GW - ___032____

ENFORCEMENT

Chavez, Carl J, EMNRD

From: Larsen, Thurman <Thurman.Larsen@wnr.com>
Sent: Monday, August 27, 2012 3:43 PM
To: VanHorn, Kristen, NMENV; Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV
Cc: Riege, Ed; Johnson, Cheryl; Morgan, Loretta; Dorsey, Alvin; Tso, Janice
Subject: AUGUST 2012 MONTHLY MPPE PROGRESS REPORT
Attachments: 20120827134529637.pdf; 1208557.pdf; 1207C95.pdf; 1208177.pdf; 1208240.pdf; 1208452.pdf; 1208451.pdf; 1207C87.pdf; Monthly-1207C93.pdf; ATM CARBON-1207C10.pdf; ATM CARBON-1207C83.pdf

Dear Kristen,

The following is the monthly Progress Report for August 2012. Attached are all laboratory results from Hall laboratories for August 2012 sampling events to date and the benzene stripper / MPPE charts for your review. Please note that the some analytical data is still pending for August 11th , 13th through 27th.

The monthly flow data for August 2012 through the (N-S) Benzene Strippers to AL-1 is estimated in summary as follows: The flow through the South benzene stripper was used only on one occasion (August 6th) in which the flow was slip stream. The flow was only diverted during this time frame for about 8 hours.

	N-Stripper (gpm)	S-Stripper (gpm)	Total Flow (gpm)
Average (gpm)	0	2.8	2.8
Maximum (gpm)	0	2.9	2.9
Minimum (gpm)	0	2.7	2.7

The monthly flow data for August 2012 from **AL-2 to EP-1** is summarized as follows:

	Weir Height (in)	Flow Rate (gpm)	Flow Volume (gpd)
Average	5.3	84.3	121461
Maximum	6.2	124.2	178877
Minimum	4.6	58.0	83450

Please notice that the reduction in flow from AL-2 to EP-1 is a direct function of a lack of precipitation, increased evaporation, and a reduction in flow through the benzene strippers.

The monthly flow data for August 2012 of the **API Influent, API Influent, MPPE Effluent to STP-1** is summarized as follows:

	API Influent (gpm)	API Effluent (gpm)	MPPE Effluent (gpm)
Average (gpm)	168.27	172.54	177.82
Maximum (gpm)	198.36	209.87	226.64
Minimum (gpm)	94.27	104.85	116.63

NOTE: Benzene Stripper #3
Benzene Stripper #3 (Process Unit Stripper) was taken out of service and blinded off between the blower fan and the benzene tower on May 14, 2012. A Management of Change (MOC) was written for a piping change in order to bypass the benzene stripper. The piping change and modifications was completed as scheduled by July 4, 2012. All piping has been removed.

NOTE: (N-S) Benzene Stripper

As previously mentioned in the July 2012 Monthly Report, the North and South strippers were only operated on an as needed basis due to operation of the MPPE Unit with an estimated at 25 to 35% slipstream flow from the API Influent/DGF Unit. During the month of August, the south stripper was only used on August 6th . Volumetric flow analysis will not balance due to slip stream flow estimation.

Please note that the total benzene stripper usage has decline significantly in August compared to previous months. The benzene strippers were utilized in August for problematic wastewater streams; however, they were operated as a slip-stream flow from the MPPE/DGF process to AL-1 when they were operated.

MPPE UNIT and SAMPLING:
The initial startup of the MPPE Unit began on May 8, 2012 at 1500 hrs. Flow data indicates that only the south benzene stripper was operated in conjunction with MPPE Unit on August 6th. Sampling was conducted in accordance with NMED letter of May 24, 2010 (Comment 17). The Agency letter prescribes the methodology and sample requirements necessary to fulfill this obligation.

Samples were collected during the month of August 2012 for either wastewater that was diverted through the MPPE (only), or a combination of MPPE flow to STP-1 and the slip-stream flow through the south benzene stripper(only on one occasion). There was no benzene exceedence for the month of August as indicated in the enclosed table. Sample analysis have been divided into distinct tables. The "MPPE Unit Sampling-Section 17" table provides benzene data for wastewater routed through the MPPE Unit. The table indicated as "Benzene Stripper Outlet" provides analysis of wastewater going through the benzene strippers. Benzene samples for August 2012 that were going through the MPPE Unit indicated Non-detect ("ND") for August 2012. Likewise, benzene samples collected at the outlet of the benzene strippers also indicated a less than the Regulatory Limit of 0.5 ppm (<0.5) during the August 2012 sampling periods. Please note that there will be dates that overlap by duplicate sampling events due to the slip-stream flow diversion through both the MPPE Unit and the Benzene Stripper Units. Please note that data is still pending from Hall Laboratories for August 11th , 13th through 27th.

Two ATM Carbon Canister air samples were also collected in suma canisters for the month of July and shipped to Hall Laboratories for analysis in accordance as per Comment 17.e using EPA Method TO-15. The VOC content for these two canister was 2.4 ppmv and 11.9 ppmv respectively which is less than the 500 ppm allowable limit for Voc breakthrough utilized by LDAR personnel as a breakthrough point.

If you should have any questions or concerns, please contact me via my office phone at (505) 722-0258 or via my cell at (505) 862-1749.

Sincerely,
Beck Larsen
Environmental Engineer
Western Refining (Gallup Refinery)

LABORATORY COMPARISON

	Benzene Strippers (ppm)				MPPE Unit (ppm)			
DATE	WNR (Am)	WNR (Pm)	Hall (Am)	Hall Lab ID	WNR (Am)	WNR (Pm)	Hall (Am)	Hall Lab ID
5/8/2012	0	0	0.069	1205560	MPPE STARTUP		0.00	1205459
5/9/2012	0	0	No Sample		NO SAMPLE COLLECTED FOR DATE			
5/10/2012	FLOW TO MPPE				0.01	0.02	0	1205563
5/11/2012					0	0	0	1205562
5/12/2012					0	0.02	0	1205591
5/13/2012					0	0.01	0	1205595
5/14/2012					0.01	0.01	0	1205592
5/15/2012					0	0.06	0	1205794
5/16/2012	0	0	0.05	1205949	DIVERTED TO STRIPPERS			
5/17/2012	0	0.05	0.06	1205949				
5/18/2012	0.12	0.05	0.10	1205949				
5/19/2012	0.1	0.07	0.14	1205949				
5/20/2012	0.08	0.06	0.06	1205949				
5/21/2012	0.14	0.06	0.12	1205949				
5/22/2012	0	0.16	0.05	1205949				
5/23/2012	0	0	0.07	1205B25				
5/24/2012	No Sample	0	0.97	1205B25	0	0	0	1205B27
5/25/2012	0	0	0	1205B25	0	0	0	1205B27
5/26/2012	0	0	0	1205B25	0	0	0	1205B27
5/27/2012	0	0	0	1205B25	0	0	0	1205B27
5/28/2012	FLOW TO MPPE				0	0	0	1205B27
5/29/2012					0	0	0	1206066
5/30/2012					0	0	0	1206005
5/31/2012					0	0	0	1206079
6/1/2012					0	0.87	0	1206079
6/2/2012					0	0	0	1206079
6/3/2012					0	0.53	0	1206079
6/4/2012	0	0	0.0	1206211	0	0	0	1206211
6/5/2012	0	0	0.0	1206211	0	0	0	1206211
6/6/2012	0	0	0.0	1206211	0	0	0.01	1206211
6/7/2012	0	0	0.0	1206406	0	0	0	1206401
6/8/2012	0	0	0.01	1206406	0	0	0	1206401
6/9/2012	0	0	0	1206406	0	0	0	1206401
6/10/2012	0	0	0	1206406	0	0	0	1206401
6/11/2012	0	0	0	1206690	0	0	0	1206670
6/12/2012	0	0	0	1206688	0	0	0	1206670
6/13/2012	0.05	0	0.03	1206688	0	0	0	1206670
6/14/2012	0	0	0.40	1206688	0	0	0	1206688
6/15/2012	0	0	0.01	1206738	0	0	0	1206738
6/16/2012	0	0	0.02	1206738	0	0	0	1206738
6/17/2012	0	0	0	1206738	0	0	0	1206738
6/18/2012	0	0	0	1206738	0	0	0	1206748
6/19/2012	0	0	0.01	1206A49	DIVERTED TO STRIPPERS			
6/20/2012	0	0	0.01	1206A49				
6/21/2012	0	0	0.02	1206A49				
6/22/2012	FLOW TO MPPE				0.14	0	0.0	1206A50
6/23/2012					0	0	0.0	1206A50
6/24/2012					0.01	0.15	0.04	1206A50
6/25/2012	0	0	0.02	1206A49	0	0	0	1206A50
6/26/2012	0	0	0.02	1206C25	DIVERTED TO STRIPPERS			
6/27/2012	0	0	0.03	1206C25				
6/28/2012	0	0	0.01	1206C25	0	0	0	1207013
6/29/2012	FLOW TO MPPE				0	0	0	1207013

6/30/2012	0	0	0.00	1207011		0	0	0	1207013
7/1/2012	0	0	0.00	1207011		DIVERTED TO STRIPPERS			
7/2/2012	0	0	0.00	1207011		0	0	0	1207013
7/3/2012	0	0	0.00	1207155		0	0	0	1207154
7/4/2012	0	0	0.00	1207155		0	0	0	1207154
7/5/2012	0	0	0.00	1207155		0	0	0	1207154
7/6/2012	0	0	0.01	1207235		DIVERTED TO STRIPPERS			
7/7/2012	FLOW TO MPPE					0	0	0.02	1207236
7/8/2012						0	0	0	1207236
7/9/2012						0	0	0	1207236
7/10/2012						0	0	0	1207539
7/11/2012	0	0	0	1207538		0	0	0	1207539
7/12/2012	0	0	0.01	1207538		DIVERTED TO STRIPPERS			
7/13/2012	0	0	0	1207620		0	0	0	1207622
7/14/2012	0	0	0.01	1207620		0	0	0	1207622
7/15/2012	0	0	0.01	1207620		0	0.04	0	1207622
7/16/2012	0	0	0.02	1207620		0	0	0	1207622
7/17/2012	0	0	0	1207895		DIVERTED TO STRIPPERS			
7/18/2012	0	0	0.01	1207895		0	Inst Down	0	1207897
7/19/2012	FLOW TO MPPE					0	0.02	0	1207897
7/20/2012	0	0	0	1207979		0	0	0	1207981
7/21/2012	FLOW TO MPPE					0	0	0	1207981
7/22/2012						0	0	0	1207981
7/23/2012						0.23	0	0	1207B39
7/24/2012						0	0	0.03	1207B39
7/25/2012						0	0	0	1207B90
7/26/2012	0.37	0	0.06	1027B89		0	0	0	1207B90
7/27/2012	FLOW TO MPPE					0	0	0	1207C95
7/28/2012	0	0	0.04	1207C87		0	0	0	1207C95
7/29/2012	FLOW TO MPPE					0	0	0	1207C95
7/30/2012						0.04	0	0.14	1208177
7/31/2012						0.0	0.10	0	1208177
8/1/2012						0.05	0.00	0	1208177
8/2/2012						0.00	0.00	0	1208240
8/3/2012						0.00	0.00	0	1208240
8/4/2012						0.00	0.00	0	1208240
8/5/2012						0.00	0.00	0	1208240
8/6/2012	0	0	0.04	1208451		0.00	0.00	0	1208240
8/7/2012	FLOW TO MPPE					0.00	0.00	0	1208452
8/8/2012						0.00	0.00	0	1208452
8/9/2012						0.00	0.00	0	1208557
8/10/2012						0.00	0.00	0	1108557
8/11/2012						0.08	0.01	0	Analysis Pending
8/12/2012						0.00	0.00	0	1208557
8/13/2012						0.00	0.02	0	Analysis Pending
8/14/2012						0.00	0.00	0	Analysis Pending
8/15/2012						0.03	0.02	0	Analysis Pending
8/16/2012						0.02	0.00	0	Analysis Pending
8/17/2012						0.02	0.00	0	Analysis Pending
8/18/2012						0.02	0.03	0	Analysis Pending
8/19/2012						0.04	0.04	0	Analysis Pending
8/20/2012						0.00	0.00	0	Analysis Pending
8/21/2012						0.04	0.04	0	Analysis Pending
8/22/2012						0.03	0.02	0	Analysis Pending
8/23/2012						0.04	0.03	0	Analysis Pending
8/24/2012						0.03	0.03	0	Analysis Pending
8/25/2012						0.04	0.03	0	Analysis Pending
8/26/2012						0.04	0.03	0	Analysis Pending
8/27/2012						0.00	0.00	0	Analysis Pending

WESTERN REFINING - GALLUP REFINERY

MPPE BENZENE ANALYSIS

Date Sample Taken	Western - Lab Benzene Results (ppm)		Hall Sample ID	Time	Hall Environmental Lab Data Benzene Results (ppm)			Results in Compliance < 0.5 ppm Yes; FAILED >0.5	Comments
	AM	PM			Sample rec'd Temp <6° C Acceptable range	Results (ppb)	> 0.5 ppm		
Wednesday, August 01, 2012	0.05	0.00	1208177	0800	1.0	ND	0.00	Yes	Flow Through MPPE
Thursday, August 02, 2012	0.00	0.00	1208240	0800	4.4	ND	0.00	Yes	Flow Through MPPE
Friday, August 03, 2012	0.00	0.00	1208240	0800	4.4	ND	0.00	Yes	Flow Through MPPE
Saturday, August 04, 2012	0.00	0.00	1208240	0800	4.4	ND	0.00	Yes	Flow Through MPPE
Sunday, August 05, 2012	0.00	0.00	1208240	0800	4.4	66.0	0.07	Yes	Flow Through MPPE
Monday, August 06, 2012	0.00	0.00	1208240	0800	4.4	58.0	0.06	Yes	Flow going thru MPPE Unit & Benzene Stripper
Tuesday, August 07, 2012	0.00	0.00	1208452	0800	1.0	ND	0.00	Yes	Flow Through MPPE
Wednesday, August 08, 2012	0.00	0.00	1208452	0800	1.0	ND	0.00	Yes	Flow Through MPPE
Thursday, August 09, 2012	0.00	0.00	1208557	0800	1.5	ND	0.00	Yes	Flow Through MPPE
Friday, August 10, 2012	0.00	0.00	1108557	0800	1.5	ND	0.00	Yes	Flow Through MPPE
Saturday, August 11, 2012	0.08	0.01	Analysis Pending				0.00	Yes	Flow Through MPPE
Sunday, August 12, 2012	0.00	0.00	1208557	0800	1.5	ND	0.00	Yes	Flow Through MPPE
Monday, August 13, 2012	0.00	0.02	Analysis Pending				0.00	Yes	Flow Through MPPE
Tuesday, August 14, 2012	0.00	0.00	Analysis Pending				0.00	Yes	Flow Through MPPE
Wednesday, August 15, 2012	0.03	0.02	Analysis Pending				0.00	Yes	Flow Through MPPE
Thursday, August 16, 2012	0.02	0.00	Analysis Pending				0.00	Yes	Flow Through MPPE
Friday, August 17, 2012	0.02	0.00	Analysis Pending				0.00	Yes	Flow Through MPPE
Saturday, August 18, 2012	0.02	0.03	Analysis Pending				0.00	Yes	Flow Through MPPE
Sunday, August 19, 2012	0.04	0.04	Analysis Pending				0.00	Yes	Flow Through MPPE
Monday, August 20, 2012	0.00	0.00	Analysis Pending				0.00	Yes	Flow Through MPPE
Tuesday, August 21, 2012	0.04	0.04	Analysis Pending				0.00	Yes	Flow Through MPPE
Wednesday, August 22, 2012	0.03	0.02	Analysis Pending				0.00	Yes	Flow Through MPPE
Thursday, August 23, 2012	0.04	0.03	Analysis Pending				0.00	Yes	Flow Through MPPE
Friday, August 24, 2012	0.03	0.03	Analysis Pending				0.00	Yes	Flow Through MPPE
Saturday, August 25, 2012	0.04	0.03	Analysis Pending				0.00	Yes	Flow Through MPPE
Sunday, August 26, 2012	0.04	0.03	Analysis Pending				0.00	Yes	Flow Through MPPE
Monday, August 27, 2012			Analysis Pending				0.00	Yes	Flow Through MPPE

WESTERN REFINING - GALLUP REFINERY

BENZENE STRIPPER OUTLETS

Date Sample Taken	Western - Lab Benzene Results (ppm)		Hall Sample ID	Time	Hall Environmental Lab Data Benzene Results (ppm)			Results in Compliance < 0.5 ppm Yes; FAILED >0.5	Comments
	AM	PM			Sample rec'd Temp <6°C Acceptable range	Results (ppb)	> 0.5 ppm		
Wednesday, August 01, 2012							0.00	Yes	Flow through MPPE
Thursday, August 02, 2012							0.00	Yes	Flow through MPPE
Friday, August 03, 2012							0.00	Yes	Flow through MPPE
Saturday, August 04, 2012							0.00	Yes	Flow through MPPE
Sunday, August 05, 2012							0.00	Yes	Flow through MPPE
Monday, August 06, 2012	0.00	0.00	1208451	2000	1.0	35.0	0.04	Yes	Flow going thru MPPE Unit & Benzene Stripper
Tuesday, August 07, 2012							0.00	Yes	Flow through MPPE
Wednesday, August 08, 2012							0.00	Yes	Flow through MPPE
Thursday, August 09, 2012							0.00	Yes	Flow through MPPE
Friday, August 10, 2012							0.00	Yes	Flow through MPPE
Saturday, August 11, 2012							0.00	Yes	Flow through MPPE
Sunday, August 12, 2012							0.00	Yes	Flow through MPPE
Monday, August 13, 2012							0.00	Yes	Flow through MPPE
Tuesday, August 14, 2012							0.00	Yes	Flow through MPPE
Wednesday, August 15, 2012							0.00	Yes	Flow through MPPE
Thursday, August 16, 2012							0.00	Yes	Flow through MPPE
Friday, August 17, 2012							0.00	Yes	Flow through MPPE
Saturday, August 18, 2012							0.00	Yes	Flow through MPPE
Sunday, August 19, 2012							0.00	Yes	Flow through MPPE
Monday, August 20, 2012							0.00	Yes	Flow through MPPE
Tuesday, August 21, 2012							0.00	Yes	Flow through MPPE
Wednesday, August 22, 2012							0.00	Yes	Flow through MPPE
Thursday, August 23, 2012							0.00	Yes	Flow through MPPE
Friday, August 24, 2012							0.00	Yes	Flow through MPPE
Saturday, August 25, 2012							0.00	Yes	Flow through MPPE
Sunday, August 26, 2012							0.00	Yes	Flow through MPPE
Monday, August 27, 2012							0.00	Yes	Flow through MPPE

SECTION 17 SAMPLING -1

MPPE UNIT SAMPLING- SECTION 17

Sample #: (Event Days)	1		2	3	4	5	6	7		8	9	10	11	12	13	14	15
DATE---->>	5/8/12	5/9/12	5/10/12	5/11/12	5/12/12	5/13/12	5/14/12	5/15/12	5/16 - 5/23	5/24/12	5/25/12	5/26/12	5/27/12	5/28/12	5/29/12	5/30/12	5/31/12
HALL LAB #	1205459		1205563	1205562	1205591	1205595	1205592	1205794		1205B27	1205B27	1205B27	1205B27	1205B27	1206066	1206005	1206079
Sample ID / Project Name:	MPPE-1		MPPE-3	MPPE-4	MPPE-5	MPPE-6	MPPE-7	MPPE		MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE
Sample Time	1700		2000	1555	0800	0800	0800	0730		1445	1020	1130	0736	0620	0630	0630	0700
Sample Temperature (deg C)	2.6		2.3	2.3	1.4	1.4	1.4	1.0		1.0	1.0	1.0	1.0	1.0	1.4	1.4	1.0
PARAMETERS / FREQUENCY								DAILY FOR 15 Days									
Btex																	
Benzene (ug/l)	ND	NO MPPE	ND	ND	ND	ND	ND	ND	NO MPPE	ND	ND	ND	ND	ND	ND	ND	26
Toluene (ug/l)	ND	SAMPLE	11	ND	15	6.1	ND	12	SAMPLE	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene (ug/l)	ND	COLLECTED	ND	ND	ND	ND	ND	ND	COLLECTED	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (ug/l)	ND	FOR DATE	ND	ND	ND	ND	ND	ND	FOR DATES	ND	ND	ND	ND	ND	ND	ND	ND
TPH																	
DRO (mg/l)	10		7.1	7.1	8.2	8.3	9.9	19		12	8.8	9.2	8.5	8.1	7.2	10	9
General Chemistry																	
pH	8.42		8.46	8.4	8.01	7.95	9.09	6.99		7.86	8.27	8.18	8.25	8.22	8.45	8.55	8.69
Specific Conductance (umhos/cm)	4200		14000	5900	4900	4700	4900	4900		20000	33000	9600	4600	5100	4700	29000	5100
Anions:																	
Fluoride (mg/l)	60		25	80	15	80	120	380		72	32	98	72	55	18	42	110
Chloride (mg/l)	430		3700	960	480	520	460	440		7300	19000	2500	570	450	390	8600	630
Nitrate+Nitrite (mg/l)	0.49		ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND
Phosphorus (Organophosphate) (mg/l)	0.71		ND	ND	ND	ND	ND	120		ND	ND	ND	ND	ND	ND	ND	ND
Sulfate (mg/l)	800		1100	870	790	880	530	480		1000	1400	950	940	1400	940	1000	560
Cations:																	
Calcium (mg/l)	87		340	90	82	72	57	72		410	520	81	74	74	83	270	43
Magnesium (mg/l)	21		78	28	22	20	17	11		94	120	23	21	20	20	92	20
Potassium (mg/l)	62		51	69	50	75	90	120		52	48	56	31	33	18	110	67
Sodium (mg/l)	500		1700	890	580	660	730	480		4300	6500	1900	630	670	590	5200	780

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33		34	35
6/1/12	6/2/12	6/3/12	6/4/12	6/5/12	6/6/12	6/7/12	6/8/12	6/9/12	6/10/12	6/11/12	6/12/12	6/13/12	6/14/12	6/15/12	6/16/12	6/17/12	6/18/12		6/22/12	6/23/12
1206079	1206079	1206079	1206211	1206211	1206211	1206401	1206401	1206401	1206401	1206670	1206670	1206670	1206688	1206738	1206738	1206738	1206748	6/19 - 21	1206A50	1206A50
MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE	MPPE		MPPE	MPPE
0700	0700	1500	0800	0800	0800	0800	0800	0800	0800	0800	0800	1530	0800	0730	0800	0800	0800		0800	0800
1.0	1.0	1.0	4.1	4.1	4.1	3.1	3.1	3.1	3.1	1.0	1.0	1.0	1.4	1.4	1.4	1.4	1.4		1.0	1.0
ND	ND	ND	ND	ND	8.60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NO MPPE	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SAMPLE	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	COLLECTED	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	FOR DATES	ND	ND
10	7.2	6.7	7.0	5.0	8.0	8.2	9.2	5.9	5.0	7.7	8.2	8.2	4.4	4.2	5.1	5.4	7.5		8.4	8.3
8.64	8	8.25	6.91	8.57	7.91	8.26	8.08	6.1	6.89	8.1	8.08	8.17	8.13	7.99	8.48	8.55	8.49		8.63	8.66
4100	5300	4400	4000	3600	4200	3700	4200	5300	4100	3300	3100	2500	3800	5200	3900	4200	4500		3800	3600
26	15	21	6.5	71	25	120	270	110	73	39	41	33	47	38	62	9.2	170		39	28
330	390	370	470	310	390	310	290	790	280	210	180	150	210	750	300	250	240		180	210
ND	ND	ND	ND	0.61	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND		2.6	2.3
23	3.8	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
570	1400	1000	1600	960	1200	480	570	1400	1300	1100	860	600	990	1100	1300	1100	890		670	610
39	82	83	80	59	74	61	17	53	81	80	73	78	69	140	68	60	44		57	54
21	27	25	20	15	19	20	16	28	23	24	21	21	20	36	19	16	13		15	15
32	26	24	9.2	32	11	36	48	210	73	60	45	64	53	45	53	38	94		98	92
530	850	590	740	660	680	530	590	940	590	530	570	530	490	830	650	610	690		420	410

36	37		38	39	40		41	42	43	44		45	46	47	48	49		50
6/24/12	6/25/12		6/28/12	6/29/12	6/30/12		7/2/12	7/3/12	7/4/12	7/5/12	7/6/12	7/7/12	7/8/12	7/9/12	7/10/12	7/11/12	7/12/12	7/13/12
1206A50	1206A50	6/26 - 27	1207013	1207013	1207013	7/1/12	1207013	1207154	1207154	1207154		1207236	1207236	1207236	1207539	1207539		1207622
MPPE	MPPE		MPPE	MPPE	MPPE		MPPE	MPPE	MPPE	MPPE		MPPE	MPPE	MPPE	MPPE	MPPE		MPPE
0800	0800		0800	0800	0800		0800	0800	0800	0800		0800	0800	0800	0800	0800		0800
1.0	1.0		5.2	5.2	5.2		5.2	1.1	1.1	1.1		3.7	3.7	3.7	1.0	1.0		1.0
40	ND	NO MPPE	ND	ND	ND	NO MPPE	ND	ND	ND	ND	NO MPPE	19	ND	ND	ND	ND	NO MPPE	ND
65	ND	SAMPLE	ND	ND	ND	SAMPLE	ND	ND	ND	ND	SAMPLE	38	ND	ND	ND	ND	SAMPLE	ND
5.2	ND	COLLECTED	ND	ND	ND	COLLECTED	ND	ND	ND	ND	COLLECTED	ND	ND	ND	ND	ND	COLLECTED	ND
36	ND	FOR DATES	ND	ND	ND	FOR DATE	ND	ND	ND	ND	FOR DATE	22	ND	ND	ND	ND	FOR DATE	ND
7.9	7.3		5.6	7.9	6.0		7	11	10	8.1		12	9.5	11	6.3	9.2		8.2
8.81	7.3		8.55	8.82	9.11		9.04	9	8.81	9.5		9.05	8.89	8.84	9.0	8.85		8.72
4300	4200		3400	3700	5700		4900	4800	4100	5000		3500	4800	4000	4300	4100		4400
8.7	8.8		13	12	510		60	92	16	57		19	100	73	40	29		22
620	490		190	200	240		290	280	260	190		230	230	220	360	230		220
ND	ND		ND	3.8	3.8		9	6	4.6	17		3.5	5.4	5.4	5.3	5.4		ND
ND	ND		ND	ND	ND		ND	ND	ND	ND		ND	ND	ND	ND	ND		ND
640	940		750	640	620		920	940	730	1200		560	980	680	710	640		870
49	77		100	50	4.3		46	41	48	33		36	51	76	58	80		71
24	22		25	14	4.7		13	11	12	10		16	18	19	18	21		17
210	210		99	74	160		67	62	33	53		23	68	47	260	110		54
530	550		330	450	1200		690	760	420	1100		490	820	530	570	460		440

51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
7/14/12	**7/15/12**	**7/16/12**	**7/17/12**	**7/18/12**	**7/19/12**	**7/20/12**	**7/21/12**	**7/22/12**	**7/23/12**	**7/24/12**	**7/25/12**	**7/26/12**	**7/27/12**	**7/28/12**
1207622	**1207622**	**1207622**	**1207897**	**1207897**	**1207897**	**1207981**	**1207981**	**1207981**	**1207B39**	**1207B39**	**1207B90**	**1207B90**	**1207C95**	**1207C95**
MPPE	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**
0800	**0820**	**0810**	**0630**	**0800**	**0800**	**0800**	**0800**	**0800**	**0800**	**0800**	**0800**	**1030**	**0800**	**0800**
1.0	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.1**	**1.1**	**1.8**	**1.8**	**3.0**	**3.0**
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	7.6	8.3	7.8	6.7	9	11	11	12	16	11	11	11	8.7	7.6
8.6	8.7	8.66	8.56	8.36	8.75	8.34	8.57	8.5	8.51	8.56	8.56	8.56	8.73	10.0
5500	3800	4400	3900	19000	6200	4700	4300	3900	3900	4600	4600	4600	3500	6200
460	63	77	64	23	9.8	140	27	28	9.6	10	10	10	15	20
160	180	200	230	5500	2100	250	200	220	210	290	290	290	240	240
4	3.2	ND	ND	47	8.9	ND	2	ND	ND	6.6	6.6	6.6	ND	3.9
ND	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
830	710	760	820	710	840	850	1000	770	860	1100	1100	1100	920	1400
4.3	56	61	81	750	130	57	76	81	73	60	60	60	85	8.3
6.3	16	16	21	150	35	18	18	18	17	17	17	17	20	5
80	47	49	53	90	44	43	32	24	22	27	27	27	18	73
850	430	490	520	2100	900	600	470	400	400	560	560	560	450	1600

66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
7/29/12	**7/30/12**	**7/31/12**	**8/1/12**	**8/2/12**	**8/3/12**	**8/4/12**	**8/5/12**	**8/6/12**	**8/7/12**	**8/8/12**	**8/9/12**	**8/10/12**	**8/11/12**	**8/12/12**	**8/13/12**	**8/14/12**
1207C95	**1208177**	**1208177**	**1208177**	**1208240**	**1208240**	**1208240**	**1208240**	**1208240**	**1208452**	**1208452**	**1208557**	**1108557 s**	**Pending**	**1208557 s**	**Pending s**	**Pending**
MPPE	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**
0800	**0800**	**0800**	**0800**	**0800**	**0800**	**0800**	**0800**	**0800**	**0800**	**0800**	**0800**	**0800**	**0**	**0800**	**0**	**0**
3.0	**1.0**	**1.0**	**1.0**	**4.4**	**4.4**	**4.4**	**4.4**	**4.4**	**1.0**	**1.0**	**1.5**	**1.5**	**0.0**	**1.5**	**0.0**	**0.0**
ND	140	ND	ND	ND	ND	ND	66	58	ND	ND	ND	ND	0	ND	0	0
ND	24	ND	ND	ND	ND	ND	35	30	ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7.9	8.4	8.1	25	6.6	5.9	5.4	6.5	7.4	9.6	13	7.9	7.8		5.5		
8.89	8.42	8.44	10.8	8.36	8.33	8.45	8.42	8.74	8.61	8.66	8.57	8.72		8.72		
3900	5300	4400	11000	3900	4000	3500	4400	4700	4400	4400	4000	4000		3700		
130	120	89	840	65	11	6.5	46	120	97	86	67	48		20		
210	260	200	200	190	250	210	240	220	230	180	170	150		110		
2.2	ND	6.0	ND	ND	ND	1.8	ND	ND	ND	1.6	ND	2.3		ND		
ND	ND	ND	ND	ND	3.4	ND	ND	ND	ND	5.7	ND	ND		ND		
760	1000	870	860	750	770	740	810	750	890	1200	930	970		720		
57	57	72	ND	69	82	71	38	26	52	54	64	69		74		
18	17	18	ND	19	20	19	18	16	18	15	17	17		19		
50	130	87	3200	120	81	53	49	63	62	67	47	35		34		
600	660	540	470	430	430	450	590	620	670	740	560	560		400		

83	84	85	86	87	88	89	90	91	92	93	94	95
8/15/12	**8/16/12**	**8/17/12**	**8/18/12**	**8/19/12**	**8/20/12**	**8/21/12**	**8/22/12**	**8/23/12**	**8/24/12**	**8/25/12**	**8/26/12**	**8/27/12**
s Pending	**s Pending**	**s Pending**	**s Pending**	**s Pending**	**s Pending**	**s Pending**	**s Pending**	**s Pending**	**s Pending**	**s Pending**	**s Pending**	**s Pending**
MPPE	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**	**MPPE**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
0	0	0	0	0	0	0	0	0	0	0	0	0
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

August 14, 2012

Thurman B. Larsen
Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: BZ Strippers OrderNo.: 1208451

Dear Thurman B. Larsen:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/10/2012 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. 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. 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.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1208451**
Date Reported: **8/14/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BZ 1-2 OUT
Project: BZ Strippers
Collection Date: 8/6/2012 8:00:00 PM
Lab ID: 1208451-001 **Matrix:** AQUEOUS **Received Date:** 8/10/2012 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	8/13/2012 5:43:47 PM
Benzene	35	5.0		µg/L	5	8/13/2012 5:43:47 PM
Toluene	43	5.0		µg/L	5	8/13/2012 5:43:47 PM
Ethylbenzene	ND	5.0		µg/L	5	8/13/2012 5:43:47 PM
Xylenes, Total	23	10		µg/L	5	8/13/2012 5:43:47 PM
1,2,4-Trimethylbenzene	5.3	5.0		µg/L	5	8/13/2012 5:43:47 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	8/13/2012 5:43:47 PM
Surr: 4-Bromofluorobenzene	103	55-140		%REC	5	8/13/2012 5:43:47 PM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208451**

14-Aug-12

Client: Western Refining Southwest, Gallup
Project: BZ Strippers

Sample ID **5ML-RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R4838**	RunNo: **4838**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136783** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		104	55	140			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R4838**	RunNo: **4838**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136784** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	23	2.5	20.00	0	115	66.9	136			
Benzene	21	1.0	20.00	0	106	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	107	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
1,2,4-Trimethylbenzene	21	1.0	20.00	0	106	74.3	117			
1,3,5-Trimethylbenzene	22	1.0	20.00	0	109	75.8	117			
Surr: 4-Bromofluorobenzene	21		20.00		103	55	140			

Sample ID **1208451-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BZ 1-2 OUT**	Batch ID: **R4838**	RunNo: **4838**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136788** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	120	12	100.0	0	115	45.1	137			
Benzene	140	5.0	100.0	34.52	106	74.1	124			
Toluene	150	5.0	100.0	42.77	106	75.2	124			
Ethylbenzene	110	5.0	100.0	4.060	103	69	125			
Xylenes, Total	340	10	300.0	23.16	104	73.1	126			
1,2,4-Trimethylbenzene	110	5.0	100.0	5.320	102	63.1	121			
1,3,5-Trimethylbenzene	110	5.0	100.0	2.350	104	60	133			
Surr: 4-Bromofluorobenzene	99		100.0		98.8	55	140			

Sample ID **1208451-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BZ 1-2 OUT**	Batch ID: **R4838**	RunNo: **4838**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136789** Units: **µg/L**

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

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208451**

14-Aug-12

Client: Western Refining Southwest, Gallup

Project: BZ Strippers

Sample ID **1208451-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BZ 1-2 OUT**	Batch ID: **R4838**	RunNo: **4838**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136789** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	120	12	100.0	0	121	45.1	137	5.12	13.6	
Benzene	140	5.0	100.0	34.52	105	74.1	124	0.522	11.2	
Toluene	150	5.0	100.0	42.77	105	75.2	124	1.10	11.9	
Ethylbenzene	100	5.0	100.0	4.060	101	69	125	2.16	13.5	
Xylenes, Total	330	10	300.0	23.16	102	73.1	126	1.65	13	
1,2,4-Trimethylbenzene	100	5.0	100.0	5.320	98.7	63.1	121	2.82	14.7	
1,3,5-Trimethylbenzene	100	5.0	100.0	2.350	102	60	133	1.97	14	
Surr: 4-Bromofluorobenzene	100		100.0		102	55	140	0	0	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1208451

Received by/date: AG 08/10/12

Logged By: **Lindsay Mangin** 8/10/2012 8:00:00 AM

Completed By: **Lindsay Mangin** 8/10/2012 8:14:19 AM

Reviewed By: 08/10/12

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information)	Yes ☑	No ☐	NA ☐
5. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
7. Sample(s) in proper container(s)?	Yes ☑	No ☐	
8. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
12. Were any sample containers received broken?	Yes ☐	No ☑	
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15. Is it clear what analyses were requested?	Yes ☑	No ☐	
16. 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)

17. 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: _____

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush

Project Name: BZ Strippers

Project #: API BZ 1-2 Out

Project Manager: Beck Larsen

Sampler: API-MPPE-OPPs

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1208451	Analysis Request: BTEX + MTBE + TMB's (8021)B	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
8/6/2012	08:00PM	H2O	BZ 1-2 Out	40ml-3	HCL	-001	X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
08-09-12	12:00	Alvin Dorsey			
Date:	Time:	Relinquished by:	Received by:	08/10/12 Date	0800 Time

