0.163		Clear, 0-5 mph, 20-25 Deg F							
2 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY			WATER APPEARANCE							
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)	NA									
at end of Purging										

SAMPLE LOG

GWM-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)								
GAUGE TIME	0820	(2)								
DTB (feet)		(3)								
Depth to Bottom	17.80	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS							
DTW (feet)										
Depth to Water	None - dry									
DTB - DTW										
Capacity per foot	0.163		Clear, 0-5 mph, 20-25 Deg F							
2 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY			WATER APPEARANCE							
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA		No water detected							

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
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GWM-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)	837	-4.88	-9.99	0.000	0.001	0.01	0.7	957.2
GAUGE TIME	0818	(2)	839	7.94	9.72	4.053	3.721	3.11	402.0	-194.9
DTB (feet)										
Depth to Bottom	26.20	(3)	841	8.05	9.64	3.819	3.513	2.93	43.8	-161.9
DEDICATED PUMP	N	(4)	842	8.05	9.59	3.816	3.515	2.93	34.6	-161.1
DTW (feet)		WEATHER CONDITIONS Clear 0-5 mph, 20-25 Deg F								
Depth to Water	20.99									
DTB - DTW	5.21									
Capacity per foot	0.163									
3 Well Volumes	1.70									
PURGE DATE	3/10/2015	WATER APPEARANCE Clear with slight yellow tint, slight odor detected								
PURGE TIME										
SAMPLE DAY	3/10/2015									
SAMPLE TIME	0848									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in a plastic container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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Oil Sump LDU		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)								
GAUGE TIME	1350	(2)								
DTB (feet)										
Depth to Bottom	NA	(3)								
DEDICATED PUMP	N	(4)	WEATHER CONDITIONS Clear, 5-10 mph							
DTW (feet)	NA									
Depth to Water	NA									
DTB - DTW	NA									
Capacity per foot	NA									
3 Well Volumes	NA									
PURGE DATE	NA	WATER APPEARANCE DRY								
PURGE TIME	NA									
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									
SAMPLE LOG										
DRY										

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
 Disposable Polyethylene Bailer

Signature:

 Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
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East LDU		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)								
GAUGE TIME	1353	(2)								
DTB (feet)		(3)								
Depth to Bottom	NA	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Clear, 5-10 mph							
DTW (feet)										
Depth to Water	5.00									
DTB - DTW										
Capacity per foot	NA									
3 Well Volumes	NA									
PURGE DATE	NA		WATER APPEARANCE							
PURGE TIME	NA									
SAMPLE DAY	3/10/2015		Clear to brown with odor							
SAMPLE TIME	1410									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Used new bailer - grab samples only - no bailing.

West LDU		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)								
GAUGE TIME	1400	(2)								
DTB (feet)		(3)								
Depth to Bottom	NA	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS							
DTW (feet)										
Depth to Water	20.74									
DTB - DTW	NA									
Capacity per foot	NA									
3 Well Volumes	NA									
PURGE DATE	NA		WATER APPEARANCE							
PURGE TIME	NA									
SAMPLE DAY	3/10/2015									
SAMPLE TIME	1430									
PUMP DEPTH	NA		Clear to brown with odor							
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Used new bailer - grab samples only - no bailing.

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
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STP1-NW		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)								
GAUGE TIME	1445	(2)								
DTB (feet)		(3)								
Depth to Bottom	50.00	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Clear, 0-5 mph, 20-25 Deg F							
DTW (feet)										
Depth to Water	20.74									
DTB - DTW	29.26									
Capacity per foot	0.163									
2 Well Volumes	9.54									
PURGE DATE	3/10/2015		WATER APPEARANCE							
PURGE TIME										
SAMPLE DAY	3/10/2015		Clear to cloudy, no odor detected							
SAMPLE TIME	1458									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in a plastic container and disposed of at the bundle pad.

STP1-SW		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/10/2015	(1)								
GAUGE TIME	1520	(2)								
DTB (feet)		(3)								
Depth to Bottom	29.10	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Clear, 0-5 mph, 20-25 Deg F							
DTW (feet)										
Depth to Water	None - dry									
DTB - DTW	#VALUE!									
Capacity per foot	0.163									
2 Well Volumes	#VALUE!									
PURGE DATE			WATER APPEARANCE No water detected							
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015**

OW-13		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/1/2015	(1)	1305	7.94	12.82	0.960	0.813	0.63	24.7	-321.2
GAUGE TIME		(2)	1307	7.99	12.84	0.961	0.813	0.63	7.1	-368.4
DTB (feet)	99.15	(3)	1309	7.96	12.82	0.960	0.814	0.63	4.4	-392.6
Depth to Bottom		(4)	1311	8.00	12.79	0.960	0.814	1.00	3.2	-401.9
DEDICATED PUMP		WEATHER CONDITIONS Partly cloudy, 0-5 mph, 70-75 Deg F.								
DTW (feet)										
Depth to Water										
DTB - DTW										
Capacity per foot	0.740	WATER APPEARANCE Clear, no odor								
2 Well Volumes	114.54									
PURGE DATE	6/1/2015									
PURGE TIME										
SAMPLE DAY	6/1/2015									
SAMPLE TIME	1210									
PUMP DEPTH	80 ft									
DTW (feet)	NA									
at end of Purging										

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

OW-14		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/1/2015	(1)	1100	7.65	13.92	1.176	1.453	1.15	417.3	-317.3
GAUGE TIME		(2)	1102	7.45	13.75	1.751	1.450	1.15	20.1	-381.9
DTB (feet)	46.52 Y									
Depth to Bottom		(3)	1104	7.50	13.73	1.750	1.450	1.15	11.1	-385.7
DEDICATED PUMP		(4)	1106	7.50	13.71	1.750	1.450	0.96	8.5	-387.8
DTW (feet)		WEATHER CONDITIONS Partly cloudy, 0-5 mph, 70-75 Deg F.								
Depth to Water										
DTB - DTW										
Capacity per foot										
2 Well Volumes	33.51									
PURGE DATE	6/1/2015	WATER APPEARANCE								
PURGE TIME										
SAMPLE DAY	6/1/2015	Clear, no odor								
SAMPLE TIME										
PUMP DEPTH	30 ft									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Dedicated pumps

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015

OW-29		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/1/2015	(1)	1151	7.63	12.83	1.448	1.226	0.97	12.9	-328.7
GAUGE TIME		(2)	1153	7.66	12.85	1.449	1.227	0.97	5.3	-363.7
DTB (feet)	51.08	(3)	1155	7.68	12.86	1.450	1.227	0.97	4.2	-376.4
Depth to Bottom		(4)	1157	7.67	12.87	1.453	1.229	0.97	4.8	-383.8
DEDICATED PUMP		WEATHER CONDITIONS Partly cloudy, breezy 70-75 Deg F.								
DTW (feet)										
Depth to Water										
DTB - DTW										
Capacity per foot	Y									
2 Well Volumes	18.67									
	32.41									
	0.650									
	42.13									
PURGE DATE	6/1/2015	WATER APPEARANCE								
PURGE TIME										
SAMPLE DAY	6/1/2015	Clear, No odor detected								
SAMPLE TIME	1118									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

OW-30		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/1/2015	(1)	905	8.00	12.62	1.490	1.268	1.00	19.5	-362.6
GAUGE TIME	0845	(2)	907	8.01	12.63	1.491	1.269	1.00	8.4	-370.2
DTB (feet)	49.90 Y 23.20 26.70 0.650 34.71	(3)	909	8.00	12.69	1.493	1.269	1.00	6.2	-373.3
Depth to Bottom		(4)	911	1.00	13.35	0.026	0.021	0.01	10.6	-277.0
DEDICATED PUMP		WEATHER CONDITIONS Partly cloudy,breezy, 70-75 Deg F.								
DTW (feet)										
Depth to Water										
DTB - DTW										
Capacity per foot										
2 Well Volumes	34.71									
PURGE DATE	6/1/2015	WATER APPEARANCE								
PURGE TIME										
SAMPLE DAY	6/1/2015	Clear, No odor detected								
SAMPLE TIME	0910									
PUMP DEPTH	38 ft									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Dedicated pumps

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015**

OW-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/3/2015	(1)	1002	7.85	13.04	1.038	0.875	0.680	11	-317.4
GAUGE TIME	0910	(2)	1004	7.84	13.02	1.038	0.875	0.680	6.1	-323.8
DTB (feet)										
Depth to Bottom	94.55	(3)	1006	7.85	13.12	1.040	0.875	0.680	4.1	-326.9
DEDICATED PUMP	Y	(4)	1008	7.86	13.36	1.047	0.875	0.680	2.9	-329.4
DTW (feet)	0.00	WEATHER CONDITIONS Clear to partly cloudy, breezy, 70-75 deg F								
Depth to Water	0.00									
DTB - DTW	94.55									
Capacity per foot	0.740									
2 Well Volumes	139.93									
PURGE DATE	6/3/2015	WATER APPEARANCE Clear slightly cloudy								
PURGE TIME	1508									
SAMPLE DAY	6/3/2015									
SAMPLE TIME	1015									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Water level full (to top of casing).

OW-10		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/3/2015	(1)	1117	8.10	13.05	4.311	3.631	3.04	5	-400.2
GAUGE TIME	1040	(2)	1119	8.00	13.06	4.326	3.643	3.05	3.9	-399.2
DTB (feet)										
Depth to Bottom	60.33	(3)	1121	5.00	13.07	4.278	3.602	3.01	3.4	-399.6
DEDICATED PUMP	Y	(4)	1123	8.02	13.07	4.357	3.668	3.07	3.1	-399.4
DTW (feet)	1.00	8 Clear to partly cloudy, breezy, 70-75 deg F								
Depth to Water	1.00									
DTB - DTW	59.33									
Capacity per foot	0.740									
2 Well Volumes	87.81									
PURGE DATE	6/3/2015	WATER APPEARANCE Clear, no odor detected.								
PURGE TIME										
SAMPLE DAY	6/3/2015									
SAMPLE TIME	1130									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
bailer.

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015**

NAPIS-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/2/2015	(1)	1304	7.97	20.32	3.856	2.752	2.26	64.5	-236.9
GAUGE TIME	1232	(2)	1306	8.01	20.39	3.863	2.753	2.26	58.0	-234.3
DTB (feet)										
Depth to Bottom	30.42	(3)	1308	8.02	20.49	3.876	2.757	2.26	55.7	-234.0
DEDICATED PUMP	N	(4)	1310	8.03	20.61	3.886	2.757	2.26	55.4	-234.4
DTW (feet)	9.10	WEATHER CONDITIONS Partly cloudy, breezy, 65-70 Deg F								
Depth to Water	21.32									
DTB - DTW	0.163									
Capacity per foot	6.95									
2 Well Volumes										
PURGE DATE	6/2/2015	WATER APPEARANCE								
PURGE TIME										
SAMPLE DAY	6/2/2015									
SAMPLE TIME	1310	Clear								
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	Dry									

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer, bailed approx. 4.5 gallons. Collected purged water in a container and disposed of at the bundle pad.

KA-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
		(1)	1323	7.70	26.07	1.532	0.976	0.75	54.4	-237.5
		(2)	1325	7.68	26.16	1.532	0.974	0.75	52.7	-239.4
		(3)	1327	7.66	26.17	1.530	0.973	0.75	50.6	-237.8
GAUGE DATE	6/2/2015	(4)	1329	7.62	26.16	1.529	0.972	0.75	51.5	-236.9
GAUGE TIME	1231	WEATHER CONDITIONS Partly cloudy, breezy, 65-70 Deg F								
DTB (feet)	23.20									
DEDICATED PUMP	N									
DTW (feet)	8.59									
Depth to Water	14.61									
DTB - DTW	0.163	WATER APPEARANCE Clear								
Capacity per foot	4.76									
2 Well Volumes										
PURGE DATE	6/2/2015									
PURGE TIME										
SAMPLE DAY	6/2/2015									
SAMPLE TIME	1330									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer, bailed approx. 4.5 gallons. Collected purged water in a container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
 Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
 Disposable Polyethylene Bailer

Signature:

 Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015

NAPIS-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/2/2015	(1)								
GAUGE TIME	1340	(2)	Did not save results on the meter.							
DTB (feet)		(3)								
Depth to Bottom	13.53	(4)								
DEDICATED PUMP	N	WEATHER CONDITIONS Partly cloudy, breezy, 65-70 Deg F								
DTW (feet)	7.00									
Depth to Water	6.53									
DTB - DTW	0.163									
Capacity per foot	2.13									
2 Well Volumes		WATER APPEARANCE Clear, no odor detected								
PURGE DATE	6/2/2015									
PURGE TIME										
SAMPLE DAY	6/2/2015									
SAMPLE TIME	1340									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Used new bailer for purging and collecting samples. Purged water collected in a plastic container and disposed of at the bundle pad.

NAPIS-2		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/2/2015	(1)	1244	7.60	25.18	2.19	1.420	1.12	14.3	-261.6
GAUGE TIME	1140	(2)	1246	7.56	25.28	2.20	1.419	1.11	12.8	-259.4
DTB (feet)										
Depth to Bottom	13.61	(3)	1248	7.52	25.35	2.20	1.419	1.11	12.4	-257.9
DEDICATED PUMP	N	(4)	1250	7.49	25.39	2.20	1.419	1.11	11.6	-256.1
DTW (feet)		WEATHER CONDITIONS								
Depth to Water	8.54									
DTB - DTW	5.07									
Capacity per foot	0.163									
2 Well Volumes	1.65									
PURGE DATE	6/2/2015	Partly cloudy, breezy, 65-70 Deg F								
PURGE TIME										
SAMPLE DAY	6/2/2015									
SAMPLE TIME	1255									
PUMP DEPTH	NA									
DTW (feet)		WATER APPEARANCE								
at end of Purging	NA									
Clear with slight yellow tint										

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer, bailed approx. 4.5 gallons. Collected purged water in a container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015**

OAPIS-1		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)
GAUGE DATE	6/2/2015	(1)							
GAUGE TIME	1140	(2)							
DTB (feet)									
Depth to Bottom	28.30	(3)							
DEDICATED PUMP	N	(4)							
DTW (feet)		WEATHER CONDITIONS Partly cloudy, breezy, 65-70 Deg F							
Depth to Water	12.01								
DTB - DTW	16.29								
Capacity per foot	0.163								
3 Well Volumes	5.31								
PURGE DATE	6/2/2015	WATER APPEARANCE Clear with slight yellow tint, odor detected							
PURGE TIME	0915								
SAMPLE DAY	6/2/2015								
SAMPLE TIME	1200								
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging									

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in a plastic container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015**

GWM-2		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/2/2015	(1)								
GAUGE TIME	0948	(2)								
DTB (feet)		(3)								
Depth to Bottom	18.81	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Partly cloudy, breezy, 65-70 Deg F							
DTW (feet)										
Depth to Water	None - dry									
DTB - DTW										
Capacity per foot	0.163		WATER APPEARANCE No water detected							
2 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY			WATER APPEARANCE No water detected							
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

GWM-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/2/2015	(1)								
GAUGE TIME	0946	(2)								
DTB (feet)		(3)								
Depth to Bottom	17.80	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Partly cloudy, breezy, 65-70 Deg F							
DTW (feet)										
Depth to Water	None - dry									
DTB - DTW										
Capacity per foot	0.163		WATER APPEARANCE No water detected							
2 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY			WATER APPEARANCE No water detected							
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015**

GWM-1		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)
GAUGE DATE	6/2/2015	(1)							
GAUGE TIME	0952	(2)	Did not save results on the meter.						
DTB (feet)									
Depth to Bottom	26.20	(3)							
DEDICATED PUMP	N	(4)							
DTW (feet)		WEATHER CONDITIONS Partly cloudy, breezy, 65-70 Deg F							
Depth to Water	20.92								
DTB - DTW	5.28								
Capacity per foot	0.163								
3 Well Volumes	1.72								
PURGE DATE	6/2/2015	WATER APPEARANCE Clear with slight yellow tint, slight odor detected							
PURGE TIME									
SAMPLE DAY	6/2/2015								
SAMPLE TIME	1040								
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging									

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in a plastic container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015**

Oil Sump LDU		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/3/2015	(1)							
GAUGE TIME	1430	(2)							
DTB (feet)									
Depth to Bottom	NA	(3)							
DEDICATED PUMP	N	(4)	WEATHER CONDITIONS Partly cloudy, breezy, 65-70 Deg F						
DTW (feet)									
Depth to Water	None - Dry								
DTB - DTW	NA								
Capacity per foot	NA								
3 Well Volumes	NA								
PURGE DATE	NA	WATER APPEARANCE DRY							
PURGE TIME	NA								
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging	NA								
SAMPLE LOG									
DRY									

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015

East LDU		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/3/2015	(1)								
GAUGE TIME	1432	(2)								
DTB (feet)		(3)								
Depth to Bottom	NA	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Partly cloudy, breezy, 65-70 Deg F							
DTW (feet)										
Depth to Water	5.25									
DTB - DTW										
Capacity per foot	NA									
3 Well Volumes	NA									
PURGE DATE	NA		WATER APPEARANCE							
PURGE TIME	NA									
SAMPLE DAY	3/10/2015		Clear to brown with odor							
SAMPLE TIME	1455									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Used new bailer - grab samples only - no bailing.

West LDU		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/3/2015	(1)								
GAUGE TIME	1434	(2)								
DTB (feet)		(3)								
Depth to Bottom	NA	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Partly cloudy, breezy, 65-70 Deg F							
DTW (feet)										
Depth to Water	11.89									
DTB - DTW	NA									
Capacity per foot	NA									
3 Well Volumes	NA									
PURGE DATE	NA		WATER APPEARANCE Clear to brown with odor							
PURGE TIME	NA									
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Not enough water to collect samples.

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
2ND QTR 2015**

STP1-NW		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/2/2015	(1)								
GAUGE TIME	0930	(2)								
DTB (feet)		(3)								
Depth to Bottom	50.00	(4)								
DEDICATED PUMP	N	WEATHER CONDITIONS Partly cloudy, breezy								
DTW (feet) Depth to Water	20.72									
DTB - DTW	29.28									
Capacity per foot	0.163									
2 Well Volumes	9.55									
PURGE DATE	6/2/2015									
PURGE TIME		WATER APPEARANCE Clear to cloudy, no odor detected								
SAMPLE DAY	6/2/2015									
SAMPLE TIME	1005									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in a plastic container and disposed of at the bundle pad.

STP1-SW		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/2/2015	(1)								
GAUGE TIME	0932	(2)								
DTB (feet)		(3)								
Depth to Bottom	29.10	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS							
DTW (feet)										
Depth to Water	None - dry									
DTB - DTW	#VALUE!									
Capacity per foot	0.163									
2 Well Volumes	#VALUE!		Partly cloudy, breezy							
PURGE DATE			WATER APPEARANCE							
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)			No water detected							
at end of Purging	NA									

SAMPLE LOG

No samples collected - DRY.

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
3RD QTR/ANNUAL 2015**

OW-11		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1346	12.66	15.79	2.195	1.732	1.39	22.0	-402.9
GAUGE TIME	1045	(2)	1348	12.41	15.74	2.203	1.739	1.40	18.3	-389.0
DTB (feet)	65.79	(3)	1350	12.26	16.01	2.216	1.739	1.39	17.3	-375.3
Depth to Bottom										
DEDICATED PUMP	N	(4)	1352	12.17	16.28	2.230	1.739	1.39	16.9	-357.3
DTW (feet)	19.30	WEATHER CONDITIONS Clear to partly cloudy, slight breeze, 80-85 Deg F								
Depth to Water	46.49									
DTB - DTW	0.740									
Capacity per foot	68.81									
2 Well Volumes		WATER APPEARANCE Clear, no odor detected.								
PURGE DATE	8/17/2015									
PURGE TIME	1305									
SAMPLE DAY	8/17/2015									
SAMPLE TIME	1355									
PUMP DEPTH										
DTW (feet)										
at end of Purging										

SAMPLE LOG

OW-12		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/13/2015	(1)	1056	10.59	15.19	0.899	0.719	0.55	54.1	-319.1
GAUGE TIME	1010	(2)	1058	10.54	15.29	0.902	0.720	0.55	53.1	-314.8
DTB (feet)	128.85	(3)	1100	10.50	15.42	0.905	0.720	0.55	52.4	-312.1
Depth to Bottom										
DEDICATED PUMP	N	(4)	1102	10.46	15.55	0.908	0.721	0.55	52.2	-310.1
DTW (feet)	47.42	WEATHER CONDITIONS Clear, slight breeze, 80-85 Deg F								
Depth to Water	81.43									
DTB - DTW	0.740									
Capacity per foot	120.52									
2 Well Volumes		WATER APPEARANCE Clear, no odor detected.								
PURGE DATE	8/13/2015									
PURGE TIME	1030									
SAMPLE DAY	8/13/2015									
SAMPLE TIME	1105									
PUMP DEPTH	120									
DTW (feet)										
at end of Purging										

SAMPLE LOG

Purged 60 gallons, pump lost suction. Allowed to recharge and collected samples. Purged water collected in 55 gallon drums and disposed of upstream of the WWT plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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OW-50		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1422	4.49	14.05	0.911	0.749	0.58	24.6	-387.3
GAUGE TIME	1100	(2)	1424	7.18	14.30	0.917	0.749	0.58	19.2	-389.8
DTB (feet)	64.00	(3)	1426	8.64	15.00	0.933	0.749	0.58	44.2	-383.8
Depth to Bottom										
DEDICATED PUMP	N	(4)	1428	9.03	14.97	0.935	0.749	0.58	23.9	-383.0
DTW (feet)	16.47	WEATHER CONDITIONS Overcast, 0-5 mph, 80-85 Deg F.								
Depth to Water	47.53									
DTB - DTW	0.163									
Capacity per foot	15.49									
2 Well Volumes										
PURGE DATE	8/10/2015	WATER APPEARANCE Clear - No Odor								
PURGE TIME	1400									
SAMPLE DAY	8/10/2015									
SAMPLE TIME	1430									
PUMP DEPTH										
DTW (feet)										
at end of Purging										

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in plastic container and disposed of at the bundle pad.

OW-52		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1326	7.38	13.91	0.801	0.661	0.51	14.6	-354.9
GAUGE TIME	0810	(2)	1328	8.02	14.13	0.809	0.664	0.51	13.4	-367.3
DTB (feet)	77.74	(3)	1330	6.06	14.42	0.818	0.667	0.51	13.1	-367.7
Depth to Bottom										
DEDICATED PUMP	N	(4)	1332	7.10	14.80	0.830	0.667	0.51	13.2	-339.3
DTW (feet)	15.49	WEATHER CONDITIONS								
Depth to Water										
DTB - DTW										
Capacity per foot										
2 Well Volumes	20.29	Overcast, 0-5 mph, 80-85 Deg F.								
PURGE DATE	8/10/2015									
PURGE TIME										
SAMPLE DAY	8/10/2015									
SAMPLE TIME	1330	WATER APPEARANCE								
PUMP DEPTH										
DTW (feet)										
at end of Purging		Clear - No Odor								

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in plastic container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
 Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
 Disposable Bailer

Signature:

 Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
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OW-13		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	856	8.70	12.83	0.961	0.814	0.63	6.2	-274.9
GAUGE TIME	0855	(2)	858	8.69	12.82	0.960	0.814	0.63	3.2	-287.8
DTB (feet)										
Depth to Bottom	99.15	(3)	900	8.64	12.84	0.960	0.813	0.63	2.4	-304.2
DEDICATED PUMP	Y	(4)	902	8.58	12.83	0.960	0.813	0.63	2	-318.9
DTW (feet)	22.14	WEATHER CONDITIONS Overcast, 0-5 mph, 80-85 Deg F.								
Depth to Water	77.01									
DTB - DTW	0.740									
Capacity per foot	113.97									
2 Well Volumes										
PURGE DATE	8/10/2015	WATER APPEARANCE Clear, no odor								
PURGE TIME	0830									
SAMPLE DAY	8/10/2015									
SAMPLE TIME	0900									
PUMP DEPTH	80 ft									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

OW-14		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1653	6.96	13.37	1.740	1.370	1.08	104.5	-363.4
GAUGE TIME	0750	(2)	1655	8.64	15.86	1.736	1.442	1.14	3.9	-383.5
DTB (feet)	46.52 Y 23.96 22.56 0.740 33.39	(3)	1657	8.71	13.61	1.741	1.442	1.14	3.6	-400.2
Depth to Bottom		(4)	WEATHER CONDITIONS Overcast, 5-10 mph, 80-85 Deg F.							
DEDICATED PUMP										
DTW (feet)										
Depth to Water										
DTB - DTW	22.56	WATER APPEARANCE Clear, no odor								
Capacity per foot										
2 Well Volumes										
PURGE DATE	8/10/2015									
PURGE TIME	1630	WATER APPEARANCE Clear, no odor								
SAMPLE DAY	8/10/2015									
SAMPLE TIME	1700									
PUMP DEPTH	30 ft									
DTW (feet)	NA									
at end of Purging										

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Dedicated pumps

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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OW-29		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1020	8.60	13.05	1.463	1.232	0.97	6.0	-418.5
GAUGE TIME	0804	(2)	1022	8.54	13.03	1.462	1.232	0.97	4.8	-424.7
DTB (feet)										
Depth to Bottom	51.08	(3)	1024	8.56	13.02	1.462	1.232	0.97	4.2	-429.8
DEDICATED PUMP	Y	(4)	1026	8.48	13.01	1.463	1.233	0.97	3.7	-436.9
DTW (feet)		WEATHER CONDITIONS Partly cloudy, 5-10 mph, 65-70 Deg F.								
Depth to Water	18.94									
DTB - DTW	32.14									
Capacity per foot	0.740									
2 Well Volumes	47.57									
PURGE DATE	8/10/2015	WATER APPEARANCE Clear, No odor detected								
PURGE TIME	0935									
SAMPLE DAY	8/10/2015									
SAMPLE TIME	1025									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

OW-30		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
		(1)	1604	6.28	28.45	0.010	0.006	0.00	9.6	-284.5
		(2)	1606	4.67	13.21	1.523	1.278	1.01	17.7	-394.0
		(3)	1608	9.03	13.64	1.537	1.276	1.01	14.3	-426.7
GAUGE DATE	8/10/2015	(4)	1610	8.96	13.37	1.529	1.277	1.01	5.3	-459.0
GAUGE TIME	0755									
DTB (feet)	49.90 Y									
Depth to Bottom										
DEDICATED PUMP										
DTW (feet)										
Depth to Water										
DTB - DTW	23.42	WEATHER CONDITIONS Overcast, 0-5 mph, 80-85 Deg F.								
Capacity per foot	26.48									
2 Well Volumes	0.740									
	39.19									
PURGE DATE	8/10/2015									
PURGE TIME	1210									
SAMPLE DAY	8/10/2015									
SAMPLE TIME	1230									
PUMP DEPTH	38 ft									
DTW (feet)	NA									
at end of Purging										

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Dedicated pumps

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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OW-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/12/2015	(1)	921	4.24	23.48	0.003	0.002	0.000	95	-251.2
GAUGE TIME	0750	(2)	923	9.06	17.89	1.167	0.878	0.680	47.1	-283.4
DTB (feet)										
Depth to Bottom	94.55	(3)	925	8.94	18.42	1.186	0.882	0.680	48	-278.1
DEDICATED PUMP	Y	(4)								
DTW (feet)	0.00	WEATHER CONDITIONS Partly Cloudy, slight breeze, 55-60 Deg F.								
Depth to Water	0.00									
DTB - DTW	94.55									
Capacity per foot	0.740									
2 Well Volumes	139.93									
PURGE DATE	8/12/2015	WATER APPEARANCE Clear, no odor - slight brownish tint at end of purge.								
PURGE TIME	0750									
SAMPLE DAY	8/12/2015									
SAMPLE TIME	0930									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Water level full (to top of casing). Purged approx 80 gallons before pump lost suction. Allowed to recharge and collected samples. Purged water collected in 55 gallon drums and disposed of upstream of the WWT plant.

OW-10		TEST PARAMETERS																	
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)									
GAUGE DATE	8/12/2015	(1)	1017	9.89	12.95	5.683	4.799	4.09	9	-318.5									
GAUGE TIME	1010	(2)	1019	9.62	13.10	5.654	4.756	4.05	4.1	-334.3									
DTB (feet)	60.33 Y	(3)	1021	9.58	13.80	3.443	2.847	2.35	3.1	-351.9									
Depth to Bottom																			
DEDICATED PUMP																			
DTW (feet)																			
Depth to Water	0.38	WEATHER CONDITIONS Partly Cloudy, slight breeze, 55-60 Deg F.																	
DTB - DTW	59.95																		
Capacity per foot	0.740																		
2 Well Volumes	88.73																		
PURGE DATE	8/12/2015	(4)	1023	9.51	13.72	2.535	2.100	1.70	2.4	-363.3									
PURGE TIME	1010																		
SAMPLE DAY											WATER APPEARANCE Clear, no odor detected.								
SAMPLE TIME																			
PUMP DEPTH																			
DTW (feet)	NA																		
at end of Purging	NA																		

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
bailer.

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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NAPIS-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1418	8.81	20.20	3.864	2.765	2.27	50.5	-270.8
GAUGE TIME	1014	(2)	1420	9.16	20.44	3.884	2.765	2.27	47.7	-278.2
DTB (feet)										
Depth to Bottom	30.42	(3)	1422	9.13	20.72	3.909	2.767	2.27	46.3	-286.2
DEDICATED PUMP	N	(4)	1424	9.12	20.99	3.936	2.770	2.27	46.1	-275.7
DTW (feet)	8.49	WEATHER CONDITIONS Cloudy, slight breeze, 75-80 Deg F.								
Depth to Water	21.93									
DTB - DTW	0.163									
Capacity per foot	7.15									
2 Well Volumes		WATER APPEARANCE Clear with slight yellow tint, end of bail turned brownish								
PURGE DATE	8/11/2015									
PURGE TIME	1408									
SAMPLE DAY	8/11/2015									
SAMPLE TIME	1430									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer purged and collected samples. Purged water collected in 55 gal drum and disposed of upstream of the WWT Plant.

KA-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1344	5.59	22.10	1.836	1.263	0.99	119.6	-245.2
GAUGE TIME	1012	(2)	1346	7.58	24.63	1.854	1.214	0.95	20.1	-296.8
DTB (feet)										
Depth to Bottom	23.20	(3)	1348	7.69	24.85	1.852	1.207	0.94	18.8	-309.4
DEDICATED PUMP	N	(4)	1350	7.70	25.04	1.833	1.203	0.94	19.2	-305.4
DTW (feet)	8.78	WEATHER CONDITIONS Cloudy, slight breeze, 75-80 Deg F.								
Depth to Water	14.42									
DTB - DTW	0.163									
Capacity per foot	4.70									
2 Well Volumes		WATER APPEARANCE Clear with slight yellow tint								
PURGE DATE	8/11/2015									
PURGE TIME	1335									
SAMPLE DAY	8/11/2015									
SAMPLE TIME	1350									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer purged and collected samples. Purged water collected in 55 gal drum and disposed of upstream of the WWT Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Disposable Polyethylene Bailer

Signature:

 Cheryl Johnson / Environmental Specialist / Gallup Refinery

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NAPIS-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1458	7.52	19.93	1.724	1.241	0.97	52.9	-253.8
GAUGE TIME	0948	(2)	1500	8.63	20.19	1.738	1.244	0.98	49.3	-248.1
DTB (feet)										
Depth to Bottom	13.53	(3)	1502	8.89	20.47	1.753	1.247	0.98	45.8	-247.6
DEDICATED PUMP	N	(4)	1504	8.91	20.81	1.765	1.247	0.98	44.2	-247.6
DTW (feet)	7.00	WEATHER CONDITIONS Cloudy, 5-10 mph, 75-80 Deg F.								
Depth to Water	6.53									
DTB - DTW	0.163									
Capacity per foot	2.13									
2 Well Volumes										
PURGE DATE	8/11/2015	WATER APPEARANCE Clear, no odor detected								
PURGE TIME	1446									
SAMPLE DAY	8/11/2015									
SAMPLE TIME	1503									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

NAPIS-2		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1320	5.16	28.02	2.37	1.456	1.14	98.2	-325.8
GAUGE TIME	1000	(2)	1322	5.65	28.05	2.37	1.454	1.14	98.6	-330.3
DTB (feet)										
Depth to Bottom	13.61	(3)	1324	5.78	28.17	2.38	1.456	1.14	98.0	-343.0
DEDICATED PUMP	N	(4)	1326	5.56	28.29	2.38	1.455	1.14	100.8	-342.8
DTW (feet)	8.40	WEATHER CONDITIONS Cloudy, 5-10 mph, 75-80 Deg F.								
Depth to Water	5.21									
DTB - DTW	0.163									
Capacity per foot	1.70									
2 Well Volumes										
PURGE DATE	8/11/2015	WATER APPEARANCE Clear with slight yellow tint								
PURGE TIME	1320									
SAMPLE DAY	8/11/2015									
SAMPLE TIME	1326									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer purged and collected samples. Purged water collected in 55 gal drum and disposed of upstream of the WWT Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
 Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
 Disposable Polyethylene Bailer

Signature:

 Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
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OAPIS-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1539	9.16	15.90	5.784	4.550	3.87	16.8	-294.3
GAUGE TIME	1020	(2)	1541	10.30	16.12	5.817	4.553	3.87	12.6	-345.7
DTB (feet)										
Depth to Bottom	28.30	(3)	1543	10.15	16.39	5.873	4.569	3.88	11.3	-342.9
DEDICATED PUMP	N	(4)	1545	10.01	16.73	5.906	4.558	3.87	10.8	-339.0
DTW (feet)		WEATHER CONDITIONS Partly cloudy, 5-10 mph, 75-80 Deg F.								
Depth to Water	11.33									
DTB - DTW	16.97									
Capacity per foot	0.163									
3 Well Volumes	5.53									
PURGE DATE	8/11/2015	WATER APPEARANCE Clear with slight yellow tint, slight odor detected								
PURGE TIME	1521									
SAMPLE DAY	8/11/2015									
SAMPLE TIME	1548									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in a plastic container and disposed of upstream of the WWT plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
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GWM-2		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/11/2015	(1)								
GAUGE TIME	1115	(2)								
DTB (feet)		(3)								
Depth to Bottom	18.81	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS							
DTW (feet)										
Depth to Water	None - dry									
DTB - DTW										
Capacity per foot	0.163		Partly Cloudy, 5-10 mph							
2 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY			WATER APPEARANCE							
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA		No water detected							

SAMPLE LOG

GWM-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/11/2015	(1)								
GAUGE TIME	1125	(2)								
DTB (feet)		(3)								
Depth to Bottom	17.80	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS							
DTW (feet)										
Depth to Water	None - dry									
DTB - DTW										
Capacity per foot	0.163		Partly Cloudy, 5-10 mph							
2 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY			WATER APPEARANCE							
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA		No water detected							

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

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GWM-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/11/2015	(1)	1504							
GAUGE TIME	1120	(2)	1507							
DTB (feet)										
Depth to Bottom	26.20	(3)	1512							
Depth to Product	21.44???	(4)	1517							
DTW (feet)		WEATHER CONDITIONS Clear 0-5 mph, 20-25 Deg F								
Depth to Water										
DTB - DTW										
Capacity per foot	0.163									
2 Well Volumes		WATER APPEARANCE Oily layer found in the well...Did not use correct water level meter.								
PURGE DATE	8/24/2015									
PURGE TIME	0752									
SAMPLE DAY	8/24/2015									
SAMPLE TIME	0800									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										

SAMPLE LOG

Discovered an oil layer in this well--did not have oil/water interface meter at time of discovery - estimated about 4.5' of oil. Contacted NMED via e-mail of the oil detected inside well. On 8/24/15 - well regauged using an oil/interface level meter. Samples were collected for the third quarter,

On 9/18/15 - Gauged well: DTP = 21.0 ft; DTW = 21.45 ft. Collected 2 each 40ml VOAs of product only for analysis (GRO/DRO/MRO), as requested by NMED.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
 Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
 Disposable Polyethylene Bailer

Signature:

 Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
3RD QTR/ANNUAL 2015**

Oil Sump LDU		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/11/2015	(1)								
GAUGE TIME	1622	(2)								
DTB (feet)										
Depth to Bottom	NA	(3)								
DEDICATED PUMP	N	(4)	WEATHER CONDITIONS Clear, 5-10 mph							
DTW (feet)	NA									
Depth to Water	NA									
DTB - DTW	NA									
Capacity per foot	NA									
3 Well Volumes	NA									
PURGE DATE	NA	WATER APPEARANCE DRY								
PURGE TIME	NA									
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									
SAMPLE LOG										
DRY										

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Disposable Polyethylene Bailer

Signature:

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WESTERN REFINING - GALLUP REFINERY
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East LDU		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	ORP (mV)
GAUGE DATE		(1)							
GAUGE TIME		(2)							
DTB (feet)		(3)							
Depth to Bottom	NA	(4)							
DEDICATED PUMP	N		WEATHER CONDITIONS Cloudy, breezy						
DTW (feet)									
Depth to Water	5.00								
DTB - DTW									
Capacity per foot	NA								
3 Well Volumes	NA		WATER APPEARANCE Clear to brown with odor						
PURGE DATE	NA								
PURGE TIME	NA								
SAMPLE DAY	8/11/2015								
SAMPLE TIME	1620								
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging	NA								

SAMPLE LOG

Used new bailer - grab samples only - no bailing.

West LDU		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	ORP (mV)
GAUGE DATE		(1)							
GAUGE TIME		(2)							
DTB (feet)		(3)							
Depth to Bottom	NA	(4)							
DEDICATED PUMP	N		WEATHER CONDITIONS Cloudy, slight breeze						
DTW (feet)									
Depth to Water	20.74								
DTB - DTW	NA								
Capacity per foot	NA								
3 Well Volumes	NA		WATER APPEARANCE Clear to brown with odor						
PURGE DATE	NA								
PURGE TIME	NA								
SAMPLE DAY	8/11/2015								
SAMPLE TIME	1610								
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging	NA								

SAMPLE LOG

Used new bailer - grab samples only - no bailing.

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
 Disposable Polyethylene Bailer

Signature:

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WESTERN REFINING - GALLUP REFINERY
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BW-1A		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	NONE TAKEN							
GAUGE TIME	0920	(2)								
DTB (feet)		(3)								
Depth to Bottom	46.06	(4)								
DEDICATED PUMP	N	WEATHER CONDITIONS Clear, slight breeze, 75-80 Deg F.								
DTW (feet)	DRY									
Depth to Water										
DTB - DTW										
Capacity per foot	0.163									
2 Well Volumes										
PURGE DATE	NA	WATER APPEARANCE								
PURGE TIME	NA									
SAMPLE DAY		DRY								
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

BW-1B		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	NONE TAKEN							
GAUGE TIME	0922	(2)								
DTB (feet)		(3)								
Depth to Bottom	76.29	(4)								
DEDICATED PUMP	N	WEATHER CONDITIONS								
DTW (feet)										
Depth to Water	DRY									
DTB - DTW										
Capacity per foot	0.163									
2 Well Volumes		Clear, slight breeze, 75-80 Deg F.								
PURGE DATE	NA									
PURGE TIME	NA									
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH	NA	WATER APPEARANCE								
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Plastic dipper

Signature:

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WESTERN REFINING - GALLUP REFINERY
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BW-1C		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	914	10.70	14.5	1.084	0.881	0.68	18.6
GAUGE TIME	0921	(2)	916	10.13	14.6	1.085	0.880	0.68	15.1
DTB (feet)									
Depth to Bottom	141.89	(3)	918	9.87	14.7	1.089	0.881	0.68	13.7
DEDICATED PUMP	Y	(4)	920	9.73	14.8	1.093	0.882	0.68	13.2
DTW (feet)	12.33	WEATHER CONDITIONS Clear, slight breeze, 75-80 Deg F.							
Depth to Water	129.56								
DTB - DTW	0.163								
Capacity per foot	42.24								
2 Well Volumes		WATER APPEARANCE Clear - no odor detected.							
PURGE DATE	8/13/2015								
PURGE TIME	0900								
SAMPLE DAY	8/13/2015								
SAMPLE TIME	0920								
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging	NA								

SAMPLE LOG

Pump lost suction at 16 gallons - allowed to recharge and collected samples. Purged water collected in plastic container and disposed of upstreat of the WWT plant.

BW-2A		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1405	9.91	38.1	0.059	0.031	0.02	88.7
GAUGE TIME	0900	(2)	1407	9.78	14.0	1.082	0.891	0.69	12.8
DTB (feet)									
Depth to Bottom	67.57	(3)	1409	9.48	14.2	1.093	0.894	0.69	9.7
DEDICATED PUMP	Y	(4)	1411	9.41	14.7	1.106	0.895	0.69	9.3
DTW (feet)	32.00	WEATHER CONDITIONS Partly Cloudy, breezy, 80-85 Deg F.							
Depth to Water	35.57								
DTB - DTW	0.163								
Capacity per foot	11.60								
2 Well Volumes		WATER APPEARANCE Clear - no odor detected.							
PURGE DATE	8/12/2015								
PURGE TIME	1400								
SAMPLE DAY	8/12/2015								
SAMPLE TIME	1410								
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging	NA								

SAMPLE LOG

Purged water collected in 55 gallon drum and disposed of upstream of the WWT plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Disposable Polyethylene Bailer

Signature:

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**WESTERN REFINING - GALLUP REFINERY
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BW-3C		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)
GAUGE DATE	8/10/2015	(1)							
GAUGE TIME	0847	(2)							
DTB (feet)		(3)							
Depth to Bottom	154.55	(4)							
DEDICATED PUMP	N	WEATHER CONDITIONS Partly cloudy, breezy, 75-80 Deg F.							
DTW (feet)									
Depth to Water	7.75								
DTB - DTW	146.80								
Capacity per foot	0.163								
2 Well Volumes	47.86								
PURGE DATE	8/12/2015	WATER APPEARANCE Clear, no odor detected.							
PURGE TIME	1150								
SAMPLE DAY	8/12/2015								
SAMPLE TIME	1220								
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging	NA								

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Signature:

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WESTERN REFINING - GALLUP REFINERY
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BW-3A		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1215	8.78	16.8	1.299	1.002	0.78	11.3
GAUGE TIME	0848	(2)	1217	8.74	17.2	1.314	1.004	0.78	11.1
DTB (feet)									
Depth to Bottom	52.35	(3)	1219	8.72	17.6	1.328	1.006	0.78	11.8
DEDICATED PUMP	N	(4)	1221	8.70	18.0	1.34	1.005	0.78	11.3
DTW (feet)		WEATHER CONDITIONS Partly cloudy, breezy, 75-80 Deg F.							
Depth to Water	DRY								
DTB - DTW									
Capacity per foot	0.163	WATER APPEARANCE Dry - no water detected							
2 Well Volumes									
PURGE DATE	NA								
PURGE TIME	NA								
SAMPLE DAY		WATER APPEARANCE Dry - no water detected							
SAMPLE TIME									
PUMP DEPTH	NA								
DTW (feet)		WATER APPEARANCE Dry - no water detected							
at end of Purging	NA								

SAMPLE LOG

BW-3B		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1233	9.59	13.8	0.031	0.026	0.02	284.8
GAUGE TIME	NA	(2)	1235	9.44	13.5	1.214	1.011	0.79	19.8
DTB (feet)									
Depth to Bottom	69.40	(3)	1234	9.23	13.7	1.218	1.010	0.79	14.2
DEDICATED PUMP	Y	(4)							
DTW (feet)		WEATHER CONDITIONS Partly cloudy, breezy, 75-80 Deg F.							
Depth to Water	33.00								
DTB - DTW	36.40								
Capacity per foot	0.163	WATER APPEARANCE Clear - no odor detected							
2 Well Volumes	11.87								
PURGE DATE	8/12/2015								
PURGE TIME	1225								
SAMPLE DAY	8/12/2015	WATER APPEARANCE Clear - no odor detected							
SAMPLE TIME	1240								
PUMP DEPTH	NA								
DTW (feet)		WATER APPEARANCE Clear - no odor detected							
at end of Purging	NA								

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Disposable Bailer

Signature:

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WESTERN REFINING - GALLUP REFINERY
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BW-2B		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1434	5.92	13.6	1.8	1.496	1.19	186.9	-337
GAUGE TIME	0858	(2)	1436	9.62	13.5	1.779	1.482	1.18	17.9	-389
DTB (feet)										
Depth to Bottom	92.26	(3)	1438	9.12	14.0	1.805	1.484	1.18	15.2	-358
DEDICATED PUMP	Y	(4)	1440	9.64	14.5	1.831	1.488	1.18	15.1	-352
DTW (feet)	28.00	WEATHER CONDITIONS Partly Cloudy, breezy, 80-85 Deg F.								
Depth to Water										
DTB - DTW										
Capacity per foot										
2 Well Volumes										
PURGE DATE	8/12/2015	WATER APPEARANCE								
PURGE TIME	1420									
SAMPLE DAY	8/12/2015	Clear - no odor detected.								
SAMPLE TIME	1440									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

BW-2C		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/10/2015	(1)	1327	9.50	20.2	1.236	0.884	0.68	86.4	-292
GAUGE TIME	0901	(2)	1329	9.93	20.5	1.245	0.885	0.68	76.5	-299
DTB (feet)										
Depth to Bottom	152.84	(3)	1331	9.97	20.8	1.256	0.888	0.69	73.0	-315
DEDICATED PUMP	N	(4)	1333	9.92	21.0	1.264	0.889	0.69	71.2	-316
DTW (feet)	20.56	WEATHER CONDITIONS Partly Cloudy, breezy, 80-85 Deg F.								
Depth to Water										
DTB - DTW	132.28									
Capacity per foot	0.163									
2 Well Volumes	43.12									
PURGE DATE	8/12/2015	WATER APPEARANCE								
PURGE TIME	1300									
SAMPLE DAY	8/12/2015	Clear - no odor detected.								
SAMPLE TIME	1335									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Disposable Bailer

Signature:

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WESTERN REFINING - GALLUP REFINERY
3RD QTR/ANNUAL 2015

STP1-NW		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/11/2015	(1)								
GAUGE TIME	1045	(2)								
DTB (feet)		(3)								
Depth to Bottom	50.00	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Partly Cloudy, 5-10 mph, 65-70 Deg F							
DTW (feet) Depth to Water	20.79									
DTB - DTW	29.21									
Capacity per foot	0.163									
2 Well Volumes	9.52									
PURGE DATE	8/11/2015									
PURGE TIME	1050		WATER APPEARANCE Clear to cloudy, no odor detected							
SAMPLE DAY	8/11/2015									
SAMPLE TIME	1130									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in a plastic container and disposed of at the bundle pad.

STP1-SW		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	8/11/2015	(1)								
GAUGE TIME	1047	(2)								
DTB (feet)		(3)								
Depth to Bottom	29.10	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Partly Cloudy, 5-10 mph, 65-70 Deg F							
DTW (feet)										
Depth to Water	None - dry									
DTB - DTW	#VALUE!									
Capacity per foot	0.163									
2 Well Volumes	#VALUE!									
PURGE DATE			WATER APPEARANCE No water detected							
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015

OW-13		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/27/2015	(1)	1341	8.10	12.89	0.977	0.826	0.64	7.9	184.5
GAUGE TIME	1259	(2)	1343	8.09	12.90	0.977	0.826	0.64	3.3	116.7
DTB (feet)										
Depth to Bottom	99.15	(3)	1345	8.09	12.91	0.977	0.826	0.64	2.4	72.1
DEDICATED PUMP	Y	(4)								
DTW (feet)	22.10	WEATHER CONDITIONS Clear to partly cloudy, breezy, 60-65 Deg								
Depth to Water	77.05									
DTB - DTW	0.740									
Capacity per foot	114.03									
2 Well Volumes										
PURGE DATE	10/27/2015	WATER APPEARANCE								
PURGE TIME	1302									
SAMPLE DAY	10/27/2015									
SAMPLE TIME	1350									
PUMP DEPTH	80 ft									
DTW (feet)		Clear, no odor								
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

OW-14		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/27/2015	(1)	1052	7.10	13.54	1.741	1.449	1.15	7.1	-133.7
GAUGE TIME	1039	(2)	1054	7.07	13.59	1.741	1.447	1.15	7.1	-144.0
DTB (feet)	46.52 Y	(3)	1056	7.06	13.58	1.739	1.446	1.15	7.1	-147.5
Depth to Bottom										
DEDICATED PUMP										
DTW (feet)										
Depth to Water	23.69	WEATHER CONDITIONS Clear to partly cloudy, breezy, 60-65 Deg								
DTB - DTW	22.83									
Capacity per foot	0.740									
2 Well Volumes	33.79									
PURGE DATE	10/27/2015	WATER APPEARANCE Clear, no odor								
PURGE TIME	1042									
SAMPLE DAY	10/27/2015									
SAMPLE TIME	1103									
PUMP DEPTH	30 ft									
DTW (feet)	NA									
at end of Purging										

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509
Dedicated pumps

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015

OW-29		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/27/2015	(1)	1003	7.38	12.90	1.475	1.247	0.98	4.6	-28.3
GAUGE TIME	942	(2)	1005	7.32	12.86	1.474	1.247	0.98	3.6	-36.3
DTB (feet)										
Depth to Bottom	51.08	(3)	1007	7.30	12.77	1.472	1.248	0.98	4.0	-40.9
DEDICATED PUMP	Y	(4)	1009	7.29	12.77	1.473	1.250	0.98	3.0	-42.9
DTW (feet)		WEATHER CONDITIONS Clear to partly cloudy, breezy, 50-55 deg F								
Depth to Water	18.72									
DTB - DTW	32.36									
Capacity per foot	0.650									
2 Well Volumes	42.07									
PURGE DATE	10/27/2015	WATER APPEARANCE Clear, No odor detected								
PURGE TIME	945									
SAMPLE DAY	10/27/2015									
SAMPLE TIME	1010									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

OW-30		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/27/2015	(1)	857	7.64	12.37	0.122	0.104	0.08	84.7	99.8
GAUGE TIME	827	(2)	859	7.28	12.28	0.049	0.042	0.03	65.3	103.4
DTB (feet)										
Depth to Bottom	49.90	(3)	901	7.27	12.63	0.041	0.035	0.02	64.1	37.5
DEDICATED PUMP	Y	(4)	903	7.27	12.77	0.037	0.031	0.02	63.9	51.0
DTW (feet)		WEATHER CONDITIONS Clear, 0-5 mph, 40-45 deg F								
Depth to Water	23.14									
DTB - DTW	26.76									
Capacity per foot	0.650									
2 Well Volumes	34.79									
PURGE DATE	10/27/2015	WATER APPEARANCE Clear, No odor detected								
PURGE TIME	850									
SAMPLE DAY	10/27/2015									
SAMPLE TIME	905									
PUMP DEPTH	38 ft									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Began with purge. Pumped approximately 50 gals. Collected water samples, labeled and placed on ice in cooler. Purge water collected labeled 55 gal drum to be disposed of at the bundle pad upstream of the NAPIS .

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509
Dedicated pumps

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015

OW-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/28/2015	(1)	935	8.87	9.94	0.981	0.895	0.690	7.7	198.0
GAUGE TIME	810	(2)	937	8.85	9.98	0.011	0.010	0.010	17.2	200.4
DTB (feet)										
Depth to Bottom	94.55	(3)	939	8.87	15.81	1.129	0.890	0.690	13.5	25.4
DEDICATED PUMP	Y	(4)	941	8.76	12.32	1.059	0.909	0.710	71.8	147.1
DTW (feet)		WEATHER CONDITIONS Overcast, calm,								
Depth to Water	FULL									
DTB - DTW	#VALUE!									
Capacity per foot	0.740									
2 Well Volumes	#VALUE!	WATER APPEARANCE Clear to cloudy, brown								
PURGE DATE	10/28/2015									
PURGE TIME	812									
SAMPLE DAY	10/28/2015									
SAMPLE TIME	945									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Water level full (to top of casing). Pump lost suction at 94 gallons. Allowed to recharge before collecting samples.

