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November 15, 2020

Mr. Kevin Pierard, Chief
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505

**RE: Response to Approval with Modifications
Response Action Report Tank 35 – Oily Water Release
Western Refining Southwest Inc., Gallup Refinery
EPA ID #NMD000333211
HWB-WRG-19-018**

Dear Mr. Pierard,

Attached please find the response to comments contained in the New Mexico Environment Department (NMED) Approval with Modifications letter dated April 3, 2020.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. John Moore of my staff at 505-722-0205.

Certification

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

Sincerely,
Marathon Petroleum Company LP, Gallup Refinery

Robert S. Hanks
Refinery General Manager
Enclosure

- cc: D. Cobrain, NMED HWB
M. Suzuki, NMED HWB
C. Chavez OCD
L. King, EPA Region 6
G. McCartney, Marathon Petroleum Company
J. Moore, Marathon Gallup Refinery
H. Jones, Trihydro Corporation



RESPONSE TO APPROVAL WITH MODIFICATIONS

RESPONSE ACTION REPORT TANK 35 – OILY WATER RELEASE

New Mexico Environment Department (NMED) Comments:

NMED Comment 1:

In the Remediation Activities, Assessment — Soil Confirmation Sampling Event, page 5 of 14, the Permittee states, "[b]oth field screening and analytical sampling were completed to confirm contamination was removed. Soil samples were collected from six locations shown on Figure 5." According to Figure 5, Tank 35 Soil Sample Locations, soil sample T-35-2 was collected outside of the excavation area. All soil confirmation samples should have been collected within excavation floor or sides. Explain the basis for collecting confirmation sample T-35-2 outside of the excavation area and provide a justification in a response letter.

Marathon Petroleum Company (MPC) Response 1:

Although sample T-35-2 was collected outside the excavation area, the sample was collected within the area of the release (see first photo in Appendix B). This sample location was selected for background comparison purposes.

NMED Comment 2:

In the Conclusions and Recommendations, page 7 of 14, the Permittee states, "[t]he Refinery received heavy rainfall on July 29, 2017 and July 30, 2017. On July 30, 2017, Tank 35 began to overflow with oily water. The oily water flowed through the vents at the top of the tank and pooled inside the tank berm." Explain whether any contingency measures were implemented to prevent overflow from Tank 35 in case similar rain events occur in the future. If so, explain nature of the contingency measures in the response letter. Otherwise, explain why such measures are not necessary at this time (e.g., upgrading the wastewater treatment system).

MPC Response 2:

Following the release, contingency measures were not implemented. However, at this time, the refinery is indefinitely idled, and the storm sewer inlet valves have been closed.



RESPONSE TO APPROVAL WITH MODIFICATIONS

RESPONSE ACTION REPORT TANK 35 – OILY WATER RELEASE

NMED Comment 3:

Although the Conclusions and Recommendations, Soil Confirmation Sampling Results, page 7 of 14, adequately discussed the TPH exceedance of residential screening levels in the confirmation samples, the discussion regarding the exceedance of the soil screening level for a dilution and attenuation factor (DAF) of 20 for lead was not included. Include the discussion and provide a replacement page.

MPC Response 3:

The lead exceedances in the Response Action Report (RAR) are based on outdated screening levels (March 2017) that were used in the RAR for New Mexico Groundwater or Maximum Contaminant Level (NMGW/MCL) based lead Soil Screening Level (SSL) with a DAF 20 (0.052 mg/kg). The tables have been updated with Table A-3 from the February 2019 (Revised June 2019) NMGW/MCL based SSL, DAF 20 for lead (270 mg/kg) resulting in no samples exceeding the updated lead SSL, DAF20. The revised tables are included with this submittal.

NMED Comment 4:

In the Conclusion and Recommendations, Recommended Additional Excavation and Assessment, page 7 of 14, the Permittee recommends no further action based on the TPH concentrations being below the industrial/occupational or construction worker screening levels. The Permittee must provide a justification for no further action relative to the lead concentrations that exceeded the soil screening level for a DAF of 20. Provide a replacement page that includes the discussion or propose to further investigate/remediate the lead exceedance detected in the excavation area, if appropriate.

MPC Response 4:

Table 1 has been updated to reflect the latest (February 2019; Revised June 2019) lead SSLs, DAF20. The text has also been modified to reflect the changes which indicate that no soil samples exceeded the lead SSL, DAF 20.

ATTACHMENT A

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TABLE 1. SOIL ANALYTICAL RESULTS - AUGUST 30, 2017
GALLUP REFINERY, GALLUP, NEW MEXICO

	Residential Soil Screening Level	Source	Non- Residential Soil Screening Level	Source	NMGW/M CL-based DAF (20) (mg/kg) SoilGW	Source	T-35-1		T-35-2		T-35-3		T-35-4		T-35-5		T-35-6		
							1708H80-001		1708H80-002		1708H80-003		1708H80-004		1708H80-005		1708H80-006		
							8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017		
Metals (mg/kg)																			
Arsenic	7.07	(1)	35.9	(4)	5.83	(8)	<4.3	u	<2.49	u	<12	u	<4.3	u	<12	u	<12	u	
Barium	15,600	(1)	4,390	(5)	2,700	(8)	450	v	500	v	220	v	400	v	170	v	72	v	
Cadmium	70.5	(1)	72.1	(5)	9.39	(8)	<0.062	u	<0.063	u	<0.062	u	<0.061	u	<0.063	u	<0.062	u	
Chromium	96.6	(1)	134	(5)	205,256	(8)	7.1	v	4.5	v	13	v	10	v	6.4	v	4.8	v	
Lead	400	(2)	800	(6)	270	(8)	3.5	v	1.7	v	3.9	v	4	v	14	v	0.51	v	
Mercury	23.6	(1)	20.5	(5)	2.09	(8)	0.013	J	0.0073	J	0.011	J	0.066	v	0.0071	J	<0.0065	u	
Selenium	391	(1)	1,750	(5)	10.22	(8)	<1.8	u	<1.8	u	<1.8	u	<1.7	u	<1.8	u	<1.8	u	
Silver	391	(1)	1,770	(5)	13.8	(8)	<0.061	u	<0.062	u	<0.061	u	<0.06	u	<0.062	u	<0.061	u	
Volatiles (mg/kg)																			
1,1,1,2-Tetrachloroethane	27.8	(1)	136	(4)	0.036	(8)	<0.0044	u	<0.0033	u	<0.0038	u	<0.0043	u	<0.004	u	<0.004	u	
1,1,1-Trichloroethane	14,300	(1)	13,500	(5)	51.10	(8)	<0.0051	u	<0.0039	u	<0.0044	u	<0.0049	u	<0.0046	u	<0.0046	u	
1,1,2,2-Tetrachloroethane	7.93	(1)	39.1	(4)	0.00481	(8)	<0.0112	u	<0.0085	u	<0.0098	u	<0.0109	u	<0.0102	u	<0.0101	u	
1,1,2-Trichloroethane	2.59	(1)	2.28	(5)	0.0268	(8)	<0.0042	u	<0.0032	u	<0.0036	u	<0.004	u	<0.0038	u	<0.0037	u	
1,1-Dichloroethane	77.9	(1)	380	(4)	0.136	(8)	<0.0157	u	<0.0119	u	<0.0136	u	<0.0152	u	<0.0142	u	<0.0141	u	
1,1-Dichloroethene	436	(1)	420	(5)	1.9500	(8)	<0.0157	u	<0.0119	u	<0.0136	u	<0.0152	u	<0.0142	u	<0.0141	u	
1,1-Dichloropropene	-	-	-	-	-	-	<0.0044	u	<0.0034	u	<0.0038	u	<0.0043	u	<0.004	u	<0.004	u	
1,2,3-Trichlorobenzene	63	(2)	930	(6)	0.42	(9)	<0.0036	u	<0.0027	u	<0.0031	u	<0.0035	u	<0.0032	u	<0.0032	u	
1,2,3-Trichloropropane	0.051	(1)	1.21	(4)	0.0000582	(8)	<0.0196	u	<0.0149	u	<0.0171	u	<0.0191	u	<0.0178	u	<0.0176	u	
1,2,4-Trichlorobenzene	82.2	(1)	78.4	(5)	3.1	(8)	<0.004	u	<0.003	u	<0.0034	u	<0.0039	u	<0.0036	u	<0.0036	u	
1,2,4-Trimethylbenzene	300	(2)	1,800	(6)	1.62	(9)	0.86	u	<0.0026	u	<0.003	u	<0.0033	u	<0.0031	u	<0.0031	u	
1,2-Dibromo-3-chloropropane	0.0851	(1)	1.17	(4)	0.00139	(8)	<0.0054	u	<0.0041	u	<0.0047	u	<0.0052	u	<0.0049	u	<0.0048	u	
1,2-Dibromoethane (EDB)	0.668	(1)	3.28	(4)	0.000236	(8)	<0.005	u	<0.0038	u	<0.0043	u	<0.0048	u	<0.0045	u	<0.0045	u	
1,2-Dichlorobenzene	2,140	(1)	2,470	(5)	9.08	(8)	<0.002	u	<0.0015	u	<0.0017	u	<0.0019	u	<0.0018	u	<0.0018	u	
1,2-Dichloroethane (EDC)	8.25	(1)	40.3	(4)	0.0238	(8)	<0.0041	u	<0.0031	u	<0.0035	u	<0.004	u	<0.0037	u	<0.0037	u	
1,2-Dichloropropane	17.6	(1)	25.2	(5)	0.0277	(8)	<0.0024	u	<0.0018	u	<0.0021	u	<0.0024	u	<0.0022	u	<0.0022	u	
1,3,5-Trimethylbenzene	270	(2)	1,500	(6)	1.74	(9)	0.6	u	<0.0019	u	<0.0022	u	<0.0024	u	<0.0022	u	<0.0022	u	
1,3-Dichlorobenzene	-	-	-	-	-	-	<0.0034	u	<0.0026	u	<0.003	u	<0.0034	u	<0.0031	u	<0.0031	u	
1,3-Dichloropropane	1,600	(2)	23,000	(6)	2.6	(9)	<0.0097	u	<0.0073	u	<0.0084	u	<0.0094	u	<0.0088	u	<0.0087	u	
1,4-Dichlorobenzene	1,290	(1)	6,730	(4)	1.12	(8)	<0.0044	u	<0.0033	u	<0.0038	u	<0.0042	u	<0.0039	u	<0.0039	u	
1-Methylnaphthalene	172	(1)	813	(7)	0.893	(8)	<0.0028	u	<0.0021	u	<0.0024	u	<0.0027	u	<0.0025	u	<0.0025	u	
2,2-Dichloropropane	-	-	-	-	-	-	<0.0044	u	<0.0034	u	<0.0039	u	<0.0043	u	<0.004	u	<0.004	u	
2-Butanone	37,300	(1)	91,200	(5)	20.1	(8)	<0.0232	u	<0.0176	u	<0.0202	u	<0.0225	u	<0.021	u	<0.0208	u	
2-Chlorotoluene	1,560	(1)	7,080	(5)	3.56	(8)	<0.0033	u	<0.0023	u	<0.0026	u	<0.003	u	<0.0028	u	<0.0027	u	
2-Hexanone	200	(2)	1,300	(6)	0.176	(9)	<0.0076	u	<0.0058	u	<0.0066	u	<0.0074	u	<0.0069	u	<0.0069	u	
2-Methylnaphthalene	232	(1)	1,000	(5)	2.76	(8)	<0.0032	u	<0.0024	u	<0.0028	u	<0.0031	u	<0.0029	u	<0.0029	u	
4-Chlorotoluene	1,600	(2)	23,000	(6)	4.8	(9)	<0.0035	u	<0.0027	u	<0.0031	u	<0.0034	u	<0.0032	u	<0.0032	u	
4-Isopropyltoluene	-	-	-	-	-	-	0.056	v	<0.0023	u	<0.0026	u	<0.0029	u	<0.0027	u	<0.0027	u	