Remarks:

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.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

August 20, 2012

Thurman B. Larsen
Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: MPPE

OrderNo.: 1208557

Dear Thurman B. Larsen:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/13/2012 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. 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. 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.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MPPE
Project: MPPE
Collection Date: 8/9/2012 8:00:00 AM
Lab ID: 1208557-001
Matrix: AQUEOUS
Received Date: 8/13/2012 1:46:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JMP**
Diesel Range Organics (DRO)	7.9	1.0		mg/L	1	8/14/2012 2:05:02 PM
Surr: DNOP	135	79.5-166		%REC	1	8/14/2012 2:05:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	8/13/2012 10:15:24 PM
Benzene	ND	5.0		µg/L	5	8/13/2012 10:15:24 PM
Toluene	ND	5.0		µg/L	5	8/13/2012 10:15:24 PM
Ethylbenzene	ND	5.0		µg/L	5	8/13/2012 10:15:24 PM
Xylenes, Total	ND	10		µg/L	5	8/13/2012 10:15:24 PM
Surr: 4-Bromofluorobenzene	109	55-140		%REC	5	8/13/2012 10:15:24 PM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	67	2.0	*	mg/L	20	8/14/2012 12:08:53 AM
Chloride	170	10		mg/L	20	8/14/2012 12:08:53 AM
Bromide	1.1	0.50		mg/L	5	8/13/2012 11:56:28 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	8/13/2012 11:56:28 PM
Sulfate	930	25		mg/L	50	8/14/2012 4:15:08 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/13/2012 11:31:38 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	64	1.0		mg/L	1	8/14/2012 5:47:16 PM
Magnesium	17	1.0		mg/L	1	8/14/2012 5:47:16 PM
Potassium	47	1.0		mg/L	1	8/14/2012 5:47:16 PM
Sodium	560	10		mg/L	10	8/14/2012 5:50:28 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **IDC**
Conductivity	4000	0.010		µmhos/cm	1	8/15/2012 3:40:00 PM
SM4500-H+B: PH						Analyst: **IDC**
pH	8.57	1.68	*H	pH units	1	8/15/2012 3:40:00 PM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MPPE
Project: MPPE
Collection Date: 8/10/2012 8:00:00 AM
Lab ID: 1208557-002
Matrix: AQUEOUS
Received Date: 8/13/2012 1:46:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JMP**
Diesel Range Organics (DRO)	7.8	1.0		mg/L	1	8/14/2012 2:27:17 PM
Surr: DNOP	136	79.5-166		%REC	1	8/14/2012 2:27:17 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	8/13/2012 10:47:21 PM
Benzene	ND	5.0		µg/L	5	8/13/2012 10:47:21 PM
Toluene	ND	5.0		µg/L	5	8/13/2012 10:47:21 PM
Ethylbenzene	ND	5.0		µg/L	5	8/13/2012 10:47:21 PM
Xylenes, Total	ND	10		µg/L	5	8/13/2012 10:47:21 PM
Surr: 4-Bromofluorobenzene	101	55-140		%REC	5	8/13/2012 10:47:21 PM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	48	2.0	*	mg/L	20	8/14/2012 12:33:42 AM
Chloride	150	10		mg/L	20	8/14/2012 12:33:42 AM
Bromide	1.0	0.50		mg/L	5	8/14/2012 12:21:18 AM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	8/14/2012 12:21:18 AM
Sulfate	970	25		mg/L	50	8/14/2012 4:02:43 PM
Nitrate+Nitrite as N	2.3	1.0		mg/L	5	8/13/2012 11:06:48 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	69	1.0		mg/L	1	8/14/2012 6:07:58 PM
Magnesium	17	1.0		mg/L	1	8/14/2012 6:07:58 PM
Potassium	35	1.0		mg/L	1	8/14/2012 6:07:58 PM
Sodium	560	10		mg/L	10	8/14/2012 6:12:03 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **IDC**
Conductivity	4000	0.010		µmhos/cm	1	8/15/2012 3:44:00 PM
SM4500-H+B: PH						Analyst: **IDC**
pH	8.72	1.68	*H	pH units	1	8/15/2012 3:44:00 PM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MPPE
Project: MPPE
Collection Date: 8/12/2012 8:00:00 AM
Lab ID: 1208557-003
Matrix: AQUEOUS
Received Date: 8/13/2012 1:46:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JMP**
Diesel Range Organics (DRO)	5.5	1.0		mg/L	1	8/14/2012 2:49:42 PM
Surr: DNOP	137	79.5-166		%REC	1	8/14/2012 2:49:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	8/13/2012 11:17:36 PM
Benzene	ND	5.0		µg/L	5	8/13/2012 11:17:36 PM
Toluene	ND	5.0		µg/L	5	8/13/2012 11:17:36 PM
Ethylbenzene	ND	5.0		µg/L	5	8/13/2012 11:17:36 PM
Xylenes, Total	ND	10		µg/L	5	8/13/2012 11:17:36 PM
Surr: 4-Bromofluorobenzene	97.4	55-140		%REC	5	8/13/2012 11:17:36 PM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	20	2.0	*	mg/L	20	8/14/2012 1:35:46 AM
Chloride	110	10		mg/L	20	8/14/2012 1:35:46 AM
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	8/14/2012 1:23:21 AM
Bromide	1.2	0.50		mg/L	5	8/14/2012 1:23:21 AM
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	8/14/2012 1:23:21 AM
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	8/14/2012 1:23:21 AM
Sulfate	720	10		mg/L	20	8/14/2012 1:35:46 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	74	1.0		mg/L	1	8/14/2012 6:15:44 PM
Magnesium	19	1.0		mg/L	1	8/14/2012 6:15:44 PM
Potassium	34	1.0		mg/L	1	8/14/2012 6:15:44 PM
Sodium	400	10		mg/L	10	8/14/2012 6:19:35 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **IDC**
Conductivity	3700	0.010		µmhos/cm	1	8/15/2012 3:48:00 PM
SM4500-H+B: PH						Analyst: **IDC**
pH	8.72	1.68	*H	pH units	1	8/15/2012 3:48:00 PM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208557

20-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID	MB-3310	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID:	3310	RunNo:	4855					
Prep Date:	8/14/2012	Analysis Date:	8/14/2012	SeqNo:	137178	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS-3310	SampType:	LCS	TestCode:	EPA Method 200.7: Metals					
Client ID:	LCSW	Batch ID:	3310	RunNo:	4855					
Prep Date:	8/14/2012	Analysis Date:	8/14/2012	SeqNo:	137179	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	102	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Sodium	53	1.0	50.00	0	106	85	115			

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208557**

20-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R4834**	RunNo: **4834**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136598** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R4834**	RunNo: **4834**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136599** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	93.2	90	110			
Chloride	4.7	0.50	5.000	0	94.1	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.1	90	110			
Bromide	2.4	0.10	2.500	0	95.0	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.3	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.4	90	110			
Sulfate	9.5	0.50	10.00	0	94.5	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.8	90	110			

Sample ID **1208517-001AMS**	SampType: **MS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R4834**	RunNo: **4834**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136604** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	4.4	0.50	5.000	0	88.8	74.5	115			

Sample ID **1208517-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R4834**	RunNo: **4834**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136605** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	4.5	0.50	5.000	0	90.5	74.5	115	1.91	20	

Sample ID **1208548-002AMS**	SampType: **MS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R4834**	RunNo: **4834**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136618** Units: **mg/L**

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

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

WO#: 1208557

Hall Environmental Analysis Laboratory, Inc.

20-Aug-12

Client: Western Refining Southwest, Gallup
Project: MPPE

Sample ID	1208548-002AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R4834	RunNo:	4834					
Prep Date:		Analysis Date:	8/13/2012	SeqNo:	136618	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.2	0.10	0.5000	1.740	90.6	76.6	110			
Bromide	2.4	0.10	2.500	0.07503	93.2	83.3	107			

Sample ID	1208548-002AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R4834	RunNo:	4834					
Prep Date:		Analysis Date:	8/13/2012	SeqNo:	136619	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.2	0.10	0.5000	1.740	92.6	76.6	110	0.457	20	
Bromide	2.4	0.10	2.500	0.07503	93.3	83.3	107	0.0903	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R4834	RunNo:	4834					
Prep Date:		Analysis Date:	8/14/2012	SeqNo:	136661	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R4834	RunNo:	4834					
Prep Date:		Analysis Date:	8/14/2012	SeqNo:	136662	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.8	90	110			
Chloride	4.7	0.50	5.000	0	94.5	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.7	90	110			
Bromide	2.4	0.10	2.500	0	95.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	101	90	110			
Sulfate	9.6	0.50	10.00	0	96.2	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	98.8	90	110			

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208557

20-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **1208578-001BMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**

Client ID: **BatchQC** Batch ID: **R4834** RunNo: **4834**

Prep Date: Analysis Date: **8/14/2012** SeqNo: **136664** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.68	0.10	0.5000	0.2240	90.8	76.6	110			
Nitrogen, Nitrite (As N)	0.86	0.10	1.000	0	85.7	72.5	111			
Bromide	2.6	0.10	2.500	0.3056	91.4	83.3	107			
Nitrogen, Nitrate (As N)	8.3	0.10	2.500	5.526	109	90.4	113			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.9	74.5	115			
Nitrate+Nitrite as N	9.1	0.20	3.500	5.526	103	88.6	110			

Sample ID **1208578-001BMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**

Client ID: **BatchQC** Batch ID: **R4834** RunNo: **4834**

Prep Date: Analysis Date: **8/14/2012** SeqNo: **136665** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.68	0.10	0.5000	0.2240	90.9	76.6	110	0.0588	20	
Nitrogen, Nitrite (As N)	0.86	0.10	1.000	0	86.4	72.5	111	0.817	20	
Bromide	2.6	0.10	2.500	0.3056	92.3	83.3	107	0.829	20	
Nitrogen, Nitrate (As N)	8.3	0.10	2.500	5.526	110	90.4	113	0.327	20	
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.1	74.5	115	1.33	20	
Nitrate+Nitrite as N	9.1	0.20	3.500	5.526	104	88.6	110	0.373	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBW** Batch ID: **R4870** RunNo: **4870**

Prep Date: Analysis Date: **8/14/2012** SeqNo: **137622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSW** Batch ID: **R4870** RunNo: **4870**

Prep Date: Analysis Date: **8/14/2012** SeqNo: **137623** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.4	0.50	10.00	0	94.5	90	110			

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208557**

20-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **MB-3312**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **PBW**	Batch ID: **3312**	RunNo: **4836**
Prep Date: **8/14/2012**	Analysis Date: **8/14/2012**	SeqNo: **136932** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Surr: DNOP	1.3		1.000		130	79.5	166			

Sample ID **LCS-3312**	SampType: **LCS**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **LCSW**	Batch ID: **3312**	RunNo: **4836**
Prep Date: **8/14/2012**	Analysis Date: **8/14/2012**	SeqNo: **136938** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.0	1.0	5.000	0	80.8	74	157			
Surr: DNOP	0.51		0.5000		102	79.5	166			

Sample ID **LCSD-3312**	SampType: **LCSD**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **LCSS02**	Batch ID: **3312**	RunNo: **4836**
Prep Date: **8/14/2012**	Analysis Date: **8/14/2012**	SeqNo: **136944** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.3	1.0	5.000	0	85.3	74	157	5.43	23	
Surr: DNOP	0.52		0.5000		105	79.5	166	0	0	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208557**

20-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **5ML-RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R4838**	RunNo: **4838**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136783** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	21		20.00		104	55	140			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R4838**	RunNo: **4838**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136784** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	23	2.5	20.00	0	115	66.9	136			
Benzene	21	1.0	20.00	0	106	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	107	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		103	55	140			

Sample ID **1208451-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BatchQC**	Batch ID: **R4838**	RunNo: **4838**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136788** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	120	12	100.0	0	115	45.1	137			
Benzene	140	5.0	100.0	34.52	106	74.1	124			
Toluene	150	5.0	100.0	42.77	106	75.2	124			
Ethylbenzene	110	5.0	100.0	4.060	103	69	125			
Xylenes, Total	340	10	300.0	23.16	104	73.1	126			
Surr: 4-Bromofluorobenzene	99		100.0		98.8	55	140			

Sample ID **1208451-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BatchQC**	Batch ID: **R4838**	RunNo: **4838**
Prep Date:	Analysis Date: **8/13/2012**	SeqNo: **136789** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	120	12	100.0	0	121	45.1	137	5.12	13.6	
Benzene	140	5.0	100.0	34.52	105	74.1	124	0.522	11.2	
Toluene	150	5.0	100.0	42.77	105	75.2	124	1.10	11.9	
Ethylbenzene	100	5.0	100.0	4.060	101	69	125	2.16	13.5	
Xylenes, Total	330	10	300.0	23.16	102	73.1	126	1.65	13	
Surr: 4-Bromofluorobenzene	100		100.0		102	55	140	0	0	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208557**

20-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID	**1208557-003CDUP**	SampType: **DUP**			TestCode: **EPA 120.1: Specific Conductance**					
Client ID:	**MPPE**	Batch ID: **R4882**			RunNo: **4882**					
Prep Date:		Analysis Date: **8/15/2012**			SeqNo: **137999**		Units: **µmhos/cm**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	3700	0.010						0.216	20	

Sample ID	**1208180-001c dup**	SampType: **dup**			TestCode: **EPA 120.1: Specific Conductance**					
Client ID:	**BatchQC**	Batch ID: **R4882**			RunNo: **4882**					
Prep Date:		Analysis Date: **8/15/2012**			SeqNo: **138738**		Units: **µmhos/cm**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	240	0.010						1.20	20	

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208557**

20-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **1208557-003CDUP**	SampType: **DUP**	TestCode: **SM4500-H+B: pH**							
Client ID: **MPPE**	Batch ID: **R4882**	RunNo: **4882**							
Prep Date:	Analysis Date: **8/15/2012**	SeqNo: **138003**	Units: **pH units**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.71	1.68								*H

Sample ID **1208180-001c dup**	SampType: **dup**	TestCode: **SM4500-H+B: pH**							
Client ID: **BatchQC**	Batch ID: **R4882**	RunNo: **4882**							
Prep Date:	Analysis Date: **8/15/2012**	SeqNo: **138729**	Units: **pH units**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.72	1.68								*H

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1208557

Received by/date: AT 08/13/12

Logged By: **Ashley Gallegos** 8/13/2012 1:46:00 PM

Completed By: **Ashley Gallegos** 8/13/2012 2:05:39 PM

Reviewed By: IO 08/13/12

Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ ~~No~~ ☑ NA ☐

0010-0031 - ADDED 1mL HNO_3 FOR ACCEPTABLE pH - AT 08/13/12

11. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 04 (<2 or >12 unless noted)
Adjusted? YES
Checked by: AT

Special Handling (if applicable)

17. 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: _____

18. Additional remarks:

19. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good	Not Present			

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush

Project Name:

MPPE

Project #:

Sample Day 08-09-12

Project Manager:

Beck Larsen

Sampler: MPPE-OPPs

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1208557	BTEX + MTBE + ~~TMB's~~ (8021)B	BTEX + MTBE + TPH (Gas only)	TPH 8015B (~~GRO~~ / DRO / ~~MRO~~)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
8/9/2012	08:00AM	H2O	MPPE	40ml-3	HCL	-001	X															
8/9/2012	08:00AM	H2O	MPPE	40ml-1	None	-001			X													
8/9/2012	08:00AM	H2O	MPPE	125ml-1	H2SO4	-001								X								
8/9/2012	08:00AM	H2O	MPPE	250ml-1	None	-001												X	X			
8/9/2012	08:00AM	H2O	MPPE	500ml-1	HNO3	-001														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
08-13-12	13:46	Janice Tso		08/13/12	13:46
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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.

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush

Project Name: MPPE

Project #:

Sample Day 08-10-12

Project Manager:

Beck Larsen

Sampler: MPPE-OPPs

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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. 1208557	BTEX + MTBE + ~~TMB's~~ (8021)B	BTEX + MTBE + TPH (Gas only)	TPH 8015B (~~GRO~~ / DRO / ~~MRO~~)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
8/10/2012	08:00AM	H2O	MPPE	40ml-3	HCL	-002	X															
8/10/2012	08:00AM	H2O	MPPE	40ml-1	None	-002			X													
8/10/2012	08:00AM	H2O	MPPE	125ml-1	H2SO4	-002								X								
8/10/2012	08:00AM	H2O	MPPE	250ml-1	None	-002												X	X			
8/10/2012	08:00AM	H2O	MPPE	500ml-1	HNO3	-002														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
08-13-12	13:46	Janice Tso			
Date:	Time:	Relinquished by:	Received by:	Date	Time
				08/13/12	1346

Remarks:

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.

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ~~☐ Rush~~

Project Name:

MPPE

Project #:

Sample Day 08-12-12

Project Manager:

Beck Larsen

Sampler: MPPE-OPPs

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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. 120855	BTEX + MTBE + ~~TMB's~~ (8021)B	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
8/12/2012	08:00AM	H2O	MPPE	40ml-3	HCL	-003	X															
8/12/2012	08:00AM	H2O	MPPE	40ml-1	None	-003			X													
8/12/2012	08:00AM	H2O	MPPE	125ml-1	H2SO4	-003								X								
8/12/2012	08:00AM	H2O	MPPE	250ml-1	None	-003												X	X			
8/12/2012	08:00AM	H2O	MPPE	500ml-1	HNO3	-003														X		

Date: 08-13-12 Time: 13:46 Relinquished by: Janice Tso

Received by: Date 08/13/12 Time 1346

Date: Time: Relinquished by:

Received by: Date Time

Remarks:

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.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

August 03, 2012

Beck Larsen
Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: BZ Strippers OrderNo.: 1207C87

Dear Beck Larsen:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/30/2012 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. 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. 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.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1207C87**
Date Reported: **8/3/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BZ 1-2 OUT
Project: BZ Strippers
Collection Date: 7/28/2012 8:00:00 AM
Lab ID: 1207C87-001 **Matrix:** AQUEOUS **Received Date:** 7/30/2012 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	7/31/2012 2:39:44 PM
Benzene	35	5.0		µg/L	5	7/31/2012 2:39:44 PM
Toluene	56	5.0		µg/L	5	7/31/2012 2:39:44 PM
Ethylbenzene	ND	5.0		µg/L	5	7/31/2012 2:39:44 PM
Xylenes, Total	29	10		µg/L	5	7/31/2012 2:39:44 PM
Surr: 4-Bromofluorobenzene	99.2	55-140		%REC	5	7/31/2012 2:39:44 PM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C87**

03-Aug-12

Client: Western Refining Southwest, Gallup

Project: BZ Strippers

Sample ID **B7** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBW** Batch ID: **R4576** RunNo: **4576**

Prep Date: Analysis Date: **7/31/2012** SeqNo: **128416** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	23		20.00		113	55	140			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSW** Batch ID: **R4576** RunNo: **4576**

Prep Date: Analysis Date: **7/31/2012** SeqNo: **128417** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18	2.5	20.00	0	91.4	66.9	136			
Benzene	22	1.0	20.00	0	109	80	120			
Toluene	22	1.0	20.00	0	112	80	120			
Ethylbenzene	22	1.0	20.00	0	111	80	120			
Xylenes, Total	68	2.0	60.00	0	113	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		112	55	140			

Sample ID **1207C87-001A MS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BZ 1-2 OUT** Batch ID: **R4576** RunNo: **4576**

Prep Date: Analysis Date: **7/31/2012** SeqNo: **128424** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	98	12	100.0	0	98.0	58	139			
Benzene	140	5.0	100.0	35.17	109	70.1	118			
Toluene	170	5.0	100.0	55.55	113	72.3	117			
Ethylbenzene	120	5.0	100.0	4.210	112	73.5	117			
Xylenes, Total	370	10	300.0	28.81	114	73.1	119			
Surr: 4-Bromofluorobenzene	100		100.0		105	55	140			

Sample ID **1207C87-001A MSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **BZ 1-2 OUT** Batch ID: **R4576** RunNo: **4576**

Prep Date: Analysis Date: **7/31/2012** SeqNo: **128425** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	100	12	100.0	0	102	58	139	3.82	15.2	
Benzene	140	5.0	100.0	35.17	106	70.1	118	2.44	16.4	
Toluene	160	5.0	100.0	55.55	108	72.3	117	3.03	13.9	
Ethylbenzene	110	5.0	100.0	4.210	107	73.5	117	4.63	13.5	
Xylenes, Total	350	10	300.0	28.81	108	73.1	119	4.54	12.9	
Surr: 4-Bromofluorobenzene	100		100.0		105	55	140	0	0	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1207C87

Received by/date: AT 07/30/12

Logged By: **Ashley Gallegos** 7/30/2012 12:40:00 PM

Completed By: **Ashley Gallegos** 7/30/2012 2:29:20 PM

Reviewed By: 07/30/12

Chain of Custody

1. Were seals intact? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. 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)

17. 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: _____

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Not Present			

Chain of Custody Record

Client:	Western - Refining
	Gallup Refinery
Mailing Address:	RT 3 Box 7
	Gallup NM 87301
Phone #:	505 722 3833
email or Fax#:	505 863 0930
QA/QC Package:	
☐ Standard	☐ Level 4 (Full Validation)
☐ Other	
☐ EDD (Type)	

☐ Standard ~~☐ Rush~~

Project Name: BZ Strippers

Project #: API BZ 1-2 Out

Project Manager: Beck Larsen

Sampler: API-MPPE-OPPs

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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. 1207687	BTEX + MTBE + ~~TMB's~~ (8021)B	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
7/28/2012	08:00AM	H2O	BZ 1-2 Out	40ml-3	HCL	-001	X															

Date: 7-30-12	Time: 12:40	Relinquished by: Alvin Dorsey	Received by:	Date	Time: 07/30/12 1240
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

August 08, 2012

Beck Larsen
Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: MPPE OrderNo.: 1207C95

Dear Beck Larsen:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/30/2012 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. 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. 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.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1207C95**
Date Reported: **8/8/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MPPE
Project: MPPE
Collection Date: 7/27/2012 8:00:00 AM
Lab ID: 1207C95-001
Matrix: AQUEOUS
Received Date: 7/30/2012 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JMP**
Diesel Range Organics (DRO)	8.7	1.0		mg/L	1	7/31/2012 5:42:18 PM
Surr: DNOP	125	79.5-166		%REC	1	7/31/2012 5:42:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	7/31/2012 4:10:30 PM
Benzene	ND	5.0		µg/L	5	7/31/2012 4:10:30 PM
Toluene	ND	5.0		µg/L	5	7/31/2012 4:10:30 PM
Ethylbenzene	ND	5.0		µg/L	5	7/31/2012 4:10:30 PM
Xylenes, Total	ND	10		µg/L	5	7/31/2012 4:10:30 PM
Surr: 4-Bromofluorobenzene	92.6	55-140		%REC	5	7/31/2012 4:10:30 PM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	15	2.0	*	mg/L	20	7/30/2012 10:52:40 PM
Chloride	240	10		mg/L	20	7/30/2012 10:52:40 PM
Bromide	1.4	0.50		mg/L	5	7/30/2012 10:40:15 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	7/30/2012 10:40:15 PM
Sulfate	920	10		mg/L	20	7/30/2012 10:52:40 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	7/31/2012 3:13:21 AM
EPA METHOD 200.7: METALS						Analyst: **JLF**
Calcium	85	1.0		mg/L	1	8/2/2012 1:07:07 PM
Magnesium	20	1.0		mg/L	1	8/2/2012 1:07:07 PM
Potassium	18	1.0		mg/L	1	8/2/2012 1:07:07 PM
Sodium	450	10		mg/L	10	8/2/2012 1:09:14 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **DBD**
Conductivity	3500	0.010		µmhos/cm	1	7/31/2012 1:43:09 AM
SM4500-H+B: PH						Analyst: **DBD**
pH	8.73	1.68	*H	pH units	1	7/31/2012 1:43:09 AM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MPPE
Project: MPPE
Collection Date: 7/28/2012 8:00:00 AM
Lab ID: 1207C95-002
Matrix: AQUEOUS
Received Date: 7/30/2012 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JMP**
Diesel Range Organics (DRO)	7.6	1.0		mg/L	1	7/31/2012 6:04:52 PM
Surr: DNOP	126	79.5-166		%REC	1	7/31/2012 6:04:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	7/31/2012 4:40:45 PM
Benzene	ND	5.0		µg/L	5	7/31/2012 4:40:45 PM
Toluene	ND	5.0		µg/L	5	7/31/2012 4:40:45 PM
Ethylbenzene	ND	5.0		µg/L	5	7/31/2012 4:40:45 PM
Xylenes, Total	ND	10		µg/L	5	7/31/2012 4:40:45 PM
Surr: 4-Bromofluorobenzene	121	55-140		%REC	5	7/31/2012 4:40:45 PM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	20	0.50	*	mg/L	5	7/30/2012 11:05:05 PM
Chloride	240	10		mg/L	20	7/30/2012 11:54:44 PM
Bromide	1.0	0.50		mg/L	5	7/30/2012 11:05:05 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	7/30/2012 11:05:05 PM
Sulfate	1400	50		mg/L	100	7/31/2012 8:25:37 PM
Nitrate+Nitrite as N	3.9	1.0		mg/L	5	7/31/2012 3:38:10 AM
EPA METHOD 200.7: METALS						Analyst: **JLF**
Calcium	8.3	1.0		mg/L	1	8/2/2012 1:11:14 PM
Magnesium	5.0	1.0		mg/L	1	8/2/2012 1:11:14 PM
Potassium	73	1.0		mg/L	1	8/2/2012 1:11:14 PM
Sodium	1600	20		mg/L	20	8/2/2012 1:18:11 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **DBD**
Conductivity	6200	0.010		µmhos/cm	1	7/31/2012 1:47:08 AM
SM4500-H+B: PH						Analyst: **DBD**
pH	10.0	1.68	*H	pH units	1	7/31/2012 1:47:08 AM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MPPE
Project: MPPE
Collection Date: 7/29/2012 8:00:00 AM
Lab ID: 1207C95-003
Matrix: AQUEOUS
Received Date: 7/30/2012 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JMP**
Diesel Range Organics (DRO)	7.9	1.0		mg/L	1	7/31/2012 6:27:13 PM
Surr: DNOP	127	79.5-166		%REC	1	7/31/2012 6:27:13 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	7/31/2012 5:10:57 PM
Benzene	ND	5.0		µg/L	5	7/31/2012 5:10:57 PM
Toluene	ND	5.0		µg/L	5	7/31/2012 5:10:57 PM
Ethylbenzene	ND	5.0		µg/L	5	7/31/2012 5:10:57 PM
Xylenes, Total	ND	10		µg/L	5	7/31/2012 5:10:57 PM
Surr: 4-Bromofluorobenzene	102	55-140		%REC	5	7/31/2012 5:10:57 PM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	130	5.0	*	mg/L	50	7/31/2012 8:13:12 PM
Chloride	210	10		mg/L	20	7/31/2012 12:19:34 AM
Bromide	1.2	0.50		mg/L	5	7/31/2012 12:07:09 AM
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	7/31/2012 12:07:09 AM
Sulfate	760	10		mg/L	20	7/31/2012 12:19:34 AM
Nitrate+Nitrite as N	2.2	1.0		mg/L	5	7/31/2012 4:03:00 AM
EPA METHOD 200.7: METALS						Analyst: **JLF**
Calcium	57	1.0		mg/L	1	8/2/2012 1:16:04 PM
Magnesium	18	1.0		mg/L	1	8/2/2012 1:16:04 PM
Potassium	50	1.0		mg/L	1	8/2/2012 1:16:04 PM
Sodium	600	10		mg/L	10	8/2/2012 1:20:43 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **DBD**
Conductivity	3900	0.010		µmhos/cm	1	7/31/2012 1:51:07 AM
SM4500-H+B: PH						Analyst: **DBD**
pH	8.89	1.68	*H	pH units	1	7/31/2012 1:51:07 AM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1207C95

08-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID	MB-3134	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals				
Client ID:	PBW	Batch ID:	3134	RunNo:	4606				
Prep Date:	8/1/2012	Analysis Date:	8/2/2012	SeqNo:	129308	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS-3134	SampType:	LCS	TestCode:	EPA Method 200.7: Metals				
Client ID:	LCSW	Batch ID:	3134	RunNo:	4606				
Prep Date:	8/1/2012	Analysis Date:	8/2/2012	SeqNo:	129309	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	52	1.0	50.00	0	105	85	115			
Magnesium	53	1.0	50.00	0	105	85	115			
Potassium	52	1.0	50.00	0	103	85	115			
Sodium	52	1.0	50.00	0	104	85	115			

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C95**

08-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R4524**	RunNo: **4524**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **126789** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **1207C64-001BMS**	SampType: **MS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R4524**	RunNo: **4524**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **126792** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.72	0.10	0.5000	0.2705	89.5	76.6	110			
Bromide	2.6	0.10	2.500	0.4510	86.2	83.3	107			
Phosphorus, Orthophosphate (As P	4.4	0.50	5.000	0	89.0	74.5	115			
Nitrate+Nitrite as N	5.2	0.20	3.500	2.056	90.3	88.6	110			

Sample ID **1207C64-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R4524**	RunNo: **4524**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **126793** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.72	0.10	0.5000	0.2705	90.7	76.6	110	0.838	20	
Bromide	2.6	0.10	2.500	0.4510	85.8	83.3	107	0.454	20	
Phosphorus, Orthophosphate (As P	4.5	0.50	5.000	0	89.0	74.5	115	0.104	20	
Nitrate+Nitrite as N	5.2	0.20	3.500	2.056	89.8	88.6	110	0.339	20	

Sample ID **LCS-b**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R4524**	RunNo: **4524**
Prep Date:	Analysis Date: **7/30/2012**	SeqNo: **126795** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			
Chloride	4.6	0.50	5.000	0	92.5	90	110			
Bromide	2.3	0.10	2.500	0	93.6	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.7	90	110			
Sulfate	9.3	0.50	10.00	0	93.2	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.4	90	110			

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C95**

08-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **1207C80-001AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**

Client ID: **BatchQC** Batch ID: **R4524** RunNo: **4524**

Prep Date: Analysis Date: **7/30/2012** SeqNo: **126797** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.80	0.10	0.5000	0.3193	95.8	76.6	110			
Chloride	9.6	0.50	5.000	4.653	99.4	87.8	111			
Bromide	2.4	0.10	2.500	0	97.0	83.3	107			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.3	74.5	115			
Sulfate	25	0.50	10.00	14.68	101	84.6	122			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.2	88.6	110			

Sample ID **1207C80-001AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**

Client ID: **BatchQC** Batch ID: **R4524** RunNo: **4524**

Prep Date: Analysis Date: **7/30/2012** SeqNo: **126798** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.77	0.10	0.5000	0.3193	90.7	76.6	110	3.21	20	
Chloride	9.4	0.50	5.000	4.653	95.6	87.8	111	2.01	20	
Bromide	2.3	0.10	2.500	0	93.6	83.3	107	3.49	20	
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.9	74.5	115	4.56	20	
Sulfate	24	0.50	10.00	14.68	97.2	84.6	122	1.50	20	
Nitrate+Nitrite as N	3.2	0.20	3.500	0	92.2	88.6	110	4.21	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBW** Batch ID: **R4560** RunNo: **4560**

Prep Date: Analysis Date: **7/31/2012** SeqNo: **127902** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSW** Batch ID: **R4560** RunNo: **4560**

Prep Date: Analysis Date: **7/31/2012** SeqNo: **127903** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.3	90	110			
Sulfate	9.3	0.50	10.00	0	92.9	90	110			

Sample ID **1207D09-001AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**

Client ID: **BatchQC** Batch ID: **R4560** RunNo: **4560**

Prep Date: Analysis Date: **7/31/2012** SeqNo: **127920** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.4	0.10	0.5000	0.9096	94.7	76.6	110			
Sulfate	60	0.50	10.00	49.88	97.5	84.6	122			E

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C95**

08-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID	1207D09-001AMSD	SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R4560		RunNo:	4560				
Prep Date:		Analysis Date:	7/31/2012		SeqNo:	127921	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.4	0.10	0.5000	0.9096	95.4	76.6	110	0.254	20	
Sulfate	60	0.50	10.00	49.88	98.3	84.6	122	0.140	20	E

Sample ID	1207D25-001BMS	SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R4560		RunNo:	4560				
Prep Date:		Analysis Date:	7/31/2012		SeqNo:	127952	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.2	0.10	0.5000	0.7267	93.6	76.6	110			

Sample ID	1207D25-001BMSD	SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	R4560		RunNo:	4560				
Prep Date:		Analysis Date:	7/31/2012		SeqNo:	127953	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.2	0.10	0.5000	0.7267	93.8	76.6	110	0.107	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1207C95

08-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **MB-3113**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **PBW**	Batch ID: **3113**	RunNo: **4525**
Prep Date: **7/31/2012**	Analysis Date: **7/31/2012**	SeqNo: **127732** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Surr: DNOP	1.2		1.000		118	79.5	166			

Sample ID **LCS-3113**	SampType: **LCS**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **LCSW**	Batch ID: **3113**	RunNo: **4525**
Prep Date: **7/31/2012**	Analysis Date: **7/31/2012**	SeqNo: **127733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.3	1.0	5.000	0	85.1	74	157			
Surr: DNOP	0.46		0.5000		91.6	79.5	166			

Sample ID **LCSD-3113**	SampType: **LCSD**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **LCSS02**	Batch ID: **3113**	RunNo: **4525**
Prep Date: **7/31/2012**	Analysis Date: **7/31/2012**	SeqNo: **127734** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	89.5	74	157	5.03	23	
Surr: DNOP	0.48		0.5000		96.0	79.5	166	0	0	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C95**

08-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **B7**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R4576**	RunNo: **4576**
Prep Date:	Analysis Date: **7/31/2012**	SeqNo: **128416** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	23		20.00		113	55	140			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R4576**	RunNo: **4576**
Prep Date:	Analysis Date: **7/31/2012**	SeqNo: **128417** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18	2.5	20.00	0	91.4	66.9	136			
Benzene	22	1.0	20.00	0	109	80	120			
Toluene	22	1.0	20.00	0	112	80	120			
Ethylbenzene	22	1.0	20.00	0	111	80	120			
Xylenes, Total	68	2.0	60.00	0	113	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		112	55	140			

Sample ID **1207C87-001A MS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BatchQC**	Batch ID: **R4576**	RunNo: **4576**
Prep Date:	Analysis Date: **7/31/2012**	SeqNo: **128424** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	98	12	100.0	0	98.0	58	139			
Benzene	140	5.0	100.0	35.17	109	70.1	118			
Toluene	170	5.0	100.0	55.55	113	72.3	117			
Ethylbenzene	120	5.0	100.0	4.210	112	73.5	117			
Xylenes, Total	370	10	300.0	28.81	114	73.1	119			
Surr: 4-Bromofluorobenzene	100		100.0		105	55	140			

Sample ID **1207C87-001A MSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BatchQC**	Batch ID: **R4576**	RunNo: **4576**
Prep Date:	Analysis Date: **7/31/2012**	SeqNo: **128425** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	100	12	100.0	0	102	58	139	3.82	15.2	
Benzene	140	5.0	100.0	35.17	106	70.1	118	2.44	16.4	
Toluene	160	5.0	100.0	55.55	108	72.3	117	3.03	13.9	
Ethylbenzene	110	5.0	100.0	4.210	107	73.5	117	4.63	13.5	
Xylenes, Total	350	10	300.0	28.81	108	73.1	119	4.54	12.9	
Surr: 4-Bromofluorobenzene	100		100.0		105	55	140	0	0	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1207C95

08-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID	1207B39-001C dup	SampType:	DUP			TestCode:	EPA 120.1: Specific Conductance				
Client ID:	BatchQC	Batch ID:	R4521			RunNo:	4521				
Prep Date:		Analysis Date:	7/30/2012			SeqNo:	126649	Units:	µmhos/cm		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Conductivity	3800	0.010						0.674	20		

Sample ID	1207B93-001A dup	SampType:	DUP			TestCode:	EPA 120.1: Specific Conductance				
Client ID:	BatchQC	Batch ID:	R4521			RunNo:	4521				
Prep Date:		Analysis Date:	7/30/2012			SeqNo:	126661	Units:	µmhos/cm		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Conductivity	3700	0.010						5.09	20		

Sample ID	1207B93-017A dup	SampType:	DUP			TestCode:	EPA 120.1: Specific Conductance				
Client ID:	BatchQC	Batch ID:	R4521			RunNo:	4521				
Prep Date:		Analysis Date:	7/31/2012			SeqNo:	126678	Units:	µmhos/cm		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Conductivity	2300	0.010						3.74	20		

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C95**

08-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID	**1207B39-001C dup**	SampType: **DUP**			TestCode: **SM4500-H+B: pH**					
Client ID:	**BatchQC**	Batch ID: **R4521**			RunNo: **4521**					
Prep Date:		Analysis Date: **7/30/2012**			SeqNo: **126609**		Units: **pH units**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.53	1.68								*H

Sample ID	**1207B93-017A dup**	SampType: **DUP**			TestCode: **SM4500-H+B: pH**					
Client ID:	**BatchQC**	Batch ID: **R4521**			RunNo: **4521**					
Prep Date:		Analysis Date: **7/31/2012**			SeqNo: **126622**		Units: **pH units**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	9.11	1.68								*H

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1207C95

Received by/date: AT 07/30/12

Logged By: **Ashley Gallegos** 7/30/2012 12:40:00 PM

Completed By: **Ashley Gallegos** 7/30/2012 2:54:16 PM

Reviewed By: IO 07/30/12

Chain of Custody

1. Were seals intact? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☑ No ☑ mg 7/30 NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 6 (<2 or >12 unless noted)
Adjusted? YES
Checked by: mg

Special Handling (if applicable)

17. 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: ____

18. Additional remarks: Added 1mL HNO_3 to -0010 and -003D. Added 2mL HNO_3 to -002D for acceptable pH. mg 07/30/12 1207C95-002A pH>2 @ 8/3/12

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Not Present			

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☑ Rush

Project Name: MPPE

Project #:

Sample Day 07-27-12

Project Manager:

Beck Larsen

Sampler: MPPE-OPPs

On Ice: ☑ Yes ☐ No

Sample Temperature: 3.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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 1207695	BTEX + MTBE + ~~TMB's~~ (8021)B	BTEX + MTBE + TPH (Gas only)	TPH 8015B (~~GRO~~ / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
7/27/2012	08:00AM	H2O	MPPE	40ml-3	HCL	-001	X															
7/27/2012	08:00AM	H2O	MPPE	40ml-1	None	-001			X													
7/27/2012	08:00AM	H2O	MPPE	125ml-1	H2SO4	-001								X								
7/27/2012	08:00AM	H2O	MPPE	250ml-1	None	-001												X	X			
7/27/2012	08:00AM	H2O	MPPE	500ml-1	HNO3															X		

Date: 07-30-12 Time: 12:40 Relinquished by: Alvin Dorsey Received by: Date 07/30/12 Time 1240

Date: Time: Relinquished by: Received by: Date Time

Remarks:

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.