OW-10		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/28/2015	(1)	1101	7.37	12.92	4.097	3.462	2.89	1	82.6
GAUGE TIME	1025	(2)	1103	7.33	12.91	4.176	3.530	2.95	1.1	68.2
DTB (feet)										
Depth to Bottom	60.33	(3)	1105	7.31	12.90	4.285	3.623	3.03	1.1	56.8
DEDICATED PUMP	Y	(4)	1107	7.32	12.90	4.307	3.641	3.05	1.0	47.9
DTW (feet)		WEATHER CONDITIONS Overcast, calm,								
Depth to Water	1.47									
DTB - DTW	58.86									
Capacity per foot	0.740									
2 Well Volumes	87.11	WATER APPEARANCE Clear, no odor detected.								
PURGE DATE	10/28/2015									
PURGE TIME	1027									
SAMPLE DAY	10/28/2015									
SAMPLE TIME	1110									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Purged water collected in 55 gallon drums and disposed of upstream of the WW treatment Plant.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509
bailer.

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015

NAPIS-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/28/2015	(1)	1504	7.42	15.40	3.748	2.983	2.47	69.3	-30.7
GAUGE TIME	1444	(2)	1506	7.82	20.41	3.787	2.698	2.21	41.8	-54.1
DTB (feet)										
Depth to Bottom	30.42	(3)								
DEDICATED PUMP	N	(4)								
DTW (feet)		WEATHER CONDITIONS								
Depth to Water	9.22									
DTB - DTW	21.20									
Capacity per foot	0.163									
2 Well Volumes	6.91									
PURGE DATE	10/28/2015	Overcast, calm								
PURGE TIME	1445									
SAMPLE DAY	10/28/2015									
SAMPLE TIME	1509									
PUMP DEPTH	NA									
DTW (feet)		WATER APPEARANCE								
at end of Purging										
		Clear with slight yellow tint								

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer, bailed approx. 4.5 gallons. Collected purged water in a container and disposed of at the bundle pad.

KA-3		TEST PARAMETERS									
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	10/28/2015	(1)	1446	7.51	16.15	1.594	1.161	0.91	73.2	-36.6	
GAUGE TIME	1445	(2)	1448	7.27	16.17	1.606	1.009	0.78	31.0	-23.1	
DTB (feet)	23.20 N	(3)	1450	7.25	16.19	1.593	1.007	0.78	28.8	-22.1	
Depth to Bottom		(4)	WEATHER CONDITIONS Overcast, calm								
DEDICATED PUMP											
DTW (feet)											
Depth to Water											
DTB - DTW											
Capacity per foot	0.163	WATER APPEARANCE Clear with slight yellow tint									
2 Well Volumes	4.89										
PURGE DATE	10/28/2015										
PURGE TIME	1447										
SAMPLE DAY	10/28/2015										
SAMPLE TIME	1505										
PUMP DEPTH	NA										
DTW (feet)											
at end of Purging	NA										

SAMPLE LOG

Water inside vault when opened. Bailed water from inside vault before opening pipe cap. With new bailer, bailed approx. 4.5 gallons. Collected purged water in a container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015

NAPIS-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/28/2015	(1)	1532	8.08	20.50	1.645	1.170	0.92	99.9	-69.6
GAUGE TIME	1525	(2)	1534	7.27	18.64	1.633	1.208	0.95	19.1	-22.7
DTB (feet)										
Depth to Bottom	13.53	(3)	1536	7.25	18.66	1.636	1.210	0.95	17.5	-21.5
DEDICATED PUMP	N	(4)								
DTW (feet)	7.20	WEATHER CONDITIONS Overcast, calm								
Depth to Water	6.33									
DTB - DTW	0.163									
Capacity per foot	2.06									
2 Well Volumes										
PURGE DATE	10/28/2015	WATER APPEARANCE Clear, no odor detected								
PURGE TIME										
SAMPLE DAY	10/28/2015									
SAMPLE TIME	1540									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Used new bailer for purging and collecting samples. Purged water collected in a plastic container and disposed of at the bundle pad.

NAPIS-2		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/28/2015	(1)	1455	7.79	23.70	2.48	1.650	1.31	78.4	-53.3
GAUGE TIME	1443	(2)	1457	7.12	27.24	2.51	1.565	1.23	14.2	-14.5
DTB (feet)										
Depth to Bottom	13.61	(3)	1459	7.13	27.05	2.51	1.570	1.24	10.5	-15.1
DEDICATED PUMP	N	(4)	1501	7.12	26.77	2.50	1.572	1.24	9.7	-14.7
DTW (feet)	8.32	WEATHER CONDITIONS Overcast, calm								
Depth to Water	5.29									
DTB - DTW	0.163									
Capacity per foot	1.72									
2 Well Volumes										
PURGE DATE	10/28/2015	WATER APPEARANCE Clear with slight yellow tint								
PURGE TIME	1445									
SAMPLE DAY	10/28/2015									
SAMPLE TIME	1506									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Water inside vault when opened (water dark in color). Bailed water from inside vault before opening pipe cap. With new bailer, bailed approx. 4.5 gallons. Collected purged water in a container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.
WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509
Bailer
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015

OAPIS-1		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)
GAUGE DATE	10/29/2015	(1)							
GAUGE TIME	815	(2)							
DTB (feet)									
Depth to Bottom	28.30	(3)							
DEDICATED PUMP	N	(4)							
DTW (feet)		WEATHER CONDITIONS Partly cloudy, slight breeze							
Depth to Water	11.02								
DTB - DTW	17.28								
Capacity per foot	0.163								
3 Well Volumes	5.63								
PURGE DATE	10/29/2015	WATER APPEARANCE Clear with slight yellow tint, slight odor detected							
PURGE TIME	817								
SAMPLE DAY	10/29/2015								
SAMPLE TIME	845								
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging									

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in a plastic container and disposed of at the bundle pad.

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509

Disposable Polyethylene Bailer

Signature:

 Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015

GWM-2		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/29/2015	(1)								
GAUGE TIME	1/24/1902	(2)								
DTB (feet)		(3)								
Depth to Bottom	18.81	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Partly cloudy, breezy							
DTW (feet)										
Depth to Water	DRY									
DTB - DTW	-									
Capacity per foot	0.163									
2 Well Volumes	-									
PURGE DATE	N/A		WATER APPEARANCE No water detected							
PURGE TIME										
SAMPLE DAY	N/A									
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

GWM-3		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/29/2015	(1)								
GAUGE TIME	750	(2)								
DTB (feet)		(3)								
Depth to Bottom	17.80	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS							
DTW (feet)										
Depth to Water	DRYY									
DTB - DTW	-									
Capacity per foot	0.163									
2 Well Volumes	-									
PURGE DATE	N/A		WATER APPEARANCE							
PURGE TIME										
SAMPLE DAY	N/A									
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)			No water detected							
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015

GWM-1		TEST PARAMETERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)
GAUGE DATE	10/29/2015	(1)							
GAUGE TIME	757	(2)							
DTB (feet)									
Depth to Bottom	26.20	(3)							
DTP (feet)	21.13	(4)							
DTW (feet)		WEATHER CONDITIONS							
Depth to Water	21.47								
DTP - DTW	0.34								
Capacity per foot	0.163								
3 Well Volumes	-								
PURGE DATE	N/A	WATER APPEARANCE							
PURGE TIME									
SAMPLE DAY	N/A								
SAMPLE TIME									
PUMP DEPTH	NA								
DTW (feet)									
at end of Purging									
		Product layer in well - oil - dark with odor							

SAMPLE LOG

Product layer in well. Did not sample. Aeration lagoons contain less than 25% liquid..

INSTRUMENTS USED:

YSI 556 MPS instrument used to collect water quality parameters.

WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509

Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

**WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015**

Oil Sump LDU		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/29/2015	(1)								
GAUGE TIME	1425	(2)								
DTB (feet)										
Depth to Bottom	NA	(3)								
DEDICATED PUMP	N	(4)	WEATHER CONDITIONS Cloudy, rain showers							
DTW (feet)	NA									
Depth to Water	NA									
DTB - DTW	NA									
Capacity per foot	NA									
3 Well Volumes	NA									
PURGE DATE	NA	WATER APPEARANCE DRY								
PURGE TIME	NA									
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

SAMPLE LOG
 DRY

INSTRUMENTS USED:

WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509
 Disposable Polyethylene Bailer

Signature:

 Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015

East LDU		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/29/2015	(1)								
GAUGE TIME	1430	(2)								
DTB (feet)		(3)								
Depth to Bottom	NA	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS							
DTW (feet)										
Depth to Water	5.00									
DTB - DTW										
Capacity per foot	NA									
3 Well Volumes	NA		Cloudy, rain showers							
PURGE DATE	NA									
PURGE TIME	NA									
SAMPLE DAY	10/29/2015		WATER APPEARANCE							
SAMPLE TIME	1430									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

Used new bailer - grab samples only - no bailing.

West LDU		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/29/2015	(1)								
GAUGE TIME	1450	(2)								
DTB (feet)		(3)								
Depth to Bottom	NA	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS							
DTW (feet)										
Depth to Water	N/A									
DTB - DTW	NA									
Capacity per foot	NA									
3 Well Volumes	NA		Cloudy, rain showers							
PURGE DATE	NA									
PURGE TIME	NA									
SAMPLE DAY	3/10/2015									
SAMPLE TIME	1430									
PUMP DEPTH	NA		WATER APPEARANCE							
DTW (feet)										
at end of Purging	NA									
			Clear to brown with odor							

SAMPLE LOG

Used new bailer - grab samples only - no bailing.

INSTRUMENTS USED:

WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

WESTERN REFINING - GALLUP REFINERY
4TH QTR 2015

STP1-NW		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	10/29/2015	(1)								
GAUGE TIME	915	(2)								
DTB (feet)		(3)								
Depth to Bottom	50.00	(4)								
DEDICATED PUMP	N		WEATHER CONDITIONS Partly cloudy, slight breeze							
DTW (feet) Depth to Water	20.60									
DTB - DTW	29.40									
Capacity per foot	0.163									
2 Well Volumes	9.58									
PURGE DATE	10/29/2015									
PURGE TIME			WATER APPEARANCE Clear to cloudy, no odor detected							
SAMPLE DAY	10/29/2015									
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

SAMPLE LOG

Used new bailer to purge and collect samples. Purged water collected in a plastic container and disposed of at the bundle pad.

STP1-SW		TEST PARAMETERS									
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP	(mV)
GAUGE DATE	10/29/2015	(1)									
GAUGE TIME	918	(2)									
DTB (feet)		(3)									
Depth to Bottom	29.10	(4)									
DEDICATED PUMP	N		WEATHER CONDITIONS Partly cloudy, slight breeze								
DTW (feet)											
Depth to Water	DRY										
DTB - DTW	-										
Capacity per foot	0.163										
2 Well Volumes	-										
PURGE DATE	N/A		WATER APPEARANCE No water detected								
PURGE TIME											
SAMPLE DAY	N/A										
SAMPLE TIME											
PUMP DEPTH	NA										
DTW (feet)											
at end of Purging	NA										

SAMPLE LOG

INSTRUMENTS USED:

WaterMark oil Water Interface Meter (100 ft), Model 101L/SMOIL, S/N 01-5509
Disposable Polyethylene Bailer

Signature:

Cheryl Johnson / Environmental Specialist / Gallup Refinery

MKTF 1 - 45/STP1-NW/STP1-SW

Quarter: 1st - 2015

Well ID Number	DATE/TIME	DTP	DTW	SAMPLED Y/N	Total Well Depth ¹ (feet)	Casing Diameter (Inch)	Capacity Per Foot	Minimum 2 Well Volumes
MKTF-1	3/11/15 @ 1210	-	5.85	1230 hrs	17.42	4.00	0.740	17
MKTF-2	3/11/15 @ 1250	-	6.88	1315 hrs	20.48	4.00	0.740	20
MKTF-3	3/17/15 @ 1148	8.46	9.26	N	18.45	4.00	0.740	
MKTF-4	3/16/15 @ 1025	-	10.25	1050 hrs	22.15	4.00	0.740	17
MKTF-5	3/16/15 @ 1010	15.72	16.08	N	17.75	4.00	0.740	
MKTF-6	3/16/15 @ 1012	18.24	19.94	N	23.77	4.00	0.740	
MKTF-7	3/16/15 @ 1015	13.1	14.23	N	17.62	4.00	0.740	
MKTF-8	3/16/15 @ 1017	14.25	14.5	N	21.98	4.00	0.740	
MKTF-9	3/16/15 @ 1312	-	14.48	1330 hrs	22.70	4.00	0.740	3
MKTF-10	3/16/15 @ 1125	-	8.96	1140 hrs	15.99	4.00	0.740	10
MKTF-11	3/16/15 @ 1032	-	8.8	1116	18.14	4.00	0.740	14
MKTF-12	3/12/15 @ 1030	19.13	20.94	N	25.60	4.00	0.740	
MKTF-13	3/12/15 @1036	13.75	15.82	N	21.25	4.00	0.740	
MKTF-14	3/12/15 @ 1040	7.6	8.15	N	17.46	4.00	0.740	
MKTF-15	3/16/15 @ 1152	13.17	13.92	N	19.48	2.00	0.163	
MKTF-16	3/16/15 @ 1346	-	10.93	1355 HRS	14.10	2.00	0.163	1
MKTF-17	3/12/15 @ 1455	-	12.81	1505 HRS	24.11	2.00	0.163	4
MKTF-18	3/17/15 @ 1015	-	8.92	1029 HRS	25.38	2.00	0.163	5
MKTF-19	3/12/15 @ 1525	-	12.95	1537 HRS	17.47	2.00	0.163	1.5
MKTF-20	3/16/15 @ 1405	-	7.26	1420 HRS	9.89	4.00	0.740	0.9
MKTF-21	3/16/15 @ 1420	-	7.62	1426 HRS	9.89	4.00	0.740	0.8
MKTF-22	3/12/15 @ 0946	-	26.07	1050 HRS	35.25	2.00	0.163	3
MKTF-23	3/12/15 @ 1000	-	14.79	1015 HRS	20.36	2.00	0.163	2
MKTF-24	3/11/15 @ 1140	-	21.54	1156 HRS	30.47	2.00	0.163	3
MKTF-25	3/11/15 @ 1140	-	10.85	1410 HRS	19.43	2.00	0.163	3
MKTF-26	3/11/15 @ 1020	-	8	1036 HRS	17.15	2.00	0.163	3

MKTF 1 - 45/STP1-NW/STP1-SW
Quarter: 1st - 2015

Well ID Number	DATE/TIME	DTP	DTW	SAMPLED Y/N	Total Well Depth ¹ (feet)	Casing Diameter (Inch)	Capacity Per Foot	Minimum 2 Well Volumes
MKTF-27	3/11/15 @ 0810	-	7.1	0825 HRS	14.72	2.00	0.163	2.5
MKTF-28	3/11/15 @ 0840	-	6.64	0855 HRS	16.16	2.00	0.163	3
MKTF-29	3/11/15 @ 0940	-	2.04	0955 HRS	22.84	2.00	0.163	7
MKTF-30	3/11/15 @ 0910	-	14.74	0925 HRS	23.20	2.00	0.163	3
MKTF-31	3/11/15 @ 1420	-	7.98	1436 HRS	22.81	2.00	0.163	5
MKTF-32	3/12/15 @ 0845	-	15.49	0905 HRS	27.75	2.00	0.163	4
MKTF-33	3/12/15 @ 0920	-	23.32	0930 HRS	33.2	2.00	0.163	3
MKTF-34	3/12/15 @ 1420	-	18.77	1430 HRS	27.68	2.00	0.163	3
MKTF-35	3/17/15 @ 1105	-	8.93	1125 HRS	16.45	2.00	0.163	2
MKTF-36	3/17/15 @ 1045	-	7.71	1053 HRS	15.45	2.00	0.163	2.5
MKTF-37	3/17/15 @ 0930	-	9.21	0950 HRS	24.60	2.00	0.163	5
MKTF-38	3/16/15 @ 1510	-	9	1515 HRS	20.29	2.00	0.163	4
MKTF-39	3/16/15 @ 1445	-	8.88	1445 HRS	15.20	2.00	0.163	2
MKTF-40	3/11/15 @ 1452	-	14.6	1505 HRS	23.64	2.00	0.163	3
MKTF-41	3/12/15 @ 0813	-	20.07	0831 HRS	40.10	2.00	0.163	7
MKTF-42	3/11/15 @ 1550	-	17.97	1607 HRS	33.15	2.00	0.163	5
MKTF-43	3/11/15 @ 1520	-	5.2	1536 HRS	15.43	2.00	0.163	3
MKTF-44	3/12/15 @ 1130	-	38.44	1145 HRS	51.15	2.00	0.163	4
MKTF-45	3/17/15 @ 1137	13.14	14.94	N	30.24	4.00	0.740	
STP1-NW	3/10/15 @ 1445	-	20.74	1458 HRS	50.00	2.00	0.163	9.5
STP1-SW	3/10/15 @ 1520	-	DRY	N	32.0 (Actual 29.1)	2.00	0.163	
Odor								
Product								

1) Field verified on 2/5/2015

MKTF 1 - 45/STP1-NW/STP1-SW
Quarter: 2nd - 2015

Well ID Number	DATE/TIME	DTP	DTW	SAMPLED Y/N	Total Well Depth ¹ (feet)	Casing Diameter (Inch)	Capacity Per Foot	Minimum 2 Well Volumes
MKTF-1	6/9/15 @1340	-	7.15	1400	17.42	4.00	0.740	15
MKTF-2	6/9/15 @1420	-	7.55	1445	20.48	4.00	0.740	19
MKTF-3	6/4/15 @1105	8.7	9.32	N	18.45	4.00	0.740	
MKTF-4	6/4/15 @ 1118	-	11	1148	22.15	4.00	0.740	16
MKTF-5	6/4/15 @ 0943	15.77	16.4	N	17.75	4.00	0.740	
MKTF-6	6/4/15 @ 0940	18.56	19.4	N	23.77	4.00	0.740	
MKTF-7	6/4/15 @ 0935	12.95	14.6	N	17.62	4.00	0.740	
MKTF-8	6/4/15 @ 0930	14.35	14.91	N	21.98	4.00	0.740	
MKTF-9	6/4/15 @ 0905	-	14.68	1005	22.70	4.00	0.740	12
MKTF-10	6/4/15 @ 1025	-	8.82	1035	15.99	4.00	0.740	11
MKTF-11	6/4/15 @ 1100	-	9	1110	18.14	4.00	0.740	14
MKTF-12	6/9/2015 @ 0925	19.47	21.65	N	25.60	4.00	0.740	
MKTF-13	6/9/15 @ 0930	14.22	15.87	N	21.25	4.00	0.740	
MKTF-14	6/9/2015 @ 0935	8	8.37	N	17.46	4.00	0.740	
MKTF-15	6/4/15 @ 1015	13.2	13.78	N	19.48	2.00	0.163	
MKTF-16	6/8/15 @ 1210	-	8.86	1220	14.10	2.00	0.163	0.5
MKTF-17	6/8/15 @ 1500	-	13.4	1520	24.11	2.00	0.163	3.5
MKTF-18	6/8/15 @ 1120	-	8.86	1140	25.38	2.00	0.163	5
MKTF-19	6/8/15 @ 1430	-	12.76	1442	17.47	2.00	0.163	1.5
MKTF-20	6/8/15 @ 1240	-	7.89	1255	9.89	4.00	0.740	3
MKTF-21	6/10/15 @ 1450	-	7.96	1500	9.89	4.00	0.740	3
MKTF-22	6/9/2015 @ 0835	-	26.18	900	35.25	2.00	0.163	3
MKTF-23	6/9/15 @ 0940	-	13.82	1005	20.36	2.00	0.163	2
MKTF-24	6/10/15 @ 0944	-	21.65	958	30.47	2.00	0.163	3
MKTF-25	6/10/15 @ 1018	-	11.04	1047	19.43	2.00	0.163	3
MKTF-26	6/10/15 @ 0913	-	8.57	926	17.15	2.00	0.163	3

MKTF 1 - 45/STP1-NW/STP1-SW
Quarter: 2nd - 2015

Well ID Number	DATE/TIME	DTP	DTW	SAMPLED Y/N	Total Well Depth ¹ (feet)	Casing Diameter (Inch)	Capacity Per Foot	Minimum 2 Well Volumes
MKTF-27	6/9/15 @ 1456	-	7.44	1516	14.72	2.00	0.163	2
MKTF-28	6/9/15 @ 1535	-	5.4	1550	16.16	2.00	0.163	3.5
MKTF-29	6/10/15 @ 0843	-	2.69	902	22.84	2.00	0.163	7
MKTF-30	6/10/2015 @ 0800	-	14.57	830	23.20	2.00	0.163	3
MKTF-31	6/10/15 @ 1100	-	7.75	1114	22.81	2.00	0.163	5
MKTF-32	6/9/15 @ 1025	-	15.49	1043	27.75	2.00	0.163	4
MKTF-33	6/9/15 @ 0800	-	23.3	820	33.2	2.00	0.163	3
MKTF-34	6/8/15 @ 1535	-	18.9	1550	27.68	2.00	0.163	3
MKTF-35	6/4/15 @ 1420	-	8.93	1430	16.45	2.00	0.163	2.5
MKTF-36	6/4/15 @ 1400	-	7.53	1410	15.45	2.00	0.163	3
MKTF-37	6/4/15 @ 1330	-	9.48	1345	24.60	2.00	0.163	5
MKTF-38	6/10/15 @ 1555	-	9.34	1600	20.29	2.00	0.163	4
MKTF-39	6/10/15 @ 1520	-	9.31	1537	15.20	2.00	0.163	2
MKTF-40	6/10/15 @ 1155	-	14.2	1214	23.64	2.00	0.163	3
MKTF-41	6/9/15 @ 1130	-	19.77	1153	40.10	2.00	0.163	7
MKTF-42	6/9/15 @ 1210	-	17.6	1235	33.15	2.00	0.163	5
MKTF-43	6/10/15 @ 1238	-	3.63	1251	15.43	2.00	0.163	4
MKTF-44	6/10/15 @ 1310	-	29.55	1339	51.15	2.00	0.163	7
MKTF-45	6/8/15 @ 1150	13.2	16.75	N	30.24	4.00	0.740	

Odor

Product

1) Field verified on 2/5/2015

MKTF 1 - 45/STP1-NW/STP1-SW

Quarter: 3RD - 2015

Well ID Number	DATE/TIME	DTP	DTW	SAMPLED Y/N	Total Well Depth ¹ (feet)	Casing Diameter (Inch)	Capacity Per Foot	Minimum 2 Well Volumes
MKTF-1	8/21/15 @ 1530	-	6.23	1545	17.42	4.00	0.740	
MKTF-2	8/21/15 @ 1600	-	7.3	1620	20.48	4.00	0.740	
MKTF-3	8/18/15 @ 1355	8.09	8.91	N	18.45	4.00	0.740	
MKTF-4	8/18/15 @ 1315	-	10.64	1335	22.15	4.00	0.740	
MKTF-5	8/18/15 @ 1231	15.44	15.63	N	17.75	4.00	0.740	
MKTF-6	8/18/15 @ 1226	17.53	18.39	N	23.77	4.00	0.740	
MKTF-7	8/18/15 @ 1221	12.71	13.84	N	17.62	4.00	0.740	
MKTF-8	8/18/15 @ 1217	13.79	14.75	N	21.98	4.00	0.740	
MKTF-9	8/18/15 @ 1210	-	14.49	1255	22.70	4.00	0.740	
MKTF-10	8/18/15 @ 1457	-	8.72	1540	15.99	4.00	0.740	
MKTF-11	8/18/15 @ 1411	-	8.45	1435	18.14	4.00	0.740	
MKTF-12	8/21/15 @ 1256	19.46	19.99	N	25.60	4.00	0.740	
MKTF-13	8/21/15 @ 1250	13.94	15.62	N	21.25	4.00	0.740	
MKTF-14	8/21/15 @ 1305	7.61	8.03	N	17.46	4.00	0.740	
MKTF-15	8/18/15 @ 1518	13.09	13.34	N	19.48	2.00	0.163	
MKTF-16	8/23/15 @ 0825	-	9.79	936	14.10	2.00	0.163	
MKTF-17	8/18/15 @ 1035	-	11.98	1048	24.11	2.00	0.163	
MKTF-18	8/18/15 @ 0933	-	8.83	1110	25.38	2.00	0.163	
MKTF-19	8/18/15 @ 1016	-	12.6	1020	17.47	2.00	0.163	
MKTF-20	8/23/15 @ 0816	-	7.79	Not enough water to sample	9.89	4.00	0.740	
MKTF-21	8/23/15 @ 0800	-	7.62	Not enough water to sample	9.89	4.00	0.740	
MKTF-22	8/20/15 @ 1640	-	26.2	1650	35.25	2.00	0.163	
MKTF-23	8/21/15 @ 1310	-	14.76	1330	20.36	2.00	0.163	
MKTF-24	8/20/15 @ 1021	-	21.53	1030	30.47	2.00	0.163	

MKTF 1 - 45/STP1-NW/STP1-SW

Quarter: 3RD - 2015

Well ID Number	DATE/TIME	DTP	DTW	SAMPLED Y/N	Total Well Depth ¹ (feet)	Casing Diameter (Inch)	Capacity Per Foot	Minimum 2 Well Volumes
MKTF-25	8/21/15 @ 0737	-	10.6	800	19.43	2.00	0.163	
MKTF-26	8/20/15 @ 0952	-	8.54	1009	17.15	2.00	0.163	
MKTF-27	8/20/15 @ 0750	-	7.85	800	14.72	2.00	0.163	
MKTF-28	8/20/15 @ 0925	-	6.42	944	16.16	2.00	0.163	
MKTF-29	8/20/15 @ 0855	-	2.3	904	22.84	2.00	0.163	
MKTF-30	8/20/15 @ 0828	-	15.29	842	23.20	2.00	0.163	
MKTF-31	8/21/15 @ 0818	-	8.09	825	22.81	2.00	0.163	
MKTF-32	8/21/15 @ 1135	-	15.15	1145	27.75	2.00	0.163	
MKTF-33	8/21/15 @ 1220	-	23.32	1235	33.2	2.00	0.163	
MKTF-34	8/18/15 @ 0955	-	18.74	1004	27.68	2.00	0.163	
MKTF-35	8/18/15 @ 0850	-	8.91	905	16.45	2.00	0.163	
MKTF-36	8/18/15 @ 0835	-	7.5	845	15.45	2.00	0.163	
MKTF-37	8/18/15 @ 0803	-	9.45	820	24.60	2.00	0.163	
MKTF-38	8/24/15 @0900	-	9.25	920	20.29	2.00	0.163	
MKTF-39	8/23/15 @ 0855	-	9.24	910	15.20	2.00	0.163	
MKTF-40	8/21/15 @ 0844	-	13.83	852	23.64	2.00	0.163	
MKTF-41	8/21/15 @ 1058	-	19.9	1115	40.10	2.00	0.163	
MKTF-42	8/21/15 @ 1023	-	17.44	1035	33.15	2.00	0.163	
MKTF-43	8/21/15 @ 0949	-	3.8	1004	15.43	2.00	0.163	
MKTF-44	8/17/15 @ 1435	-	31.23	1505	51.15	2.00	0.163	
MKTF-45	8/18/15 @ 0944	13.5	13.61	N	30.24	4.00	0.740	
Odor								
Product								

1) Field verified on 2/5/2015

MKTF - FIELD LOGS - 4th QUARTER - 2015

WELL ID	GAUGE DATE	GAUGE TIME	DTP	DTW	DTB	DTB - DTW	CAP/FT	2 WELL VOLTS	SAMPLE DATE	SAMPLE TIME	WEATHER COND	WATER APPEARANCE	COMMENTS
MKTF-1	11/4/2015	905	-	5.87	17.42	11.55	0.74	17	11/4/2015	927	Cloudy, snow	clear, odor	
MKTF-2	11/4/2015	914	-	7.25	20.48	13.23	0.74	20	11/4/2015	1012	Cloudy, snow	clear, odor	
MKTF-3	11/3/2015	1520	8.3	9.4	18.45	9.05	0.74	13	11/3/2015	No samples collected		oily, brown	Product layer = 1.1 ft
MKTF-4	11/3/2015	1435	-	4.23	22.15	17.92	0.74	27	11/3/2015	1448	Cloudy, snow	Clear 1st bail, turned gray, odor detected	
MKTF-5	11/3/2015	1150	15.47	16.31	17.75	1.44	0.74	2	11/3/2015	No samples collected		oily, brown	Product layer = 0.84 ft
MKTF-6	11/3/2015	1158	18.04	18.78	23.77	4.99	0.74	7	11/3/2015	No samples collected		oily, brown	Product layer = 0.74 ft
MKTF-7	11/3/2015	1202	12.9	14.88	17.62	2.74	0.74	4	11/3/2015	No samples collected		oily, brown	Product layer = 1.98 ft
MKTF-8	11/8/2015	1206	13.84	15.32	21.98	6.66	0.74	10	11/8/2015	No samples collected		oily, brown	Product layer = 1.48 ft
MKTF-9	11/3/2015	1212	-	14.29	22.7	8.41	0.74	12	11/3/2015	1226	Cloudy, snow	clear	
MKTF-10	11/3/2015	1249	-	8.84	15.99	7.15	0.74	11	11/3/2015	1300	Cloudy, snow	clear w/pink tint.	Purged 7 gals, turned murky(silt). Allowed to recharge before collecting samples
MKTF-11	11/3/2015	1305	-	8.63	18.14	9.51	0.74	14	11/3/2015	1315	Cloudy, snow	Clear, cloudy, gray - odor	
MKTF-12	11/3/2015	1046	19.66	20.27	25.6	5.33	0.74	8	11/3/2015	No samples collected		oily, brown	Product layer = 0.61ft
MKTF-13	11/3/2015	1050	14.22	15.55	21.25	5.7	0.74	8	11/3/2015	No samples collected		oily, brown	Product layer = 1.33 ft
MKTF-14	11/3/2015	1055	7.71	8.1	17.46	9.36	0.74	14	11/3/2015	No samples collected		oily, brown	Product layer = 0.39 ft
MKTF-15	11/3/2015	1240	12.9	13.55	19.48	5.93	0.163	2	11/3/2015	No samples collected		oily, brown	Product layer = 0.39 ft. Water inside vault - bailed before removing pipe plug.
MKTF-16	11/3/2015	1528	-	9.49	14.1	4.61	0.163	2	11/3/2015	1540	Cloudy, snow	clear	
MKTF-17	11/3/2015	910	-	12.34	24.11	11.77	0.163	4	11/3/2015	925	Clear, slight breeze	clear	water inside vault, bailed before removing pipe cap
MKTF-18	11/3/2015	745	-	8.52	25.38	16.86	0.163	5	11/3/2015	750	Clear, slight breeze	Clear, pink tint, odor	Bailed 4 gals, turned muddy. Allowed to recharge before collecting samples
MKTF-19	11/3/2015	945	-	12.84	17.47	4.63	0.163	2	11/3/2015	958	Clear, breezy	Clear	
MKTF-20	11/9/2015	1048	-	7.78	9.89	2.11	0.74	3	11/9/2015	No samples collected			Not enough water to collect samples
MKTF-21	11/9/2015	1045	-	7.46	9.89	2.43	0.74	4	11/9/2015	No samples collected			Not enough water to collect samples
MKTF-22	11/9/2015	830	-	26.05	35.25	9.2	0.163	3	11/9/2015	845	Clear, calm	Clear	
MKTF-23	11/9/2015	930	-	14.61	20.36	5.75	0.163	2	11/9/2015	943	Clear, calm	Clear, odor, sheen	
MKTF-24	11/4/2015	1038	-	21.72	30.47	8.75	0.163	3	11/4/2015	1056	Cloudy, snow	Clear	
MKTF-25	11/5/2015	900	-	11.2	19.43	8.23	0.163	3	11/5/2015	912	Cloudy, snow	Clear, odor detected	
MKTF-26	11/4/2015	918	-	8.4	17.15	8.75	0.163	3	11/4/2015	1030	Clear, breezy	Clear	
MKTF-27	11/4/2015	718	-	7.53	14.72	7.19	0.163	2	11/4/2015	740	Cloudy, rain, sleet	Clear	
MKTF-28	11/4/2015	840	-	5.74	16.16	10.42	0.163	3	11/4/2015	856	Cloudy, rain, sleet	Clear	
MKTF-29	11/4/2015	820	-	2.4	22.84	20.44	0.163	7	11/4/2015	835	Cloudy, rain, sleet	Clear	
MKTF-30	11/4/2015	800	-	14.74	23.2	8.46	0.163	3	11/4/2015	815	Cloudy, rain, sleet	Clear	
MKTF-31	11/4/2015	1150	-	8.14	22.81	14.67	0.163	5	11/4/2015	1210	Cloudy, sleet, snow	Clear	
MKTF-32	11/5/2015	950	-	14.84	27.75	12.91	0.163	4	11/5/2015	1000	Cloudy, breezy	Clear	
MKTF-33	11/9/2015	900	-	23.19	33.2	10.01	0.163	3	11/9/2015	915	Clear, calm	Clear	
MKTF-34	11/3/2015	1015	-	19	27.68	8.68	0.163	3	11/3/2015	1031	Cloudy, breezy	Clear, cloudy	
MKTF-35	11/3/2015	830	-	9.02	16.45	7.43	0.163	2	11/3/2015	843	Cloudy, breezy	Clear-cloudy with pink tint	
MKTF-36	11/3/2015	820	7	7.66	15.45	7.79	0.163	3		No samples collected		oily, brown	Product layer = 0.66 ft
MKTF-37	11/3/2015	730	9.54	9.57	24.6	15.03	0.163	5	11/3/2015	No samples collected		oily, brown	Product layer = 0.03 ft. Water inside vault - bailed before removing pipe plug.
MKTF-38	11/9/2015	1014	-	9.45	20.29	10.84	0.163	4	11/9/2015	920	Clear, slight breeze	Clear	
MKTF-39	11/9/2015	1055	-	9.39	15.2	5.81	0.163	2	11/9/2015	1100	Clear, breezy	Clear, odor	
MKTF-40	11/4/2015	1100	-	13.91	23.64	9.73	0.163	3	11/4/2015	1140	Cloudy, snow	Clear	
MKTF-41	11/5/2015	1005	-	19.77	40.1	20.33	0.163	7	11/5/2015	1030	Cloudy, breezy	Clear	
MKTF-42	11/5/2015	1037	-	17.26	33.15	15.89	0.163	5	11/5/2015	1056	Cloudy, breezy	Clear	
MKTF-43	11/5/2015	915	-	5.12	15.43	10.31	0.163	3	11/5/2015	930	Cloudy, breezy	Clear	
MKTF-44	11/9/2015	718	-	33.32	51.15	17.83	0.163	6	11/9/2015	740	Clear, calm	Clear w/orange tint. Turned cloudy at end of purge	

MKTF - FIELD LOGS - 4th QUARTER - 2015

WELL ID	GAUGE DATE	GAUGE TIME	DTP	DTW	DTB	DTB - DTW	CAP/FT	2 WELL VOLs	SAMPLE DATE	SAMPLE TIME	WEATHER COND	WATER APPEARANCE	COMMENTS
MKTF-45	11/3/2015	858	13.7	14.02	30.24	16.22	0.74	24	11/3/2015	No samples collected		oily, brown	Product layer = 0.32 ft

ODOR

PRODUCT

0.74 = 4" 0.163 = 2"

INSTRUMENTS USED:

YSI 556 MPS Instrument for water quality parameters

Water Mark oil-water Interface Meter, Model H01L/S01L, (100 ft)

Disposable Bailers, 2" and 3"

SIGNATURE: _____

Cheryl Johnson / Environmental Specialist / Western-Gallup

APPENDIX C

APPLICABLE STANDARDS

Table A-1: NMED Soil Screening Levels

Chemical	Residential Soil (mg/kg)	End- point	Industrial/ Occupational Soil (mg/kg)	End- point	Construction Worker Soil (mg/kg)	End- point	Tap Water (ug/L)	End- point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
Acenaphthene	3.48E+03	n	5.05E+04	n	1.51E+04	n	5.35E+02	n	4.12E+00	8.25E+01
Acetaldehyde	2.49E+02	n	1.17E+03	n	2.17E+02	n	1.88E+01	n	3.29E-03	6.58E-02
Acetone	6.63E+04	n	9.60E+05	nls	2.42E+05	nls	1.41E+04	n	2.49E+00	4.98E+01
Acrylonitrile	4.93E+00	c	2.46E+01	c	3.52E+01	n	5.23E-01	c	9.77E-05	1.95E-03
Acetophenone	7.82E+03	ns	1.30E+05	nls	3.54E+04	ns	1.92E+03	n	4.82E-01	9.64E+00
Acrolein	4.54E-01	n	2.16E+00	n	4.01E-01	n	4.15E-02	n	7.29E-06	1.46E-04
Aldrin	3.11E-01	c	1.50E+00	c	8.07E+00	n	4.54E-02	c	5.60E-03	1.12E-01
Aluminum	7.80E+04	n	1.29E+06	nl	4.14E+04	n	1.99E+04	n	2.99E+04	5.97E+05
Anthracene	1.74E+04	n	2.53E+05	nl	7.53E+04	n	1.72E+03	n	4.25E+01	8.51E+02
Antimony	3.13E+01	n	5.19E+02	n	1.42E+02	n	7.26E+00	n	3.28E-01	6.56E+00
Arsenic	4.25E+00	c	2.15E+01	c	5.74E+01	n	5.13E-01	c	1.50E-02	2.99E-01
Barium	1.56E+04	n	2.55E+05	nl	4.39E+03	n	3.28E+03	n	1.35E+02	2.70E+03
Benzene	1.78E+01	c	8.72E+01	c	1.42E+02	n	4.54E+00	c	1.90E-03	3.80E-02
Benzidine	5.18E-03	c	1.12E-01	c	8.12E-01	c	1.07E-03	c	2.09E-06	4.17E-05
Benzo(a)anthracene	1.53E+00	c	3.23E+01	c	2.40E+02	c	3.43E-01	c	9.11E-02	1.82E+00
Benzo(a)pyrene	1.53E-01	c	3.23E+00	c	2.40E+01	c	3.43E-02	c	3.02E-02	6.05E-01
Benzo(b)fluoranthene	1.53E+00	c	3.23E+01	c	2.40E+02	c	3.43E-01	c	3.09E-01	6.17E+00
Benzo(k)fluoranthene	1.53E+01	c	3.23E+02	c	2.31E+03	c	3.43E+00	c	3.02E+00	6.05E+01
Beryllium	1.56E+02	n	2.58E+03	n	1.48E+02	n	1.24E+01	n	9.79E+00	1.96E+02
a-BHC (a-Hexachlorocyclohexane, a-HCH)	8.45E-01	c	4.07E+00	c	2.97E+01	c	6.80E-02	c	2.98E-04	5.96E-03
b-BHC (b-Hexachlorocyclohexane, b-HCH)	2.96E+00	c	1.43E+01	c	1.04E+02	c	2.38E-01	c	1.04E-03	2.09E-02
g-BHC (Lindane)	5.63E+00	c	2.83E+01	c	9.43E+01	n	4.08E-01	c	1.79E-03	3.58E-02
1,1-Biphenyl	6.32E+01	n	2.98E+02	n	5.46E+01	n	8.34E-01	n	6.56E-03	1.31E-01
Bis(2-chloroethyl) ether	3.11E+00	c	1.57E+01	c	1.95E+00	c	1.36E-01	c	3.03E-05	6.05E-04
Bis(2-chloroisopropyl) ether	9.93E+01	c	5.19E+02	cs	3.54E+03	cs	9.76E+00	c	2.37E-03	4.73E-02
Bis(2-ethylhexyl) phthalate	3.80E+02	c	1.83E+03	c	5.38E+03	n	5.56E+01	c	9.99E+00	2.00E+02
Bis(chloromethyl) ether	2.08E-03	c	1.02E-02	c	4.81E-02	c	7.20E-04	c	1.50E-07	3.00E-06
Boron	1.56E+04	n	2.59E+05	nl	5.14E+04	n	3.95E+03	n	1.25E+01	2.51E+02
Bromodichloromethane	6.19E+00	c	3.02E+01	c	1.43E+02	c	1.34E+00	c	3.10E-04	6.21E-03
Bromomethane	1.77E+01	n	9.45E+01	n	1.79E+01	n	7.54E+00	n	1.71E-03	3.43E-02
1,3-Butadiene	6.86E-01	c	3.41E+00	c	2.02E+00	n	1.80E-01	c	1.04E-04	2.07E-03

Chemical	Residential Soil (mg/kg)	End- point	Industrial/ Occupational Soil (mg/kg)	End- point	Construction Worker Soil (mg/kg)	End- point	Tap Water (ug/L)	End- point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
2-Butanone (Methyl ethyl ketone, MEK)	3.74E+04	n	4.11E+05	nls	9.17E+04	ns	5.56E+03	n	1.00E+00	2.01E+01
tert-Butyl methyl ether (MTBE)	9.75E+02	c	4.82E+03	c	2.42E+04	cs	1.43E+02	c	2.77E-02	5.53E-01
Cadmium	7.05E+01	n	1.11E+03	n	7.21E+01	n	6.24E+00	n	4.69E-01	9.39E+00
Carbon disulfide	1.55E+03	ns	8.54E+03	ns	1.62E+03	ns	8.10E+02	n	2.21E-01	4.42E+00
Carbon tetrachloride	1.07E+01	c	5.25E+01	c	2.02E+02	n	4.53E+00	c	1.66E-03	3.33E-02
Chlordane	1.77E+01	c	8.90E+01	c	1.53E+02	n	2.23E+00	c	1.13E-01	2.26E+00
2-Chloroacetophenone	1.72E+05	nl	8.12E+05	nl	2.81E+02	n				
2-Chloro-1,3-butadiene	1.75E-01	c	8.48E-01	c	3.95E+00	c	1.87E-01	c	9.83E-05	1.97E-03
1-Chloro-1,1-difluoroethane	1.09E+05	nls	5.15E+05	nls	9.58E+04	ns	1.04E+05	n	5.34E+01	1.07E+03
Chlorobenzene	3.78E+02	ns	2.16E+03	ns	4.12E+02	ns	7.76E+01	n	4.18E-02	8.36E-01
1-Chlorobutane	3.13E+03	ns	5.19E+04	ns	1.42E+04	ns	6.31E+02	n	2.27E-01	4.53E+00
Chlorodifluoromethane	1.02E+05	nls	4.83E+05	nls	8.98E+04	ns	1.04E+05	n	4.27E+01	8.55E+02
Chloroform	5.90E+00	c	2.87E+01	c	1.34E+02	c	2.29E+00	c	5.46E-04	1.09E-02
Chloromethane	4.11E+01	c	2.01E+02	c	2.35E+02	n	2.03E+01	c	4.76E-03	9.51E-02
b-Chloronaphthalene	6.26E+03	n	1.04E+05	nl	2.83E+04	ns	7.33E+02	n	2.85E+00	5.70E+01
o-Chloronitrobenzene	1.78E+01	c	8.55E+01	c	8.39E+01	n	2.35E+00	c	1.71E-03	3.42E-02
p-Chloronitrobenzene	6.16E+01	n	9.16E+02	n	2.57E+02	n	1.79E+01	n	1.28E-02	2.57E-01
2-Chlorophenol	3.91E+02	n	6.49E+03	n	1.77E+03	n	9.10E+01	n	5.76E-02	1.15E+00
2-Chloropropane	2.86E+02	n	1.35E+03	ns	2.51E+02	ns	2.09E+02	n	6.31E-02	1.26E+00
o-Chlorotoluene	1.56E+03	ns	2.60E+04	ns	7.08E+03	ns	2.33E+02	n	1.78E-01	3.56E+00
Chromium III	1.17E+05	nl	1.95E+06	nl	5.31E+05	nl	1.36E+04	n	2.46E+07	4.91E+08
Chromium VI	3.05E+00	c	7.21E+01	c	6.69E+01	c	2.52E-01	c	4.84E-03	9.68E-02
Chromium (Total)	9.66E+01	c	5.05E+02	c	1.34E+02	n	5.59E+00	c	1.01E+04	2.01E+05
Chrysene	1.53E+02	c	3.23E+03	c	2.31E+04	c	3.43E+01	c	9.30E+00	1.86E+02
Copper	3.13E+03	n	5.19E+04	n	1.42E+04	n	7.90E+02	n	2.78E+01	5.56E+02
Crotonaldehyde	3.66E+00	c	1.91E+01	c	1.30E+02	c	4.04E-01	c	7.11E-05	1.42E-03
Cumene (isopropylbenzene)	2.36E+03	ns	1.42E+04	ns	2.74E+03	ns	4.47E+02	n	5.69E-01	1.14E+01
Cyanide	1.12E+01	n	6.33E+01	n	1.21E+01	n	1.46E+00	n	2.61E-04	5.22E-03
Cyanogen	7.82E+01	n	1.30E+03	n	3.54E+02	n	1.99E+01	n	4.01E-03	8.01E-02
Cyanogen bromide	7.04E+03	n	1.17E+05	nl	3.19E+04	n	1.80E+03	n	5.29E-01	1.06E+01
Cyanogen chloride	3.91E+03	n	6.49E+04	n	1.77E+04	n	9.99E+02	n	2.94E-01	5.88E+00
DDD	2.22E+01	c	1.07E+02	c	7.78E+02	c	3.06E-01	c	5.39E-02	1.08E+00
DDE	1.57E+01	c	7.55E+01	c	5.49E+02	c	2.29E+00	c	4.04E-01	8.08E+00

Chemical	Residential Soil (mg/kg)	End- point	Industrial/ Occupational Soil (mg/kg)	End- point	Construction Worker Soil (mg/kg)	End- point	Tap Water (ug/L)	End- point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
DDT	1.87E+01	c	9.50E+01	c	1.62E+02	n	2.29E+00	c	5.80E-01	1.16E+01
Dibenz(a,h)anthracene	1.53E-01	c	3.23E+00	c	2.40E+01	c	1.06E-01	c	3.05E-01	6.11E+00
1,2-Dibromo-3-chloropropane	8.58E-02	c	1.18E+00	c	5.53E+00	c	3.36E-03	c	1.17E-06	2.34E-05
Dibromochloromethane	1.39E+01	c	6.74E+01	c	3.40E+02	c	1.68E+00	c	3.77E-04	7.54E-03
1,2-Dibromoethane	6.72E-01	c	3.31E+00	c	1.63E+01	c	7.46E-02	c	1.76E-05	3.52E-04
1,4-Dichloro-2-butene	1.15E-01	c	5.58E-01	c	2.59E+00	c	1.34E-02	c	5.00E-06	9.99E-05
1,2-Dichlorobenzene	2.15E+03	ns	1.30E+04	ns	2.50E+03	ns	3.02E+02	n	2.29E-01	4.58E+00
1,4-Dichlorobenzene	3.28E+01	c	1.59E+02	c	7.46E+02	c	4.81E+00	c	3.60E-03	7.20E-02
3,3-Dichlorobenzidine	1.18E+01	c	5.70E+01	c	4.10E+02	c	1.24E+00	c	6.14E-03	1.23E-01
Dichlorodifluoromethane	1.82E+02	n	8.65E+02	ns	1.61E+02	n	1.97E+02	n	3.61E-01	7.23E+00
1,1-Dichloroethane	7.86E+01	c	3.83E+02	c	1.82E+03	cs	2.75E+01	c	6.79E-03	1.36E-01
1,2-Dichloroethane	8.32E+00	c	4.07E+01	c	5.38E+01	n	1.71E+00	c	4.07E-04	8.14E-03
cis-1,2-Dichloroethene	1.56E+02	n	2.60E+03	ns	7.08E+02	n	3.65E+01	n	9.18E-03	1.84E-01
trans-1,2-Dichloroethene	2.95E+02	n	1.61E+03	ns	3.05E+02	n	9.32E+01	n	2.35E-02	4.69E-01
1,1-Dichloroethene	4.40E+02	n	2.26E+03	ns	4.24E+02	n	2.84E+02	n	9.74E-02	1.95E+00
2,4-Dichlorophenol	1.85E+02	n	2.75E+03	n	8.07E+02	n	4.53E+01	n	4.13E-02	8.25E-01
1,2-Dichloropropane	1.78E+01	c	8.68E+01	c	2.54E+01	n	4.37E+00	c	1.21E-03	2.43E-02
1,3-Dichloropropene	2.93E+01	c	1.46E+02	c	1.30E+02	n	4.70E+00	c	1.40E-03	2.80E-02
Dicyclopentadiene	1.73E+00	n	8.14E+00	n	1.51E+00	n	6.25E-01	n	1.71E-03	3.42E-02
Dieldrin	3.33E-01	c	1.60E+00	c	1.17E+01	c	1.71E-02	c	5.18E-04	1.04E-02
Diethyl phthalate	4.93E+04	n	7.33E+05	nl	2.15E+05	nl	1.48E+04	n	4.89E+00	9.79E+01
Di-n-butyl phthalate (Dibutyl phthalate)	6.16E+03	n	9.16E+04	n	2.69E+04	n	8.85E+02	n	1.69E+00	3.38E+01
2,4-Dimethylphenol	1.23E+03	n	1.83E+04	n	5.38E+03	n	3.54E+02	n	3.22E-01	6.45E+00
4,6-Dinitro-o-cresol	4.93E+00	n	7.33E+01	n	2.15E+01	n	1.51E+00	n	1.97E-03	3.94E-02
2,4-Dinitrophenol	1.23E+02	n	1.83E+03	n	5.38E+02	n	3.88E+01	n	3.35E-02	6.71E-01
2,4-Dinitrotoluene	1.71E+01	c	8.23E+01	c	5.36E+02	n	2.37E+00	c	2.46E-03	4.91E-02
2,6-Dinitrotoluene	3.56E+00	c	1.72E+01	c	8.09E+01	n	4.84E-01	c	5.10E-04	1.02E-02
2,4/2,6-Dinitrotoluene Mixture	7.83E+00	c	3.77E+01	c	2.77E+02	c	1.06E+00	c	1.12E-03	2.23E-02
1,4-Dioxane	5.33E+01	c	2.57E+02	c	1.88E+03	c	7.76E+00	c	1.38E-03	2.75E-02
1,2-Diphenylhydrazine	6.66E+00	c	3.21E+01	c	2.34E+02	c	7.73E-01	c	1.88E-03	3.76E-02
Endosulfan	3.70E+02	n	5.50E+03	n	1.61E+03	n	9.87E+01	n	1.02E+00	2.04E+01
Endrin	1.85E+01	n	2.75E+02	n	8.07E+01	n	2.23E+00	n	6.77E-02	1.35E+00
Epichlorohydrin	4.27E+01	n	2.15E+02	n	4.02E+01	n	2.05E+00	n	3.86E-04	7.72E-03