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							1708H80-001	1708H80-002	1708H80-003	1708H80-004	1708H80-005	1708H80-006
							8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017
4-Methyl-2-pentanone	5,810	(1)	20,200	(5)	4.800	(8)	<0.0084 u	<0.0064 u	<0.0073 u	<0.0081 u	<0.0076 u	<0.0075 u
Acetone	66,300	(1)	241,000	(5)	49.8	(8)	<0.0426 u	<0.0323 u	<0.037 u	<0.0414 u	<0.0386 u	<0.0382 u
Benzene	17.7	(1)	86.5	(4)	0.0418	(8)	<0.0038 u	<0.0029 u	<0.0033 u	<0.0037 u	<0.0035 u	<0.0035 u
Bromobenzene	290	(2)	1,800	(6)	0.84	(9)	<0.0029 u	<0.0022 u	<0.0025 u	<0.0028 u	<0.0026 u	<0.0026 u
Bromodichloromethane	6.14	(1)	29.9	(4)	0.00621	(8)	<0.0051 u	<0.0039 u	<0.0044 u	<0.005 u	<0.0046 u	<0.0046 u
Bromoform	674	(1)	1,750	(4)	0.147	(8)	<0.0096 u	<0.0073 u	<0.0084 u	<0.0093 u	<0.0087 u	<0.0086 u
Bromomethane	17.6	(1)	17.7	(5)	0.0343	(8)	0.025 J	<0.0051 u	0.017 u	<0.0066 u	<0.0061 u	<0.0061 u
Carbon disulfide	1,540	(1)	1,610	(5)	4.42	(8)	<0.0047 u	<0.0035 u	<0.004 u	0.011 J	<0.0042 u	<0.0042 u
Carbon tetrachloride	10.6	(1)	52.1	(4)	0.0367	(8)	<0.0039 u	<0.0029 u	<0.0034 u	<0.0038 u	<0.0035 u	<0.0035 u
Chlorobenzene	376	(1)	408	(5)	1.08	(8)	<0.0023 u	<0.0018 u	<0.002 u	<0.0023 u	<0.0021 u	<0.0021 u
Chloroethane	18,800	(1)	16,500	(5)	107	(8)	<0.0129 u	<0.0098 u	<0.0112 u	<0.0125 u	<0.0117 u	<0.0116 u
Chloroform	5.85	(1)	28.4	(4)	0.0109	(8)	<0.0024 u	<0.0018 u	<0.0021 u	<0.0023 u	<0.0021 u	<0.0021 u
Chloromethane	40.8	(1)	199	(4)	0.0952	(8)	<0.0082 u	<0.0062 u	<0.0071 u	<0.008 u	<0.0075 u	<0.0074 u
cis-1,2-DCE	156	(1)	708	(5)	0.352	(8)	<0.005 u	<0.0038 u	<0.0043 u	<0.0049 u	<0.0045 u	<0.0045 u
cis-1,3-Dichloropropene	29.1	(1)	129	(5)	0.028	(8)	<0.003 u	<0.0023 u	<0.0026 u	<0.0029 u	<0.0027 u	<0.0027 u
Dibromochloromethane	13.8	(1)	66.9	(4)	0.00755	(8)	<0.0033 u	<0.0025 u	<0.0029 u	<0.0032 u	<0.003 u	<0.003 u
Dibromomethane	57.4	(1)	53.4	(5)	0.0335	(8)	<0.0019 u	<0.0015 u	<0.0017 u	<0.0019 u	<0.0017 u	<0.0017 u
Dichlorodifluoromethane	180	(1)	159	(5)	7.23	(8)	<0.0161 u	<0.0122 u	<0.014 u	<0.0157 u	<0.0146 u	<0.0145 u
Ethylbenzene	74.5	(1)	365	(4)	12.3	(8)	<0.0027 u	<0.0021 u	<0.0024 u	<0.0027 u	<0.0025 u	<0.0025 u
Hexachlorobutadiene	61.6	(1)	51.7	(4)	0.0413	(8)	<0.0097 u	<0.0074 u	<0.0085 u	<0.0095 u	<0.0088 u	<0.0087 u
Isopropylbenzene	2,350	(1)	2,710	(5)	11.4	(8)	<0.0026 u	<0.002 u	<0.0023 u	<0.0026 u	<0.0024 u	<0.0024 u
Methyl tert-butyl ether (MTBE)	968	(1)	4,780	(4)	0.553	(8)	<0.006 u	<0.0046 u	<0.0052 u	<0.0058 u	<0.0054 u	<0.0054 u
Methylene chloride	409	(1)	1,200	(5)	0.0221	(8)	<0.0157 u	<0.0119 u	<0.0136 u	<0.0152 u	<0.0142 u	<0.0141 u
Naphthalene	1,160	(1)	5,020	(5)	0.0823	(8)	<0.004 u	<0.003 u	<0.0034 u	<0.0039 u	<0.0036 u	<0.0036 u
n-Butylbenzene	3,900	(2)	58,000	(6)	64	(9)	<0.0035 u	<0.0027 u	<0.003 u	<0.0034 u	<0.0032 u	<0.0031 u
n-Propylbenzene	3,800	(2)	24,000	(6)	24	(9)	<0.0024 u	<0.0018 u	<0.0021 u	<0.0024 u	<0.0022 u	<0.0022 u
sec-Butylbenzene	7,800	(2)	120,000	(6)	118	(9)	0.016 J	<0.0031 u	<0.0035 u	<0.0039 u	<0.0037 u	<0.0036 u
Styrene	7,230	(1)	10,100	(5)	1.71	(8)	<0.0068 u	<0.0052 u	<0.0059 u	<0.0066 u	<0.0062 u	<0.0061 u
tert-Butylbenzene	7,800	(2)	120,000	(6)	32	(9)	<0.0032 u	<0.0024 u	<0.0028 u	<0.0031 u	<0.0029 u	<0.0028 u
Tetrachloroethene (PCE)	110	(1)	119	(5)	0.0398	(8)	<0.0031 u	<0.0024 u	<0.0027 u	<0.003 u	<0.0028 u	<0.0028 u
Toluene	5,220	(1)	14,000	(5)	11.1	(8)	0.0092 J	<0.0024 u	<0.0028 u	<0.0031 u	<0.0029 u	<0.0028 u
trans-1,2-DCE	293	(1)	303	(5)	0.503	(8)	<0.0157 u	<0.0119 u	<0.0136 u	<0.0152 u	<0.0142 u	<0.0141 u
trans-1,3-Dichloropropene	29.1	(1)	129	(5)	0.0281	(8)	<0.0047 u	<0.0035 u	<0.0041 u	<0.0045 u	<0.0042 u	<0.0042 u
Trichloroethene (TCE)	6.72	(1)	6.84	(5)	0.031	(8)	<0.0047 u	<0.0036 u	<0.0041 u	<0.0046 u	<0.0043 u	<0.0043 u
Trichlorofluoromethane	1,220	(1)	1,120	(5)	15.7	(8)	<0.0059 u	<0.0045 u	<0.0051 u	<0.0057 u	<0.0053 u	<0.0053 u
Vinyl chloride	0.741	(1)	28.3	(4)	0.0134	(8)	<0.0033 u	<0.0025 u	<0.0028 u	<0.0032 u	<0.003 u	<0.0029 u
Xylenes, Total	863	(1)	791	(5)	154	(8)	4.8 u	<0.0093 u	<0.0106 u	<0.0119 u	<0.0111 u	<0.011 u