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☑ Rush

Project Name: MPPE

Project #:

Sample Day 07-28-12

Project Manager: Beck Larsen

Sampler: MPPE-OPPs

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1207695	BTEX + MTBE + TMB's (8021)B	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
7/28/2012	08:00AM	H2O	MPPE	40ml-3	HCL	-002	X															
7/28/2012	08:00AM	H2O	MPPE	40ml-1	None	-003			X													
7/28/2012	08:00AM	H2O	MPPE	125ml-1	H2SO4	-002								X								
7/28/2012	08:00AM	H2O	MPPE	250ml-1	None	-002												X	X			
7/28/2012	08:00AM	H2O	MPPE	500ml-1	HNO3	-002														X		

Analysis Request

Date	Time	Relinquished by	Received by	Date	Time
07-30-12	12:40	Alvin Dorsey			
				07/30/12	15:40

Remarks:

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.

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☐ ~~Rush~~ _____

Project Name:

MPPE

Project #:

Sample Day 07-29-12

Project Manager:

Beck Larsen

Sampler: MPPE-OPPs

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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	BTEX + MTBE + ~~TMB's~~ (8021)B	BTEX + MTBE + TPH (Gas only)	TPH 8015B (~~GRO~~/DRO/~~MRO~~)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
7/29/2012	08:00AM	H2O	MPPE	40ml-3	HCL	-003	X															
7/29/2012	08:00AM	H2O	MPPE	40ml-1	None	-003			X													
7/29/2012	08:00AM	H2O	MPPE	125ml-1	H2SO4	-003								X								
7/29/2012	08:00AM	H2O	MPPE	250ml-1	None	-003												X	X			
7/29/2012	08:00AM	H2O	MPPE	500ml-1	HNO3	-003														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
07-30-12	12:40	Alvin Dorsey		07/30/12	1240
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

August 15, 2012

Thurman B. Larsen
Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: Section 17 Once a Month OrderNo.: 1207C93

Dear Thurman B. Larsen:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/30/2012 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. 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. 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.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MPPE Effluent Samples
Project: Section 17 Once a Month
Collection Date: 7/27/2012 10:50:00 AM
Lab ID: 1207C93-001
Matrix: AQUEOUS
Received Date: 7/30/2012 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: METALS						Analyst: **ELS**
Beryllium	ND	0.0020		mg/L	1	8/7/2012 8:50:14 AM
Cadmium	ND	0.0020		mg/L	1	8/7/2012 8:50:14 AM
Chromium	ND	0.0060		mg/L	1	8/7/2012 8:50:14 AM
Nickel	ND	0.010		mg/L	1	8/7/2012 8:50:14 AM
Silver	ND	0.0050		mg/L	1	8/7/2012 8:50:14 AM
Zinc	ND	0.010		mg/L	1	8/7/2012 8:50:14 AM
EPA 200.8: METALS						Analyst: **SNV**
Antimony	ND	0.0025		mg/L	2.5	8/3/2012 1:20:16 PM
Arsenic	0.0037	0.0025		mg/L	2.5	8/3/2012 1:20:16 PM
Lead	ND	0.0025		mg/L	2.5	8/3/2012 1:20:16 PM
Copper	0.0040	0.0025		mg/L	2.5	8/3/2012 1:20:16 PM
Selenium	0.0057	0.0025		mg/L	2.5	8/3/2012 1:20:16 PM
Thallium	ND	0.0025		mg/L	2.5	8/3/2012 1:20:16 PM
EPA METHOD 245.1: MERCURY						Analyst: **DBD**
Mercury	ND	0.00020		mg/L	1	8/3/2012 1:31:43 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**
Acenaphthene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Acenaphthylene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Aniline	600	100		µg/L	10	7/31/2012 10:16:03 PM
Anthracene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Azobenzene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Benz(a)anthracene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Benzo(a)pyrene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Benzoic acid	ND	20		µg/L	1	7/31/2012 9:46:00 PM
Benzyl alcohol	21	10		µg/L	1	7/31/2012 9:46:00 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/31/2012 9:46:00 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Butyl benzyl phthalate	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Carbazole	ND	10		µg/L	1	7/31/2012 9:46:00 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/31/2012 9:46:00 PM
4-Chloroaniline	ND	10		µg/L	1	7/31/2012 9:46:00 PM
2-Chloronaphthalene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
2-Chlorophenol	ND	10		µg/L	1	7/31/2012 9:46:00 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/31/2012 9:46:00 PM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: Section 17 Once a Month
Lab ID: 1207C93-001 **Matrix:** AQUEOUS

Client Sample ID: MPPE Effluent Samples
Collection Date: 7/27/2012 10:50:00 AM
Received Date: 7/30/2012 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**
Chrysene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Di-n-butyl phthalate	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Di-n-octyl phthalate	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Dibenzofuran	ND	10		µg/L	1	7/31/2012 9:46:00 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
1,4-Dichlorobenzene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Diethyl phthalate	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Dimethyl phthalate	ND	10		µg/L	1	7/31/2012 9:46:00 PM
2,4-Dichlorophenol	ND	20		µg/L	1	7/31/2012 9:46:00 PM
2,4-Dimethylphenol	180	10		µg/L	1	7/31/2012 9:46:00 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/31/2012 9:46:00 PM
2,4-Dinitrophenol	ND	20		µg/L	1	7/31/2012 9:46:00 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Fluoranthene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Fluorene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Hexachlorobenzene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Hexachlorobutadiene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Hexachloroethane	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Isophorone	ND	10		µg/L	1	7/31/2012 9:46:00 PM
1-Methylnaphthalene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
2-Methylnaphthalene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
2-Methylphenol	1800	100		µg/L	10	7/31/2012 10:16:03 PM
3+4-Methylphenol	3800	1000		µg/L	100	8/1/2012 7:30:51 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/31/2012 9:46:00 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	7/31/2012 9:46:00 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Naphthalene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
2-Nitroaniline	ND	10		µg/L	1	7/31/2012 9:46:00 PM
3-Nitroaniline	ND	10		µg/L	1	7/31/2012 9:46:00 PM
4-Nitroaniline	ND	20		µg/L	1	7/31/2012 9:46:00 PM
Nitrobenzene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
2-Nitrophenol	ND	10		µg/L	1	7/31/2012 9:46:00 PM
4-Nitrophenol	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Pentachlorophenol	ND	20		µg/L	1	7/31/2012 9:46:00 PM
Phenanthrene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Phenol	6700	1000		µg/L	100	8/1/2012 7:30:51 PM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MPPE Effluent Samples
Project: Section 17 Once a Month
Collection Date: 7/27/2012 10:50:00 AM
Lab ID: 1207C93-001 **Matrix:** AQUEOUS **Received Date:** 7/30/2012 12:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**
Pyrene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Pyridine	13	10		µg/L	1	7/31/2012 9:46:00 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/31/2012 9:46:00 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/31/2012 9:46:00 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/31/2012 9:46:00 PM
Surr: 2,4,6-Tribromophenol	83.3	44.2-126		%REC	1	7/31/2012 9:46:00 PM
Surr: 2-Fluorobiphenyl	59.1	37-114		%REC	1	7/31/2012 9:46:00 PM
Surr: 2-Fluorophenol	52.0	23.4-98		%REC	1	7/31/2012 9:46:00 PM
Surr: 4-Terphenyl-d14	80.5	41.3-116		%REC	1	7/31/2012 9:46:00 PM
Surr: Nitrobenzene-d5	67.3	39.5-118		%REC	1	7/31/2012 9:46:00 PM
Surr: Phenol-d5	47.2	20.9-95.9		%REC	1	7/31/2012 9:46:00 PM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C93**

15-Aug-12

Client: Western Refining Southwest, Gallup

Project: Section 17 Once a Month

Sample ID	**1207C76-001AMS**	SampType: **MS**		TestCode: **EPA Method 200.7: Metals**						
Client ID:	**BatchQC**	Batch ID: **3134**		RunNo: **4711**						
Prep Date:	**8/1/2012**	Analysis Date: **8/7/2012**		SeqNo: **132752**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	102	70	130			

Sample ID	**1207C76-001AMSD**	SampType: **MSD**		TestCode: **EPA Method 200.7: Metals**						
Client ID:	**BatchQC**	Batch ID: **3134**		RunNo: **4711**						
Prep Date:	**8/1/2012**	Analysis Date: **8/7/2012**		SeqNo: **132753**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	102	70	130	0.284	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C93**

15-Aug-12

Client: Western Refining Southwest, Gallup

Project: Section 17 Once a Month

Sample ID	MB-3161	SampType:	MBLK		TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3161		RunNo:	4640					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012		SeqNo:	130429	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	ND	0.00020									

Sample ID	LCS-3161	SampType:	LCS		TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3161		RunNo:	4640					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012		SeqNo:	130430	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0050	0.00020	0.005000	0	101	80	120				

Sample ID	1207A38-003BMS	SampType:	MS		TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3161		RunNo:	4640					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012		SeqNo:	130437	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0051	0.00020	0.005000	0	101	75	125				

Sample ID	1207A38-003BMSD	SampType:	MSD		TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3161		RunNo:	4640					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012		SeqNo:	130438	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0051	0.00020	0.005000	0	103	75	125	1.60	20		

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C93**

15-Aug-12

Client: Western Refining Southwest, Gallup

Project: Section 17 Once a Month

Sample ID **mb-3105**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **3105**	RunNo: **4555**
Prep Date: **7/31/2012**	Analysis Date: **7/31/2012**	SeqNo: **127876** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C93**

15-Aug-12

Client: Western Refining Southwest, Gallup

Project: Section 17 Once a Month

Sample ID **mb-3105**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **3105**	RunNo: **4555**
Prep Date: **7/31/2012**	Analysis Date: **7/31/2012**	SeqNo: **127876** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	20								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2,4,6-Tribromophenol	140		200.0		69.2	44.2	126			
Surr: 2-Fluorobiphenyl	49		100.0		49.3	37	114			
Surr: 2-Fluorophenol	78		200.0		38.9	23.4	98			
Surr: 4-Terphenyl-d14	70		100.0		70.2	41.3	116			
Surr: Nitrobenzene-d5	48		100.0		47.6	39.5	118			
Surr: Phenol-d5	66		200.0		33.2	20.9	95.9			

Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1207C93**

15-Aug-12

Client: Western Refining Southwest, Gallup

Project: Section 17 Once a Month

Sample ID **lcs-3105**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **3105**	RunNo: **4555**
Prep Date: **7/31/2012**	Analysis Date: **7/31/2012**	SeqNo: **127877** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	56	10	100.0	0	56.0	38.2	99.4			
4-Chloro-3-methylphenol	130	10	200.0	0	66.3	35.5	108			
2-Chlorophenol	120	10	200.0	0	58.9	29.8	106			
1,4-Dichlorobenzene	53	10	100.0	0	52.8	32.6	91.5			
2,4-Dinitrotoluene	57	10	100.0	0	57.0	44.7	112			
N-Nitrosodi-n-propylamine	62	10	100.0	0	61.9	38.5	105			
4-Nitrophenol	98	10	200.0	0	48.9	11.6	73.1			
Pentachlorophenol	110	20	200.0	0	57.2	20.2	93			
Phenol	85	10	200.0	0	42.4	23	66.1			
Pyrene	61	10	100.0	0	61.3	40.1	101			
1,2,4-Trichlorobenzene	63	10	100.0	0	63.5	37.7	99.1			
Surr: 2,4,6-Tribromophenol	160		200.0		79.9	44.2	126			
Surr: 2-Fluorobiphenyl	60		100.0		59.9	37	114			
Surr: 2-Fluorophenol	95		200.0		47.3	23.4	98			
Surr: 4-Terphenyl-d14	80		100.0		79.9	41.3	116			
Surr: Nitrobenzene-d5	68		100.0		67.8	39.5	118			
Surr: Phenol-d5	86		200.0		42.9	20.9	95.9			

Sample ID **lcsd-3105**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **3105**	RunNo: **4555**
Prep Date: **7/31/2012**	Analysis Date: **7/31/2012**	SeqNo: **127878** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	64	10	100.0	0	64.2	38.2	99.4	13.6	20	
4-Chloro-3-methylphenol	160	10	200.0	0	78.1	35.5	108	16.4	20	
2-Chlorophenol	130	10	200.0	0	67.2	29.8	106	13.1	20	
1,4-Dichlorobenzene	55	10	100.0	0	55.1	32.6	91.5	4.11	20	
2,4-Dinitrotoluene	72	10	100.0	0	71.8	44.7	112	22.9	20	R
N-Nitrosodi-n-propylamine	68	10	100.0	0	67.7	38.5	105	8.98	20	
4-Nitrophenol	110	10	200.0	0	55.0	11.6	73.1	11.8	20	
Pentachlorophenol	130	20	200.0	0	64.7	20.2	93	12.3	20	
Phenol	92	10	200.0	0	46.0	23	66.1	8.08	20	
Pyrene	68	10	100.0	0	68.2	40.1	101	10.6	20	
1,2,4-Trichlorobenzene	62	10	100.0	0	62.5	37.7	99.1	1.56	20	
Surr: 2,4,6-Tribromophenol	180		200.0		88.3	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	66		100.0		66.3	37	114	0	0	
Surr: 2-Fluorophenol	110		200.0		56.4	23.4	98	0	0	
Surr: 4-Terphenyl-d14	90		100.0		89.7	41.3	116	0	0	
Surr: Nitrobenzene-d5	76		100.0		76.1	39.5	118	0	0	
Surr: Phenol-d5	96		200.0		47.9	20.9	95.9	0	0	

Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1207C93

Received by/date: AT 07/30/12

Logged By: **Ashley Gallegos** 7/30/2012 12:40:00 PM

Completed By: **Ashley Gallegos** 7/30/2012 2:44:47 PM

Reviewed By: 07/30/12

Chain of Custody

1. Were seals intact? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐ HS 7/30/12
    Added 1mL HNO3 to -001B for acceptable pH
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 1 (<2 or >12 unless noted)
Adjusted? YES
Checked by: MG

Special Handling (if applicable)

17. 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: ____

18. Additional remarks:

19. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Not Present			

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush _____

Project Name:

Section 17 Once a Month

Project #:

Priority metals, Semi Volatiles (SCVOC's)

Project Manager:

Beck Larsen

Sampler: API-MPPE-OPPs

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix (07/31/12 AT)	Sample Request ID	Container Type and #	Preservative Type	HEAL No 1207C93	BTEX + MTBE + TMB's (8021)B	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)		Priority Metals (200.7)	(SVOC's) semi volatiles (8270C)		Air Bubbles (Y or N)
7/27/2012	10:50AM	A9	MPPE Effluent Samples	250ml-1	HNO3	-001													X			
7/27/2012	10:50AM	↓	MPPE Effluent Samples	liter-1	None	-001														X		

Date: 07-30-12 Time: 12:40 Relinquished by: Alvin Dorsey Received by: Date 07/31/12 Time 1240

Date: Time: Relinquished by: Received by: Date Time

Remarks:

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.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 21, 2012

Thurman B. Larsen
Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: MPPE OrderNo.: 1208177

Dear Thurman B. Larsen:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/3/2012 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. 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. 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.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MPPE
Project: MPPE
Collection Date: 7/30/2012 8:00:00 AM
Lab ID: 1208177-001
Matrix: AQUEOUS
Received Date: 8/3/2012 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JMP**
Diesel Range Organics (DRO)	8.4	1.0		mg/L	1	8/6/2012 8:48:18 AM
Surr: DNOP	117	79.5-166		%REC	1	8/6/2012 8:48:18 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	8/3/2012 5:35:18 PM
Benzene	140	5.0		µg/L	5	8/3/2012 5:35:18 PM
Toluene	24	5.0		µg/L	5	8/3/2012 5:35:18 PM
Ethylbenzene	ND	5.0		µg/L	5	8/3/2012 5:35:18 PM
Xylenes, Total	ND	10		µg/L	5	8/3/2012 5:35:18 PM
Surr: 4-Bromofluorobenzene	102	55-140		%REC	5	8/3/2012 5:35:18 PM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	120	5.0	*	mg/L	50	8/6/2012 4:01:27 PM
Chloride	260	10		mg/L	20	8/3/2012 3:21:04 PM
Bromide	1.4	0.50		mg/L	5	8/3/2012 2:36:09 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	8/3/2012 2:36:09 PM
Sulfate	1000	25		mg/L	50	8/6/2012 4:01:27 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/3/2012 5:35:53 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	57	1.0		mg/L	1	8/9/2012 7:36:58 AM
Magnesium	17	1.0		mg/L	1	8/9/2012 7:36:58 AM
Potassium	130	10		mg/L	10	8/9/2012 7:42:01 AM
Sodium	660	10		mg/L	10	8/9/2012 7:42:01 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **DBD**
Conductivity	5300	0.010		µmhos/cm	1	8/6/2012 12:33:42 PM
SM4500-H+B: PH						Analyst: **DBD**
pH	8.42	1.68	H	pH units	1	8/6/2012 12:33:42 PM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MPPE
Project: MPPE
Collection Date: 7/31/2012 8:00:00 AM
Lab ID: 1208177-002
Matrix: AQUEOUS
Received Date: 8/3/2012 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JMP**
Diesel Range Organics (DRO)	8.1	1.0		mg/L	1	8/6/2012 9:13:28 AM
Surr: DNOP	120	79.5-166		%REC	1	8/6/2012 9:13:28 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	8/3/2012 7:05:44 PM
Benzene	ND	5.0		µg/L	5	8/3/2012 7:05:44 PM
Toluene	ND	5.0		µg/L	5	8/3/2012 7:05:44 PM
Ethylbenzene	ND	5.0		µg/L	5	8/3/2012 7:05:44 PM
Xylenes, Total	ND	10		µg/L	5	8/3/2012 7:05:44 PM
Surr: 4-Bromofluorobenzene	102	55-140		%REC	5	8/3/2012 7:05:44 PM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	89	5.0	*	mg/L	50	8/6/2012 4:26:17 PM
Chloride	200	10		mg/L	20	8/3/2012 3:43:32 PM
Bromide	0.81	0.50		mg/L	5	8/3/2012 3:32:18 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	8/3/2012 3:32:18 PM
Sulfate	870	10		mg/L	20	8/3/2012 3:43:32 PM
Nitrate+Nitrite as N	6.0	4.0		mg/L	20	8/6/2012 5:40:44 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	72	1.0		mg/L	1	8/9/2012 7:44:02 AM
Magnesium	18	1.0		mg/L	1	8/9/2012 7:44:02 AM
Potassium	87	1.0		mg/L	1	8/9/2012 7:44:02 AM
Sodium	540	10		mg/L	10	8/9/2012 7:46:11 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **DBD**
Conductivity	4400	0.010		µmhos/cm	1	8/6/2012 12:41:40 PM
SM4500-H+B: PH						Analyst: **DBD**
pH	8.44	1.68	H	pH units	1	8/6/2012 12:41:40 PM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: MPPE
Lab ID: 1208177-003
Matrix: AQUEOUS
Client Sample ID: MPPE
Collection Date: 8/1/2012 8:00:00 AM
Received Date: 8/3/2012 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JMP**
Diesel Range Organics (DRO)	25	1.0		mg/L	1	8/6/2012 9:38:51 AM
Surr: DNOP	125	79.5-166		%REC	1	8/6/2012 9:38:51 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	12		µg/L	5	8/4/2012 12:07:27 AM
Benzene	ND	5.0		µg/L	5	8/4/2012 12:07:27 AM
Toluene	ND	5.0		µg/L	5	8/4/2012 12:07:27 AM
Ethylbenzene	ND	5.0		µg/L	5	8/4/2012 12:07:27 AM
Xylenes, Total	ND	10		µg/L	5	8/4/2012 12:07:27 AM
Surr: 4-Bromofluorobenzene	91.6	55-140		%REC	5	8/4/2012 12:07:27 AM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Fluoride	840	50	*	mg/L	500	8/6/2012 5:15:55 PM
Chloride	200	10		mg/L	20	8/3/2012 4:06:01 PM
Bromide	1.3	0.50		mg/L	5	8/3/2012 3:54:47 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	8/3/2012 3:54:47 PM
Sulfate	860	10		mg/L	20	8/3/2012 4:06:01 PM
Nitrate+Nitrite as N	ND	2.0		mg/L	10	8/6/2012 6:05:34 PM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Calcium	ND	10		mg/L	10	8/9/2012 7:50:52 AM
Magnesium	ND	10		mg/L	10	8/9/2012 7:50:52 AM
Potassium	3200	50		mg/L	50	8/9/2012 8:00:44 AM
Sodium	470	10		mg/L	10	8/9/2012 7:50:52 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **DBD**
Conductivity	11000	0.020		µmhos/cm	2	8/6/2012 1:01:34 PM
SM4500-H+B: PH						Analyst: **DBD**
pH	10.8	1.68	*H	pH units	1	8/6/2012 12:45:40 PM

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208177**

21-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **LCS-3242**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **3242**	RunNo: **4752**
Prep Date: **8/8/2012**	Analysis Date: **8/9/2012**	SeqNo: **133811** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	52	1.0	50.00	0	105	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Potassium	52	1.0	50.00	0	104	85	115			
Sodium	52	1.0	50.00	0	105	85	115			

Sample ID **MB-3242**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **3242**	RunNo: **4752**
Prep Date: **8/8/2012**	Analysis Date: **8/9/2012**	SeqNo: **133868** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208177**

21-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R4656**	RunNo: **4656**
Prep Date:	Analysis Date: **8/3/2012**	SeqNo: **130838** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R4656**	RunNo: **4656**
Prep Date:	Analysis Date: **8/3/2012**	SeqNo: **130839** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.4	90	110			
Bromide	2.3	0.10	2.500	0	93.2	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	102	90	110			
Sulfate	9.5	0.50	10.00	0	94.8	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Sample ID **1208180-001CMS**	SampType: **MS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R4656**	RunNo: **4656**
Prep Date:	Analysis Date: **8/3/2012**	SeqNo: **130841** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.8	0.50	5.000	1.149	92.6	87.8	111			
Bromide	2.3	0.10	2.500	0	93.8	83.3	107			
Phosphorus, Orthophosphate (As P	5.2	0.50	5.000	0	104	74.5	115			
Sulfate	23	0.50	10.00	13.34	98.1	84.6	122			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	95.9	88.6	110			

Sample ID **1208180-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R4656**	RunNo: **4656**
Prep Date:	Analysis Date: **8/3/2012**	SeqNo: **130842** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.7	0.50	5.000	1.149	91.2	87.8	111	1.16	20	
Bromide	2.3	0.10	2.500	0	91.0	83.3	107	2.98	20	
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.5	74.5	115	4.07	20	
Sulfate	23	0.50	10.00	13.34	96.4	84.6	122	0.737	20	
Nitrate+Nitrite as N	3.3	0.20	3.500	0	94.1	88.6	110	1.82	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208177**

21-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID	**1208181-001AMS**	SampType: **MS**		TestCode: **EPA Method 300.0: Anions**						
Client ID:	**BatchQC**	Batch ID: **R4656**		RunNo: **4656**						
Prep Date:		Analysis Date: **8/3/2012**		SeqNo: **130865**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	16	0.50	5.000	11.23	92.6	87.8	111			
Bromide	2.3	0.10	2.500	0	90.3	83.3	107			

Sample ID	**1208181-001AMSD**	SampType: **MSD**		TestCode: **EPA Method 300.0: Anions**						
Client ID:	**BatchQC**	Batch ID: **R4656**		RunNo: **4656**						
Prep Date:		Analysis Date: **8/3/2012**		SeqNo: **130866**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	16	0.50	5.000	11.23	92.7	87.8	111	0.0209	20	
Bromide	2.3	0.10	2.500	0	90.1	83.3	107	0.238	20	

Sample ID	**MB**	SampType: **MBLK**		TestCode: **EPA Method 300.0: Anions**						
Client ID:	**PBW**	Batch ID: **R4696**		RunNo: **4696**						
Prep Date:		Analysis Date: **8/6/2012**		SeqNo: **132016**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	**LCS**	SampType: **LCS**		TestCode: **EPA Method 300.0: Anions**						
Client ID:	**LCSW**	Batch ID: **R4696**		RunNo: **4696**						
Prep Date:		Analysis Date: **8/6/2012**		SeqNo: **132017**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.5	90	110			
Sulfate	9.4	0.50	10.00	0	93.7	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.2	90	110			

Sample ID	**1208229-001AMS**	SampType: **MS**		TestCode: **EPA Method 300.0: Anions**						
Client ID:	**BatchQC**	Batch ID: **R4696**		RunNo: **4696**						
Prep Date:		Analysis Date: **8/6/2012**		SeqNo: **132019**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.76	0.10	0.5000	0.3138	89.5	76.6	110			
Sulfate	21	0.50	10.00	11.35	97.5	84.6	122			
Nitrate+Nitrite as N	3.9	0.20	3.500	0.5838	93.8	88.6	110			

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208177**

21-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **1208229-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R4696**	RunNo: **4696**
Prep Date:	Analysis Date: **8/6/2012**	SeqNo: **132020** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.76	0.10	0.5000	0.3138	89.7	76.6	110	0.0799	20	
Sulfate	21	0.50	10.00	11.35	97.4	84.6	122	0.0688	20	
Nitrate+Nitrite as N	3.9	0.20	3.500	0.5838	93.6	88.6	110	0.186	20	

Sample ID **1208236-002AMS**	SampType: **MS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R4696**	RunNo: **4696**
Prep Date:	Analysis Date: **8/6/2012**	SeqNo: **132035** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.78	0.10	0.5000	0.3238	90.4	76.6	110			
Sulfate	30	0.50	10.00	19.79	103	84.6	122			
Nitrate+Nitrite as N	8.4	0.20	3.500	4.779	103	88.6	110			

Sample ID **1208236-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R4696**	RunNo: **4696**
Prep Date:	Analysis Date: **8/6/2012**	SeqNo: **132036** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.78	0.10	0.5000	0.3238	91.2	76.6	110	0.523	20	
Sulfate	30	0.50	10.00	19.79	103	84.6	122	0.0666	20	
Nitrate+Nitrite as N	8.4	0.20	3.500	4.779	104	88.6	110	0.0283	20	

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R4696**	RunNo: **4696**
Prep Date:	Analysis Date: **8/7/2012**	SeqNo: **132069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R4696**	RunNo: **4696**
Prep Date:	Analysis Date: **8/7/2012**	SeqNo: **132070** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	97.0	90	110			
Sulfate	9.3	0.50	10.00	0	92.9	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.4	90	110			

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208177**

21-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID	**1208233-048AMS**	SampType:	**MS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**BatchQC**	Batch ID:	**R4696**		RunNo:	**4696**				
Prep Date:		Analysis Date:	**8/7/2012**		SeqNo:	**132072**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.0	0.10	0.5000	0.5653	93.9	76.6	110			

Sample ID	**1208233-048AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**BatchQC**	Batch ID:	**R4696**		RunNo:	**4696**				
Prep Date:		Analysis Date:	**8/7/2012**		SeqNo:	**132073**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.0	0.10	0.5000	0.5653	95.5	76.6	110	0.798	20	

Sample ID	**1208233-054AMS**	SampType:	**MS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**BatchQC**	Batch ID:	**R4696**		RunNo:	**4696**				
Prep Date:		Analysis Date:	**8/7/2012**		SeqNo:	**132082**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.99	0.10	0.5000	0.5366	90.6	76.6	110			

Sample ID	**1208233-054AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**BatchQC**	Batch ID:	**R4696**		RunNo:	**4696**				
Prep Date:		Analysis Date:	**8/7/2012**		SeqNo:	**132083**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.99	0.10	0.5000	0.5366	90.9	76.6	110	0.169	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208177**

21-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **MB-3178**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **PBW**	Batch ID: **3178**	RunNo: **4631**
Prep Date: **8/3/2012**	Analysis Date: **8/3/2012**	SeqNo: **130080** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Surr: DNOP	1.3		1.000		127	79.5	166			

Sample ID **LCS-3178**	SampType: **LCS**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **LCSW**	Batch ID: **3178**	RunNo: **4631**
Prep Date: **8/3/2012**	Analysis Date: **8/3/2012**	SeqNo: **130081** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.4	1.0	5.000	0	87.9	74	157			
Surr: DNOP	0.48		0.5000		96.9	79.5	166			

Sample ID **LCSD-3178**	SampType: **LCSD**	TestCode: **EPA Method 8015B: Diesel Range**
Client ID: **LCSS02**	Batch ID: **3178**	RunNo: **4631**
Prep Date: **8/3/2012**	Analysis Date: **8/3/2012**	SeqNo: **130082** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	90.4	74	157	2.85	23	
Surr: DNOP	0.48		0.5000		96.3	79.5	166	0	0	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208177

21-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R4658**	RunNo: **4658**
Prep Date:	Analysis Date: **8/3/2012**	SeqNo: **130988** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	21		20.00		104	55	140			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R4658**	RunNo: **4658**
Prep Date:	Analysis Date: **8/3/2012**	SeqNo: **130989** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	23	2.5	20.00	0	114	66.9	136			
Benzene	20	1.0	20.00	0	101	80	120			
Toluene	20	1.0	20.00	0	101	80	120			
Ethylbenzene	21	1.0	20.00	0	103	80	120			
Xylenes, Total	63	2.0	60.00	0	104	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		104	55	140			

Sample ID **B30**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R4658**	RunNo: **4658**
Prep Date:	Analysis Date: **8/3/2012**	SeqNo: **130997** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	20		20.00		100	55	140			

Sample ID **100NG BTEX LCS-II**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R4658**	RunNo: **4658**
Prep Date:	Analysis Date: **8/3/2012**	SeqNo: **130998** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	23	2.5	20.00	0	116	66.9	136			
Benzene	20	1.0	20.00	0	100	80	120			
Toluene	20	1.0	20.00	0	101	80	120			
Ethylbenzene	20	1.0	20.00	0	101	80	120			
Xylenes, Total	62	2.0	60.00	0	104	80	120			
Surr: 4-Bromofluorobenzene	18		20.00		87.7	55	140			

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208177**

21-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID **1208177-001AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **MPPE** Batch ID: **R4658** RunNo: **4658**

Prep Date: Analysis Date: **8/3/2012** SeqNo: **131000** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	130	12	100.0	0	126	45.1	137			
Benzene	250	5.0	100.0	136.8	109	74.1	124			
Toluene	130	5.0	100.0	23.65	103	75.2	124			
Ethylbenzene	100	5.0	100.0	1.420	99.6	69	125			
Xylenes, Total	310	10	300.0	4.710	103	73.1	126			
Surr: 4-Bromofluorobenzene	97		100.0		97.4	55	140			

Sample ID **1208177-001AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **MPPE** Batch ID: **R4658** RunNo: **4658**

Prep Date: Analysis Date: **8/3/2012** SeqNo: **131001** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	130	12	100.0	0	127	45.1	137	1.02	13.6	
Benzene	240	5.0	100.0	136.8	105	74.1	124	1.66	11.2	
Toluene	120	5.0	100.0	23.65	100	75.2	124	2.53	11.9	
Ethylbenzene	100	5.0	100.0	1.420	98.2	69	125	1.37	13.5	
Xylenes, Total	310	10	300.0	4.710	101	73.1	126	2.11	13	
Surr: 4-Bromofluorobenzene	92		100.0		91.8	55	140	0	0	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208177**

21-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID	**1208177-001CDUP**	SampType: **DUP**		TestCode: **EPA 120.1: Specific Conductance**					
Client ID:	**MPPE**	Batch ID: **R4687**		RunNo: **4687**					
Prep Date:		Analysis Date: **8/6/2012**		SeqNo: **131681**		Units: **µmhos/cm**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	5300	0.010						0.0187	20	

Sample ID	**1208046-001ADUP**	SampType: **DUP**		TestCode: **EPA 120.1: Specific Conductance**					
Client ID:	**BatchQC**	Batch ID: **R4687**		RunNo: **4687**					
Prep Date:		Analysis Date: **8/6/2012**		SeqNo: **131688**		Units: **µmhos/cm**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	1100	0.010						1.83	20	

Qualifiers:

*/X	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1208177**

21-Aug-12

Client: Western Refining Southwest, Gallup

Project: MPPE

Sample ID	**1208177-001CDUP**	SampType: **DUP**		TestCode: **SM4500-H+B: pH**					
Client ID:	**MPPE**	Batch ID: **R4687**		RunNo: **4687**					
Prep Date:		Analysis Date: **8/6/2012**		SeqNo: **131648**		Units: **pH units**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.42	1.68								H

Sample ID	**1208046-001ADUP**	SampType: **DUP**		TestCode: **SM4500-H+B: pH**					
Client ID:	**BatchQC**	Batch ID: **R4687**		RunNo: **4687**					
Prep Date:		Analysis Date: **8/6/2012**		SeqNo: **131655**		Units: **pH units**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.49	1.68								H

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1208177

Received by/date: KM 08/03/12

Logged By: **Ashley Gallegos** 8/3/2012 7:30:00 AM

Completed By: **Ashley Gallegos** 8/3/2012 9:36:50 AM

Reviewed By: MG 08/03/12

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information)	Yes ☑	No ☐	NA ☐
5. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
7. Sample(s) in proper container(s)?	Yes ☑	No ☐	
8. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10. Was preservative added to bottles?	Yes ☑	No ☑	NA ☐
11. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
12. Were any sample containers received broken?	Yes ☐	No ☑	
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15. Is it clear what analyses were requested?	Yes ☑	No ☐	
16. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

— all 3 samples have pH 7 2.0 for 8021 VOA NB 8/5/12

0010, 002D - ADDED 1mL HNO3 FOR ACCEPTABLE pH — 08/03/12
003D - ADDED 3mL HNO3 " " "

# of preserved bottles checked for pH: 06 (<2 or >12 unless noted)

Adjusted? YES

Checked by:

Special Handling (if applicable)

17. 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:

18. Additional remarks: -002C(1 OF 2), -002D - CHANGED DATE ON BOTTLE FROM 8/1/12 TO 7/31/12. BOTTLES WERE IN THE SAME BAG AS VOAS WITH THE DATE 7/31/12. — 08/03/12 (PER ANDY)

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn Around Time:

☐ Standard ☒ Rush

Project Name: MPPE

Project #: Sample Day 07-30-12

Project Manager: Beck Larsen

Sampler: MPPE-OPPs

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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. 1208144	BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
7/30/2012	08:00AM	H2O	MPPE	40ml-3	HCL	-001	X															
7/30/2012	08:00AM	H2O	MPPE	40ml-1	None	-001			X													
7/30/2012	08:00AM	H2O	MPPE	125ml-1	H2SO4	-001								X								
7/30/2012	08:00AM	H2O	MPPE	250ml-1	None	-001												X	X			
7/30/2012	08:00AM	H2O	MPPE	500ml-1	HNO3	-001														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
08-02-12	12:00	Alvin Dorsey			
Date:	Time:	Relinquished by:	Received by:	08/03/12	0730

Remarks:

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.