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Ethyl acetate	1.82E+03	n	8.75E+03	n	1.63E+03	n	1.45E+02	n	2.64E-02	5.28E-01
Ethyl acrylate	1.45E+02	c	7.57E+02	c	5.16E+03	cs	1.56E+01	c	2.99E-03	5.97E-02
Ethyl chloride	1.90E+04	ns	8.95E+04	ns	1.66E+04	ns	2.09E+04	n	5.37E+00	1.07E+02
Ethyl ether	1.56E+04	ns	2.60E+05	nls	7.08E+04	ns	3.93E+03	n	7.60E-01	1.52E+01
Ethyl methacrylate	2.73E+03	ns	1.78E+04	ns	3.48E+03	ns	4.55E+02	n	9.15E-02	1.83E+00
Ethylbenzene	7.51E+01	c	3.68E+02	cs	1.77E+03	cs	1.49E+01	c	1.31E-02	2.62E-01
Ethylene oxide	5.02E+00	c	2.48E+01	c	1.23E+02	c	5.08E-01	c	9.09E-05	1.82E-03
Fluoranthene	2.32E+03	n	3.37E+04	n	1.00E+04	n	8.02E+02	n	6.69E+01	1.34E+03
Fluorene	2.32E+03	n	3.37E+04	n	1.00E+04	n	2.88E+02	n	4.00E+00	8.00E+01
Fluoride	4.69E+03	n	7.78E+04	n	1.81E+04	n	1.18E+03	n	1.78E+02	3.56E+03
Furan	7.24E+01	n	1.15E+03	n	3.54E+02	n	1.92E+01	n	6.12E-03	1.22E-01
Heptachlor	1.18E+00	c	5.70E+00	c	4.15E+01	c	4.39E-02	c	2.73E-03	5.45E-02
Hexachlorobenzene	3.33E+00	c	1.60E+01	c	1.17E+02	c	4.87E-01	c	4.61E-03	9.22E-02
Hexachloro-1,3-butadiene	6.16E+01	n	3.29E+02	c	2.69E+02	n	2.95E+00	c	4.39E-03	8.79E-02
Hexachlorocyclopentadiene	3.70E+02	n	5.49E+03	n	8.67E+02	n	2.78E+01	n	6.68E-02	1.34E+00
Hexachloroethane	4.31E+01	n	6.41E+02	c	1.88E+02	n	6.80E+00	n	3.31E-03	6.62E-02
n-Hexane	6.15E+02	ns	3.20E+03	ns	6.03E+02	ns	3.19E+02	n	2.78E+00	5.57E+01
HMX	3.85E+03	n	6.33E+04	n	1.74E+04	n	1.00E+03	n	9.72E-01	1.94E+01
Hydrazine anhydride	1.78E+00	c	8.55E+00	c	5.99E+01	c	2.60E-01	c	4.50E-05	9.00E-04
Hydrogen cyanide	1.02E+01	n	5.72E+01	n	1.09E+01	n	1.46E+00	n	2.61E-04	5.22E-03
Indeno(1,2,3-c,d)pyrene	1.53E+00	c	3.23E+01	c	2.40E+02	c	3.43E-01	c	1.00E+00	2.01E+01
Iron	5.48E+04	n	9.08E+05	nl	2.48E+05	nl	1.38E+04	n	3.48E+02	6.96E+03
Isobutanol (Isobutyl alcohol)	1.85E+04	n	2.75E+05	nl	8.07E+04	n	5.91E+03	n	1.05E+00	2.10E+01
Isophorone	5.61E+03	c	2.70E+04	c	5.37E+04	n	7.79E+02	c	2.11E-01	4.22E+00
Lead	4.00E+02	IEUBK	8.00E+02	IEUBK	8.00E+02	IEUBK				
Lead (tetraethyl-)	6.16E-03	n	9.16E-02	n	3.54E-02	n	1.24E-03	n	4.70E-06	9.41E-05
Maleic hydrazide	3.08E+04	n	4.58E+05	nl	1.35E+05	nl	1.00E+04	n	1.79E+00	3.57E+01
Manganese	1.05E+04	n	1.60E+05	nl	4.64E+02	n	2.02E+03	n	1.31E+02	2.63E+03
Mercury (elemental)	2.38E+01	ns	1.12E+02	ns	2.07E+01	ns	6.26E-01	n	3.27E-02	6.54E-01
Mercury (methyl)	7.82E+00	n	1.30E+02	n	3.54E+01	n	1.96E+00	n	4.45E-04	8.89E-03
Mercury (salts)	2.35E+01	n	3.89E+02	ns	7.71E+01	n	4.92E+00	n	2.56E-01	5.13E+00
Methacrylonitrile	7.70E+00	n	1.23E+02	n	3.28E+01	n	1.91E+00	n	3.71E-04	7.43E-03
Methomyl	1.54E+03	n	2.29E+04	n	6.73E+03	n	4.98E+02	n	9.37E-02	1.87E+00

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Methyl acetate	7.82E+04	ns	1.30E+06	nls	3.54E+05	nls	1.99E+04	n	3.55E+00	7.11E+01
Methyl acrylate	3.50E+02	n	1.85E+03	n	3.48E+02	n	3.90E+01	n	7.13E-03	1.43E-01
Methyl isobutyl ketone	5.81E+03	ns	8.16E+04	ns	2.02E+04	ns	1.24E+03	n	2.40E-01	4.80E+00
Methyl methacrylate	1.11E+04	ns	5.65E+04	ns	1.06E+04	ns	1.39E+03	n	2.61E-01	5.22E+00
Methyl styrene (alpha)	5.48E+03	ns	9.08E+04	ns	2.48E+04	ns	7.65E+02	n	9.43E-01	1.89E+01
Methyl styrene (mixture)	2.73E+02	ns	2.20E+03	ns	4.49E+02	ns	3.73E+01	n	4.70E-02	9.40E-01
Methylcyclohexane	5.50E+03	ns	2.59E+04	ns	4.82E+03	ns	6.26E+03	n	1.58E+01	3.16E+02
Methylene bromide (Dibromomethane)	5.79E+01	n	2.88E+02	n	5.39E+01	n	8.00E+00	n	1.68E-03	3.35E-02
Methylene chloride	4.09E+02	n	5.13E+03	ns	1.21E+03	n	1.06E+02	n	2.35E-02	4.71E-01
Molybdenum	3.91E+02	n	6.49E+03	n	1.77E+03	n	9.87E+01	n	1.99E+00	3.98E+01
Naphthalene	4.97E+01	c	2.41E+02	c	1.59E+02	n	1.65E+00	c	4.11E-03	8.23E-02
Nickel	1.56E+03	n	2.57E+04	n	7.53E+02	n	3.72E+02	n	2.42E+01	4.85E+02
Nitrate	1.25E+05	nl	2.08E+06	nl	5.66E+05	nl	3.16E+04	n	2.13E+01	4.25E+02
Nitrite	7.82E+03	n	1.30E+05	nl	3.54E+04	n	1.97E+03	n	1.33E+00	2.66E+01
Nitrobenzene	6.04E+01	c	2.93E+02	c	3.53E+02	n	1.40E+00	c	7.20E-04	1.44E-02
Nitroglycerin	6.16E+00	n	9.16E+01	n	2.69E+01	n	1.96E+00	n	6.80E-04	1.36E-02
N-Nitrosodiethylamine	7.94E-03	c	1.71E-01	c	1.25E+00	c	1.65E-03	c	4.92E-07	9.84E-06
N-Nitrosodimethylamine	2.34E-02	c	5.03E-01	c	2.14E+00	n	4.90E-03	c	1.02E-06	2.03E-05
N-Nitrosodi-n-butylamine	7.81E-01	c	3.77E+00	c	2.46E+01	c	2.72E-02	c	4.21E-05	8.41E-04
N-Nitrosodiphenylamine	1.09E+03	c	5.24E+03	c	3.79E+04	c	1.21E+02	c	4.98E-01	9.95E+00
N-Nitrosopyrrolidine	2.54E+00	c	1.22E+01	c	8.89E+01	c	3.70E-01	c	1.15E-04	2.30E-03
m-Nitrotoluene	6.16E+00	n	9.16E+01	n	2.69E+01	n	1.74E+00	n	1.25E-03	2.50E-02
o-Nitrotoluene	3.16E+01	c	1.65E+02	c	3.19E+02	n	3.13E+00	c	2.28E-03	4.56E-02
p-Nitrotoluene	2.47E+02	n	1.60E+03	c	1.08E+03	n	4.24E+01	c	3.05E-02	6.09E-01
Pentachlorobenzene	4.93E+01	n	7.33E+02	n	2.15E+02	n	3.07E+00	n	1.76E-02	3.52E-01
Pentachlorophenol	9.85E+00	c	4.45E+01	c	3.46E+02	c	4.00E-01	c	3.04E-03	6.08E-02
Perchlorate	5.48E+01	n	9.08E+02	ns	2.48E+02	n	1.38E+01	n	5.85E-03	1.17E-01
Phenanthrene	1.74E+03	n	2.53E+04	n	7.53E+03	n	1.70E+02	n	4.30E+00	8.59E+01
Phenol	1.85E+04	n	2.75E+05	nl	7.74E+04	n	5.76E+03	n	2.62E+00	5.23E+01
Polychlorinatedbiphenyls (PCBs)										
Aroclor 1016	3.98E+00	n	5.74E+01	n	1.72E+01	n	1.40E+00	n	1.01E-01	2.01E+00
Aroclor 1221	1.81E+00	c	8.57E+00	c	5.53E+01	cs	5.54E-02	c	7.08E-04	1.42E-02
Aroclor 1232	1.86E+00	c	8.82E+00	c	5.76E+01	cs	5.54E-02	c	7.08E-04	1.42E-02

Chemical	Residential Soil (mg/kg)	End- point	Industrial/ Occupational Soil (mg/kg)	End- point	Construction Worker Soil (mg/kg)	End- point	Tap Water (ug/L)	End- point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
Aroclor 1242	2.43E+00	c	1.15E+01	c	8.53E+01	c	3.89E-01	c	4.57E-02	9.14E-01
Aroclor 1248	2.43E+00	c	1.15E+01	c	8.53E+01	c	3.89E-01	c	4.48E-02	8.96E-01
Aroclor 1254	1.14E+00	n	1.15E+01	c	4.91E+00	n	3.89E-01	c	7.63E-02	1.53E+00
Aroclor 1260	2.43E+00	c	1.15E+01	c	8.53E+01	c	3.89E-01	c	2.04E-01	4.09E+00
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	3.75E-01	c	1.77E+00	c	1.72E+00	n	5.99E-02	c	3.21E-02	6.42E-01
2,2',3,4,4',5,5'-Heptachlorobiphenyl (PCB 180)	3.75E+00	c	1.77E+01	c	1.72E+01	n	5.99E-01	c	3.14E-01	6.29E+00
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	1.05E-01	2.10E+00
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	6.27E-02	1.25E+00
2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 157)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	6.40E-02	1.28E+00
2,3,3',4,4',5-Hexachlorobiphenyl (PCB 156)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	6.40E-02	1.28E+00
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	1.25E-03	c	5.89E-03	c	5.73E-03	n	2.00E-04	c	6.27E-05	1.25E-03
2',3,4,4',5-Pentachlorobiphenyl (PCB 123)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	3.91E-02	7.83E-01
2',3',4,4',5-Pentachlorobiphenyl (PCB 118)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	3.84E-02	7.67E-01
2',3,3',4,4'-Pentachlorobiphenyl (PCB 105)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	3.91E-02	7.83E-01
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	3.91E-02	7.83E-01
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	3.75E-04	c	1.77E-03	c	1.72E-03	n	5.99E-05	c	1.15E-05	2.30E-04
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	3.75E-01	c	1.77E+00	c	1.72E+00	n	5.99E-02	c	7.03E-03	1.41E-01
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	1.25E-01	c	5.89E-01	c	5.73E-01	n	2.00E-02	c	2.34E-03	4.69E-02
Propylene oxide	2.56E+01	c	1.33E+02	c	7.99E+02	n	2.66E+00	c	4.82E-04	9.65E-03
Pyrene	1.74E+03	n	2.53E+04	n	7.53E+03	n	1.17E+02	n	9.59E+00	1.92E+02
RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	6.04E+01	c	3.11E+02	c	1.01E+03	n	7.02E+00	c	2.16E-03	4.31E-02
Selenium	3.91E+02	n	6.49E+03	n	1.75E+03	n	9.87E+01	n	5.11E-01	1.02E+01
Silver	3.91E+02	n	6.49E+03	n	1.77E+03	n	8.12E+01	n	6.88E-01	1.38E+01
Strontium	4.69E+04	n	7.79E+05	nl	2.12E+05	nl	1.18E+04	n	4.17E+02	8.33E+03
Styrene	7.26E+03	ns	5.13E+04	ns	1.02E+04	ns	1.21E+03	n	1.03E+00	2.06E+01
Sulfolane	6.16E+01	n	9.16E+02	n	2.65E+02	n	2.00E+01	n	3.75E-03	7.49E-02
2,3,7,8-TCDD	4.90E-05	c	2.48E-04	c	2.26E-04	n	5.99E-06	c	2.24E-06	4.48E-05
2,3,7,8-TCDF	4.90E-04	c	2.48E-03	c	1.72E-02	c	2.01E-06	c	4.22E-07	8.44E-06
1,2,4,5-Tetrachlorobenzene	1.85E+01	n	2.75E+02	n	8.07E+01	n	1.66E+00	n	5.83E-03	1.17E-01
1,1,1,2-Tetrachloroethane	2.81E+01	c	1.37E+02	c	6.59E+02	cs	5.72E+00	c	1.80E-03	3.59E-02
1,1,2,2-Tetrachloroethane	7.98E+00	c	3.94E+01	c	1.97E+02	c	7.57E-01	c	2.40E-04	4.80E-03
Tetrachloroethene	1.11E+02	ns	6.29E+02	ns	1.20E+02	ns	4.03E+01	n	1.60E-02	3.21E-01
Tetryl (Trinitrophenylmethylnitramine)	1.56E+02	n	2.59E+03	n	7.06E+02	n	3.94E+01	n	2.79E-01	5.59E+00

Chemical	Residential Soil (mg/kg)	End- point	Industrial/ Occupational Soil (mg/kg)	End- point	Construction Worker Soil (mg/kg)	End- point	Tap Water (ug/L)	End- point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
Thallium	7.82E-01	n	1.30E+01	n	3.54E+00	n	1.97E-01	n	1.41E-02	2.81E-01
Toluene	5.23E+03	ns	6.13E+04	ns	1.40E+04	ns	1.09E+03	n	6.07E-01	1.21E+01
Toxaphene	4.84E+00	c	2.33E+01	c	1.70E+02	c	1.53E-01	c	1.77E-02	3.54E-01
Tribromomethane (Bromoform)	6.74E+02	c	3.25E+03	c	5.38E+03	n	9.19E+01	c	2.05E-02	4.11E-01
1,1,2-Trichloro-1,2,2-trifluoroethane	5.08E+04	ns	2.43E+05	nls	4.53E+04	ns	5.50E+04	n	1.60E+02	3.20E+03
1,2,4-Trichlorobenzene	8.29E+01	n	4.23E+02	ns	7.91E+01	n	3.98E+00	n	8.82E-03	1.76E-01
1,1,1-Trichloroethane	1.44E+04	ns	7.25E+04	ns	1.36E+04	ns	8.00E+03	n	2.55E+00	5.11E+01
1,1,2-Trichloroethane	2.61E+00	n	1.24E+01	n	2.30E+00	n	4.15E-01	n	1.11E-04	2.23E-03
Trichloroethylene	6.77E+00	n	3.65E+01	n	6.90E+00	n	2.82E+00	n	8.75E-04	1.75E-02
Trichlorofluoromethane	1.23E+03	ns	6.03E+03	ns	1.13E+03	ns	1.14E+03	n	7.84E-01	1.57E+01
2,4,5-Trichlorophenol	6.16E+03	n	9.16E+04	n	2.69E+04	n	1.17E+03	n	3.31E+00	6.62E+01
2,4,6-Trichlorophenol	6.16E+01	n	9.16E+02	n	2.69E+02	n	1.19E+01	n	3.37E-02	6.74E-01
1,1,2-Trichloropropane	3.91E+02	n	6.49E+03	ns	1.77E+03	ns	8.81E+01	n	2.79E-02	5.59E-01
1,2,3-Trichloropropane	5.10E-02	c	1.21E+00	c	6.31E+00	n	7.47E-03	c	2.60E-06	5.21E-05
Triethylamine	1.93E+02	n	9.09E+02	n	1.69E+02	n	1.46E+01	n	3.65E-03	7.31E-02
2,4,6-Trinitrotoluene	3.60E+01	n	5.73E+02	n	1.61E+02	n	9.80E+00	n	4.30E-02	8.61E-01
Uranium (soluble salts)	2.34E+02	n	3.88E+03	ns	2.77E+02	ns	5.92E+01	n	2.67E+01	5.33E+02
Vanadium	3.94E+02	n	6.53E+03	n	6.14E+02	n	6.31E+01	n	6.31E+01	1.26E+03
Vinyl acetate	2.56E+03	n	1.24E+04	ns	2.30E+03	ns	4.09E+02	n	7.52E-02	1.50E+00
Vinyl bromide	2.71E+00	c	1.31E+01	c	8.46E+00	n	1.75E+00	c	4.62E-04	9.23E-03
Vinyl chloride	7.42E-01	c	2.84E+01	c	1.61E+02	c	2.01E-01	c	6.75E-05	1.35E-03
m-Xylene	7.64E+02	ns	3.73E+03	ns	6.96E+02	ns	1.93E+02	n	1.48E-01	2.97E+00
o-Xylene	8.05E+02	ns	3.94E+03	ns	7.36E+02	ns	1.93E+02	n	1.49E-01	2.98E+00
Xylenes	8.71E+02	ns	4.28E+03	ns	7.98E+02	ns	1.93E+02	n	1.49E-01	2.98E+00
Zinc	2.35E+04	n	3.89E+05	nl	1.06E+05	nl	5.96E+03	n	3.71E+02	7.41E+03

c – carcinogen

cs - carcinogenic, SSL may exceed saturation

DAF – Dilution Attenuation Factor

mg/kg – milligrams per kilogram

n – noncarcinogenic

nl - noncarcinogen, SSL may exceed ceiling limit

ns - noncarcinogen, SSL may exceed saturation

nls - noncarcinogen, SSL may exceed both saturation and ceiling limit

SSL – Soil Screening Level

µg/L – micrograms per liter

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)																													
Toxicity and Chemical-specific Information													Contaminant				Screening Levels										Protection of Ground Water SSLs		
SFO (mg/kg-day) ⁻¹	k e y	IUR (ug/m ³) ⁻¹	k e y	RfD _o (mg/kg-day)	k e y	RfC _i (mg/m ³)	k e y	v o l u t a b i l i t y	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m ³)	key	Industrial Air (ug/m ³)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)		
8.7E-03	I			4.0E-03	I				1	0.1		Acephate	30560-19-1	6.2E+01	c**	2.6E+02	c*					8.9E+00	c**		2.0E-03	c**			
		2.2E-06	I			9.0E-03	I	V	1		1.1E+05	Acetaldehyde	75-07-0	1.1E+01	c**	4.9E+01	c**	1.3E+00	c**	5.6E+00	c**	2.6E+00	c**		5.2E-04	c**			
				2.0E-02	I				1	0.1		Acetochlor	34256-82-1	1.3E+03	n	1.6E+04	n					3.5E+02	n		2.8E-01	n			
				9.0E-01	I	3.1E+01	A	V	1		1.1E+05	Acetone	67-64-1	6.1E+04	n	6.7E+05	nms	3.2E+04	n	1.4E+05	n	1.4E+04	n		2.9E+00	n			
						2.0E-03	X		1	0.1		Acetone Cyanohydrin	75-86-5	2.8E+06	nm	1.2E+07	nm	2.1E+00	n	8.8E+00	n								
						6.0E-02	I	V	1		1.3E+05	Acetonitrile	75-05-8	8.1E+02	n	3.4E+03	n	6.3E+01	n	2.6E+02	n	1.3E+02	n		2.6E-02	n			
3.8E+00	C	1.3E-03	C	1.0E-01	I			V	1		2.5E+03	Acetophenone	98-86-2	7.8E+03	ns	1.2E+05	nms					1.9E+03	n		5.8E-01	n			
				5.0E-04	I	2.0E-05	I	V	1	0.1		Acetylaminofluorene, 2-	53-96-3	1.4E-01	c	6.0E-01	c	2.2E-03	c	9.4E-03	c	1.6E-02	c		7.2E-05	c			
									1		2.3E+04	Acrolein	107-02-8	1.4E-01	n	6.0E-01	n	2.1E-02	n	8.8E-02	n	4.2E-02	n		8.4E-06	n			
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M	1	0.1	Acrylamide	79-06-1	2.4E-01	c	4.6E+00	c	1.0E-02	c	1.2E-01	c	5.0E-02	c		1.1E-05	c			
				5.0E-01	I	1.0E-03	I	V	1		1.1E+05	Acrylic Acid	79-10-7	9.9E+01	n	4.2E+02	n	1.0E+00	n	4.4E+00	n	2.1E+00	n		4.2E-04	n			
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V	1		1.1E+04	Acrylonitrile	107-13-1	2.5E-01	c*	1.1E+00	c*	4.1E-02	c*	1.8E-01	c*	5.2E-02	c*		1.1E-05	c*			
5.6E-02	C					6.0E-03	P		1	0.1		Adiponitrile	111-69-3	8.5E+06	nm	3.6E+07	nm	6.3E+00	n	2.6E+01	n								
				1.0E-02	I				1	0.1		Alachlor	15972-60-8	9.7E+00	c*	4.1E+01	c					1.1E+00	c	2.0E+00	8.7E-04	c	1.6E-03		
				1.0E-03	I				1	0.1		Aldicarb	116-06-3	6.3E+00	n	8.2E+02	n					2.0E+01	n	3.0E+00	4.9E-03	n	7.5E-04		
1.7E+01	I	4.9E-03	I	3.0E-05	I			V	1	0.1		Aldicarb Sulfone	1646-88-4	6.3E+01	n	8.2E+02	n					2.0E+01	n	2.0E+00	4.4E-03	n	4.4E-04		
									1	0.1		Aldicarb sulfoxide	1646-87-3											4.0E+00			8.8E-04		
									1	0.1		Aldrin	309-00-2	3.9E-02	c*	1.8E-01	c	5.7E-04	c	2.5E-03	c	9.2E-04	c		1.5E-04	c			
2.1E-02	C	6.0E-06	C	5.0E-03	I	1.0E-04	X	V	1		1.1E+05	Allyl Alcohol	107-18-6	3.5E+00	n	1.5E+01	n	1.0E-01	n	4.4E-01	n	2.1E-01	n		4.2E-05	n			
				1.0E+00	P	5.0E-03	P		1		1.4E+03	Allyl Chloride	107-05-1	7.2E-01	c**	3.2E+00	c**	4.7E-01	c**	2.0E+00	c**	7.3E-01	c**		2.3E-04	c**			
									1			Aluminum	7429-90-5	7.7E+04	n	1.1E+06	nm	5.2E+00	n	2.2E+01	n	2.0E+04	n		3.0E+04	n			
2.1E+01	C	6.0E-03	C	4.0E-04	I				1			Aluminum Phosphide	20859-73-8	3.1E+01	n	4.7E+02	n					8.0E+00	n			n			
				9.0E-03	I				1	0.1		Ametryn	834-12-8	5.7E+02	n	7.4E+03	n					1.5E+02	n		1.6E-01	n			
									1	0.1		Aminobiphenyl, 4-	92-67-1	2.6E-02	c	1.1E-01	c	4.7E-04	c	2.0E-03	c	3.0E-03	c		1.5E-05	c			
				8.0E-02	P				1	0.1		Aminophenol, m-	591-27-5	5.1E+03	n	6.6E+04	n					1.6E+03	n		6.1E-01	n			
				2.0E-02	P				1	0.1		Aminophenol, p-	123-30-8	1.3E+03	n	1.6E+04	n					4.0E+02	n		1.5E-01	n			
				2.5E-03	I				1	0.1		Amitraz	33089-61-1	1.6E+02	n	2.1E+03	n					8.2E+00	n		4.2E+00	n			
						1.0E-01	I	V	1			Ammonia	7664-41-7					1.0E+02	n	4.4E+02	n								
				2.0E-01	I				1			Ammonium Sulfamate	7773-06-0	1.6E+04	n	2.3E+05	nm					4.0E+03	n		1.3E-03	n			
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I		1	0.1		Amyl Alcohol, tert-	75-85-4	8.2E+01	n	3.4E+02	n	3.1E+00	n	1.3E+01	n	6.3E+00	n			n			
4.0E-02	P								1	0.1		Aniline	62-53-3	9.5E+01	c**	4.0E+02	c*	1.0E+00	n	4.4E+00	n	1.3E+01	c*		4.6E-03	c*			
				2.0E-03	X				1	0.1		Anthraquinone, 9,10-	84-65-1	1.4E+01	c**	5.7E+01	c*					1.4E+00	c*		1.4E-02	c*			
				4.0E-04	I				0.15			Antimony (metallic)	7440-36-0	3.1E+01	n	4.7E+02	n					7.8E+00	n	6.0E+00	3.5E-01	n	2.7E-01		
				5.0E-04	H				0.15			Antimony Pentoxide	1314-60-9	3.9E+01	n	5.8E+02	n					9.7E+00	n			n			
				4.0E-04	H				0.15			Antimony Tetroxide	1332-81-6	3.1E+01	n	4.7E+02	n					7.8E+00	n			n			
						2.0E-04	I		0.15			Antimony Trioxide	1309-64-4	2.8E+05	nm	1.2E+06	nm	2.1E-01	n	8.8E-01	n								
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C		1	0.03		Arsenic, Inorganic	7440-38-2	6.8E-01	c*R	3.0E+00	cR	6.5E-04	c*	2.9E-03	c*	5.2E-02	c	1.0E+01	1.5E-03	c	2.9E-01		
				3.5E-06	C	5.0E-05	I		1			Arsine	7784-42-1	2.7E-01	n	4.1E+00	n	5.2E-02	n	2.2E-01	n	7.0E-02	n			n			
				5.0E-02	I				1	0.1		Asulam	3337-71-1	3.2E+03	n	4.1E+04	n					1.0E+03	n		2.6E-01	n			
2.3E-01	C			3.5E-02	I				1	0.1		Atrazine	1912-24-9	2.4E+00	c	1.0E+01	c					3.0E-01	c	3.0E+00	2.0E-04	c	1.9E-03		
8.8E-01	C	2.5E-04	C						1	0.1		Auramine	492-80-8	6.2E-01	c	2.6E+00	c	1.1E-02	c	4.9E-02	c	6.7E-02	c		6.1E-04	c			
				4.0E-04	I				1	0.1		Avermectin B1	65195-55-3	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.4E+01	n			
1.1E-01	I	3.1E-05	I	3.0E-03	A	1.0E-02	A		1	0.1		Azinphos-methyl	86-50-0	1.9E+02	n	2.5E+03	n	1.0E+01	n	4.4E+01	n	5.6E+01	n		1.7E-02	n			
								V	1			Azobenzene	103-33-3	5.6E+00	c	2.6E+01	c	9.1E-02	c	4.0E-01	c	1.2E-01	c		9.3E-04	c			
				1.0E+00	P	7.0E-06	P		1	0.1		Azodicarbonamide	123-77-3	8.6E+03	n	4.0E+04	n	7.3E-03	n	3.1E-02	n	2.0E+04	n		6.8E+00	n			
5.0E-01	C	1.5E-01	C	2.0E-01	I	5.0E-04	H		0.07			Barium	7440-39-3	1.5E+04	n	2.2E+05	nm	5.2E-01	n	2.2E+00	n	3.8E+03	n	2.0E+03	1.6E+02	n	8.2E+01		
				2.0E-02	C	2.0E-04	C		0.025			Barium Chromate	10294-40-3	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c			
				3.0E-01	I		V		1			Benfluralin	1861-40-1	2.3E+04	n	3.5E+05	nm					1.7E+03	n		5.6E+01	n			
				5.0E-02	I				1	0.1		Benomyl	17804-35-2	3.2E+03	n	4.1E+04	n					9.7E+02	n		8.5E-01	n			
				2.0E-01	I				1	0.1		Bensulfuron-methyl	83055-99-6	1.3E+04	n	1.6E+05	nm					3.9E+03	n		1.0E+00	n			
				3.0E-02	I				1	0.1		Bentazon	25057-89-0	1.9E+03	n	2.5E+04	n					5.7E+02	n		1.2E-01	n			
5.5E-02	I	7.8E-06	I	1.0E-01	I			V	1		1.2E+03	Benzaldehyde	100-52-7	7.8E+03	ns	1.2E+05	nms					1.9E+03	n		4.3E-01	n			
				4.0E-03	I	3.0E-02	I	V	1		1.8E+03	Benzene	71-43-2	1.2E+00	c*	5.1E+00	c*	3.6E-01	c*	1.6E+00	c*	4.6E-01	c*	5.0E+00	2.3E-04	c*	2.6E-03		
1.0E-01	X			3.0E-04	X				1	0.1		Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	5.4E+00	c**	2.3E+01	c*					7.8E-01	c**		2.2E-04	c**			
2.3E+02	I	6.7E-02	I	1.0E-03	P			V	1		1.3E+03	Benzenethiol	108-98-5	7.8E+01	n	1.2E+03	n					1.7E+01	n		1.1E-02	n			
				3.0E-03	I				M	1	0.1	Benzidine	92-87-5	5.3E-04	c	1.0E-02	c	1.5E-05	c	1.8E-04	c	1.1E-04	c		2.8E-07	c			
				4.0E+00	I				1	0.1		Benzoic Acid	65-85-0	2.5E+05	nm	3.3E+06	nm					7.5E+04	n		1.8E+01	n			
1.3E+01	I							V	1		3.2E+02	Benzotrichloride	98-07-7	5.3E-02	c	2.5E-01	c					3.0E-03	c		6.6E-06	c			
				1.0E-01	P				1	0.1		Benzyl Alcohol	100-51-6	6.3E+03	n	8.2E+04	n					2.0E+03	n		4.8E-01	n			

Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) November 2015

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Toxicity and Chemical-specific Information													Contaminant			Screening Levels											Protection of Ground Water SSLs		
SFO (mg/kg-day) ⁻¹	^k _e y	IUR (ug/m ³) ⁻¹	^k _e y	RfD _o (mg/kg-day)	^k _e y	RfC _i (mg/m ³)	^k _e y	v o	muta- gen	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	^k _e y	Industrial Soil (mg/kg)	^k _e y	Resident Air (ug/m ³)	^k _e y	Industrial Air (ug/m ³)	^k _e y	Tapwater (ug/L)	^k _e y	MCL (ug/L)	Risk-based SSL (mg/kg)	^k _e y	MCL-based SSL (mg/kg)	
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		1		1.5E+03	Benzyl Chloride	100-44-7	1.1E+00	c*	4.8E+00	c*	5.7E-02	c*	2.5E-01	c*	8.9E-02	c*		9.8E-05	c*		
		2.4E-03	I	2.0E-03	I	2.0E-05	I			0.007			Beryllium and compounds	7440-41-7	1.6E+02	n	2.3E+03	n	1.2E-03	c*	5.1E-03	c*	2.5E+01	n	4.0E+00	1.9E+01	n	3.2E+00	
				9.0E-03	P		P			1	0.1		Bifenox	42576-02-3	5.7E+02	n	7.4E+03	n					1.0E+02	n		7.6E-01	n		
				1.5E-02	I		I			1	0.1		Biphen thrin	82657-04-3	9.5E+02	n	1.2E+04	n					3.0E+02	n		1.4E+03	n		
8.0E-03	I			5.0E-01	I	4.0E-04	X	V		1			Biphenyl, 1,1'-	92-52-4	4.7E+01	n	2.0E+02	n	4.2E-01	n	1.8E+00	n	8.3E-01	n		8.7E-03	n		
				4.0E-02	I		V			1		1.0E+03	Bis(2-chloro-1-methylethyl) ether	108-60-1	3.1E+03	ns	4.7E+04	ns					7.1E+02	n		2.6E-01	n		
				3.0E-03	P		P			1	0.1		Bis(2-chloroethoxy)methane	111-91-1	1.9E+02	n	2.5E+03	n					5.9E+01	n		1.3E-02	n		
1.1E+00	I	3.3E-04	I					V		1		5.1E+03	Bis(2-chloroethyl)ether	111-44-4	2.3E-01	c	1.0E+00	c	8.5E-03	c	3.7E-02	c	1.4E-02	c		3.6E-06	c		
2.2E+02	I	6.2E-02	I					V		1		4.2E+03	Bis(chloromethyl)ether	542-88-1	8.3E-05	c	3.6E-04	c	4.5E-05	c	2.0E-04	c	7.2E-05	c		1.7E-08	c		
				5.0E-02	I					1	0.1		Bisphenol A	80-05-7	3.2E+03	n	4.1E+04	n					7.7E+02	n		5.8E+01	n		
				2.0E-01	I	2.0E-02	H			1			Boron And Borates Only	7440-42-8	1.6E+04	n	2.3E+05	nm	2.1E+01	n	8.8E+01	n	4.0E+03	n		1.3E+01	n		
				2.0E+00	P	2.0E-02	P	V		1			Boron Trichloride	10294-34-5	1.6E+05	nm	2.3E+06	nm	2.1E+01	n	8.8E+01	n	4.2E+01	n			n		
				4.0E-02	C	1.3E-02	C	V		1			Boron Trifluoride	7637-07-2	3.1E+03	n	4.7E+04	n	1.4E+01	n	5.7E+01	n	2.6E+01	n			n		
7.0E-01	I			4.0E-03	I					1			Bromate	15541-45-4	9.9E-01	c	4.7E+00	c					1.1E-01	c	1.0E+01	8.5E-04	c	7.7E-02	
2.0E+00	X	6.0E-04	X					V		1		2.4E+03	Bromo-2-chloroethane, 1-	107-04-0	2.6E-02	c	1.1E-01	c	4.7E-03	c	2.0E-02	c	7.4E-03	c		2.1E-06	c		
				8.0E-03	I	6.0E-02	I	V		1		6.8E+02	Bromobenzene	108-86-1	2.9E+02	n	1.8E+03	ns	6.3E+01	n	2.6E+02	n	6.2E+01	n		4.2E-02	n		
				4.0E-02	X	V				1		4.0E+03	Bromochloromethane	74-97-5	1.5E+02	n	6.3E+02	n	4.2E+01	n	1.8E+02	n	8.3E+01	n		2.1E-02	n		
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		1		9.3E+02	Bromodichloromethane	75-27-4	2.9E-01	c	1.3E+00	c	7.6E-02	c	3.3E-01	c	1.3E-01	c	8.0E+01(F)	3.6E-05	c	2.2E-02	
7.9E-03	I	1.1E-06	I	2.0E-02	I			V		1		9.2E+02	Bromoform	75-25-2	1.9E+01	c*	8.6E+01	c	2.6E+00	c	1.1E+01	c	3.3E+00	c	8.0E+01(F)	8.7E-04	c	2.1E-02	
				1.4E-03	I	5.0E-03	I	V		1		3.6E+03	Bromomethane	74-83-9	6.8E+00	n	3.0E+01	n	5.2E+00	n	2.2E+01	n	7.5E+00	n		1.9E-03	n		
				5.0E-03	H			V		1			Bromophos	2104-96-3	3.9E+02	n	5.8E+03	n					3.5E+01	n		1.5E-01	n		
				2.0E-02	I					1	0.1		Bromoxynil	1689-84-5	1.3E+03	n	1.6E+04	n					3.3E+02	n		2.8E-01	n		
3.4E+00	C	3.0E-05	I	2.0E-02	I			V		1		6.7E+02	Bromoxynil Octanoate	1689-99-2	1.6E+03	n	2.3E+04	n					1.4E+02	n		1.2E+00	n		
						2.0E-03	I	V		1			Butadiene, 1,3-	106-99-0	5.8E-02	c*	2.6E-01	c*	9.4E-02	c*	4.1E-01	c*	1.8E-02	c		9.9E-06	c		
				1.0E-01	I			V		1		7.6E+03	Butanol, N-	71-36-3	7.8E+03	ns	1.2E+05	nms					2.0E+03	n		4.1E-01	n		
1.9E-03	P			2.0E-01	I					1	0.1		Butyl Benzyl Phthalate	85-68-7	2.9E+02	c*	1.2E+03	c					1.6E+01	c		2.4E-01	c		
				2.0E+00	P	3.0E+01	P	V		1		2.1E+04	Butyl alcohol, sec-	78-92-2	1.3E+05	nms	1.5E+06	nms	3.1E+04	n	1.3E+05	n	2.4E+04	n		5.0E+00	n		
				5.0E-02	I			V		1			Butylate	2008-41-5	3.9E+03	n	5.8E+04	n					4.6E+02	n		4.5E-01	n		
2.0E-04	C	5.7E-08	C							1	0.1		Butylated hydroxyanisole	25013-16-5	2.7E+03	c	1.1E+04	c	4.9E+01	c	2.2E+02	c	1.5E+02	c		2.9E-01	c		
3.6E-03	P			3.0E-01	P					1	0.1		Butylated hydroxytoluene	128-37-0	1.5E+02	c	6.4E+02	c					3.4E+00	c		1.0E-01	c		
				5.0E-02	P			V		1		1.1E+02	Butylbenzene, n-	104-51-8	3.9E+03	ns	5.8E+04	ns					1.0E+03	n		3.2E+00	n		
				1.0E-01	X			V		1		1.5E+02	Butylbenzene, sec-	135-98-8	7.8E+03	ns	1.2E+05	nms					2.0E+03	n		5.9E+00	n		
				1.0E-01	X			V		1		1.8E+02	Butylbenzene, tert-	98-06-6	7.8E+03	ns	1.2E+05	nms					6.9E+02	n		1.6E+00	n		
				2.0E-02	A					1	0.1		Cacodylic Acid	75-60-5	1.3E+03	n	1.6E+04	n					4.0E+02	n		1.1E-01	n		
		1.8E-03	I	1.0E-03	I	1.0E-05	A			0.025	0.001		Cadmium (Diet)	7440-43-9	7.1E+01	n	9.8E+02	n								</			

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Toxicity and Chemical-specific Information											Contaminant			Screening Levels											Protection of Ground Water SSLs		
SFO (mg/kg-day) ⁻¹	^k _e IUR (ug/m ³) ⁻¹	^k _e RfD _o (mg/kg-day)	^k _e RfC _i (mg/m ³)	^k _e V _o muta- gen	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	^k _e	Industrial Soil (mg/kg)	^k _e	Resident Air (ug/m ³)	^k _e	Industrial Air (ug/m ³)	^k _e	Tapwater (ug/L)	^k _e	MCL (ug/L)	Risk-based SSL (mg/kg)	^k _e	MCL-based SSL (mg/kg)				
		3.0E-02	I	2.0E-04	I	V		1	1	2.3E+03	n	3.4E+04	n	2.1E-01	n	8.8E-01	n	4.2E-01	n				n				
		3.0E-02	I					1		2.3E+03	n	3.5E+04	n					6.0E+02	n	1.0E+03		n					
4.6E-01	H	3.0E-04	I	2.0E-02	H	2.0E-02	I	V	1	1.2E+03	7.9E+02	Chloro-1,1-difluoroethane, 1-	75-68-3	5.4E+04	ns	2.3E+05	nms	5.2E+04	n	2.2E+05	n	1.0E+05	n		5.2E+01	n	
												Chloro-1,3-butadiene, 2-	126-99-8	1.0E-02	c	4.4E-02	c	9.4E-03	c	4.1E-02	c	1.9E-02	c		9.8E-06	c	
												Chloro-2-methylaniline HCl, 4-	3165-93-3	1.2E+00	c	5.0E+00	c					1.7E-01	c		1.5E-04	c	
1.0E-01	P	7.7E-05	C	3.0E-03	X			1	0.1	5.4E+00	c*	2.3E+01	c	3.6E-02	c	1.6E-01	c	7.0E-01	c*		4.0E-04	c*					
2.7E-01	X							1	1.2E+04	2.6E+00	c	1.2E+01	c					2.9E-01	c	6.0E+01	5.8E-05	c	1.2E-02				
2.0E-01	P			4.0E-03	I	3.0E-05	I		1	0.1		Chloroacetophenone, 2-	532-27-4	4.3E+04	n	1.8E+05	nm	3.1E-02	n	1.3E-01	n		1.6E-04	c			
												Chloroaniline, p-	106-47-8	2.7E+00	c*	1.1E+01	c			3.7E-01	c	5.3E-02	n	6.8E-02			
1.1E-01	C	3.1E-05	C	2.0E-02	I	3.0E-02	X	3.0E-01	P	V	1	0.1	Chlorobenzilate	510-15-6	4.9E+00	c	2.1E+01	c	9.1E-02	c	4.0E-01	c	3.1E-01	c		1.0E-03	c
													Chlorobenzoic Acid, p-	74-11-3	1.9E+03	n	2.5E+04	n			5.1E+02	n	1.3E-01	n			
													Chlorobenzotrifluoride, 4-	98-56-6	2.1E+02	n	2.5E+03	ns	3.1E+02	n	1.3E+03	n	3.5E+01	n	1.2E-01	n	
				4.0E-02	P		V		1	7.3E+02		Chlorobutane, 1-	109-69-3	3.1E+03	ns	4.7E+04	ns			6.4E+02	n		2.6E-01	n			
												Chlorodifluoromethane	75-45-6	4.9E+04	ns	2.1E+05	nms	5.2E+04	n	2.2E+05	n	1.0E+05	n	4.3E+01	n		
				2.0E-02	P		V		1	1.7E+03	1.1E+05	Chloroethanol, 2-	107-07-3	1.6E+03	n	2.3E+04	n			4.0E+02	n	8.1E-02	n				
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V	1	2.5E+03		Chloroform	67-66-3	3.2E-01	c	1.4E+00	c	1.2E-01	c	5.3E-01	c	2.2E-01	c	8.0E+01(F)	6.1E-05	c	2.2E-02
2.4E+00	C	6.9E-04	C			9.0E-02	I	V	1	1.3E+03		Chloromethane	74-87-3	1.1E+02	n	4.6E+02	n	9.4E+01	n	3.9E+02	n	1.9E+02	n		4.9E-02	n	
												Chloromethyl Methyl Ether	107-30-2	2.0E-02	c	8.9E-02	c	4.1E-03	c	1.8E-02	c	6.5E-03	c	1.4E-06	c		
3.0E-01	P			3.0E-03	P	1.0E-05	X		1	0.1		Chloronitrobenzene, o-	88-73-3	1.8E+00	c	7.7E+00	c	1.0E-02	n	4.4E-02	n	2.4E-01	c		2.2E-04	c	
6.3E-03	P			1.0E-03	P	6.0E-04	P		1	0.1		Chloronitrobenzene, p-	100-00-5	6.3E+01	n	3.6E+02	c**	6.3E-01	n	2.6E+00	n	1.1E+01	c**		1.0E-02	c**	
												Chlorophenol, 2-	95-57-8	3.9E+02	n	5.8E+03	n			9.1E+01	n	7.4E-02	n				
3.1E-03	C	8.9E-07	C	1.5E-02	I	4.0E-04	C	V	1	6.2E+02		Chloropicrin	76-06-2	2.0E+00	n	8.2E+00	n	4.2E-01	n	1.8E+00	n	8.3E-01	n		2.5E-04	n	
												Chlorothalonil	1897-45-6	1.8E+02	c**	7.4E+02	c*	3.2E+00	c	1.4E+01	c	2.2E+01	c*	5.0E-02	c*		
2.4E+02	C	6.9E-02	C	2.0E-02	X		V		1	2.5E+02		Chlorotoluene, o-	95-49-8	1.6E+03	ns	2.3E+04	ns					2.4E+02	n		2.3E-01	n	
												Chlorotoluene, p-	106-43-4	1.6E+03	ns	2.3E+04	ns			2.5E+02	n	2.4E-01	n				
												Chlorozotocin	54749-90-5	2.3E-03	c	9.6E-03	c	4.1E-05	c	1.8E-04	c	3.2E-04	c	7.1E-08	c		
				2.0E-01	I				1	0.1		Chlorpropham	101-21-3	1.3E+04	n	1.6E+05	nm			2.8E+03	n		2.6E+00	n			
				1.0E-03	A				1	0.1		Chlorpyrifos	2921-88-2	6.3E+01	n	8.2E+02	n					8.4E+00	n		1.2E-01	n	
												Chlorpyrifos Methyl	5598-13-0	6.3E+02	n	8.2E+03	n			1.2E+02	n	5.4E-01	n				
												Chlorsulfuron	64902-72-3	3.2E+03	n	4.1E+04	n			9.9E+02	n	8.3E-01	n				
				1.0E-02	I				1	0.1		Chlorthal-dimethyl	1861-32-1	6.3E+02	n	8.2E+03	n					1.2E+02	n		1.5E-01	n	
												Chlorthiophos	60238-56-4	5.1E+01	n	6.6E+02	n			2.8E+00	n	7.3E-02	n				
												Chromium(III), Insoluble Salts	16065-83-1	1.2E+05	nm	1.8E+06	nm			2.2E+04	n	4.0E+07	n				
5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I	M	0.025			Chromium(VI)	18540-29-9	3.0E-01	c	6.3E+00	c	1.2E-05	c	1.5E-04	c	3.5E-02	c	1.0E+02	6.7E-04	c	1.8E+05
				1.3E-02	I				1	0.1		Chromium, Total	7440-47-3														
								Clofentezine	74115-24-5	8.2E+02	n	1.1E+04	n					2.3E+02	n			1.4E+01	n				
		9.0E-03	P	3.0E-04	P	6.0E-06	P		1			Cobalt	7440-48-4	2.3E+01	n	3.5E+02	n	3.1E-04	c*	1.4E-03	c*	6.0E+00	n		2.7E-01	n	
												Coke Oven Emissions	8007-45-2			1.6E-03	c	2.0E-02	c								
		6.2E-04	I	4.0E-02	H			V	M	1		Copper	7440-50-8	3.1E+03	n	4.7E+04	n					8.0E+02	n	1.3E+03	2.8E+01	n	4.6E+01
				5.0E-02	I	6.0E-01	C		1	0.1		Cresol, m-	108-39-4	3.2E+03	n	4.1E+04	n	6.3E+02	n	2.6E+03	n	9.3E+02	n		7.4E-01	n	
												Cresol, o-	95-48-7	3.2E+03	n	4.1E+04	n	6.3E+02	n	2.6E+03	n	9.3E+02	n	7.5E-01	n		
												Cresol, p-	106-44-5	6.3E+03	n	8.2E+04	n	6.3E+02	n	2.6E+03	n	1.9E+03	n	1.5E+00	n		
1.9E+00	H			1.0E-01	A				1	0.1		Cresol, p-chloro-m-	59-50-7	6.3E+03	n	8.2E+04	n					1.4E+03	n		1.7E+00	n	
												Cresols	1319-77-3	6.3E+03	n	8.2E+04	n	6.3E+02	n	2.6E+03	n	1.5E+03	n	1.3E+00	n		
												Crotonaldehyde, trans-	123-73-9	3.7E-01	c	1.7E+00	c			4.0E-02	c	8.2E-06	c				
2.2E-01	C	6.3E-05	C	1.0E-01	I	4.0E-01	I	V	1	2.7E+02		Cumene	98-82-8	1.9E+03	ns	9.9E+03	ns	4.2E+02	n	1.8E+03	n	4.5E+02	n		7.4E-01	n	
8.4E-01	H			2.0E-03	H				1	0.1		Cupferron	135-20-6	2.5E+00	c	1.0E+01	c	4.5E-02	c	1.9E-01	c	3.5E-01	c		6.1E-04	c	
												Cyanazine	21725-46-2	6.5E-01	c	2.7E+00	c			8.8E-02	c	4.1E-05	c				
				1.0E-03	I				1			Cyanides															
												~Calcium Cyanide	592-01-8	7.8E+01	n	1.2E+03	n			2.0E+01	n			n			
												~Copper Cyanide	544-92-3	3.9E+02	n	5.8E+03	n			1.0E+02	n			n			
		6.0E-04	I	8.0E-04	S	V			1	9.7E+05		~Cyanide (CN-)	57-12-5	2.7E+00	n	1.2E+01	n	8.3E-01	n	3.5E+00	n	1.5E+00	n	2.0E+02	1.5E-02	n	2.0E+00
												~Cyanogen	460-19-5	7.8E+01	n	1.2E+03	n			2.0E+01	n			n			
												~Cyanogen Bromide	506-68-3	7.0E+03	n	1.1E+05	nm			1.8E+03	n			n			
		5.0E-02	I		V				1			~Cyanogen Chloride	506-77-4	3.9E+03	n	5.8E+04	n					1.0E+03	n			n	
												~Hydrogen Cyanide	74-90-8	2.3E+01	n	1.5E+02	n	8.3E-01	n	3.5E+00	n	1.5E+00	n		1.5E-02	n	
												~Potassium Cyanide	151-50-8	1.6E+02	n	2.3E+03	n			4.0E+01	n			n			