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							1708H80-001	1708H80-002	1708H80-003	1708H80-004	1708H80-005	1708H80-006						
							8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017						
Semi-volatiles (mg/kg)																		
1,2,4-Trichlorobenzene	82.2	(1)	78.4	(5)	3.1	(8)	<1.7867	D	<1.7746	D	<1.8013	D	<1.835	D	<1.7972	D	<1.824	D
1,2-Dichlorobenzene	2,140	(1)	2,470	(5)	9.08	(8)	<1.4571	D	<1.4473	D	<1.4691	D	<1.4966	D	<1.4657	D	<1.4876	D
1,3-Dichlorobenzene	-	-	-	-	-	-	<1.345	D	<1.3359	D	<1.356	D	<1.3814	D	<1.3529	D	<1.3731	D
1,4-Dichlorobenzene	1,290	(1)	6,730	(4)	1.12	(8)	<1.5771	D	<1.5664	D	<1.59	D	<1.6198	D	<1.5864	D	<1.6101	D
1-Methylnaphthalene	172	(1)	813	(7)	0.893	(8)	<1.8747	D	<1.8619	D	<1.89	D	<1.9254	D	<1.8857	D	<1.9139	D
2,4,5-Trichlorophenol	6,160	(1)	26,900	(5)	66.2	(8)	<1.4374	D	<1.4276	D	<1.4492	D	<1.4763	D	<1.4459	D	<1.4675	D
2,4,6-Trichlorophenol	61.6	(1)	269	(5)	0.674	(8)	<1.528	D	<1.5176	D	<1.5405	D	<1.5693	D	<1.537	D	<1.56	D
2,4-Dichlorophenol	185	(1)	807	(5)	0.825	(8)	<1.5306	D	<1.5202	D	<1.5431	D	<1.572	D	<1.5396	D	<1.5626	D
2,4-Dimethylphenol	1,230	(1)	5,380	(5)	6.45	(8)	<0.8623	D	<0.8565	D	<0.8694	D	<0.8857	D	<0.8674	D	<0.8804	D
2,4-Dinitrophenol	123	(1)	538	(5)	0.669	(8)	<1.151	D	<1.1431	D	<1.1604	D	<1.1821	D	<1.1577	D	<1.175	D
2,4-Dinitrotoluene	17.1	(1)	82.3	(4)	0.0492	(8)	<1.8112	D	<1.7989	D	<1.826	D	<1.8602	D	<1.8219	D	<1.8491	D
2,6-Dinitrotoluene	3.56	(1)	17.2	(4)	0.0102	(8)	<1.7048	D	<1.6933	D	<1.7188	D	<1.751	D	<1.7149	D	<1.7405	D
2-Chloronaphthalene	6,260	(1)	28,300	(5)	57	(8)	<1.7382	D	<1.7264	D	<1.7524	D	<1.7852	D	<1.7484	D	<1.7746	D
2-Chlorophenol	391	(1)	1,770	(5)	1.15	(8)	<1.4033	D	<1.3938	D	<1.4148	D	<1.4413	D	<1.4116	D	<1.4327	D
2-Methylnaphthalene	232	(1)	1,000	(5)	2.76	(8)	<1.6287	D	<1.6177	D	<1.6421	D	<1.6728	D	<1.6383	D	<1.6628	D
2-Methylphenol (cresol,o-)	3,200	(2)	41,000	(6)	15	(9)	<1.435	D	<1.4253	D	<1.4468	D	<1.4738	D	<1.4434	D	<1.465	D
2-Nitroaniline	630	(2)	8,000	(6)	1.6	(9)	<1.7812	D	<1.7692	D	<1.7958	D	<1.8294	D	<1.7917	D	<1.8185	D
2-Nitrophenol	-	-	-	-	-	-	<1.825	D	<1.8126	D	<1.84	D	<1.8744	D	<1.8358	D	<1.8632	D
3,3'-Dichlorobenzidine	11.8	(1)	57	(4)	0.124	(8)	<1.4282	D	<1.4185	D	<1.4399	D	<1.4668	D	<1.4366	D	<1.458	D
3+4-Methylphenol	-	-	-	-	-	-	<1.3067	D	<1.2978	D	<1.3174	D	<1.3421	D	<1.3144	D	<1.334	D
3-Nitroaniline	-	-	-	-	-	-	<1.732	D	<1.7203	D	<1.7462	D	<1.7789	D	<1.7422	D	<1.7682	D
4,6-Dinitro-2-methylphenol	4.93	(1)	21.5	(5)	0.0398	(8)	<1.4689	D	<1.459	D	<1.481	D	<1.5087	D	<1.4776	D	<1.4997	D
4-Bromophenyl phenyl ether	-	-	-	-	-	-	<1.5825	D	<1.5717	D	<1.5954	D	<1.6253	D	<1.5918	D	<1.6156	D
4-Chloro-3-methylphenol	-	-	-	-	-	-	<1.7609	D	<1.749	D	<1.7754	D	<1.8086	D	<1.7713	D	<1.7978	D
4-Chloroaniline	27	(3)	110	(7)	0.0032	(9)	<1.5054	D	<1.4952	D	<1.5177	D	<1.5461	D	<1.5143	D	<1.5369	D
4-Chlorophenyl phenyl ether	-	-	-	-	-	-	<1.5113	D	<1.5011	D	<1.5237	D	<1.5522	D	<1.5202	D	<1.5429	D
4-Nitroaniline	270	(3)	1,100	(7)	0.032	(9)	<1.6472	D	<1.636	D	<1.6607	D	<1.6917	D	<1.6569	D	<1.6816	D
4-Nitrophenol	-	-	-	-	-	-	<1.5055	D	<1.4953	D	<1.5179	D	<1.5463	D	<1.5144	D	<1.537	D
Acenaphthene	3,480	(1)	15,100	(5)	0.0309	(8)	<1.5915	D	<1.5807	D	<1.6046	D	<1.6346	D	<1.6009	D	<1.6248	D
Acenaphthylene	-	-	-	-	-	-	<1.786	D	<1.7739	D	<1.8006	D	<1.8343	D	<1.7965	D	<1.8234	D
Aniline	950	(3)	4,000	(7)	0.092	(9)	<1.0952	D	<1.0878	D	<1.1042	D	<1.1249	D	<1.1017	D	<1.1181	D
Anthracene	17,400	(1)	75,300	(5)	851	(8)	<1.771	D	<1.759	D	<1.7855	D	<1.8189	D	<1.7814	D	<1.808	D
Azobenzene	56	(3)	260	(7)	1,860,000	(9)	<1.7871	D	<1.775	D	<1.8018	D	<1.8355	D	<1.7977	D	<1.8245	D
Benz(a)anthracene	1.53	(1)	32.3	(4)	0.637	(8)	<1.6644	D	<1.6531	D	<1.6781	D	<1.7094	D	<1.6742	D	<1.6992	D
Benzo(a)pyrene	1.12	(1)	23.6	(4)	3.53	(8)	<1.5312	D	<1.5208	D	<1.5437	D	<1.5726	D	<1.5402	D	<1.5632	D
Benzo(b)fluoranthene	1.53	(1)	32.3	(4)	6.17	(8)	<1.8481	D	<1.8355	D	<1.8632	D	<1.8981	D	<1.8589	D	<1.8867	D
Benzo(g,h,i)perylene	-	-	-	-	-	-	<1.5803	D	<1.5696	D	<1.5932	D	<1.623	D	<1.5896	D	<1.6133	D