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☑ Rush _____

Project Name: MPPE

Project #:

Sample Day 07-31-12

Project Manager:

Beck Larsen

Sampler: MPPE-OPPs

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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. 1208177	BTEX + MTBE + ~~TMB's~~ (8021) B	BTEX + MTBE + TPH (Gas only)	TPH: 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
7/31/2012	08:00AM	H2O	MPPE	40ml-3	HCL	-002	X															
7/31/2012	08:00AM	H2O	MPPE	40ml-1	None	-002			X													
7/31/2012	08:00AM	H2O	MPPE	125ml-1	H2SO4	-002								X								
7/31/2012	08:00AM	H2O	MPPE	250ml-1	None	-002												X	X			
7/31/2012	08:00AM	H2O	MPPE	500ml-1	HNO3	-002														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
08-02-12	11:00	Alvin Dorsey			
Date:	Time:	Relinquished by:	Received by:	Date	Time
				08/02/12	0730

Remarks:

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.

Chain-of-Custody Record

Client: Western - Refining

Gallup Refinery

Mailing Address: RT 3 Box 7

Gallup NM 87301

Phone #: 505 722 3833

email or Fax#: 505 863 0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

☐ Standard ☒ Rush

Project Name: MPPE

Project #: Sample Day 08-01-12

Project Manager: Beck Larsen

Sampler: MPPE-OPPs

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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. 1208177	BTEX + MTBE + TMBs (8021)B	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	PH	Specific Conductance	Cations	Anions	Air Bubbles (Y or N)
8/1/2012	08:00AM	H2O	MPPE	40ml-3	HCL	-003	X															
8/1/2012	08:00AM	H2O	MPPE	40ml-1	None	-003			X													
8/1/2012	08:00AM	H2O	MPPE	125ml-1	H2SO4	-003								X								
8/1/2012	08:00AM	H2O	MPPE	250ml-1	None	-003												X	X			
8/1/2012	08:00AM	H2O	MPPE	500ml-1	HNO3	-003														X		

Date	Time	Relinquished by	Received by	Date	Time
08-02-12	12:00	Alvin Dorsey			
				08/03/12	0730

Remarks:

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.

Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Tuesday, February 07, 2012 9:56 AM
To: Kieling, John, NMENV; 'Hansen.Mark@epamail.epa.gov'; Dougherty.Joel@epamail.epa.gov
Cc: Chavez, Carl J, EMNRD; 'Tidmore.Guy@epamail.epa.gov'; VanHorn, Kristen, NMENV; Turri, Mark; Starr, Don; Keys, Frank; Allen, Ann
Subject: Completion of Milestone #7 Certification
Attachments: 20120207075230050.pdf; WWTP 021.jpg

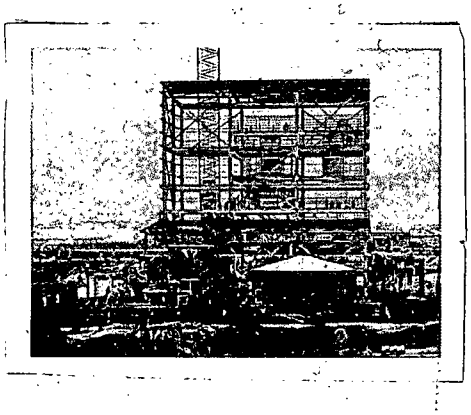
Dear Mr. Kieling,

Please find attached a copy of the Completion of Milestone #7 letter in PDF with a pipe and pump photo in jpg. Milestone #7 was completed on February 6, 2012. The original signed copy is being mailed to you.

Sincerely,

Ed Riege
Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com



Western Refining

GALLUP REFINERY

WNR LISTED NYSE

February 7, 2012

VIA EMAIL AND CERTIFIED MAIL No. 7010 0290 0002 7735 4018

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

Mark Hansen
Associate Director
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Avenue
Dallas, TX 75202-2733

Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

RE: COMPLETION OF MILESTONE CERTIFICATION
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
EPA ID #NMD000333211

Dear Mr. Kieling:

This letter is to notify NMED and EPA that Western Refining Southwest, Inc., Gallup Refinery ("Gallup") has met Milestone #7, in Paragraph 100.I of the Complaint and Consent Agreement and Final Order (CAFO), Docket No. RCRA-06-2009-0936: "Complete installation of interconnecting piping and transfer pumps for DGF and MPPE units." Western has met this milestone not later than February 6, 2012. Enclosed is a photo of the piping and transfer pumps.

I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

Please feel free to contact Ed Riege at 505-722-0217 with any questions.

Sincerely,

Mark B. Turri
Refinery Manager

cc: Kristen Van Horn NMED HWB
Carl Chavez OCD
Ann Allen Western Refining
Ed Riege Western Refining
Don Starr Western Refining
Frank Keys Western Refining

Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Wednesday, December 21, 2011 1:58 PM
To: Kieling, John, NMENV
Cc: Cobrain, Dave, NMENV; VanHorn, Kristen, NMENV; Chavez, Carl J, EMNRD
Subject: Response To Approval With Modification December 2, 2011
Attachments: 20111221133859464.pdf; WWTP Block Flow Diagram 12-13-11.pdf

Hi John,

Attached please find Gallup's response to NMED's Approval With Modification Request For Approval of Process Design Changes. I hope this clarifies NMEDs concerns. The original hard copy with signature is in the mail.

Thanks,
Ed

Ed Riege
Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

Western Refining
GALLUP

WNR
LISTED
NYSE

Certified Return Receipt: #7008 2810 0000 4726 1796

December 21, 2011

Mr. John Kieling, Acting Chief
NMED - Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg 1
Santa Fe, NM 87505-6303

RE: Approval With Modifications
Request For Approval Of Process Design Changes
Western Refining Company, Southwest, Inc., Gallup Refinery
EPA ID #NMD000333211
HWB-WRG-11-003

Dear Mr. Kieling:

Western Refining Southwest, Gallup Refinery is pleased to submit the following response to the above referenced letter dated December 2, 2011. The HWB comments are underlined followed by Gallup's responses.

Comment 1
The description of the function of the tanks in the second point of the letter was difficult to interpret without a drawing. In the future, ensure that letters that describe changes to the process system are accompanied by the appropriate figures.

Response 1
Gallup will follow this directive for future letters.

Comment 2
Sludge that settles in Tanks 27 and 28 or 35 must be treated as hazardous waste if it is removed rather than entrained in the wastewater stream and sent through the treatment system. Solids recovery must be part of the tank system maintenance.

Response 2
Solids recovery is part of the tank system maintenance. The recovered solids/sludge will be treated as a hazardous waste or excluded under 40 CFR 261.4 (12) if managed as a oil bearing hazardous secondary material inserted into a petroleum refining process.

Comment 3

Provide a letter to OCD and NMED describing the factors that influence whether or not to divert the storm sewer, process sewer, RO reject and/or softener regeneration water to Tanks 27 and 28 instead of flowing directly to Tank 35. Recently an oily wastewater overflow at Tank 35 occurred due to a precipitation event. It appears that there may be a lack of wastewater handling capacity when reliance is placed on Tank 35 and Tanks 27 and 28 will likely help prevent overflows in the future.

Response 3a

This incident was due to Operator error, it was not caused by lack of capacity. At the time of the incident, tanks 27/28 had room to handle the normal rundown flow in addition to the storm surge.

Comment 3b

However, the manual diversion of wastewater to tanks is an issue when a rapid surge occurs, such as in the Tank 35 overflow incident. The Permittee must ensure that the tanks are frequently or continuously monitored and maintain a water level in Tank 35 that is low enough to avoid overflows.

Response 3b

The waste water tank operating procedure has been revised to provide improved guidelines for tank level monitoring and switching flows to control tank levels.

Comment 4

The Permittee must provide a letter describing the diversion system in more detail and discuss whether or not the existing tank diversion network has the capacity to handle the designed maximum volume of the waste water treatment system (WWTS). Discuss the lag time between sampling and shut off/diversion if samples indicate that the water is off-spec.

Response 4

Western's definitions are as follows:

1) WWTU = WWTP = Waste Water Treatment *Plant*. The WWTP includes the design & installation of the DGF Feed Tank, DGF unit, DGF Float Tank, MPPE unit & STP-1. The WWTP is all equipment and systems being installed between the API Separator and existing surface impoundment network.

2) WWTS = Waste Water Treatment *System* and is the all-inclusive work related to:
    a. Combining the refinery oily sewer, water conditioning sewer and stormwater sewer into a single 24" sewer,
    b. Construction of T35/27/28 for the purposes of equalization and diversion,
    c. Installation of the wastewater transfer pumps (P44/45/46),
    d. Design & installation of the WWTP.

Two diversions may occur within the WWTP. They are:

1) Diversion after the DGF unit (resulting from high turbidity and/or conductivity (TSS, O&G, etc.)) is intended to protect the MPPE unit from contamination. If post-DGF water is diverted, the MPPE unit will go into automatic shutdown and flow of WWTP effluent to STP-1 & EP-2 will stop. The sanitary sewer will continue to flow into STP-1 for treatment. The DGF Feed Tank system and DGF unit will continue to operate for a pre-programmed period of time to allow the problem to be

remedied. The wastewater transfer pumps at T35/27/28 will stop to prevent the WWTP from being flooded. If repairs take longer than this pre-programmed period of time, the entire WWTP will go into automatic shutdown and wastewater volumes will build in T35/27/28 until the problem is remedied. This diversion is completely automated and no operator intervention is required. Turbidity and conductivity instrumentation monitor the DGF effluent water quality real-time and control a set of automated block valves.

2) Diversion after the MPPE unit (resulting from the inability of the WWTP to reduce benzene concentration to less that the required 0.5ppm) is intended to prevent high benzene discharge into Evaporation Pond #2 (EP-2). If post-MPPE water is diverted, the DGF Feed tanks system, the DGF unit and the MPPE unit will continue to operate. Flow of WWTP effluent to STP-1 & EP-2 will stop. The sanitary sewer will continue to flow into STP-1 for treatment. The DGF Feed tanks system, DGF unit and MPPE unit will continue to operate for a pre-programmed period of time to allow the problem to be remedied. The wastewater transfer pumps at T35/27/28 will stop to prevent the WWTP from being flooded. If repairs take longer than this pre-programmed period of time, the entire WWTP will go into automatic shutdown and wastewater volumes will build in T35/27/28 until the problem is remedied.

The lag time between sampling and Post-MPPE diversion if samples indicate that the water is off-spec is approximately four hours, as described in Section 4.4, paragraph two, of the approved Process Design Report for Wastewater Treatment Plant Work Plan A (Alternate Design, Revision A) April 2010. This section reads "The MPPE process monitoring will consist primarily of two daily measurements (at approximately 7:00 am and 7:00 pm) of benzene in samples of wastewater. These samples will be analyzed at Gallup Refinery's onsite testing laboratory using gas chromatograph/Mass Spectrometer (GC/MS). The results will be available almost immediately – that is, within a few hours of sample collection. To account for the fact that our onsite method is not identical to the EPA approved method, and to divert proactively, we will use the 0.4 Mg/L of benzene as a trigger for diversion."

Comment 5

Provide a figure or design drawing depicting the sampling port design(s) per location, if different, for the WWTS monitoring system.

Response 5

Please find Attachment 1, containing the revised Block Flow Diagram showing all of the sample points and flowmeters within the WWTS.

Comment 6

The Permittee states that the "DGF Feed Tank is sized to accommodate the required material in the WWTS itself that might need to be drained to facilitate maintenance and access to equipment." Provide a description of the size of the DGF Feed Tank and the steps necessary to divert the waste stream when this tank is taken out of service (i.e., diversion of influent containing VOCs to Tanks 27, 28 and 35).

Response 6

The permittee stated "DGF Feed Tank is sized to accommodate the required material in the WWTU itself that might need to be drained to facilitate maintenance and access to equipment." As stated in Response 4 above, the WWTU is the same as the WWTP.

The DGF Feed Tank has a diameter of 16ft and is 6ft tall, with a nominal volume of 9030 gallons. Two liquid volumes were considered when sizing and locating this tank. The nominal liquid volume equals 4000 gallons, resulting in the tank being approximately one-half full. This nominal volume provides DGF Feed pump suction. The emergency liquid volume also equals 4000 gallons, resulting in the tank approaching full. This emergency volume is reserved for emergency back flow during system anomalies, such as power failures.
During normal WWTP operations, the DGF Feed tank will maintain this nominal liquid volume and be one-half full. If a power failure is experienced, the operator can manually drain the DGF unit back to the DGF Feed tank. This will utilize the emergency liquid volume and increase the tank to near full. The emergency liquid volume is protected because the wastewater transfer pumps at T35/27/28 will stop. The emergency liquid level was selected to be six inches below the normal API level, so that this emergency volume does not overflow back into the API.

If maintenance is required on the DGF Feed tank (or any other WWTP equipment), the WWTP will be off-line and wastewater volumes will build in T35/27/28 until maintenance is complete. Once maintenance is complete, the WWTP will sequentially startup (unit-by-unit) so that benzene discharge limits are not exceeded.

Comment 7
The drawing provided to NMED (Wastewater Treatment Plant (WWTP) Work Plan Flow Diagram) no longer shows the location of flow meters; NMED assumes that flow meters are still part of the system and the meters should be depicted in the diagram and identify the type of instrument. If this is not the case, the Permittee must explain why flow meters are no longer part of the system.

Response 7
Please find Attachment 1, containing the revised Block Flow Diagram showing all of the sample points and flowmeters within the WWTS. For clarity, the following table gives more information:

Sample Point #	Sample Point Description
SP-1	Oil & Grease, Total Suspended Solids & pH Verification Prior to DGF unit
SP-2	Nitrogen Super-Saturation Verification Prior to DGF Unit
SP-3	Oil & Grease and Total Suspended Solid Separation Test
SP-4	DGF Float Tank Water Decant
SP-5	Oil & Grease, Total Suspended Solids & pH Verification After DGF unit
SP-6	Primary Oil & Grease, Total Suspended Solids & pH Verification After MPPE Filters
SP-7	MPPE Return Water
SP-8	Secondary Oil & Grease, Total Suspended Solids & pH Verification After MPPE Filters
SP-9	Secondary Benzene Compliance
SP-10	Recovered Benzene Quality
SP-11	Primary Benzene Compliance

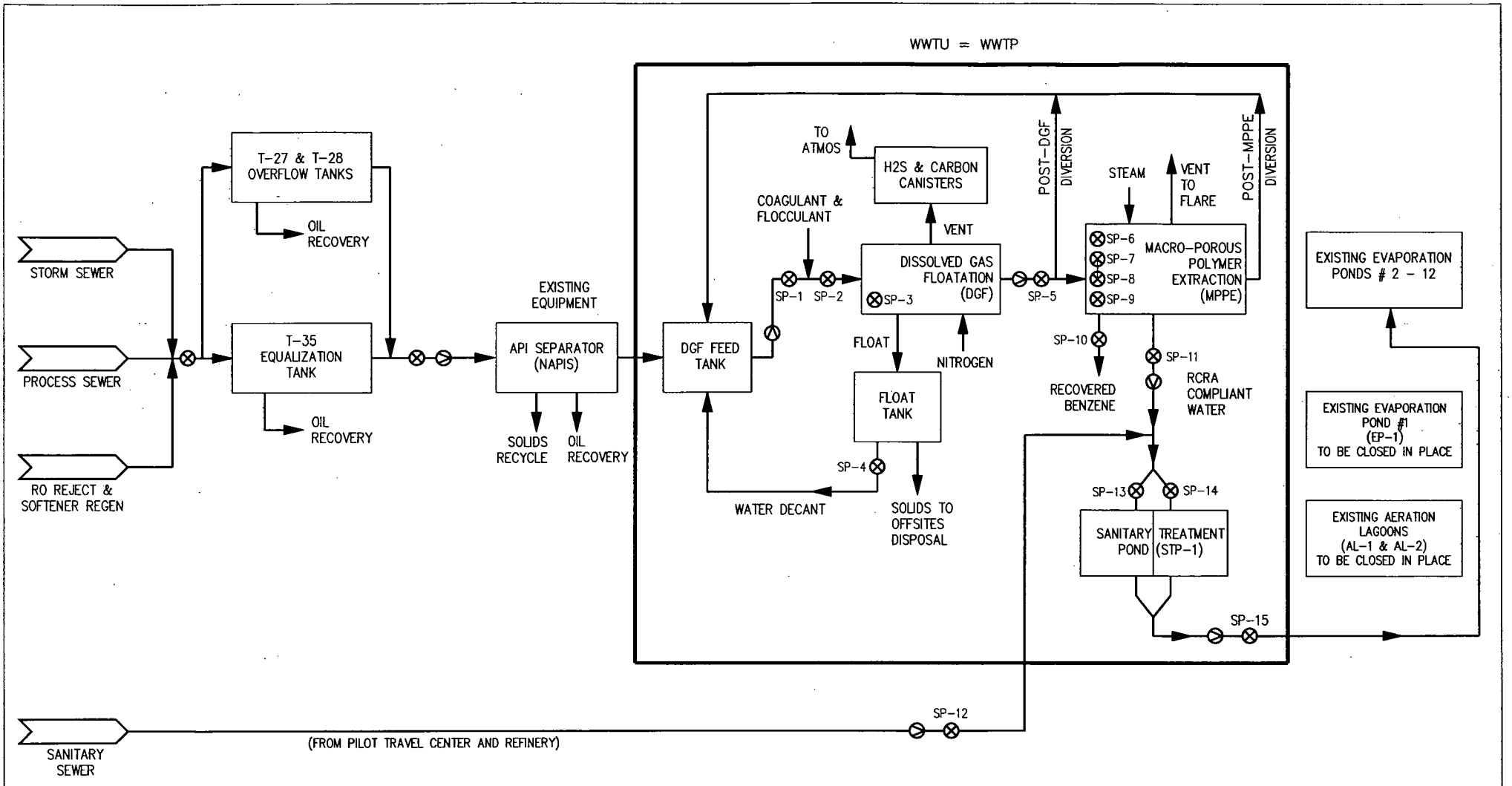
SP-12	Sanitary Sewer
SP-13	Combine Benzene & Sanitary Sewers for South Bay of STP-1
SP-14	Combine Benzene & Sanitary Sewers for North Bay of STP-1
SP-15	Benzene Compliance & Treated Sanitary Quality after WWTP

If you have any questions regarding Western's responses, please do not hesitate to contact me at (505) 722-0217.

Sincerely,

Ed Riege
Environmental Manager

cc: K. Van Horn, NMED HWB
C. Chavez, OCD
M. Turri, Gallup
F. Keys, Gallup



LEGEND

⊗ SAMPLE POINT

⊖ FLOWMETER

REV.	REVISION DESCRIPTION	RFC No.	DATE
3			
2			
1	For June 2011 Process Design Review	n/a	07/01/11
0	For April 2010 Process Design Review	n/a	09/23/09

Western Refining
Gallup Refinery

Wastewater Treatment Plant (WWTP)
Work Plan Flow Diagram

DRN. BY: FK	DATE: 09/15/11	RFE No: n/a
CHK'D. BY: DR	DATE: 09/15/11	CAD REF:
APP'D. BY: DR	DATE: 09/15/11	n/a

DRAWING NO. FIGURE 1 REV 1

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us

DAVE MARTIN
Secretary

BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 2, 2011

Mr. Ed Riege
Environmental Manager
Western Refining, Southwest Inc., Gallup Refinery
Route 3, Box 7
Gallup, New Mexico 87301

RE: APPROVAL WITH MODIFICATIONS
REQUEST FOR APPROVAL OF PROCESS DESIGN CHANGES
WESTERN REFINING COMPANY SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-MISC

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has reviewed the *Request for Approval of Process Design Changes Process Design Report (Approved May 24, 2010)*, dated September 14, 2011, submitted on behalf of Western Refining Company Southwest Inc., Gallup Refinery (Permittee). NMED hereby issues this Approval with the following modifications. Some of the comments were addressed during a phone call between NMED and the Permittee on October 7, 2011; however, NMED requires that the Permittee provide clarification in a written response to this letter.

Comment 1
The description of the function of the tanks in the second point of the letter was difficult to interpret without a drawing. In the future, ensure that letters that describe changes to the process system are accompanied by the appropriate figures.

Comment 2
Sludge that settles in Tanks 27 and 28 or 35 must be treated as hazardous waste if it is removed rather than entrained in the wastewater stream and sent through the treatment system. Solids recovery must be part of the tank system maintenance.

Comment 3
Provide a letter to OCD and NMED describing the factors that influence whether or not to divert the storm sewer, process sewer, RO reject and/or softener regeneration water to Tanks 27 and 28 instead of flowing directly to Tank 35. Recently an oily wastewater overflow at Tank 35 occurred due to a precipitation event. It appears that there may be a lack of wastewater handling capacity when reliance is placed on Tank 35 and Tanks 27 and 28 will likely help prevent overflows in the future. However, the manual diversion of wastewater to tanks is an issue when a rapid surge occurs, such as in the Tank 35 overflow incident. The Permittee must ensure that the tanks are frequently or continuously monitored and maintain a water level in Tank 35 that is low enough to avoid overflows.

Comment 4
The Permittee must provide a letter describing the diversion system in more detail and discuss whether or not the existing tank diversion network has the capacity to handle the designed maximum volume of the waste water treatment system (WWTS). Discuss the lag time between sampling and shut off/diversion if samples indicate that the water is off-spec.

Comment 5
Provide a figure or design drawing depicting the sampling port design(s) per location, if different, for the WWTS monitoring system.

Comment 6
The Permittee states that the "DGF Feed Tank is sized to accommodate the required material in the WWTS itself that might need to be drained to facilitate maintenance and access to equipment." Provide a description of the size of the DGF Feed Tank and the steps necessary to divert the waste stream when this tank is taken out of service, (i.e., diversion of influent containing VOCs to Tanks 27, 28 and 35).

Comment 7
The drawing provided to NMED (Wastewater Treatment Plant (WWTP) Work Plan Flow Diagram) no longer shows the location of flow meters; NMED assumes that flow meters are still part of the system and the meters should be depicted in the diagram and identify the type of instrument. If this is not the case, the Permittee must explain why flow meters are no longer part of the system.

Provide a letter addressing the issues in the above comments to NMED no later than **December 21, 2011**.

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

Sincerely,

John E. Kieling
Acting Chief
Hazardous Waste Bureau

cc: D. Cobrain NMED HWB
K. Van Horn NMED HWB
C. Chavez OCD
A. Haines, WRG

File: Reading File and WRG 2011 File
WRG-MISC

Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Wednesday, September 21, 2011 8:48 AM
To: Kieling, John, NMENV
Cc: VanHorn, Kristen, NMENV; Chavez, Carl J, EMNRD; Larsen, Thurman
Subject: FW: Soil From STP-1 Construction Area
Attachments: 20110921083311119.pdf; 20110921083347397.pdf

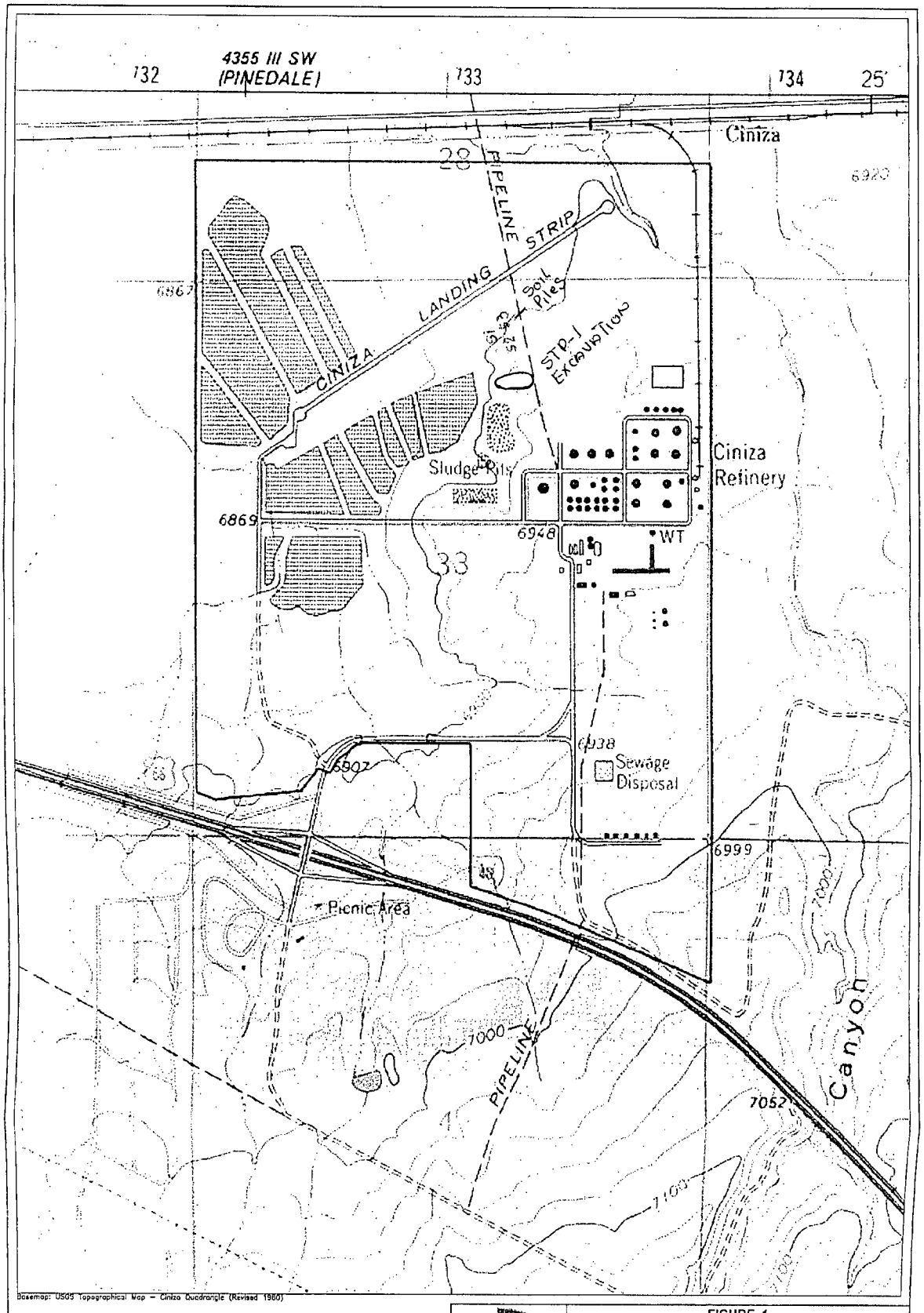
Dear Mr.Kieling,

Please find attached a request for approval of the use of the excavated soil from the STP-1 construction site. The signed hard copy is in the US mail.

Thanks
Ed

Ed Riege
Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com



Basemap: USGS Topographical Map – Ciniza Quadrangle (Revised 1980)

EXPLANATION

PROPERTY BOUNDARY

SOIL INVESTIGATION AREA

N

0 ~1,000'

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 1

TOPOGRAPHIC MAP OF GALLUP REFINERY SITE

WESTERN REFINING
GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP	Checked By: RM	Scale: 1" = ~1,000'	Date: 12/28/09	File: 072TOPO-200912

Western Refining
GALLUP

WNR LISTED NYSE

September 20, 2011

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

RE: Western Refining Company Southwest Inc., Gallup Refinery
EPA ID # NMD000333211

Dear Mr. Kieling:

Recently the Gallup refinery removed 21,000 cubic yards of overburden from the STP-1 construction site. The soil came from a virgin hillside north of EP-1. To our knowledge there has never been any refinery related activities in this area. Several storage locations were made as shown on Figure 1.
The piles were sampled and all seven composite sample result constituents are attached as Attachment 1. All samples came back non detect (ND) for EPA Method 8260B volatiles except for S1-B-Pile which was .077 mg/kg for 4-Isopropyltoluene. The Hall Analysis Lab Report dated September 15, 2011 is attached.

Upon NMED approval, Western Refining would like to use the excavated soil for fill material and for evaporation pond berm repair, provided it meets OCD approval for any major repairs. If you have any questions, or if we can be of further service to you, please do not hesitate to call me at (505) 722-0217.

Sincerely,
Western Refining Company

Ed Riege
Environmental Manager

Attachments

cc: K. Van Horn NMED HWB
C. Chavez, OCD

ATTACHMENT 1

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*
Analytical Report

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	S1-A-Pile
Lab Order:	1108B17	**Collection Date:**	8/25/2011 2:00:00 PM
Project:	Soil Samples	**Date Received:**	8/29/2011
Lab ID:	1108B17-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/1/2011 4:11:56 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/1/2011 4:11:56 AM
Surr: DNOP	106	73.4-123		%REC	1	9/1/2011 4:11:56 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/31/2011 7:32:40 PM
Surr: BFB	93.7	76.2-136		%REC	1	8/31/2011 7:32:40 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	5.9	0.30		mg/Kg	1	9/1/2011 1:44:07 PM
Chloride	79	30		mg/Kg	20	9/1/2011 2:01:31 PM
Nitrogen, Nitrate (As N)	27	6.0		mg/Kg	20	9/1/2011 2:01:31 PM
EPA METHOD 7471: MERCURY						Analyst: BRM
Mercury	ND	0.033		mg/Kg	1	9/8/2011 11:57:42 AM
EPA METHOD 6010B: SOIL METALS						Analyst: ELS
Arsenic	ND	13		mg/Kg	5	9/15/2011 7:16:04 AM
Barium	820	2.0		mg/Kg	20	9/15/2011 8:35:25 AM
Cadmium	ND	0.50		mg/Kg	5	9/15/2011 7:16:04 AM
Chromium	9.7	1.5		mg/Kg	5	9/15/2011 7:16:04 AM
Lead	7.4	1.3		mg/Kg	5	9/15/2011 7:16:04 AM
Selenium	ND	13		mg/Kg	5	9/15/2011 7:16:04 AM
Silver	ND	1.3		mg/Kg	5	9/15/2011 7:16:04 AM
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Toluene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Methyl tert-butyl ether (MTBE)	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,2,4-Trimethylbenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,3,5-Trimethylbenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,2-Dichloroethane (EDC)	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,2-Dibromoethane (EDB)	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Naphthalene	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
1-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 12:12:57 PM
2-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 12:12:57 PM
Acetone	ND	0.71		mg/Kg	1	8/31/2011 12:12:57 PM
Bromobenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Bromodichloromethane	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*

Analytical Report

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	S1-A-Pile
Lab Order:	1108B17	**Collection Date:**	8/25/2011 2:00:00 PM
Project:	Soil Samples	**Date Received:**	8/29/2011
Lab ID:	1108B17-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Bromoform	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Bromomethane	ND	0.14		mg/Kg	1	8/31/2011 12:12:57 PM
2-Butanone	ND	0.47		mg/Kg	1	8/31/2011 12:12:57 PM
Carbon disulfide	ND	0.47		mg/Kg	1	8/31/2011 12:12:57 PM
Carbon tetrachloride	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
Chlorobenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Chloroethane	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
Chloroform	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Chloromethane	ND	0.14		mg/Kg	1	8/31/2011 12:12:57 PM
2-Chlorotoluene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
4-Chlorotoluene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
cis-1,2-DCE	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
cis-1,3-Dichloropropene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,2-Dibromo-3-chloropropane	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
Dibromochloromethane	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Dibromomethane	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
1,2-Dichlorobenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,3-Dichlorobenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,4-Dichlorobenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Dichlorodifluoromethane	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,1-Dichloroethane	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
1,1-Dichloroethene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,2-Dichloropropane	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,3-Dichloropropane	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
2,2-Dichloropropane	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
1,1-Dichloropropene	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
Hexachlorobutadiene	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
2-Hexanone	ND	0.47		mg/Kg	1	8/31/2011 12:12:57 PM
Isopropylbenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
4-Isopropyltoluene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
4-Methyl-2-pentanone	ND	0.47		mg/Kg	1	8/31/2011 12:12:57 PM
Methylene chloride	ND	0.14		mg/Kg	1	8/31/2011 12:12:57 PM
n-Butylbenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
n-Propylbenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
sec-Butylbenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Styrene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
tert-Butylbenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,1,1,2-Tetrachloroethane	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,1,2,2-Tetrachloroethane	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Tetrachloroethene (PCE)	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
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CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S1-A-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 2:00:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-01	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
trans-1,2-DCE	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
trans-1,3-Dichloropropene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,2,3-Trichlorobenzene	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
1,2,4-Trichlorobenzene	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,1,1-Trichloroethane	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,1,2-Trichloroethane	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Trichloroethene (TCE)	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Trichlorofluoromethane	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
1,2,3-Trichloropropane	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
Vinyl chloride	ND	0.047		mg/Kg	1	8/31/2011 12:12:57 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/31/2011 12:12:57 PM
Surr: 1,2-Dichloroethane-d4	88.5	70-130		%REC	1	8/31/2011 12:12:57 PM
Surr: 4-Bromofluorobenzene	96.0	70-130		%REC	1	8/31/2011 12:12:57 PM
Surr: Dibromofluoromethane	89.4	63.1-128		%REC	1	8/31/2011 12:12:57 PM
Surr: Toluene-d8	91.3	70-130		%REC	1	8/31/2011 12:12:57 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*
Analytical Report

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S1-B-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 2:00:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-02	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	14	9.9		mg/Kg	1	9/1/2011 9:54:06 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2011 9:54:06 AM
Surr: DNOP	106	73.4-123		%REC	1	9/1/2011 9:54:06 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/31/2011 8:01:30 PM
Surr: BFB	94.1	75.2-136		%REC	1	8/31/2011 8:01:30 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	7.5	1.5		mg/Kg	5	9/1/2011 2:18:55 PM
Chloride	82	7.5		mg/Kg	5	9/1/2011 2:18:55 PM
Nitrogen, Nitrate (As N)	30	1.5		mg/Kg	5	9/1/2011 2:18:55 PM
EPA METHOD 7471: MERCURY						Analyst: BRM
Mercury	ND	0.033		mg/Kg	1	9/8/2011 12:03:00 PM
EPA METHOD 6010B: SOIL METALS						Analyst: ELS
Arsenic	ND	12		mg/Kg	5	9/15/2011 7:24:24 AM
Barium	700	2.0		mg/Kg	20	9/15/2011 8:37:17 AM
Cadmium	ND	0.50		mg/Kg	5	9/15/2011 7:24:24 AM
Chromium	16	1.5		mg/Kg	5	9/15/2011 7:24:24 AM
Lead	7.3	1.2		mg/Kg	5	9/15/2011 7:24:24 AM
Selenium	ND	12		mg/Kg	5	9/15/2011 7:24:24 AM
Silver	ND	1.2		mg/Kg	5	9/15/2011 7:24:24 AM
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Toluene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Methyl tert-butyl ether (MTBE)	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,2,4-Trimethylbenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,3,5-Trimethylbenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,2-Dichloroethane (EDC)	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,2-Dibromoethane (EDB)	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Naphthalene	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
1-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 2:36:03 PM
2-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 2:36:03 PM
Acetone	ND	0.71		mg/Kg	1	8/31/2011 2:36:03 PM
Bromobenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Bromodichloromethane	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*
Analytical Report