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)																												
Toxicity and Chemical-specific Information												Contaminant				Screening Levels										Protection of Ground Water SSLs		
SFO (mg/kg-day) ⁻¹	k e y	IUR (ug/m ³) ⁻¹	k e y	RfD _o (mg/kg-day)	k e y	RfC _i (mg/m ³)	k e y	v o l u t a g e n	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m ³)	key	Industrial Air (ug/m ³)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)	
				5.0E-03	I				0.04			~Potassium Silver Cyanide	506-61-6	3.9E+02	n	5.8E+03	n					8.2E+01	n			n		
				1.0E-01	I				0.04			~Silver Cyanide	506-64-9	7.8E+03	n	1.2E+05	nm					1.8E+03	n			n		
				1.0E-03	I				1			~Sodium Cyanide	143-33-9	7.8E+01	n	1.2E+03	n					2.0E+01	n	2.0E+02		n		
				2.0E-04	P				1			~Thiocyanates	NA	1.6E+01	n	2.3E+02	n					4.0E+00	n			n		
				2.0E-04	X			V	1			~Thiocyanic Acid	463-56-9	1.6E+01	n	2.3E+02	n					4.0E+00	n			n		
				5.0E-02	I				1			~Zinc Cyanide	557-21-1	3.9E+03	n	5.8E+04	n					1.0E+03	n			n		
2.3E-02	H					6.0E+00	I	V		1		1.2E+02	Cyclohexane	110-82-7	6.5E+03	ns	2.7E+04	ns	6.3E+03	n	2.6E+04	n	1.3E+04	n		1.3E+01	n	
									1	0.1			Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	2.4E+01	c	1.0E+02	c					2.4E+00	c		1.4E-02	c	
						5.0E+00	I	7.0E-01	P	V	1		5.1E+03	Cyclohexanone	108-94-1	2.8E+04	ns	1.3E+05	nms	7.3E+02	n	3.1E+03	n	1.4E+03	n		3.4E-01	n
				5.0E-03	P	1.0E+00	X	V		1		2.8E+02	Cyclohexene	110-83-8	3.1E+02	ns	3.1E+03	ns	1.0E+03	n	4.4E+03	n	7.0E+01	n		4.6E-02	n	
				2.0E-01	I			V		1		2.9E+05	Cyclohexylamine	108-91-8	1.6E+04	n	2.3E+05	nm					3.8E+03	n		1.0E+00	n	
				2.5E-02	I				1	0.1			Cyfluthrin	68359-37-5	1.6E+03	n	2.1E+04	n					1.2E+02	n		3.1E+01	n	
				5.0E-03	I				1	0.1			Cyhalothrin	68085-85-8	3.2E+02	n	4.1E+03	n					1.0E+02	n		6.8E+01	n	
				1.0E-02	I				1	0.1			Cypermethrin	52315-07-8	6.3E+02	n	8.2E+03	n					2.0E+02	n		3.2E+01	n	
				7.5E-03	I				1	0.1			Cyromazine	66215-27-8	4.7E+02	n	6.2E+03	n					1.5E+02	n		3.8E-02	n	
2.4E-01	I	6.9E-05	C						1	0.1			DDD	72-54-8	2.3E+00	c	9.6E+00	c	4.1E-02	c	1.8E-01	c	3.2E-02	c		7.5E-03	c	
3.4E-01	I	9.7E-05	C					V	1				DDE, p,p'-	72-55-9	2.0E+00	c	9.3E+00	c	2.9E-02	c	1.3E-01	c	4.6E-02	c		1.1E-02	c	
3.4E-01	I	9.7E-05	I	5.0E-04	I				1	0.03			DDT	50-29-3	1.9E+00	c*	8.5E+00	c*	2.9E-02	c	1.3E-01	c	2.3E-01	c*		7.7E-02	c*	
				3.0E-02	I				1	0.1			Dalapon	75-99-0	1.9E+03	n	2.5E+04	n					6.0E+02	n	2.0E+02	1.2E-01	n	4.1E-02
1.8E-02	C	5.1E-06	C	1.5E-01	I				1	0.1			Daminozide	1596-84-5	3.0E+01	c	1.3E+02	c	5.5E-01	c	2.4E+00	c	4.3E+00	c		9.5E-04	c	
7.0E-04	I			7.0E-03	I				1	0.1			Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	4.4E+02	n	3.3E+03	c**					1.1E+02	c**		6.2E+01	c**	
				4.0E-05	I				1	0.1			Demeton	8065-48-3	2.5E+00	n	3.3E+01	n					4.2E-01	n			n	
1.2E-03	I			6.0E-01	I				1	0.1			Di(2-ethylhexyl)adipate	103-23-1	4.5E+02	c*	1.9E+03	c					6.5E+01	c	4.0E+02	4.7E+00	c	2.9E+01
6.1E-02	H								1	0.1			Diallate	2303-16-4	8.9E+00	c	3.8E+01	c					5.4E-01	c		8.0E-04	c	
				7.0E-04	A				1	0.1			Diazinon	333-41-5	4.4E+01	n	5.7E+02	n					1.0E+01	n		6.5E-02	n	
8.0E-01	P	6.0E-03	P	1.0E-02	X			V	1				Dibenzothiophene	132-65-0	7.8E+02	n	1.2E+04	n					6.5E+01	n		1.2E+00	n	
				2.0E-04	P	2.0E-04	I	V	M	1		9.8E+02	Dibromo-3-chloropropane, 1,2-	96-12-8	5.3E-03	c	6.4E-02	c	1.7E-04	c	2.0E-03	c	3.3E-04	c	2.0E-01	1.4E-07	c	8.6E-05
				4.0E-04	X			V	1			1.6E+02	Dibromobenzene, 1,3-	108-36-1	3.1E+01	n	4.7E+02	ns					5.3E+00	n		5.1E-03	n	
				1.0E-02	I			V	1				Dibromobenzene, 1,4-	106-37-6	7.8E+02	n	1.2E+04	n					1.3E+02	n		1.2E-01	n	
8.4E-02	I			2.0E-02	I			V	1			8.0E+02	Dibromochloromethane	124-48-1	8.3E+00	c	3.9E+01	c					8.7E-01	c	8.0E+01(F)	2.3E-04	c	2.1E-02
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V	1			1.3E+03	Dibromoethane, 1,2-	106-93-4	3.6E-02	c	1.6E-01	c	4.7E-03	c	2.0E-02	c	7.5E-03	c	5.0E-02	2.1E-06	c	1.4E-05
						4.0E-03	X	V	1			2.8E+03	Dibromomethane (Methylene Bromide)	74-95-3	2.4E+01	n	9.9E+01	n	4.2E+00	n	1.8E+01	n	8.3E+00	n		2.1E-03	n	
				3.0E-04	P				1	0.1			Dibutyltin Compounds	NA	1.9E+01	n	2.5E+02	n					6.0E+00	n			n	
				3.0E-02	I				1	0.1			Dicamba	1918-00-9	1.9E+03	n	2.5E+04	n					5.7E+02	n		1.5E-01	n	
		4.2E-03	P					V	1			5.5E+02	Dichloro-2-butene, 1,4-	764-41-0	2.1E-03	c	9.4E-03	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.6E-07	c	
		4.2E-03	P					V	1			5.2E+02	Dichloro-2-butene, cis-1,4-	1476-11-5	7.4E-03	c	3.2E-02	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.2E-07	c	
5.0E-02	I		P					V	1			7.6E+02	Dichloro-2-butene, trans-1,4-	110-57-6	7.4E-03	c	3.2E-02	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.2E-07	c	
				4.0E-03	I				1	0.1			79-43-6	1.1E+01	c*	4.6E+01	c*					1.5E+00	c*	6.0E+01	3.1E-04	c*	1.2E-02	
				9.0E-02	I	2.0E-01	H	V	1		3.8E+02	Dichlorobenzene, 1,2-	95-50-1	1.8E+03	ns	9.3E+03	ns	2.1E+02	n	8.8E+02	n	3.0E+02	n	6.0E+02	3.0E-01	n	5.8E-01	
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V	1				Dichlorobenzene, 1,4-	106-46-7	2.6E+00	c	1.1E+01	c	2.6E-01	c	1.1E+00	c	4.8E-01	c	7.5E+01	4.6E-04	c	7.2E-02
4.5E-01	I	3.4E-04	C						1	0.1			Dichlorobenzidine, 3,3'-	91-94-1	1.2E+00	c	5.1E+00	c	8.3E-03	c	3.6E-02	c	1.3E-01	c		8.2E-04	c	
				9.0E-03	X				1	0.1			Dichlorobenzophenone, 4,4'-	90-98-2	5.7E+02	n	7.4E+03	n					7.8E+01	n		4.7E-01	n	
				2.0E-01	I	1.0E-01	X	V	1			8.5E+02	Dichlorodifluoromethane	75-71-8	8.7E+01	n	3.7E+02	n	1.0E+02	n	4.4E+02	n	2.0E+02	n		3.0E-01	n	
5.7E-03	C	1.6E-06	C	2.0E-01	P			V	1			1.7E+03	Dichloroethane, 1,1-	75-34-3	3.6E+00	c	1.6E+01	c	1.8E+00	c	7.7E+00	c	2.8E+00	c		7.8E-04	c	
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V	1			3.0E+03	Dichloroethane, 1,2-	107-06-2	4.6E-01	c*	2.0E+00	c*	1.1E-01	c*	4.7E-01	c*	1.7E-01	c*	5.0E+00	4.8E-05	c*	1.4E-03
				5.0E-02	I	2.0E-01	I	V	1			1.2E+03	Dichloroethylene, 1,1-	75-35-4	2.3E+02	n	1.0E+03	n	2.1E+02	n	8.8E+02	n	2.8E+02	n	7.0E+00	1.0E-01	n	2.5E-03
				2.0E-03	I			V	1			2.4E+03	Dichloroethylene, 1,2-cis-	156-59-2	1.6E+02	n	2.3E+03	n					3.6E+01	n	7.0E+01	1.1E-02	n	2.1E-02
				2.0E-02	I			V	1			1.9E+03	Dichloroethylene, 1,2-trans-	156-60-5	1.6E+03	n	2.3E+04	ns					3.6E+02	n	1.0E+02	1.1E-01	n	3.1E-02
				3.0E-03	I				1	0.1			Dichlorophenol, 2,4-	120-83-2	1.9E+02	n	2.5E+03	n					4.6E+01	n		5.4E-02	n	
				1.0E-02	I				1	0.05			Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	7.0E+02	n	9.6E+03	n					1.7E+02	n	7.0E+01	4.5E-02	n	1.8E-02
				8.0E-03	I				1	0.1			Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	5.1E+02	n	6.6E+03	n					1.2E+02	n		1.1E-01	n	
3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V	1			1.4E+03	Dichloropropane, 1,2-	78-87-5	1.0E+00	c*	4.4E+00	c*	2.8E-01	c*	1.2E+00	c*	4.4E-01	c*	5.0E+00	1.5E-04	c*	1.7E-03
				2.0E-02	P		V	1		1.5E+03	Dichloropropane, 1,3-	142-28-9	1.6E+03	ns	2.3E+04	ns					3.7E+02	n		1.3E-01	n			
				3.0E-03	I			1	0.1			616-23-9	1.9E+02	n	2.5E+03	n					5.9E+01	n		1.3E-02	n			
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V	1			1.6E+03	Dichloropropene, 1,3-	542-75-6	1.8E+00	c*	8.2E+00	c*	7.0E-01	c*	3.1E+00	c*	4.7E-01	c*		1.7E-04	c*	
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I		1	0.1			Dichlorvos	62-73-7	1.9E+00	c*	7.9E+00	c*	3.4E-02	c*	1.5E-01	c*	2.6E-01	c*		8.1E-05	c*	
				1.0E-04	I				1	0.1			Dicrotophos	141-66-2	6.3E+00	n	8.2E+01	n					2.0E+00	n		4.7E-04	n	
1.6E+01	I	4.6E-03	I	8.0E-02	P	3.0E-04	X	V	1			2																

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Toxicity and Chemical-specific Information													Contaminant				Screening Levels										Protection of Ground Water SSLs														
SFO (mg/kg-day) ⁻¹	k e y	IUR (ug/m ³) ⁻¹	k e y	RfD _o (mg/kg-day)	k e y	RfC _i (mg/m ³)	k e y	v o l	muta- gen	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m ³)	key	Industrial Air (ug/m ³)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)													
				2.0E-03	P	2.0E-04	P			1	0.1		Diethanolamine	111-42-2	1.3E+02	n	1.6E+03	n	2.1E-01	n	8.8E-01	n	4.0E+01	n		8.1E-03	n														
				3.0E-02	P	1.0E-04	P						Diethylene Glycol Monobutyl Ether	112-34-5	1.9E+03	n	2.4E+04	n	1.0E-01	n	4.4E-01	n	6.0E+02	n		1.3E-01	n														
				6.0E-02	P	3.0E-04	P						Diethylene Glycol Monoethyl Ether	111-90-0	3.8E+03	n	4.8E+04	n	3.1E-01	n	1.3E+00	n	1.2E+03	n		2.4E-01	n														
3.5E+02	C	1.0E-01	C	1.0E-03	P		V			1	0.1	1.1E+05	Diethylformamide	617-84-5	7.8E+01	n	1.2E+03	n	2.8E-05	c	1.2E-04	c	2.0E+01	n		4.1E-03	n														
				8.0E-02	I								Diethylstilbestrol	56-53-1	1.6E-03	c	6.6E-03	c					5.1E-05	c		2.8E-05	c														
													Difenzoquat	43222-48-6	5.1E+03	n	6.6E+04	n								1.6E+03	n														
4.4E-02	C	1.3E-05	C	2.0E-02	I					1	0.1	1.4E+03	Diflubenzuron	35367-38-5	1.3E+03	n	1.6E+04	n					2.9E+02	n		3.3E-01	n														
													4.0E+01	I	V	1		2.8E+01					n																		
													V	1		1.9E-04	c																								
				8.0E-02	I	7.0E-01	P	V	1		2.3E+03	Diisopropyl Ether	108-20-3	2.2E+03	n	9.4E+03	ns	7.3E+02	n	3.1E+03	n	1.5E+03	n		3.7E-01	n															
						V	1		5.3E+02	Diisopropyl Methylphosphonate	1445-75-6	6.3E+03	ns	9.3E+04	ns			1.6E+03	n	4.5E-01	n																				
				2.0E-02	I		1	0.1	55290-64-7	1.3E+03	n	1.6E+04	n			4.0E+02	n	8.8E-02	n																						
1.6E+00	P			2.0E-04	I					1	0.1		Dimethoate	60-51-5	1.3E+01	n	1.6E+02	n					4.0E+00	n		9.0E-04	n														
													Dimethoxybenzidine, 3,3'-	119-90-4	3.4E-01	c	1.4E+00	c					4.7E-02	c		5.8E-05	c														
				1.7E-03	P								6.0E-02	P	1	0.1	Dimethyl methylphosphonate	756-79-6					3.2E+02	c*		1.4E+03	c*		4.6E+01	c*	9.6E-03	c*									
4.6E+00	C	1.3E-03	C							1	0.1		Dimethylamino azobenzene [p-]	60-11-7	1.2E-01	c	5.0E-01	c	2.2E-03	c	9.4E-03	c	5.0E-03	c		2.1E-05	c														
													5.8E-01	H	2.0E-03	X	Dimethylaniline HCl, 2,4-	21436-96-4	9.4E-01	c	4.0E+00	c	1.3E-01	c		1.2E-04	c														
													2.0E-01	P			Dimethylaniline, 2,4-	95-68-1	2.7E+00	c*	1.1E+01	c	3.7E-01	c		2.1E-04	c														
1.1E+01	P			2.0E-03	I		V	1		8.3E+02	Dimethylaniline, N,N-	121-69-7	1.6E+02	n	2.3E+03	ns					3.5E+01	n		1.3E-02	n																
						1	0.1	Dimethylbenzidine, 3,3'-	119-93-7	4.9E-02	c	2.1E-01	c	6.5E-03	c	4.3E-05					c																				
				1.0E-01	P	3.0E-02	I	V	1	1.1E+05	Dimethylformamide	68-12-2	2.6E+03	n	1.5E+04	n					3.1E+01	n		1.3E+02	n		6.1E+01	n	1.2E-02	n											
5.5E+02	C	1.6E-01	C	1.0E-04	X	2.0E-06	X	V	1		1.7E+05	Dimethylhydrazine, 1,1-	57-14-7	5.7E-02	n	2.4E-01	n	2.1E-03	n	8.8E-03	n	4.2E-03	n		9.3E-07	n															
						V	1	1.9E+05	Dimethylhydrazine, 1,2-	540-73-8	8.8E-04	c	4.1E-03	c	1.8E-05	c	7.7E-05	c	2.8E-05	c	6.5E-09	c																			
				2.0E-02	I		1	0.1	105-67-9	1.3E+03	n	1.6E+04	n			3.6E+02	n	4.2E-01	n																						
4.5E-02	C	1.3E-05	C	6.0E-04	I					1	0.1		Dimethylphenol, 2,6-	576-26-1	3.8E+01	n	4.9E+02	n					1.1E+01	n		1.3E-02	n														
				1.0E-03	I									1	0.1	Dimethylphenol, 3,4-	95-65-8	6.3E+01					n	8.2E+02		n	1.8E+01		n	2.1E-02	n										
													V	1	1.3E+03	Dimethylvinylchloride	513-37-1	2.0E-01					c	8.9E-01		c	2.2E-01		c	9.4E-01	c	3.3E-01	c	2.4E-04	c						
				8.0E-05	X					1	0.1		Dinitro-o-cresol, 4,6-	534-52-1	5.1E+00	n	6.6E+01	n					1.5E+00	n		2.6E-03	n														
				2.0E-03	I									1	0.1	Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	1.3E+02					n	1.6E+03		n	2.3E+01		n	7.7E-01	n										
				1.0E-04	P									1	0.1	Dinitrobenzene, 1,2-	528-29-0	6.3E+00					n	8.2E+01		n	1.9E+00		n	1.8E-03	n										
				1.0E-04	I					1	0.1		Dinitrobenzene, 1,3-	99-65-0	6.3E+00	n	8.2E+01	n					2.0E+00	n		1.8E-03	n														
				1.0E-04	P									1	0.1	Dinitrobenzene, 1,4-	100-25-4	6.3E+00					n	8.2E+01		n	2.0E+00		n	1.8E-03	n										
				2.0E-03	I									1	0.1	Dinitrophenol, 2,4-	51-28-5	1.3E+02					n	1.6E+03		n	3.9E+01		n	4.4E-02	n										
6.8E-01	I	8.9E-05	C	2.0E-03	I					1	0.1		Dinitrotoluene Mixture, 2,4/2,6-	NA	8.0E-01	c	3.4E+00	c					1.1E-01	c		1.5E-04	c														
													3.1E-01	C	3.0E-04	X	1	0.102					Dinitrotoluene, 2,4-	121-14-2		1.7E+00	c*		7.4E+00	c	3.2E-02	c	1.4E-01	c	2.4E-01	c	3.2E-04	c			
													1.5E+00	P	1	0.099	Dinitrotoluene, 2,6-	606-20-2					3.6E-01	c*		1.5E+00	c		4.9E-02	c	6.7E-05	c									
4.5E-01	X			2.0E-03	S					1	0.006		Dinitrotoluene, 2-Amino-4,6-	35572-78-2	1.5E+02	n	2.3E+03	n					3.9E+01	n		3.0E-02	n														
				2.0E-03	S									1	0.009	Dinitrotoluene, 4-Amino-2,6-	19406-51-0	1.5E+02					n	2.3E+03		n	3.9E+01		n	3.0E-02	n										
				9.0E-04	X									1	0.1	Dinitrotoluene, Technical grade	25321-14-6	1.2E+00					c*	5.1E+00		c	1.0E-01		c	1.4E-04	c										
1.0E-01	I	5.0E-06	I	1.0E-03	I					1	0.1	1.2E+05	Dinoseb	88-85-7	6.3E+01	n	8.2E+02	n					1.5E+01	n	7.0E+00	1.3E-01	n	6.2E-02													
				3.0E-02	I								3.0E-02	I	V	1		Dioxane, 1,4-					123-91-1	5.3E+00		c	2.4E+01		c	5.6E-01	c*	2.5E+00	c*	4.6E-01	c	9.4E-05	c				
																		Dioxins																							
6.2E+03	I	1.3E+00	I							1	0.03		~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.0E-04	c	4.7E-04	c	2.2E-06	c	9.4E-06	c	1.3E-05	c		1.7E-05	c														
													1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V	1	0.03	~TCDD, 2,3,7,8-		1746-01-6	4.8E-06		c*	2.2E-05	c*	7.4E-08	c	3.2E-07	c	1.2E-07	c	3.0E-05	5.9E-08	c	1.5E-05
													3.0E-02	I		1	0.1	Diphenamid	957-51-7	1.9E+03	n	2.5E+04	n				5.3E+02		n							5.2E+00	n				
8.0E-01	I	2.2E-04	I	8.0E-04	X					1	0.1		Diphenyl Sulfone	127-63-9	5.1E+01	n	6.6E+02	n					1.5E+01	n		3.6E-02	n														
				2.5E-02	I									1	0.1	Diphenylamine	122-39-4	1.6E+03					n	2.1E+04		n				3.1E+02	n	5.8E-01	n								
														1	0.1	Diphenylhydrazine, 1,2-	122-66-7	6.8E-01					c	2.9E+00		c	1.3E-02		c	5.6E-02	c	7.8E-02	c	2.5E-04	c						
7.1E+00	C	1.4E-01	C	2.2E-03	I					1	0.1		Diquat	85-00-7	1.4E+02	n	1.8E+03	n					4.4E+01	n	2.0E+01	8.3E-01	n	3.7E-01													
													Direct Black 38	1937-37-7	7.6E-02	c	3.2E-01	c					2.0E-05	c		8.8E-05	c		1.1E-02	c	5.3E+00	c									
				7.4E+00	C								1.4E-01	C		1	0.1	Direct Blue 6					2602-46-2	7.3E-02		c	3.1E-01		c	2.0E-05	c	8.8E-05	c	1.1E-02	c	1.7E+01	c				
6.7E+00	C	1.4E-01	C							1	0.1		Direct Brown 95	16071-86-6	8.1E-02	c	3.4E-01	c	2.0E-05	c	8.8E-05	c	1.2E-02	c			c														
													4.0E-05	I		V	Disulfoton	298-04-4	2.5E+00	n	3.3E+01	n				5.0E-01	n		9.4E-04	n											
													1.0E-02	I			Dithiane, 1,4-	505-29-3	7.8E+02	n	1.2E+04	n				2.0E+02	n		9.7E-02	n											
				2.0E-03	I					1	0.1		Diuron	330-54-1	1.3E+02	n	1.6E+03	n					3.6E+01	n		1.5E-02	n														
				4.0E-03	I									1	0.1	Dodine	2439-10-3	2.5E+02					n	3.3E+03		n				8.0E+01	n	4.1E-01	n								
				2.5E-02	I									1		EPTC	759-94-4	2.0E+03					n	2.9E+04		n				3.8E+02	n	2.0E-01	n								
				6.0E-03	I					1			Endosulfan	115-29-7	4.7E+02	n	7.0E+03	n					1.0E+02	n	1.0E+02	1.4E+00	n														
				2.0E-02	I									1	0.1	Endothall	145-73-3	1.3E+03					n	1.6E+04		n				3.8E+02	n	9.1E-02	n	2.4E-02							
				3.0E-04	I									1	0.1	Endrin	72-20-8	1.9E+01					n	2.5E+02		n				2.3E+00	n	2.0E+00	n	9.2E-02	n	8.1E-02					
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		1		1.1E+04	Epichlorohydrin	106-89-8	1.9E+01	n	8.2E+01	n	1.0E+00	n	4.4E+00	n	2.0E+00	n		4.5E-04	n														

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)																																							
Toxicity and Chemical-specific Information													Contaminant					Screening Levels										Protection of Ground Water SSLs											
SFO (mg/kg-day) ⁻¹	k e y	IUR (ug/m ³) ⁻¹	k e y	RfD _o (mg/kg-day)	k e y	RfC _i (mg/m ³)	k e y	v o l u t a b i l	muta- gen	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m ³)	key	Industrial Air (ug/m ³)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)											
				2.0E-02	I	V				1	0.1	1.5E+04	Epoxybutane, 1,2-	106-88-7	1.6E+02	n	6.7E+02	n	2.1E+01	n	8.8E+01	n	4.2E+01	n		9.2E-03	n												
				4.0E-02									P																										
				5.0E-03	I					1	0.1		Ethephon	16672-87-0	3.2E+02	n	4.1E+03	n					1.0E+02	n		2.1E-02	n												
				5.0E-04									I																										
				1.0E-01									P	6.0E-02	P	V																							
				9.0E-02	P	2.0E-01	I	V		1		1.1E+05	Ethoxyethanol, 2-	110-80-5	5.2E+03	n	4.7E+04	n	2.1E+02	n	8.8E+02	n	3.4E+02	n		6.8E-02	n												
				9.0E-01									I	7.0E-02	P	V																							
				5.0E-03									P	8.0E-03	P	V																							
				1.0E+01	I	V				1		2.1E+03	Ethyl Chloride (Chloroethane)	75-00-3	1.4E+04	ns	5.7E+04	ns	1.0E+04	n	4.4E+04	n	2.1E+04	n		5.9E+00	n												
				2.0E-01									I																										
				3.0E-01	P	V				1		1.0E+04	Ethyl Ether	60-29-7	1.6E+04	ns	2.3E+05	nms					3.9E+03	n		8.8E-01	n												
				1.1E+03						I																													
				1.0E-05	I					1	0.1	4.8E+02	Ethyl-p-nitrophenyl Phosphonate	2104-64-5	6.3E-01	n	8.2E+00	n					8.9E-02	n	7.0E+02	2.8E-03	n												
				1.0E-01									I	1.0E+00	I	V																							
				7.0E-02									P																										
				9.0E-02	P			V		1		1.9E+05	Ethylene Diamine	107-15-3	7.0E+03	n	1.1E+05	nm					1.8E+03	n		4.1E-01	n												
				2.0E+00									I	4.0E-01	C																								
				1.0E-01									I	1.6E+00	I																								
				3.1E-01	C	8.8E-05	C		V	1		1.2E+05	Ethylene Oxide	75-21-8	1.8E-01	c	7.9E-01	c	3.2E-02	c	1.4E-01	c	5.1E-02	c		1.1E-05	c												
				4.5E-02									C	1.3E-05	C	8.0E-05	I																						
				6.5E+01									C	1.9E-02	C																								
				3.0E+00	I					1	0.1		Ethylphthalyl Ethyl Glycolate	84-72-0	1.9E+05	nm	2.5E+06	nm					5.8E+04	n		1.3E+02	n												
				2.5E-04									I																										
				2.5E-02									I																										
				2.5E-02	I					1	0.1		Fenvalerate	51630-58-1	1.6E+03	n	2.1E+04	n					5.0E+02	n		3.2E+02	n												
				1.3E-02									I																										
				4.0E-02									C	1.3E-02	C																								
				6.0E-02	I	1.3E-02	C			1			Fluorine (Soluble Fluoride)	7782-41-4	4.7E+03	n	7.0E+04	n	1.4E+01	n	5.7E+01	n	1.2E+03	n	4.0E+03	1.8E+02	n	6.0E+02											
				8.0E-02									I																										
				2.0E-02									I																										
				7.0E-04	I					1	0.1		Flusilazole	85509-19-9	4.4E+01	n	5.7E+02	n					1.1E+01	n		1.8E+00	n												
				6.0E-02									I																										
				1.0E-02									I																										
				3.5E-03	I					1	0.1		Folpet	133-07-3	1.6E+02	c*	6.6E+02	c					2.0E+01	c*		4.7E-03	c*												
				1.9E-01									I																										
				1.3E-05	I	2.0E-01	I	9.8E-03	A	V	1		Formaldehyde	50-00-0	1.7E+01	c*	7.3E+01	c*	2.2E-01	c*	9.4E-01	c*	4.3E-01	c*		8.7E-05	c*												
				9.0E-01									P	3.0E-04	X	V																							
				3.0E+00									I																										
				1.0E-03	X			V		1	0.03		Furans																										
				1.0E-03									I																										
				9.0E-01	I	2.0E+00	I	V		1	0.03	1.7E+05	~Tetrahydrofuran	109-99-9	1.8E+04	n	9.6E+04	n	2.1E+03	n	8.8E+03	n	3.4E+03	n		7.5E-01	n												
				3.8E+00									H																										
				3.0E-03	I	5.0E-02	H	V		1		1.0E+04	Furazolidone	67-45-8	1.4E-01	c	6.0E-01	c					2.0E-02	c		3.9E-05	c												
				1.5E+00	C	4.3E-04	C			1	0.1		Furium	531-82-8	3.6E-01	c	1.5E+00	c	6.5E-03	c	2.9E-02	c	5.1E-02	c		6.8E-05	c												
				3.0E-02									I	8.6E-06	C																								
				4.0E-04	I					1	0.1		Glufosinate, Ammonium	77182-82-2	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.8E-03	n												
				8.0E-05	C					1	0.1		Glutaraldehyde	111-30-8	1.1E+05	nm	4.8E+05	nm	8.3E-02	n	3.5E-01	n																	
				4.0E-04									I	1.0E-03	H	V																							
				1.0E-01									I																										
				1.0E-02	X			V		1			Guanidine	113-00-8	7.8E+02	n	1.2E+04	n					2.0E+02	n		4.5E-02	n												
				2.0E-02									P																										
				5.0E-05									I																										
				4.5E+00	I	1.3E-03	I	5.0E-04	I	V	1		Heptachlor	76-44-8	1.3E-01	c	6.3E-01	c	2.2E-03	c	9.4E-03	c	1.4E-03	c	4.0E-01	1.2E-04	c	3.3E-02											
				9.1E+00									I	2.6E-03	I	1.3E-05	I																						
				2.0E-04	I					1	0.1		Hexachlorobenzene	118-74-1	2.1E-01	c	9.6E-01	c	6.1E-03	c	2.7E-02	c	9.8E-03	c	1.0E+00	1.2E-04	c	1.3E-02											
				7.8E-02									I	2.2E-05	I	1.0E-03	P																						

Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) November 2015

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)																													
Toxicity and Chemical-specific Information													Contaminant				Screening Levels										Protection of Ground Water SSLs		
SFO (mg/kg-day) ⁻¹	k _e y	IUR (ug/m ³) ⁻¹	k _e y	RfD _o (mg/kg-day)	k _e y	RfC _i (mg/m ³)	k _e y	v l	muta- gen	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m ³)	key	Industrial Air (ug/m ³)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)	
1.1E+00	C	3.1E-04	C	3.0E-04	I					1	0.04		Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	5.7E-01	c*	2.5E+00	c	9.1E-03	c	4.0E-02	c	4.2E-02	c*	2.0E-01	2.4E-04	c*	1.2E-03	
1.8E+00	I	5.1E-04	I							1	0.1		Hexachlorocyclohexane, Technical	608-73-1	3.0E-01	c	1.3E+00	c	5.5E-03	c	2.4E-02	c	2.5E-02	c		1.5E-04	c		
				6.0E-03	I	2.0E-04	I	V		1		1.6E+01	Hexachlorocyclopentadiene	77-47-4	1.8E+00	n	7.5E+00	n	2.1E-01	n	8.8E-01	n	4.1E-01	n	5.0E+01	1.3E-03	n	1.6E-01	
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V		1			Hexachloroethane	67-72-1	1.8E+00	c*	8.0E+00	c*	2.6E-01	c	1.1E+00	c	3.3E-01	c*		2.0E-04	c*		
				3.0E-04	I					1	0.1		Hexachlorophene	70-30-4	1.9E+01	n	2.5E+02	n					6.0E+00	n		8.0E+00	n		
1.1E-01	I			3.0E-03	I					1	0.015		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	6.1E+00	c*	2.8E+01	c					7.0E-01	c*		2.7E-04	c*		
						1.0E-05	I	V		1		3.4E+03	Hexamethylene Diisocyanate, 1,6-	822-06-0	3.1E+00	n	1.3E+01	n	1.0E-02	n	4.4E-02	n	2.1E-02	n		2.1E-04	n		
				4.0E-04	P					1	0.1		Hexamethylphosphoramide	680-31-9	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.8E-03	n		
						7.0E-01	I	V		1		1.4E+02	Hexane, N-	110-54-3	6.1E+02	ns	2.5E+03	ns	7.3E+02	n	3.1E+03	n	1.5E+03	n		1.0E+01	n		
				2.0E+00	P					1	0.1		Hexanedioic Acid	124-04-9	1.3E+05	nm	1.6E+06	nm					4.0E+04	n		9.9E+00	n		
				5.0E-03	I	3.0E-02	I	V		1		3.3E+03	Hexanone, 2-	591-78-6	2.0E+02	n	1.3E+03	n	3.1E+01	n	1.3E+02	n	3.8E+01	n		8.8E-03	n		
				3.3E-02	I					1	0.1		Hexazinone	51235-04-2	2.1E+03	n	2.7E+04	n					6.4E+02	n		3.0E-01	n		
				2.5E-02	I					1	0.1		Hexythiazox	78587-05-0	1.6E+03	n	2.1E+04	n					1.1E+02	n		5.0E-01	n		
				3.0E-04	I					1	0.1		Hydramethylnon	67485-29-4	1.9E+01	n	2.5E+02	n					5.9E+00	n		2.1E+03	n		
3.0E+00	I	4.9E-03	I			3.0E-05	P	V		1			Hydrazine	302-01-2	2.3E-01	c	1.1E+00	c	5.7E-04	c*	2.5E-03	c*	1.1E-03	c*			c*		
3.0E+00	I	4.9E-03	I							1			Hydrazine Sulfate	10034-93-2	2.3E-01	c	1.1E+00	c	5.7E-04	c	2.5E-03	c	2.6E-02	c			c		
						2.0E-02	I	V		1			Hydrogen Chloride	7647-01-0	2.8E+07	nm	1.2E+08	nm	2.1E+01	n	8.8E+01	n	4.2E+01	n			n		
				4.0E-02	C	1.4E-02	C	V		1			Hydrogen Fluoride	7664-39-3	3.1E+03	n	4.7E+04	n	1.5E+01	n	6.1E+01	n	2.8E+01	n			n		
						2.0E-03	I	V		1			Hydrogen Sulfide	7783-06-4	2.8E+06	nm	1.2E+07	nm	2.1E+00	n	8.8E+00	n	4.2E+00	n			n		
6.0E-02	P			4.0E-02	P					1	0.1		Hydroquinone	123-31-9	9.0E+00	c	3.8E+01	c					1.3E+00	c		8.7E-04	c		
				1.3E-02	I					1	0.1		Imazalil	35554-44-0	8.2E+02	n	1.1E+04	n					1.9E+02	n		3.2E+00	n		
				2.5E-01	I					1	0.1		Imazaquin	81335-37-7	1.6E+04	n	2.1E+05	nm					4.9E+03	n		2.4E+01	n		
				2.5E-01	I					1	0.1		Imazethapyr	81335-77-5	1.6E+04	n	2.1E+05	nm					4.7E+03	n		4.1E+00	n		
				1.0E-02	A					1			Iodine	7553-56-2	7.8E+02	n	1.2E+04	n					2.0E+02	n		1.2E+01	n		
				4.0E-02	I					1	0.1		Iprodione	36734-19-7	2.5E+03	n	3.3E+04	n					7.4E+02	n		2.2E-01	n		
				7.0E-01	P					1			Iron	7439-89-6	5.5E+04	n	8.2E+05	nm					1.4E+04	n		3.5E+02	n		
				3.0E-01	I			V		1		1.0E+04	Isobutyl Alcohol	78-83-1	2.3E+04	ns	3.5E+05	nms					5.9E+03	n		1.2E+00	n		
9.5E-04	I			2.0E-01	I	2.0E+00	C			1	0.1		Isophorone	78-59-1	5.7E+02	c*	2.4E+03	c*	2.1E+03	n	8.8E+03	n	7.8E+01	c*		2.6E-02	c*		
				1.5E-02	I			V		1			Isopropalin	33820-53-0	1.2E+03	n	1.8E+04	n					4.0E+01	n		9.2E-01	n		
				2.0E+00	P	2.0E-01	P	V		1		1.1E+05	Isopropanol	67-63-0	5.6E+03	n	2.4E+04	n	2.1E+02	n	8.8E+02	n	4.1E+02	n		8.4E-02	n		
				1.0E-01	I					1	0.1		Isopropyl Methyl Phosphonic Acid	1832-54-8	6.3E+03	n	8.2E+04	n					2.0E+03	n		4.3E-01	n		
				5.0E-02	I					1	0.1		Isoxaben	82558-50-7	3.2E+03	n	4.1E+04	n					7.3E+02	n		2.0E+00	n		
						3.0E-01	A	V		1			JP-7	NA	4.3E+08	nm	1.8E+09	nm	3.1E+02	n	1.3E+03	n	6.3E+02	n			n		
				2.0E-03	I					1	0.1		Lactofen	77501-63-4	1.3E+02	n	1.6E+03	n					2.5E+01	n		1.2E+00	n		
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			Lead Compounds																
8.5E-03	C	1.2E-05	C							1			~Lead Chromate	7758-97-6	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c		
										1			~Lead Phosphate	7446-27-7															

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SFO (mg/kg-day) ⁻¹	^k _e y	IUR (ug/m ³) ⁻¹	^k _e y	RfD _o (mg/kg-day)	^k _e y	RfC _i (mg/m ³)	^k _e y	o l	muta- gen	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	^k _e y	Industrial Soil (mg/kg)	^k _e y	Resident Air (ug/m ³)	^k _e y	Industrial Air (ug/m ³)	^k _e y	Tapwater (ug/L)	^k _e y	MCL (ug/L)	Risk-based SSL (mg/kg)	^k _e y	MCL-based SSL (mg/kg)	
				8.0E-05	I					1	0.1		~Phenylmercuric Acetate	62-38-4	5.1E+00	n	6.6E+01	n					1.6E+00	n		5.0E-04	n		
				3.0E-05	I				V	1			Merphos	150-50-5	2.3E+00	n	3.5E+01	n					6.0E-01	n		5.9E-02	n		
				3.0E-05	I					1	0.1		Merphos Oxide	78-48-8	1.9E+00	n	2.5E+01	n					8.5E-02	n		4.2E-04	n		
				6.0E-02	I					1	0.1		Metalaxyl	57837-19-1	3.8E+03	n	4.9E+04	n					1.2E+03	n		3.3E-01	n		
				1.0E-04	I	3.0E-02	P	V		1		4.6E+03	Methacrylonitrile	126-98-7	7.5E+00	n	1.0E+02	n	3.1E+01	n	1.3E+02	n	1.9E+00	n		4.3E-04	n		
				5.0E-05	I					1	0.1		Methamidophos	10265-92-6	3.2E+00	n	4.1E+01	n					1.0E+00	n		2.1E-04	n		
				2.0E+00	I	2.0E+01	I	V		1		1.1E+05	Methanol	67-56-1	1.2E+05	nms	1.2E+06	nms	2.1E+04	n	8.8E+04	n	2.0E+04	n		4.1E+00	n		
				1.0E-03	I					1	0.1		Methidathion	950-37-8	6.3E+01	n	8.2E+02	n					1.9E+01	n		4.7E-03	n		
				2.5E-02	I					1	0.1		Methomyl	16752-77-5	1.6E+03	n	2.1E+04	n					5.0E+02	n		1.1E-01	n		
4.9E-02	C	1.4E-05	C							1	0.1		Methoxy-5-nitroaniline, 2-	99-59-2	1.1E+01	c	4.7E+01	c	2.0E-01	c	8.8E-01	c	1.5E+00	c	4.0E+01	5.3E-04	c		
				5.0E-03	I					1	0.1		Methoxychlor	72-43-5	3.2E+02	n	4.1E+03	n					3.7E+01	n		2.0E+00	n	2.2E+00	
				8.0E-03	P	1.0E-03	P	V		1		1.2E+05	Methoxyethanol Acetate, 2-	110-49-6	1.1E+02	n	5.1E+02	n	1.0E+00	n	4.4E+00	n	2.1E+00	n		4.2E-04	n		
				5.0E-03	P	2.0E-02	I	V		1		1.1E+05	Methoxyethanol, 2-	109-86-4	3.3E+02	n	3.5E+03	n	2.1E+01	n	8.8E+01	n	2.9E+01	n		5.9E-03	n		
				1.0E+00	X			V		1		2.9E+04	Methyl Acetate	79-20-9	7.8E+04	ns	1.2E+06	nms					2.0E+04	n		4.1E+00	n		
						2.0E-02	P	V		1		6.8E+03	Methyl Acrylate	96-33-3	1.5E+02	n	6.1E+02	n	2.1E+01	n	8.8E+01	n	4.2E+01	n		8.9E-03	n		
				6.0E-01	I	5.0E+00	I	V		1		2.8E+04	Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.7E+04	n	1.9E+05	nms	5.2E+03	n	2.2E+04	n	5.6E+03	n		1.2E+00	n		
		1.0E-03	X	1.0E-03	P	2.0E-05	X	V		1		1.8E+05	Methyl Hydrazine	60-34-4	1.4E-01	c**	6.2E-01	c**	2.8E-03	c**	1.2E-02	c**	5.6E-03	c**		1.3E-06	c**		
						3.0E+00	I	V		1		3.4E+03	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	3.3E+04	ns	1.4E+05	nms	3.1E+03	n	1.3E+04	n	6.3E+03	n		1.4E+00	n		
						1.0E-03	C	V		1		1.0E+04	Methyl Isocyanate	624-83-9	4.6E+00	n	1.9E+01	n	1.0E+00	n	4.4E+00	n	2.1E+00	n		5.9E-04	n		
				1.4E+00	I	7.0E-01	I	V		1		2.4E+03	Methyl Methacrylate	80-62-6	4.4E+03	ns	1.9E+04	ns	7.3E+02	n	3.1E+03	n	1.4E+03	n		3.0E-01	n		
				2.5E-04	I					1	0.1		Methyl Parathion	298-00-0	1.6E+01	n	2.1E+02	n					4.5E+00	n		7.4E-03	n		
				6.0E-02	X					1	0.1		Methyl Phosphonic Acid	993-13-5	3.8E+03	n	4.9E+04	n					1.2E+03	n		2.4E-01	n		
9.9E-02	C	2.8E-05	C			6.0E-03	H	4.0E-02	H	V		3.9E+02	Methyl Styrene (Mixed Isomers)	25013-15-4	3.2E+02	n	2.6E+03	ns	4.2E+01	n	1.8E+02	n	2.3E+01	n		3.8E-02	n		
										1	0.1		Methyl methanesulfonate	66-27-3	5.5E+00	c	2.3E+01	c	1.0E-01	c	4.4E-01	c	7.9E-01	c		1.6E-04	c		
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		1		8.9E+03	Methyl tert-Butyl Ether (MTBE)	1634-04-4	4.7E+01	c	2.1E+02	c	1.1E+01	c	4.7E+01	c	1.4E+01	c		3.2E-03	c		
				3.0E-04	X					1	0.1		Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	1.9E+01	n	2.5E+02	n					6.0E+00	n		3.6E-03	n		
9.0E-03	P			2.0E-02	X					1	0.1		Methyl-5-Nitroaniline, 2-	99-55-8	6.0E+01	c*	2.6E+02	c*					8.2E+00	c*		4.6E-03	c*		
8.3E+00	C	2.4E-03	C							1	0.1		Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	6.5E-02	c	2.8E-01	c	1.2E-03	c	5.1E-03	c	9.4E-03	c		3.2E-06	c		
1.3E-01	C	3.7E-05	C							1	0.1		Methylaniline Hydrochloride, 2-	636-21-5	4.2E+00	c	1.8E+01	c	7.6E-02	c	3.3E-01	c	6.0E-01	c		2.6E-04	c		
				1.0E-02	A					1	0.1		Methylarsonic acid	124-58-3	6.3E+02	n	8.2E+03	n					2.0E+02	n			n		
				2.0E-04	X					1	0.1		Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	1.3E+01	n	1.6E+02	n					4.0E+00	n			n		
1.0E-01	X			3.0E-04	X					1	0.1		Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	5.4E+00	c**	2.3E+01	c*					7.8E-01	c**			c**		
2.2E+01	C	6.3E-03	C						M	1	0.1		Methylcholanthrene, 3-	56-49-5	5.5E-03	c	1.0E-01	c	1.6E-04	c	1.9E-03	c	1.1E-03	c		2.2E-03	c		
2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	1		3.3E+03	Methylene Chloride	75-09-2	5.7E+01	c**	1.0E+03	c**	1.0E+02	c**	1.2E+03	c**	1.1E+01	c**	5.0E+00	2.9E-03	c**	1.3E-03	
1.0E-01	P	4.3E-04	C	2.0E-03	P				M	1	0.1		Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.2E+00	c	2.3E+01	c*											

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Toxicity and Chemical-specific Information													Contaminant				Screening Levels										Protection of Ground Water SSLs		
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		2.6E-04	C	1.1E-02	C	1.4E-05	C			0.04			Nickel Hydroxide	12054-48-7	8.2E+02	n	1.1E+04	n	1.1E-02	c**	4.7E-02	c**	2.0E+02	n			n		
		2.6E-04	C	1.1E-02	C	2.0E-05	C			0.04			Nickel Oxide	1313-99-1	8.4E+02	n	1.2E+04	n	1.1E-02	c**	4.7E-02	c**	2.0E+02	n			n		
		2.4E-04	I	1.1E-02	C	1.4E-05	C			0.04			Nickel Refinery Dust	NA	8.2E+02	n	1.1E+04	n	1.2E-02	c**	5.1E-02	c**	2.2E+02	n		3.2E+01	n		
1.7E+00		2.6E-04	C	2.0E-02	I	9.0E-05	A			0.04			Nickel Soluble Salts	7440-02-0	1.5E+03	n	2.2E+04	n	1.1E-02	c**	4.7E-02	c**	3.9E+02	n		2.6E+01	n		
		4.8E-04	I	1.1E-02	C	1.4E-05	C			0.04			Nickel Subsulfide	12035-72-2	4.1E-01	c	1.9E+00	c	5.8E-03	c**	2.6E-02	c**	4.5E-02	c			c		
		2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		Nickelocene	1271-28-9	6.7E+02	n	8.1E+03	n	1.1E-02	c**	4.7E-02	c**	2.2E+02	n			n		
				1.6E+00	I					1			Nitrate	14797-55-8	1.3E+05	nm	1.9E+06	nm					3.2E+04	n	1.0E+04		n		
										1			Nitrate + Nitrite (as N)	NA										1.0E+04					
				1.0E-01	I					1			Nitrite	14797-65-0	7.8E+03	n	1.2E+05	nm					2.0E+03	n	1.0E+03		n		
2.0E-02	P			1.0E-02	X	5.0E-05	X			1	0.1		Nitroaniline, 2-	88-74-4	6.3E+02	n	8.0E+03	n	5.2E-02	n	2.2E-01	n	1.9E+02	n		8.0E-02	n		
				4.0E-03	P	6.0E-03	P			1	0.1		Nitroaniline, 4-	100-01-6	2.7E+01	c**	1.1E+02	c*	6.3E+00	n	2.6E+01	n	3.8E+00	c*		1.6E-03	c*		
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1		3.1E+03	Nitrobenzene	98-95-3	5.1E+00	c*	2.2E+01	c*	7.0E-02	c	3.1E-01	c	1.4E-01	c*		9.2E-05	c*		
1.3E+00				3.0E+03	P					1	0.1		Nitrocellulose	9004-70-0	1.9E+08	nm	2.5E+09	nm					6.0E+07	n		1.3E+04	n		
				7.0E-02	H					1	0.1		Nitrofurantoin	67-20-9	4.4E+03	n	5.7E+04	n					1.4E+03	n		6.1E-01	n		
	C	3.7E-04	C							1	0.1		Nitrofurazone	59-87-0	4.2E-01	c	1.8E+00	c	7.6E-03	c	3.3E-02	c	6.0E-02	c		5.4E-05	c		
1.7E-02	P			1.0E-04	P					1	0.1		Nitroglycerin	55-63-0	6.3E+00	n	8.2E+01	n					2.0E+00	n		8.5E-04	n		
				1.0E-01	I					1	0.1		Nitroguanidine	556-88-7	6.3E+03	n	8.2E+04	n					2.0E+03	n		4.8E-01	n		
		8.8E-06	P			5.0E-03	P	V		1		1.8E+04	Nitromethane	75-52-5	5.4E+00	c*	2.4E+01	c*	3.2E-01	c*	1.4E+00	c*	6.4E-01	c*		1.4E-04	c*		
2.7E+01		2.7E-03	H			2.0E-02	I	V		1		4.9E+03	Nitropropane, 2-	79-46-9	1.4E-02	c	6.0E-02	c	1.0E-03	c	4.5E-03	c	2.1E-03	c		5.4E-07	c		
	C	7.7E-03	C						M	1	0.1		Nitroso-N-ethylurea, N-	759-73-9	4.5E-03	c	8.5E-02	c	1.3E-04	c	1.6E-03	c	9.2E-04	c		2.2E-07	c		
	C	3.4E-02	C						M	1	0.1		Nitroso-N-methylurea, N-	684-93-5	1.0E-03	c	1.9E-02	c	3.0E-05	c	3.6E-04	c	2.1E-04	c		4.6E-08	c		
5.4E+00	I	1.6E-03	I					V		1			Nitroso-di-N-butylamine, N-	924-16-3	9.9E-02	c	4.6E-01	c	1.8E-03	c	7.7E-03	c	2.7E-03	c		5.5E-06	c		
	I	2.0E-03	C							1	0.1		Nitroso-di-N-propylamine, N-	621-64-7	7.8E-02	c	3.3E-01	c	1.4E-03	c	6.1E-03	c	1.1E-02	c		8.1E-06	c		
	I	8.0E-04	C							1	0.1		Nitrosodiethanolamine, N-	1116-54-7	1.9E-01	c	8.2E-01	c	3.5E-03	c	1.5E-02	c	2.8E-02	c		5.6E-06	c		
1.5E+02	I	4.3E-02	I						M	1	0.1		Nitrosodiethylamine, N-	55-18-5	8.1E-04	c	1.5E-02	c	2.4E-05	c	2.9E-04	c	1.7E-04	c		6.1E-08	c		
	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	1		2.4E+05	Nitrosodimethylamine, N-	62-75-9	2.0E-03	c	3.4E-02	c	7.2E-05	c	8.8E-04	c	1.1E-04	c		2.7E-08	c		
	I	2.6E-06	C							1	0.1		Nitrosodiphenylamine, N-	86-30-6	1.1E+02	c	4.7E+02	c	1.1E+00	c	4.7E+00	c	1.2E+01	c		6.7E-02	c		
2.2E+01	I	6.3E-03	C					V		1		1.1E+05	Nitrosomethylethylamine, N-	10595-95-6	2.0E-02	c	9.1E-02	c	4.5E-04	c	1.9E-03	c	7.1E-04	c		2.0E-07	c		
	C	1.9E-03	C							1	0.1		Nitrosomorpholine [N-]	59-89-2	8.1E-02	c	3.4E-01	c	1.5E-03	c	6.5E-03	c	1.2E-02	c		2.8E-06	c		
	C	2.7E-03	C							1	0.1		Nitrosopiperidine [N-]	100-75-4	5.8E-02	c	2.4E-01	c	1.0E-03	c	4.5E-03	c	8.2E-03	c		4.4E-06	c		
2.1E+00	I	6.1E-04	I							1	0.1		Nitrosopyrrolidine, N-	930-55-2	2.6E-01	c	1.1E+00	c	4.6E-03	c	2.0E-02	c	3.7E-02	c		1.4E-05	c		
				1.0E-04	X					1	0.1		Nitrotoluene, m-	99-08-1	6.3E+00	n	8.2E+01	n					1.7E+00	n		1.6E-03	n		
	P			9.0E-04	P			V		1		1.5E+03	Nitrotoluene, o-	88-72-2	3.2E+00	c*	1.5E+01	c*					3.1E-01	c*		3.0E-04	c*		
1.6E-02	P			4.0E-03	P					1	0.1		Nitrotoluene, p-	99-99-0	3.4E+01	c**	1.4E+02	c*					4.3E+00	c*		4.0E-03	c*		
				3.0E-04	X	2.0E-02	P	V		1		6.9E+00	Nonane, n-	111-84-2	1.1E+01	ns	7.2E+01	ns	2.1E+01	n	8.8E+01	n	5.3E+00	n		7.5E-02	n		
				4.0E-02	I					1	0.1		Norflurazon	27314-13-2	2.5E+03	n	3.3E+04	n					7.7E+02	n		5.0E+00	n		
				3.0E-03	I					1	0.1		Octabromodiphenyl Ether	32536-52-0	1.9E+02	n	2.5E+03	n					6.0E+01	n		1.2E+01	n		
				5.0E-02	I					1	0.006		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-4															

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)																													
Toxicity and Chemical-specific Information													Contaminant				Screening Levels										Protection of Ground Water SSLs		
SFO (mg/kg-day) ⁻¹	^k _e y	IUR (ug/m ³) ⁻¹	^k _e y	RfD _o (mg/kg-day)	^k _e y	RfC _i (mg/m ³)	^k _e y	v	muta- gen	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m ³)	key	Industrial Air (ug/m ³)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)	
2.2E-03	C	6.3E-07	C	7.0E-04	I					1			~Sodium Perchlorate	7601-89-0	5.5E+01	n	8.2E+02	n					1.4E+01	n			n		
				2.0E-02	P				V	1			Perfluorobutane Sulfonate	375-73-5	1.6E+03	n	2.3E+04	n					3.8E+02	n		2.1E-01	n		
				5.0E-02	I					1	0.1		Permethrin	52645-53-1	3.2E+03	n	4.1E+04	n					1.0E+03	n		2.4E+02	n		
				2.5E-01	I					1	0.1		Phenacetin	62-44-2	2.5E+02	c	1.0E+03	c	4.5E+00	c	1.9E+01	c	3.4E+01	c		9.7E-03	c		
4.7E-02	H									1	0.1		Phenmedipham	13684-63-4	1.6E+04	n	2.1E+05	nm					4.0E+03	n		2.1E+01	n		
				3.0E-01	I	2.0E-01	C			1	0.1		Phenol	108-95-2	1.9E+04	n	2.5E+05	nm	2.1E+02	n	8.8E+02	n	5.8E+03	n		3.3E+00	n		
				5.0E-04	X					1	0.1		Phenothiazine	92-84-2	3.2E+01	n	4.1E+02	n					4.3E+00	n		1.4E-02	n		
				6.0E-03	I					1	0.1		Phenylenediamine, m-	108-45-2	3.8E+02	n	4.9E+03	n					1.2E+02	n		3.2E-02	n		
1.9E-03	H			1.9E-01	H					1	0.1		Phenylenediamine, o-	95-54-5	1.2E+01	c	4.9E+01	c					1.6E+00	c		4.4E-04	c		
										1	0.1		Phenylenediamine, p-	106-50-3	1.2E+04	n	1.6E+05	nm					3.8E+03	n		1.0E+00	n		
										1	0.1		Phenylphenol, 2-	90-43-7	2.8E+02	c	1.2E+03	c					3.0E+01	c		4.1E-01	c		
				2.0E-04	H					1	0.1	1.6E+03	Phorate	298-02-2	1.3E+01	n	1.6E+02	n					3.0E+00	n		3.4E-03	n		
						3.0E-04	I	V		1			Phosgene	75-44-5	3.1E-01	n	1.3E+00	n	3.1E-01	n	1.3E+00	n							
				2.0E-02	I					1	0.1		Phosmet	732-11-6	1.3E+03	n	1.6E+04	n					3.7E+02	n		8.2E-02	n		
													Phosphates, Inorganic																
				4.9E+01	P					1			~Aluminum metaphosphate	13776-88-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Ammonium polyphosphate	68333-79-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Calcium pyrophosphate	7790-76-3	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Diammonium phosphate	7783-28-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Dicalcium phosphate	7757-93-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Dimagnesium phosphate	7782-75-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Dipotassium phosphate	7758-11-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Disodium phosphate	7558-79-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monocalcium phosphate	13530-50-2	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monoammonium phosphate	7722-76-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monocalcium phosphate	7758-23-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monomagnesium phosphate	7757-86-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monopotassium phosphate	7778-77-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monosodium phosphate	7558-80-7	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Polyphosphoric acid	8017-16-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Potassium tripolyphosphate	13845-36-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium acid pyrophosphate	7758-16-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium aluminum phosphate (acidic)	7785-88-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium aluminum phosphate (anhydrous)	10279-59-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium aluminum phosphate (tetrahydrate)	10305-76-7	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium hexametaphosphate	10124-56-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium polyphosphate	68915-31-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium trimetaphosphate	7785-84-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium tripolyphosphate	7758-29-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Tetrapotassium phosphate	7320-34-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Tetrasodium pyrophosphate	7722-88-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Tricalcium phosphate	7758-87-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Trimagnesium phosphate	7757-87-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Tripotassium phosphate	7778-53-2	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Trisodium phosphate	7601-54-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				3.0E-04	I	3.0E-04	I	V		1			Phosphine	7803-51-2	2.3E+01	n	3.5E+02	n	3.1E-01	n	1.3E+00	n	5.7E-01	n			n		
				4.9E+01	P	1.0E-02	I			1			Phosphoric Acid	7664-38-2	3.0E+06	nm	2.9E+07	nm	1.0E+01	n	4.4E+01	n	9.7E+05	n			n		
1.4E-02	I	2.4E-06	C	2.0E-05	I				V	1			Phosphorus, White	7723-14-0	1.6E+00	n	2.3E+01	n					4.0E-01	n		1.5E-03	n		
												Phthalates																	
				2.0E-02	I					1	0.1		~Bis(2-ethylhexyl)phthalate	117-81-7	3.9E+01	c*	1.6E+02	c	1.2E+00	c	5.1E+00	c	5.6E+00	c*	6.0E+00	1.3E+00	c*	1.4E+00	
				1.0E+00	I					1	0.1		~Butylphthalyl Butylglycolate	85-70-1	6.3E+04	n	8.2E+05	nm					1.3E+04	n		3.1E+02	n		
				1.0E-01	I					1	0.1		~Dibutyl Phthalate	84-74-2	6.3E+03	n	8.2E+04	n					9.0E+02	n		2.3E+00	n		
				8.0E-0																									

Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) November 2015

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)																													
Toxicity and Chemical-specific Information													Contaminant				Screening Levels										Protection of Ground Water SSLs		
SFO (mg/kg-day) ⁻¹	k _e y	IUR (ug/m ³) ⁻¹	k _e y	RfD _o (mg/kg-day)	k _e y	RfC _i (mg/m ³)	k _e y	v _o l	muta- gen	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m ³)	key	Industrial Air (ug/m ³)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)	
3.0E+01	C	8.6E-03	C	7.0E-06	H					1	0.1		Polybrominated Biphenyls	59536-65-1	1.8E-02	c*	7.7E-02	c*	3.3E-04	c	1.4E-03	c	2.6E-03	c*			c*		
7.0E-02	S	2.0E-05	S	7.0E-05	I			V		1	0.14		Polychlorinated Biphenyls (PCBs)																
													~Aroclor 1016	12674-11-2	4.1E+00	n	2.7E+01	c**	1.4E-01	c	6.1E-01	c	2.2E-01	c**		2.1E-02	c**		
2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1221	11104-28-2	2.0E-01	c	8.3E-01	c	4.9E-03	c	2.1E-02	c	4.7E-03	c		8.0E-05	c		
2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1232	11141-16-5	1.7E-01	c	7.2E-01	c	4.9E-03	c	2.1E-02	c	4.7E-03	c		8.0E-05	c		
2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1242	53469-21-9	2.3E-01	c	9.5E-01	c	4.9E-03	c	2.1E-02	c	7.8E-03	c		1.2E-03	c		
2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1248	12672-29-6	2.3E-01	c	9.5E-01	c	4.9E-03	c	2.1E-02	c	7.8E-03	c		1.2E-03	c		
2.0E+00	S	5.7E-04	S	2.0E-05	I			V		1	0.14		~Aroclor 1254	11097-69-1	2.4E-01	c**	9.7E-01	c*	4.9E-03	c	2.1E-02	c	7.8E-03	c*		2.0E-03	c*		
2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1260	11096-82-5	2.4E-01	c	9.9E-01	c	4.9E-03	c	2.1E-02	c	7.8E-03	c		5.5E-03	c		
				6.0E-04	X			V		1	0.14		~Aroclor 5460	11126-42-4	3.5E+01	n	4.4E+02	n					1.2E+01	n		2.0E+00	n		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.3E-01	c*	5.2E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		2.8E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.2E-01	c*	5.2E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.7E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.2E-01	c*	5.1E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.7E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 156)	38380-08-4	1.2E-01	c*	5.1E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.7E-03	c		
3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V		1	0.14		~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.2E-04	c*	5.2E-04	c*	2.5E-06	c	1.1E-05	c	4.0E-06	c		1.7E-06	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.2E-01	c*	5.0E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.2E-01	c*	5.0E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2,3,3',4,4',5- (PCB 105)	32598-14-4	1.2E-01	c*	5.0E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.2E-01	c*	5.1E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c		
1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V		1	0.14		~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	3.7E-05	c*	1.5E-04	c*	7.4E-07	c	3.2E-06	c	1.2E-06	c		3.0E-07	c		
2.0E+00	I	5.7E-04	I					V		1	0.14		~Polychlorinated Biphenyls (high risk)	1336-36-3	2.3E-01	c	9.4E-01	c	4.9E-03	c	2.1E-02	c							
4.0E-01	I	1.0E-04	I					V		1	0.14		~Polychlorinated Biphenyls (low risk)	1336-36-3					2.8E-02	c	1.2E-01	c	4.4E-02	c	5.0E-01	6.8E-03	c	7.8E-02	
7.0E-02	I	2.0E-05	I					V		1	0.14		~Polychlorinated Biphenyls (lowest risk)	1336-36-3					1.4E-01	c	6.1E-01	c							
1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E			1	0.14		~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	3.8E-02	c*	1.6E-01	c*	7.4E-04	c	3.2E-03	c	6.0E-03	c*		9.4E-04	c*		
3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V		1	0.14		~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.2E-02	c*	4.9E-02	c*	2.5E-04	c	1.1E-03	c	4.0E-04	c		6.2E-05	c		
				6.0E-04	I					1	0.1		Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	8.5E+05	nm	3.6E+06	nm	6.3E-01	n	2.6E+00	n							
				6.0E-02	I			V		1	0.13		Polynuclear Aromatic Hydrocarbons (PAHs)																
				3.0E-01	I			V		1	0.13		~Acenaphthene	83-32-9	3.6E+03	n	4.5E+04	n					5.3E+02	n		5.5E+00	n		
7.3E-01	E	1.1E-04	C					V	M	1	0.13		~Anthracene	120-12-7	1.8E+04	n	2.3E+05	nm					1.8E+03	n		5.8E+01	n		
								V		1	0.13		~Benz[a]anthracene	56-55-3	1.6E-01	c	2.9E+00	c	9.2E-03	c	1.1E-01	c	1.2E-02	c		4.2E-03	c		
1.2E+00	C	1.1E-04	C							1	0.13		~Benzo(j)fluoranthene	205-82-3	4.2E-01	c	1.8E+00	c	2.6E-02	c	1.1E-01	c	6.5E-02	c		7.8E-02	c		
7.3E+00	I	1.1E-03	C						M	1	0.13		~Benzo[a]pyrene	50-32-8	1.6E-02	c	2.9E-01	c	9.2E-04	c	1.1E-02	c	3.4E-03	c	2.0E-01	4.0E-03	c	2.4E-01	
7.3E-01	E	1.1E-04	C						M	1	0.13		~Benzo[b]fluoranthene	205-99-2	1.6E-01	c	2.9E+00	c	9.2E-										

Key: I = IRIS; P = PPRTV; A = Cal EPA; X = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)																													
Toxicity and Chemical-specific Information													Contaminant				Screening Levels										Protection of Ground Water SSLs		
SFO (mg/kg-day) ⁻¹	k _e y	IUR (ug/m ³) ⁻¹	k _e y	RfD _o (mg/kg-day)	k _e y	RfC _i (mg/m ³)	k _e y	v _o l	muta- gen	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m ³)	key	Industrial Air (ug/m ³)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)	
				3.0E+00	C	V				1		3.5E+02	Propylene	115-07-1	2.2E+03	ns	9.3E+03	ns	3.1E+03	n	1.3E+04	n	6.3E+03	n		6.0E+00	n		
				2.0E+01	P					1	0.1		Propylene Glycol	57-55-6	1.3E+06	nm	1.6E+07	nm					4.0E+05	n		8.1E+01	n		
				2.7E-04	A					1	0.1		Propylene Glycol Dinitrate	6423-43-4	3.9E+05	nm	1.6E+06	nm	2.8E-01	n	1.2E+00	n							
				7.0E-01	H	2.0E+00	I	V		1		1.1E+05	Propylene Glycol Monomethyl Ether	107-98-2	4.1E+04	n	3.7E+05	nms	2.1E+03	n	8.8E+03	n	3.2E+03	n		6.5E-01	n		
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		1		7.8E+04	Propylene Oxide	75-56-9	2.1E+00	c	9.7E+00	c	7.6E-01	c*	3.3E+00	c*	2.7E-01	c		5.6E-05	c		
				7.5E-02	I					1	0.1		Propyzamide	23950-58-5	4.7E+03	n	6.2E+04	n					1.2E+03	n		1.2E+00	n		
				1.0E-03	I			V		1		5.3E+05	Pyridine	110-86-1	7.8E+01	n	1.2E+03	n					2.0E+01	n		6.8E-03	n		
3.0E+00	I			5.0E-04	I					1	0.1		Quinalphos	13593-03-8	3.2E+01	n	4.1E+02	n					5.1E+00	n		4.3E-02	n		
				9.0E-03	I					1	0.1		Quinoline	91-22-5	1.8E-01	c	7.7E-01	c					2.4E-02	c		7.8E-05	c		
										1	0.1		Quizalofop-ethyl	76578-14-8	5.7E+02	n	7.4E+03	n					1.2E+02	n		1.9E+00	n		
						3.0E-02	A			1			Refractory Ceramic Fibers	NA	4.3E+07	nm	1.8E+08	nm	3.1E+01	n	1.3E+02	n							
				3.0E-02	I					1	0.1		Resmethrin	10453-86-8	1.9E+03	n	2.5E+04	n					6.7E+01	n		4.2E+01	n		
				5.0E-02	H			V		1			Ronnel	299-84-3	3.9E+03	n	5.8E+04	n					4.1E+02	n		3.7E+00	n		
2.2E-01	C	6.3E-05	C	4.0E-03	I					1	0.1		Rotenone	83-79-4	2.5E+02	n	3.3E+03	n					6.1E+01	n		3.2E+01	n		
				5.0E-03	I				M	1	0.1		Safrrole	94-59-7	5.5E-01	c	1.0E+01	c	1.6E-02	c	1.9E-01	c	9.6E-02	c		5.9E-05	c		
										1			Selenious Acid	7783-00-8	3.9E+02	n	5.8E+03	n					1.0E+02	n			n		
				5.0E-03	I	2.0E-02	C			1			Selenium	7782-49-2	3.9E+02	n	5.8E+03	n	2.1E+01	n	8.8E+01	n	1.0E+02	n	5.0E+01	5.2E-01	n	2.6E-01	
				5.0E-03	C	2.0E-02	C			1			Selenium Sulfide	7446-34-6	3.9E+02	n	5.8E+03	n	2.1E+01	n	8.8E+01	n	1.0E+02	n			n		
				9.0E-02	I					1	0.1		Sethoxydim	74051-80-2	5.7E+03	n	7.4E+04	n					1.0E+03	n		9.3E+00	n		
1.2E-01	H			5.0E-03	I	3.0E-03	C			1			Silica (crystalline, respirable)	7631-86-9	4.3E+06	nm	1.8E+07	nm	3.1E+00	n	1.3E+01	n				8.0E-01	n		
				5.0E-03	I					0.04			Silver	7440-22-4	3.9E+02	n	5.8E+03	n					9.4E+01	n		3.0E-04	c	2.0E-03	
										1	0.1		Simazine	122-34-9	4.5E+00	c*	1.9E+01	c					6.1E-01	c	4.0E+00				
5.0E-01	C	1.5E-01	C	1.3E-02	I					1	0.1		Sodium Acifluorfen	62476-59-9	8.2E+02	n	1.1E+04	n					2.6E+02	n		2.1E+00	n		
				4.0E-03	I					1			Sodium Azide	26628-22-8	3.1E+02	n	4.7E+03	n					8.0E+01	n			n		
				2.0E-02	C	2.0E-04	C		M	0.025			Sodium Dichromate	10588-01-9	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c		
2.7E-01	H			3.0E-02	I					1	0.1		Sodium Diethyldithiocarbamate	148-18-5	2.0E+00	c	8.5E+00	c					2.9E-01	c			c		
				5.0E-02	A	1.3E-02	C			1			Sodium Fluoride	7681-49-4	3.9E+03	n	5.8E+04	n	1.4E+01	n	5.7E+01	n	1.0E+03	n			n		
				2.0E-05	I					1	0.1		Sodium Fluoroacetate	62-74-8	1.3E+00	n	1.6E+01	n					4.0E-01	n		8.1E-05	n		
				1.0E-03	H					1			Sodium Metavanadate	13718-26-8	7.8E+01	n	1.2E+03	n					2.0E+01	n			n		
				8.0E-04	P					1			Sodium Tungstate	13472-45-2	6.3E+01	n	9.3E+02	n					1.6E+01	n			n		
				8.0E-04	P					1			Sodium Tungstate Dihydrate	10213-10-2	6.3E+01	n	9.3E+02	n					1.6E+01	n			n		
2.4E-02	H			3.0E-02	I					1	0.1		Stirofos (Tetrachlorovinphos)	961-11-5	2.3E+01	c*	9.6E+01	c					2.8E+00	c		8.2E-03	c		
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			Strontium Chromate	7789-06-2	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c		
				6.0E-01	I					1			Strontium, Stable	7440-24-6	4.7E+04	n	7.0E+05	nm					1.2E+04	n		4.2E+02	n		
				3.0E-04	I					1	0.1		Strychnine	57-24-9	1.9E+01	n	2.5E+02	n					5.9E+00	n	1.0E+02	6.5E-02	n	1.1E-01	
				2.0E-01	I	1.0E+00	I	V		1		8.7E+02	Styrene	100-42-5	6.0E+03	ns	3.5E+04	ns	1.0E+03	n	4.4E+03	n	1.2E+03	n		1.3E+00	n		
				3.0E-03	P					1	0.1		Styrene-Acrylonitrile (SAN) Trimer	NA	1.9E+02	n	2.5E+03	n					4.8E+01	n			n		
				1.0E-03	P	2.0E-03	X			1	0.1		Sulfolane	126-33-0	6.3E+01	n	8.2E+02	n	2.1E+00	n	8.8E+00	n	2.0E+01	n		4.4E-03	n		
				8.0E-04	P					1	0.1		Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	5.1E+01	n	6.6E+02	n					1.1E+01	n		6.5E-02	n		
						1.0E-03	C	V		1			Sulfur Trioxide	7446-11-9	1.4E+06	nm	6.0E+06	nm	1.0E+00	n	4.4E+00	n	2.1E+00	n			n		
2.5E-02	I	7.1E-06	I	5.0E-02	H					1	0.1		Sulfuric Acid	7664-93-9	1.4E+06	nm	6.0E+06	nm	1.0E+00	n	4.4E+00	n							
				3.0E-02	H					1	0.1		Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	2.2E+01	c	9.2E+01	c	4.0E-01	c	1.7E+00	c	1.3E+00	c		1.5E-02	c		
										1			TCMTB	21564-17-0	1.9E+03	n	2.5E+04	n					4.8E+02	n		3.3E+00	n		
				7.0E-02	I					1	0.1		Tebuthiuron	34014-18-1	4.4E+03	n	5.7E+04	n					1.4E+03	n		3.9E-01	n		
				2.0E-02	H					1	0.1		Temephos	3383-96-8	1.3E+03	n	1.6E+04	n					4.0E+02	n		7.6E+01	n		
				1.3E-02	I					1	0.1		Terbacil	5902-51-2	8.2E+02	n	1.1E+04	n					2.5E+02	n		7.5E-02	n		
				2.5E-05	H			V		1		3.1E+01	Terbufos	13071-79-9	2.0E+00	n	2.9E+01	n					2.4E-01	n		5.2E-04	n		
				1.0E-03	I					1	0.1		Terbutryn	886-50-0	6.3E+01	n	8.2E+02	n					1.3E+01	n		1.9E-02	n		
				1.0E-04	I					1	0.1		Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1	6.3E+00	n	8.2E+01	n					2.0E+00	n		5.3E-02	n		
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		1		6.8E+02	Tetrachlorobenzene, 1,2,4,5-	95-94-3	2.3E+01	n	3.5E+02	n					1.7E+00	n		7.9E-03	n		
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1		1.9E+03	Tetrachloroethane, 1,1,1,2-	630-20-6	2.0E+00	c	8.8E+00	c	3.8E-01	c	1.7E+00	c	5.7E-01	c		2.2E-04	c		
										1			Tetrachloroethane, 1,1,2,2-	79-34-5	6.0E-01	c	2.7E+00	c	4.8E-02	c	2.1E-01	c	7.6E-02	c		3.0E-05	c		
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		1		1.7E+02	Tetrachloroethylene	127-18-4	2.4E+01	c**	1.0E+02	c**	1.1E+01	c**	4.7E+01	c**	1.1E+01	c**	5.0E+00	5.1E-03	c**	2.3E-03	
				3.0E-02	I					1	0.1		Tetrachlorophenol, 2,3,4,6-	58-90-2	1.9E+03	n	2.5E+04	n					2.4E+02	n		1.5E+00	n		
2.0E+01	H							V		1			Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.5E-02	c	1.6E-01	c					1.3E-03	c		4.5E-06	c		
				5.0E-04	I					1	0.1		Tetraethyl Dithiopyrophosphate	3689-24-5	3.2E+01	n	4.1E+02	n					7.1E+00	n		5.2E-03	n		
						8.0E+01	I	V		1		2.1E+03	Tetrafluoroethane, 1,1,1,2-	811-97-2	1.0E+05	nms	4.3E+05	nms	8.3E+04	n	3.5E+05	n	1.7E+05	n		9.3E+01	n		
				2.0E-03	P					1	0.0007		Tetryl (Trinitrophenylmethylnitramine)	479-45-8	1.6E+02	n	2.3E+03	n					3.9E+01	n		3.7E-01	n		
				7.0E-06	X					1			Thallium (I) Nitrate	10102-45-1	5.5E-01	n	8.2E+00	n					1.4E-01	n			n		

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)																																
Toxicity and Chemical-specific Information												Contaminant				Screening Levels										Protection of Ground Water SSLs						
SFO (mg/kg-day) ⁻¹	^k _e IUR (ug/m ³) ⁻¹	^k _e RfD _o (mg/kg-day)	^k _e RfC _i (mg/m ³)	^k _e v o l u t e n e	muta- gen	GIABS	ABS	C _{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	^k _e key	Industrial Soil (mg/kg)	^k _e key	Resident Air (ug/m ³)	^k _e key	Industrial Air (ug/m ³)	^k _e key	Tapwater (ug/L)	^k _e key	MCL (ug/L)	Risk-based SSL (mg/kg)	^k _e key	MCL-based SSL (mg/kg)								
		1.0E-05	X		V	1			Thallium (Soluble Salts)	7440-28-0	7.8E-01	n	1.2E+01	n					2.0E-01	n	2.0E+00	1.4E-02	n	1.4E-01								
		6.0E-06	X			1			Thallium Acetate	563-68-8	4.7E-01	n	7.0E+00	n					1.2E-01	n												
		2.0E-05	X			1			Thallium Carbonate	6533-73-9	1.6E+00	n	2.3E+01	n					4.0E-01	n		n										
		2.0E-05	X			1			Thallium Chloride	7791-12-0	4.7E-01	n	7.0E+00	n					1.2E-01	n				n								
		6.0E-06	X			1			Thallium Sulfate	7446-18-6	1.6E+00	n	2.3E+01	n					4.0E-01	n												
		2.0E-05	X			1																										
		1.3E-02	I			1	0.1		Thifensulfuron-methyl	79277-27-3	8.2E+02	n	1.1E+04	n					2.6E+02	n				n								
		1.0E-02	I			1	0.1		Thiobencarb	28249-77-6	6.3E+02	n	8.2E+03	n					1.6E+02	n												
		7.0E-02	X			1	0.0075		Thiodiglycol	111-48-8	5.4E+03	n	7.9E+04	n					1.4E+03	n												
		3.0E-04	H			1	0.1		Thiofanox	39196-18-4	1.9E+01	n	2.5E+02	n					5.3E+00	n				n								
		8.0E-02	I			1	0.1		Thiophanate, Methyl	23564-05-8	5.1E+03	n	6.6E+04	n					1.6E+03	n												
		5.0E-03	I			1	0.1		Thiram	137-26-8	3.2E+02	n	4.1E+03	n					9.8E+01	n												
		6.0E-01	H			1			Tin	7440-31-5	4.7E+04	n	7.0E+05	nm					1.2E+04	n				n								
						1.0E-04			A	V	1	1.4E+02	Total Petroleum Hydrocarbons (Aliphatic Low)	NA					5.2E+02	ns					2.2E+03	ns	6.3E+02	n	2.6E+03	n	1.3E+03	n
		8.0E-02	I			5.0E+00			I	V	1	8.2E+02	Toluene	108-88-3					4.9E+03	ns					4.7E+04	ns	5.2E+03	n	2.2E+04	n	1.1E+03	n
1.8E-01 3.0E-02	X P	2.0E-04	X			1	0.1		Toluene-2,5-diamine	95-70-5	3.0E+00	c**	1.3E+01	c*					4.3E-01	c**				c**								
		4.0E-03	X			1	0.1		Toluidine, p-	106-49-0	1.8E+01	c*	7.7E+01	c*					2.5E+00	c*												
		3.0E+00	P				V		1	3.4E-01	Total Petroleum Hydrocarbons (Aliphatic High)	NA	2.3E+05	nms					3.5E+06	nms					6.0E+04	n						
				6.0E-01	P	V	1	1.4E+02	Total Petroleum Hydrocarbons (Aliphatic Low)	NA	5.2E+02	ns	2.2E+03	ns	6.3E+02	n	2.6E+03	n	1.3E+03	n				n								
		1.0E-02	X	1.0E-01	P	V	1	6.9E+00	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	9.6E+01	ns	4.4E+02	ns	1.0E+02	n	4.4E+02	n	1.0E+02	n												
		4.0E-02	P			1	0.1	Total Petroleum Hydrocarbons (Aromatic High)	NA	2.5E+03	n	3.3E+04	n					8.0E+02	n													
4.0E-03 4.0E-03 1.1E+00		P	3.0E-02	P	V	1	1.8E+03		Total Petroleum Hydrocarbons (Aromatic Low)	NA	8.2E+01	n	4.2E+02	n	3.1E+01	n	1.3E+02	n	3.3E+01	n				n								
						4.0E-03			P	3.0E-03	P	V	1		Total Petroleum Hydrocarbons (Aromatic Medium)	NA	1.1E+02	n	6.0E+02	n					3.1E+00	n	1.3E+01	n	5.5E+00	n		
													1	0.1	Toxaphene	8001-35-2	4.9E-01	c	2.1E+00	c					8.8E-03	c	3.8E-02	c	7.1E-02	c	3.0E+00	1.1E-02
		7.5E-03	I			1	0.1		Tralomethrin	66841-25-6	4.7E+02	n	6.2E+03	n					1.5E+02	n				n								
		3.0E-04	A				V		1		Tri-n-butyltin	688-73-3	2.3E+01	n					3.5E+02	n					3.7E+00	n						
		8.0E+01	X						1	0.1	Triacetin	102-76-1	5.1E+06	nm					6.6E+07	nm					1.6E+06	n						
		3.0E-02	I			1	0.1		Triadimefon	43121-43-3	1.9E+03	n	2.5E+04	n					5.5E+02	n				n								
		1.3E-02	I				V		1		Triallate	2303-17-5	1.0E+03	n					1.5E+04	n					1.2E+02	n						
		1.0E-02	I						1	0.1	Triasulfuron	82097-50-5	6.3E+02	n					8.2E+03	n					2.0E+02	n						
9.0E-03	P	8.0E-03	I			1	0.1		Tribenuron-methyl	101200-48-0	5.1E+02	n	6.6E+03	n					1.6E+02	n				n								
		5.0E-03	I				V		1		Tribromobenzene, 1,2,4-	615-54-3	3.9E+02	n					5.8E+03	n					4.5E+01	n						
		1.0E-02	P						1	0.1	Tributyl Phosphate	126-73-8	6.0E+01	c*					2.6E+02	c*					5.2E+00	c*						
		3.0E-04	P			1	0.1		Tributyltin Compounds	NA	1.9E+01	n	2.5E+02	n					6.0E+00	n				n								
		3.0E-04	I						1	0.1	Tributyltin Oxide	56-35-9	1.9E+01	n					2.5E+02	n					5.7E+00	n						
		3.0E+01	I			3.0E+01	H		V	1	9.1E+02	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	4.0E+04					ns	1.7E+05					nms	3.1E+04	n	1.3E+05	n	5.5E+04	n	
7.0E-02 2.9E-02 7.0E-03	I H X	2.0E-02	I			1 1 1	0.1 0.1 0.1		Trichloroacetic Acid	76-03-9	7.8E+00	c	3.3E+01	c					1.1E+00	c	6.0E+01	2.2E-04	c	1.2E-02								
		3.0E-05	X						1	0.1	Trichloroaniline HCl, 2,4,6-	33663-50-2	1.9E+01	c					7.9E+01	c	2.7E+00	c										
		3.0E-05	X						1	0.1	Trichloroaniline, 2,4,6-	634-93-5	1.9E+00	n					2.5E+01	n					4.0E-01	n			3.6E-03	n		
2.9E-02	P	8.0E-04	X			1			Trichlorobenzene, 1,2,3-	87-61-6	6.3E+01	n	9.3E+02	n					7.0E+00	n				n								
		1.0E-02	I			2.0E-03			P	V	1	4.0E+02	Trichlorobenzene, 1,2,4-	120-82-1					2.4E+01	c**					1.1E+02	c**	2.1E+00	n	8.8E+00	n	1.2E+00	c**
		2.0E+00	I			5.0E+00			I	V	1	6.4E+02	Trichloroethane, 1,1,1-	71-55-6					8.1E+03	ns					3.6E+04	ns	5.2E+03	n	2.2E+04	n	8.0E+03	n
5.7E-02 4.6E-02	I I	1.6E-05 4.1E-06	I I	4.0E-03 5.0E-04	I I	2.0E-04 2.0E-03	X I	V V	M	1 1	2.2E+03 6.9E+02				1.1E+00 9.4E-01	c** c**	5.0E+00 6.0E+00	c** c**	1.8E-01 4.8E-01	c** c**	7.7E-01 3.0E+00	c** c**	2.8E-01 4.9E-01	c** c**	5.0E+00 5.0E+00	8.9E-05 1.8E-04	c** c**	1.6E-03 1.8E-03				
		3.0E-01	I			V	1	1.2E+03	Trichlorofluoromethane	75-69-4	2.3E+04	ns	3.5E+05	nms					5.2E+03	n				3.3E+00	n							
1.1E-02	I	3.1E-06	I	1.0E-01	P		1	0.1	Trichlorophenol, 2,4,5-	95-95-4	6.3E+03	n	8.2E+04	n					1.2E+03	n				n								
				1.0E-03	I			1	0.1	Trichlorophenol, 2,4,6-	88-06-2	4.9E+01	c**	2.1E+02					c**	9.1E-01					c	4.0E+00	c	4.1E+00	c**			
				1.0E-02	I			1	0.1	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	6.3E+02	n	8.2E+03					n									1.6E+02	n			
3.0E+01	I	8.0E-03	I			1	0.1		Trichlorophenoxypropionic acid, -2,4,5	93-72-1	5.1E+02	n	6.6E+03	n					1.1E+02	n				n								
		5.0E-03	I				V		1	1.3E+03	Trichloropropane, 1,1,2-	598-77-6	3.9E+02	n					5.8E+03	ns							8.8E+01	n				
		4.0E-03	I			3.0E-04	I		V	M	1	1.4E+03	Trichloropropane, 1,2,3-	96-18-4					5.1E-03	c					1.1E-01	c	3.1E-01	n	1.3E+00	n	7.5E-04	c
		3.0E-03	X	3.0E-04	P	V	1	3.1E+02	Trichloropropene, 1,2,3-	96-19-5	7.3E-01	n	3.1E+00	n	3.1E-01	n	1.3E+00	n	6.2E-01	n				n								
		2.0E-02	A			1	0.1	Tricresyl Phosphate (TCP)	1330-78-5	1.3E+03	n	1.6E+04	n			1.6E+02	n															
		3.0E-03	I			1	0.1	Tridiphane	58138-08-2	1.9E+02	n	2.5E+03	n			1.8E+01	n															
		2.0E+00	P			1	0.1		Triethylamine	121-44-8	1.2E+02	n	4.8E+02	n	7.3E+00	n	3.1E+01	n	1.5E+01	n				n								
						2.0E+01	P		V	1	4.8E+03	Triethylene Glycol	112-27-6	1.3E+05	nm	1.6E+06	nm			4.0E+04					n							
						2.0E+01	P		V	1		Trifluoroethane, 1,1,1-	420-46-2	1.5E+04	ns	6.2E+04	ns	2.1E+04	n	8.8E+04					n	4.2E+04	n					
7.7E-03 2.0E-02	I P	7.5E-03 1.0E-02	I P			1 1			Trifluralin	1582-09-8	9.0E+01	c**	4.2E+02	c*					2.6E+00	c*				c*								
		1.0E-02	P						0.1	Trimethyl Phosphate	512-56-1	2.7E+01	c*	1.1E+02					c*	3.9E+00					c*							

along the northeast edge of the San Agustin Plains closed basin; thence north along the east side of the north plains closed basin to the Continental Divide; thence northly along the Continental Divide to the community of Regina on State Highway 96; thence southeasterly along the crest of the San Pedro Mountains to Cerro Toledo Peak; thence southwesterly along the Sierra de Los Valles ridge and the Borrego Mesa to Bodega Butte; thence southerly to Angostura Diversion Dam which is the upper reach of the Rio Grande in this basin; thence southeast to the crest and the crest of the Manzano Mountains and the Los Pinos Mountains; thence southerly along the divide that contributes to the Rio Grande to San Marcial gauging station to the point and place of beginning; excluding all waters upstream of Jemez Pueblo which flow into the Jemez River drainage and the Bluewater Lake. Counties included in the basin are:

- (1) north portion of Socorro County;
- (2) northeast corner of Catron County;
- (3) east portion of Valencia County;
- (4) west portion of Bernalillo County;
- (5) east portion of McKinley County; and
- (6) most of Sandoval County.

[3-14-71, 9-3-72, 8-13-76, 2-20-81, 12-1-95; 20.6.2.2102 NMAC - Rn, 20 NMAC 6.2.II.2102, 1-15-01]

20.6.2.2103 - 20.6.2.2199: [RESERVED]

[12-1-95; 20.6.2.2103 - 20.6.2.2199 NMAC - Rn, 20 NMAC 6.2.II.2103-2199, 1-15-01]

20.6.2.2200 WATERCOURSE PROTECTION:

[12-1-95; 20.6.2.2200 NMAC - Rn, 20 NMAC 6.2.II.2200, 1-15-01]

20.6.2.2201 DISPOSAL OF REFUSE: No person shall dispose of any refuse in a natural watercourse or in a location and manner where there is a reasonable probability that the refuse will be moved into a natural watercourse by leaching or otherwise. Solids diverted from the stream and returned thereto are not subject to abatement under this Section.

[4-20-68, 9-3-72; 20.6.2.2201 NMAC - Rn, 20 NMAC 6.2.II.2201, 1-15-01]

20.6.2.2202 - 20.6.2.2999: [RESERVED]

[12-1-95; 20.6.2.2202 - 20.6.2.2999 NMAC - Rn, 20 NMAC 6.2.II.2202-3100, 1-15-01]

20.6.2.3000 PERMITTING AND GROUND WATER STANDARDS:

[12-1-95; 20.6.2.3000 NMAC - Rn, 20 NMAC 6.2.III, 1-15-01]

20.6.2.3001 - 20.6.2.3100: [RESERVED]

[12-1-95; 20.6.2.3001 - 20.6.2.3100 NMAC - Rn, 20 NMAC 6.2.II.2202-3100, 1-15-01]

20.6.2.3101 PURPOSE:

A. The purpose of Sections 20.6.2.3000 through 20.6.2.3114 NMAC controlling discharges onto or below the surface of the ground is to protect all ground water of the state of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, for present and potential future use as domestic and agricultural water supply, and to protect those segments of surface waters which are gaining because of ground water inflow, for uses designated in the New Mexico Water Quality Standards. Sections 20.6.2.3000 through 20.6.2.3114 NMAC are written so that in general:

- (1) if the existing concentration of any water contaminant in ground water is in conformance with the standard of 20.6.2.3103 NMAC, degradation of the ground water up to the limit of the standard will be allowed; and
- (2) if the existing concentration of any water contaminant in ground water exceeds the standard of Section 20.6.2.3103 NMAC, no degradation of the ground water beyond the existing concentration will be allowed.

B. Ground water standards are numbers that represent the pH range and maximum concentrations of water contaminants in the ground water which still allow for the present and future use of ground water resources.

C. The standards are not intended as maximum ranges and concentrations for use, and nothing herein contained shall be construed as limiting the use of waters containing higher ranges and concentrations.

[2-18-77; 20.6.2.3101 NMAC - Rn, 20 NMAC 6.2.III.3101, 1-15-01]

20.6.2.3102: [RESERVED]

[12-1-95; 20.6.2.3102 NMAC - Rn, 20 NMAC 6.2.III.3102, 1-15-01]

20.6.2.3103 STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS: The following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection D of Section 20.6.2.3109 NMAC. Regardless of whether there is one contaminant or more than one contaminant present in ground water, when an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B, or C of this section, the existing

pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section. These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "*methods for chemical analysis of water and waste of the U.S. environmental protection agency*," with the exception that standards for mercury, organic compounds and non-aqueous phase liquids shall apply to the total unfiltered concentrations of the contaminants.

A. Human Health Standards-Ground water shall meet the standards of Subsection A and B of this section unless otherwise provided. If more than one water contaminant affecting human health is present, the toxic pollutant criteria as set forth in the definition of toxic pollutant in Section 20.6.2.1101 NMAC for the combination of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent.

Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.

(1)	Arsenic (As).....	0.1 mg/l
(2)	Barium (Ba).....	1.0 mg/l
(3)	Cadmium (Cd).....	0.01 mg/l
(4)	Chromium (Cr).....	0.05 mg/l
(5)	Cyanide (CN).....	0.2 mg/l
(6)	Fluoride (F).....	1.6 mg/l
(7)	Lead (Pb).....	0.05 mg/l
(8)	Total Mercury (Hg).....	0.002 mg/l
(9)	Nitrate (NO ₃ as N).....	10.0 mg/l
(10)	Selenium (Se).....	0.05 mg/l
(11)	Silver (Ag).....	0.05 mg/l
(12)	Uranium (U).....	0.03 mg/l
(13)	Radioactivity: Combined Radium-226 & Radium-228.....	30 pCi/l
(14)	Benzene.....	0.01 mg/l
(15)	Polychlorinated biphenyls (PCB's).....	0.001 mg/l
(16)	Toluene.....	0.75 mg/l
(17)	Carbon Tetrachloride.....	0.01 mg/l
(18)	1,2-dichloroethane (EDC)	0.01 mg/l
(19)	1,1-dichloroethylene (1,1-DCE)	0.005 mg/l
(20)	1,1,2,2-tetrachloroethylene (PCE)	0.02 mg/l
(21)	1,1,2-trichloroethylene (TCE)	0.1 mg/l
(22)	ethylbenzene.....	0.75 mg/l
(23)	total xylenes.....	0.62 mg/l
(24)	methylene chloride.....	0.1 mg/l
(25)	chloroform.....	0.1 mg/l
(26)	1,1-dichloroethane.....	0.025 mg/l
(27)	ethylene dibromide (EDB)	0.0001 mg/l
(28)	1,1,1-trichloroethane.....	0.06 mg/l
(29)	1,1,2-trichloroethane.....	0.01 mg/l
(30)	1,1,2,2-tetrachloroethane.....	0.01 mg/l
(31)	vinyl chloride.....	0.001 mg/l
(32)	PAHs: total naphthalene plus monomethylnaphthalenes.....	0.03 mg/l
(33)	benzo-a-pyrene.....	0.0007 mg/l

B. Other Standards for Domestic Water Supply

(1)	Chloride (Cl)	250.0 mg/l
(2)	Copper (Cu)	1.0 mg/l
(3)	Iron (Fe)	1.0 mg/l
(4)	Manganese (Mn)	0.2 mg/l
(6)	Phenols.....	0.005 mg/l
(7)	Sulfate (SO ₄)	600.0 mg/l
(8)	Total Dissolved Solids (TDS)	1000.0 mg/l
(9)	Zinc (Zn)	10.0 mg/l
(10)	pH.....	between 6 and 9

C. Standards for Irrigation Use - Ground water shall meet the standards of Subsection A, B, and C of this section unless otherwise provided.

(1)	Aluminum (Al).....	5.0 mg/l
(2)	Boron (B)	0.75 mg/l
(3)	Cobalt (Co)	0.05 mg/l

(4)	Molybdenum (Mo)	1.0 mg/l
(5)	Nickel (Ni)	0.2 mg/l

[2-18-77, 1-29-82, 11-17-83, 3-3-86, 12-1-95; 20.6.2.3103 NMAC - Rn, 20 NMAC 6.2.III.3103, 1-15-01; A, 9-26-04]

[Note: For purposes of application of the amended numeric uranium standard to past and current water discharges (as of 9-26-04), the new standard will not become effective until June 1, 2007. For any new water discharges, the uranium standard is effective 9-26-04.]

20.6.2.3104 DISCHARGE PERMIT REQUIRED: Unless otherwise provided by this Part, no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the secretary. When a permit has been issued, discharges must be consistent with the terms and conditions of the permit. In the event of a transfer of the ownership, control, or possession of a facility for which a discharge permit is in effect, the transferee shall have authority to discharge under such permit, provided that the transferee has complied with Section 20.6.2.3111 NMAC, regarding transfers.

[2-18-77, 12-24-87, 12-1-95; Rn & A, 20.6.2.3104 NMAC - 20 NMAC 6.2.III.3104, 1-15-01; A, 12-1-01]

20.6.2.3105 EXEMPTIONS FROM DISCHARGE PERMIT REQUIREMENT: Sections 20.6.2.3104 and 20.6.2.3106 NMAC do not apply to the following:

- A.** Effluent or leachate which conforms to all the listed numerical standards of Section 20.6.2.3103 NMAC and has a total nitrogen concentration of 10 mg/l or less, and does not contain any toxic pollutant. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access to obtain the appropriate samples, this exemption shall not apply;
- B.** Effluent which is regulated pursuant to 20.7.3 NMAC, "Liquid Waste Disposal and Treatment" regulations;
- C.** Water used for irrigated agriculture, for watering of lawns, trees, gardens or shrubs, or for irrigation for a period not to exceed five years for the revegetation of any disturbed land area, unless that water is received directly from any sewerage system;
- D.** Discharges resulting from the transport or storage of water diverted, provided that the water diverted has not had added to it after the point of diversion any effluent received from a sewerage system, that the source of the water diverted was not mine workings, and that the secretary has not determined that a hazard to public health may result;
- E.** Effluent which is discharged to a watercourse which is naturally perennial; discharges to dry arroyos and ephemeral streams are not exempt from the discharge permit requirement, except as otherwise provided in this section;
- F.** Those constituents which are subject to effective and enforceable effluent limitations in a National Pollutant Discharge Elimination System (NPDES) permit, where discharge onto or below the surface of the ground so that water contaminants may move directly or indirectly into ground water occurs downstream from the outfall where NPDES effluent limitations are imposed, unless the secretary determines that a hazard to public health may result. For purposes of this subsection, monitoring requirements alone do not constitute effluent limitations;
- G.** Discharges resulting from flood control systems;
- H.** Leachate which results from the direct natural infiltration of precipitation through disturbed materials, unless the secretary determines that a hazard to public health may result;
- I.** Leachate which results entirely from the direct natural infiltration of precipitation through undisturbed materials;
- J.** Leachate from materials disposed of in accordance with the Solid Waste Management Regulations (20 NMAC 9.1) adopted by the New Mexico Environmental Improvement Board;
- K.** Natural ground water seeping or flowing into conventional mine workings which re-enters the ground by natural gravity flow prior to pumping or transporting out of the mine and without being used in any mining process; this exemption does not apply to solution mining;
- L.** Effluent or leachate discharges resulting from activities regulated by a mining plan approved and permit issued by the New Mexico Coal Surface Mining Commission, provided that this exemption shall not be construed as limiting the application of appropriate ground water protection requirements by the New Mexico Coal Surface Mining Commission;
- M.** Effluent or leachate discharges which are regulated by the Oil Conservation Commission and the regulation of which by the Water Quality Control Commission would interfere with the exclusive authority granted under Section 70-2-12 NMSA 1978, or under other laws, to the Oil Conservation Commission.

[2-18-77, 6-26-80, 7-2-81, 12-24-87, 12-1-95; 20.6.2.3105 NMAC - Rn, 20 NMAC 6.2.III.3105, 1-15-01; A, 12-1-01; A, 8-1-14]

20.6.2.3106 APPLICATION FOR DISCHARGE PERMITS AND RENEWALS:

- A.** Any person who, before or on June 18, 1977, is discharging any of the water contaminants listed in 20.6.2.3103 NMAC or any toxic pollutant so that they may move directly or indirectly into ground water shall, within 120 days of receipt of written notice from the secretary that a discharge permit is required, or such longer time as the secretary shall for good cause allow, submit a discharge plan to the secretary for approval; such person may discharge without a discharge permit until 240 days after

APPENDIX D

SUMMARY OF EPA/NMED/RCRA ACTIVITY

2015 Major Refinery Activities and Events

January

- The annual Financial Assurance Cost Estimate was sent to the HWB.

February

- The annual Facility Wide Groundwater Monitoring Workplan update was submitted to the HWB.

March/Sept

- The semi-annual pond sampling conducted.

April

- Submitted notification to NMED/OCD of new area of contamination at north drainage ditch.
- Drilling and soil boring continued southwest of aeration lagoons.

August

- 2014 Groundwater Discharge report was completed and sent to NMED/OCD.
- Conducted annual groundwater sampling.
- Submitted OW-29 and OW-30 and North Drainage Ditch Area Investigation Work Plan

October

- NMED approval received regarding request to extend corrective action submittal dates RCRA Post-Closure Permit for SWMU 11 & 12.

December

- A summary report Evaporation Pond Repairs was sent to NMED HWB and OCD.

Year 2015

- During numerous months of 2015, contractors performed repair/improvements to the evaporation pond earthen berms improving slope and stability.

APPENDIX E

SUMMARY OF ALL LEAKS, SPILLS AND RELEASES

SPILL SUMMARY REPORT – 2015

DATE	INCIDENT
------	----------

2/7/15	At approximately 1100 hr the offsite operator opened tank 703 (FCC feed) and the FCC/Rail Road Rack loading pump valve. The bleeder to T-703 suction side was left open. The pump was turned on allowing FCC feed to flow out of the valve onto the ground and was contained in an earthen dike. The affected area was 140 feet long by 20 to 30 ft wide underneath the center pipe rack in the Hot Oil Tank Farm near T-703. Initial Cleanup was initiated immediately using onsite vacuum trucks and contract labor. Additional contract personnel were dispatched to begin more extensive cleanup operations on 2/8/15. The FCC material was removed using a super sucker vacuum truck and manual labor with hand shovels. Cleanup was completed after 16 non-consecutive days and finalized on 5/8/15. Approximately 84 tons of TPH material was removed and disposed of.
--------	---

7/4/15	The Gallup refinery experienced a power outage due to Tri-state Power Company equipment issues from a rainstorm resulting in facility wide power failure. Tri-state was immediately notified and the power failure lasted 2 hours. Sulfur Dioxide was released to the atmosphere over a two day period due to shut-down and startup of the refinery totaling 1,738 pounds.
--------	--

9/23/15	Marketing tank (T-1001) containing dyed diesel overflowed (5.7 bbl) at 0815 hr through a two inch overfill line at the top of the tank contained in an earthen dike. The onsite fire department placed 23 gallons of a foam/water mixture on the affected area. A vacuum truck immediately removed 230 gallons of free liquid. Soil cleanup began on 9/29/15 to remove contaminated TPH soil from the earthen containment. Cleanup was completed on 10/29/15 removing 83,077 lbs of contaminated soil and shipped offsite for disposal.
---------	---

12/27/15	Wastewater operators were back flushing the south carbon canister and wastewater (158 bbl) was released from the rupture disk located on the outlet side of the canister. The wastewater believed to contain < .5 ppm benzene was vacuumed up with vacuum truck and placed back into the WW treatment system.
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District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: WESTERN REFINING	Contact: Beck Larsen	
Address: I-40 / EXIT 39, JAMESTOWN, NM 87347	Telephone No. (505) 722-0258	
Facility Name: WESTERN RENINING (GALLUP REFINERY)	Facility Type: Petroleum Refinery	
Surface Owner	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	28	15 N	15 W					MCKINLEY

Latitude 35° 029' 13.2" Longitude 108° 025' 28.4"

NATURE OF RELEASE

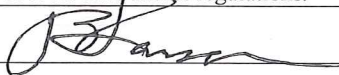
Type of Release: FCC Feed	Volume of Release 50 bbls	Volume Recovery Estimated at 50 bbls
Source of Release: Open Bleeder Valve at T-703 Suction Pump	Date and Hour of Occurrence 02/07/15 @ 1100 hrs	Date and Hour of Discovery 02/07/15 @ 1100 hrs
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD (B. Powel/ C. Chavez); NMED (R Horowitz/K. Vanhorn); NM St Police	
By Whom? Beck Larsen	Date and Hour: 2/7/15- (1418, 1418); (1408, 1411); 1405	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.* No (Area of spill was localized inside T-703 dike area.)

Describe Cause of Problem and Remedial Action Taken.* On February 7, 2015, T-703 suction valve and the FCC/RRR loading pump bleeder valve was left open allowing FCC Feed to flow out of the Sample valve onto the ground. The FCC Feed was contained within an earthen dike in the tank farm. Spill Coordinates: are approximately Lat: 35 deg 29'13.2" N, Long: 108 deg 25'28.4" W. Initial cleanup was initiated immediately using onsite vacuum trucks and contract labor. Additional contract personnel were dispatched to begin a more extensive clean up operations on 2/8/2015. Cleanup was completed after 16 non-consecutive days and finalized on 5/8/2015.

Describe Area Affected and Cleanup Action Taken.* The affected area was about 140 feet long by 20-30 feet wide (estimated) underneath the center pipe rack in the Hot Oil Tank Farm near Tank T-703 inside an earthen dike. Lat: 35 deg 29'13.2" N, Long: 108 deg 25'28.4" W. Initial soil samples were collected on 3/10/2015 under # 1503615 in order to determine the extent of contamination. (see attached analytical) The FCC material was removed via super- sucker and by manual labor with shovels. The material was put into roll-off boxes for disposal. Confirmation samples were collected on 7/9/2015 under Lab# 1507492. (see attached analytical) The project of spill cleanup is completed. Initial analysis revealed that this material is characteristically non-hazardous and is classified as Total Petroleum Hydrocarbon (TPH) or Petroleum Contaminated Soil (PCS). This contaminated soil was transported offsite on June 3 and 4 to a non-hazardous landfill (NM Solid Waste Authority, Redrock Facility) in Thoreau, NM. Approximately 84 tons (~69 yd³) of TPH material was removed. (Photos attached)

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Beck Larsen	Approved by Environmental Specialist:	
Title: Environmental Engineer	Approval Date:	Expiration Date:
E-mail Address: thurman.larsen@wnr.com	Conditions of Approval:	Attached ☐
Date: 08/27/2015	Phone: (505) 722-0258	

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company: WESTERN REFINING	Contact: Ed Riege	
Address: I-40 / EXIT 39, JAMESTOWN, NM 87347	Telephone No. (505) 722-0258	
Facility Name: WESTERN REFINING (GALLUP REFINERY)	Facility Type: Petroleum Refinery	
Surface Owner	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	28	15 N	15 W					MCKINLEY

Latitude 35° 02' 024" Longitude 108° 02' 024"

NATURE OF RELEASE

Type of Release: Sulfur Dioxide (SO2) (Air Release)	Volume of Release 1738 pounds	Volume Recovered: N/A
Source of Release: Refinery Wide Power Outage	Date and Hour of Occurrence 07/04/15 @ 1337 hrs	Date and Hour of Discovery 07/06/15 @ 0800 hrs
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NRC (Kevin Williams- Rpt # 1121945); LEPC (Courtney); SERC (Yvone Gaintz); OCD (B. Powel/ C. Chavez); NMED (K. Vanhorn)	
By Whom? Ed Riege/Loretta Morgan	Date and Hour: 4/6/15-(07:49); (09:05); (0906); (1000, 1005); (10:10)	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.* No

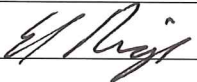
Describe Cause of Problem and Remedial Action Taken.*

Western Refining (Gallup Refinery) experienced a power outage on July 4, 2015 due to Tri-state Power Company equipment issues from a rainstorm resulting in a facility wide power failure. The power failure lasted for about 2 hours, but access to continuous emission monitoring data and reports of monitoring conditions was not until Monday morning.

Describe Area Affected and Cleanup Action Taken.*

Tri-state was immediately notified of the issue and to obtain the necessary instructions for resetting the equipment so as to get the refinery online. 1738 pounds of Sulfur Dioxide (SO2) was released to the atmosphere over a two day period due to shutdown and startup of refinery.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Ed Riege	Approved by Environmental Specialist:	
Title: Environmental Manager	Approval Date:	Expiration Date:
E-mail Address: ed.riege@wnr.com	Conditions of Approval:	Attached ☐
Date: 07/9/2015 Phone: (505) 722-0217		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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Energy Minerals and Natural Resources

Oil Conservation Division
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Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: WESTERN REFINING	Contact: Beck Larsen	
Address: I-40 / EXIT 39, JAMESTOWN, NM 87347	Telephone No. (505) 722-0258	
Facility Name: WESTERN RENINING (GALLUP REFINERY)	Facility Type: Petroleum Refinery	
Surface Owner	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	28	15 N	15 W					MCKINLEY

Latitude 35° 029' 024" Longitude 108° 024' 024"

NATURE OF RELEASE

Type of Release: Dyed Diesel Tank Overflow	Volume of Release 5.7 bbls (239 gal)	Volume Recovered: 5.5 bbls (230 gal)
Source of Release: T1001 Marketing Tank Overflow (Dyed Diesel)	Date and Hour of Occurrence 09/23/15 @ 0815 hrs	Date and Hour of Discovery 09/23/15 @ 0815 hrs
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom? OCD (B. Powel/ C. Chavez); NMED (K. Vanhorn)	
By Whom? Beck Larsen	Date and Hour: 09/25/15 (0929- msg/0925-msg); 0934	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.* No

Describe Cause of Problem and Remedial Action Taken.* Marketing Tank (T1001), a dyed diesel tank, overflowed at 0815 through a 2 inch over-fill line at the top of the tank. The fill valve to the tank was blocked in to prevent further diesel spilling onto the ground and Kurtz Fire Department was called to place about 3 gallons/20 gallon of foam/water mixture on the affected area. Maintenance and the Environmental departments were both notified in order to assess the situation and to commence cleanup operations. T1001 is located on a concrete slab within a secondary earthen dike. An onsite vacuum truck was dispatched to begin removing all accumulated free liquid. The vacuum trucked removed about 230 gallons on free liquid.