TABLE 1. SOIL ANALYTICAL RESULTS - AUGUST 30, 2017
GALLUP REFINERY, GALLUP, NEW MEXICO

	Residential Soil Screening Level	Source	Non- Residential Soil Screening Level	Source	NMGW/M CL-based DAF (20) (mg/kg) Soil/GW	Source	T-35-1	T-35-2	T-35-3	T-35-4	T-35-5	T-35-6
							1708H80-001	1708H80-002	1708H80-003	1708H80-004	1708H80-005	1708H80-006
							8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017
Benzo(k)fluoranthene	15.3	(1)	323	(4)	60.5	(8)	<1.4591 D	<1.4492 D	<1.471 D	<1.4985 D	<1.4677 D	<1.4896 D
Benzoic acid	250,000	(2)	3,300,000	(6)	300	(9)	<1.467 D	<1.457 D	<1.479 D	<1.5067 D	<1.4756 D	<1.4977 D
Benzyl alcohol	6,300	(2)	82,000	(6)	9.6	(9)	<1.6262 D	<1.6152 D	<1.6396 D	<1.6702 D	<1.6358 D	<1.6602 D
Bis(2-chloroethoxy)methane	190	(2)	2,500	(6)	0.26	(9)	<1.7527 D	<1.7408 D	<1.7671 D	<1.8001 D	<1.763 D	<1.7894 D
Bis(2-chloroethyl)ether	3.1	(1)	1.93	(5)	0.000605	(8)	<1.2457 D	<1.2372 D	<1.2559 D	<1.2794 D	<1.253 D	<1.2717 D
Bis(2-chloroisopropyl)ether	99.3	(1)	519	(4)	0.0475	(8)	<1.9344 D	<1.9213 D	<1.9503 D	<1.9868 D	<1.9458 D	<1.9749 D
Bis(2-ethylhexyl)phthalate	380	(1)	1,830	(4)	21.5	(8)	<1.8767 D	<1.864 D	<1.8921 D	<1.9275 D	<1.8877 D	<1.9159 D
Butyl benzyl phthalate	2,900	(3)	12,000	(7)	4.6	(9)	<1.6094 D	<1.5985 D	<1.6226 D	<1.6529 D	<1.6189 D	<1.6431 D
Carbazole	-	-	-	-	-	-	<1.5394 D	<1.5289 D	<1.552 D	<1.581 D	<1.5484 D	<1.5716 D
Chrysene	153	(1)	3,230	(4)	186	(8)	<1.4614 D	<1.4515 D	<1.4734 D	<1.5009 D	<1.47 D	<1.492 D
Dibenz(a,h)anthracene	0.153	(1)	3.23	(4)	1.97	(8)	<1.5583 D	<1.5477 D	<1.5711 D	<1.6005 D	<1.5675 D	<1.5909 D
Dibenzofuran	-	-	-	-	-	-	<1.6743 D	<1.6629 D	<1.688 D	<1.7196 D	<1.6841 D	<1.7093 D
Diethyl phthalate	49,300	(1)	215,000	(5)	97.9	(8)	<1.6499 D	<1.6387 D	<1.6634 D	<1.6945 D	<1.6596 D	<1.6844 D
Dimethyl phthalate	61,600	(1)	269,000	(5)	3.57	(8)	<1.8144 D	<1.8021 D	<1.8292 D	<1.8635 D	<1.8251 D	<1.8523 D
Di-n-butyl phthalate	6,160	(1)	26,900	(5)	33.8	(8)	<1.1014 D	<1.0939 D	<1.1104 D	<1.1312 D	<1.1078 D	<1.1244 D
Di-n-octyl phthalate	-	-	-	-	-	-	<1.4558 D	<1.4459 D	<1.4677 D	<1.4951 D	<1.4643 D	<1.4862 D
Fluoranthene	2,320	(1)	10,000	(5)	1,340	(8)	<1.6162 D	<1.6053 D	<1.6295 D	<1.6599 D	<1.6257 D	<1.65 D
Fluorene	2,320	(1)	10,000	(5)	80	(8)	<1.4842 D	<1.4742 D	<1.4964 D	<1.5244 D	<1.493 D	<1.5153 D
Hexachlorobenzene	3.33	(1)	16	(4)	0.189	(8)	<1.7884 D	<1.7762 D	<1.803 D	<1.8367 D	<1.7989 D	<1.8258 D
Hexachlorobutadiene	61.6	(1)	51.7	(4)	0.0413	(8)	<1.654 D	<1.6427 D	<1.6675 D	<1.6987 D	<1.6637 D	<1.6886 D
Hexachlorocyclopentadiene	2.28	(1)	867	(5)	2.4	(8)	<1.547 D	<1.5365 D	<1.5597 D	<1.5889 D	<1.5561 D	<1.5794 D
Hexachloroethane	43.1	(1)	188	(5)	0.032	(8)	<1.4 D	<1.3905 D	<1.4115 D	<1.4379 D	<1.4082 D	<1.4293 D
Indeno(1,2,3-cd)pyrene	1.53	(1)	32.3	(4)	20.1	(8)	<1.6018 D	<1.5909 D	<1.6149 D	<1.6451 D	<1.6112 D	<1.6353 D
Isophorone							<1.8577 D	<1.8451 D	<1.8729 D	<1.908 D	<1.8686 D	<1.8966 D
Naphthalene	1,160	(1)	5,020	(5)	0.0823	(8)	<1.8021 D	<1.7898 D	<1.8168 D	<1.8508 D	<1.8127 D	<1.8397 D
Nitrobenzene	59.9	(1)	291	(4)	0.0144	(8)	<1.6149 D	<1.6039 D	<1.6281 D	<1.6586 D	<1.6244 D	<1.6487 D
N-Nitrosodi-n-propylamine	0.78	(3)	3.3	(7)	0.000162	(9)	<1.7174 D	<1.7057 D	<1.7314 D	<1.7638 D	<1.7275 D	<1.7533 D
N-Nitrosodiphenylamine	1,090	(1)	5,240	(4)	10	(8)	<1.8635 D	<1.8509 D	<1.8788 D	<1.9139 D	<1.8745 D	<1.9025 D
Pentachlorophenol	9.85	(1)	44.5	(4)	0.152	(8)	<1.6647 D	<1.6534 D	<1.6783 D	<1.7097 D	<1.6745 D	<1.6995 D
Phenanthrene	1,740	(1)	7,530	(5)	85.9	(8)	<1.7148 D	<1.7032 D	<1.7289 D	<1.7612 D	<1.7249 D	<1.7507 D
Phenol	18,500	(1)	77,400	(5)	52.3	(8)	<1.3427 D	<1.3336 D	<1.3537 D	<1.379 D	<1.3506 D	<1.3708 D
Pyrene	1,740	(1)	7,530	(5)	192	(8)	<1.4583 D	<1.4484 D	<1.4702 D	<1.4977 D	<1.4669 D	<1.4888 D
Pyridine	78	(2)	1,200	(6)	0.136	(9)	<1.2907 D	<1.2819 D	<1.3012 D	<1.3256 D	<1.2982 D	<1.3176 D