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S1-B-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 2:00:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-02	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Bromoform	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Bromomethane	ND	0.14		mg/Kg	1	8/31/2011 2:36:03 PM
2-Butanone	ND	0.47		mg/Kg	1	8/31/2011 2:36:03 PM
Carbon disulfide	ND	0.47		mg/Kg	1	8/31/2011 2:36:03 PM
Carbon tetrachloride	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
Chlorobenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Chloroethane	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
Chloroform	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Chloromethane	ND	0.14		mg/Kg	1	8/31/2011 2:36:03 PM
2-Chlorotoluene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
4-Chlorotoluene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
cis-1,2-DCE	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
cis-1,3-Dichloropropene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,2-Dibromo-3-chloropropane	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
Dibromochloromethane	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Dibromomethane	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
1,2-Dichlorobenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,3-Dichlorobenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,4-Dichlorobenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Dichlorodifluoromethane	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,1-Dichloroethane	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
1,1-Dichloroethene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,2-Dichloropropane	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,3-Dichloropropane	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
2,2-Dichloropropane	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
1,1-Dichloropropene	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
Hexachlorobutadiene	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
2-Hexanone	ND	0.47		mg/Kg	1	8/31/2011 2:36:03 PM
Isopropylbenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
4-Isopropyltoluene	0.077	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
4-Methyl-2-pentanone	ND	0.47		mg/Kg	1	8/31/2011 2:36:03 PM
Methylene chloride	ND	0.14		mg/Kg	1	8/31/2011 2:36:03 PM
n-Butylbenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
n-Propylbenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
sec-Butylbenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Styrene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
tert-Butylbenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,1,1,2-Tetrachloroethane	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,1,2,2-Tetrachloroethane	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Tetrachloroethene (PCE)	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S1-B-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 2:00:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-02	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
trans-1,2-DCE	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
trans-1,3-Dichloropropene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,2,3-Trichlorobenzene	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
1,2,4-Trichlorobenzene	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,1,1-Trichloroethane	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,1,2-Trichloroethane	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Trichloroethene (TCE)	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Trichlorofluoromethane	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
1,2,3-Trichloropropane	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
Vinyl chloride	ND	0.047		mg/Kg	1	8/31/2011 2:36:03 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/31/2011 2:36:03 PM
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%REC	1	8/31/2011 2:36:03 PM
Surr: 4-Bromofluorobenzene	94.8	70-130		%REC	1	8/31/2011 2:36:03 PM
Surr: Dibromofluoromethane	98.4	63.1-128		%REC	1	8/31/2011 2:36:03 PM
Surr: Toluene-d8	89.1	70-130		%REC	1	8/31/2011 2:36:03 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*
Analytical Report

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	S2-A-Pile
Lab Order:	1108B17	**Collection Date:**	8/25/2011 2:25:00 PM
Project:	Soil Samples	**Date Received:**	8/29/2011
Lab ID:	1108B17-03	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	41	10		mg/Kg	1	9/2/2011 8:13:28 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2011 8:13:28 AM
Surr: DNOP	110	73.4-123		%REC	1	9/2/2011 8:13:28 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/31/2011 8:30:21 PM
Surr: BFB	93.2	75.2-136		%REC	1	8/31/2011 8:30:21 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	16	6.0		mg/Kg	20	9/1/2011 3:11:09 PM
Chloride	290	30		mg/Kg	20	9/1/2011 3:11:09 PM
Nitrogen, Nitrate (As N)	38	6.0		mg/Kg	20	9/1/2011 3:11:09 PM
EPA METHOD 7471: MERCURY						Analyst: BRM
Mercury	0.093	0.033		mg/Kg	1	9/8/2011 12:04:47 PM
EPA METHOD 6010B: SOIL METALS						Analyst: ELS
Arsenic	ND	12		mg/Kg	5	9/15/2011 7:26:25 AM
Barium	540	2.0		mg/Kg	20	9/15/2011 8:39:10 AM
Cadmium	ND	0.50		mg/Kg	5	9/15/2011 7:26:25 AM
Chromium	23	1.5		mg/Kg	5	9/15/2011 7:26:25 AM
Lead	9.3	1.2		mg/Kg	5	9/15/2011 7:26:25 AM
Selenium	ND	12		mg/Kg	5	9/15/2011 7:26:25 AM
Silver	ND	1.2		mg/Kg	5	9/15/2011 7:26:25 AM
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Toluene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,2-Dichloroethane (EDC)	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,2-Dibromoethane (EDB)	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Naphthalene	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
1-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 3:04:52 PM
2-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 3:04:52 PM
Acetone	ND	0.72		mg/Kg	1	8/31/2011 3:04:52 PM
Bromobenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Bromodichloromethane	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL *Practical Quantitation Limit*
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S *Spike recovery outside accepted recovery limits*

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*

Analytical Report

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	S2-A-Pile
Lab Order:	1108B17	**Collection Date:**	8/25/2011 2:25:00 PM
Project:	Soil Samples	**Date Received:**	8/29/2011
Lab ID:	1108B17-03	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Bromoform	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Bromomethane	ND	0.14		mg/Kg	1	8/31/2011 3:04:52 PM
2-Butanone	ND	0.48		mg/Kg	1	8/31/2011 3:04:52 PM
Carbon disulfide	ND	0.48		mg/Kg	1	8/31/2011 3:04:52 PM
Carbon tetrachloride	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
Chlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Chloroethane	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
Chloroform	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Chloromethane	ND	0.14		mg/Kg	1	8/31/2011 3:04:52 PM
2-Chlorotoluene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
4-Chlorotoluene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
cis-1,2-DCE	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
cis-1,3-Dichloropropene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,2-Dibromo-3-chloropropane	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
Dibromochloromethane	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Dibromomethane	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
1,2-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,3-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,4-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Dichlorodifluoromethane	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,1-Dichloroethane	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
1,1-Dichloroethene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,2-Dichloropropane	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,3-Dichloropropane	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
2,2-Dichloropropane	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
1,1-Dichloropropene	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
Hexachlorobutadiene	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
2-Hexanone	ND	0.48		mg/Kg	1	8/31/2011 3:04:52 PM
Isopropylbenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
4-Isopropyltoluene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
4-Methyl-2-pentanone	ND	0.48		mg/Kg	1	8/31/2011 3:04:52 PM
Methylene chloride	ND	0.14		mg/Kg	1	8/31/2011 3:04:52 PM
n-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
n-Propylbenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
sec-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Styrene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
tert-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,1,1,2-Tetrachloroethane	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,1,2,2-Tetrachloroethane	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Tetrachloroethene (PCE)	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*
Analytical Report

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S2-A-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 2:25:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-03	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
trans-1,2-DCE	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
trans-1,3-Dichloropropene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,2,3-Trichlorobenzene	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
1,2,4-Trichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,1,1-Trichloroethane	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,1,2-Trichloroethane	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Trichloroethene (TCE)	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Trichlorofluoromethane	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
1,2,3-Trichloropropane	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
Vinyl chloride	ND	0.048		mg/Kg	1	8/31/2011 3:04:52 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/31/2011 3:04:52 PM
Surr: 1,2-Dichloroethane-d4	93.6	70-130		%REC	1	8/31/2011 3:04:52 PM
Surr: 4-Bromofluorobenzene	89.6	70-130		%REC	1	8/31/2011 3:04:52 PM
Surr: Dibromofluoromethane	95.0	63.1-128		%REC	1	8/31/2011 3:04:52 PM
Surr: Toluene-d8	92.5	70-130		%REC	1	8/31/2011 3:04:52 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*
Analytical Report

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	S2-B-Pile
Lab Order:	1108B17	**Collection Date:**	8/25/2011 2:25:00 PM
Project:	Soil Samples	**Date Received:**	8/29/2011
Lab ID:	1108B17-04	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	27	10		mg/Kg	1	9/1/2011 10:28:47 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/1/2011 10:28:47 AM
Surr: DNOP	107	73.4-123		%REC	1	9/1/2011 10:28:47 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/1/2011 2:16:26 AM
Surr: BFB	102	75.2-136		%REC	1	9/1/2011 2:16:26 AM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	13	1.5		mg/Kg	5	9/1/2011 3:28:33 PM
Chloride	48	7.5		mg/Kg	5	9/1/2011 3:28:33 PM
Nitrogen, Nitrate (As N)	7.4	1.5		mg/Kg	5	9/1/2011 3:28:33 PM
EPA METHOD 7471: MERCURY						Analyst: BRM
Mercury	ND	0.033		mg/Kg	1	9/8/2011 12:06:40 PM
EPA METHOD 6010B: SOIL METALS						Analyst: ELS
Arsenic	ND	12		mg/Kg	5	9/15/2011 7:28:27 AM
Barium	400	1.0		mg/Kg	10	9/15/2011 8:41:04 AM
Cadmium	ND	0.50		mg/Kg	5	9/15/2011 7:28:27 AM
Chromium	10	1.5		mg/Kg	5	9/15/2011 7:28:27 AM
Lead	5.3	1.2		mg/Kg	5	9/15/2011 7:28:27 AM
Selenium	ND	12		mg/Kg	5	9/15/2011 7:28:27 AM
Silver	ND	1.2		mg/Kg	5	9/15/2011 7:28:27 AM
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Toluene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Naphthalene	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
1-Methylnaphthalene	ND	0.20		mg/Kg	1	8/31/2011 3:33:44 PM
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/31/2011 3:33:44 PM
Acetone	ND	0.74		mg/Kg	1	8/31/2011 3:33:44 PM
Bromobenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Bromodichloromethane	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S2-B-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 2:25:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-04	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Bromoform	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Bromomethane	ND	0.15		mg/Kg	1	8/31/2011 3:33:44 PM
2-Butanone	ND	0.49		mg/Kg	1	8/31/2011 3:33:44 PM
Carbon disulfide	ND	0.49		mg/Kg	1	8/31/2011 3:33:44 PM
Carbon tetrachloride	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
Chlorobenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Chloroethane	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
Chloroform	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Chloromethane	ND	0.15		mg/Kg	1	8/31/2011 3:33:44 PM
2-Chlorotoluene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
4-Chlorotoluene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
cis-1,2-DCE	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,2-Dibromo-3-chloropropane	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
Dibromochloromethane	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Dibromomethane	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,1-Dichloroethane	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
1,1-Dichloroethene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,2-Dichloropropane	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,3-Dichloropropane	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
2,2-Dichloropropane	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
1,1-Dichloropropene	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
Hexachlorobutadiene	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
2-Hexanone	ND	0.49		mg/Kg	1	8/31/2011 3:33:44 PM
Isopropylbenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
4-Isopropyltoluene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	8/31/2011 3:33:44 PM
Methylene chloride	ND	0.15		mg/Kg	1	8/31/2011 3:33:44 PM
n-Butylbenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
n-Propylbenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
sec-Butylbenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Styrene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
tert-Butylbenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S2-B-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 2:25:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-04	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
trans-1,2-DCE	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,2,3-Trichlorobenzene	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Trichlorofluoromethane	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
1,2,3-Trichloropropane	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
Vinyl chloride	ND	0.049		mg/Kg	1	8/31/2011 3:33:44 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/31/2011 3:33:44 PM
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%REC	1	8/31/2011 3:33:44 PM
Surr: 4-Bromofluorobenzene	91.6	70-130		%REC	1	8/31/2011 3:33:44 PM
Surr: Dibromofluoromethane	98.2	63.1-128		%REC	1	8/31/2011 3:33:44 PM
Surr: Toluene-d8	93.5	70-130		%REC	1	8/31/2011 3:33:44 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*
Analytical Report

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S3-A-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 3:00:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-05	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	20	10		mg/Kg	1	9/1/2011 11:03:12 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/1/2011 11:03:12 AM
Surr: DNOP	107	73.4-123		%REC	1	9/1/2011 11:03:12 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2011 2:45:20 AM
Surr: BFB	95.9	76.2-136		%REC	1	9/1/2011 2:45:20 AM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	5.8	1.5		mg/Kg	5	9/1/2011 4:38:14 PM
Chloride	260	7.5		mg/Kg	5	9/1/2011 4:38:14 PM
Nitrogen, Nitrate (As N)	2.6	1.5		mg/Kg	5	9/1/2011 4:38:14 PM
EPA METHOD 7471: MERCURY						Analyst: BRM
Mercury	ND	0.033		mg/Kg	1	9/8/2011 12:08:28 PM
EPA METHOD 6010B: SOIL METALS						Analyst: ELS
Arsenic	ND	12		mg/Kg	5	9/15/2011 7:30:27 AM
Barium	170	0.60		mg/Kg	5	9/15/2011 7:30:27 AM
Cadmium	ND	0.60		mg/Kg	5	9/15/2011 7:30:27 AM
Chromium	9.4	1.5		mg/Kg	5	9/15/2011 7:30:27 AM
Lead	6.4	1.2		mg/Kg	5	9/15/2011 7:30:27 AM
Selenium	ND	12		mg/Kg	5	9/15/2011 7:30:27 AM
Silver	ND	1.2		mg/Kg	5	9/15/2011 7:30:27 AM
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Toluene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,2-Dichloroethane (EDC)	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,2-Dibromoethane (EDB)	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Naphthalene	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
1-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 4:02:43 PM
2-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 4:02:43 PM
Acetone	ND	0.73		mg/Kg	1	8/31/2011 4:02:43 PM
Bromobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Bromodichloromethane	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S3-A-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 3:00:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-05	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Bromoform	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Bromomethane	ND	0.15		mg/Kg	1	8/31/2011 4:02:43 PM
2-Butanone	ND	0.48		mg/Kg	1	8/31/2011 4:02:43 PM
Carbon disulfide	ND	0.48		mg/Kg	1	8/31/2011 4:02:43 PM
Carbon tetrachloride	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
Chlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Chloroethane	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
Chloroform	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Chloromethane	ND	0.15		mg/Kg	1	8/31/2011 4:02:43 PM
2-Chlorotoluene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
4-Chlorotoluene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
cis-1,2-DCE	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
cis-1,3-Dichloropropene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,2-Dibromo-3-chloropropane	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
Dibromochloromethane	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Dibromomethane	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
1,2-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,3-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,4-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Dichlorodifluoromethane	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,1-Dichloroethane	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
1,1-Dichloroethene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,2-Dichloropropane	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,3-Dichloropropane	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
2,2-Dichloropropane	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
1,1-Dichloropropene	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
Hexachlorobutadiene	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
2-Hexanone	ND	0.48		mg/Kg	1	8/31/2011 4:02:43 PM
Isopropylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
4-Isopropyltoluene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
4-Methyl-2-pentanone	ND	0.48		mg/Kg	1	8/31/2011 4:02:43 PM
Methylene chloride	ND	0.15		mg/Kg	1	8/31/2011 4:02:43 PM
n-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
n-Propylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
sec-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Styrene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
tert-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,1,1,2-Tetrachloroethane	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,1,2,2-Tetrachloroethane	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Tetrachloroethene (PCE)	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S3-A-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 3:00:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-05	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
trans-1,2-DCE	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
trans-1,3-Dichloropropene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,2,3-Trichlorobenzene	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
1,2,4-Trichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,1,1-Trichloroethane	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,1,2-Trichloroethane	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Trichloroethene (TCE)	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Trichlorofluoromethane	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
1,2,3-Trichloropropane	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
Vinyl chloride	ND	0.048		mg/Kg	1	8/31/2011 4:02:43 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/31/2011 4:02:43 PM
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%REC	1	8/31/2011 4:02:43 PM
Surr: 4-Bromofluorobenzene	86.6	70-130		%REC	1	8/31/2011 4:02:43 PM
Surr: Dibromofluoromethane	97.7	63.1-128		%REC	1	8/31/2011 4:02:43 PM
Surr: Toluene-d8	92.8	70-130		%REC	1	8/31/2011 4:02:43 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*

Analytical Report

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	S3-B-Pile
Lab Order:	1108B17	**Collection Date:**	8/25/2011 3:00:00 PM
Project:	Soil Samples	**Date Received:**	8/29/2011
Lab ID:	1108B17-06	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	65	9.7		mg/Kg	1	9/2/2011 8:47:20 AM
Motor Oil Range Organics (MRO)	170	48		mg/Kg	1	9/2/2011 8:47:20 AM
Surr: DNOP	122	73.4-123		%REC	1	9/2/2011 8:47:20 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2011 3:14:16 AM
Surr: BFB	94.3	75.2-136		%REC	1	9/1/2011 3:14:16 AM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	13	1.5		mg/Kg	5	9/1/2011 5:13:03 PM
Chloride	50	7.5		mg/Kg	5	9/1/2011 5:13:03 PM
Nitrogen, Nitrate (As N)	3.2	1.5		mg/Kg	5	9/1/2011 5:13:03 PM
EPA METHOD 7471: MERCURY						Analyst: BRM
Mercury	0.039	0.033		mg/Kg	1	9/8/2011 12:10:16 PM
EPA METHOD 6010B: SOIL METALS						Analyst: ELS
Arsenic	ND	12		mg/Kg	5	9/15/2011 7:38:46 AM
Barium	580	2.0		mg/Kg	20	9/15/2011 8:42:53 AM
Cadmium	ND	0.50		mg/Kg	5	9/15/2011 7:38:46 AM
Chromium	11	1.5		mg/Kg	5	9/15/2011 7:38:46 AM
Lead	7.2	1.2		mg/Kg	5	9/15/2011 7:38:46 AM
Selenium	ND	12		mg/Kg	5	9/15/2011 7:38:46 AM
Silver	ND	1.2		mg/Kg	5	9/15/2011 7:38:46 AM
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Toluene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,2-Dichloroethane (EDC)	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,2-Dibromoethane (EDB)	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Naphthalene	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
1-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 4:31:46 PM
2-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 4:31:46 PM
Acetone	ND	0.71		mg/Kg	1	8/31/2011 4:31:46 PM
Bromobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Bromodichloromethane	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*
Analytical Report

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S3-B-Pile
Lab Order:	1108B17	Collection Date:	8/25/2011 3:00:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-06	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Bromoform	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Bromomethane	ND	0.14		mg/Kg	1	8/31/2011 4:31:46 PM
2-Butanone	ND	0.48		mg/Kg	1	8/31/2011 4:31:46 PM
Carbon disulfide	ND	0.48		mg/Kg	1	8/31/2011 4:31:46 PM
Carbon tetrachloride	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
Chlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Chloroethane	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
Chloroform	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Chloromethane	ND	0.14		mg/Kg	1	8/31/2011 4:31:46 PM
2-Chlorotoluene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
4-Chlorotoluene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
cis-1,2-DCE	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
cis-1,3-Dichloropropene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,2-Dibromo-3-chloropropane	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
Dibromochloromethane	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Dibromomethane	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
1,2-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,3-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,4-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Dichlorodifluoromethane	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,1-Dichloroethane	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
1,1-Dichloroethene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,2-Dichloropropane	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,3-Dichloropropane	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
2,2-Dichloropropane	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
1,1-Dichloropropene	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
Hexachlorobutadiene	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
2-Hexanone	ND	0.48		mg/Kg	1	8/31/2011 4:31:46 PM
Isopropylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
4-Isopropyltoluene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
4-Methyl-2-pentanone	ND	0.48		mg/Kg	1	8/31/2011 4:31:46 PM
Methylene chloride	ND	0.14		mg/Kg	1	8/31/2011 4:31:46 PM
n-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
n-Propylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
sec-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Styrene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
tert-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,1,1,2-Tetrachloroethane	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,1,2,2-Tetrachloroethane	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Tetrachloroethene (PCE)	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*

Analytical Report

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	S3-B-Pile
Lab Order:	1108B17	**Collection Date:**	8/25/2011 3:00:00 PM
Project:	Soil Samples	**Date Received:**	8/29/2011
Lab ID:	1108B17-06	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
trans-1,2-DCE	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
trans-1,3-Dichloropropene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,2,3-Trichlorobenzene	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
1,2,4-Trichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,1,1-Trichloroethane	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,1,2-Trichloroethane	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Trichloroethene (TCE)	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Trichlorofluoromethane	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
1,2,3-Trichloropropane	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
Vinyl chloride	ND	0.048		mg/Kg	1	8/31/2011 4:31:46 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/31/2011 4:31:46 PM
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%REC	1	8/31/2011 4:31:46 PM
Surr: 4-Bromofluorobenzene	86.7	70-130		%REC	1	8/31/2011 4:31:46 PM
Surr: Dibromofluoromethane	99.9	63.1-128		%REC	1	8/31/2011 4:31:46 PM
Surr: Toluene-d8	96.0	70-130		%REC	1	8/31/2011 4:31:46 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Sep-11*
Analytical Report

CLIENT:	Western Refining Southwest, Gallup	**Client Sample ID:**	S1-S2-S3 Composite
Lab Order:	1108B17	**Collection Date:**	8/25/2011 3:25:00 PM
Project:	Soil Samples	**Date Received:**	8/29/2011
Lab ID:	1108B17-07	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JB
Diesel Range Organics (DRO)	28	9.8		mg/Kg	1	9/2/2011 9:21:41 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/2/2011 9:21:41 AM
Surr: DNOP	107	73.4-123		%REC	1	9/2/2011 9:21:41 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2011 3:43:09 AM
Surr: BFB	95.7	75.2-136		%REC	1	9/1/2011 3:43:09 AM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	9.7	1.5		mg/Kg	5	9/1/2011 5:47:53 PM
Chloride	120	7.5		mg/Kg	5	9/1/2011 5:47:53 PM
Nitrogen, Nitrate (As N)	16	1.5		mg/Kg	5	9/1/2011 5:47:53 PM
EPA METHOD 7471: MERCURY						Analyst: BRM
Mercury	0.051	0.033		mg/Kg	1	9/8/2011 12:15:46 PM
EPA METHOD 6010B: SOIL METALS						Analyst: ELS
Arsenic	ND	13		mg/Kg	5	9/15/2011 7:40:50 AM
Barium	630	2.0		mg/Kg	20	9/15/2011 8:44:46 AM
Cadmium	ND	0.50		mg/Kg	5	9/15/2011 7:40:50 AM
Chromium	14	1.5		mg/Kg	5	9/15/2011 7:40:50 AM
Lead	10	1.3		mg/Kg	5	9/15/2011 7:40:50 AM
Selenium	ND	13		mg/Kg	5	9/15/2011 7:40:50 AM
Silver	ND	1.3		mg/Kg	5	9/15/2011 7:40:50 AM
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Toluene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,2-Dichloroethane (EDC)	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,2-Dibromoethane (EDB)	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Naphthalene	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
1-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 5:00:52 PM
2-Methylnaphthalene	ND	0.19		mg/Kg	1	8/31/2011 5:00:52 PM
Acetone	ND	0.72		mg/Kg	1	8/31/2011 5:00:52 PM
Bromobenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Bromodichloromethane	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S1-S2-S3 Composite
Lab Order:	1108B17	Collection Date:	8/25/2011 3:25:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-07	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
Bromoform	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Bromomethane	ND	0.14		mg/Kg	1	8/31/2011 5:00:52 PM
2-Butanone	ND	0.48		mg/Kg	1	8/31/2011 5:00:52 PM
Carbon disulfide	ND	0.48		mg/Kg	1	8/31/2011 5:00:52 PM
Carbon tetrachloride	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
Chlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Chloroethane	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
Chloroform	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Chloromethane	ND	0.14		mg/Kg	1	8/31/2011 5:00:52 PM
2-Chlorotoluene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
4-Chlorotoluene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
cis-1,2-DCE	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
cis-1,3-Dichloropropene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,2-Dibromo-3-chloropropane	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
Dibromochloromethane	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Dibromomethane	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
1,2-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,3-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,4-Dichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Dichlorodifluoromethane	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,1-Dichloroethane	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
1,1-Dichloroethene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,2-Dichloropropane	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,3-Dichloropropane	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
2,2-Dichloropropane	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
1,1-Dichloropropene	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
Hexachlorobutadiene	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
2-Hexanone	ND	0.48		mg/Kg	1	8/31/2011 5:00:52 PM
Isopropylbenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
4-Isopropyltoluene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
4-Methyl-2-pentanone	ND	0.48		mg/Kg	1	8/31/2011 5:00:52 PM
Methylene chloride	ND	0.14		mg/Kg	1	8/31/2011 5:00:52 PM
n-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
n-Propylbenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
sec-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Styrene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
tert-Butylbenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,1,1,2-Tetrachloroethane	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,1,2,2-Tetrachloroethane	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Tetrachloroethene (PCE)	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

CLIENT:	Western Refining Southwest, Gallup	Client Sample ID:	S1-S2-S3 Composite
Lab Order:	1108B17	Collection Date:	8/25/2011 3:25:00 PM
Project:	Soil Samples	Date Received:	8/29/2011
Lab ID:	1108B17-07	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: NSB
trans-1,2-DCE	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
trans-1,3-Dichloropropene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,2,3-Trichlorobenzene	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
1,2,4-Trichlorobenzene	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,1,1-Trichloroethane	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,1,2-Trichloroethane	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Trichloroethene (TCE)	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Trichlorofluoromethane	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
1,2,3-Trichloropropane	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
Vinyl chloride	ND	0.048		mg/Kg	1	8/31/2011 5:00:52 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/31/2011 5:00:52 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	8/31/2011 5:00:52 PM
Surr: 4-Bromofluorobenzene	80.2	70-130		%REC	1	8/31/2011 5:00:52 PM
Surr: Dibromofluoromethane	101	63.1-128		%REC	1	8/31/2011 5:00:52 PM
Surr: Toluene-d8	93.8	70-130		%REC	1	8/31/2011 5:00:52 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Anatek Labs, Inc.

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

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	110831032
Address:	4901 HAWKINS NE SUITE D	**Project Name:**	1108B17
	ALBUQUERQUE, NM 87109		
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	110831032-001	**Sampling Date**	8/25/2011	**Date/Time Received**	8/31/2011 12:00 PM
Client Sample ID	1108B17-01A / S1-A-PILE			**Sampling Time**	2:00 PM
Matrix	Soil				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	9/12/2011	JTT	SW846 CH7	
Ignitability	Negative			9/1/2011	JWC	EPA 1030	
pH	8.02	ph Units		9/13/2011	JTT	EPA 9045	
Reactive sulfide	ND	mg/kg	15	9/7/2011	JTT	SW846 CH7	
%moisture	5.1	Percent		9/1/2011	KFG	%moisture	

Anatek Labs, Inc.

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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	Batch #:	110831032
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	Project Name:	1108B17
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	110831032-002	Sampling Date	8/26/2011	Date/Time Received	8/31/2011 12:00 PM
Client Sample ID	1108B17-02A / S1-B-PILE			Sampling Time	2:00 PM
Matrix	Soil				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	9/12/2011	JTT	SW846 CH7	
Ignitability	Negative			9/1/2011	JWC	EPA 1030	
pH	7.79	ph Units		9/13/2011	JTT	EPA 9045	
Reactive sulfide	ND	mg/kg	15	9/7/2011	JTT	SW846 CH7	
%moisture	6.6	Percent		9/1/2011	KFG	%moisture	

Anatek Labs, Inc.

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	Batch #:	110831032
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	Project Name:	1108B17
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	110831032-003	Sampling Date	8/25/2011	Date/Time Received	8/31/2011 12:00 PM
Client Sample ID	1108B17-03A / S2-A-PILE			Sampling Time	2:25 PM
Matrix	Soil				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	9/12/2011	JTT	SW846 CH7	
Ignitability	Negative			9/1/2011	JWC	EPA 1030	
pH	8.13	ph Units		9/13/2011	JTT	EPA 9045	
Reactive sulfide	ND	mg/kg	15	9/7/2011	JTT	SW846 CH7	
%moisture	4.1	Percent		9/1/2011	KFG	%moisture	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87693; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C585
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	110831032
Address:	4901 HAWKINS NE SUITE D	**Project Name:**	1108B17
	ALBUQUERQUE, NM 87109		
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	110831032-004	**Sampling Date**	8/25/2011	**Date/Time Received**	8/31/2011 12:00 PM
Client Sample ID	1108B17-04A / S2-B-PILE			**Sampling Time**	2:26 PM
Matrix	Soil				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	9/12/2011	JTT	SW846 CH7	
Ignitability	Negative			9/1/2011	JWC	EPA 1030	
pH	8.52	ph Units		9/13/2011	JTT	EPA 9045	
Reactive sulfide	ND	mg/kg	15	9/7/2011	JTT	SW846 CH7	
%moisture	8.6	Percent		9/1/2011	KFG	%moisture	

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	Batch #:	110831032
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	Project Name:	1108B17
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	110831032-005	Sampling Date	8/25/2011	Date/Time Received	8/31/2011 12:00 PM
Client Sample ID	1108B17-05A / S3-A-PILE			Sampling Time	3:00 PM
Matrix	Soil				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	9/12/2011	JTT	SW846 CH7	
Ignitability	Negative			9/1/2011	JWC	EPA 1030	
pH	6.83	ph Units		9/13/2011	JTT	EPA 9045	
Reactive sulfide	ND	mg/kg	16	9/7/2011	JTT	SW846 CH7	
%moisture	6.7	Percent		9/1/2011	KFG	%moisture	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2832; ID:WA00169; WA:C585; MT:Cert0085

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	110831032
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1108B17
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	110831032-006	**Sampling Date**	8/25/2011	**Date/Time Received**	8/31/2011 12:00 PM
Client Sample ID	1108B17-06A / S3-B-PILE			**Sampling Time**	3:00 PM
Matrix	Soil				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	9/12/2011	JTT	SW846 CH7	
Ignitability	Negative			9/1/2011	JWC	EPA 1030	
pH	8.38	ph Units		9/13/2011	JTT	EPA 9045	
Reactive sulfide	ND	mg/kg	15	9/7/2011	JTT	SW846 CH7	
%moisture	6.8	Percent		9/1/2011	KFG	%moisture	

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	110831032
Address:	4901 HAWKINS NE SUITE D	**Project Name:**	1108B17
	ALBUQUERQUE, NM 87109		
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	110831032-007	**Sampling Date**	8/26/2011	**Date/Time Received**	8/31/2011 12:00 PM
Client Sample ID	1108B17-07A / S1-S2-S3 COMPOS			**Sampling Time**	3:25 PM
Matrix	Soil				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	9/7/2011	CRW	SW846 CH7	
Ignitability	Negative			9/1/2011	JWC	EPA 1030	
pH	8.37	ph Units		9/13/2011	JTT	EPA 9045	
Reactive sulfide	ND	mg/kg	15	9/7/2011	JTT	SW846 CH7	
%moisture	6.4	Percent		9/1/2011	KFG	%moisture	

Wednesday, September 14, 2011

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Soil Samples Work Order: 1108B17

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Anions											
Sample ID: MB-28272		*MBLK*				Batch ID:	28272	Analysis Date:		9/1/2011 1:09:17 PM	
Fluoride	ND	mg/Kg	0.30								
Chloride	ND	mg/Kg	1.5								
Nitrogen, Nitrate (As N)	ND	mg/Kg	0.30								
Sample ID: LCS-28272		*LCS*				Batch ID:	28272	Analysis Date:		9/1/2011 1:26:42 PM	
Fluoride	1.530	mg/Kg	0.30	1.5	0	102	90	110			
Chloride	14.12	mg/Kg	1.5	15	0	94.1	90	110			
Nitrogen, Nitrate (As N)	7.338	mg/Kg	0.30	7.5	0	97.8	90	110			
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: MB-28250		*MBLK*				Batch ID:	28250	Analysis Date:		8/31/2011 11:37:27 PM	
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-28250		*LCS*				Batch ID:	28250	Analysis Date:		9/1/2011 12:11:52 AM	
Diesel Range Organics (DRO)	43.98	mg/Kg	10	50	0	88.0	66.7	119			
Sample ID: LCSD-28250		*LCSD*				Batch ID:	28250	Analysis Date:		9/1/2011 12:46:14 AM	
Diesel Range Organics (DRO)	43.01	mg/Kg	10	50	0	86.0	66.7	119	2.24	18.9	
Method: EPA Method 8015B: Gasoline Range											
Sample ID: MB-28242		*MBLK*				Batch ID:	28242	Analysis Date:		8/30/2011 1:19:05 PM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: MB-28256		*MBLK*				Batch ID:	28256	Analysis Date:		8/31/2011 12:45:23 PM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-28242		*LCS*				Batch ID:	28242	Analysis Date:		8/30/2011 12:21:19 PM	
Gasoline Range Organics (GRO)	27.11	mg/Kg	5.0	25	0	108	86.4	132			
Sample ID: LCS-28256		*LCS*				Batch ID:	28256	Analysis Date:		8/31/2011 11:47:36 AM	
Gasoline Range Organics (GRO)	25.62	mg/Kg	5.0	25	0	102	86.4	132			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Soil Samples
Work Order: 1108B17

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES											
Sample ID: 1108B17-01AMSD		*MSD*				Batch ID:	28266	Analysis Date:		8/31/2011 1:10:04 PM	
Benzene	1.002	mg/Kg	0.048	0.951	0	105	60	126	0.675	15.7	
Toluene	1.138	mg/Kg	0.048	0.951	0	120	68.7	132	4.41	16.2	
Chlorobenzene	1.167	mg/Kg	0.048	0.951	0	123	71.8	134	5.91	14.9	
1,1-Dichloroethene	0.8680	mg/Kg	0.048	0.951	0	91.3	34.5	155	4.54	31.8	
Trichloroethene (TCE)	0.9158	mg/Kg	0.048	0.951	0	96.3	47.2	121	9.25	16.5	
Sample ID: mb-28266		*MBLK*				Batch ID:	28266	Analysis Date:		8/31/2011 5:58:53 PM	
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.050								
1,2,4-Trimethylbenzene	ND	mg/Kg	0.050								
1,3,5-Trimethylbenzene	ND	mg/Kg	0.050								
1,2-Dichloroethane (EDC)	ND	mg/Kg	0.050								
1,2-Dibromoethane (EDB)	ND	mg/Kg	0.050								
Naphthalene	ND	mg/Kg	0.10								
1-Methylnaphthalene	ND	mg/Kg	0.20								
2-Methylnaphthalene	ND	mg/Kg	0.20								
Acetone	ND	mg/Kg	0.75								
Bromobenzene	ND	mg/Kg	0.050								
Bromodichloromethane	ND	mg/Kg	0.050								
Bromoform	ND	mg/Kg	0.050								
Bromomethane	ND	mg/Kg	0.15								
2-Butanone	ND	mg/Kg	0.50								
Carbon disulfide	ND	mg/Kg	0.50								
Carbon tetrachloride	ND	mg/Kg	0.10								
Chlorobenzene	ND	mg/Kg	0.050								
Chloroethane	ND	mg/Kg	0.10								
Chloroform	ND	mg/Kg	0.050								
Chloromethane	ND	mg/Kg	0.15								
2-Chlorotoluene	ND	mg/Kg	0.050								
4-Chlorotoluene	ND	mg/Kg	0.050								
cis-1,2-DCE	ND	mg/Kg	0.050								
cis-1,3-Dichloropropene	ND	mg/Kg	0.050								
1,2-Dibromo-3-chloropropane	ND	mg/Kg	0.10								
Dibromochloromethane	ND	mg/Kg	0.050								
Dibromomethane	ND	mg/Kg	0.10								
1,2-Dichlorobenzene	ND	mg/Kg	0.050								
1,3-Dichlorobenzene	ND	mg/Kg	0.050								
1,4-Dichlorobenzene	ND	mg/Kg	0.050								
Dichlorodifluoromethane	ND	mg/Kg	0.050								
1,1-Dichloroethane	ND	mg/Kg	0.10								
1,1-Dichloroethene	ND	mg/Kg	0.050								
1,2-Dichloropropane	ND	mg/Kg	0.050								
1,3-Dichloropropane	ND	mg/Kg	0.050								