Describe Area Affected and Cleanup Action Taken.* Liquid removal began immediately (September 23) but soil remediation cleanup operation began on September 29, 2015 under Work Order # 2614643 to remove the potentially contaminated TPH soil from the affected area. Cleanup operation was completed October 29, 2015. Engineering quantification provided a release calculation of about 5.7 bbls (~ 239 gallons). Approximately 38 to 44 cubic yards (83,077 lbs) of contaminated soil was removed from the affected area. Based on the most recent analysis, this material was shipped to US Ecology in Beatty, NV, a non-hazardous landfill for disposal as "Non-RCRA/Non-DOT Regulated Material Solid (Soil Contaminated with Diesel Fuel)".

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Beck Larsen	Approved by Environmental Specialist:		
Title: Environmental Engineer	Approval Date:	Expiration Date:	
E-mail Address: thurman.larsen@wnr.com	Conditions of Approval:		Attached ☐
Date: 10/07/2015	Phone: (505) 722-0258		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Western Refining Southwest Inc.	Contact: Loretta Morgan
Address: I-40 Exit 39 Jamestown, NM 87347	Telephone No: 505-722-3833
Facility Name: Gallup Refinery	Facility Type: Oil Refinery

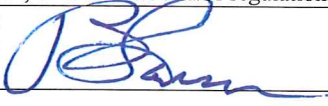
Surface Owner: Western Refining	Mineral Owner: Western Refining	Lease No.
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LOCATION OF RELEASE

Unit Letter	Section 23&33	Township 15N	Range 15W	Feet from the	North/South Line	Feet from the	East/West Line	County McKinley
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Latitude 35°29'22" Longitude 108°25'24"

NATURE OF RELEASE

Type of Release: Treated Wastewater	Volume of Release: Estimate 158 barrel of wastewater	Volume Recovered: Undetermined
Source of Release: Waste Water Treatment Plant Carbon Canister	Date and Hour of Occurrence: 12/27/2015 4:00 pm	Date and Hour of Discovery: 12/27/2015 4:00 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☒ Not Required	If YES, To Whom? Ruth Horowitz, NMED Hazardous Waste Bureau (phone call left message) Kristen VanHorn, NMED Hazardous Waste Bureau (phone call left message) Brandon Powell, Oil Conservation Division (phone call left message)	
By Whom? Loretta Morgan	Date and Hour: 12/27/2015 8:16 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. No, did not impact watercourse.	
If a Watercourse was Impacted, Describe Fully. Not applicable		
Describe Cause of Problem and Remedial Action Taken: At approximately 4 pm on 12/27/2015, Wastewater Operators were back flushing the south carbon canister and wastewater was released from the rupture disk located on the outlet side of the canister due to a block valve downstream. Immediate action was taken to clean up the wastewater that was release. The Maintenance Department was called out to begin vacuuming up the area. Carbon canisters are located downstream of MPPE unit. The wastewater was treated prior to the release with no environmental impact or safety concerns. A benzene water sample was collected and it was found to be less than RCRA limit of 0.5 ppm.		
Describe Area Affected and Cleanup Action Taken: The Carbon Canisters are located on the west side of waste water treatment plant. Standing water was vacuumed up by Maintenance and contract personnel.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Beck Larsen	Approved by District Supervisor:	
Title: Environmental Engineer – Gallup Refinery	Approval Date:	Expiration Date:
E-mail Address: Thurman.Larsen@wnr.com	Conditions of Approval:	
Date: 1/8/2016	Phone: 505-722-0258	Attached ☐

APPENDIX F

TEMPORARY LAND FARM ANALYTICAL RESULTS

(ON ATTACHED CD)



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 08, 2015

Ed Riege

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: OCD Central Landfarm Semiannual Sampling

OrderNo.: 1504287

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 10 sample(s) on 4/8/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 1504287
Date: 5/8/2015

CLIENT: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Analytical Notes Regarding EPA Method 8270:
One of the surrogate compounds was not recoverable due to dilution and matrix interferences.

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-01-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 1:45:00 PM

Lab ID: 1504287-001

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	250	30		mg/Kg	20	4/17/2015 11:40:24 AM	18745
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Benzene	ND	0.048		mg/Kg	1	4/9/2015 12:26:24 PM	18573
Toluene	ND	0.048		mg/Kg	1	4/9/2015 12:26:24 PM	18573
Ethylbenzene	ND	0.048		mg/Kg	1	4/9/2015 12:26:24 PM	18573
Xylenes, Total	ND	0.096		mg/Kg	1	4/9/2015 12:26:24 PM	18573
Surr: 1,2-Dichloroethane-d4	106	70-130		%REC	1	4/9/2015 12:26:24 PM	18573
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	4/9/2015 12:26:24 PM	18573
Surr: Dibromofluoromethane	108	70-130		%REC	1	4/9/2015 12:26:24 PM	18573
Surr: Toluene-d8	91.7	70-130		%REC	1	4/9/2015 12:26:24 PM	18573
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	4/14/2015 12:00:00 PM	18606

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 32
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-02-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 2:17:00 PM

Lab ID: 1504287-002

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	160	30		mg/Kg	20	4/17/2015 12:05:13 PM	18745
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Benzene	ND	0.048		mg/Kg	1	4/9/2015 12:55:21 PM	18573
Toluene	ND	0.048		mg/Kg	1	4/9/2015 12:55:21 PM	18573
Ethylbenzene	ND	0.048		mg/Kg	1	4/9/2015 12:55:21 PM	18573
Xylenes, Total	ND	0.096		mg/Kg	1	4/9/2015 12:55:21 PM	18573
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	4/9/2015 12:55:21 PM	18573
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	4/9/2015 12:55:21 PM	18573
Surr: Dibromofluoromethane	106	70-130		%REC	1	4/9/2015 12:55:21 PM	18573
Surr: Toluene-d8	89.6	70-130		%REC	1	4/9/2015 12:55:21 PM	18573
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	4/14/2015 12:00:00 PM	18606

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 32
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-03-04062015 MS

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 1:05:00 PM

Lab ID: 1504287-003

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	330	30		mg/Kg	20	4/17/2015 1:19:40 PM	18745
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Benzene	ND	0.047		mg/Kg	1	4/9/2015 1:24:07 PM	18573
Toluene	ND	0.047		mg/Kg	1	4/9/2015 1:24:07 PM	18573
Ethylbenzene	ND	0.047		mg/Kg	1	4/9/2015 1:24:07 PM	18573
Xylenes, Total	ND	0.095		mg/Kg	1	4/9/2015 1:24:07 PM	18573
Surr: 1,2-Dichloroethane-d4	106	70-130		%REC	1	4/9/2015 1:24:07 PM	18573
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	4/9/2015 1:24:07 PM	18573
Surr: Dibromofluoromethane	107	70-130		%REC	1	4/9/2015 1:24:07 PM	18573
Surr: Toluene-d8	93.6	70-130		%REC	1	4/9/2015 1:24:07 PM	18573
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	4/16/2015 12:00:00 PM	18606

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 32
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 2:45:00 PM

Lab ID: 1504287-004

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	220	30		mg/Kg	20	4/17/2015 1:44:29 PM	18745
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Benzene	ND	0.047		mg/Kg	1	4/9/2015 2:50:46 PM	18573
Toluene	ND	0.047		mg/Kg	1	4/9/2015 2:50:46 PM	18573
Ethylbenzene	ND	0.047		mg/Kg	1	4/9/2015 2:50:46 PM	18573
Xylenes, Total	ND	0.093		mg/Kg	1	4/9/2015 2:50:46 PM	18573
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%REC	1	4/9/2015 2:50:46 PM	18573
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	4/9/2015 2:50:46 PM	18573
Surr: Dibromofluoromethane	105	70-130		%REC	1	4/9/2015 2:50:46 PM	18573
Surr: Toluene-d8	95.2	70-130		%REC	1	4/9/2015 2:50:46 PM	18573
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	24	20		mg/Kg	1	4/14/2015 12:00:00 PM	18606

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 5 of 32
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BD-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015

Lab ID: 1504287-005

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	350	30		mg/Kg	20	4/17/2015 2:09:19 PM	18745
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: cadg
Benzene	ND	0.050		mg/Kg	1	4/9/2015 3:19:41 PM	18573
Toluene	ND	0.050		mg/Kg	1	4/9/2015 3:19:41 PM	18573
Ethylbenzene	ND	0.050		mg/Kg	1	4/9/2015 3:19:41 PM	18573
Xylenes, Total	ND	0.099		mg/Kg	1	4/9/2015 3:19:41 PM	18573
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	4/9/2015 3:19:41 PM	18573
Surr: 4-Bromofluorobenzene	99.6	70-130		%REC	1	4/9/2015 3:19:41 PM	18573
Surr: Dibromofluoromethane	104	70-130		%REC	1	4/9/2015 3:19:41 PM	18573
Surr: Toluene-d8	92.4	70-130		%REC	1	4/9/2015 3:19:41 PM	18573
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	4/14/2015 12:00:00 PM	18606

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-TZ-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 12:30:00 PM

Lab ID: 1504287-006

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8082: PCB'S							Analyst: SCC
Aroclor 1016	ND	0.20		mg/Kg	1	4/25/2015 10:22:49 AM	18660
Aroclor 1221	ND	0.20		mg/Kg	1	4/25/2015 10:22:49 AM	18660
Aroclor 1232	ND	0.20		mg/Kg	1	4/25/2015 10:22:49 AM	18660
Aroclor 1242	ND	0.20		mg/Kg	1	4/25/2015 10:22:49 AM	18660
Aroclor 1248	ND	0.20		mg/Kg	1	4/25/2015 10:22:49 AM	18660
Aroclor 1254	ND	0.20		mg/Kg	1	4/25/2015 10:22:49 AM	18660
Aroclor 1260	ND	0.20		mg/Kg	1	4/25/2015 10:22:49 AM	18660
Surr: Decachlorobiphenyl	68.0	37.5-161		%REC	1	4/25/2015 10:22:49 AM	18660
Surr: Tetrachloro-m-xylene	60.0	28.1-149		%REC	1	4/25/2015 10:22:49 AM	18660
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: BCN
Diesel Range Organics (DRO)	350	95		mg/Kg	10	4/9/2015 4:08:24 PM	18574
Motor Oil Range Organics (MRO)	700	480		mg/Kg	10	4/9/2015 4:08:24 PM	18574
Surr: DNOP	128	63.5-128	S	%REC	10	4/9/2015 4:08:24 PM	18574
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/9/2015 11:56:05 AM	18573
Surr: BFB	87.7	80-120		%REC	1	4/9/2015 11:56:05 AM	18573
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	10	6.0		mg/Kg	20	4/17/2015 2:34:07 PM	18745
Chloride	130	30		mg/Kg	20	4/17/2015 2:34:07 PM	18745
Nitrogen, Nitrate (As N)	2.7	0.30		mg/Kg	1	4/17/2015 2:21:43 PM	18745
Sulfate	1200	30		mg/Kg	20	4/17/2015 2:34:07 PM	18745
EPA METHOD 7471: MERCURY							Analyst: MED
Mercury	ND	0.16		mg/Kg	5	4/15/2015 2:53:36 PM	18690
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	4/14/2015 9:54:36 AM	18669
Barium	350	0.20		mg/Kg	2	4/14/2015 9:56:11 AM	18669
Cadmium	ND	0.099		mg/Kg	1	4/14/2015 9:54:36 AM	18669
Chromium	14	0.30		mg/Kg	1	4/14/2015 9:54:36 AM	18669
Copper	9.3	0.30		mg/Kg	1	4/14/2015 9:54:36 AM	18669
Iron	17000	99		mg/Kg	100	4/14/2015 10:08:07 AM	18669
Lead	35	0.25		mg/Kg	1	4/14/2015 9:54:36 AM	18669
Manganese	410	0.20		mg/Kg	2	4/14/2015 9:56:11 AM	18669
Selenium	ND	2.5		mg/Kg	1	4/14/2015 9:54:36 AM	18669
Silver	ND	0.25		mg/Kg	1	4/14/2015 9:54:36 AM	18669
Uranium	ND	4.9		mg/Kg	1	4/14/2015 9:54:36 AM	18669
Zinc	52	2.5		mg/Kg	1	4/18/2015 2:09:34 PM	18669

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-TZ-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 12:30:00 PM

Lab ID: 1504287-006

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Acenaphthylene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Aniline	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Anthracene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Azobenzene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Benz(a)anthracene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Benzo(a)pyrene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Benzo(b)fluoranthene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Benzo(g,h,i)perylene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Benzo(k)fluoranthene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Benzoic acid	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Benzyl alcohol	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Bis(2-chloroethoxy)methane	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Bis(2-chloroethyl)ether	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Bis(2-chloroisopropyl)ether	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Bis(2-ethylhexyl)phthalate	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
4-Bromophenyl phenyl ether	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Butyl benzyl phthalate	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Carbazole	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
4-Chloro-3-methylphenol	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
4-Chloroaniline	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2-Chloronaphthalene	ND	2.5		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2-Chlorophenol	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Chrysene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Di-n-butyl phthalate	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Di-n-octyl phthalate	ND	4.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Dibenz(a,h)anthracene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Dibenzofuran	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
1,2-Dichlorobenzene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
1,3-Dichlorobenzene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
1,4-Dichlorobenzene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
3,3'-Dichlorobenzidine	ND	2.5		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Diethyl phthalate	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Dimethyl phthalate	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2,4-Dichlorophenol	ND	4.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2,4-Dimethylphenol	ND	3.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2,4-Dinitrophenol	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 8 of 32
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-TZ-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 12:30:00 PM

Lab ID: 1504287-006

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
2,4-Dinitrotoluene	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2,6-Dinitrotoluene	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Fluoranthene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Fluorene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Hexachlorobenzene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Hexachlorobutadiene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Hexachlorocyclopentadiene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Hexachloroethane	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Isophorone	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
1-Methylnaphthalene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2-Methylnaphthalene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2-Methylphenol	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
3+4-Methylphenol	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
N-Nitrosodi-n-propylamine	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Naphthalene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2-Nitroaniline	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
3-Nitroaniline	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
4-Nitroaniline	ND	4.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Nitrobenzene	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2-Nitrophenol	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
4-Nitrophenol	ND	2.5		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Pentachlorophenol	ND	4.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Phenanthrene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Phenol	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Pyrene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Pyridine	ND	5.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	1	4/15/2015 11:00:23 PM	18661
Surr: 2-Fluorophenol	67.2	26.4-129		%REC	1	4/15/2015 11:00:23 PM	18661
Surr: Phenol-d5	75.1	34.8-118		%REC	1	4/15/2015 11:00:23 PM	18661
Surr: 2,4,6-Tribromophenol	76.8	26.8-128		%REC	1	4/15/2015 11:00:23 PM	18661
Surr: Nitrobenzene-d5	83.3	35.8-124		%REC	1	4/15/2015 11:00:23 PM	18661
Surr: 2-Fluorobiphenyl	86.9	24.5-139		%REC	1	4/15/2015 11:00:23 PM	18661
Surr: 4-Terphenyl-d14	0	29.4-129	S	%REC	1	4/15/2015 11:00:23 PM	18661
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Benzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-TZ-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 12:30:00 PM

Lab ID: 1504287-006

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Toluene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Ethylbenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Naphthalene	ND	0.099		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1-Methylnaphthalene	ND	0.20		mg/Kg	1	4/9/2015 3:48:39 PM	18573
2-Methylnaphthalene	ND	0.20		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Acetone	ND	0.74		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Bromobenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Bromodichloromethane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Bromoform	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Bromomethane	ND	0.15		mg/Kg	1	4/9/2015 3:48:39 PM	18573
2-Butanone	ND	0.49		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Carbon disulfide	ND	0.49		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Carbon tetrachloride	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Chlorobenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Chloroethane	ND	0.099		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Chloroform	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Chloromethane	ND	0.15		mg/Kg	1	4/9/2015 3:48:39 PM	18573
2-Chlorotoluene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
4-Chlorotoluene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
cis-1,2-DCE	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Dibromochloromethane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Dibromomethane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,1-Dichloroethane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,1-Dichloroethene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,2-Dichloropropane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,3-Dichloropropane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
2,2-Dichloropropane	ND	0.099		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,1-Dichloropropene	ND	0.099		mg/Kg	1	4/9/2015 3:48:39 PM	18573

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-TZ-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 12:30:00 PM

Lab ID: 1504287-006

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Hexachlorobutadiene	ND	0.099		mg/Kg	1	4/9/2015 3:48:39 PM	18573
2-Hexanone	ND	0.49		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Isopropylbenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
4-Isopropyltoluene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Methylene chloride	ND	0.15		mg/Kg	1	4/9/2015 3:48:39 PM	18573
n-Butylbenzene	ND	0.15		mg/Kg	1	4/9/2015 3:48:39 PM	18573
n-Propylbenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
sec-Butylbenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Styrene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
tert-Butylbenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
trans-1,2-DCE	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Trichlorofluoromethane	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Vinyl chloride	ND	0.049		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Xylenes, Total	ND	0.099		mg/Kg	1	4/9/2015 3:48:39 PM	18573
Surr: Dibromofluoromethane	107	70-130		%REC	1	4/9/2015 3:48:39 PM	18573
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	4/9/2015 3:48:39 PM	18573
Surr: Toluene-d8	89.9	70-130		%REC	1	4/9/2015 3:48:39 PM	18573
Surr: 4-Bromofluorobenzene	96.6	70-130		%REC	1	4/9/2015 3:48:39 PM	18573
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	370	20		mg/Kg	1	4/14/2015 12:00:00 PM	18606

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OCD-2121-04072015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/7/2015 12:16:00 PM

Lab ID: 1504287-007

Matrix: SOIL

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: LGT	
Chloride	160	30		mg/Kg	20	4/17/2015 3:23:47 PM	18745

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 12 of 32
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EB-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 1:30:00 PM

Lab ID: 1504287-008

Matrix: AQUEOUS

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: KJH	
Benzene	ND	1.0		µg/L	1	4/8/2015 1:32:26 PM	R25378
Toluene	ND	1.0		µg/L	1	4/8/2015 1:32:26 PM	R25378
Ethylbenzene	ND	1.0		µg/L	1	4/8/2015 1:32:26 PM	R25378
Xylenes, Total	ND	1.5		µg/L	1	4/8/2015 1:32:26 PM	R25378
Surr: 1,2-Dichloroethane-d4	98.9	70-130		%REC	1	4/8/2015 1:32:26 PM	R25378
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	4/8/2015 1:32:26 PM	R25378
Surr: Dibromofluoromethane	101	70-130		%REC	1	4/8/2015 1:32:26 PM	R25378
Surr: Toluene-d8	96.9	70-130		%REC	1	4/8/2015 1:32:26 PM	R25378

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 13 of 32
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-04062015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 4/6/2015 1:35:00 PM

Lab ID: 1504287-009

Matrix: AQUEOUS

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: KJH	
Benzene	ND	1.0		µg/L	1	4/8/2015 2:01:09 PM	R25378
Toluene	ND	1.0		µg/L	1	4/8/2015 2:01:09 PM	R25378
Ethylbenzene	ND	1.0		µg/L	1	4/8/2015 2:01:09 PM	R25378
Xylenes, Total	ND	1.5		µg/L	1	4/8/2015 2:01:09 PM	R25378
Surr: 1,2-Dichloroethane-d4	121	70-130		%REC	1	4/8/2015 2:01:09 PM	R25378
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	4/8/2015 2:01:09 PM	R25378
Surr: Dibromofluoromethane	119	70-130		%REC	1	4/8/2015 2:01:09 PM	R25378
Surr: Toluene-d8	102	70-130		%REC	1	4/8/2015 2:01:09 PM	R25378

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 14 of 32
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1504287

Date Reported: 5/8/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: OCD Central Landfarm Semiannual Sam

Collection Date:

Lab ID: 1504287-010

Matrix: TRIP BLANK

Received Date: 4/8/2015 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: KJH	
Benzene	ND	1.0		µg/L	1	4/8/2015 2:29:54 PM	R25378
Toluene	ND	1.0		µg/L	1	4/8/2015 2:29:54 PM	R25378
Ethylbenzene	ND	1.0		µg/L	1	4/8/2015 2:29:54 PM	R25378
Xylenes, Total	ND	1.5		µg/L	1	4/8/2015 2:29:54 PM	R25378
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	4/8/2015 2:29:54 PM	R25378
Surr: 4-Bromofluorobenzene	111	70-130		%REC	1	4/8/2015 2:29:54 PM	R25378
Surr: Dibromofluoromethane	105	70-130		%REC	1	4/8/2015 2:29:54 PM	R25378
Surr: Toluene-d8	96.6	70-130		%REC	1	4/8/2015 2:29:54 PM	R25378

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 15 of 32
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

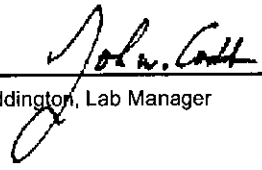
Batch #: 150409032
Project Name: 1504287

Analytical Results Report

Sample Number	150409032-001	Sampling Date	4/6/2015	Date/Time Received	4/9/2015 11:15 AM
Client Sample ID	1504287-006D / CENTRALOCD-TZ-04062015			Sampling Time	12:30 PM
Matrix	Soil				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	1.31	mg/Kg	0.295	4/15/2015	CRW	EPA 335.4	
%moisture	15.9	Percent		4/15/2015	CRW	%moisture	

Authorized Signature


John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

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The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 150409032
Project Name: 1504287

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.511	mg/kg	0.5	102.2	90-110	4/15/2015	4/15/2015

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
150409032-001	Cyanide	1.31	16.5	mg/kg	14.75	103.0	90-110	4/15/2015	4/15/2015

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	16.3	mg/kg	14.75	101.6	1.2	0-25	4/15/2015	4/15/2015

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/Kg	0.5	4/15/2015	4/15/2015

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:Cert0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 1504287
Pace Project No.: 30145292

Sample: 1504287-006C CentralOCD- Lab ID: 30145292001 Collected: 04/06/15 12:30 Received: 04/10/15 10:45 Matrix: Solid
TZ-040

PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1	1.059 ± 0.233 (0.160) C:NA T:NA	pCi/g	05/08/15 10:26	13982-63-3	
Radium-228	EPA 901.1	1.392 ± 0.289 (0.241) C:NA T:NA	pCi/g	05/08/15 10:26	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 1504287
Pace Project No.: 30145292

QC Batch:	RADC/24225	Analysis Method:	EPA 901.1
QC Batch Method:	EPA 901.1	Analysis Description:	901.1 Gamma Spec Ingrowth
Associated Lab Samples:	30145292001		

METHOD BLANK:	884958	Matrix:	Solid
Associated Lab Samples:	30145292001		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.137 ± 0.089 (0.192) C:NA T:NA	pCi/g	05/08/15 09:52	
Radium-228	0.000 ± 0.044 (0.487) C:NA T:NA	pCi/g	05/08/15 09:52	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-18745	SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS	Batch ID:	18745		RunNo:	25615				
Prep Date:	4/17/2015	Analysis Date:	4/17/2015		SeqNo:	758950		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.30								
Chloride	ND	1.5								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

Sample ID	LCS-18745		SampType: LCS		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 18745		RunNo: 25615					
Prep Date:	4/17/2015		Analysis Date: 4/17/2015		SeqNo: 758951		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.30	1.500	0	97.3	90	110			
Chloride	14	1.5	15.00	0	92.3	90	110			
Nitrogen, Nitrate (As N)	7.3	0.30	7.500	0	97.5	90	110			
Sulfate	28	1.5	30.00	0	94.7	90	110			

Sample ID	1504287-003AMS		SampType: MS		TestCode: EPA Method 300.0: Anions					
Client ID:	CentralOCD-03-0406		Batch ID: 18745		RunNo: 25615					
Prep Date:	4/17/2015		Analysis Date: 4/17/2015		SeqNo: 758962		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.4	0.30	1.500	2.186	14.0	13.6	100			
Nitrogen, Nitrate (As N)	17	0.30	7.500	8.487	114	85.3	110			S

Sample ID	1504287-003AMSD		SampType: MSD		TestCode: EPA Method 300.0: Anions					
Client ID:	CentralOCD-03-0406		Batch ID: 18745		RunNo: 25615					
Prep Date:	4/17/2015		Analysis Date: 4/17/2015		SeqNo: 758963		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.4	0.30	1.500	2.186	14.7	13.6	100	0.438	20	
Nitrogen, Nitrate (As N)	17	0.30	7.500	8.487	118	85.3	110	1.45	20	S

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-18606		SampType: MBLK		TestCode: EPA Method 418.1: TPH					
Client ID:	PBS		Batch ID: 18606		RunNo: 25503					
Prep Date:	4/9/2015		Analysis Date: 4/14/2015		SeqNo: 755191		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-18606		SampType: LCS		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS		Batch ID: 18606		RunNo: 25503					
Prep Date:	4/9/2015		Analysis Date: 4/14/2015		SeqNo: 755192		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	93	20	100.0	0	92.7	86.7	126			

Sample ID	LCSD-18606			SampType:	LCSD		TestCode:	EPA Method 418.1: TPH			
Client ID:	LCSS02			Batch ID:	18606		RunNo:	25503			
Prep Date:	4/9/2015			Analysis Date:	4/14/2015		SeqNo:	755193		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Petroleum Hydrocarbons, TR	98	20	100.0	0	97.9	86.7	126	5.45	20		

Sample ID	1504287-003AMS		SampType: MS		TestCode: EPA Method 418.1: TPH					
Client ID:	CentralOCD-03-0406		Batch ID: 18606		RunNo: 25553					
Prep Date:	4/9/2015		Analysis Date: 4/16/2015		SeqNo: 756803		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	93	20	100.0	0	92.9	80	120			

Sample ID	1504287-003AMSD			SampType:	MSD		TestCode:	EPA Method 418.1: TPH			
Client ID:	CentralOCD-03-0406			Batch ID:	18606		RunNo:	25553			
Prep Date:	4/9/2015		Analysis Date:	4/16/2015		SeqNo:	756804		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Petroleum Hydrocarbons, TR	99	20	100.7	0	98.2	80	120	6.19	20		

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-18574	SampType: MBLK		TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID:	PBS	Batch ID: 18574		RunNo: 25386						
Prep Date:	4/8/2015	Analysis Date: 4/9/2015		SeqNo: 751714			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		95.5	63.5	128			

Sample ID	LCS-18574		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 18574		RunNo: 25386					
Prep Date:	4/8/2015		Analysis Date: 4/9/2015		SeqNo: 751806		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.1	67.8	130			
Surr: DNOP	4.6		5.000		92.4	63.5	128			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-18573		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 18573		RunNo: 25395					
Prep Date:	4/8/2015		Analysis Date: 4/9/2015		SeqNo: 751932		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	850		1000		85.2	80	120			

Sample ID	LCS-18573		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 18573		RunNo: 25395					
Prep Date:	4/8/2015		Analysis Date: 4/9/2015		SeqNo: 751933		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	64	130			
Surr: BFB	920		1000		91.9	80	120			

Sample ID	1504287-006AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	CentralOCD-TZ-040		Batch ID: 18573		RunNo: 25395					
Prep Date:	4/8/2015		Analysis Date: 4/9/2015		SeqNo: 751936		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.63	0	96.1	47.9	144			
Surr: BFB	940		985.2		95.9	80	120			

Sample ID	1504287-006AMSD		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	CentralOCD-TZ-040		Batch ID: 18573		RunNo: 25395					
Prep Date:	4/8/2015		Analysis Date: 4/9/2015		SeqNo: 751937		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.9	24.61	0	104	47.9	144	7.82	29.9	
Surr: BFB	960		984.3		97.6	80	120	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-18660	SampType: MBLK			TestCode: EPA Method 8082: PCB's					
Client ID:	PBS	Batch ID: 18660			RunNo: 25757					
Prep Date:	4/13/2015	Analysis Date: 4/24/2015			SeqNo: 763490		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.020								
Aroclor 1221	ND	0.020								
Aroclor 1232	ND	0.020								
Aroclor 1242	ND	0.020								
Aroclor 1248	ND	0.020								
Aroclor 1254	ND	0.020								
Aroclor 1260	ND	0.020								
Surr: Decachlorobiphenyl	0.071		0.06250		114	37.5	161			
Surr: Tetrachloro-m-xylene	0.078		0.06250		124	28.1	149			

Sample ID	LCS-18660		SampType: LCS		TestCode: EPA Method 8082: PCB's					
Client ID:	LCSS		Batch ID: 18660		RunNo: 25757					
Prep Date:	4/13/2015		Analysis Date: 4/24/2015		SeqNo: 763491		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.074	0.020	0.1250	0	59.2	26.2	127			
Aroclor 1260	0.099	0.020	0.1250	0	79.2	36.6	122			
Surr: Decachlorobiphenyl	0.059		0.06250		94.0	37.5	161			
Surr: Tetrachloro-m-xylene	0.065		0.06250		104	28.1	149			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	mb-18573		SampType: MBLK		TestCode: EPA Method 8260B: Volatiles					
Client ID:	PBS		Batch ID: 18573		RunNo: 25409					
Prep Date:	4/8/2015		Analysis Date: 4/9/2015		SeqNo: 752062		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	mb-18573		SampType:	MBLK		TestCode:	EPA Method 8260B: Volatiles			
Client ID:	PBS		Batch ID:	18573		RunNo:	25409			
Prep Date:	4/8/2015		Analysis Date:	4/9/2015		SeqNo:	752062		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.52		0.5000		105	70	130			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130			
Surr: Toluene-d8	0.47		0.5000		93.5	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.8	70	130			

Sample ID	lcs-18573		SampType:	LCS		TestCode:	EPA Method 8260B: Volatiles			
Client ID:	LCSS		Batch ID:	18573		RunNo:	25409			
Prep Date:	4/8/2015		Analysis Date:	4/9/2015		SeqNo:	752063		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.050	1.000	0	98.8	70	130			
Toluene	0.89	0.050	1.000	0	88.6	70	130			
Chlorobenzene	0.94	0.050	1.000	0	94.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	lcs-18573		SampType: LCS		TestCode: EPA Method 8260B: Volatiles					
Client ID:	LCSS		Batch ID: 18573		RunNo: 25409					
Prep Date:	4/8/2015		Analysis Date: 4/9/2015		SeqNo: 752063		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	1.1	0.050	1.000	0	113	60.6	134			
Trichloroethene (TCE)	0.89	0.050	1.000	0	89.0	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.46		0.5000		91.9	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		103	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	mb-18573		SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	PBS		Batch ID: 18573		RunNo: 25409					
Prep Date:	4/8/2015		Analysis Date: 4/9/2015		SeqNo: 752065		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.050								
Benzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
1,2-Dibromoethane (EDB)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
Naphthalene	ND	0.10								
2-Methylnaphthalene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.8	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		105	70	130			
Surr: Toluene-d8	0.47		0.5000		93.5	70	130			

Sample ID	lcs-18573		SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	LCSS		Batch ID: 18573		RunNo: 25409					
Prep Date:	4/8/2015		Analysis Date: 4/9/2015		SeqNo: 752066		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.050	1.000	0	98.8	70	130			
Toluene	0.89	0.050	1.000	0	88.6	70	130			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		103	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.46		0.5000		91.9	70	130			

Sample ID	1504287-003ams		SampType: MS		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	CentralOCD-03-0406		Batch ID: 18573		RunNo: 25409					
Prep Date:	4/8/2015		Analysis Date: 4/9/2015		SeqNo: 752070		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.048	0.9515	0	105	57.8	132			
Toluene	0.90	0.048	0.9515	0	94.4	54.8	139			
Surr: 1,2-Dichloroethane-d4	0.51		0.4757		106	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.4757		97.1	70	130			
Surr: Dibromofluoromethane	0.52		0.4757		109	70	130			
Surr: Toluene-d8	0.44		0.4757		92.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID	1504287-003amsd	SampType: MSD			TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	CentralOCD-03-0406	Batch ID: 18573			RunNo: 25409					
Prep Date:	4/8/2015	Analysis Date: 4/9/2015			SeqNo: 752071		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.047	0.9497	0	110	57.8	132	3.98	20	
Toluene	0.89	0.047	0.9497	0	94.2	54.8	139	0.433	20	
Surr: 1,2-Dichloroethane-d4	0.52		0.4748		109	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.47		0.4748		98.4	70	130	0	0	
Surr: Dibromofluoromethane	0.54		0.4748		113	70	130	0	0	
Surr: Toluene-d8	0.43		0.4748		90.5	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID 100ng lcs	SampType: LCS			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: LCSW	Batch ID: R25378			RunNo: 25378						
Prep Date:	Analysis Date: 4/8/2015			SeqNo: 750966		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.7	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.0	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Sample ID 5mL-rb	SampType: MBLK			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: PBW	Batch ID: R25378			RunNo: 25378						
Prep Date:	Analysis Date: 4/8/2015			SeqNo: 750970		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.5	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	mb-18661	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBS	Batch ID:	18661	RunNo:	25544					
Prep Date:	4/13/2015	Analysis Date:	4/15/2015	SeqNo:	756564	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Aniline	ND	0.20								
Anthracene	ND	0.20								
Azobenzene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Benzoic acid	ND	0.50								
Benzyl alcohol	ND	0.20								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.50								
4-Bromophenyl phenyl ether	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Carbazole	ND	0.20								
4-Chloro-3-methylphenol	ND	0.50								
4-Chloroaniline	ND	0.50								
2-Chloronaphthalene	ND	0.25								
2-Chlorophenol	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
Chrysene	ND	0.20								
Di-n-butyl phthalate	ND	0.40								
Di-n-octyl phthalate	ND	0.40								
Dibenz(a,h)anthracene	ND	0.20								
Dibenzofuran	ND	0.20								
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
3,3'-Dichlorobenzidine	ND	0.25								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
2,4-Dichlorophenol	ND	0.40								
2,4-Dimethylphenol	ND	0.30								
4,6-Dinitro-2-methylphenol	ND	0.40								
2,4-Dinitrophenol	ND	0.50								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	mb-18661	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBS	Batch ID:	18661	RunNo:	25544					
Prep Date:	4/13/2015	Analysis Date:	4/15/2015	SeqNo:	756564	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	0.50								
2,6-Dinitrotoluene	ND	0.50								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Hexachlorobenzene	ND	0.20								
Hexachlorobutadiene	ND	0.20								
Hexachlorocyclopentadiene	ND	0.20								
Hexachloroethane	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Isophorone	ND	0.40								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.40								
3+4-Methylphenol	ND	0.20								
N-Nitrosodi-n-propylamine	ND	0.20								
N-Nitrosodiphenylamine	ND	0.20								
Naphthalene	ND	0.20								
2-Nitroaniline	ND	0.20								
3-Nitroaniline	ND	0.20								
4-Nitroaniline	ND	0.40								
Nitrobenzene	ND	0.40								
2-Nitrophenol	ND	0.20								
4-Nitrophenol	ND	0.25								
Pentachlorophenol	ND	0.40								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	0.40								
1,2,4-Trichlorobenzene	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
Surr: 2-Fluorophenol	2.4		3.330		70.7	26.4	129			
Surr: Phenol-d5	2.4		3.330		72.3	34.8	118			
Surr: 2,4,6-Tribromophenol	2.4		3.330		72.4	26.8	128			
Surr: Nitrobenzene-d5	1.2		1.670		70.8	35.8	124			
Surr: 2-Fluorobiphenyl	1.1		1.670		65.9	24.5	139			
Surr: 4-Terphenyl-d14	1.1		1.670		65.9	29.4	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	lcs-18661		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS		Batch ID: 18661		RunNo: 25544					
Prep Date:	4/13/2015		Analysis Date: 4/15/2015		SeqNo: 756565		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	0.99	0.20	1.670	0	59.3	45.8	114			
4-Chloro-3-methylphenol	2.3	0.50	3.330	0	69.4	52.3	122			
2-Chlorophenol	2.1	0.20	3.330	0	62.1	49.9	115			
1,4-Dichlorobenzene	1.1	0.20	1.670	0	64.0	43.7	107			
2,4-Dinitrotoluene	0.84	0.50	1.670	0	50.5	36	106			
N-Nitrosodi-n-propylamine	1.0	0.20	1.670	0	61.6	39.5	110			
4-Nitrophenol	2.0	0.25	3.330	0	59.3	45.1	121			
Pentachlorophenol	1.7	0.40	3.330	0	50.6	23.7	111			
Phenol	2.2	0.20	3.330	0	65.5	52.7	119			
Pyrene	0.98	0.20	1.670	0	58.5	50.4	116			
1,2,4-Trichlorobenzene	1.1	0.20	1.670	0	64.2	40.1	114			
Surr: 2-Fluorophenol	2.1		3.330		62.4	26.4	129			
Surr: Phenol-d5	2.2		3.330		67.2	34.8	118			
Surr: 2,4,6-Tribromophenol	2.2		3.330		66.5	26.8	128			
Surr: Nitrobenzene-d5	1.1		1.670		64.0	35.8	124			
Surr: 2-Fluorobiphenyl	1.0		1.670		62.8	24.5	139			
Surr: 4-Terphenyl-d14	1.1		1.670		66.0	29.4	129			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-18690		SampType: MBLK		TestCode: EPA Method 7471: Mercury					
Client ID:	PBS		Batch ID: 18690		RunNo: 25534					
Prep Date:	4/14/2015		Analysis Date: 4/15/2015		SeqNo: 756337		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	ND	0.033								

Sample ID	LCS-18690		SampType: LCS		TestCode: EPA Method 7471: Mercury					
Client ID:	LCSS		Batch ID: 18690		RunNo: 25534					
Prep Date:	4/14/2015		Analysis Date: 4/15/2015		SeqNo: 756338		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	97.8	80	120			

Sample ID	1504287-006BMS		SampType: MS		TestCode: EPA Method 7471: Mercury					
Client ID:	CentralOCD-TZ-040		Batch ID: 18690		RunNo: 25534					
Prep Date:	4/14/2015		Analysis Date: 4/15/2015		SeqNo: 756356		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.58	0.16	0.1591	0.1429	276	75	125			S

Sample ID	1504287-006BMSD		SampType: MSD		TestCode: EPA Method 7471: Mercury					
Client ID:	CentralOCD-TZ-040		Batch ID: 18690		RunNo: 25534					
Prep Date:	4/14/2015		Analysis Date: 4/15/2015		SeqNo: 756357		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	0.61	0.16	0.1611	0.1429	290	75	125	4.77	20	S

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-18669	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	18669	RunNo:	25491					
Prep Date:	4/13/2015	Analysis Date:	4/14/2015	SeqNo:	754953	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	2.5								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Uranium	ND	5.0								

Sample ID	LCS-18669	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	18669	RunNo:	25491					
Prep Date:	4/13/2015	Analysis Date:	4/14/2015	SeqNo:	754954	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	26	2.5	25.00	0	106	80	120			
Barium	26	0.10	25.00	0	103	80	120			
Cadmium	26	0.10	25.00	0	104	80	120			
Chromium	26	0.30	25.00	0	104	80	120			
Copper	27	0.30	25.00	0	107	80	120			
Iron	27	2.5	25.00	0	108	80	120			
Lead	26	0.25	25.00	0	102	80	120			
Manganese	26	0.10	25.00	0	103	80	120			
Selenium	26	2.5	25.00	0	102	80	120			
Silver	5.6	0.25	5.000	0	112	80	120			
Uranium	26	5.0	25.00	0	105	80	120			

Sample ID	MB-18669	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	18669	RunNo:	25596					
Prep Date:	4/13/2015	Analysis Date:	4/18/2015	SeqNo:	758372	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	2.5								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1504287

08-May-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	LCS-18669		SampType: LCS		TestCode: EPA Method 6010B: Soil Metals					
Client ID:	LCSS		Batch ID: 18669		RunNo: 25596					
Prep Date:	4/13/2015		Analysis Date: 4/18/2015		SeqNo: 758373		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	25	2.5	25.00	0	101	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4167
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup

Work Order Number: 1504287

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

4/8/2015 7:05:00 AM

Completed By: Lindsay Mangin

4/8/2015 7:59:16 AM

Reviewed By:

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? FedEx

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Yes			

NMAC LIST ANALYTES AND REPORTING LIMITS, CONSTITUENTS LISTED IN SUBSECTIONS A AND B OF 20.6.2.3103 NMAC, CENTRAL OIL CONSERVATION DIVISION LANDFARM
WESTERN REFINING SOUTHWEST, GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Analytical Method	Reporting Units	Requested Reporting Limit
Fluoride	E300	mg/kg	0.3000
Nitrogen, Nitrate (As N)	E300	mg/kg	2.2000
Sulfate	E300	mg/kg	21.5000
*Radium-226	E901.1	pCi/g	1.3950
*Radium-228	E901.1	pCi/g	1.2500
*Radium-226+Radium-228	E901.1	pCi/g	2.6450
Arsenic	SW6010A	mg/kg	2.5000
Barium	SW6010A	mg/kg	1.0000
Cadmium	SW6010A	mg/kg	0.1000
Chromium	SW6010A	mg/kg	0.3000
Copper	SW6010A	mg/kg	0.6000
Iron	SW6010A	mg/kg	500.0000
Lead	SW6010A	mg/kg	0.2500
Manganese	SW6010A	mg/kg	1.0000
Selenium	SW6010A	mg/kg	2.5000
Silver	SW6010A	mg/kg	0.2500
Uranium	SW6010A	mg/kg	5.0000
Zinc	SW6010A	mg/kg	2.5000
Mercury	SW7471	mg/kg	0.0330
Aroclor 1016	SW8082	mg/kg	0.0200
Aroclor 1221	SW8082	mg/kg	0.0200
Aroclor 1232	SW8082	mg/kg	0.0200
Aroclor 1242	SW8082	mg/kg	0.0200
Aroclor 1248	SW8082	mg/kg	0.0200
Aroclor 1254	SW8082	mg/kg	0.0200
Aroclor 1260	SW8082	mg/kg	0.0200
1,1,1-Trichloroethane	SW8260B	mg/kg	0.0480
1,1,2-Trichloroethane	SW8260B	mg/kg	0.0480
1,1-Dichloroethane	SW8260B	mg/kg	0.0970
1,1-Dichloroethene	SW8260B	mg/kg	0.0480
1,2-Dichloroethane	SW8260B	mg/kg	0.0480
Carbon tetrachloride	SW8260B	mg/kg	0.0970
Chloroform	SW8260B	mg/kg	0.0480
Dibromomethane	SW8260B	mg/kg	0.1000
Methylene chloride	SW8260B	mg/kg	0.1500
Tetrachloroethene	SW8260B	mg/kg	0.0480
Trichloroethene	SW8260B	mg/kg	0.0480
Vinyl chloride	SW8260B	mg/kg	0.0480
2,4,5-Trichlorophenol	SW8270C	mg/kg	0.2000
2,4,6-Trichlorophenol	SW8270C	mg/kg	0.2000
2,4-Dichlorophenol	SW8270C	mg/kg	0.4000
2,4-Dimethylphenol	SW8270C	mg/kg	0.3000
2,4-Dinitrophenol	SW8270C	mg/kg	0.4000
2-Chlorophenol	SW8270C	mg/kg	0.2000
2-Methylphenol	SW8270C	mg/kg	0.1000
2-Nitrophenol	SW8270C	mg/kg	0.1000
3+4-Methylphenol	SW8270C	mg/kg	0.1000
4,6-Dinitro-2-methylphenol	SW8270C	mg/kg	0.5000
4-Chloro-3-methylphenol	SW8270C	mg/kg	0.1000
4-Nitrophenol	SW8270C	mg/kg	0.1000
Pentachlorophenol	SW8270C	mg/kg	0.4000
Phenol	SW8270C	mg/kg	0.2000
1-Methylnaphthalene	SW8260B	mg/kg	0.2000
2-Methylnaphthalene	SW8260B	mg/kg	0.2000
Acenaphthene	SW8270C	mg/kg	0.2000
Acenaphthylene	SW8270C	mg/kg	0.2000
Anthracene	SW8270C	mg/kg	0.2000
Benzo(a)anthracene	SW8270C	mg/kg	0.2000
Benzo(a)pyrene	SW8270C	mg/kg	0.2000
Benzo(b)fluoranthene	SW8270C	mg/kg	0.2000
Benzo(g,h,i)perylene	SW8270C	mg/kg	0.2000
Benzo(k)fluoranthene	SW8270C	mg/kg	0.2000
Chrysene	SW8270C	mg/kg	0.2000
Dibenz(a,h)anthracene	SW8270C	mg/kg	0.2000
Fluoranthene	SW8270C	mg/kg	0.2000
Fluorene	SW8270C	mg/kg	0.2000
Indeno(1,2,3-c,d)pyrene	SW8270C	mg/kg	0.2000
Naphthalene	SW8270C	mg/kg	0.2000
Phenanthrene	SW8270C	mg/kg	0.2000
Pyrene	SW8270C	mg/kg	0.2000
Cyanide	EPA 335.4	mg/kg	0.3000
Diesel Range Organics (DRO)	SW8015	mg/kg	12
Gasoline Range Organics (GRO)	SW8015	mg/kg	1.0

**VADOSE ZONE ANALYTES AND REPORTING LIMITS, CENTRAL OIL CONSERVATION DIVISION LANDFARM
WESTERN REFINING SOUTHWEST, GALLUP REFINERY, GALLUP, NEW MEXICO**

Analyte	Analytical Method	Reporting Units	Requested Reporting Limit
Chloride	E300	mg/kg	30
Benzene	SW8260B	mg/kg	0.050
Ethylbenzene	SW8260B	mg/kg	0.050
Toluene	SW8260B	mg/kg	0.050
Xylenes, Total	SW8260B	mg/kg	0.100
Petroleum Hydrocarbons, TR	E418.1	mg/kg	20



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 30, 2015

Ed Riege

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: OCD Central Landfarm Semiannual Sampling

OrderNo.: 1511B63

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 10 sample(s) on 11/25/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-01-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 1:50:00 PM

Lab ID: 1511B63-001

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	41	20		mg/Kg	1	12/2/2015	22570
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	4.2	0.30		mg/Kg	1	12/8/2015 12:37:53 PM	22657
Chloride	460	30		mg/Kg	20	12/7/2015 5:26:55 PM	22657
Nitrogen, Nitrite (As N)	ND	0.30		mg/Kg	1	12/8/2015 12:37:53 PM	22657
Sulfate	350	30		mg/Kg	20	12/7/2015 5:26:55 PM	22657
EPA METHOD 7471: MERCURY							Analyst: DBD
Mercury	ND	0.033		mg/Kg	1	12/4/2015 4:35:36 PM	22597
EPA METHOD 6010B: SOIL METALS							Analyst: MED
Arsenic	ND	2.5		mg/Kg	1	12/8/2015 12:09:03 PM	22659
Barium	300	0.20		mg/Kg	2	12/8/2015 12:10:48 PM	22659
Cadmium	ND	0.10		mg/Kg	1	12/8/2015 12:09:03 PM	22659
Chromium	11	0.30		mg/Kg	1	12/8/2015 12:09:03 PM	22659
Copper	4.4	0.30		mg/Kg	1	12/8/2015 12:09:03 PM	22659
Iron	15000	250		mg/Kg	100	12/8/2015 11:52:45 AM	22659
Lead	5.0	0.25		mg/Kg	1	12/8/2015 12:09:03 PM	22659
Manganese	230	0.10		mg/Kg	1	12/8/2015 12:09:03 PM	22659
Selenium	ND	2.5		mg/Kg	1	12/8/2015 12:09:03 PM	22659
Silver	ND	0.25		mg/Kg	1	12/8/2015 12:09:03 PM	22659
Uranium	ND	5.1		mg/Kg	1	12/8/2015 12:09:03 PM	22659
Zinc	18	2.5		mg/Kg	1	12/8/2015 12:09:03 PM	22659
EPA METHOD 8082: PCB'S							Analyst: SCC
Aroclor 1016	ND	0.020		mg/Kg	1	12/3/2015 8:19:36 AM	22573
Aroclor 1221	ND	0.020		mg/Kg	1	12/3/2015 8:19:36 AM	22573
Aroclor 1232	ND	0.020		mg/Kg	1	12/3/2015 8:19:36 AM	22573
Aroclor 1242	ND	0.020		mg/Kg	1	12/3/2015 8:19:36 AM	22573
Aroclor 1248	ND	0.020		mg/Kg	1	12/3/2015 8:19:36 AM	22573
Aroclor 1254	ND	0.020		mg/Kg	1	12/3/2015 8:19:36 AM	22573
Aroclor 1260	ND	0.020		mg/Kg	1	12/3/2015 8:19:36 AM	22573
Surr: Decachlorobiphenyl	119	22.3-101	S	%REC	1	12/3/2015 8:19:36 AM	22573
Surr: Tetrachloro-m-xylene	110	23.9-103	S	%REC	1	12/3/2015 8:19:36 AM	22573
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/2/2015 11:01:51 AM	22559
Surr: DNOP	101	70-130		%REC	1	12/2/2015 11:01:51 AM	22559
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/1/2015 2:07:23 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-01-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 1:50:00 PM

Lab ID: 1511B63-001

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Surr: BFB	85.7	66.2-112		%REC	1	12/1/2015 2:07:23 PM	22549
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Acenaphthylene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Aniline	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Anthracene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Azobenzene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Benz(a)anthracene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Benzo(a)pyrene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Benzo(g,h,i)perylene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Benzoic acid	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Benzyl alcohol	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Bis(2-chloroisopropyl)ether	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Bis(2-ethylhexyl)phthalate	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Carbazole	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
4-Chloro-3-methylphenol	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
4-Chloroaniline	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2-Chloronaphthalene	ND	0.25		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2-Chlorophenol	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Chrysene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Di-n-butyl phthalate	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Di-n-octyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Dibenz(a,h)anthracene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Dibenzofuran	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
3,3'-Dichlorobenzidine	ND	0.25		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Diethyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Dimethyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2,4-Dichlorophenol	ND	0.40		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2,4-Dimethylphenol	ND	0.30		mg/Kg	1	12/3/2015 1:35:10 PM	22574

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	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-01-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 1:50:00 PM

Lab ID: 1511B63-001

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2,4-Dinitrotoluene	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2,6-Dinitrotoluene	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Fluorene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Hexachlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Hexachlorobutadiene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Hexachlorocyclopentadiene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Hexachloroethane	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Isophorone	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
1-Methylnaphthalene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2-Methylnaphthalene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2-Methylphenol	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
3+4-Methylphenol	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Naphthalene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2-Nitroaniline	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
3-Nitroaniline	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
4-Nitroaniline	ND	0.40		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Nitrobenzene	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2-Nitrophenol	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
4-Nitrophenol	ND	0.25		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Pentachlorophenol	ND	0.40		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Phenanthrene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Phenol	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Pyrene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Pyridine	ND	0.50		mg/Kg	1	12/3/2015 1:35:10 PM	22574
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	12/3/2015 1:35:10 PM	22574
Surr: 2-Fluorophenol	72.3	9.93-124		%REC	1	12/3/2015 1:35:10 PM	22574
Surr: Phenol-d5	79.6	28-119		%REC	1	12/3/2015 1:35:10 PM	22574
Surr: 2,4,6-Tribromophenol	79.9	11.7-134		%REC	1	12/3/2015 1:35:10 PM	22574
Surr: Nitrobenzene-d5	77.7	25-123		%REC	1	12/3/2015 1:35:10 PM	22574
Surr: 2-Fluorobiphenyl	80.5	31.2-117		%REC	1	12/3/2015 1:35:10 PM	22574
Surr: 4-Terphenyl-d14	30.0	5.82-129		%REC	1	12/3/2015 1:35:10 PM	22574