**TABLE 1. SOIL ANALYTICAL RESULTS - AUGUST 30, 2017
GALLUP REFINERY, GALLUP, NEW MEXICO**

	Residential Soil Screening Level	Source	Non- Residential Soil Screening Level	Source	NMGW/M CL-based DAF (20) (mg/kg) SoilGW	Source	T-35-1		T-35-2		T-35-3		T-35-4		T-35-5		T-35-6	
							1708H80-001		1708H80-002		1708H80-003		1708H80-004		1708H80-005		1708H80-006	
							8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017	
Total Petroleum Hydrocarbons (mg/kg)																		
Gasoline Range Organics (GRO)	1,000	(11)	3,800	(11)	20,000	(11)	110	v	<0.5616	u	<0.6431	u	<0.72	u	<0.67	u	<0.67	u
Diesel Range Organics (DRO)	1,000	(11)	3,800	(11)	20,000	(11)	250	v	53	v	11	v	1300	v	46	v	2800	v
Motor Oil Range Organics (MRO)	1,000	(11)	3,800	(11)	20,000	(11)	190	v	69	v	80	v	570	v	380	v	1400	v

- No screening level or analytical result available

NMED - Risk Assessment Guidance for Site Investigations and Remediation (February 2019; Revised June 2019)

EPA - Regional Screening Levels (June 2017)

(1) NMED Residential Screening Level

(2) EPA Residential Screening Level

(3) EPA Residential - Screening Levels multiplied by 10 pursuant to Section IV.D.2 of the Oct. 31, 2013 RCRA Permit

(4) NMED Industrial Occupational Screening Level

(5) NMED Construction Worker Screening Level

(6) EPA Industrial - Screening Levels

(7) EPA Industrial - Screening Levels multiplied by 10 pursuant to Section IV.D.2 of the Oct. 31, 2013 RCRA Permit

(8) SoilGW NMED Dilution Attenuation Factor (DAF) = 20

(9) SoilGW Risk-based EPA DAF = 20

(10) SoilGW MCL-based EPA DAF = 20

(11) NMED Table 6-4 TPH Soil Screening Levels "unknown oil" with DAF = 1.0 - see report Section 3 for use of screening levels

v = reportable detection above the Practical quantitation limit (PQL) u - result is not detected at method detection limit (MDL)

j - estimated result at concentration above MDL but less than PQL

ATTACHMENT B

REDLINE

TABLE 1. SOIL ANALYTICAL RESULTS - AUGUST 30, 2017
GALLUP REFINERY, GALLUP, NEW MEXICO

	Residential Soil Screening Level	Source	Non- Residential Soil Screening Level	Source	NMGW/M CL-based DAF (20) (mg/kg) Soil/GW	Source	T-35-1		T-35-2		T-35-3		T-35-4		T-35-5		T-35-6		
							1708H80-001		1708H80-002		1708H80-003		1708H80-004		1708H80-005		1708H80-006		
							8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017		
Metals (mg/kg)																			
Arsenic	7.07	(1)	35.9	(4)	5.83	(8)	<4.3	u	<2.49	u	<12	u	<4.3	u	<12	u	<12	u	
Barium	15,600	(1)	4,390	(5)	2,700	(8)	450	v	500	v	220	v	400	v	170	v	72	v	
Cadmium	70.5	(1)	72.1	(5)	9.39	(8)	<0.062	u	<0.063	u	<0.062	u	<0.061	u	<0.063	u	<0.062	u	
Chromium	96.6	(1)	134	(5)	205,256	(8)	7.1	v	4.5	v	13	v	10	v	6.4	v	4.8	v	
Lead	400	(2)	800	(6)	270	(8)	3.5	v	1.7	v	3.9	v	4	v	14	v	0.51	v	
Mercury	23.6	(1)	20.5	(5)	2.09	(8)	0.013	J	0.0073	J	0.011	J	0.066	v	0.0071	J	<0.0065	u	
Selenium	391	(1)	1,750	(5)	10.22	(8)	<1.8	u	<1.8	u	<1.8	u	<1.7	u	<1.8	u	<1.8	u	
Silver	391	(1)	1,770	(5)	13.8	(8)	<0.061	u	<0.062	u	<0.061	u	<0.06	u	<0.062	u	<0.061	u	
Volatiles (mg/kg)																			
1,1,1,2-Tetrachloroethane	27.8	(1)	136	(4)	0.036	(8)	<0.0044	u	<0.0033	u	<0.0038	u	<0.0043	u	<0.004	u	<0.004	u	
1,1,1-Trichloroethane	14,300	(1)	13,500	(5)	51.10	(8)	<0.0051	u	<0.0039	u	<0.0044	u	<0.0049	u	<0.0046	u	<0.0046	u	
1,1,2,2-Tetrachloroethane	7.93	(1)	39.1	(4)	0.00481	(8)	<0.0112	u	<0.0085	u	<0.0098	u	<0.0109	u	<0.0102	u	<0.0101	u	
1,1,2-Trichloroethane	2.59	(1)	2.28	(5)	0.0268	(8)	<0.0042	u	<0.0032	u	<0.0036	u	<0.004	u	<0.0038	u	<0.0037	u	
1,1-Dichloroethane	77.9	(1)	380	(4)	0.136	(8)	<0.0157	u	<0.0119	u	<0.0136	u	<0.0152	u	<0.0142	u	<0.0141	u	
1,1-Dichloroethene	436	(1)	420	(5)	1.9500	(8)	<0.0157	u	<0.0119	u	<0.0136	u	<0.0152	u	<0.0142	u	<0.0141	u	
1,1-Dichloropropene	-	-	-	-	-	-	<0.0044	u	<0.0034	u	<0.0038	u	<0.0043	u	<0.004	u	<0.004	u	
1,2,3-Trichlorobenzene	63	(2)	930	(6)	0.42	(9)	<0.0036	u	<0.0027	u	<0.0031	u	<0.0035	u	<0.0032	u	<0.0032	u	
1,2,3-Trichloropropane	0.051	(1)	1.21	(4)	0.0000582	(8)	<0.0196	u	<0.0149	u	<0.0171	u	<0.0191	u	<0.0178	u	<0.0176	u	
1,2,4-Trichlorobenzene	82.2	(1)	78.4	(5)	3.1	(8)	<0.004	u	<0.003	u	<0.0034	u	<0.0039	u	<0.0036	u	<0.0036	u	
1,2,4-Trimethylbenzene	300	(2)	1,800	(6)	1.62	(9)	0.86	u	<0.0026	u	<0.003	u	<0.0033	u	<0.0031	u	<0.0031	u	
1,2-Dibromo-3-chloropropane	0.0851	(1)	1.17	(4)	0.00139	(8)	<0.0054	u	<0.0041	u	<0.0047	u	<0.0052	u	<0.0049	u	<0.0048	u	
1,2-Dibromoethane (EDB)	0.668	(1)	3.28	(4)	0.000236	(8)	<0.005	u	<0.0038	u	<0.0043	u	<0.0048	u	<0.0045	u	<0.0045	u	
1,2-Dichlorobenzene	2,140	(1)	2,470	(5)	9.08	(8)	<0.002	u	<0.0015	u	<0.0017	u	<0.0019	u	<0.0018	u	<0.0018	u	
1,2-Dichloroethane (EDC)	8.25	(1)	40.3	(4)	0.0238	(8)	<0.0041	u	<0.0031	u	<0.0035	u	<0.004	u	<0.0037	u	<0.0037	u	
1,2-Dichloropropane	17.6	(1)	25.2	(5)	0.0277	(8)	<0.0024	u	<0.0018	u	<0.0021	u	<0.0024	u	<0.0022	u	<0.0022	u	
1,3,5-Trimethylbenzene	270	(2)	1,500	(6)	1.74	(9)	0.6	u	<0.0019	u	<0.0022	u	<0.0024	u	<0.0022	u	<0.0022	u	
1,3-Dichlorobenzene	-	-	-	-	-	-	<0.0034	u	<0.0026	u	<0.003	u	<0.0034	u	<0.0031	u	<0.0031	u	
1,3-Dichloropropane	1,600	(2)	23,000	(6)	2.6	(9)	<0.0097	u	<0.0073	u	<0.0084	u	<0.0094	u	<0.0088	u	<0.0087	u	
1,4-Dichlorobenzene	1,290	(1)	6,730	(4)	1.12	(8)	<0.0044	u	<0.0033	u	<0.0038	u	<0.0042	u	<0.0039	u	<0.0039	u	
1-Methylnaphthalene	172	(1)	813	(7)	0.893	(8)	<0.0028	u	<0.0021	u	<0.0024	u	<0.0027	u	<0.0025	u	<0.0025	u	
2,2-Dichloropropane	-	-	-	-	-	-	<0.0044	u	<0.0034	u	<0.0039	u	<0.0043	u	<0.004	u	<0.004	u	
2-Butanone	37,300	(1)	91,200	(5)	20.1	(8)	<0.0232	u	<0.0176	u	<0.0202	u	<0.0225	u	<0.021	u	<0.0208	u	
2-Chlorotoluene	1,560	(1)	7,080	(5)	3.56	(8)	<0.0023	u	<0.0023	u	<0.0026	u	<0.003	u	<0.0028	u	<0.0027	u	
2-Hexanone	200	(2)	1,300	(6)	0.176	(9)	<0.0076	u	<0.0058	u	<0.0066	u	<0.0074	u	<0.0069	u	<0.0069	u	
2-Methylnaphthalene	232	(1)	1,000	(5)	2.76	(8)	<0.0032	u	<0.0024	u	<0.0028	u	<0.0031	u	<0.0029	u	<0.0029	u	
4-Chlorotoluene	1,600	(2)	23,000	(6)	4.8	(9)	<0.0035	u	<0.0027	u	<0.0031	u	<0.0034	u	<0.0032	u	<0.0032	u	
4-Isopropyltoluene	-	-	-	-	-	-	0.056	v	<0.0023	u	<0.0026	u	<0.0029	u	<0.0027	u	<0.0027	u	