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Soil Samples **Work Order:** 1108B17

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES											
Sample ID: mb-28256		*MBLK*				**Batch ID:** 28256		**Analysis Date:** 8/31/2011 5:58:53 PM			
2,2-Dichloropropane	ND	mg/Kg	0.10								
1,1-Dichloropropene	ND	mg/Kg	0.10								
Hexachlorobutadiene	ND	mg/Kg	0.10								
2-Hexanone	ND	mg/Kg	0.50								
Isopropylbenzene	ND	mg/Kg	0.050								
4-Isopropyltoluene	ND	mg/Kg	0.050								
4-Methyl-2-pentanone	ND	mg/Kg	0.50								
Methylene chloride	ND	mg/Kg	0.15								
n-Butylbenzene	ND	mg/Kg	0.050								
n-Propylbenzene	ND	mg/Kg	0.050								
sec-Butylbenzene	ND	mg/Kg	0.050								
Styrene	ND	mg/Kg	0.050								
tert-Butylbenzene	ND	mg/Kg	0.050								
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.050								
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.050								
Tetrachloroethene (PCE)	ND	mg/Kg	0.050								
trans-1,2-DCE	ND	mg/Kg	0.050								
trans-1,3-Dichloropropene	ND	mg/Kg	0.050								
1,2,3-Trichlorobenzene	ND	mg/Kg	0.10								
1,2,4-Trichlorobenzene	ND	mg/Kg	0.050								
1,1,1-Trichloroethane	ND	mg/Kg	0.050								
1,1,2-Trichloroethane	ND	mg/Kg	0.050								
Trichloroethene (TCE)	ND	mg/Kg	0.050								
Trichlorofluoromethane	ND	mg/Kg	0.050								
1,2,3-Trichloropropane	ND	mg/Kg	0.10								
Vinyl chloride	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: lcs-28256		*LCS*				**Batch ID:** 28256		**Analysis Date:** 8/31/2011 5:29:59 PM			
Benzene	1.035	mg/Kg	0.050	1	0	103	70.7	123			
Toluene	0.9963	mg/Kg	0.050	1	0	99.6	80	120			
Chlorobenzene	1.010	mg/Kg	0.050	1	0	101	70	130			
1,1-Dichloroethene	1.036	mg/Kg	0.050	1	0	104	63.1	148			
Trichloroethene (TCE)	0.8258	mg/Kg	0.050	1	0	82.6	63.2	114			
Sample ID: 1108B17-01AMS		*MS*				**Batch ID:** 28256		**Analysis Date:** 8/31/2011 12:41:25 PM			
Benzene	1.009	mg/Kg	0.048	0.969	0	104	60	126			
Toluene	1.088	mg/Kg	0.048	0.969	0	112	68.7	132			
Chlorobenzene	1.100	mg/Kg	0.048	0.969	0	114	71.8	134			
1,1-Dichloroethene	0.9083	mg/Kg	0.048	0.969	0	93.7	34.5	165			
Trichloroethene (TCE)	0.8349	mg/Kg	0.048	0.969	0	86.2	47.2	121			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Soil Samples Work Order: 1108B17

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: Volatiles by 8260B/1311											
Sample ID: 1108B17-08A MSD		*MSD*				Batch ID: 28274		Analysis Date:		9/1/2011 5:50:15 PM	
Benzene	0.4287	mg/L	0.10	0.4	0.0065	106	51.1	171	4.21	0	
Chlorobenzene	0.4280	mg/L	0.10	0.4	0	107	36.1	191	4.10	0	
1,1-Dichloroethene	0.3754	mg/L	0.10	0.4	0	93.9	49.1	162	8.51	0	
Trichloroethene (TCE)	0.3305	mg/L	0.10	0.4	0	82.6	41.2	166	4.75	0	
Sample ID: mb-28274		*MBLK*				Batch ID: 28274		Analysis Date:		9/1/2011 8:13:02 PM	
Benzene	ND	mg/L	0.50								
2-Butanone	ND	mg/L	10								
Carbon Tetrachloride	ND	mg/L	0.50								
Chlorobenzene	ND	mg/L	100								
Chloroform	ND	mg/L	6.0								
1,4-Dichlorobenzene	ND	mg/L	7.5								
1,2-Dichloroethane (EDC)	ND	mg/L	0.50								
1,1-Dichloroethene	ND	mg/L	0.70								
Hexachlorobutadiene	ND	mg/L	0.50								
Tetrachloroethene (PCE)	ND	mg/L	0.70								
Trichloroethene (TCE)	ND	mg/L	0.50								
Vinyl chloride	ND	mg/L	0.20								
Sample ID: lcs-28274		*LCS*				Batch ID: 28274		Analysis Date:		9/1/2011 9:38:27 PM	
Benzene	0.4459	mg/L	0.10	0.4	0	111	51.1	171			
Chlorobenzene	0.4640	mg/L	0.10	0.4	0	116	36.1	191			
1,1-Dichloroethene	0.4016	mg/L	0.10	0.4	0	100	49.1	162			
Trichloroethene (TCE)	0.3420	mg/L	0.10	0.4	0	85.5	41.2	166			
Sample ID: 1108B17-08A MS		*MS*				Batch ID: 28274		Analysis Date:		9/1/2011 5:21:32 PM	
Benzene	0.4471	mg/L	0.10	0.4	0.0065	110	51.1	171			
Chlorobenzene	0.4459	mg/L	0.10	0.4	0	111	36.1	191			
1,1-Dichloroethene	0.4088	mg/L	0.10	0.4	0	102	49.1	162			
Trichloroethene (TCE)	0.3466	mg/L	0.10	0.4	0	86.7	41.2	166			
Method: EPA Method 7471: Mercury											
Sample ID: 1108B17-01AMSD		*MSD*				Batch ID: 28351		Analysis Date:		9/8/2011 12:01:13 PM	
Mercury	0.1459	mg/Kg	0.033	0.166	0.0068	83.9	75	125	0.272	20	
Sample ID: MB-28351		*MBLK*				Batch ID: 28351		Analysis Date:		9/8/2011 11:54:13 AM	
Mercury	ND	mg/Kg	0.033								
Sample ID: LCS-28351		*LCS*				Batch ID: 28351		Analysis Date:		9/8/2011 11:55:57 AM	
Mercury	0.1782	mg/Kg	0.033	0.167	0	107	80	120			
Sample ID: 1108B17-01AMS		*MS*				Batch ID: 28351		Analysis Date:		9/8/2011 11:59:28 AM	
Mercury	0.1455	mg/Kg	0.033	0.166	0.0068	83.4	75	125			

Qualifiers:

- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- NC Non-Chlorinated
- R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Gallup
Project: Soil Samples **Work Order:** 1108B17

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 6010B: Soil Metals											
Sample ID: 1108B17-01AMSD		*MSD*				**Batch ID: 28299**		**Analysis Date:**		**9/15/2011 7:20:14 AM**	
Arsenic	30.18	mg/Kg	12	24.97	0	121	75	125	4.51	20	
Cadmium	24.53	mg/Kg	0.50	24.97	0	98.3	75	125	0.806	20	
Chromium	39.46	mg/Kg	1.5	24.97	9.671	119	75	125	3.89	20	
Lead	26.07	mg/Kg	1.2	24.97	7.418	82.7	75	125	2.67	20	
Selenium	12.66	mg/Kg	12	24.97	0	50.7	75	125	41.1	20	SR
Silver	4.823	mg/Kg	1.2	4.993	0	96.6	75	125	2.14	20	
Sample ID: MB-28299		*MBLK*				**Batch ID: 28299**		**Analysis Date:**		**9/6/2011 2:35:29 PM**	
Arsenic	ND	mg/Kg	2.5								
Barium	ND	mg/Kg	0.10								
Cadmium	ND	mg/Kg	0.10								
Chromium	ND	mg/Kg	0.30								
Lead	ND	mg/Kg	0.25								
Selenium	ND	mg/Kg	2.5								
Silver	ND	mg/Kg	0.25								
Sample ID: LCS-28299		*LCS*				**Batch ID: 28299**		**Analysis Date:**		**9/6/2011 2:37:37 PM**	
Arsenic	28.38	mg/Kg	2.5	25	0	114	80	120			
Barium	26.67	mg/Kg	0.10	25	0	107	80	120			
Cadmium	27.32	mg/Kg	0.10	25	0	109	80	120			
Chromium	26.47	mg/Kg	0.30	25	0	106	80	120			
Lead	27.03	mg/Kg	0.25	25	0	108	80	120			
Selenium	27.96	mg/Kg	2.5	25	0	112	80	120			
Silver	5.351	mg/Kg	0.25	5	0	107	80	120			
Sample ID: 1108B17-01AMS		*MS*				**Batch ID: 28299**		**Analysis Date:**		**9/15/2011 7:18:04 AM**	
Arsenic	28.85	mg/Kg	12	24.79	0	116	75	125			
Cadmium	24.73	mg/Kg	0.50	24.79	0	99.8	75	125			
Chromium	37.96	mg/Kg	1.5	24.79	9.671	114	75	125			
Lead	28.83	mg/Kg	1.2	24.79	7.418	86.4	75	125			
Selenium	19.21	mg/Kg	12	24.79	0	77.5	75	125			
Silver	4.928	mg/Kg	1.2	4.957	0	99.4	75	125			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU Date Received: 8/29/2011

Work Order Number 1108B17 Received by: LNM

Checklist completed by: Signature 8/29/11 Date Sample ID labels checked by: Initials

Matrix: Carrier name: Client drop-off

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐	Not Shipped ☑
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace? No VOA vials submitted ☑		Yes ☐	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	<2 >12 unless noted below.
Container/Temp Blank temperature?	3.4°	<6° C Acceptable If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: Order with Alvin. Both COC's are for the same project.
per BL Amount: U, E, N02/AT 8/31/11
8/29/11
Per Beck Larsemon 9/15/11
Project Name: SOIL SAMPLES

Corrective Action Project #: Piles - Boxes. KMS 9/15/11

SOIL PILES * per Brandon Powell kms 9/15/11

Chain-of-Custody Record

Client: WESTERN - Refinery-Gallup

Mailing Address: RT 3 Box 7 Gallup NM 87301

Phone #: 505 722 - 3833

email or Fax#: 505 722 - 0268

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush 1

Project Name: ~~SOIL SAMPLES~~ ROLL-OFF BOXES 8/29

Project #: ~~BOXES~~ ~~A20-003~~ A20-004 A20-037 PILES - BOXES

Project Manager: kms 9/15/11 Thurman Larsen

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature: 2

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

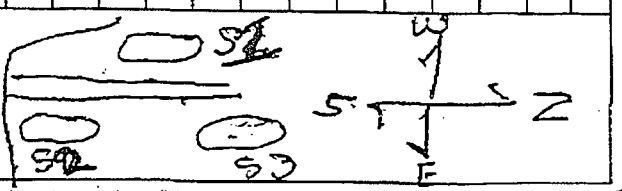
Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1108
8-25-11	1400	soil	S1-A-Pile	8oz-2	—	-1
8-25-11	1400	soil	S1-B-Pile	8oz-2	—	-2
8-25-11	1425	soil	S2-A-Pile	8oz-2	—	-3
8-25-11	1425	soil	S2-B-Pile	8oz-2	—	-4
8-25-11	1500	soil	S3-A-Pile	8oz-2	—	-5
8-25-11	1500	soil	S3-B-Pile	8oz-2	—	-6
8-25-11	1525	soil	S1-S2-S3-Composite	8oz-3	—	-7

Analysis	1	2	3	4	5	6	7
BTEX + MTBE + TMB's (8021)							
BTEX + MTBE + TPH (Gas only)							
TPH Method 8015B (Gas/Diesel)	X	X	X	X	X	X	X
TPH (Method 418.1)							
EDB (Method 504.1)							
8310 (PNA or PAH)							
RCRA 8 Metals - 8/31/11	X	X	X	X	X	X	X
Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	X	X	X	X	X	X	X
8081 Pesticides / 8082 PCB's							
8260B (VOA)	X	X	X	X	X	X	X
8270 (Semi-VOA)							
RCT	X	X	X	X	X	X	X
Air Bubbles (Y or N)							

Date:	Time:	Relinquished by:	Received by:	Date	Time
8-29-11	1331			8/29/11	1331
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: STPO



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.

ATTN: Brandon Powell cc: Ben Bird Larsen kms

September 14, 2011

VIA EMAIL AND CERTIFIED MAIL No. 7010 0290 0002 7735 3776

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

Mark Hansen
Associate Director
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Avenue
Dallas, TX 75202-2733

Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

RE: REQUEST FOR APPROVAL OF PROCESS DESIGN CHANGES PROCESS DESIGN REPORT (Approved May 24, 2010)
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
EPA ID #NMD000333211

Dear Mr. Kieling:

Western remains on-track for constructing the upgraded wastewater treatment system that complies with the terms of the CAFO. In any construction project of this magnitude, design improvements, real-world construction solutions will result in some changes from the original design as the project progresses.

Since the CAFO incorporates the NMED-approved design, Western thinks it is appropriate to seek NMED's approval of a couple changes to the original process design plan. These changes addressed below have either already been discussed with NMED or simply reflect actual operations of the new units. They do not change or affect deadlines under the CAFO Milestones:

- A new double lined aerated pond with leak detection, STP-1 has been added. NMED is aware of this addition and recently reviewed the process design along with the Oil Conservation Division (OCD). OCD approval of the design and construction plans with conditions was received on August 25, 2011. The closure

of lagoons AL-1, AL-2 and pond EP-1 creates the need for a new pond to provide aeration for the sanitary flow it receives along with process water from the MPPE.

- The function of Tanks 27 and 28 has changed from the original design plan. Tanks 27 and 28 will no longer receive off-spec wastewater from downstream of the API separator. Even though these tanks are not going to receive off-spec wastewater they were modified to meet elements of Subpart J including double bottom with leak detection and internal floating roofs. The tanks will be surrounded by an earthen secondary containment. The diversion of off-specification wastewater will be accomplished by: (i) stopping the flow to the API separator and holding the wastewater in Tanks 35, 27 and/or 28, which would normally flow to the API separator, ; and (ii) routing the off-spec wastewater to the DGF Feed Tank which will be built to RCRA Subpart J standards. Note that Tank 35 even in earlier versions of the plan was not planned to receive off-spec wastewater downstream of the API. These changes provide a larger pumping reservoir for the pumps coming off of the API which will help to equalize flow through the DAF/MPPE units in the new WWTU and provide more consistent suction head to these pumps. It will also eliminate the use of ~2000 feet of 6 inch piping to recycle any off-spec water by not having to route it all the way down and back up the hill thus reducing power consumption and reducing the risk of a spill, a win-win for all parties. The DGF Feed Tank is sized to accommodate the required material in the WWTU itself that might need to be drained to facilitate maintenance access to equipment.

I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

Thank you for your review of these changes. We would appreciate a response indicating NMED's confirmation that these construction changes are deemed incorporated into the process design plan approved (May 24, 2010) under the CAFO. Please feel free to contact Ed Riege at 505-722-0217 with any questions.

Sincerely,

Mark B. Turri
Refinery Manager

cc: Kristen Van Horn NMED HWB
Carl Chavez OCD
Ann Allen Western Refining
Ed Riege Western Refining
Don Riley Western Refining
Frank Keys Western Refining

Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Monday, July 18, 2011 3:28 PM
To: Kieling, John, NMENV; 'Hansen.Mark@epamail.epa.gov'; 'Dougherty.Joel@epamail.epa.gov'
Cc: Chavez, Carl J, EMNRD; 'Tidmore.Guy@epamail.epa.gov'; VanHorn, Kristen, NMENV; Turri, Mark; Riley, Don; Keys, Frank; Allen, Ann
Subject: Subject: Completion of Milestone #6 Certification
Attachments: IMG_0083.jpg; 20110718150058326.pdf

Dear Mr. Kieling,

Please find attached a copy of the Completion of Milestone #6 letter in PDF along with a foundation photo in jpg. The original signed copy is being mailed to you.

Thanks,

Ed Riege
Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

July 18, 2011

VIA EMAIL AND CERTIFIED MAIL No. 7010 0290 0002 7735 3462

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

Mark Hansen
Associate Director
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Avenue
Dallas, TX 75202-2733

Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

RE: COMPLETION OF MILESTONE CERTIFICATION
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
EPA ID #NMD000333211

Dear Mr. Kieling:

This letter is to notify NMED and EPA that Western Refining Southwest, Inc., Gallup Refinery ("Gallup") has met Milestone #6, in Paragraph 100.I of the Complaint and Consent Agreement and Final Order (CAFO), Docket No. RCRA-06-2009-0936: "Complete site preparation and foundations for DGF and MPPE units." Western has met this milestone not later than the specified Implementation Date of July 31, 2011. Enclosed is a photo of the foundations.

I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

Please feel free to contact Don Riley at 505-863-0932 with any questions.

Sincerely,

Mark B. Turri
Refinery Manager

cc: Kristen Van Horn NMED HWB
Carl Chavez OCD
Ann Allen Western Refining
Ed Riege Western Refining
Don Riley Western Refining


07/15/2011 13:05

Western Refining
GALLUP

WNR LISTED NYSE

June 15, 2011

VIA EMAIL AND CERTIFIED MAIL No. 7010 0290 0002 7735 4865

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

Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

RE: **PROCESS DESIGN REPORT, WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY; EPA ID #NMD000333211**

Dear Mr. Kieling,

In May 2010 Western received Approval With Modifications for the Wastewater Treatment Plant Work Plan (Alternate Design, Revision A) from both NMED HWB and OCD.

Gallup has made great progress in the design and construction of the upgraded wastewater treatment plant at the Gallup Refinery. Gallup is on track to meet the next CAFO Milestone (6) of July 31, 2011 to complete site preparation and foundations for the DGF and MPPE equipment as well as the remaining milestones. The project has evolved over the past year and the purpose of this communication is to update you and seek your approval of updates to the Work Plan. Two copies of the work plan are attached with one indicating where changes were made.

The primary purpose of this Work Plan revision is to address:

- Diversion and management of off-spec wastewater
- Replacement of Evaporation Pond #1 with a new lined sanitary treatment pond (STP-1)
- Factual Updates

I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the

person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

Thank you for your review of this request. Please feel free to contact Ed Riege at 505-722-0217 with any questions.

Sincerely,

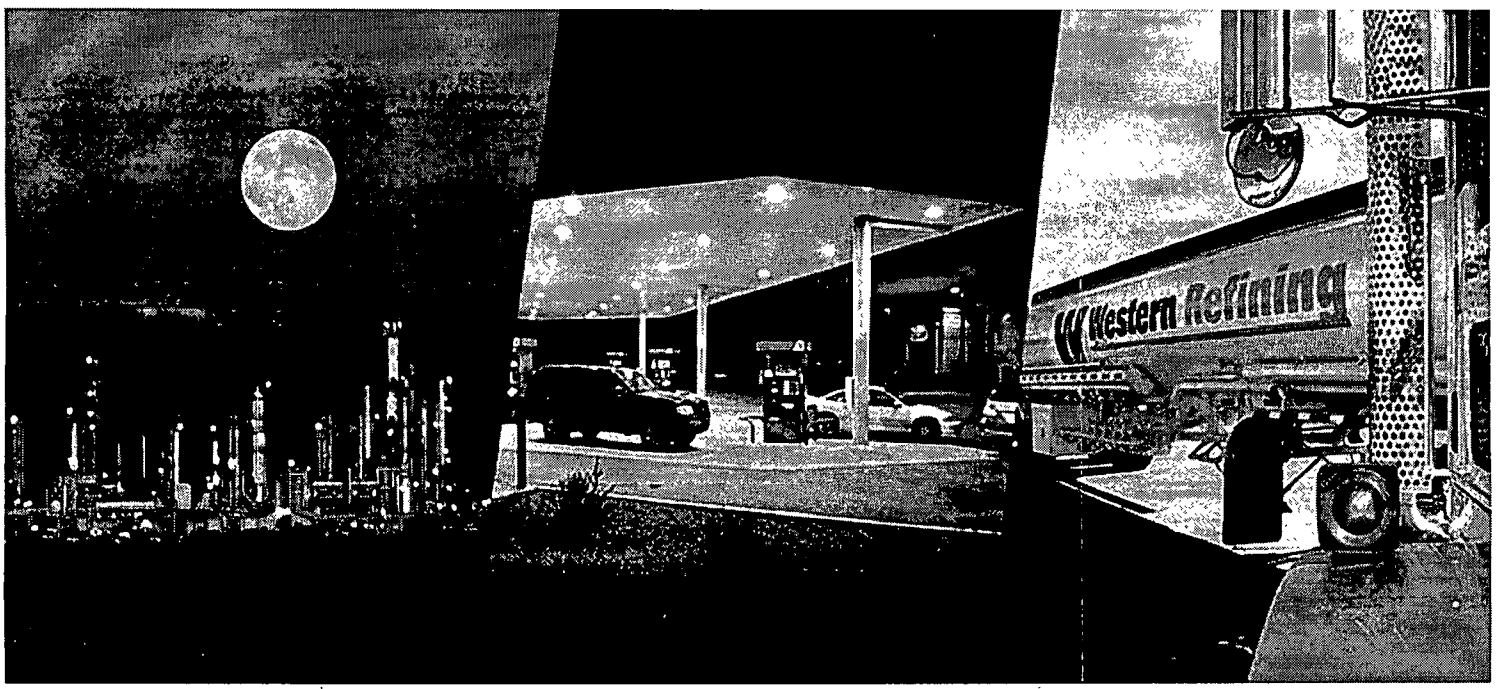
Mark B. Turri
Refinery Manager

cc: Carl Chavez OCD
Ed Riege Western Refining
Frank Keys Western Refining

Process Design Report
Wastewater Treatment Plant Work Plan
(Alternative Design, Revision B)

Western Refining
Gallup, New Mexico

Revised June 2011



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Introduction

The Western Refining Southwest's Gallup Refinery is a petroleum refinery located in Jamestown, New Mexico at Interstate 40 Exit 39. This Process Design Report for Wastewater Treatment Plant Work Plan (PDR Work Plan) presents the planned upgrades of the wastewater treatment plant (WWTP) at the refinery. This version of the PDR Work Plan is a revision to the previous version submitted in September 2009.

On August 27, 2007 Western Refining received a renewal of its discharge permit GW-032 from the New Mexico Oil Conservation Division (OCD). The permit required the refinery to complete certain actions related to wastewater management. This Work Plan addresses aspects of the following permit conditions:

1. Condition 16C - Treatment Study and Design
2. Condition 16D - Aeration Lagoons
3. Condition 16E – Evaporation Ponds

In August 2009, Western Refining, NMED and USEPA Region 6 agreed to the terms of a Complaint and Consent Agreement and Final Order (CAFO) that imposes additional regulatory requirements on the upgraded WWTP. Paragraph 100 of the CAFO sets forth certain WWTP-related compliance requirements under the Resource Conservation and Recovery Act (RCRA). These include:

1. Paragraph 100 B – "*Respondent shall cease the operation of, and dismantle, all existing Benzene/Air Strippers at its facility. . .*"
2. Paragraph 100 C – "*Respondent shall design, construct, properly permit, and commence operation of an upgraded wastewater treatment system . . . that is capable of treating all wastewater. . .*"
3. Paragraph 100 E – "*...The tanks and ancillary equipment in the upgraded wastewater treatment system that are in operation downstream of the API Separator shall be compliant with 40 C.F.R. § 262.34(a)...*"
4. Paragraph 100 G – "*Respondent shall limit volatile organic ("VO") air emissions from the upgraded waste water treatment system . . . to the limits in 40 CFR 265 subpart CC.*"
5. Paragraph 100J – "*...Respondent shall meet the following discharge limits for <u>any and all</u> wastewater discharged to any surface impoundments: benzene concentration in wastewater shall always be less than 0.5mg/L; wastewater shall have no RCRA hazardous characteristics...*"

1.1 Project Scope

The scope of the WWTP upgrade project consists of the following new systems:

- The oily refinery sewer and stormwater sewer have been combined into a single process sewer (hereafter referred to as Combined Process Sewer), as described in Section 4.1.1.
- A new equalization tank (Z84-T35, hereafter referred to as T35) has been installed that functions as the primary vessel into which the combined process sewer flows, as described in Section 4.1.2.
- Two existing tanks (Z84-T27 and Z84-T28, hereafter referred to as T27 and T28) have been refurbished and put in service. These tanks will provide additional equalization storage and emergency overflow capacity for T35, as described in Section 4.1.3. T35, T27 and T28 are all upstream of the existing "new" American Petroleum Institute (API) separator, (Z84-T5 and Z84-T6, hereafter referred to the API separator.)

- A Dissolved Gas Flotation (DGF) system, downstream of the API Separator, will be used to remove oil & grease and total suspended solids from the combined process sewer. The DGF system is described in Sections 3.1 and 4.1.5.
- A Macro Porous Polymer Extraction (MPPE) system, downstream of the DGF system will be used to remove dissolved benzene and other hydrocarbons from the combined process sewer, as described in Sections 3.2 and 4.1.6.
- A Sanitary treatment Pond (STP-1), with double liner and leak detection, will be used to remove BOD-5 from Pilot Travel Center and refinery sanitary sewers, as described in Section 4.1.7.

The following equipment and facilities will be decommissioned after WWTP upgrades:

- Benzene Stripper 1, 2 and 3
- Aeration Lagoons 1 and 2 (AL-1 and AL-2)
- Evaporation Pond 1 (EP-1)
- The Old API Separator (hereafter referred to as OAPIS) that was used to collect and treat refinery storm sewer. The OPAIS was decommissioned by March 01, 2011, as required by the CAFO.

The following equipment will continue to operate after WWTP upgrades:

- New API Separator (NAPIS)
- Evaporation Ponds 2 through 12 (EP-2 through EP-12)

The upgraded WWTP process flow diagram of is shown in Figure 1. A site plot plan is shown in Figure 2.

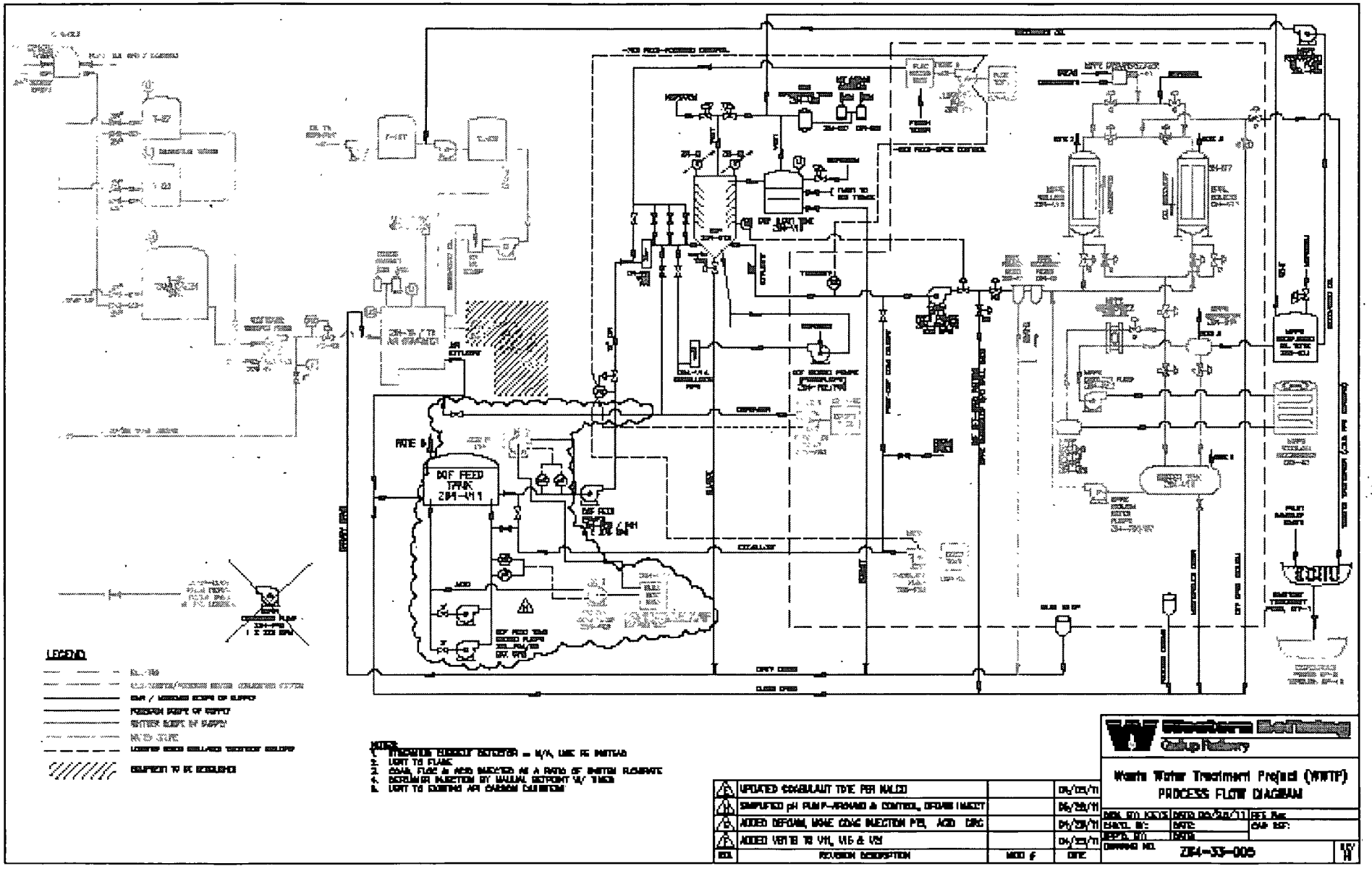

Figure 1, Process Flow Diagram

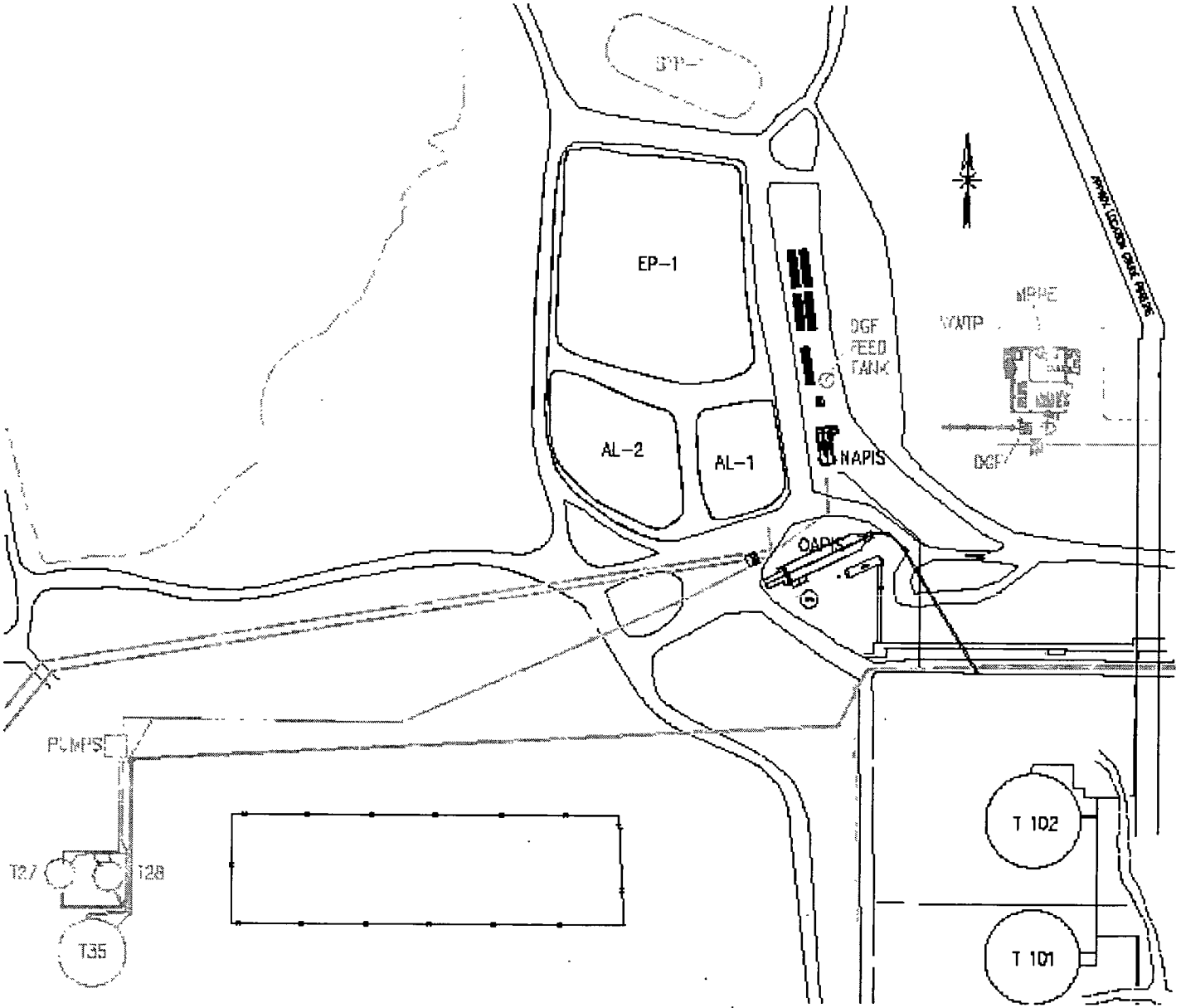

Figure 2, Site Plot Plan

1.2 Related Project - Pilot Travel Center Lift Station

A lift station to collect, screen and pump the sanitary/restaurant wastewater from the Pilot Travel Center has recently been installed and put into service. A force main conveys the wastewater to the WWTP, where it will be treated in a new Sanitary Treatment Pond (STP-1), before being discharged into EP-2.

1.3 Treatment Objectives

The ultimate objective of the upgraded WWTP is to meet the discharge limits defined in the CAFO. To achieve this, two state-of-the-art technologies have been selected, as described in Section 3.0. Each of these technologies will remove specific components from the combined process sewer. The upgraded WWTP will discharge into a new double lined aerated pond (STP-1) with no visible free oil, <0.5 mg/L benzene and no RCRA hazardous characteristics.

1.4 Regulatory Compliance

The upgraded WWTP described herein will be designed and constructed in accordance with the requirements of OCD permit GW-032 and the CAFO.

2.0 Wastewater Source

This section describes the sources of wastewater generated at the refinery and fall into two broad categories: those generated at the refinery and those generated at the adjacent Pilot Travel Center.

2.1 Refinery Wastewater

The refinery generates four different wastewater streams. They are:

- Oily process sewer resulting from normal refinery operations,
- Non-oily process sewer resulting from operations of the Reverse Osmosis (RO) unit, water softeners, cooling tower blowdown and boiler blowdown,
- Stormwater runoff from the refinery units, and
- Sanitary sewer from various restroom and kitchen facilities within the refinery and seven adjacent company-owned homes.

The oily process sewer, non-oily process sewer and stormwater runoff flow into a new combined process sewer, as described in Section 4.1.1. This combined process sewer then flows into T35.

The sanitary wastewater flows into the refinery's newly constructed lift station, as described in Section 2.2. This lift station will then flow to the new STP-1 to be constructed.

2.2 Pilot Travel Center Wastewater

The refinery has a contract with the adjacent Pilot Travel Center to treat the sanitary and restaurant wastewaters generated by that facility. The wastewater from the restaurant first passes through a Pilot-owned grease trap system that was installed in 2008. This grease trap effluent along with sanitary/restaurant wastewater from the rest of the Pilot Travel Center then flows into a Pilot-owned septic tank system. Septage is pumped out of this septic system on a scheduled quarterly basis for off-site disposal (as reported by Pilot Travel Center staff). Liquid effluent from this septic system gravity flows to a Pilot-owned lift station, located on their property. The lift station's submersible pumps then transfer the wastewater through a pipeline to the refinery for further treatment. Western Refining now operates a new lift station on its property to receive the wastewater from the Pilot Travel Center's lift station and the refinery's sanitary systems.