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	D	Sample Diluted Due to Matrix	E	Value above quantitation range
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-01-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 1:50:00 PM

Lab ID: 1511B63-001

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
Benzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Toluene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Ethylbenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Naphthalene	ND	0.099		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1-Methylnaphthalene	ND	0.20		mg/Kg	1	12/1/2015 2:59:50 PM	22549
2-Methylnaphthalene	ND	0.20		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Acetone	ND	0.74		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Bromobenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Bromodichloromethane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Bromoform	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Bromomethane	ND	0.15		mg/Kg	1	12/1/2015 2:59:50 PM	22549
2-Butanone	ND	0.50		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Carbon disulfide	ND	0.50		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Carbon tetrachloride	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Chlorobenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Chloroethane	ND	0.099		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Chloroform	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Chloromethane	ND	0.15		mg/Kg	1	12/1/2015 2:59:50 PM	22549
2-Chlorotoluene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
4-Chlorotoluene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
cis-1,2-DCE	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Dibromochloromethane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Dibromomethane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,1-Dichloroethane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,1-Dichloroethene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,2-Dichloropropane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,3-Dichloropropane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
2,2-Dichloropropane	ND	0.099		mg/Kg	1	12/1/2015 2:59:50 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-01-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 1:50:00 PM

Lab ID: 1511B63-001

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,1-Dichloropropene	ND	0.099		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Hexachlorobutadiene	ND	0.099		mg/Kg	1	12/1/2015 2:59:50 PM	22549
2-Hexanone	ND	0.50		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Isopropylbenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
4-Isopropyltoluene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Methylene chloride	ND	0.15		mg/Kg	1	12/1/2015 2:59:50 PM	22549
n-Butylbenzene	ND	0.15		mg/Kg	1	12/1/2015 2:59:50 PM	22549
n-Propylbenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
sec-Butylbenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Styrene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
tert-Butylbenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
trans-1,2-DCE	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Trichlorofluoromethane	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Vinyl chloride	ND	0.050		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Xylenes, Total	ND	0.099		mg/Kg	1	12/1/2015 2:59:50 PM	22549
Surr: Dibromofluoromethane	80.4	70-130		%REC	1	12/1/2015 2:59:50 PM	22549
Surr: 1,2-Dichloroethane-d4	89.6	70-130		%REC	1	12/1/2015 2:59:50 PM	22549
Surr: Toluene-d8	108	70-130		%REC	1	12/1/2015 2:59:50 PM	22549
Surr: 4-Bromofluorobenzene	99.7	70-130		%REC	1	12/1/2015 2:59:50 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-02-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 1:15:00 PM

Lab ID: 1511B63-002

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	12/2/2015	22570
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	3.1	0.30		mg/Kg	1	12/8/2015 12:50:17 PM	22657
Chloride	150	30		mg/Kg	20	12/7/2015 5:39:20 PM	22657
Nitrogen, Nitrite (As N)	ND	0.30		mg/Kg	1	12/8/2015 12:50:17 PM	22657
Sulfate	530	30		mg/Kg	20	12/7/2015 5:39:20 PM	22657
EPA METHOD 7471: MERCURY							Analyst: DBD
Mercury	ND	0.032		mg/Kg	1	12/4/2015 4:10:24 PM	22597
EPA METHOD 6010B: SOIL METALS							Analyst: MED
Arsenic	ND	4.9		mg/Kg	2	12/8/2015 12:14:42 PM	22659
Barium	190	0.19		mg/Kg	2	12/8/2015 12:14:42 PM	22659
Cadmium	ND	0.19		mg/Kg	2	12/8/2015 12:14:42 PM	22659
Chromium	11	0.58		mg/Kg	2	12/8/2015 12:14:42 PM	22659
Copper	3.2	0.58		mg/Kg	2	12/8/2015 12:14:42 PM	22659
Iron	17000	240		mg/Kg	100	12/8/2015 11:59:59 AM	22659
Lead	4.0	0.49		mg/Kg	2	12/8/2015 12:14:42 PM	22659
Manganese	280	0.19		mg/Kg	2	12/8/2015 12:14:42 PM	22659
Selenium	ND	4.9		mg/Kg	2	12/8/2015 12:14:42 PM	22659
Silver	ND	0.49		mg/Kg	2	12/8/2015 12:14:42 PM	22659
Uranium	ND	9.7		mg/Kg	2	12/8/2015 12:14:42 PM	22659
Zinc	17	4.9		mg/Kg	2	12/8/2015 12:14:42 PM	22659
EPA METHOD 8082: PCB'S							Analyst: SCC
Aroclor 1016	ND	0.020		mg/Kg	1	12/3/2015 9:05:28 AM	22573
Aroclor 1221	ND	0.020		mg/Kg	1	12/3/2015 9:05:28 AM	22573
Aroclor 1232	ND	0.020		mg/Kg	1	12/3/2015 9:05:28 AM	22573
Aroclor 1242	ND	0.020		mg/Kg	1	12/3/2015 9:05:28 AM	22573
Aroclor 1248	ND	0.020		mg/Kg	1	12/3/2015 9:05:28 AM	22573
Aroclor 1254	ND	0.020		mg/Kg	1	12/3/2015 9:05:28 AM	22573
Aroclor 1260	ND	0.020		mg/Kg	1	12/3/2015 9:05:28 AM	22573
Surr: Decachlorobiphenyl	132	22.3-101	S	%REC	1	12/3/2015 9:05:28 AM	22573
Surr: Tetrachloro-m-xylene	94.0	23.9-103		%REC	1	12/3/2015 9:05:28 AM	22573
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/2/2015 11:23:30 AM	22559
Surr: DNOP	99.2	70-130		%REC	1	12/2/2015 11:23:30 AM	22559
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/1/2015 3:21:02 PM	22549

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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-02-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 1:15:00 PM

Lab ID: 1511B63-002

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Surr: BFB	86.4	66.2-112		%REC	1	12/1/2015 3:21:02 PM	22549
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Acenaphthylene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Aniline	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Anthracene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Azobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Benz(a)anthracene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Benzo(a)pyrene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Benzo(g,h,i)perylene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Benzoic acid	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Benzyl alcohol	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Bis(2-chloroisopropyl)ether	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Bis(2-ethylhexyl)phthalate	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Carbazole	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
4-Chloro-3-methylphenol	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
4-Chloroaniline	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2-Chloronaphthalene	ND	0.25		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2-Chlorophenol	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Chrysene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Di-n-butyl phthalate	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Di-n-octyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Dibenz(a,h)anthracene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Dibenzofuran	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
3,3'-Dichlorobenzidine	ND	0.25		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Diethyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Dimethyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2,4-Dichlorophenol	ND	0.40		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2,4-Dimethylphenol	ND	0.30		mg/Kg	1	12/3/2015 2:04:54 PM	22574

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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-02-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 1:15:00 PM

Lab ID: 1511B63-002

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2,4-Dinitrotoluene	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2,6-Dinitrotoluene	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Fluorene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Hexachlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Hexachlorobutadiene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Hexachlorocyclopentadiene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Hexachloroethane	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Isophorone	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
1-Methylnaphthalene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2-Methylnaphthalene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2-Methylphenol	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
3+4-Methylphenol	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Naphthalene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2-Nitroaniline	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
3-Nitroaniline	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
4-Nitroaniline	ND	0.40		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Nitrobenzene	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2-Nitrophenol	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
4-Nitrophenol	ND	0.25		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Pentachlorophenol	ND	0.40		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Phenanthrene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Phenol	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Pyrene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Pyridine	ND	0.50		mg/Kg	1	12/3/2015 2:04:54 PM	22574
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	12/3/2015 2:04:54 PM	22574
Surr: 2-Fluorophenol	68.6	9.93-124		%REC	1	12/3/2015 2:04:54 PM	22574
Surr: Phenol-d5	75.7	28-119		%REC	1	12/3/2015 2:04:54 PM	22574
Surr: 2,4,6-Tribromophenol	73.0	11.7-134		%REC	1	12/3/2015 2:04:54 PM	22574
Surr: Nitrobenzene-d5	74.7	25-123		%REC	1	12/3/2015 2:04:54 PM	22574
Surr: 2-Fluorobiphenyl	72.6	31.2-117		%REC	1	12/3/2015 2:04:54 PM	22574
Surr: 4-Terphenyl-d14	31.4	5.82-129		%REC	1	12/3/2015 2:04:54 PM	22574

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	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-02-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 1:15:00 PM

Lab ID: 1511B63-002

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Toluene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Ethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,2-Dichloroethane (EDC)	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,2-Dibromoethane (EDB)	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Naphthalene	ND	0.096		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 3:27:15 PM	22549
2-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Acetone	ND	0.72		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Bromobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Bromodichloromethane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Bromoform	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Bromomethane	ND	0.14		mg/Kg	1	12/1/2015 3:27:15 PM	22549
2-Butanone	ND	0.48		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Carbon disulfide	ND	0.48		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Carbon tetrachloride	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Chlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Chloroethane	ND	0.096		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Chloroform	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Chloromethane	ND	0.14		mg/Kg	1	12/1/2015 3:27:15 PM	22549
2-Chlorotoluene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
4-Chlorotoluene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
cis-1,2-DCE	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
cis-1,3-Dichloropropene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,2-Dibromo-3-chloropropane	ND	0.096		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Dibromochloromethane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Dibromomethane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,2-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,3-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,4-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Dichlorodifluoromethane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,1-Dichloroethane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,1-Dichloroethene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,2-Dichloropropane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,3-Dichloropropane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
2,2-Dichloropropane	ND	0.096		mg/Kg	1	12/1/2015 3:27:15 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-02-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 1:15:00 PM

Lab ID: 1511B63-002

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,1-Dichloropropene	ND	0.096		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Hexachlorobutadiene	ND	0.096		mg/Kg	1	12/1/2015 3:27:15 PM	22549
2-Hexanone	ND	0.48		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Isopropylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
4-Isopropyltoluene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
4-Methyl-2-pentanone	ND	0.48		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Methylene chloride	ND	0.14		mg/Kg	1	12/1/2015 3:27:15 PM	22549
n-Butylbenzene	ND	0.14		mg/Kg	1	12/1/2015 3:27:15 PM	22549
n-Propylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
sec-Butylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Styrene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
tert-Butylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,1,1,2-Tetrachloroethane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,1,2,2-Tetrachloroethane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Tetrachloroethene (PCE)	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
trans-1,2-DCE	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
trans-1,3-Dichloropropene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,2,3-Trichlorobenzene	ND	0.096		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,2,4-Trichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,1,1-Trichloroethane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,1,2-Trichloroethane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Trichloroethene (TCE)	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Trichlorofluoromethane	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
1,2,3-Trichloropropane	ND	0.096		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Vinyl chloride	ND	0.048		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Xylenes, Total	ND	0.096		mg/Kg	1	12/1/2015 3:27:15 PM	22549
Surr: Dibromofluoromethane	79.0	70-130		%REC	1	12/1/2015 3:27:15 PM	22549
Surr: 1,2-Dichloroethane-d4	88.1	70-130		%REC	1	12/1/2015 3:27:15 PM	22549
Surr: Toluene-d8	107	70-130		%REC	1	12/1/2015 3:27:15 PM	22549
Surr: 4-Bromofluorobenzene	96.5	70-130		%REC	1	12/1/2015 3:27:15 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-03-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 2:25:00 PM

Lab ID: 1511B63-003

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	50	20		mg/Kg	1	12/2/2015	22570
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	3.3	0.30		mg/Kg	1	12/8/2015 1:02:42 PM	22657
Chloride	230	30		mg/Kg	20	12/7/2015 7:55:49 PM	22657
Nitrogen, Nitrite (As N)	ND	0.30		mg/Kg	1	12/8/2015 1:02:42 PM	22657
Sulfate	520	30		mg/Kg	20	12/7/2015 7:55:49 PM	22657
EPA METHOD 7471: MERCURY							Analyst: DBD
Mercury	ND	0.033		mg/Kg	1	12/4/2015 4:12:14 PM	22597
EPA METHOD 6010B: SOIL METALS							Analyst: MED
Arsenic	ND	2.5		mg/Kg	1	12/8/2015 12:24:02 PM	22659
Barium	230	0.10		mg/Kg	1	12/8/2015 12:24:02 PM	22659
Cadmium	ND	0.10		mg/Kg	1	12/8/2015 12:24:02 PM	22659
Chromium	10	0.30		mg/Kg	1	12/8/2015 12:24:02 PM	22659
Copper	3.6	0.30		mg/Kg	1	12/8/2015 12:24:02 PM	22659
Iron	15000	250		mg/Kg	100	12/8/2015 12:01:28 PM	22659
Lead	2.9	0.25		mg/Kg	1	12/8/2015 12:24:02 PM	22659
Manganese	230	0.10		mg/Kg	1	12/8/2015 12:24:02 PM	22659
Selenium	ND	2.5		mg/Kg	1	12/8/2015 12:24:02 PM	22659
Silver	ND	0.25		mg/Kg	1	12/8/2015 12:24:02 PM	22659
Uranium	ND	5.0		mg/Kg	1	12/8/2015 12:24:02 PM	22659
Zinc	18	2.5		mg/Kg	1	12/8/2015 12:24:02 PM	22659
EPA METHOD 8082: PCB'S							Analyst: SCC
Aroclor 1016	ND	0.020		mg/Kg	1	12/3/2015 10:34:13 AM	22573
Aroclor 1221	ND	0.020		mg/Kg	1	12/3/2015 10:34:13 AM	22573
Aroclor 1232	ND	0.020		mg/Kg	1	12/3/2015 10:34:13 AM	22573
Aroclor 1242	ND	0.020		mg/Kg	1	12/3/2015 10:34:13 AM	22573
Aroclor 1248	ND	0.020		mg/Kg	1	12/3/2015 10:34:13 AM	22573
Aroclor 1254	ND	0.020		mg/Kg	1	12/3/2015 10:34:13 AM	22573
Aroclor 1260	ND	0.020		mg/Kg	1	12/3/2015 10:34:13 AM	22573
Surr: Decachlorobiphenyl	162	22.3-101	S	%REC	1	12/3/2015 10:34:13 AM	22573
Surr: Tetrachloro-m-xylene	117	23.9-103	S	%REC	1	12/3/2015 10:34:13 AM	22573
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/2/2015 11:45:03 AM	22559
Surr: DNOP	100	70-130		%REC	1	12/2/2015 11:45:03 AM	22559
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/1/2015 3:45:42 PM	22549

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	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-03-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 2:25:00 PM

Lab ID: 1511B63-003

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Surr: BFB	86.5	66.2-112		%REC	1	12/1/2015 3:45:42 PM	22549
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Acenaphthylene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Aniline	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Anthracene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Azobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Benz(a)anthracene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Benzo(a)pyrene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Benzo(g,h,i)perylene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Benzoic acid	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Benzyl alcohol	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Bis(2-chloroisopropyl)ether	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Bis(2-ethylhexyl)phthalate	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Carbazole	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
4-Chloro-3-methylphenol	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
4-Chloroaniline	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2-Chloronaphthalene	ND	0.25		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2-Chlorophenol	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Chrysene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Di-n-butyl phthalate	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Di-n-octyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Dibenz(a,h)anthracene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Dibenzofuran	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
3,3'-Dichlorobenzidine	ND	0.25		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Diethyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Dimethyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2,4-Dichlorophenol	ND	0.40		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2,4-Dimethylphenol	ND	0.30		mg/Kg	1	12/3/2015 2:34:39 PM	22574

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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-03-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 2:25:00 PM

Lab ID: 1511B63-003

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2,4-Dinitrotoluene	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2,6-Dinitrotoluene	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Fluorene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Hexachlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Hexachlorobutadiene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Hexachlorocyclopentadiene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Hexachloroethane	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Isophorone	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
1-Methylnaphthalene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2-Methylnaphthalene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2-Methylphenol	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
3+4-Methylphenol	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Naphthalene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2-Nitroaniline	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
3-Nitroaniline	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
4-Nitroaniline	ND	0.40		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Nitrobenzene	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2-Nitrophenol	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
4-Nitrophenol	ND	0.25		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Pentachlorophenol	ND	0.40		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Phenanthrene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Phenol	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Pyrene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Pyridine	ND	0.50		mg/Kg	1	12/3/2015 2:34:39 PM	22574
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	12/3/2015 2:34:39 PM	22574
Surr: 2-Fluorophenol	38.2	9.93-124		%REC	1	12/3/2015 2:34:39 PM	22574
Surr: Phenol-d5	39.5	28-119		%REC	1	12/3/2015 2:34:39 PM	22574
Surr: 2,4,6-Tribromophenol	38.7	11.7-134		%REC	1	12/3/2015 2:34:39 PM	22574
Surr: Nitrobenzene-d5	37.8	25-123		%REC	1	12/3/2015 2:34:39 PM	22574
Surr: 2-Fluorobiphenyl	37.6	31.2-117		%REC	1	12/3/2015 2:34:39 PM	22574
Surr: 4-Terphenyl-d14	17.3	5.82-129		%REC	1	12/3/2015 2:34:39 PM	22574

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	D	Sample Diluted Due to Matrix	E	Value above quantitation range
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-03-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 2:25:00 PM

Lab ID: 1511B63-003

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Toluene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Ethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,2-Dichloroethane (EDC)	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,2-Dibromoethane (EDB)	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Naphthalene	ND	0.097		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 3:54:30 PM	22549
2-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Acetone	ND	0.73		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Bromobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Bromodichloromethane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Bromoform	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Bromomethane	ND	0.15		mg/Kg	1	12/1/2015 3:54:30 PM	22549
2-Butanone	ND	0.48		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Carbon disulfide	ND	0.48		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Carbon tetrachloride	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Chlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Chloroethane	ND	0.097		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Chloroform	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Chloromethane	ND	0.15		mg/Kg	1	12/1/2015 3:54:30 PM	22549
2-Chlorotoluene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
4-Chlorotoluene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
cis-1,2-DCE	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
cis-1,3-Dichloropropene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,2-Dibromo-3-chloropropane	ND	0.097		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Dibromochloromethane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Dibromomethane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,2-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,3-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,4-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Dichlorodifluoromethane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,1-Dichloroethane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,1-Dichloroethene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,2-Dichloropropane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,3-Dichloropropane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
2,2-Dichloropropane	ND	0.097		mg/Kg	1	12/1/2015 3:54:30 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-03-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 2:25:00 PM

Lab ID: 1511B63-003

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,1-Dichloropropene	ND	0.097		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Hexachlorobutadiene	ND	0.097		mg/Kg	1	12/1/2015 3:54:30 PM	22549
2-Hexanone	ND	0.48		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Isopropylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
4-Isopropyltoluene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
4-Methyl-2-pentanone	ND	0.48		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Methylene chloride	ND	0.15		mg/Kg	1	12/1/2015 3:54:30 PM	22549
n-Butylbenzene	ND	0.15		mg/Kg	1	12/1/2015 3:54:30 PM	22549
n-Propylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
sec-Butylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Styrene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
tert-Butylbenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,1,1,2-Tetrachloroethane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,1,2,2-Tetrachloroethane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Tetrachloroethene (PCE)	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
trans-1,2-DCE	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
trans-1,3-Dichloropropene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,2,3-Trichlorobenzene	ND	0.097		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,2,4-Trichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,1,1-Trichloroethane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,1,2-Trichloroethane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Trichloroethene (TCE)	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Trichlorofluoromethane	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
1,2,3-Trichloropropane	ND	0.097		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Vinyl chloride	ND	0.048		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Xylenes, Total	ND	0.097		mg/Kg	1	12/1/2015 3:54:30 PM	22549
Surr: Dibromofluoromethane	78.7	70-130		%REC	1	12/1/2015 3:54:30 PM	22549
Surr: 1,2-Dichloroethane-d4	89.9	70-130		%REC	1	12/1/2015 3:54:30 PM	22549
Surr: Toluene-d8	106	70-130		%REC	1	12/1/2015 3:54:30 PM	22549
Surr: 4-Bromofluorobenzene	97.2	70-130		%REC	1	12/1/2015 3:54:30 PM	22549

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:40:00 AM

Lab ID: 1511B63-004

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	31	19		mg/Kg	1	12/2/2015	22570
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	3.4	0.30		mg/Kg	1	12/8/2015 1:15:06 PM	22657
Chloride	230	30		mg/Kg	20	12/7/2015 8:08:14 PM	22657
Nitrogen, Nitrite (As N)	ND	0.30		mg/Kg	1	12/8/2015 1:15:06 PM	22657
Sulfate	270	30		mg/Kg	20	12/7/2015 8:08:14 PM	22657
EPA METHOD 7471: MERCURY							Analyst: DBD
Mercury	ND	0.032		mg/Kg	1	12/4/2015 4:14:05 PM	22597
EPA METHOD 6010B: SOIL METALS							Analyst: MED
Arsenic	ND	2.5		mg/Kg	1	12/15/2015 12:15:59 PM	22785
Barium	250	0.20		mg/Kg	2	12/15/2015 12:21:47 PM	22785
Cadmium	ND	0.099		mg/Kg	1	12/15/2015 12:15:59 PM	22785
Chromium	6.9	0.30		mg/Kg	1	12/15/2015 12:15:59 PM	22785
Copper	3.2	0.30		mg/Kg	1	12/15/2015 12:15:59 PM	22785
Iron	12000	250		mg/Kg	100	12/21/2015 12:20:42 PM	22785
Lead	12	0.25		mg/Kg	1	12/15/2015 12:15:59 PM	22785
Manganese	400	0.20		mg/Kg	2	12/15/2015 12:21:47 PM	22785
Selenium	ND	2.5		mg/Kg	1	12/15/2015 12:15:59 PM	22785
Silver	ND	0.25		mg/Kg	1	12/15/2015 12:15:59 PM	22785
Uranium	ND	5.0		mg/Kg	1	12/15/2015 12:15:59 PM	22785
Zinc	18	2.5		mg/Kg	1	12/15/2015 12:15:59 PM	22785
EPA METHOD 8082: PCB'S							Analyst: SCC
Aroclor 1016	ND	0.020		mg/Kg	1	12/3/2015 11:19:56 AM	22573
Aroclor 1221	ND	0.020		mg/Kg	1	12/3/2015 11:19:56 AM	22573
Aroclor 1232	ND	0.020		mg/Kg	1	12/3/2015 11:19:56 AM	22573
Aroclor 1242	ND	0.020		mg/Kg	1	12/3/2015 11:19:56 AM	22573
Aroclor 1248	ND	0.020		mg/Kg	1	12/3/2015 11:19:56 AM	22573
Aroclor 1254	ND	0.020		mg/Kg	1	12/3/2015 11:19:56 AM	22573
Aroclor 1260	ND	0.020		mg/Kg	1	12/3/2015 11:19:56 AM	22573
Surr: Decachlorobiphenyl	144	22.3-101	S	%REC	1	12/3/2015 11:19:56 AM	22573
Surr: Tetrachloro-m-xylene	110	23.9-103	S	%REC	1	12/3/2015 11:19:56 AM	22573
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/2/2015 12:06:43 PM	22559
Surr: DNOP	115	70-130		%REC	1	12/2/2015 12:06:43 PM	22559
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/1/2015 4:10:13 PM	22549

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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:40:00 AM

Lab ID: 1511B63-004

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Surr: BFB	84.6	66.2-112		%REC	1	12/1/2015 4:10:13 PM	22549
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Acenaphthylene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Aniline	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Anthracene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Azobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Benz(a)anthracene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Benzo(a)pyrene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Benzo(b)fluoranthene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Benzo(g,h,i)perylene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Benzo(k)fluoranthene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Benzoic acid	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Benzyl alcohol	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Bis(2-chloroethoxy)methane	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Bis(2-chloroethyl)ether	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Bis(2-chloroisopropyl)ether	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Bis(2-ethylhexyl)phthalate	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
4-Bromophenyl phenyl ether	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Butyl benzyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Carbazole	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
4-Chloro-3-methylphenol	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
4-Chloroaniline	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2-Chloronaphthalene	ND	0.50		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2-Chlorophenol	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
4-Chlorophenyl phenyl ether	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Chrysene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Di-n-butyl phthalate	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Di-n-octyl phthalate	ND	0.80		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Dibenz(a,h)anthracene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Dibenzofuran	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
1,2-Dichlorobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
1,3-Dichlorobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
1,4-Dichlorobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
3,3'-Dichlorobenzidine	ND	0.50		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Diethyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Dimethyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2,4-Dichlorophenol	ND	0.80		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2,4-Dimethylphenol	ND	0.60		mg/Kg	1	12/3/2015 3:04:10 PM	22574

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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:40:00 AM

Lab ID: 1511B63-004

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
4,6-Dinitro-2-methylphenol	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2,4-Dinitrophenol	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2,4-Dinitrotoluene	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2,6-Dinitrotoluene	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Fluoranthene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Fluorene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Hexachlorobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Hexachlorobutadiene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Hexachlorocyclopentadiene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Hexachloroethane	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Indeno(1,2,3-cd)pyrene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Isophorone	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
1-Methylnaphthalene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2-Methylnaphthalene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2-Methylphenol	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
3+4-Methylphenol	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
N-Nitrosodi-n-propylamine	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
N-Nitrosodiphenylamine	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Naphthalene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2-Nitroaniline	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
3-Nitroaniline	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
4-Nitroaniline	ND	0.80		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Nitrobenzene	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2-Nitrophenol	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
4-Nitrophenol	ND	0.50		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Pentachlorophenol	ND	0.80		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Phenanthrene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Phenol	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Pyrene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Pyridine	ND	1.0		mg/Kg	1	12/3/2015 3:04:10 PM	22574
1,2,4-Trichlorobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2,4,5-Trichlorophenol	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
2,4,6-Trichlorophenol	ND	0.40		mg/Kg	1	12/3/2015 3:04:10 PM	22574
Surr: 2-Fluorophenol	74.0	9.93-124		%REC	1	12/3/2015 3:04:10 PM	22574
Surr: Phenol-d5	85.8	28-119		%REC	1	12/3/2015 3:04:10 PM	22574
Surr: 2,4,6-Tribromophenol	93.3	11.7-134		%REC	1	12/3/2015 3:04:10 PM	22574
Surr: Nitrobenzene-d5	80.2	25-123		%REC	1	12/3/2015 3:04:10 PM	22574
Surr: 2-Fluorobiphenyl	101	31.2-117		%REC	1	12/3/2015 3:04:10 PM	22574
Surr: 4-Terphenyl-d14	41.4	5.82-129		%REC	1	12/3/2015 3:04:10 PM	22574

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	D	Sample Diluted Due to Matrix	E	Value above quantitation range
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:40:00 AM

Lab ID: 1511B63-004

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Toluene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Ethylbenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Naphthalene	ND	0.097		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 4:22:00 PM	22549
2-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Acetone	ND	0.73		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Bromobenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Bromodichloromethane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Bromoform	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Bromomethane	ND	0.15		mg/Kg	1	12/1/2015 4:22:00 PM	22549
2-Butanone	ND	0.49		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Carbon disulfide	ND	0.49		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Carbon tetrachloride	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Chlorobenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Chloroethane	ND	0.097		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Chloroform	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Chloromethane	ND	0.15		mg/Kg	1	12/1/2015 4:22:00 PM	22549
2-Chlorotoluene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
4-Chlorotoluene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
cis-1,2-DCE	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,2-Dibromo-3-chloropropane	ND	0.097		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Dibromochloromethane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Dibromomethane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,1-Dichloroethane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,1-Dichloroethene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,2-Dichloropropane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,3-Dichloropropane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
2,2-Dichloropropane	ND	0.097		mg/Kg	1	12/1/2015 4:22:00 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-11242015

Project: OCD Central Landfarm Semiannual Sam

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Lab ID: 1511B63-004

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,1-Dichloropropene	ND	0.097		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Hexachlorobutadiene	ND	0.097		mg/Kg	1	12/1/2015 4:22:00 PM	22549
2-Hexanone	ND	0.49		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Isopropylbenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
4-Isopropyltoluene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Methylene chloride	ND	0.15		mg/Kg	1	12/1/2015 4:22:00 PM	22549
n-Butylbenzene	ND	0.15		mg/Kg	1	12/1/2015 4:22:00 PM	22549
n-Propylbenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
sec-Butylbenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Styrene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
tert-Butylbenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
trans-1,2-DCE	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,2,3-Trichlorobenzene	ND	0.097		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Trichlorofluoromethane	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
1,2,3-Trichloropropane	ND	0.097		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Vinyl chloride	ND	0.049		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Xylenes, Total	ND	0.097		mg/Kg	1	12/1/2015 4:22:00 PM	22549
Surr: Dibromofluoromethane	80.8	70-130		%REC	1	12/1/2015 4:22:00 PM	22549
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%REC	1	12/1/2015 4:22:00 PM	22549
Surr: Toluene-d8	108	70-130		%REC	1	12/1/2015 4:22:00 PM	22549
Surr: 4-Bromofluorobenzene	94.0	70-130		%REC	1	12/1/2015 4:22:00 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BD-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015

Lab ID: 1511B63-005

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	35	20		mg/Kg	1	12/2/2015	22570
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	4.6	0.30		mg/Kg	1	12/8/2015 1:27:30 PM	22657
Chloride	230	30		mg/Kg	20	12/7/2015 8:45:28 PM	22657
Nitrogen, Nitrite (As N)	ND	0.30		mg/Kg	1	12/8/2015 1:27:30 PM	22657
Sulfate	340	30		mg/Kg	20	12/7/2015 8:45:28 PM	22657
EPA METHOD 7471: MERCURY							Analyst: DBD
Mercury	ND	0.033		mg/Kg	1	12/4/2015 4:15:55 PM	22597
EPA METHOD 6010B: SOIL METALS							Analyst: MED
Arsenic	ND	2.5		mg/Kg	1	12/8/2015 12:39:01 PM	22659
Barium	110	0.10		mg/Kg	1	12/8/2015 12:39:01 PM	22659
Cadmium	ND	0.10		mg/Kg	1	12/8/2015 12:39:01 PM	22659
Chromium	9.7	0.30		mg/Kg	1	12/8/2015 12:39:01 PM	22659
Copper	2.9	0.30		mg/Kg	1	12/8/2015 12:39:01 PM	22659
Iron	14000	250		mg/Kg	100	12/8/2015 12:04:29 PM	22659
Lead	2.8	0.25		mg/Kg	1	12/8/2015 12:39:01 PM	22659
Manganese	240	0.10		mg/Kg	1	12/8/2015 12:39:01 PM	22659
Selenium	ND	2.5		mg/Kg	1	12/8/2015 12:39:01 PM	22659
Silver	ND	0.25		mg/Kg	1	12/8/2015 12:39:01 PM	22659
Uranium	ND	5.0		mg/Kg	1	12/8/2015 12:39:01 PM	22659
Zinc	18	2.5		mg/Kg	1	12/8/2015 12:39:01 PM	22659
EPA METHOD 8082: PCB'S							Analyst: SCC
Aroclor 1016	ND	0.020		mg/Kg	1	12/3/2015 4:40:00 PM	22573
Aroclor 1221	ND	0.020		mg/Kg	1	12/3/2015 4:40:00 PM	22573
Aroclor 1232	ND	0.020		mg/Kg	1	12/3/2015 4:40:00 PM	22573
Aroclor 1242	ND	0.020		mg/Kg	1	12/3/2015 4:40:00 PM	22573
Aroclor 1248	ND	0.020		mg/Kg	1	12/3/2015 4:40:00 PM	22573
Aroclor 1254	ND	0.020		mg/Kg	1	12/3/2015 4:40:00 PM	22573
Aroclor 1260	ND	0.020		mg/Kg	1	12/3/2015 4:40:00 PM	22573
Surr: Decachlorobiphenyl	119	22.3-101	S	%REC	1	12/3/2015 4:40:00 PM	22573
Surr: Tetrachloro-m-xylene	93.6	23.9-103		%REC	1	12/3/2015 4:40:00 PM	22573
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/2/2015 12:28:19 PM	22559
Surr: DNOP	103	70-130		%REC	1	12/2/2015 12:28:19 PM	22559
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/1/2015 4:34:51 PM	22549

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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BD-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015

Lab ID: 1511B63-005

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Surr: BFB	85.5	66.2-112		%REC	1	12/1/2015 4:34:51 PM	22549
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Acenaphthylene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Aniline	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Anthracene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Azobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Benz(a)anthracene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Benzo(a)pyrene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Benzo(b)fluoranthene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Benzo(g,h,i)perylene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Benzo(k)fluoranthene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Benzoic acid	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Benzyl alcohol	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Bis(2-chloroethoxy)methane	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Bis(2-chloroethyl)ether	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Bis(2-chloroisopropyl)ether	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Bis(2-ethylhexyl)phthalate	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
4-Bromophenyl phenyl ether	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Butyl benzyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Carbazole	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
4-Chloro-3-methylphenol	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
4-Chloroaniline	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2-Chloronaphthalene	ND	0.50		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2-Chlorophenol	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
4-Chlorophenyl phenyl ether	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Chrysene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Di-n-butyl phthalate	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Di-n-octyl phthalate	ND	0.80		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Dibenz(a,h)anthracene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Dibenzofuran	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
1,2-Dichlorobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
1,3-Dichlorobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
1,4-Dichlorobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
3,3'-Dichlorobenzidine	ND	0.50		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Diethyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Dimethyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2,4-Dichlorophenol	ND	0.80		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2,4-Dimethylphenol	ND	0.60		mg/Kg	1	12/3/2015 3:34:05 PM	22574

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	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BD-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015

Lab ID: 1511B63-005

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
4,6-Dinitro-2-methylphenol	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2,4-Dinitrophenol	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2,4-Dinitrotoluene	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2,6-Dinitrotoluene	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Fluoranthene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Fluorene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Hexachlorobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Hexachlorobutadiene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Hexachlorocyclopentadiene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Hexachloroethane	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Indeno(1,2,3-cd)pyrene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Isophorone	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
1-Methylnaphthalene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2-Methylnaphthalene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2-Methylphenol	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
3+4-Methylphenol	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
N-Nitrosodi-n-propylamine	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
N-Nitrosodiphenylamine	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Naphthalene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2-Nitroaniline	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
3-Nitroaniline	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
4-Nitroaniline	ND	0.80		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Nitrobenzene	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2-Nitrophenol	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
4-Nitrophenol	ND	0.50		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Pentachlorophenol	ND	0.80		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Phenanthrene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Phenol	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Pyrene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Pyridine	ND	1.0		mg/Kg	1	12/3/2015 3:34:05 PM	22574
1,2,4-Trichlorobenzene	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2,4,5-Trichlorophenol	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
2,4,6-Trichlorophenol	ND	0.40		mg/Kg	1	12/3/2015 3:34:05 PM	22574
Surr: 2-Fluorophenol	79.9	9.93-124		%REC	1	12/3/2015 3:34:05 PM	22574
Surr: Phenol-d5	85.7	28-119		%REC	1	12/3/2015 3:34:05 PM	22574
Surr: 2,4,6-Tribromophenol	94.5	11.7-134		%REC	1	12/3/2015 3:34:05 PM	22574
Surr: Nitrobenzene-d5	84.5	25-123		%REC	1	12/3/2015 3:34:05 PM	22574
Surr: 2-Fluorobiphenyl	90.5	31.2-117		%REC	1	12/3/2015 3:34:05 PM	22574
Surr: 4-Terphenyl-d14	43.3	5.82-129		%REC	1	12/3/2015 3:34:05 PM	22574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BD-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015

Lab ID: 1511B63-005

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Toluene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Ethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,2-Dichloroethane (EDC)	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,2-Dibromoethane (EDB)	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Naphthalene	ND	0.095		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 4:49:27 PM	22549
2-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Acetone	ND	0.71		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Bromobenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Bromodichloromethane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Bromoform	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Bromomethane	ND	0.14		mg/Kg	1	12/1/2015 4:49:27 PM	22549
2-Butanone	ND	0.48		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Carbon disulfide	ND	0.48		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Carbon tetrachloride	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Chlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Chloroethane	ND	0.095		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Chloroform	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Chloromethane	ND	0.14		mg/Kg	1	12/1/2015 4:49:27 PM	22549
2-Chlorotoluene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
4-Chlorotoluene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
cis-1,2-DCE	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
cis-1,3-Dichloropropene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,2-Dibromo-3-chloropropane	ND	0.095		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Dibromochloromethane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Dibromomethane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,2-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,3-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,4-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Dichlorodifluoromethane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,1-Dichloroethane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,1-Dichloroethene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,2-Dichloropropane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,3-Dichloropropane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
2,2-Dichloropropane	ND	0.095		mg/Kg	1	12/1/2015 4:49:27 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BD-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015

Lab ID: 1511B63-005

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,1-Dichloropropene	ND	0.095		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Hexachlorobutadiene	ND	0.095		mg/Kg	1	12/1/2015 4:49:27 PM	22549
2-Hexanone	ND	0.48		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Isopropylbenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
4-Isopropyltoluene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
4-Methyl-2-pentanone	ND	0.48		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Methylene chloride	ND	0.14		mg/Kg	1	12/1/2015 4:49:27 PM	22549
n-Butylbenzene	ND	0.14		mg/Kg	1	12/1/2015 4:49:27 PM	22549
n-Propylbenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
sec-Butylbenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Styrene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
tert-Butylbenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,1,1,2-Tetrachloroethane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,1,2,2-Tetrachloroethane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Tetrachloroethene (PCE)	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
trans-1,2-DCE	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
trans-1,3-Dichloropropene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,2,3-Trichlorobenzene	ND	0.095		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,2,4-Trichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,1,1-Trichloroethane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,1,2-Trichloroethane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Trichloroethene (TCE)	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Trichlorofluoromethane	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
1,2,3-Trichloropropane	ND	0.095		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Vinyl chloride	ND	0.048		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Xylenes, Total	ND	0.095		mg/Kg	1	12/1/2015 4:49:27 PM	22549
Surr: Dibromofluoromethane	81.1	70-130		%REC	1	12/1/2015 4:49:27 PM	22549
Surr: 1,2-Dichloroethane-d4	88.6	70-130		%REC	1	12/1/2015 4:49:27 PM	22549
Surr: Toluene-d8	109	70-130		%REC	1	12/1/2015 4:49:27 PM	22549
Surr: 4-Bromofluorobenzene	96.4	70-130		%REC	1	12/1/2015 4:49:27 PM	22549

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:45:00 AM

Lab ID: 1511B63-006

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	43	20		mg/Kg	1	12/2/2015	22570
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	4.1	1.5		mg/Kg	5	12/9/2015 12:55:15 PM	22714
Chloride	200	7.5		mg/Kg	5	12/9/2015 12:55:15 PM	22714
Nitrogen, Nitrite (As N)	ND	1.5		mg/Kg	5	12/9/2015 12:55:15 PM	22714
Sulfate	260	7.5		mg/Kg	5	12/9/2015 12:55:15 PM	22714
EPA METHOD 7471: MERCURY							Analyst: DBD
Mercury	ND	0.033		mg/Kg	1	12/4/2015 4:17:45 PM	22597
EPA METHOD 6010B: SOIL METALS							Analyst: MED
Arsenic	ND	5.0		mg/Kg	2	12/8/2015 12:55:24 PM	22659
Barium	220	0.20		mg/Kg	2	12/8/2015 12:55:24 PM	22659
Cadmium	ND	0.20		mg/Kg	2	12/8/2015 12:55:24 PM	22659
Chromium	7.6	0.60		mg/Kg	2	12/8/2015 12:55:24 PM	22659
Copper	1.6	0.60		mg/Kg	2	12/8/2015 12:55:24 PM	22659
Iron	10000	250		mg/Kg	100	12/8/2015 12:06:01 PM	22659
Lead	3.7	0.50		mg/Kg	2	12/8/2015 12:55:24 PM	22659
Manganese	290	0.20		mg/Kg	2	12/8/2015 12:55:24 PM	22659
Selenium	ND	5.0		mg/Kg	2	12/8/2015 12:55:24 PM	22659
Silver	ND	0.50		mg/Kg	2	12/8/2015 12:55:24 PM	22659
Uranium	ND	10		mg/Kg	2	12/8/2015 12:55:24 PM	22659
Zinc	13	5.0		mg/Kg	2	12/8/2015 12:55:24 PM	22659
EPA METHOD 8082: PCB'S							Analyst: SCC
Aroclor 1016	ND	0.020		mg/Kg	1	12/3/2015 5:25:44 PM	22573
Aroclor 1221	ND	0.020		mg/Kg	1	12/3/2015 5:25:44 PM	22573
Aroclor 1232	ND	0.020		mg/Kg	1	12/3/2015 5:25:44 PM	22573
Aroclor 1242	ND	0.020		mg/Kg	1	12/3/2015 5:25:44 PM	22573
Aroclor 1248	ND	0.020		mg/Kg	1	12/3/2015 5:25:44 PM	22573
Aroclor 1254	ND	0.020		mg/Kg	1	12/3/2015 5:25:44 PM	22573
Aroclor 1260	ND	0.020		mg/Kg	1	12/3/2015 5:25:44 PM	22573
Surr: Decachlorobiphenyl	146	22.3-101	S	%REC	1	12/3/2015 5:25:44 PM	22573
Surr: Tetrachloro-m-xylene	94.4	23.9-103		%REC	1	12/3/2015 5:25:44 PM	22573
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/2/2015 12:49:58 PM	22559
Surr: DNOP	100	70-130		%REC	1	12/2/2015 12:49:58 PM	22559
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/1/2015 4:59:25 PM	22549

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:45:00 AM

Lab ID: 1511B63-006

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Surr: BFB	84.5	66.2-112		%REC	1	12/1/2015 4:59:25 PM	22549
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Acenaphthylene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Aniline	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Anthracene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Azobenzene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Benz(a)anthracene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Benzo(a)pyrene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Benzo(g,h,i)perylene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Benzoic acid	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Benzyl alcohol	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Bis(2-chloroisopropyl)ether	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Bis(2-ethylhexyl)phthalate	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Carbazole	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
4-Chloro-3-methylphenol	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
4-Chloroaniline	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2-Chloronaphthalene	ND	0.25		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2-Chlorophenol	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Chrysene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Di-n-butyl phthalate	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Di-n-octyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Dibenz(a,h)anthracene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Dibenzofuran	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
3,3'-Dichlorobenzidine	ND	0.25		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Diethyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Dimethyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2,4-Dichlorophenol	ND	0.40		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2,4-Dimethylphenol	ND	0.30		mg/Kg	1	12/3/2015 4:03:49 PM	22574

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:45:00 AM

Lab ID: 1511B63-006

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2,4-Dinitrotoluene	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2,6-Dinitrotoluene	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Fluorene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Hexachlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Hexachlorobutadiene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Hexachlorocyclopentadiene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Hexachloroethane	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Isophorone	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
1-Methylnaphthalene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2-Methylnaphthalene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2-Methylphenol	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
3+4-Methylphenol	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Naphthalene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2-Nitroaniline	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
3-Nitroaniline	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
4-Nitroaniline	ND	0.40		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Nitrobenzene	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2-Nitrophenol	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
4-Nitrophenol	ND	0.25		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Pentachlorophenol	ND	0.40		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Phenanthrene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Phenol	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Pyrene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Pyridine	ND	0.50		mg/Kg	1	12/3/2015 4:03:49 PM	22574
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	12/3/2015 4:03:49 PM	22574
Surr: 2-Fluorophenol	56.1	9.93-124		%REC	1	12/3/2015 4:03:49 PM	22574
Surr: Phenol-d5	61.3	28-119		%REC	1	12/3/2015 4:03:49 PM	22574
Surr: 2,4,6-Tribromophenol	64.5	11.7-134		%REC	1	12/3/2015 4:03:49 PM	22574
Surr: Nitrobenzene-d5	59.6	25-123		%REC	1	12/3/2015 4:03:49 PM	22574
Surr: 2-Fluorobiphenyl	60.9	31.2-117		%REC	1	12/3/2015 4:03:49 PM	22574
Surr: 4-Terphenyl-d14	29.5	5.82-129		%REC	1	12/3/2015 4:03:49 PM	22574

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	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:45:00 AM

Lab ID: 1511B63-006

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Toluene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Ethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,2-Dichloroethane (EDC)	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,2-Dibromoethane (EDB)	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Naphthalene	ND	0.095		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 5:16:53 PM	22549
2-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Acetone	ND	0.71		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Bromobenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Bromodichloromethane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Bromoform	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Bromomethane	ND	0.14		mg/Kg	1	12/1/2015 5:16:53 PM	22549
2-Butanone	ND	0.48		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Carbon disulfide	ND	0.48		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Carbon tetrachloride	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Chlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Chloroethane	ND	0.095		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Chloroform	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Chloromethane	ND	0.14		mg/Kg	1	12/1/2015 5:16:53 PM	22549
2-Chlorotoluene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
4-Chlorotoluene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
cis-1,2-DCE	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
cis-1,3-Dichloropropene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,2-Dibromo-3-chloropropane	ND	0.095		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Dibromochloromethane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Dibromomethane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,2-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,3-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,4-Dichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Dichlorodifluoromethane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,1-Dichloroethane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,1-Dichloroethene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,2-Dichloropropane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,3-Dichloropropane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
2,2-Dichloropropane	ND	0.095		mg/Kg	1	12/1/2015 5:16:53 PM	22549

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-04-11242015

Project: OCD Central Landfarm Semiannual Sam

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Lab ID: 1511B63-006

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,1-Dichloropropene	ND	0.095		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Hexachlorobutadiene	ND	0.095		mg/Kg	1	12/1/2015 5:16:53 PM	22549
2-Hexanone	ND	0.48		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Isopropylbenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
4-Isopropyltoluene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
4-Methyl-2-pentanone	ND	0.48		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Methylene chloride	ND	0.14		mg/Kg	1	12/1/2015 5:16:53 PM	22549
n-Butylbenzene	ND	0.14		mg/Kg	1	12/1/2015 5:16:53 PM	22549
n-Propylbenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
sec-Butylbenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Styrene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
tert-Butylbenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,1,1,2-Tetrachloroethane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,1,2,2-Tetrachloroethane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Tetrachloroethene (PCE)	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
trans-1,2-DCE	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
trans-1,3-Dichloropropene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,2,3-Trichlorobenzene	ND	0.095		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,2,4-Trichlorobenzene	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,1,1-Trichloroethane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,1,2-Trichloroethane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Trichloroethene (TCE)	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Trichlorofluoromethane	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
1,2,3-Trichloropropane	ND	0.095		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Vinyl chloride	ND	0.048		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Xylenes, Total	ND	0.095		mg/Kg	1	12/1/2015 5:16:53 PM	22549
Surr: Dibromofluoromethane	77.2	70-130		%REC	1	12/1/2015 5:16:53 PM	22549
Surr: 1,2-Dichloroethane-d4	88.0	70-130		%REC	1	12/1/2015 5:16:53 PM	22549
Surr: Toluene-d8	110	70-130		%REC	1	12/1/2015 5:16:53 PM	22549
Surr: 4-Bromofluorobenzene	94.8	70-130		%REC	1	12/1/2015 5:16:53 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-TZ-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:07:00 AM

Lab ID: 1511B63-007

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	47	20		mg/Kg	1	12/2/2015	22570
EPA METHOD 300.0: ANIONS							Analyst: LGT
Fluoride	4.5	0.30		mg/Kg	1	12/9/2015 1:44:54 PM	22714
Chloride	280	30		mg/Kg	20	12/9/2015 1:57:18 PM	22714
Nitrogen, Nitrite (As N)	ND	0.30		mg/Kg	1	12/9/2015 1:44:54 PM	22714
Sulfate	290	30		mg/Kg	20	12/9/2015 1:57:18 PM	22714
EPA METHOD 7471: MERCURY							Analyst: DBD
Mercury	ND	0.033		mg/Kg	1	12/4/2015 4:23:05 PM	22597
EPA METHOD 6010B: SOIL METALS							Analyst: MED
Arsenic	ND	5.1		mg/Kg	2	12/8/2015 1:03:00 PM	22659
Barium	160	0.20		mg/Kg	2	12/8/2015 1:03:00 PM	22659
Cadmium	ND	0.20		mg/Kg	2	12/8/2015 1:03:00 PM	22659
Chromium	12	0.61		mg/Kg	2	12/8/2015 1:03:00 PM	22659
Copper	2.2	0.61		mg/Kg	2	12/8/2015 1:03:00 PM	22659
Iron	15000	260		mg/Kg	100	12/8/2015 12:07:32 PM	22659
Lead	3.2	0.51		mg/Kg	2	12/8/2015 1:03:00 PM	22659
Manganese	300	0.20		mg/Kg	2	12/8/2015 1:03:00 PM	22659
Selenium	ND	5.1		mg/Kg	2	12/8/2015 1:03:00 PM	22659
Silver	ND	0.51		mg/Kg	2	12/8/2015 1:03:00 PM	22659
Uranium	ND	10		mg/Kg	2	12/8/2015 1:03:00 PM	22659
Zinc	18	5.1		mg/Kg	2	12/8/2015 1:03:00 PM	22659
EPA METHOD 8082: PCB'S							Analyst: SCC
Aroclor 1016	ND	0.020		mg/Kg	1	12/3/2015 7:43:09 PM	22573
Aroclor 1221	ND	0.020		mg/Kg	1	12/3/2015 7:43:09 PM	22573
Aroclor 1232	ND	0.020		mg/Kg	1	12/3/2015 7:43:09 PM	22573
Aroclor 1242	ND	0.020		mg/Kg	1	12/3/2015 7:43:09 PM	22573
Aroclor 1248	ND	0.020		mg/Kg	1	12/3/2015 7:43:09 PM	22573
Aroclor 1254	ND	0.020		mg/Kg	1	12/3/2015 7:43:09 PM	22573
Aroclor 1260	ND	0.020		mg/Kg	1	12/3/2015 7:43:09 PM	22573
Surr: Decachlorobiphenyl	122	22.3-101	S	%REC	1	12/3/2015 7:43:09 PM	22573
Surr: Tetrachloro-m-xylene	87.6	23.9-103		%REC	1	12/3/2015 7:43:09 PM	22573
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/2/2015 1:54:58 PM	22559
Surr: DNOP	102	70-130		%REC	1	12/2/2015 1:54:58 PM	22559
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/1/2015 5:23:56 PM	22549

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	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-TZ-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:07:00 AM

Lab ID: 1511B63-007

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Surr: BFB	86.1	66.2-112		%REC	1	12/1/2015 5:23:56 PM	22549
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Acenaphthylene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Aniline	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Anthracene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Azobenzene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Benz(a)anthracene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Benzo(a)pyrene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Benzo(g,h,i)perylene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Benzoic acid	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Benzyl alcohol	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Bis(2-chloroisopropyl)ether	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Bis(2-ethylhexyl)phthalate	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Carbazole	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
4-Chloro-3-methylphenol	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
4-Chloroaniline	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2-Chloronaphthalene	ND	0.25		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2-Chlorophenol	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Chrysene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Di-n-butyl phthalate	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Di-n-octyl phthalate	ND	0.40		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Dibenz(a,h)anthracene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Dibenzofuran	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
3,3'-Dichlorobenzidine	ND	0.25		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Diethyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Dimethyl phthalate	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2,4-Dichlorophenol	ND	0.40		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2,4-Dimethylphenol	ND	0.30		mg/Kg	1	12/3/2015 5:32:53 PM	22574

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-TZ-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:07:00 AM