TABLE 1. SOIL ANALYTICAL RESULTS - AUGUST 30, 2017
GALLUP REFINERY, GALLUP, NEW MEXICO

	Residential Soil Screening Level	Source	Non- Residential Soil Screening Level	Source	NMGW/M CL-based DAF (20) (mg/kg) Soil/GW	Source	T-35-1	T-35-2	T-35-3	T-35-4	T-35-5	T-35-6
							1708H80-001	1708H80-002	1708H80-003	1708H80-004	1708H80-005	1708H80-006
							8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017
4-Methyl-2-pentanone	5,810	(1)	20,200	(5)	4.800	(8)	<0.0084 u	<0.0064 u	<0.0073 u	<0.0081 u	<0.0076 u	<0.0075 u
Acetone	66,300	(1)	241,000	(5)	49.8	(8)	<0.0426 u	<0.0323 u	<0.037 u	<0.0414 u	<0.0386 u	<0.0382 u
Benzene	17.7	(1)	86.5	(4)	0.0418	(8)	<0.0038 u	<0.0029 u	<0.0033 u	<0.0037 u	<0.0035 u	<0.0035 u
Bromobenzene	290	(2)	1,800	(6)	0.84	(9)	<0.0029 u	<0.0022 u	<0.0025 u	<0.0028 u	<0.0026 u	<0.0026 u
Bromodichloromethane	6.14	(1)	29.9	(4)	0.00621	(8)	<0.0051 u	<0.0039 u	<0.0044 u	<0.005 u	<0.0046 u	<0.0046 u
Bromoform	674	(1)	1,750	(4)	0.147	(8)	<0.0096 u	<0.0073 u	<0.0084 u	<0.0093 u	<0.0087 u	<0.0086 u
Bromomethane	17.6	(1)	17.7	(5)	0.0343	(8)	0.025 J	<0.0051 u	0.017 u	<0.0066 u	<0.0061 u	<0.0061 u
Carbon disulfide	1,540	(1)	1,610	(5)	4.42	(8)	<0.0047 u	<0.0035 u	<0.004 u	0.011 J	<0.0042 u	<0.0042 u
Carbon tetrachloride	10.6	(1)	52.1	(4)	0.0367	(8)	<0.0039 u	<0.0029 u	<0.0034 u	<0.0038 u	<0.0035 u	<0.0035 u
Chlorobenzene	376	(1)	408	(5)	1.08	(8)	<0.0023 u	<0.0018 u	<0.002 u	<0.0023 u	<0.0021 u	<0.0021 u
Chloroethane	18,800	(1)	16,500	(5)	107	(8)	<0.0129 u	<0.0098 u	<0.0112 u	<0.0125 u	<0.0117 u	<0.0116 u
Chloroform	5.85	(1)	28.4	(4)	0.0109	(8)	<0.0024 u	<0.0018 u	<0.0021 u	<0.0023 u	<0.0021 u	<0.0021 u
Chloromethane	40.8	(1)	199	(4)	0.0952	(8)	<0.0082 u	<0.0062 u	<0.0071 u	<0.008 u	<0.0075 u	<0.0074 u
cis-1,2-DCE	156	(1)	708	(5)	0.352	(8)	<0.005 u	<0.0038 u	<0.0043 u	<0.0049 u	<0.0045 u	<0.0045 u
cis-1,3-Dichloropropene	29.1	(1)	129	(5)	0.028	(8)	<0.003 u	<0.0023 u	<0.0026 u	<0.0029 u	<0.0027 u	<0.0027 u
Dibromochloromethane	13.8	(1)	66.9	(4)	0.00755	(8)	<0.0033 u	<0.0025 u	<0.0029 u	<0.0032 u	<0.003 u	<0.003 u
Dibromomethane	57.4	(1)	53.4	(5)	0.0335	(8)	<0.0019 u	<0.0015 u	<0.0017 u	<0.0019 u	<0.0017 u	<0.0017 u
Dichlorodifluoromethane	180	(1)	159	(5)	7.23	(8)	<0.0161 u	<0.0122 u	<0.014 u	<0.0157 u	<0.0146 u	<0.0145 u
Ethylbenzene	74.5	(1)	365	(4)	12.3	(8)	<0.0027 u	<0.0021 u	<0.0024 u	<0.0027 u	<0.0025 u	<0.0025 u
Hexachlorobutadiene	61.6	(1)	51.7	(4)	0.0413	(8)	<0.0097 u	<0.0074 u	<0.0085 u	<0.0095 u	<0.0088 u	<0.0087 u
Isopropylbenzene	2,350	(1)	2,710	(5)	11.4	(8)	<0.0026 u	<0.002 u	<0.0023 u	<0.0026 u	<0.0024 u	<0.0024 u
Methyl tert-butyl ether (MTBE)	968	(1)	4,780	(4)	0.553	(8)	<0.006 u	<0.0046 u	<0.0052 u	<0.0058 u	<0.0054 u	<0.0054 u
Methylene chloride	409	(1)	1,200	(5)	0.0221	(8)	<0.0157 u	<0.0119 u	<0.0136 u	<0.0152 u	<0.0142 u	<0.0141 u
Naphthalene	1,160	(1)	5,020	(5)	0.0823	(8)	<0.004 u	<0.003 u	<0.0034 u	<0.0039 u	<0.0036 u	<0.0036 u
n-Butylbenzene	3,900	(2)	58,000	(6)	64	(9)	<0.0035 u	<0.0027 u	<0.003 u	<0.0034 u	<0.0032 u	<0.0031 u
n-Propylbenzene	3,800	(2)	24,000	(6)	24	(9)	<0.0024 u	<0.0018 u	<0.0021 u	<0.0024 u	<0.0022 u	<0.0022 u
sec-Butylbenzene	7,800	(2)	120,000	(6)	118	(9)	0.016 J	<0.0031 u	<0.0035 u	<0.0039 u	<0.0037 u	<0.0036 u
Styrene	7,230	(1)	10,100	(5)	1.71	(8)	<0.0068 u	<0.0052 u	<0.0059 u	<0.0066 u	<0.0062 u	<0.0061 u
tert-Butylbenzene	7,800	(2)	120,000	(6)	32	(9)	<0.0032 u	<0.0024 u	<0.0028 u	<0.0031 u	<0.0029 u	<0.0028 u
Tetrachloroethene (PCE)	110	(1)	119	(5)	0.0398	(8)	<0.0031 u	<0.0024 u	<0.0027 u	<0.003 u	<0.0028 u	<0.0028 u
Toluene	5,220	(1)	14,000	(5)	11.1	(8)	0.0092 J	<0.0024 u	<0.0028 u	<0.0031 u	<0.0029 u	<0.0028 u
trans-1,2-DCE	293	(1)	303	(5)	0.503	(8)	<0.0157 u	<0.0119 u	<0.0136 u	<0.0152 u	<0.0142 u	<0.0141 u
trans-1,3-Dichloropropene	29.1	(1)	129	(5)	0.0281	(8)	<0.0047 u	<0.0035 u	<0.0041 u	<0.0045 u	<0.0042 u	<0.0042 u
Trichloroethene (TCE)	6.72	(1)	6.84	(5)	0.031	(8)	<0.0047 u	<0.0036 u	<0.0041 u	<0.0046 u	<0.0043 u	<0.0043 u
Trichlorofluoromethane	1,220	(1)	1,120	(5)	15.7	(8)	<0.0059 u	<0.0045 u	<0.0051 u	<0.0057 u	<0.0053 u	<0.0053 u
Vinyl chloride	0.741	(1)	28.3	(4)	0.0134	(8)	<0.0033 u	<0.0025 u	<0.0028 u	<0.0032 u	<0.003 u	<0.0029 u
Xylenes, Total	863	(1)	791	(5)	154	(8)	4.8 u	<0.0093 u	<0.0106 u	<0.0119 u	<0.0111 u	<0.011 u