The Pilot Travel Center generates other wastewaters that are not discharged to the refinery. These other waste streams include truck washing and vehicle maintenance activities. They are managed with on-site oil-water separators, holding tanks and retention ponds.

2.3 Design Flow

The design flowrates for the individual wastewater sources are summarized below.

Design Flow Rates		
	Average, gpm	**Maximum, gpm**
API Separator Effluent[1]	250	500
Pilot Travel Center	50	120
RO Reject	100	150
Refinery Sanitary	4	--

1. API Separator effluent is the combined process sewer, which contains the oily and non-oily sewers, cooling tower blowdown and boiler blowdown.

The design flowrate for the API Separator effluent was set at an average of 250 gallons per minute (gpm) and a maximum of 500gpm. These flowrates were based on historical data with allowances for future expansion. The maximum flowrate for the upgraded WWTP is equal to the maximum flowrate of the API Separator with both bays in service, which is 500gpm.

The contract between Western Refining and the Pilot Travel Center limits their maximum sanitary sewer flowrate to 50gpm. However, the refinery's new lift station pumps are capable of handling a combined flowrate of 120gpm.

The average flowrate for the refinery's sanitary sources is based on the number of refinery employees. The maximum flowrate for the refinery's sanitary source is included in the Pilot Travel Center maximum flowrate, since it is also constrained by the combined pumping capacity of the Western-owned lift station.

3.0 Technology Selection

This section describes the two major technologies selected for the upgraded WWTP: a Dissolved Gas Flotation (DGF) system and s Macro Porous Polymer Extraction (MPPE) system. The DGF system described in Section 3.1 replaces Oil and Grease (O/G) and Total Suspended Solids (TSS) removal capabilities of the tank-based separator concept from the prior versions of this PDR. The MPPE system described in Section 3.2 replaces the benzene removal capabilities of the bioreactor concept from the prior versions of this PDR. Details on implementation of these technologies at the Gallup Refinery are contained in Section 4.0.

3.1 Dissolved Gas Flotation (DGF)

API separators, in general, provide first-stage (i.e. primary) oil-water separation by taking advantage of Stokes' Law. A second-stage oil-water separation is required to provide additional O/G removal beyond what is consistently achievable by API separators. Second-stage oil-water separation must remove the residual O/G and TSS that do not readily separate by gravity (i.e. emulsified O/G) and is required to provide appropriate influent quality to the downstream unit process (MPPE in our case).

A DGF system will provide the second-stage oil-water separation process for the upgraded

WWTP, as it is common refinery technology used downstream of API separators. Emulsified O/G is electrically released from the wastewater by the addition of coagulant and flocculant. After the pH is adjusted, the wastewater is pressurized in the presence of nitrogen, creating a super-saturated solution. When pumped into the DGF flotation chamber at atmospheric pressure, micron-sized nitrogen bubbles are released that physically float the flocculated O/G and TSS to the surface. This material is appropriately called "float". The float is thickened and removed from the top of the DGF by mechanical systems and managed in a Float Tank. The clarified water is pumped from the bottom of the DGF where a slip-stream is taken to provide the previously mentioned nitrogen super-saturation. More information on the DGF unit is contained in Section 4.1.5.

3.2 Macro Porous Polymer Extraction (MPPE)

The MPPE technology has been selected to remove all residual dissolved and dispersed hydrocarbons from the wastewater stream. MPPE technology has been successfully applied to the treatment of process water, offshore produced water, industrial wastewater and contaminated groundwater since 1994. It is a highly effective, fully automated, remote controlled and guaranteed method for removing dissolved and dispersed hydrocarbons from water with efficiencies of 99.9999% down to below ppb level by means of extraction in an MPP bed. With over 80 years of accumulated worldwide experience, the MPPE Technology is tested and proven with references by many respected companies.

The Macro Porous Polymer (MPP) acts as a carrier for an immobilized, nontoxic and biodegradable extraction liquid that has a high affinity to the components to be removed. That is, the removed constituents have partition coefficients such that they are guaranteed to have a high affinity to the MPPE extraction liquid. The treated wastewater is then free of the target constituents (i.e. benzene), which now reside only in the extraction liquid.

MPP media have a diameter of 1,000 microns, with pore sizes of 0.1 to 10 microns. These MPP media are capable of reducing contaminant concentrations in water by a factor of more than 1 million, which means that concentrations of thousands ppm (parts per million) can be lowered to below 1 ppb (parts per billion). This is done in only one cycle. The hydrocarbon removal efficiencies result from the high number of mass transfer sites developed in the packed column beds. This is mainly due to the high specific surface area associated with the porous polymer media.

Aside from clean treated water, the unit also yields almost 100% pure hydrocarbons suitable for reuse. Dissolved and dispersed compounds that can be removed with MPPE technology include:

- aromatics (i.e. benzene, toluene, xylenes and ethylbenzene),
- polyaromatic hydrocarbons (PAHs) (i.e naphthalenes, phenanthrenes, dibenzothiophenes),
- aliphatics including halogenated aliphatics.

The extraction liquid must be regenerated at fixed intervals to sustain hydrocarbon removal efficiencies. This regeneration is accomplished by back flowing low pressure steam across the column beds. The hydrocarbon laden stripping steam is condensed and sent to a separator, where recovered hydrocarbon and water are separated by gravity. This essentially 100% pure hydrocarbon phase is recycled to the refinery for reprocessing. The condensed water is recycled back to the MPPE unit, via a buffer tank.

The MPPE system utilizes two columns that cycle between absorption and regeneration,

allowing continuous operation. One column is always extraction hydrocarbons, while the other is being regenerated. This column cycle time is anticipated to be once every hour.

A schematic of the MPPE process is provided in Figure 3.

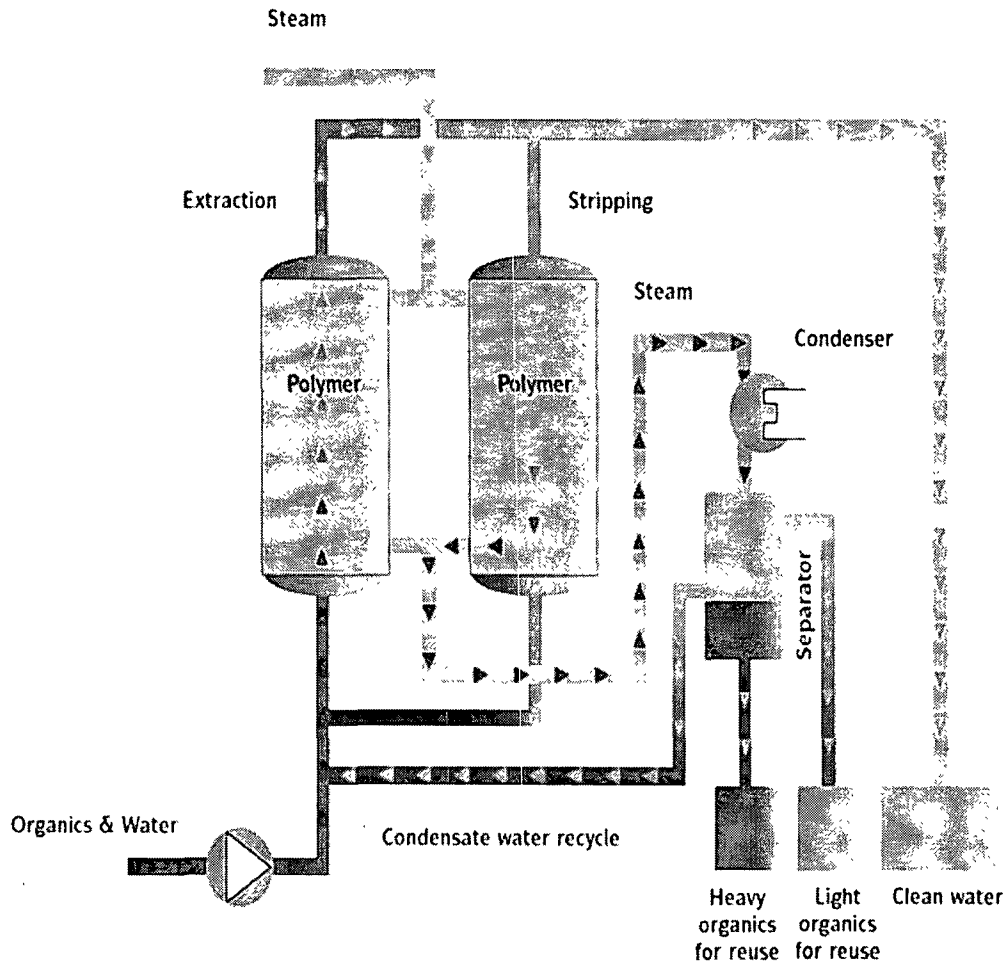

Figure 3, MPPE Schematic
(courtesy: Veolia Water)

4.0 Process Description

This section describes the new systems that will comprise the refinery's upgraded WWTP. The first subsection describes the new systems to be installed during the WWTP upgrades. The second subsection describes the existing systems that will be decommissioned because of the WWTP upgrades. The third subsection describes how the refinery will manage off-spec wastewater that may result from system anomalies. The last subsection describes tank design, secondary containment and leak detection. Please refer to the Process Flow Diagram shown in Figure 1 and the Site Plot Plan shown in Figure 2.

4.1 New Systems

4.1.1 Combined Process Sewer

During WWTP upgrades, two separate sewers were combined into one 24-inch process sewer; the stormwater sewer and the oily refinery sewer (containing RO rejects, water softener

regeneration, boiler blowdown and cooling tower blowdown). This new combined process sewer is constructed of partially buried carbon steel pipe and is approximately 1,200 linear feet long. It flows by gravity to the Equalization Tank (T35) and/or Surge Tanks (T27, T28). T35 is the primary destination of the combined process sewer, but if conditions dictate that wastewater cannot be sent to T35, it can be re-routed to T27and/or T28, by manipulating manual valves. Examples of this situation include when T35 is at its liquid holding capacity or is out of service for maintenance.

Cleanouts are installed in the combined process sewer to allow regularly scheduled clearing of blockages and sedimentation. During cleanouts, the material will be broken-up, fluidized and pushed into T35 by high pressure water and/or steam. The majority of the combined process sewer is buried below the frost line to prevent freezing, but near the tanks, the above ground portion is protected from freezing by electric heat tracing and insulation.

4.1.2 Equalization Tank (T35)

A new Equalization Tank (T35) has been constructed to equalize variability in both flowrate and material concentration before introduction to the API Separator, DGF and MPPE. The operating level of T35 will vary according to fluctuations in the combined process sewer flow, thus providing surge control function. Since the tank will normally operate at one-third to one-half of capacity, the remaining volume is available for surge control capacity.

T35 is equipped with an internal floating roof to minimize and control volatile air emissions. Sample ports are provided to allow for testing of both influent and effluent wastewater. T35 is 78ft in diameter by 32ft high. Maximum fill height is 28ft equating to 882,000 gallons of usable volume. With a routine operating level of one-third to one-half full, T35 will provide 22 to 33 hours of residence time for equalization (500,000 to 333,000 gallons), with 33 to 44 hours of surge capacity (503,000 to 671;000 gallons), based on a 250gpm average flowrate

Oil that accumulates on the water surface of T35 is removed by a skimmer device attached to the tank's floating roof. The skimmed oil is collected by vacuum truck and transferred to the refinery's oil recovery system for recycling back to the refining process. The oil level is checked on a routine basis and skimmed, as required by operating conditions and performance. It is considered undesirable for the floating oil to accumulate to such a level that it would be pumped to the API Separator. We anticipate removing oil from T35 every couple weeks, if not weekly.

Solids entering T35 will settle to the bottom of the tanks as a layer of sludge. To minimize this, provisions for tank mixing is designed into the system. T35 has internal jet nozzle mixers installed that draw a tank volume equal to three times that recirculated back to the tank. For example, if the Wastewater Transfer Pumps (described in Section 4.1.4) circulate 250gpm back to the tank, these jet mixers will induct an additional 750gpm of tank contents. This results in very effective tank mixing. Additional flexibility is designed into the system to allow wastewater transfer to the API Separator, flow from the combined process sewer and recirculatory mixing to occur simultaneously.

Additionally, sludge that settles out in the bottom of the tank will require periodically cleaning. This is expected to occur every three to five years, lasting two to four weeks. Standard refinery tank cleanout and sludge management procedures will be followed. During these periods, equalization of the combined process sewer will be accomplished using T27

and/or T28. Flexibility is designed into the piping system to allow wastewater to be routed to any of the three tanks, as needed.

T35 level will be monitored daily to verify adequate pump rate. If the tank level begins to rise, the transfer flowrate is increased by opening the flow control valve. Similarly, if the tank level begins to drop, the transfer flowrate will be decreased by closing the flow control valve.

4.1.3 Surge Tanks (T27 & T28)

T27 and T28 are existing tanks located near T35 that have been refurbished and put into service to provide additional equalization storage and emergency overflow capacity for T35. These tanks will be used only when T35 is at its liquid holding capacity or is out of service for maintenance.

Like T35, T27 and T28 are also equipped with internal floating roofs to minimize and control volatile air emissions. Sample ports are provided to allow testing of both influent and effluent wastewater. These tanks are 33.5ft in diameter by 32ft high. Both tank's maximum fill heights are 28ft, which equates to 166,000 gallons of usable volume each.

The combined surge capacity of T35, T27 and T28 is 875,000 to 1,042,000 gallons, depending on the operating level of T35. The three tanks will be able to hold 2.5 to 3.0 days worth of flow from the combined process sewer, if the API Separator, DGF and/or MPPE units malfunction or are taken out of service for maintenance.

Oil that accumulates on the liquid surfaces and solids that settle to the bottoms of T27 and T28 will be managed in a manner similar to that described for T35.

In previous version of this PDR, it was anticipated that off-spec wastewater would be returned to T27 and/or T28. This provision has since then been eliminated from the WWTP upgrades. For that reason all references to RCRA 90-day accumulation requirements have been removed. However, the need to periodically re-suspend settled solids in T35, 27 and/or T28 still exists. This re-suspension will be accomplished by recirculation of the tanks, a commonly used method for mixing tank contents. The Wastewater Transfer Pumps, as described in Section 4.1.4, will be used for this purpose.

4.1.4 Wastewater Transfer Pumps

Three 15hp Wastewater Transfer Pumps are used to transfer wastewater from T35, T27 and T28 to the API Separator. Transfer will only occur from one tank at a time. Normally, one pump is in use and pumps 275gpm, with two additional pumps available as installed spares. A flow meter and flow control valve are installed in the system to control the rate of wastewater transfer to the API Separator. Two pumps can operate at the same time to provide a combined flowrate of 500gpm. Overall flowrate to the API Separator is limited to 500gpm.

Approximately 1,300 linear feet of 6-inch diameter piping connects the Wastewater Transfer Pumps to the API Separator. The piping is protected from freezing by electric heat tracing and insulation.

With one pump operating at 275gpm, this pipeline flows nearly continuously at 3.1 feet per second, which is an industry standard for scour velocity. Occasional pressure surveys will be conducted to determine if solids have settled out of the flow. Settled solids will affect flow performance. If settling is determined to have occurred, two Wastewater Transfer pumps will be operated simultaneously. This will increase the flowrate to 500gpm and the corresponding line velocity to 5.6 feet per second, effectively sweeping out any settled solids.

Additionally, CAFO compliance requires that this pipeline to be fully welded with daily inspections.

4.1.5 DGF System

The DGF system is a single, covered, above-ground, stainless steel vessel, with a design flowrate of 275gpm and a maximum flowrate of 500gpm. Wastewater from the API Separator gravity flows to a DGF Feed Tank where coagulant is injected and pH is adjusted. DGF Feed Pumps will the transfer wastewater to the DGF system. Just before entering the DGF, flocculant will be injected into the wastewater. Nitrogen will be used to remove the O/G and TSS, as described in Section 3.1.

The clarified water from the DGF system will then be pumped to the MPPE system (as described in Section 4.1.6) by two pumps - one in operations and one in standby). Each pump has a design flowrate of 275gpm with a maximum flowrate of 500gpm.

The float material removed from the DGF will be sent to a Float Tank, where volume reduction and thickening will occur. Oily solids collected in the Float Tank will be recycled to a refining process (on-site or off-site). Should operating experience indicate that further volume reductions occur; blind-flanged nozzles are included for possible future mechanical dewatering. Water decanted from the Float Tank will be routed back to the API Separator for reprocessing through the DGF system.

It was determined that reliable operations and performance could be achieved by a single DGF, with redundant recirculation pumps. This design configuration is acceptable because the vendor claims that no reasons exist for the unit to be out of service for periods longer than the 2.5 to 3.0 days of storage provided by T25, T27 and T28. The redundant DGF recirculation pump will provide flexibility in operations for the single critical rotating equipment item in the DGF system. Attachment A provides information from the DGF vendor to support this design approach.

4.1.6 MPPE System

The MPPE system consists of two columns operating in parallel, as described in Section 3.2. One column will be in service (absorbing) while the other is being regenerated, and will switch hourly. The absorbing column will receive clarified water from the DGF system and will flow from the bottom to the top. Once benzene and other hydrocarbons are removed by the absorption column, RCRA compliant water will be discharged by gravity to STP-1, as described in Section 4.1.7.

Periodic regeneration will occur automatically every hour. Regeneration requires low pressure saturated steam to flow from the top and to the bottom. The hydrocarbon-laden steam will then be condensed and separated to produce a water stream that is recycled back to the absorbing column and a hydrocarbon stream that is collected and periodically pumped back to the refinery for reprocessing.

Attachment B provides vendor-supplied basic maintenance requirements for the MPPE. Other detailed maintenance instructions include replacement of pump seals and valve seats, instrument recalibration and media replacement; all of which can be accomplished in a matter of hours. This maintenance is anticipated to be able to occur within the 2.5 to 3.0 day wastewater retention window provided by T35, T27 and T28, as discussed in Sections 4.1.2 and 4.1.3.

4.1.7 Sanitary Treatment Pond (STP-1)

Pilot Travel Center and refinery sanitary wastewater will be biologically treated in an aerated treatment pond, before being discharged to the evaporation pond network. All solids in the Pilot wastewater are removed first by a Pilot-owned septic system. Effluent from this septic system is then pumped to a screening system at the refinery lift station. Pumps at the lift station will transfer wastewater to STP-1. Flow meters will be installed to track volumes.

This new Sanitary Treatment Pond (STP-1) will treat BOD-5 and other soluble organics. STP-1 will be designed and installed with double liner and leak detection, in accordance with NM-OCD requirements. For operational flexibility, STP-1 will be partitioned giving two individual and separate compartments that will allow one side to be cleaned and/or inspected, while the other side continues to operate. Treated water from STP-1 will gravity flow into EP-2 and then into the existing evaporation pond network.

MPPE effluent will also gravity flow into STP-1. A flow meter will also be installed on this line to track discharge volumes. MPPE effluent will be free of floating oil, have benzene concentrations less than 0.5 mg/L and will have no RCRA hazardous characteristics, as required in CAFO paragraph 100J. However, STP-1 will provide another layer of protection against unwanted discharges of contaminated water in existing surface impoundments. Evaporation pond influent quality will be assured by the following WWTP upgrades:

- flowrates and waste loadings will be less variable because of T35, T27 and T28,
- Improved oil-water separation and removal because of the DGF system, and
- Robust and reliable removal of benzene and other hydrocarbons because of the MPPE system.

4.2 Decommissioned Systems

Placing the upgraded WWTP system into service will allow the following existing systems to be decommissioned:

4.2.1 Benzene Strippers

The MPPE system will replace the current benzene removal capabilities of the three benzene strippers located near the old API Separator (Z84-V4, V5 and V8) and one stripper located in the refinery units (Z84-V7). These air-strippers and associated equipment will be decommissioned and dismantled.

4.2.2 AL-1, AL-2 and EP-1

The two Aeration Lagoons (AL-1 and AL-2) and Evaporation Pond 1 (EP-1) will be decommissioned and closed in-place, pursuant to the "Closure Plan Aeration Lagoons". The surface aerators used in AL-1 and AL-2 will be reused in STP-1. The Corrective Measures Implementation Work Plan for the Wastewater Aeration Lagoons (Solid Waste Management Unit No. 1) has been submitted separately to NMED (July 30, 2009) under which closure will be conducted following NMED approval.

4.2.3 Old API Separator (OAPIS)

The OAPIS originally collected stormwater from the process area. Recent work has been completed that removes the stormwater from this OAPIS and combines it with the refinery sewer; both of which now flow into T35 with surge capacity provided by T27 and/or T28. The OAPIS inlet was physically separated and plugged from the old sewer system by March 01, 2011, as required by the CAFO. Because the OAPIS was designated by the NM-EPA as Solid Waste Management Unit #14, it will be demolished in accordance with the Investigation Work Plan Old API Separator (Revised October 2010).

4.3 Management of Off-Spec Wastewater

DGF and MPPE process health will be monitored twice per day, with samples collected at approximately 7:00am and 7:00pm. On-site laboratory Gas Chromatograph/ Mass Spectrometer (GC/MS) analysis will be conducted to determine benzene concentrations in the MPPE effluent. Results will be available within a few hours of sample collection and will be used as process knowledge in determining when to divert flow from STP-1. To account for the fact that our on-site method is not identical to the EPA-approved method, and to act proactively, benzene concentrations of 0.4 mg/L trigger diversion from STP-1.

As discussed in the last paragraph of Section 4.1.3, earlier versions of this PDR stated that off-spec wastewater would be returned to T27 and/or T28. This provision has since then been eliminated from the WWTP upgrades. If effluent from either the DGF or MPPE are found to be off-spec (i.e. > 0.5 mg/L benzene), flows will be diverted to the DGF Feed Tank instead of T27 and/or T28. The design and construction of this DGF Feed Tank will be in accordance with all RCRA standards, as described in Section 4.4.

If wastewater is diverted from STP-1, corrective actions will be taken with respect to the DGF and/or MPPE systems. During the diversion period, no post-API material will be returned to T35, T27 or T28. Wastewater transfer from T35, T27 or T28 to the API Separator will stop until on-site laboratory analysis proves that benzene concentrations in the MPPE effluent are less than 0.4 mg/L. Only then will flow through the WWTP system, and subsequent discharge into STP-1, be returned to normal operating conditions.

4.4 Tank Design, Secondary Containment and Leak Detection

Under the terms of the CAFO, all tanks and ancillary equipment downstream of the API Separator are subject to 40 CFR §262.34(a) which contains language related to 90-day accumulation without a permit. By reference, these systems are therefore subject to 40 CFR §265 Subpart J for tank systems. Accordingly, all systems downstream of the new API separator will comply with the tank design requirements of 40 CFR §265 Subpart J, including secondary containment and leak detection.

As discussed in Sections 4.1.3 and 4.3, diversion of off-spec DGF/MPPE wastewater will not return to T35, T27 and/or T28. Instead, all off-spec material will be piped to the DGF Feed Tank; which is located after the NAPIS and will comply with 40 CFR §265 Subpart J for tank systems.

The table below shows the components of the upgraded WWTP project described in this Work Plan. For each component, the table lists whether it is subjected to the requirements of paragraphs 100 E and F of the CAFO and, if so, how secondary containment and leak detection will be accomplished to conform to the requirements of 40 CFR §262.34(a) and 40 CFR §265

Subpart J Tank Systems.

There exist instances where above ground "all welded" pipe connections are outside secondary containment areas (i.e. at flow meters and valve locations). In these instances, dedicated secondary containment devices (i.e. fabricated or constructed boxes) will be installed under the non-welded connections.

CAFO Sub Part J Compliance					
Item No.	Name	Description	Covered by CAFO?	Secondary Containment	Leak Detection
1	Buried Combined Process Sewer to T35, T27 & T28	Combines oily process and stormwater sewers into a single pipeline flowing into T35, T27 & T28	No; not downstream of API Separator	None	None
2	Above ground Combined Process Sewer to T35, T27 & T28	As the combined process sewer enters the bermed secondary containment area for T35, T27 & T28, it will be routed above ground	No; not downstream of API Separator	Yes; inside bermed tank containment area with volume to contain 1.3 times largest tank	Yes; Visual
3	T35 (Equalization Tank)	Provides wastewater equalization and surge capacity for combined process sewer	No; not downstream of API Separator	Yes; inside bermed tank containment area with volume to contain 1.3 times largest tank	Yes; Double Bottom with Leak Detection at the Tank Perimeter
4	T27 & T28 (Surge Tanks)	Additional surge & equalizations capacity for combined process sewer	No; not downstream of API Separator. *Note off-spec diversion now only after NAPIS.*	Yes; inside bermed tank containment area with volume to contain 1.3 times largest tank	Yes; Double Bottom with Leak Detection at the Tank Perimeter
5	Above ground piping from T35, T27 & T28 to Wastewater Transfer Pumps	Pump suction from all three tanks	No; not downstream of API Separator	Yes; inside bermed tank containment area with volume to contain 1.3 times largest tank	Yes; Visual (daily)
6	Wastewater Transfer Pumps	Pumps used to transfer wastewater from T35, T27 & T28 to API Separator	No; not downstream of API Separator	Yes; curbed area inside Pump Shed, also inside bermed tank containment area with volume to contain 1.3 times largest tank	Yes; Visual (daily)

CAFO Sub Part J Compliance					
Item No.	Name	Description	Covered by CAFO?	Secondary Containment	Leak Detection
7	Above ground piping from Wastewater Transfer Pumps to API Separator	Single discharge pipeline from the Wastewater Transfer Pumps to API Separator	No; not downstream of API Separator	Yes; essentially all above ground; welded pipe, flanges, joints and connections. Sleeved underground road crossings with leak indication	Yes; Visual (daily)
8	API Separator including skimmed oil and bottom solids systems	Existing; no change	No; no change	Existing; no change	Existing; no change
9	DGF Feed Tank	Surge, pump suction, chemical treatment and pH adjustment between API Separator & WWTP	Yes, Downstream of API separator	Yes; to be installed inside concrete containment area with volume 1.3 times largest tank	Yes; Visual (daily)
10	DGF Feed Pumps	Pumps used to transfer wastewater from DGF Feed Tank to WWTP	Yes, Downstream of API separator	Yes; to be installed inside concrete containment area with volume 1.3 times largest tank	Yes; Visual (daily)
11	Piping from DGF Feed Pumps to DGF system	Single discharge pipeline from the DGF Feed Pumps to DGF system	Yes; downstream of API Separator	Yes; above ground; welded pipe flanges, joints and connections	Yes; Visual (daily)
12	DGF System	Elevated Vessel	Yes; downstream of API Separator	Yes; Inside curbed concrete containment adjacent WWTP bldg with volume1.3 times largest tank	Yes; Visual (daily)
13	MPPE Feed Pumps	Pumps used to transfer wastewater from DGF to MPPE	Yes, Downstream of API separator	Yes; to be installed inside WWTP bldg concrete containment area with volume 1.3 times largest tank	Yes; Visual (daily)
14	Piping from DGF system to MPPE system	Single discharge pipeline from the MPPE Feed Pumps to MPPE system	Yes; downstream of API Separator	Yes; to be installed inside WWTP bldg concrete containment area with volume 1.3 times largest tank	Yes; Visual (daily)

CAFO Sub Part J Compliance					
Item No.	Name	Description	Covered by CAFO?	Secondary Containment	Leak Detection
15	MPPE System	Various elevated vessels	Yes; downstream of API Separator	Yes; to be installed inside WWTP bldg concrete containment area with volume 1.3 times largest tank	Yes; Visual (daily)
16	Treated Effluent from MPPE system	Single discharge pipeline from the MPPE system to STP-1	No; RCRA non-hazardous; <0.5 mg/L benzene	None, but will be installed above ground	None
17	Off-Spec Diversion Piping from WWTP to DGF Feed Tank	Single discharge pipeline from the WWTP to DGF Feed Tank	Yes; downstream of API Separator	No; above ground; welded pipe flanges, joints and connections	Yes; Visual (daily)
18	DGF Float Tank	Elevated vessel for DGF float management	No; oil-bearing residuals exemption per 40 CFR 261.4(a)(12)	Yes; Inside curbed concrete containment adjacent WWTP bldg with volume1.3 times largest tank	Yes; Visual (daily)
19	Recovered Hydrocarbon Piping	Single discharge pipeline from the MPPE Recovered Oil Tank to pump discharge at T105	No; by-product reclaimed and exempt per 40 CFR 261.2 (c)(3)	None, but still above ground; welded pipe flanges, joints and connections	None
20	STP-1	Receives sanitary and treated process wastewater.	No; For treatment of sewage wastewaters	Yes; OCD requirement for double liners	Yes; OCD requirement for leak detection

4.5 Air Emissions Control

The upgraded WWTP will meet all air emission regulatory requirements, including Paragraph 100 G of the CAFO as applicable, through the following measures:

- Internal floating roofs are used to control air emissions from T35, T27 and T28.
- The existing GAC system (located near the NAPIS) will be used to control emissions from the DGF Feed Tank.
- A new iron-impregnated wood / Granular Activated Carbon (GAC) canister system will be used to control emissions from the DGF, DGF Float Tank and the MPPE Recovered Oil Tank.
- The existing flare system will be used to control emissions from both MPPE Columns, the MPPE Separator and the MPPE Buffer Tank.

Vapor sampling points will be added to the DGF emission point, MPPE emission point, GAC inlets and outlets, as previously requested by the NMED. However, routine sampling of these points are not anticipated, with the exception of the following: GAC performance will be based on results from exhaust vapor (GAC outlet) sampling and carbon replacement will be based on breakthrough calculations.

5.0 Project Schedule

The required project schedule for design and construction of the upgraded WWTP is in accordance with the revised CAFO Milestone Schedule, recreated below.

CAFO Milestone Schedule	
1. Submit proof of procurement including vendor Acknowledgement of Order, vendor's factory order number, and estimated delivery date for DGF and MPPE units to demonstrate Respondent will comply with milestone 7 of this chart.	September 30, 2010
2. Commence construction of Equalization Tank.	September 30, 2010
3. Complete installation of Tanks 27 and 28, and Equalization Tank and ancillary equipment and connect the storm water management system to the current Waste Water Treatment System.	December 31, 2010
4. Commence operation of the storm water management system.	January 15, 2011
5. Complete measures to prevent the Old API Separator from receiving and flows, including removal of segments from, and insertion of cement plugs in, all inlet piping to the Old API Separator.[2]	March 1, 2011
6. Complete site preparation and foundations for DGF and MPPE equipment.	July 31, 2011
7. Complete installation of interconnecting piping and transfer pumps for DGF and MPPE units.	January 31, 2012
8. Complete connection of the storm water management system to the new Waste Water Treatment System and commission and Start-Up of DGF and MPPE units.	February 29, 2012
9. End of system startup grace period for achievement of all discharge limits as required by the CAFO.	May 31, 2012

[2] Such measures shall not be construed to limit the authority of the NMED with respect to corrective action at any solid waste management unit or area of concern at Respondent's facility.

Attachment A, DGF System Maintenance Information

The following information regarding DGF system maintenance was provided by:

Traitements des eaux POSEÏDON Inc.
Suite 310, 1290 Van Horne Avenue, Montréal QC Canada H2V 4S2
Tel. 514-270-9593, Fax. 514-270-9355, Gen. E-mail: info@poseidoninc.com, Web: poseidoninc.com

The need for maintenance will mainly come from mechanical components. The skimming device and its motor reducer require little maintenance. The Poseipump[1] requires the same maintenance as a typical centrifugal pump; i.e., replacement of the mechanical seal approximately once per year. In addition, there is a rotary joint on the shaft of the Poseipump that brings the flotation gas to the pump. It requires replacement approximately once or twice per year.

The units are built in stainless steel and there are no mechanical components below water level. All of the mechanical components that need attention are accessible from outside the unit and will not need down time for maintenance. They are the skimming device (inside the unit but above the water level) and its motor reducer (outside the unit), the recirculation/gas dissolution Poseipump and its motor. Some shelf spares and an installed Poseipump will offset the need for down time.

We estimate that it would be good practice to inspect and clean the unit during planned turnarounds. A typical DGF outage is simple and provision should be made for: complete skimming of the float, opening the cover hatch, draining of the water, removal of the cover (with a crane), cleaning the inside of the unit (with water hoses), re-installation of the cover with new seal and filling the unit with clean water. This can be done within one day for the Saturn model.

Since our units are built in stainless steel, since there are no mechanical components below water level, and since we use only the most dependable components (such as motor-reducers instead of chains and sprockets, etc.), operation reliability is improved and maintenance is significantly reduced. Therefore, it is possible to treat the entire wastewater stream on a continuous basis with a single DGF unit and with reliability. We have DGF units that have been in operation since late 2003, that have been open only once during a planned turnaround in 2006 (for preventive inspection and cleaning) and that have been operating without any interruption since then.

[1] The Poseipump provide dissolution of the flotation gas through pressurized recycle stream. It's the DGF recycle pump.

Attachment B, MPPE System Maintenance Information

The following information regarding MPPE system maintenance was provided by Whittier Filtration:

Although the unit is designed to run automatically and unmanned, the unit should be inspected daily. Normal maintenance will include inspecting and/or replacing pump seals and valve seats. This should be done on an annual basis. The instruments should be checked and/or recalibrated semiannually. Pressure relief valves should be checked on a monthly basis to ensure safety. If found to be leaking or damaged, they should be replaced.

The performance is guaranteed for the operational lifetime of the unit. The media is designed to last between one and two years. When the media effectiveness decreases below a predetermined value, the media will need to be exchanged. This is determined by periodic effluent sampling. The exchange service is provided by Whittier Filtration as part of the performance guarantee. The exchange will take between four and eight hours. As part of the operating parameters, the media is steam stripped with low pressure steam every hour. This will remove the extracted hydrocarbons from the media as well as protecting the media from organic fouling.

Chavez, Carl J, EMNRD

From: VonGonten, Glenn, EMNRD
Sent: Friday, June 10, 2011 8:18 AM
To: Sanchez, Daniel J., EMNRD; Chavez, Carl J, EMNRD
Subject: FW: Western Refining Penalty

From: Winchester, Jim, NMENV
Sent: Thursday, June 09, 2011 5:45 PM
To: NMENV-global
Subject: Western Refining Penalty

NEWS RELEASE
June 9, 2011

Contact: Jim Winchester, Public Information Officer (NMED)
(505)231-8800 / jim.winchester@state.nm.us

WESTERN REFINING AGREES TO PAY $350,000 PENALTY TO NEW MEXICO ENVIRONMENT DEPARTMENT

Western Refining Company, the nation's fourth largest publicly traded independent oil refiner, has agreed to pay a $350,000 civil penalty to the New Mexico Environment Department (NMED). The civil penalty was assessed in a recent compliance order alleging that compressor engines at Western's refinery east of Gallup, New Mexico violated their permitted emission limits for nitrogen oxides and carbon monoxide between March and September 2010. The violations were detected during routine testing of the engines. In consultation with the NMED, Western Refining has revised its permitted emission limits and retested the engines to demonstrate compliance. During the permitting process, the Department determined that the engine violations did not cause or contribute to an exceedance of state or federal ambient air quality standards.

The compliance order is not the first environmental compliance issue for the Gallup refinery, which Western Refining, based in El Paso, Texas, purchased from Giant Industries of Arizona in 2006. The previous year, NMED and Giant Industries entered into a stipulated final order requiring Giant to implement extensive environmental upgrades at both the Gallup and Bloomfield refineries and to pay a civil penalty of $850,000. In 2009, NMED and Western Refining agreed to amend the stipulated final order, in part to resolve pending violations, and as part of this process, Western agreed to pay an additional $2,250,000 in stipulated penalties to the State of New Mexico.