Lab ID: 1511B63-007

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2,4-Dinitrotoluene	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2,6-Dinitrotoluene	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Fluoranthene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Fluorene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Hexachlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Hexachlorobutadiene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Hexachlorocyclopentadiene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Hexachloroethane	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Isophorone	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
1-Methylnaphthalene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2-Methylnaphthalene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2-Methylphenol	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
3+4-Methylphenol	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Naphthalene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2-Nitroaniline	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
3-Nitroaniline	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
4-Nitroaniline	ND	0.40		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Nitrobenzene	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2-Nitrophenol	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
4-Nitrophenol	ND	0.25		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Pentachlorophenol	ND	0.40		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Phenanthrene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Phenol	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Pyrene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Pyridine	ND	0.50		mg/Kg	1	12/3/2015 5:32:53 PM	22574
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	12/3/2015 5:32:53 PM	22574
Surr: 2-Fluorophenol	58.1	9.93-124		%REC	1	12/3/2015 5:32:53 PM	22574
Surr: Phenol-d5	66.9	28-119		%REC	1	12/3/2015 5:32:53 PM	22574
Surr: 2,4,6-Tribromophenol	75.1	11.7-134		%REC	1	12/3/2015 5:32:53 PM	22574
Surr: Nitrobenzene-d5	66.4	25-123		%REC	1	12/3/2015 5:32:53 PM	22574
Surr: 2-Fluorobiphenyl	72.3	31.2-117		%REC	1	12/3/2015 5:32:53 PM	22574
Surr: 4-Terphenyl-d14	50.4	5.82-129		%REC	1	12/3/2015 5:32:53 PM	22574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-TZ-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:07:00 AM

Lab ID: 1511B63-007

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Toluene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Ethylbenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Methyl tert-butyl ether (MTBE)	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,2,4-Trimethylbenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,3,5-Trimethylbenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,2-Dichloroethane (EDC)	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,2-Dibromoethane (EDB)	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Naphthalene	ND	0.095		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 5:44:11 PM	22549
2-Methylnaphthalene	ND	0.19		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Acetone	ND	0.71		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Bromobenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Bromodichloromethane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Bromoform	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Bromomethane	ND	0.14		mg/Kg	1	12/1/2015 5:44:11 PM	22549
2-Butanone	ND	0.47		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Carbon disulfide	ND	0.47		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Carbon tetrachloride	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Chlorobenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Chloroethane	ND	0.095		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Chloroform	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Chloromethane	ND	0.14		mg/Kg	1	12/1/2015 5:44:11 PM	22549
2-Chlorotoluene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
4-Chlorotoluene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
cis-1,2-DCE	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
cis-1,3-Dichloropropene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,2-Dibromo-3-chloropropane	ND	0.095		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Dibromochloromethane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Dibromomethane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,2-Dichlorobenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,3-Dichlorobenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,4-Dichlorobenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Dichlorodifluoromethane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,1-Dichloroethane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,1-Dichloroethene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,2-Dichloropropane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,3-Dichloropropane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
2,2-Dichloropropane	ND	0.095		mg/Kg	1	12/1/2015 5:44:11 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: CentralOCD-TZ-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 11:07:00 AM

Lab ID: 1511B63-007

Matrix: SOIL

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,1-Dichloropropene	ND	0.095		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Hexachlorobutadiene	ND	0.095		mg/Kg	1	12/1/2015 5:44:11 PM	22549
2-Hexanone	ND	0.47		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Isopropylbenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
4-Isopropyltoluene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
4-Methyl-2-pentanone	ND	0.47		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Methylene chloride	ND	0.14		mg/Kg	1	12/1/2015 5:44:11 PM	22549
n-Butylbenzene	ND	0.14		mg/Kg	1	12/1/2015 5:44:11 PM	22549
n-Propylbenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
sec-Butylbenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Styrene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
tert-Butylbenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,1,1,2-Tetrachloroethane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,1,2,2-Tetrachloroethane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Tetrachloroethene (PCE)	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
trans-1,2-DCE	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
trans-1,3-Dichloropropene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,2,3-Trichlorobenzene	ND	0.095		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,2,4-Trichlorobenzene	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,1,1-Trichloroethane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,1,2-Trichloroethane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Trichloroethene (TCE)	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Trichlorofluoromethane	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
1,2,3-Trichloropropane	ND	0.095		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Vinyl chloride	ND	0.047		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Xylenes, Total	ND	0.095		mg/Kg	1	12/1/2015 5:44:11 PM	22549
Surr: Dibromofluoromethane	81.4	70-130		%REC	1	12/1/2015 5:44:11 PM	22549
Surr: 1,2-Dichloroethane-d4	94.5	70-130		%REC	1	12/1/2015 5:44:11 PM	22549
Surr: Toluene-d8	112	70-130		%REC	1	12/1/2015 5:44:11 PM	22549
Surr: 4-Bromofluorobenzene	92.6	70-130		%REC	1	12/1/2015 5:44:11 PM	22549

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EB-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 12:05:00 PM

Lab ID: 1511B63-008

Matrix: AQUEOUS

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: DJF	
Benzene	ND	1.0		µg/L	1	11/30/2015 8:31:11 PM	A30526
Toluene	ND	1.0		µg/L	1	11/30/2015 8:31:11 PM	A30526
Ethylbenzene	ND	1.0		µg/L	1	11/30/2015 8:31:11 PM	A30526
Xylenes, Total	ND	1.5		µg/L	1	11/30/2015 8:31:11 PM	A30526
Surr: 1,2-Dichloroethane-d4	98.4	70-130		%REC	1	11/30/2015 8:31:11 PM	A30526
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	11/30/2015 8:31:11 PM	A30526
Surr: Dibromofluoromethane	87.6	70-130		%REC	1	11/30/2015 8:31:11 PM	A30526
Surr: Toluene-d8	111	70-130		%REC	1	11/30/2015 8:31:11 PM	A30526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-11242015

Project: OCD Central Landfarm Semiannual Sam

Collection Date: 11/24/2015 12:15:00 PM

Lab ID: 1511B63-009

Matrix: AQUEOUS

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: DJF	
Benzene	ND	1.0		µg/L	1	11/30/2015 8:58:30 PM	A30526
Toluene	ND	1.0		µg/L	1	11/30/2015 8:58:30 PM	A30526
Ethylbenzene	ND	1.0		µg/L	1	11/30/2015 8:58:30 PM	A30526
Xylenes, Total	ND	1.5		µg/L	1	11/30/2015 8:58:30 PM	A30526
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%REC	1	11/30/2015 8:58:30 PM	A30526
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	11/30/2015 8:58:30 PM	A30526
Surr: Dibromofluoromethane	83.9	70-130		%REC	1	11/30/2015 8:58:30 PM	A30526
Surr: Toluene-d8	109	70-130		%REC	1	11/30/2015 8:58:30 PM	A30526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1511B63

Date Reported: 12/30/2015

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: OCD Central Landfarm Semiannual Sam

Collection Date:

Lab ID: 1511B63-010

Matrix: AQUEOUS

Received Date: 11/25/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST					Analyst: DJF		
Benzene	ND	1.0		µg/L	1	11/30/2015 9:25:49 PM	A30526
Toluene	ND	1.0		µg/L	1	11/30/2015 9:25:49 PM	A30526
Ethylbenzene	ND	1.0		µg/L	1	11/30/2015 9:25:49 PM	A30526
Xylenes, Total	ND	1.5		µg/L	1	11/30/2015 9:25:49 PM	A30526
Surr: 1,2-Dichloroethane-d4	101	70-130		%REC	1	11/30/2015 9:25:49 PM	A30526
Surr: 4-Bromofluorobenzene	99.2	70-130		%REC	1	11/30/2015 9:25:49 PM	A30526
Surr: Dibromofluoromethane	87.1	70-130		%REC	1	11/30/2015 9:25:49 PM	A30526
Surr: Toluene-d8	110	70-130		%REC	1	11/30/2015 9:25:49 PM	A30526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 151201037
Project Name: 1511B63

Analytical Results Report

Sample Number	151201037-001	Sampling Date	11/24/2015	Date/Time Received	12/1/2015	11:40 AM
Client Sample ID	1511B63-001D / CENTRALOCD-01-11242015			Sampling Time	1:50 PM	
Matrix	Soil	Sample Location				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.381	mg/Kg	0.311	12/8/2015	MER	EPA 335.4	
%moisture	19.6	Percent		12/2/2015	MER	%moisture	

Sample Number	151201037-002	Sampling Date	11/24/2015	Date/Time Received	12/1/2015	11:40 AM
Client Sample ID	1511B63-002D / CENTRALOCD-02-11242015			Sampling Time	1:15 PM	
Matrix	Soil	Sample Location				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.294	12/8/2015	MER	EPA 335.4	
%moisture	17.4	Percent		12/2/2015	MER	%moisture	

Sample Number	151201037-003	Sampling Date	11/24/2015	Date/Time Received	12/1/2015	11:40 AM
Client Sample ID	1511B63-003D / CENTRALOCD-03-11242015			Sampling Time	2:25 PM	
Matrix	Soil	Sample Location				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.283	12/8/2015	MER	EPA 335.4	
%moisture	16.1	Percent		12/2/2015	MER	%moisture	

Sample Number	151201037-004	Sampling Date	11/24/2015	Date/Time Received	12/1/2015	11:40 AM
Client Sample ID	1511B63-004D / CENTRALOCD-04-11242015			Sampling Time	11:40 AM	
Matrix	Soil	Sample Location				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.284	12/8/2015	MER	EPA 335.4	
%moisture	14.2	Percent		12/2/2015	MER	%moisture	

Certifications held by Anatek Labs ID: EPA-ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:Cert0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

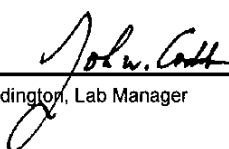
Batch #: 151201037
Project Name: 1511B63

Analytical Results Report

Sample Number	151201037-005	Sampling Date	11/24/2015	Date/Time Received	12/1/2015	11:40 AM	
Client Sample ID	1511B63-005D / BD-11242015			Sampling Time			
Matrix	Soil	Sample Location					
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.232	12/8/2015	MER	EPA 335.4	
%moisture	18.4	Percent		12/2/2015	MER	%moisture	

Sample Number	151201037-006	Sampling Date	11/24/2015	Date/Time Received	12/1/2015	11:40 AM	
Client Sample ID	1511B63-007D / CENTRALOCD-TZ-11242015			Sampling Time	11:07 AM		
Matrix	Soil	Sample Location					
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.207	12/8/2015	MER	EPA 335.4	
%moisture	18.8	Percent		12/2/2015	MER	%moisture	

Authorized Signature


John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

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The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP):E871099

Thursday, December 10, 2015

Page 2 of 2

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 151201037
Project Name: 1511B63

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.522	mg/kg	0.5	104.4	90-110	12/8/2015	12/8/2015

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
151201037-004	Cyanide	ND	14.7	mg/kg	14.2	103.5	70-130	12/8/2015	12/8/2015

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	15.0	mg/kg	14.2	105.6	2.0	0-25	12/8/2015	12/8/2015

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/Kg	0.1	12/8/2015	12/8/2015

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:Cert0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 1511B63
Pace Project No.: 30166551

Sample: **1511B63-001 CentralOCD-01-1124** Lab ID: **30166551001** Collected: 11/24/15 13:50 Received: 12/01/15 10:40 Matrix: Solid

PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Comments: • Sample Acceptance Policy Waiver on file from the client.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1	1.375 ± 0.267 (0.165) C:NA T:NA	pCi/g	12/29/15 10:07	13982-63-3	
Radium-228	EPA 901.1	1.745 ± 0.467 (0.469) C:NA T:NA	pCi/g	12/29/15 10:07	15262-20-1	

Sample: **1511B63-002 CentralOCD-02-1124** Lab ID: **30166551002** Collected: 11/24/15 13:15 Received: 12/01/15 10:40 Matrix: Solid

PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1	1.603 ± 0.355 (0.278) C:NA T:NA	pCi/g	12/29/15 10:08	13982-63-3	
Radium-228	EPA 901.1	2.090 ± 0.569 (0.333) C:NA T:NA	pCi/g	12/29/15 10:08	15262-20-1	

Sample: **1511B63-003 CentralOCD-03-1124** Lab ID: **30166551003** Collected: 11/24/15 14:25 Received: 12/01/15 10:40 Matrix: Solid

PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1	1.274 ± 0.317 (0.235) C:NA T:NA	pCi/g	12/29/15 10:25	13982-63-3	
Radium-228	EPA 901.1	1.582 ± 0.426 (0.169) C:NA T:NA	pCi/g	12/29/15 10:25	15262-20-1	

Sample: **1511B63-004 CentralOCD-04-1124** Lab ID: **30166551004** Collected: 11/24/15 11:40 Received: 12/01/15 10:40 Matrix: Solid

PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1	1.358 ± 0.293 (0.132) C:NA T:NA	pCi/g	12/29/15 10:26	13982-63-3	
Radium-228	EPA 901.1	1.640 ± 0.383 (0.268) C:NA T:NA	pCi/g	12/29/15 10:26	15262-20-1	

Sample: **1511B63-005 BD-11242015** Lab ID: **30166551005** Collected: 11/24/15 00:01 Received: 12/01/15 10:40 Matrix: Solid

PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Comments: • Sample collection time was not present on the sample container or the COC for this sample.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1	1.370 ± 0.316 (0.166) C:NA T:NA	pCi/g	12/29/15 10:43	13982-63-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 1511B63
Pace Project No.: 30166551

Sample: 1511B63-005 BD-11242015 Lab ID: 30166551005 Collected: 11/24/15 00:01 Received: 12/01/15 10:40 Matrix: Solid
PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Comments: • Sample collection time was not present on the sample container or the COC for this sample.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-228	EPA 901.1	1.987 ± 0.461 (0.146) C:NA T:NA	pCi/g	12/29/15 10:43	15262-20-1	

Sample: 1511B63-007 CentralOCD-TZ-1124 Lab ID: 30166551007 Collected: 11/24/15 11:07 Received: 12/01/15 10:40 Matrix: Solid
PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1	1.098 ± 0.246 (0.166) C:NA T:NA	pCi/g	12/30/15 08:15	13982-63-3	
Radium-228	EPA 901.1	1.756 ± 0.379 (0.135) C:NA T:NA	pCi/g	12/30/15 08:15	15262-20-1	

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Greensburg, PA 15601
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QUALITY CONTROL - RADIOCHEMISTRY

Project: 1511B63
Pace Project No.: 30166551

QC Batch: RADC/27191 Analysis Method: EPA 901.1
QC Batch Method: EPA 901.1 Analysis Description: 901.1 Gamma Spec Ingrowth
Associated Lab Samples: 30166551001, 30166551002, 30166551003, 30166551004, 30166551005

METHOD BLANK: 995893 Matrix: Solid
Associated Lab Samples: 30166551001, 30166551002, 30166551003, 30166551004, 30166551005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.118 ± 0.097 (0.179) C:NA T:NA	pCi/g	12/23/15 08:33	
Radium-228	0.000 ± 0.032 (0.301) C:NA T:NA	pCi/g	12/23/15 08:33	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 1511B63
Pace Project No.: 30166551

QC Batch:	RADC/27234	Analysis Method:	EPA 901.1
QC Batch Method:	EPA 901.1	Analysis Description:	901.1 Gamma Spec Ingrowth
Associated Lab Samples:	30166551007		

METHOD BLANK:	998079	Matrix:	Solid
---------------	--------	---------	-------

Associated Lab Samples: 30166551007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.128 ± 0.077 (0.249) C:NA T:NA	pCi/g	12/21/15 09:31	
Radium-228	0.068 ± 0.081 (0.457) C:NA T:NA	pCi/g	12/21/15 09:31	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 1511B63
Pace Project No.: 30166551

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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Date: 12/30/2015 09:50 AM

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-22657		SampType:	MBLK		TestCode:	EPA Method 300.0: Anions			
Client ID:	PBS		Batch ID:	22657		RunNo:	30664			
Prep Date:	12/7/2015		Analysis Date:	12/7/2015		SeqNo:	936838		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.30								
Chloride	ND	1.5								
Nitrogen, Nitrite (As N)	ND	0.30								
Sulfate	ND	1.5								

Sample ID	LCS-22657		SampType:	LCS		TestCode:	EPA Method 300.0: Anions			
Client ID:	LCSS		Batch ID:	22657		RunNo:	30664			
Prep Date:	12/7/2015		Analysis Date:	12/7/2015		SeqNo:	936839		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.30	1.500	0	102	90	110			
Chloride	14	1.5	15.00	0	94.2	90	110			
Nitrogen, Nitrite (As N)	2.8	0.30	3.000	0	93.2	90	110			
Sulfate	29	1.5	30.00	0	96.3	90	110			

Sample ID	MB-22714		SampType:	MBLK		TestCode:	EPA Method 300.0: Anions			
Client ID:	PBS		Batch ID:	22714		RunNo:	30760			
Prep Date:	12/9/2015		Analysis Date:	12/9/2015		SeqNo:	939545		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.30								
Chloride	ND	1.5								
Nitrogen, Nitrite (As N)	ND	0.30								
Sulfate	ND	1.5								

Sample ID	LCS-22714		SampType:	LCS		TestCode:	EPA Method 300.0: Anions			
Client ID:	LCSS		Batch ID:	22714		RunNo:	30760			
Prep Date:	12/9/2015		Analysis Date:	12/9/2015		SeqNo:	939546		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.30	1.500	0	101	90	110			
Chloride	14	1.5	15.00	0	93.0	90	110			
Nitrogen, Nitrite (As N)	2.8	0.30	3.000	0	94.2	90	110			
Sulfate	28	1.5	30.00	0	94.9	90	110			

Sample ID	1511B63-006BMS		SampType:	MS		TestCode:	EPA Method 300.0: Anions			
Client ID:	CentralOCD-04-1124		Batch ID:	22714		RunNo:	30760			
Prep Date:	12/9/2015		Analysis Date:	12/9/2015		SeqNo:	939548		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	1511B63-006BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	CentralOCD-04-1124	Batch ID:	22714	RunNo:	30760					
Prep Date:	12/9/2015	Analysis Date:	12/9/2015	SeqNo:	939548	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	5.0	1.5	1.500	4.123	60.5	13.6	100			
Nitrogen, Nitrite (As N)	2.6	1.5	3.000	0	85.2	84.9	108			

Sample ID	1511B63-006BMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	CentralOCD-04-1124	Batch ID:	22714	RunNo:	30760					
Prep Date:	12/9/2015	Analysis Date:	12/9/2015	SeqNo:	939549	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	5.2	1.5	1.500	4.123	73.8	13.6	100	3.88	20	
Nitrogen, Nitrite (As N)	2.6	1.5	3.000	0	86.6	84.9	108	1.63	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-22570		SampType: MBLK		TestCode: EPA Method 418.1: TPH					
Client ID:	PBS		Batch ID: 22570		RunNo: 30585					
Prep Date:	12/1/2015		Analysis Date: 12/2/2015		SeqNo: 933705		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-22570		SampType: LCS		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS		Batch ID: 22570		RunNo: 30585					
Prep Date:	12/1/2015		Analysis Date: 12/2/2015		SeqNo: 933706		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	93	20	100.0	0	92.6	83.6	116			

Sample ID	LCSD-22570		SampType: LCSD		TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS02		Batch ID: 22570		RunNo: 30585					
Prep Date:	12/1/2015		Analysis Date: 12/2/2015		SeqNo: 933707		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	99	20	100.0	0	99.4	83.6	116	7.10	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-22559		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 22559		RunNo: 30578					
Prep Date:	11/30/2015		Analysis Date: 12/2/2015		SeqNo: 933512		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.5		10.00		94.9	70	130			

Sample ID	LCS-22559		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 22559		RunNo: 30578					
Prep Date:	11/30/2015		Analysis Date: 12/2/2015		SeqNo: 933513		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.6	57.4	139			
Surr: DNOP	4.8		5.000		95.5	70	130			

Sample ID	1511B63-006AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	CentralOCD-04-1124		Batch ID: 22559		RunNo: 30578					
Prep Date:	11/30/2015		Analysis Date: 12/2/2015		SeqNo: 933566		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.5	47.62	0	92.9	31.2	162			
Surr: DNOP	4.9		4.762		103	70	130			

Sample ID	1511B63-006AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	CentralOCD-04-1124		Batch ID: 22559		RunNo: 30578					
Prep Date:	11/30/2015		Analysis Date: 12/2/2015		SeqNo: 933567		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.5	47.71	0	94.3	31.2	162	1.69	31.7	
Surr: DNOP	4.8		4.771		99.9	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-22549		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 22549		RunNo: 30565					
Prep Date:	11/30/2015		Analysis Date: 12/1/2015		SeqNo: 933151		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	840		1000		83.6	66.2	112			

Sample ID	LCS-22549		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 22549		RunNo: 30565					
Prep Date:	11/30/2015		Analysis Date: 12/1/2015		SeqNo: 933152		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.4	79.6	122			
Surr: BFB	950		1000		94.6	66.2	112			

Sample ID	1511B63-001AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	CentralOCD-01-1124		Batch ID: 22549		RunNo: 30565					
Prep Date:	11/30/2015		Analysis Date: 12/1/2015		SeqNo: 933156		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	32	5.0	24.90	0	129	62.5	151			
Surr: BFB	1000		996.0		101	66.2	112			

Sample ID	1511B63-001AMSD		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	CentralOCD-01-1124		Batch ID: 22549		RunNo: 30565					
Prep Date:	11/30/2015		Analysis Date: 12/1/2015		SeqNo: 933157		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	5.0	24.85	0	119	62.5	151	8.45	22.1	
Surr: BFB	960		994.0		96.6	66.2	112	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-22573	SampType: MBLK			TestCode: EPA Method 8082: PCB's					
Client ID:	PBS	Batch ID: 22573			RunNo: 30599					
Prep Date:	12/1/2015	Analysis Date: 12/3/2015			SeqNo: 934656		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.020								
Aroclor 1221	ND	0.020								
Aroclor 1232	ND	0.020								
Aroclor 1242	ND	0.020								
Aroclor 1248	ND	0.020								
Aroclor 1254	ND	0.020								
Aroclor 1260	ND	0.020								
Surr: Decachlorobiphenyl	0.10		0.1250		83.6	22.3	101			
Surr: Tetrachloro-m-xylene	0.082		0.1250		65.6	23.9	103			

Sample ID	LCS-22573		SampType: LCS		TestCode: EPA Method 8082: PCB's					
Client ID:	LCSS		Batch ID: 22573		RunNo: 30599					
Prep Date:	12/1/2015		Analysis Date: 12/3/2015		SeqNo: 934657		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.13	0.020	0.2500	0	53.8	26.1	137			
Aroclor 1260	0.17	0.020	0.2500	0	69.5	20.8	167			
Surr: Decachlorobiphenyl	0.095		0.1250		76.0	22.3	101			
Surr: Tetrachloro-m-xylene	0.069		0.1250		55.2	23.9	103			

Sample ID	1511B63-006AMS		SampType: MS		TestCode: EPA Method 8082: PCB's					
Client ID:	CentralOCD-04-1124		Batch ID: 22573		RunNo: 30599					
Prep Date:	12/1/2015		Analysis Date: 12/3/2015		SeqNo: 935065		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.11	0.020	0.1239	0	88.4	15.8	111			
Aroclor 1260	0.14	0.020	0.1239	0	113	6.14	135			
Surr: Decachlorobiphenyl	0.068		0.06194		110	22.3	101			S
Surr: Tetrachloro-m-xylene	0.058		0.06194		93.2	23.9	103			

Sample ID	1511B63-006AMSD		SampType: MSD		TestCode: EPA Method 8082: PCB's					
Client ID:	CentralOCD-04-1124		Batch ID: 22573		RunNo: 30599					
Prep Date:	12/1/2015		Analysis Date: 12/3/2015		SeqNo: 935066		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.12	0.020	0.1240	0	96.6	15.8	111	8.96	27.6	
Aroclor 1260	0.15	0.020	0.1240	0	122	6.14	135	7.53	36.9	
Surr: Decachlorobiphenyl	0.077		0.06200		124	22.3	101	0	0	S
Surr: Tetrachloro-m-xylene	0.067		0.06200		108	23.9	103	0	0	S

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	mb-22549	SampType:	MBLK	TestCode:	EPA Method 8260B: Volatiles					
Client ID:	PBS	Batch ID:	22549	RunNo:	30566					
Prep Date:	11/30/2015	Analysis Date:	12/1/2015	SeqNo:	933179	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	mb-22549		SampType: MBLK			TestCode: EPA Method 8260B: Volatiles				
Client ID:	PBS		Batch ID: 22549			RunNo: 30566				
Prep Date:	11/30/2015		Analysis Date: 12/1/2015			SeqNo: 933179		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.39		0.5000		78.5	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.1	70	130			
Surr: Toluene-d8	0.55		0.5000		110	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			

Sample ID	lcs-22549		SampType: LCS			TestCode: EPA Method 8260B: Volatiles				
Client ID:	LCSS		Batch ID: 22549			RunNo: 30566				
Prep Date:	11/30/2015		Analysis Date: 12/1/2015			SeqNo: 933180		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.050	1.000	0	88.4	70	130			
Toluene	1.1	0.050	1.000	0	109	70	130			
Chlorobenzene	1.0	0.050	1.000	0	100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	Ics-22549		SampType: LCS			TestCode: EPA Method 8260B: Volatiles				
Client ID:	LCSS		Batch ID: 22549			RunNo: 30566				
Prep Date:	11/30/2015		Analysis Date: 12/1/2015			SeqNo: 933180		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.89	0.050	1.000	0	89.4	70	130			
Trichloroethene (TCE)	0.80	0.050	1.000	0	80.5	70	130			
Surr: Dibromofluoromethane	0.40		0.5000		80.4	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.4	70	130			
Surr: Toluene-d8	0.54		0.5000		108	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.1	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID rb	SampType: MBLK			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: PBW	Batch ID: A30526			RunNo: 30526						
Prep Date:	Analysis Date: 11/30/2015			SeqNo: 932037		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.0	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Sample ID 100ng lcs	SampType: LCS			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: LCSW	Batch ID: A30526			RunNo: 30526						
Prep Date:	Analysis Date: 11/30/2015			SeqNo: 932038		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.7	70	130			
Toluene	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.6	70	130			
Surr: Toluene-d8	11		10.00		107	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	mb-22574	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBS	Batch ID:	22574	RunNo:	30619					
Prep Date:	12/1/2015	Analysis Date:	12/3/2015	SeqNo:	935238	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Aniline	ND	0.20								
Anthracene	ND	0.20								
Azobenzene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Benzoic acid	ND	0.50								
Benzyl alcohol	ND	0.20								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.50								
4-Bromophenyl phenyl ether	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Carbazole	ND	0.20								
4-Chloro-3-methylphenol	ND	0.50								
4-Chloroaniline	ND	0.50								
2-Chloronaphthalene	ND	0.25								
2-Chlorophenol	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
Chrysene	ND	0.20								
Di-n-butyl phthalate	ND	0.40								
Di-n-octyl phthalate	ND	0.40								
Dibenz(a,h)anthracene	ND	0.20								
Dibenzofuran	ND	0.20								
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
3,3'-Dichlorobenzidine	ND	0.25								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
2,4-Dichlorophenol	ND	0.40								
2,4-Dimethylphenol	ND	0.30								
4,6-Dinitro-2-methylphenol	ND	0.40								
2,4-Dinitrophenol	ND	0.50								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	mb-22574	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBS	Batch ID:	22574	RunNo:	30619					
Prep Date:	12/1/2015	Analysis Date:	12/3/2015	SeqNo:	935238	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	0.50								
2,6-Dinitrotoluene	ND	0.50								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Hexachlorobenzene	ND	0.20								
Hexachlorobutadiene	ND	0.20								
Hexachlorocyclopentadiene	ND	0.20								
Hexachloroethane	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Isophorone	ND	0.40								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.40								
3+4-Methylphenol	ND	0.20								
N-Nitrosodi-n-propylamine	ND	0.20								
N-Nitrosodiphenylamine	ND	0.20								
Naphthalene	ND	0.20								
2-Nitroaniline	ND	0.20								
3-Nitroaniline	ND	0.20								
4-Nitroaniline	ND	0.40								
Nitrobenzene	ND	0.40								
2-Nitrophenol	ND	0.20								
4-Nitrophenol	ND	0.25								
Pentachlorophenol	ND	0.40								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	0.40								
1,2,4-Trichlorobenzene	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
Surr: 2-Fluorophenol	2.3		3.330		68.8	9.93	124			
Surr: Phenol-d5	2.7		3.330		80.8	28	119			
Surr: 2,4,6-Tribromophenol	2.7		3.330		82.0	11.7	134			
Surr: Nitrobenzene-d5	1.4		1.670		81.9	25	123			
Surr: 2-Fluorobiphenyl	1.4		1.670		84.9	31.2	117			
Surr: 4-Terphenyl-d14	0.54		1.670		32.3	5.82	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	1511b63-006ams	SampType: MS			TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	CentralOCD-04-1124	Batch ID: 22574			RunNo: 30619					
Prep Date:	12/1/2015	Analysis Date: 12/3/2015			SeqNo: 935247		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	0.88	0.20	1.661	0	53.2	27.5	117			
4-Chloro-3-methylphenol	1.8	0.50	3.312	0	54.5	26.3	116			
2-Chlorophenol	1.9	0.20	3.312	0	57.3	21.4	113			
1,4-Dichlorobenzene	0.81	0.20	1.661	0	48.9	25	105			
2,4-Dinitrotoluene	0.84	0.50	1.661	0	50.4	21.1	119			
N-Nitrosodi-n-propylamine	1.0	0.20	1.661	0	59.9	21.3	126			
4-Nitrophenol	1.7	0.25	3.312	0	52.3	21.3	120			
Pentachlorophenol	1.7	0.40	3.312	0	50.1	11.5	115			
Phenol	1.9	0.20	3.312	0	56.8	23	118			
Pyrene	0.69	0.20	1.661	0	41.3	25.7	110			
1,2,4-Trichlorobenzene	1.0	0.20	1.661	0	62.7	31.1	107			
Surr: 2-Fluorophenol	1.8		3.312		53.8	9.93	124			
Surr: Phenol-d5	2.0		3.312		61.7	28	119			
Surr: 2,4,6-Tribromophenol	2.0		3.312		60.9	11.7	134			
Surr: Nitrobenzene-d5	1.0		1.661		60.4	25	123			
Surr: 2-Fluorobiphenyl	1.1		1.661		66.9	31.2	117			
Surr: 4-Terphenyl-d14	0.51		1.661		30.9	5.82	129			

Sample ID	1511b63-006amsd	SampType: MSD			TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	CentralOCD-04-1124	Batch ID: 22574			RunNo: 30619					
Prep Date:	12/1/2015	Analysis Date: 12/3/2015			SeqNo: 935248		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	0.95	0.20	1.669	0	57.0	27.5	117	7.49	25.4	
4-Chloro-3-methylphenol	2.0	0.50	3.329	0	59.2	26.3	116	8.81	30.4	
2-Chlorophenol	2.0	0.20	3.329	0	59.4	21.4	113	4.05	33.4	
1,4-Dichlorobenzene	0.91	0.20	1.669	0	54.6	25	105	11.6	20.9	
2,4-Dinitrotoluene	0.83	0.50	1.669	0	49.9	21.1	119	0.456	27.9	
N-Nitrosodi-n-propylamine	1.1	0.20	1.669	0	64.1	21.3	126	7.13	27.5	
4-Nitrophenol	1.9	0.25	3.329	0	57.9	21.3	120	10.7	33.7	
Pentachlorophenol	1.9	0.40	3.329	0	57.4	11.5	115	14.1	39.7	
Phenol	2.0	0.20	3.329	0	59.4	23	118	4.91	30.1	
Pyrene	0.69	0.20	1.669	0	41.4	25.7	110	0.788	22.7	
1,2,4-Trichlorobenzene	1.1	0.20	1.669	0	65.2	31.1	107	4.34	27.8	
Surr: 2-Fluorophenol	1.9		3.329		57.3	9.93	124	0	0	
Surr: Phenol-d5	2.2		3.329		65.6	28	119	0	0	
Surr: 2,4,6-Tribromophenol	2.2		3.329		67.0	11.7	134	0	0	
Surr: Nitrobenzene-d5	1.1		1.669		64.2	25	123	0	0	
Surr: 2-Fluorobiphenyl	1.2		1.669		72.3	31.2	117	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	1511b63-006amsd	SampType:	MSD	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	CentralOCD-04-1124	Batch ID:	22574	RunNo:	30619					
Prep Date:	12/1/2015	Analysis Date:	12/3/2015	SeqNo:	935248	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	0.51		1.669		30.4	5.82	129	0	0	

Sample ID	lcs-22574	SampType:	LCS	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS	Batch ID:	22574	RunNo:	30663					
Prep Date:	12/1/2015	Analysis Date:	12/7/2015	SeqNo:	936834	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	1.2	0.20	1.670	0	69.8	45.8	99.8			
4-Chloro-3-methylphenol	2.4	0.50	3.330	0	72.8	51.5	103			
2-Chlorophenol	2.4	0.20	3.330	0	71.2	46.5	105			
1,4-Dichlorobenzene	1.2	0.20	1.670	0	70.5	45.5	103			
2,4-Dinitrotoluene	0.98	0.50	1.670	0	58.8	36	87.2			
N-Nitrosodi-n-propylamine	1.3	0.20	1.670	0	78.8	47.3	104			
4-Nitrophenol	2.0	0.25	3.330	0	59.9	47.3	95.3			
Pentachlorophenol	2.1	0.40	3.330	0	62.1	38.7	89.3			
Phenol	2.5	0.20	3.330	0	73.7	47.8	106			
Pyrene	0.83	0.20	1.670	0	49.8	33.4	105			
1,2,4-Trichlorobenzene	1.4	0.20	1.670	0	84.1	50.4	115			
Surr: 2-Fluorophenol	2.3		3.330		69.4	9.93	124			
Surr: Phenol-d5	2.5		3.330		76.4	28	119			
Surr: 2,4,6-Tribromophenol	2.7		3.330		80.0	11.7	134			
Surr: Nitrobenzene-d5	1.2		1.670		73.3	25	123			
Surr: 2-Fluorobiphenyl	1.3		1.670		79.8	31.2	117			
Surr: 4-Terphenyl-d14	0.58		1.670		34.8	5.82	129			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-22597		SampType: MBLK		TestCode: EPA Method 7471: Mercury					
Client ID:	PBS		Batch ID: 22597		RunNo: 30635					
Prep Date:	12/2/2015		Analysis Date: 12/4/2015		SeqNo: 935703		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	ND	0.033								

Sample ID	LCS-22597		SampType: LCS		TestCode: EPA Method 7471: Mercury					
Client ID:	LCSS		Batch ID: 22597		RunNo: 30635					
Prep Date:	12/2/2015		Analysis Date: 12/4/2015		SeqNo: 935704		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.18	0.033	0.1667	0	105	80	120			

Sample ID	1511B63-006BMS		SampType: MS		TestCode: EPA Method 7471: Mercury					
Client ID:	CentralOCD-04-1124		Batch ID: 22597		RunNo: 30635					
Prep Date:	12/2/2015		Analysis Date: 12/4/2015		SeqNo: 935720		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.032	0.1628	0.01732	93.6	75	125			

Sample ID	1511B63-006BMSD		SampType: MSD		TestCode: EPA Method 7471: Mercury					
Client ID:	CentralOCD-04-1124		Batch ID: 22597		RunNo: 30635					
Prep Date:	12/2/2015		Analysis Date: 12/4/2015		SeqNo: 935721		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	0.16	0.033	0.1645	0.01732	89.8	75	125	2.79	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID MB-22659	SampType: MBLK		TestCode: EPA Method 6010B: Soil Metals							
Client ID: PBS	Batch ID: 22659		RunNo: 30691							
Prep Date: 12/7/2015	Analysis Date: 12/8/2015		SeqNo: 937131		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	2.5								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Uranium	ND	5.0								
Zinc	ND	2.5								

Sample ID LCS-22659	SampType: LCS		TestCode: EPA Method 6010B: Soil Metals							
Client ID: LCSS	Batch ID: 22659		RunNo: 30691							
Prep Date: 12/7/2015	Analysis Date: 12/8/2015		SeqNo: 937132		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	26	2.5	25.00	0	105	80	120			
Barium	25	0.10	25.00	0	98.3	80	120			
Cadmium	25	0.10	25.00	0	99.3	80	120			
Chromium	24	0.30	25.00	0	97.9	80	120			
Copper	25	0.30	25.00	0	101	80	120			
Iron	25	2.5	25.00	0	101	80	120			
Lead	24	0.25	25.00	0	97.4	80	120			
Manganese	24	0.10	25.00	0	97.6	80	120			
Selenium	26	2.5	25.00	0	103	80	120			
Silver	5.0	0.25	5.000	0	99.0	80	120			
Uranium	25	5.0	25.00	0	98.9	80	120			
Zinc	25	2.5	25.00	0	98.0	80	120			

Sample ID 1511B63-006BMS	SampType: MS		TestCode: EPA Method 6010B: Soil Metals							
Client ID: CentralOCD-04-1124	Batch ID: 22659		RunNo: 30691							
Prep Date: 12/7/2015	Analysis Date: 12/8/2015		SeqNo: 937274		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	20	5.0	24.87	0	79.6	75	125			
Barium	210	0.20	24.87	215.1	-14.8	75	125			S
Cadmium	19	0.20	24.87	0	76.6	75	125			
Chromium	27	0.60	24.87	7.589	78.8	75	125			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	1511B63-006BMS		SampType: MS		TestCode: EPA Method 6010B: Soil Metals					
Client ID:	CentralOCD-04-1124		Batch ID: 22659		RunNo: 30691					
Prep Date:	12/7/2015		Analysis Date: 12/8/2015		SeqNo: 937274		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	20	0.60	24.87	1.564	73.4	75	125			S
Lead	23	0.50	24.87	3.668	76.3	75	125			
Manganese	360	0.20	24.87	292.7	288	75	125			S
Selenium	16	5.0	24.87	0	65.6	75	125			S
Silver	3.7	0.50	4.974	0	74.7	75	125			S
Uranium	17	9.9	24.87	0	68.2	75	125			S
Zinc	33	5.0	24.87	13.13	80.1	75	125			

Sample ID	1511B63-006BMSD	SampType:	MSD		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	CentralOCD-04-1124	Batch ID:	22659		RunNo:	30691				
Prep Date:	12/7/2015	Analysis Date:	12/8/2015		SeqNo:	937275		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	5.1	25.29	0	89.6	75	125	13.6	20	
Barium	230	0.20	25.29	215.1	76.7	75	125	10.4	20	
Cadmium	22	0.20	25.29	0	85.9	75	125	13.2	20	
Chromium	31	0.61	25.29	7.589	92.9	75	125	13.4	20	
Copper	23	0.61	25.29	1.564	85.0	75	125	15.0	20	
Lead	25	0.51	25.29	3.668	82.5	75	125	7.97	20	
Manganese	410	0.20	25.29	292.7	464	75	125	11.8	20	S
Selenium	18	5.1	25.29	0	72.2	75	125	11.2	20	S
Silver	4.3	0.51	5.057	0	84.1	75	125	13.5	20	
Uranium	19	10	25.29	0	74.5	75	125	10.4	20	S
Zinc	37	5.1	25.29	13.13	95.6	75	125	12.1	20	

Sample ID	MB-22785	SampType: MBLK			TestCode: EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID: 22785			RunNo: 30838					
Prep Date:	12/14/2015	Analysis Date: 12/15/2015			SeqNo: 942292		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	2.5								
Lead	ND	0.25								
Manganese	ND	0.10								
Silver	ND	0.25								
Uranium	ND	5.0								

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	MB-22785		SampType: MBLK		TestCode: EPA Method 6010B: Soil Metals					
Client ID:	PBS		Batch ID: 22785		RunNo: 30838					
Prep Date:	12/14/2015		Analysis Date: 12/15/2015		SeqNo: 942292		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	2.5								

Sample ID	LCS-22785		SampType: LCS		TestCode: EPA Method 6010B: Soil Metals						
Client ID:	LCSS		Batch ID: 22785		RunNo: 30838						
Prep Date:	12/14/2015		Analysis Date: 12/15/2015		SeqNo: 942293		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	28	2.5	25.00	0	113	80	120				
Barium	26	0.10	25.00	0	103	80	120				
Cadmium	26	0.10	25.00	0	106	80	120				
Chromium	26	0.30	25.00	0	103	80	120				
Copper	26	0.30	25.00	0	104	80	120				
Iron	25	2.5	25.00	0	101	80	120				
Lead	25	0.25	25.00	0	102	80	120				
Manganese	25	0.10	25.00	0	99.8	80	120				
Silver	5.1	0.25	5.000	0	102	80	120				
Uranium	25	5.0	25.00	0	98.7	80	120				
Zinc	27	2.5	25.00	0	109	80	120				

Sample ID	1511B63-004BMS		SampType: MS		TestCode: EPA Method 6010B: Soil Metals					
Client ID:	CentralOCD-04-1124		Batch ID: 22785		RunNo: 30838					
Prep Date:	12/14/2015		Analysis Date: 12/15/2015		SeqNo: 942734		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	21	2.5	24.58	1.742	79.9	75	125			
Cadmium	21	0.098	24.58	0	85.0	75	125			
Chromium	27	0.29	24.58	6.896	80.4	75	125			
Copper	26	0.29	24.58	3.219	92.0	75	125			
Lead	28	0.25	24.58	11.85	65.4	75	125			S
Selenium	22	2.5	24.58	0	88.9	75	125			
Silver	4.0	0.25	4.916	0	82.2	75	125			
Uranium	16	4.9	24.58	0	66.2	75	125			S
Zinc	37	2.5	24.58	18.01	77.9	75	125			

Sample ID	1511B63-004BMSD		SampType:	MSD		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	CentralOCD-04-1124		Batch ID:	22785		RunNo:	30838				
Prep Date:	12/14/2015		Analysis Date:	12/15/2015		SeqNo:	942735		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	21	2.5	24.72	1.742	76.6	75	125	3.35	20		

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511B63

30-Dec-15

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	1511B63-004BMSD		SampType: MSD		TestCode: EPA Method 6010B: Soil Metals					
Client ID:	CentralOCD-04-1124		Batch ID: 22785		RunNo: 30838					
Prep Date:	12/14/2015		Analysis Date: 12/15/2015		SeqNo: 942735		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	21	0.099	24.72	0	84.3	75	125	0.223	20	
Chromium	26	0.30	24.72	6.896	78.0	75	125	1.89	20	
Copper	25	0.30	24.72	3.219	88.7	75	125	2.72	20	
Lead	25	0.25	24.72	11.85	52.2	75	125	12.0	20	S
Selenium	22	2.5	24.72	0	88.0	75	125	0.430	20	
Silver	4.0	0.25	4.943	0	81.9	75	125	0.165	20	
Uranium	17	4.9	24.72	0	70.4	75	125	6.67	20	S
Zinc	33	2.5	24.72	18.01	61.5	75	125	11.2	20	S

Sample ID	1511B63-004BMS		SampType: MS		TestCode: EPA Method 6010B: Soil Metals					
Client ID:	CentralOCD-04-1124		Batch ID: 22785		RunNo: 30838					
Prep Date:	12/14/2015		Analysis Date: 12/15/2015		SeqNo: 942737		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	250	0.20	24.58	251.8	7.64	75	125			S

Sample ID	1511B63-004BMSD		SampType: MSD		TestCode: EPA Method 6010B: Soil Metals					
Client ID:	CentralOCD-04-1124		Batch ID: 22785		RunNo: 30838					
Prep Date:	12/14/2015		Analysis Date: 12/15/2015		SeqNo: 942738		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	290	0.20	24.72	251.8	146	75	125	12.7	20	S

Sample ID	MB-22785		SampType: MBLK		TestCode: EPA Method 6010B: Soil Metals					
Client ID:	PBS		Batch ID: 22785		RunNo: 30879					
Prep Date:	12/14/2015		Analysis Date: 12/16/2015		SeqNo: 943822		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	2.5								

Sample ID	LCS-22785			SampType:	LCS		TestCode:	EPA Method 6010B: Soil Metals			
Client ID:	LCSS			Batch ID:	22785		RunNo:	30879			
Prep Date:	12/14/2015			Analysis Date:	12/16/2015		SeqNo:	943823		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Selenium	29	2.5	25.00	0	116	80	120				

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup

Work Order Number: 1511B63

RcptNo: 1

Received by/date: JH 11/25/15

Logged By: Anne Thorne 11/25/2015 12:10:00 PM

Completed By: Anne Thorne 11/25/2015

Reviewed By: JH 11/25/15

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☒ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? UPS

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☒ NA ☐

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Route 3 Box 7

Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☒ EDD (Type) Please provide EDD

Turn-Around Time:

☒ Standard

☐ Rush

Project Name:

OCD Central Landfarm Semiannual Sampling

Project #:

697-052-002

Project Manager:

Ed Riege

Sampler:

Zac Bitsue

On Ice:

☒ Yes

☐ No

Sample Temperature:

11

HEAL No. 518103

Vadose Zone List (see attached)

NMAC List (see attached)

TPH-DRO and TPH-GRO by 8015M

BTEX (8260)

Air Bubbles (Y or N)



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	Vadose Zone List (see attached)	NMAC List (see attached)	TPH-DRO and TPH-GRO by 8015M	BTEX (8260)	Air Bubbles (Y or N)
11/24/2015	1350	soil	CentralOCD-01-11242015	80z - 3, 40z - 1	none	-201	X	X			
11/24/2015	1315	soil	CentralOCD-02-11242015	80z - 3, 40z - 1	none	-202	X	X			
11/24/2015	1425	soil	CentralOCD-03-11242015	80z - 3, 40z - 1	none	-203	X	X			
11/24/2015	1140	soil	CentralOCD-04-11242015	80z - 3, 40z - 1	none	-204	X	X			
11/24/2015	—	soil	BD-11242015	80z - 3, 40z - 1	none	-205	X	X			
11/24/2015	1145	soil	CentralOCD-04-11242015-MS	80z - 3, 40z - 1	none	-206	X	X			
11/24/2015	1155	soil	CentralOCD-04-11242015-MSD	80z - 3, 40z - 1	none	-207	X	X			
11/24/2015	1107	soil	CentralOCD-TZ-11242015	80z - 3, 40z - 1	none	-208	X	X			
11/24/2015	1265	water	EB-11242015	VOA - 3	HCL	-209			X		
11/24/2015	1215	water	FB-11242015	VOA - 3	HCL	-210			X		
NA	NA	water	Tripp Blank	VOA - 3	HCL	-211			X		
Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:					
11-24-15	1630	SEB	AC. Ochoa	11/25/15	12:10	Please cc Grant Price (gprice@trihydro.com) with results. Call Grant @ 307-745-7474 w/ questions. Verify that Reporting limits comply with those shown on the attached. PCBs need DL of 0.02 mg/kg.					

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

**VADOSE ZONE ANALYTES AND REPORTING LIMITS, CENTRAL OIL CONSERVATION DIVISION LANDFARM
WESTERN REFINING SOUTHWEST, GALLUP REFINERY, GALLUP, NEW MEXICO**

Analyte	Analytical Method	Reporting Units	Requested Reporting Limit
Chloride	E300	mg/kg	30
Benzene	SW8260B	mg/kg	0.050
Ethylbenzene	SW8260B	mg/kg	0.050
Toluene	SW8260B	mg/kg	0.050
Xylenes, Total	SW8260B	mg/kg	0.100
Petroleum Hydrocarbons, TR	E418.1	mg/kg	20

**NMAC LIST ANALYTES AND REPORTING LIMITS, CONSTITUENTS LISTED IN SUBSECTIONS A AND B OF 20.6.2.3103 NMAC, CENTRAL OIL CONSERVATION DIVISION LANDFARM
WESTERN REFINING SOUTHWEST, GALLUP REFINERY, GALLUP, NEW MEXICO**

Analyte	Analytical Method	Reporting Units	Requested Reporting Limit
Fluoride	E300	mg/kg	0.3000
Nitrogen, Nitrate (As N)	E300	mg/kg	2.2000
Sulfate	E300	mg/kg	21.5000
*Radium-226	E901.1	pCi/g	1.3950
*Radium-228	E901.1	pCi/g	1.2500
*Radium-226+Radium-228	E901.1	pCi/g	2.8450
Arsenic	SW6010A	mg/kg	2.5000
Barium	SW6010A	mg/kg	1.0000
Cadmium	SW6010A	mg/kg	0.1000
Chromium	SW6010A	mg/kg	0.3000
Copper	SW6010A	mg/kg	0.6000
Iron	SW6010A	mg/kg	500.0000
Lead	SW6010A	mg/kg	0.2500
Manganese	SW6010A	mg/kg	1.0000
Selenium	SW6010A	mg/kg	2.5000
Silver	SW6010A	mg/kg	0.2500
Uranium	SW6010A	mg/kg	5.0000
Zinc	SW6010A	mg/kg	2.5000
Mercury	SW7471	mg/kg	0.0330
Aroclor 1016	SW8082	mg/kg	0.0200
Aroclor 1221	SW8082	mg/kg	0.0200
Aroclor 1232	SW8082	mg/kg	0.0200
Aroclor 1242	SW8082	mg/kg	0.0200
Aroclor 1248	SW8082	mg/kg	0.0200
Aroclor 1254	SW8082	mg/kg	0.0200
Aroclor 1260	SW8082	mg/kg	0.0200
1,1,1-Trichloroethane	SW8260B	mg/kg	0.0480
1,1,2-Trichloroethane	SW8260B	mg/kg	0.0480
1,1-Dichloroethane	SW8260B	mg/kg	0.0970
1,1-Dichloroethene	SW8260B	mg/kg	0.0480
1,2-Dichloroethane	SW8260B	mg/kg	0.0480
Carbon tetrachloride	SW8260B	mg/kg	0.0970
Chloroform	SW8260B	mg/kg	0.0480
Dibromomethane	SW8260B	mg/kg	0.1000
Methylene chloride	SW8260B	mg/kg	0.1500
Tetrachloroethene	SW8260B	mg/kg	0.0480
Trichloroethene	SW8260B	mg/kg	0.0480
Vinyl chloride	SW8260B	mg/kg	0.0480
2,4,5-Trichlorophenol	SW8270C	mg/kg	0.2000
2,4,6-Trichlorophenol	SW8270C	mg/kg	0.2000
2,4-Dichlorophenol	SW8270C	mg/kg	0.4000
2,4-Dimethylphenol	SW8270C	mg/kg	0.3000
2,4-Dinitrophenol	SW8270C	mg/kg	0.4000
2-Chlorophenol	SW8270C	mg/kg	0.2000
2-Methylphenol	SW8270C	mg/kg	0.1000
2-Nitrophenol	SW8270C	mg/kg	0.1000
3+4-Methylphenol	SW8270C	mg/kg	0.1000
4,6-Dinitro-2-methylphenol	SW8270C	mg/kg	0.5000
4-Chloro-3-methylphenol	SW8270C	mg/kg	0.1000
4-Nitrophenol	SW8270C	mg/kg	0.1000
Pentachlorophenol	SW8270C	mg/kg	0.4000
Phenol	SW8270C	mg/kg	0.2000
1-Methylnaphthalene	SW8260B	mg/kg	0.2000
2-Methylnaphthalene	SW8260B	mg/kg	0.2000
Acenaphthene	SW8270C	mg/kg	0.2000
Acenaphthylene	SW8270C	mg/kg	0.2000
Anthracene	SW8270C	mg/kg	0.2000
Benzo(a)anthracene	SW8270C	mg/kg	0.2000
Benzo(a)pyrene	SW8270C	mg/kg	0.2000
Benzo(b)fluoranthene	SW8270C	mg/kg	0.2000
Benzo(g,h,i)perylene	SW8270C	mg/kg	0.2000
Benzo(k)fluoranthene	SW8270C	mg/kg	0.2000
Chrysene	SW8270C	mg/kg	0.2000
Dibenz(a,h)anthracene	SW8270C	mg/kg	0.2000
Fluoranthene	SW8270C	mg/kg	0.2000
Fluorene	SW8270C	mg/kg	0.2000
Indeno(1,2,3-c,d)pyrene	SW8270C	mg/kg	0.2000
Naphthalene	SW8270C	mg/kg	0.2000
Phenanthrene	SW8270C	mg/kg	0.2000
Pyrene	SW8270C	mg/kg	0.2000
Cyanide	EPA 335.4	mg/kg	0.3000
Diesel Range Organics (DRO)	SW8015	mg/kg	12
Gasoline Range Organics (GRO)	SW8015	mg/kg	1.0