TABLE 1. SOIL ANALYTICAL RESULTS - AUGUST 30, 2017
GALLUP REFINERY, GALLUP, NEW MEXICO

	Residential Soil Screening Level	Source	Non- Residential Soil Screening Level	Source	NMGW/M CL-based DAF (20) (mg/kg) Soil/GW	Source	T-35-1	T-35-2	T-35-3	T-35-4	T-35-5	T-35-6						
							1708H80-001	1708H80-002	1708H80-003	1708H80-004	1708H80-005	1708H80-006						
							8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017						
Semi-volatiles (mg/kg)																		
1,2,4-Trichlorobenzene	82.2	(1)	78.4	(5)	3.1	(8)	<1.7867	D	<1.7746	D	<1.8013	D	<1.835	D	<1.7972	D	<1.824	D
1,2-Dichlorobenzene	2,140	(1)	2,470	(5)	9.08	(8)	<1.4571	D	<1.4473	D	<1.4691	D	<1.4966	D	<1.4657	D	<1.4876	D
1,3-Dichlorobenzene	-	-	-	-	-	-	<1.345	D	<1.3359	D	<1.356	D	<1.3814	D	<1.3529	D	<1.3731	D
1,4-Dichlorobenzene	1,290	(1)	6,730	(4)	1.12	(8)	<1.5771	D	<1.5664	D	<1.59	D	<1.6198	D	<1.5864	D	<1.6101	D
1-Methylnaphthalene	172	(1)	813	(7)	0.893	(8)	<1.8747	D	<1.8619	D	<1.89	D	<1.9254	D	<1.8857	D	<1.9139	D
2,4,5-Trichlorophenol	6,160	(1)	26,900	(5)	66.2	(8)	<1.4374	D	<1.4276	D	<1.4492	D	<1.4763	D	<1.4459	D	<1.4675	D
2,4,6-Trichlorophenol	61.6	(1)	269	(5)	0.674	(8)	<1.528	D	<1.5176	D	<1.5405	D	<1.5693	D	<1.537	D	<1.56	D
2,4-Dichlorophenol	185	(1)	807	(5)	0.825	(8)	<1.5306	D	<1.5202	D	<1.5431	D	<1.572	D	<1.5396	D	<1.5626	D
2,4-Dimethylphenol	1,230	(1)	5,380	(5)	6.45	(8)	<0.8623	D	<0.8565	D	<0.8694	D	<0.8857	D	<0.8674	D	<0.8804	D
2,4-Dinitrophenol	123	(1)	538	(5)	0.669	(8)	<1.151	D	<1.1431	D	<1.1604	D	<1.1821	D	<1.1577	D	<1.175	D
2,4-Dinitrotoluene	17.1	(1)	82.3	(4)	0.0492	(8)	<1.8112	D	<1.7989	D	<1.826	D	<1.8602	D	<1.8219	D	<1.8491	D
2,6-Dinitrotoluene	3.56	(1)	17.2	(4)	0.0102	(8)	<1.7048	D	<1.6933	D	<1.7188	D	<1.751	D	<1.7149	D	<1.7405	D
2-Chloronaphthalene	6,260	(1)	28,300	(5)	57	(8)	<1.7382	D	<1.7264	D	<1.7524	D	<1.7852	D	<1.7484	D	<1.7746	D
2-Chlorophenol	391	(1)	1,770	(5)	1.15	(8)	<1.4033	D	<1.3938	D	<1.4148	D	<1.4413	D	<1.4116	D	<1.4327	D
2-Methylnaphthalene	232	(1)	1,000	(5)	2.76	(8)	<1.6287	D	<1.6177	D	<1.6421	D	<1.6728	D	<1.6383	D	<1.6628	D
2-Methylphenol (cresol,o-)	3,200	(2)	41,000	(6)	15	(9)	<1.435	D	<1.4253	D	<1.4468	D	<1.4738	D	<1.4434	D	<1.465	D
2-Nitroaniline	630	(2)	8,000	(6)	1.6	(9)	<1.7812	D	<1.7692	D	<1.7958	D	<1.8294	D	<1.7917	D	<1.8185	D
2-Nitrophenol	-	-	-	-	-	-	<1.825	D	<1.8126	D	<1.84	D	<1.8744	D	<1.8358	D	<1.8632	D
3,3'-Dichlorobenzidine	11.8	(1)	57	(4)	0.124	(8)	<1.4282	D	<1.4185	D	<1.4399	D	<1.4668	D	<1.4366	D	<1.458	D
3+4-Methylphenol	-	-	-	-	-	-	<1.3067	D	<1.2978	D	<1.3174	D	<1.3421	D	<1.3144	D	<1.334	D
3-Nitroaniline	-	-	-	-	-	-	<1.732	D	<1.7203	D	<1.7462	D	<1.7789	D	<1.7422	D	<1.7682	D
4,6-Dinitro-2-methylphenol	4.93	(1)	21.5	(5)	0.0398	(8)	<1.4689	D	<1.459	D	<1.481	D	<1.5087	D	<1.4776	D	<1.4997	D
4-Bromophenyl phenyl ether	-	-	-	-	-	-	<1.5825	D	<1.5717	D	<1.5954	D	<1.6253	D	<1.5918	D	<1.6156	D
4-Chloro-3-methylphenol	-	-	-	-	-	-	<1.7609	D	<1.749	D	<1.7754	D	<1.8086	D	<1.7713	D	<1.7978	D
4-Chloroaniline	27	(3)	110	(7)	0.0032	(9)	<1.5054	D	<1.4952	D	<1.5177	D	<1.5461	D	<1.5143	D	<1.5369	D
4-Chlorophenyl phenyl ether	-	-	-	-	-	-	<1.5113	D	<1.5011	D	<1.5237	D	<1.5522	D	<1.5202	D	<1.5429	D
4-Nitroaniline	270	(3)	1,100	(7)	0.032	(9)	<1.6472	D	<1.636	D	<1.6607	D	<1.6917	D	<1.6569	D	<1.6816	D
4-Nitrophenol	-	-	-	-	-	-	<1.5055	D	<1.4953	D	<1.5179	D	<1.5463	D	<1.5144	D	<1.537	D
Acenaphthene	3,480	(1)	15,100	(5)	0.0309	(8)	<1.5915	D	<1.5807	D	<1.6046	D	<1.6346	D	<1.6009	D	<1.6248	D
Acenaphthylene	-	-	-	-	-	-	<1.786	D	<1.7739	D	<1.8006	D	<1.8343	D	<1.7965	D	<1.8234	D
Aniline	950	(3)	4,000	(7)	0.092	(9)	<1.0952	D	<1.0878	D	<1.1042	D	<1.1249	D	<1.1017	D	<1.1181	D
Anthracene	17,400	(1)	75,300	(5)	851	(8)	<1.771	D	<1.759	D	<1.7855	D	<1.8189	D	<1.7814	D	<1.808	D
Azobenzene	56	(3)	260	(7)	1,860,000	(9)	<1.7871	D	<1.775	D	<1.8018	D	<1.8355	D	<1.7977	D	<1.8245	D
Benz(a)anthracene	1.53	(1)	32.3	(4)	0.637	(8)	<1.6644	D	<1.6531	D	<1.6781	D	<1.7094	D	<1.6742	D	<1.6992	D
Benzo(a)pyrene	1.12	(1)	23.6	(4)	3.53	(8)	<1.5312	D	<1.5208	D	<1.5437	D	<1.5726	D	<1.5402	D	<1.5632	D
Benzo(b)fluoranthene	1.53	(1)	32.3	(4)	6.17	(8)	<1.8481	D	<1.8355	D	<1.8632	D	<1.8981	D	<1.8589	D	<1.8867	D
Benzo(g,h,i)perylene	-	-	-	-	-	-	<1.5803	D	<1.5696	D	<1.5932	D	<1.623	D	<1.5896	D	<1.6133	D

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							1708H80-001	1708H80-002	1708H80-003	1708H80-004	1708H80-005	1708H80-006
							8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017	8/30/2017
Benzo(k)fluoranthene	15.3	(1)	323	(4)	60.5	(8)	<1.4591 D	<1.4492 D	<1.471 D	<1.4985 D	<1.4677 D	<1.4896 D
Benzoic acid	250,000	(2)	3,300,000	(6)	300	(9)	<1.467 D	<1.457 D	<1.479 D	<1.5067 D	<1.4756 D	<1.4977 D
Benzyl alcohol	6,300	(2)	82,000	(6)	9.6	(9)	<1.6262 D	<1.6152 D	<1.6396 D	<1.6702 D	<1.6358 D	<1.6602 D
Bis(2-chloroethoxy)methane	190	(2)	2,500	(6)	0.26	(9)	<1.7527 D	<1.7408 D	<1.7671 D	<1.8001 D	<1.763 D	<1.7894 D
Bis(2-chloroethyl)ether	3.1	(1)	1.93	(5)	0.000605	(8)	<1.2457 D	<1.2372 D	<1.2559 D	<1.2794 D	<1.253 D	<1.2717 D
Bis(2-chloroisopropyl)ether	99.3	(1)	519	(4)	0.0475	(8)	<1.9344 D	<1.9213 D	<1.9503 D	<1.9868 D	<1.9458 D	<1.9749 D
Bis(2-ethylhexyl)phthalate	380	(1)	1,830	(4)	21.5	(8)	<1.8767 D	<1.864 D	<1.8921 D	<1.9275 D	<1.8877 D	<1.9159 D
Butyl benzyl phthalate	2,900	(3)	12,000	(7)	4.6	(9)	<1.6094 D	<1.5985 D	<1.6226 D	<1.6529 D	<1.6189 D	<1.6431 D
Carbazole	-	-	-	-	-	-	<1.5394 D	<1.5289 D	<1.552 D	<1.581 D	<1.5484 D	<1.5716 D
Chrysene	153	(1)	3,230	(4)	186	(8)	<1.4614 D	<1.4515 D	<1.4734 D	<1.5009 D	<1.47 D	<1.492 D
Dibenz(a,h)anthracene	0.153	(1)	3.23	(4)	1.97	(8)	<1.5583 D	<1.5477 D	<1.5711 D	<1.6005 D	<1.5675 D	<1.5909 D
Dibenzofuran	-	-	-	-	-	-	<1.6743 D	<1.6629 D	<1.688 D	<1.7196 D	<1.6841 D	<1.7093 D
Diethyl phthalate	49,300	(1)	215,000	(5)	97.9	(8)	<1.6499 D	<1.6387 D	<1.6634 D	<1.6945 D	<1.6596 D	<1.6844 D
Dimethyl phthalate	61,600	(1)	269,000	(5)	3.57	(8)	<1.8144 D	<1.8021 D	<1.8292 D	<1.8635 D	<1.8251 D	<1.8523 D
Di-n-butyl phthalate	6,160	(1)	26,900	(5)	33.8	(8)	<1.1014 D	<1.0939 D	<1.1104 D	<1.1312 D	<1.1078 D	<1.1244 D
Di-n-octyl phthalate	-	-	-	-	-	-	<1.4558 D	<1.4459 D	<1.4677 D	<1.4951 D	<1.4643 D	<1.4862 D
Fluoranthene	2,320	(1)	10,000	(5)	1,340	(8)	<1.6162 D	<1.6053 D	<1.6295 D	<1.6599 D	<1.6257 D	<1.65 D
Fluorene	2,320	(1)	10,000	(5)	80	(8)	<1.4842 D	<1.4742 D	<1.4964 D	<1.5244 D	<1.493 D	<1.5153 D
Hexachlorobenzene	3.33	(1)	16	(4)	0.189	(8)	<1.7884 D	<1.7762 D	<1.803 D	<1.8367 D	<1.7989 D	<1.8258 D
Hexachlorobutadiene	61.6	(1)	51.7	(4)	0.0413	(8)	<1.654 D	<1.6427 D	<1.6675 D	<1.6987 D	<1.6637 D	<1.6886 D
Hexachlorocyclopentadiene	2.28	(1)	867	(5)	2.4	(8)	<1.547 D	<1.5365 D	<1.5597 D	<1.5889 D	<1.5561 D	<1.5794 D
Hexachloroethane	43.1	(1)	188	(5)	0.032	(8)	<1.4 D	<1.3905 D	<1.4115 D	<1.4379 D	<1.4082 D	<1.4293 D
Indeno(1,2,3-cd)pyrene	1.53	(1)	32.3	(4)	20.1	(8)	<1.6018 D	<1.5909 D	<1.6149 D	<1.6451 D	<1.6112 D	<1.6353 D
Isophorone							<1.8577 D	<1.8451 D	<1.8729 D	<1.908 D	<1.8686 D	<1.8966 D
Naphthalene	1,160	(1)	5,020	(5)	0.0823	(8)	<1.8021 D	<1.7898 D	<1.8168 D	<1.8508 D	<1.8127 D	<1.8397 D
Nitrobenzene	59.9	(1)	291	(4)	0.0144	(8)	<1.6149 D	<1.6039 D	<1.6281 D	<1.6586 D	<1.6244 D	<1.6487 D
N-Nitrosodi-n-propylamine	0.78	(3)	3.3	(7)	0.000162	(9)	<1.7174 D	<1.7057 D	<1.7314 D	<1.7638 D	<1.7275 D	<1.7533 D
N-Nitrosodiphenylamine	1,090	(1)	5,240	(4)	10	(8)	<1.8635 D	<1.8509 D	<1.8788 D	<1.9139 D	<1.8745 D	<1.9025 D
Pentachlorophenol	9.85	(1)	44.5	(4)	0.152	(8)	<1.6647 D	<1.6534 D	<1.6783 D	<1.7097 D	<1.6745 D	<1.6995 D
Phenanthrene	1,740	(1)	7,530	(5)	85.9	(8)	<1.7148 D	<1.7032 D	<1.7289 D	<1.7612 D	<1.7249 D	<1.7507 D
Phenol	18,500	(1)	77,400	(5)	52.3	(8)	<1.3427 D	<1.3336 D	<1.3537 D	<1.379 D	<1.3506 D	<1.3708 D
Pyrene	1,740	(1)	7,530	(5)	192	(8)	<1.4583 D	<1.4484 D	<1.4702 D	<1.4977 D	<1.4669 D	<1.4888 D
Pyridine	78	(2)	1,200	(6)	0.136	(9)	<1.2907 D	<1.2819 D	<1.3012 D	<1.3256 D	<1.2982 D	<1.3176 D

**TABLE 1. SOIL ANALYTICAL RESULTS - AUGUST 30, 2017
GALLUP REFINERY, GALLUP, NEW MEXICO**

	Residential Soil Screening Level	Source	Non-Residential Soil Screening Level	Source	NMGW/MCL-based DAF (20) (mg/kg) SoilGW	Source	T-35-1		T-35-2		T-35-3		T-35-4		T-35-5		T-35-6	
							1708H80-001		1708H80-002		1708H80-003		1708H80-004		1708H80-005		1708H80-006	
							8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017		8/30/2017	
Total Petroleum Hydrocarbons (mg/kg)																		
Gasoline Range Organics (GRO)	1,000	(11)	3,800	(11)	20,000	(11)	110	v	<0.5616	u	<0.6431	u	<0.72	u	<0.67	u	<0.67	u
Diesel Range Organics (DRO)	1,000	(11)	3,800	(11)	20,000	(11)	250	v	53	v	11	v	1300	v	46	v	2800	v
Motor Oil Range Organics (MRO)	1,000	(11)	3,800	(11)	20,000	(11)	190	v	69	v	80	v	570	v	380	v	1400	v

- No screening level or analytical result available

NMED - Risk Assessment Guidance for Site Investigations and Remediation (February 2019; Revised June 2019)

EPA - Regional Screening Levels (June 2017)

(1) NMED Residential Screening Level

(2) EPA Residential Screening Level

(3) EPA Residential - Screening Levels multiplied by 10 pursuant to Section IV.D.2 of the Oct. 31, 2013 RCRA P tCl P it b th tit tilitd i i

(4) NMED Industrial Occupational Screening Level

(5) NMED Construction Worker Screening Level

(6) EPA Industrial - Screening Levels

(7) EPA Industrial - Screening Levels multiplied by 10 pursuant to Section IV.D.2 of the Oct. 31, 2013 RCRA

(8) SoilGW NMED Dilution Attenuation Factor (DAF) = 20

(9) SoilGW Risk-based EPA DAF = 20

(10) SoilGW MCL-based EPA DAF = 20

(11) NMED Table 6-4 TPH Soil Screening Levels "unknown oil" with DAF = 1.0 - see report Section 3 for use of screening levels

Bold represents value above Residential Screening Level

Yellow highlight represents value above Leachate (DAF) Screening Level

Bold with yellow highlight value exceeds Residential Screening Level and DAF

v = reportable detection above the Practical quantitation limit (PQL) u - result is not detected at method detection limit (MDL)

j - estimated result at concentration above MDL but less than PQL