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Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Monday, February 14, 2011 10:26 AM
To: Bearzi, James, NMENV; 'Dougherty.Joel@epamail.epa.gov'; Chavez, Carl J, EMNRD; Hansen.Mark@epamail.epa.gov; Tidmore.Guy@epamail.epa.gov
Cc: Allen, Ann; Turri, Mark; Leute, Alan; Monzeglio, Hope, NMENV; VanHorn, Kristen, NMENV; Riley, Don
Subject: RE: Completion of Milestone #5 Certification
Attachments: 20110214101155818.pdf

Subject: Completion of Milestone #5 Certification

Dear Mr. Bearzi,

Please find attached a copy of the Completion of Milestone #5 letter in PDF. The original signed copy is being mailed to you.

Thanks,

Ed Riege
Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

Western Refining
GALLUP

WNR LISTED NYSE

February 14, 2011

VIA EMAIL AND CERTIFIED MAIL No. 7008 2810 0000 4726 2175

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environmental Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Mark Hansen
Associate Director
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Avenue
Dallas, TX 75202-2733

Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

RE: COMPLETION OF MILESTONE CERTIFICATION
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
EPA ID #NMD000333211

Dear Mr. Bearzi:

This letter is to notify NMED and EPA that Western Refining Southwest, Inc., Gallup refinery ("Gallup") has met Milestone #5, in Paragraph 100.I of the Complaint and Consent Agreement and Final Order (CAFO), Docket No. RCRA-06-2009-0936: "Complete measures to prevent the Old API Separator from receiving any flows, including removal of segments from, and insertion of cement plugs in, all inlet piping to the Old API Separator." Western has met this milestone not later than the specified Implementation Date of March 1, 2011.

I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

Please feel free to contact Don Riley at 505-722-0932 with any questions.

Sincerely,

for Mark Turri

Mark B. Turri
Refinery Manager

Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Monday, January 17, 2011 9:45 AM
To: Riege, Ed; Bearzi, James, NMENV; 'Dougherty.Joel@epamail.epa.gov'; Chavez, Carl J, EMNRD; Hansen.Mark@epamail.epa.gov; Tidmore.Guy@epamail.epa.gov
Cc: Allen, Ann; Turri, Mark; Leute, Alan; Monzeglio, Hope, NMENV; 'Van Horn, Kristen, NMENV'
Subject: RE: Completion of Milestone #4 Certification
Attachments: 20110117085153949.pdf

Subject: Completion of Milestone #4 Certification

Dear Mr. Bearzi,

Please find attached a copy of the Completion of Milestone #4 letter in PDF. The original is in the mail.

Thanks,

Ed Riege
Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

Western Refining
GALLUP

WNR
LISTED
NYSE

January 17, 2011

VIA EMAIL AND CERTIFIED MAIL No. 7008 2810 0000 4726 2465

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environmental Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Mark Hansen
Associate Director
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Avenue
Dallas, TX 75202-2733

Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

RE: COMPLETION OF MILESTONE CERTIFICATION
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
EPA ID #NMD000333211

Dear Mr. Bearzi:

This letter is to notify NMED and EPA that Western Refining Southwest, Inc., Gallup refinery ("Gallup") has met Milestone #4, in Paragraph 100.I of the Complaint and Consent Agreement and Final Order (CAFO), Docket No. RCRA-06-2009-0936: "Commence operation of the storm water management system". Western has met this milestone not later than the specified Implementation Date of January 15, 2011.

I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

Please feel free to contact Alan Leute at 915-775-3278 with any questions.

Sincerely,

Mark B. Turri
Refinery Manager

Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Tuesday, January 04, 2011 4:47 PM
To: Bearzi, James, NMENV; 'broyes.ragan@epa.gov'; 'Dougherty.Joel@epamail.epa.gov'; Chavez, Carl J, EMNRD
Cc: Allen, Ann; Turri, Mark; Leute, Alan; Monzeglio, Hope, NMENV; 'Van Horn, Kristen, NMENV'
Subject: RE: Completion of Milestone #3 Certification
Attachments: 20110104163218254.pdf; DSCN0284.jpg; DSCN0287.jpg; DSCN0291.jpg; DSCN0313.jpg; DSCN0314.jpg

Subject: Completion of Milestone #3 Certification

Dear Mr. Bearzi,

Please find attached a copy of the Completion of Milestone #3 letter in PDF. Also attached are photos of the Equalization Tank and associated piping. The original signed copy is being mailed to you.

Thanks,

Ed Riege
Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

Western Refining
GALLUP

January 4, 2011

VIA EMAIL AND CERTIFIED MAIL No. 7008 2810 0000 4726 2458

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environmental Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Ragan Broyles (6EN-H)
Assistant Director
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

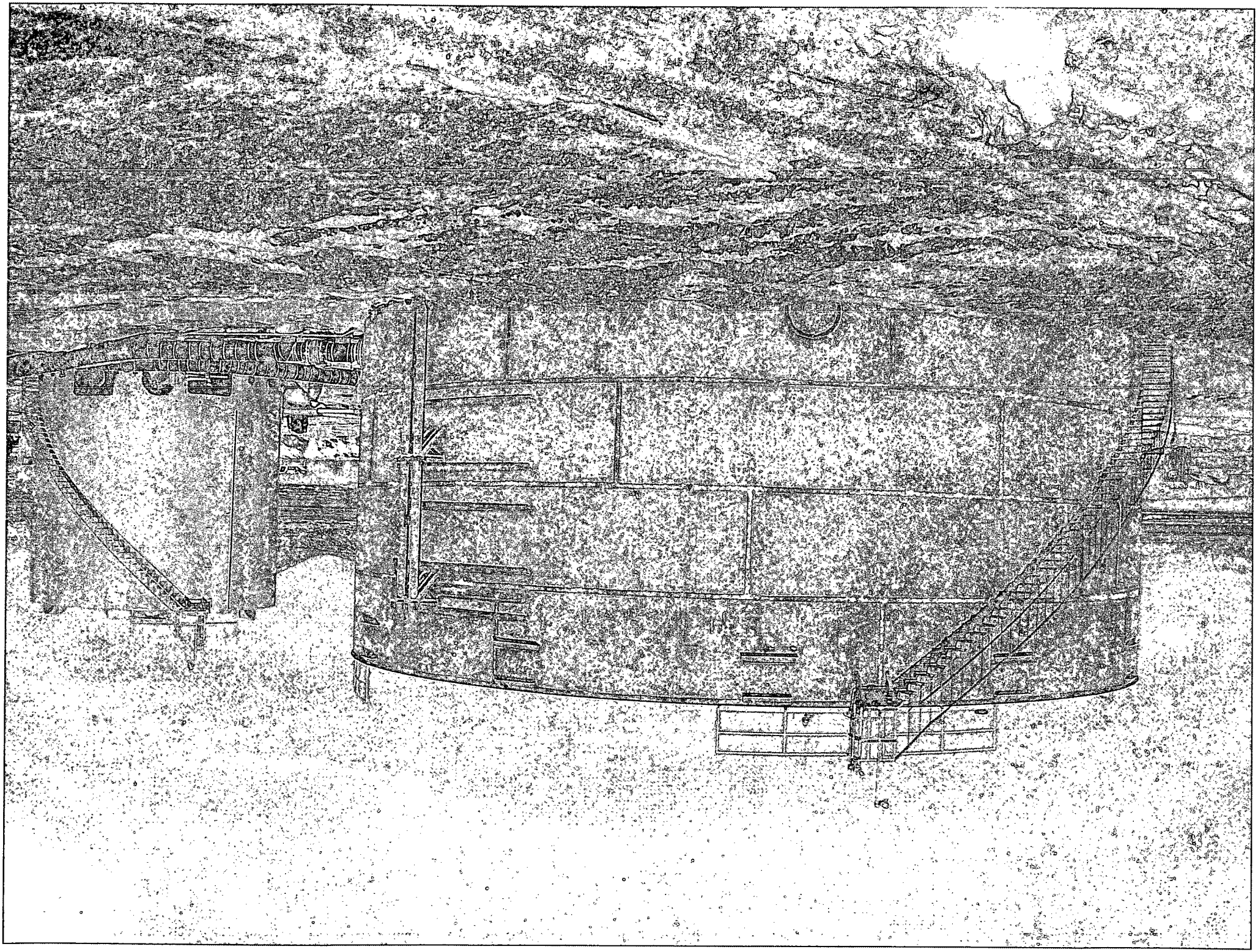
Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

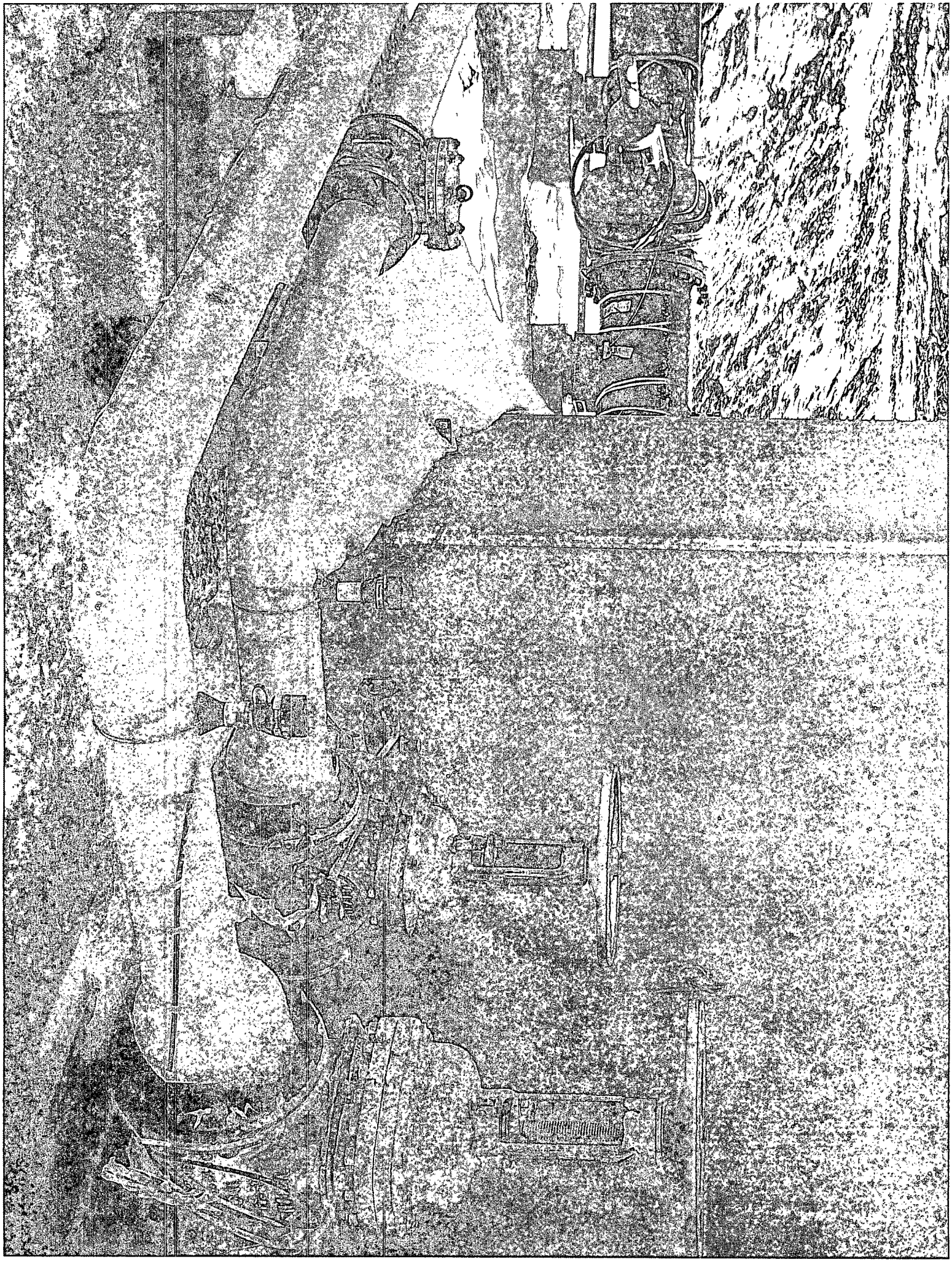
RE: COMPLETION OF MILESTONE CERTIFICATION
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
EPA ID #NMD000333211

Dear Mr. Bearzi:

This letter is to notify NMED and EPA that Western Refining Southwest, Inc., Gallup refinery ("Gallup") has met Milestone #3, in Paragraph 100.I of the Complaint and Consent Agreement and Final Order (CAFO), Docket No. RCRA-06-2009-0936 : "Complete installation of Tanks 27 and 28, and Equalization Tank and ancillary equipment and connect the storm water management system to the current Waste Water Treatment System". Enclosed are pictures taken of the installations. Western has met this milestone not later than the specified Implementation Date of December 31, 2010.

I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.





Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Tuesday, October 05, 2010 1:44 PM
To: Bearzi, James, NMENV; broyes.ragan@epa.gov; Dougherty.Joel@epamail.epa.gov; Chavez, Carl J, EMNRD
Cc: Allen, Ann; Turri, Mark; Leute, Alan; Monzeglio, Hope, NMENV; Van Horn, Kristen, NMENV
Subject: Completion of Milestone #1 Certification
Attachments: 20101005133403148.pdf

Dear Mr. Bearzi,

Please find attached a copy of the Completion of Milestone #1 letter. The original signed copy is being mailed to you.

Thanks,

Ed Riege
Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

Safety starts with "S", but always begins with "You"

Western Refining
GALLUP

WNR LISTED NYSE

October 5, 2010

VIA EMAIL AND CERTIFIED MAIL No. 7008 2810 0000 4726 2489

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environmental Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Ragan Broyles (6EN-H)
Assistant Director
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

RE: COMPLETION OF MILESTONE CERTIFICATION
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
EPA ID #NMD000333211

Dear Mr. Bearzi:

This letter is to notify NMED and EPA that Western Refining Southwest, Inc., Gallup refinery ("Gallup") has met Milestone #1, in Paragraph 100.I of the Complaint and Consent Agreement and Final Order (CAFO), Docket No. RCRA-06-2009-0936 : "Submit proof of procurement including vendor acknowledgement of Order, vendor's factory order number, and estimated delivery date for DGF and MPPE units to demonstrate Respondent will comply with milestone 7 of this chart"". Western has met this milestone not later than the specified Implementation Date of September 30, 2010.

The attached proof of procurement contains the vendor acknowledgement of Order, vendor's factory order number, and estimated delivery date from Poseidon Inc. (the Dissolved Gas Flotation unit vendor) and Whittier Filtration (the Macro Porous Polymer Extraction unit vendor).

I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

Please feel free to contact Alan Leute at 915-775-3278 with any questions.

Sincerely,

Mark B. Turri
Refinery Manager

cc: Hope Monzeglio NMED HWB
Carl Chavez OCD
Ann Allen Western Refining
Ed Riege Western Refining
Alan Leute Western Refining

Montreal, September 29th 2010

Western Refining
Route 3, Box 7
Gallup NM 87301
USA

Attention: Mr. Alan Leute, Project Manager

E-mail: alan.leute@wnr.com

Reference: **Western Refining, Gallup Refinery– New Mexico**
Dissolved Nitrogen Gas Flotation (DGF) Unit
Poseïdon SATURN S100TCE07,5-E Clarifier™ DGF

Dear Mr. Leute:

We want to thank you for selecting a Poseidon DNF unit for your wastewater treatment plant improvement project - your **PO No. 20803384**. Your Poseidon contact will be Mr. Jonathan Dion, Project Coordinator.

For your project our **factory number is 4097-10** and our estimated delivery date is 24 weeks after receipt of approved drawings, final and without modifications. This represents approximately 30 weeks from today.

Our acceptance of this PO is conditional to our mutual agreement on T&Cs.

We are eager to start working with you. Please let me know who will be the contacts at Western Refining and my colleague will soon get in touch with them. Of course I remain available. If you need assistance or anything that will be beneficial to this project please let me know. You can reach me at the coordinates below.

Best regards,

Alain Saint-Louis
Technical Sales Manager
Poseidon Inc.

Tél.: (514) 270-9593 Fax: (514) 270-9355
E-mail: info@poseidoninc.com

WHITTIER FILTRATION

Order Acknowledgment Letter

Thursday, September 30, 2010

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

Attention: Alan Leute
Project Manager

Telephone: (915)-487-9793
E-Mail : alan.leute@wnr.com

Regarding: Your Purchase Order No. **20803403**
One (1) 500 gpm MPPE Treatment System
Whittier Filtration Project No: **50000220**

Dear Mr. Leute:

Thank you for your much valued order! The purpose of this letter is to acknowledge your Purchase Order of today. Our Job Shop No. for this project is **50000220**

The estimated delivery for this project is 52 weeks after receipt of order and we will make every effort to finalize this shortly and possibly improve upon this.

Until the Project Manager contacts you, should you have any questions or comments regarding the above subjects, please do not hesitate to contact me either by phone, fax or e-mail.

Regards,

James E. Sawkins
Senior Application Engineer
Whittier Filtration
e-mail: jim.sawkins@veoliawater.com

cc: Job File

WHITTIER FILTRATION
315 N. Puente Street, Unit A
Brea, CA 90670, USA
Tel: 714-986-5300
Fax: 714-986-5301 (1st Floor)
Fax: 714-986-5318 (2nd Floor)

VEOLIA WATER
Solutions & Technologies

Western Refining
GALLUP

WNR LISTED NYSE

September 7, 2010

RECEIVED OCD

2010 SEP -9 P 12: 52

VIA EMAIL AND CERTIFIED MAIL No. 7008 2810 0000 4726 2434

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environmental Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

RE: COMPLETION OF MILESTONE CERTIFICATION
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
EPA ID #NMD000333211

Dear Mr. Bearzi:

This letter is to notify NMED and EPA that Western Refining Southwest, Inc., Gallup refinery ("Gallup") has met Milestone #2, in Paragraph 100.I of the Complaint and Consent Agreement and Final Order (CAFO), Docket No. RCRA-06-2009-0936 : "Commence construction of Equalization Tank by September 30, 2010".

The attached photos, taken Wednesday, September 1, 2010, show installation of the Equalization Tank T-35 floor steel plates, and subsequent welding. Western Refining is on schedule to compete tank construction by the end of the year. Please let us know if you would like to visit the Gallup Refinery to view tank construction over the next several weeks.

I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

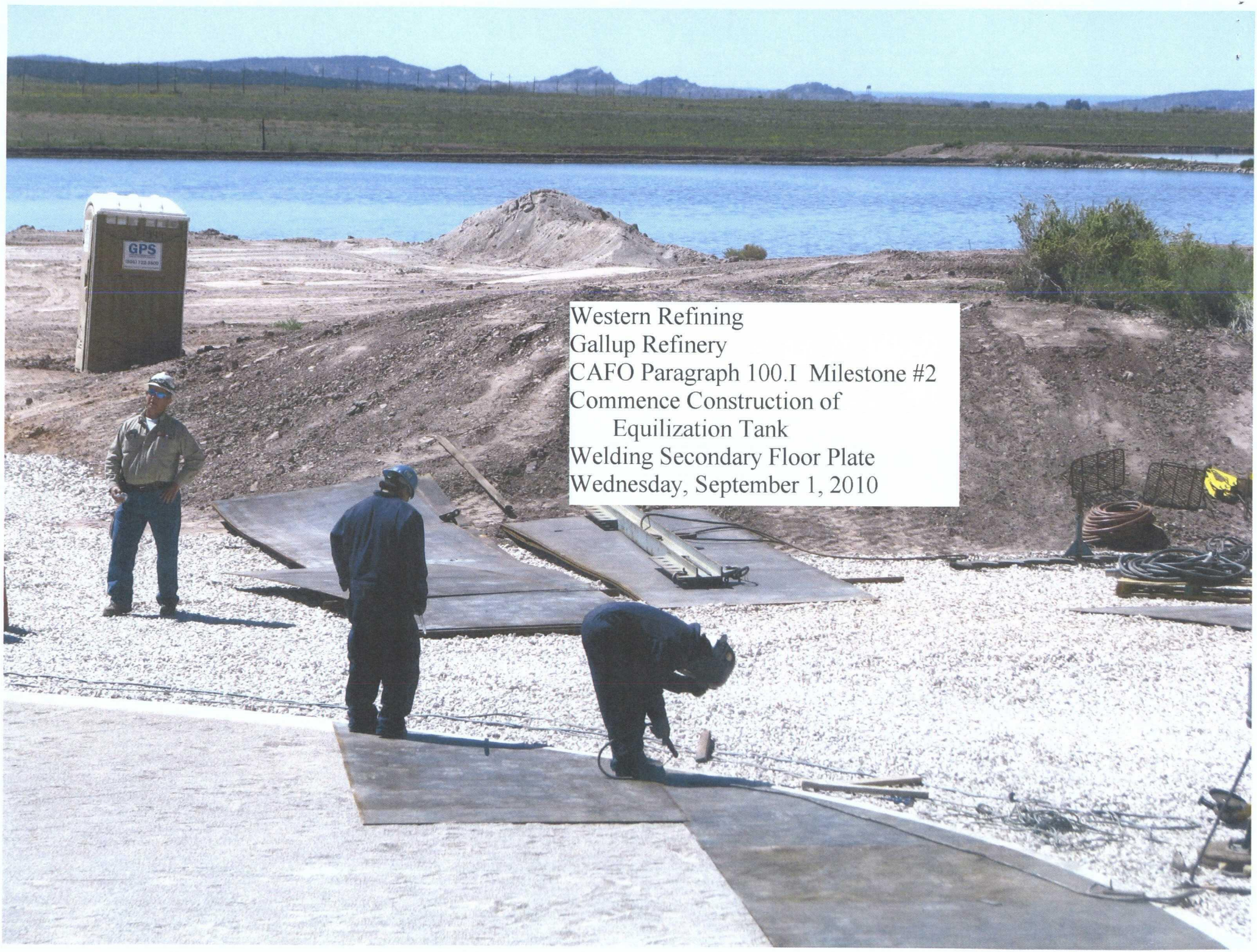
Please feel free to contact Allen Leute at 505-722-0217 with any questions.

Sincerely,

Mark B. Turri
Refinery Manager

cc: Hope Monzeglio NMED HWB
✓ Carl Chavez OCD
Ann Allen Western Refining
Ed Riege Western Refining
Allen Leute Western Refining


Western Refining
Gallup Refinery
CAFO Paragraph 100.I Milestone #2
Commence Construction of
Equalization Tank
Assembling Secondary Floor Plate
Wednesday, September 1, 2010
TEREX


GPS
Western Refining
Gallup Refinery
CAFO Paragraph 100.I Milestone #2
Commence Construction of
Equilization Tank
Welding Secondary Floor Plate
Wednesday, September 1, 2010

Chavez, Carl J, EMNRD

From: Riege, Ed [Ed.Riege@wnr.com]
Sent: Wednesday, September 08, 2010 6:16 AM
To: Bearzi, James, NMENV; Dougherty.Joel@epamail.epa.gov; Chavez, Carl J, EMNRD
Cc: Turri, Mark; Leute, Alan; Allen, Ann; Monzeglio, Hope, NMENV
Subject: FW: CAFO Milestone #2 Certification
Attachments: WNR_Gallup_EQ_Tk_Assembling_Floor_Plates090110.jpg; WNR_Gallup_EQ_Tk_Welding_Floor_Plates_090110.jpg; 20100908060752240.pdf

James,
Attached is the CAFO milestone #2 certification letter in the attached PDF. The other two files contain pictures showing installation of Equalization Tank T-35. The signed letter is being sent by certified mail.

Sincerely,

Ed Riege
Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

Safety starts with "S", but always begins with "You"

Western Refining
GALLUP

WNR LISTED NYSE

September 7, 2010

VIA EMAIL AND CERTIFIED MAIL No. 7008 2810 0000 4726 2434

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environmental Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

RE: COMPLETION OF MILESTONE CERTIFICATION
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
EPA ID #NMD000333211

Dear Mr. Bearzi:

This letter is to notify NMED and EPA that Western Refining Southwest, Inc., Gallup refinery ("Gallup") has met Milestone #2, in Paragraph 100.I of the Complaint and Consent Agreement and Final Order (CAFO), Docket No. RCRA-06-2009-0936 : "Commence construction of Equalization Tank by September 30, 2010".

The attached photos, taken Wednesday, September 1, 2010, show installation of the Equalization Tank T-35 floor steel plates, and subsequent welding. Western Refining is on schedule to compete tank construction by the end of the year. Please let us know if you would like to visit the Gallup Refinery to view tank construction over the next several weeks.

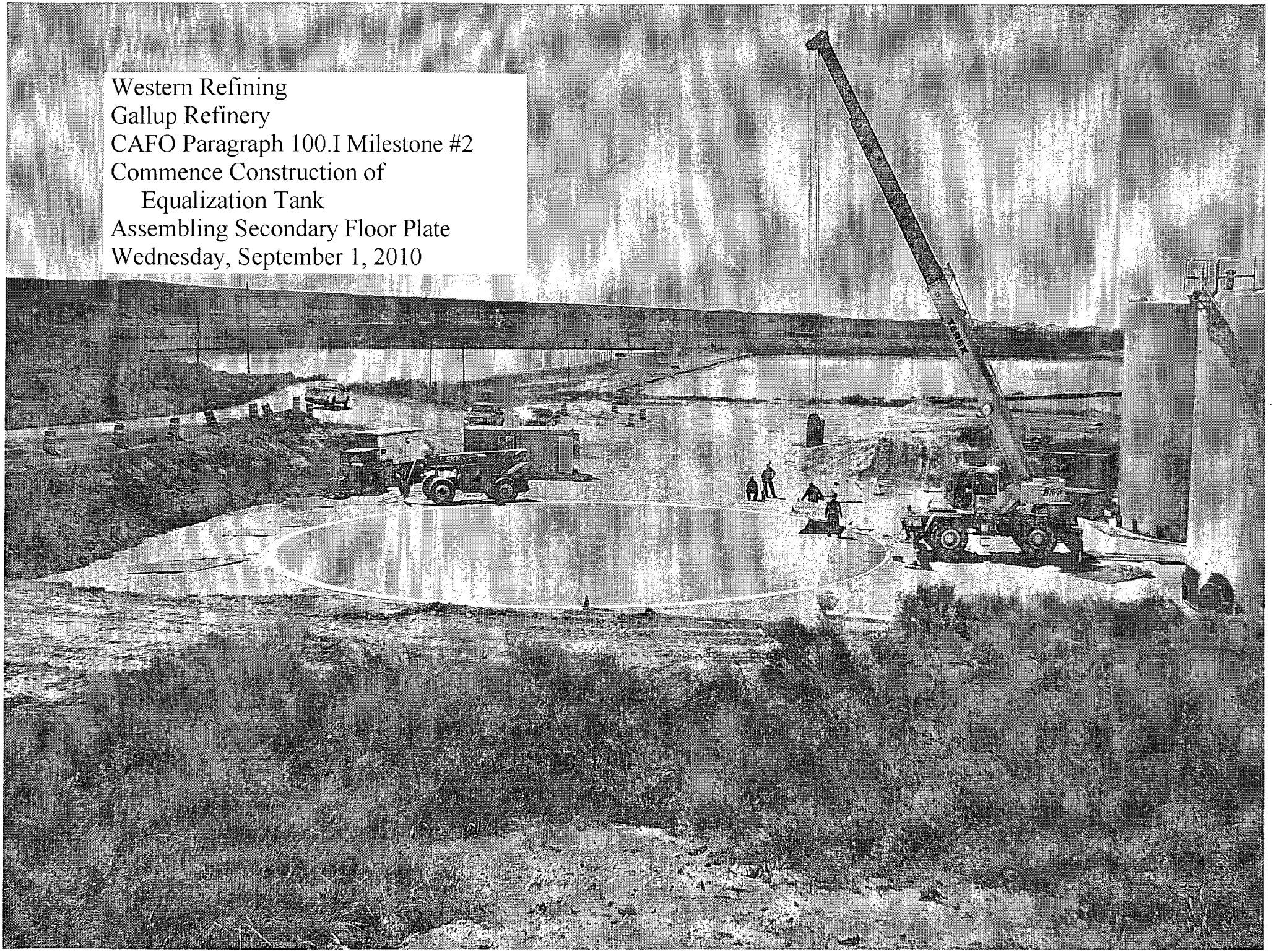
I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

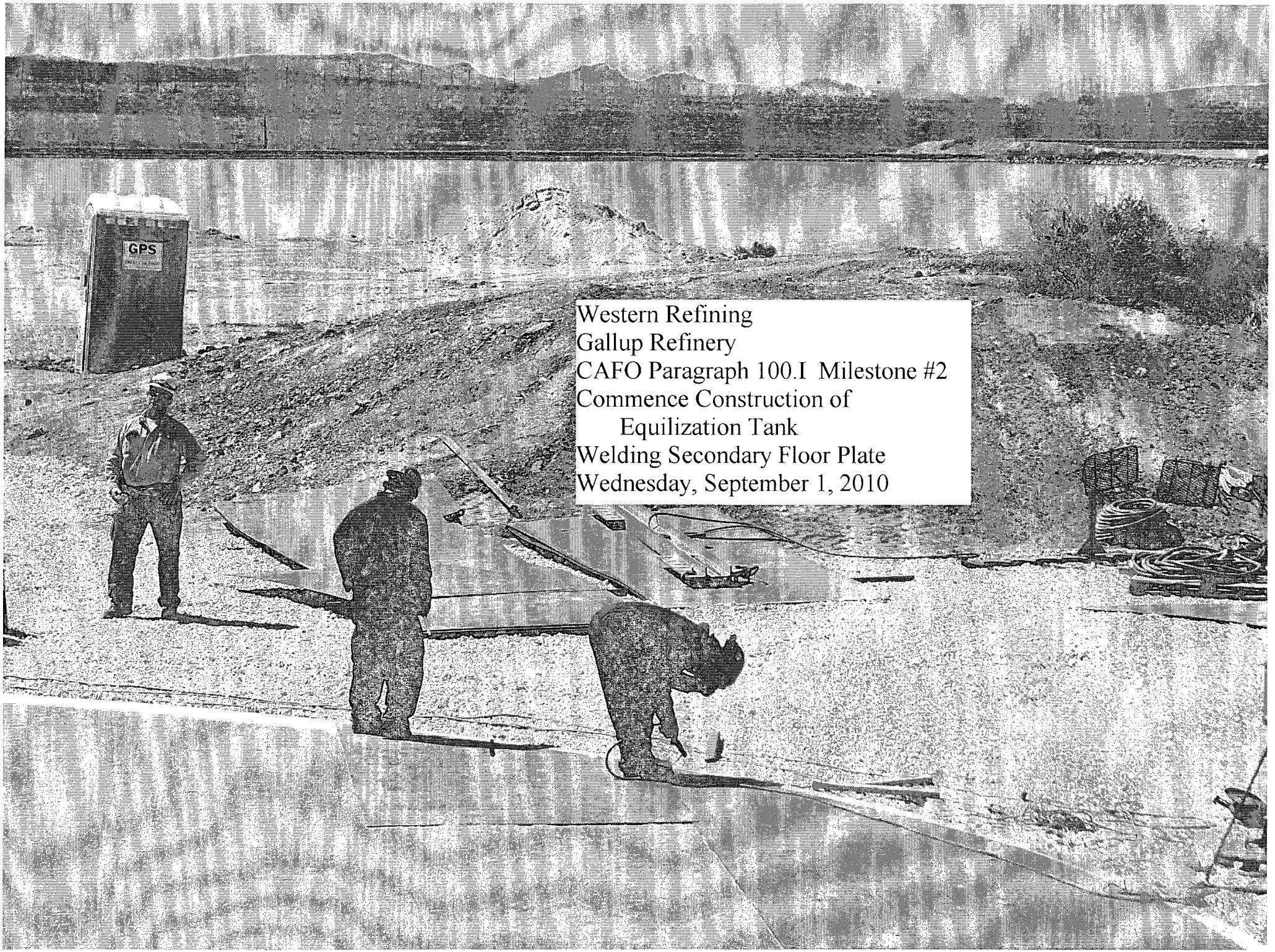
Please feel free to contact Allen Leute at 505-722-0217 with any questions.

Sincerely,

Mark B. Turri
Refinery Manager

cc: Hope Monzeglio NMED HWB
Carl Chavez OCD
Ann Allen Western Refining
Ed Riege Western Refining
Allen Leute Western Refining


Western Refining
Gallup Refinery
CAFO Paragraph 100.I Milestone #2
Commence Construction of
Equalization Tank
Assembling Secondary Floor Plate
Wednesday, September 1, 2010
TEREX


GPS
Western Refining
Gallup Refinery
CAFO Paragraph 100.I Milestone #2
Commence Construction of
Equilization Tank
Welding Secondary Floor Plate
Wednesday, September 1, 2010

Western Refining
GALLUP

WNR
LISTED
NYSE

Via E-mail and Federal Express

RECEIVED OCD
2010 AUG 27 P 1:24

August 26, 2010

Mr. James P. Bearzi
State of New Mexico Environment Department
2905 Rodeo Park Drive East
Santa Fe, New Mexico 87505-6303

RE: CAFO - CMI WORK PLAN SUBMITTAL DATE
WASTEWATER AERATION LAGOONS
WESTERN REFINING COMPANY SOUTHWEST INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-GRCC-09-003

Dear Mr. Bearzi:

Pursuant to your email of August 24th regarding the closure of AL-1 and AL-2 and the submittal date of the revised CMI Work Plan for the Aeration Lagoons, Western offers the following responses:

1. The proposed closure option for AL-1 and AL-2 is closure in-place;
2. Western will submit responses to NMED's NOD dated June 7, 2010 and the revised CMI Work Plan on or before October 29, 2010.
3. Western proposes the submittal date of October 29, 2010 to allow sufficient time to revise the CMI Work Plan for closure in-place. This schedule includes time to conduct meetings and additional discussions, as necessary, between NMED's staff and Western's representatives to help ensure the revised CMI Work Plan is acceptable to NMED.

Western appreciates NMED's consideration in this matter. If there are any questions, then please contact Mr. Ed Riege at (505) 722-0217.

Sincerely,

Mark B. Turri

Mr. Mark B. Turri
Refinery Manager
Western Refining Southwest, Inc. – Gallup Refinery

cc J. Kieling, NMED HWB
D. Cobrain NMED HWB
H. Monzeglio, NMED HWB
C. Chavez, OCD
E. Riege, Western Gallup
A. Allen, Western El Paso

Chavez, Carl J, EMNRD

From: Turri, Mark [Mark.Turri@wnr.com]
Sent: Friday, July 16, 2010 12:11 PM
To: Bearzi, James, NMENV
Cc: Dougherty.Joel@epamail.epa.gov; Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Jean M. Flores; Allen, Ann; Riege, Ed; Riley, Don; Leute, Alan; Facker, Mike L.
Subject: Gallup Refinery WWTP Proposed Compliance Schedule
Attachments: Redline - Modification_to_CAFO.DOC; Clean Version - Modification_to_CAFO.DOC; Poseidon_DGF_delivery_letter071610.pdf; Whittier_MPPE_delivery_letter071510.pdf; Whittier_MPPE_vendor_letter071510.pdf

Dear Mr. Bearzi,

Western Refining appreciates the meeting that you arranged last Friday July 9, 2010 in Santa Fe between NMED, OCD, EPA and Western Refining regarding the construction schedule of the Gallup Refinery Upgraded Wastewater Treatment System. You requested that Western provide a proposed compliance schedule, based on the construction timeline we discussed at the meeting, in a format that can be used to modify the CAFO.

Accordingly, attached for your review is a red-line and a clean version of the proposed modifications to the CAFO. This is done primarily by insertion of a new paragraph 100.I into the CAFO, but we also proposed minor modifications to several other paragraphs (existing paragraphs 100.B, 100.C. and 100.E) that make reference to the design workplan and construction schedule. You will see that we have referenced Western's June 18, 2010 letter to NMED. Once NMED has evaluated and responded to the water quality issue we discussed in the meeting, we will likely need to change that to a reference to NMED's response. We have identified a number of milestones in the schedule and have made an effort to develop a procedure under which NMED can evaluate the implementation of the milestones. Western Refining is open to comments and revisions, particularly on the evaluation procedure, since there was no existing procedure in the CAFO that we could use as a model. We look forward to your response.

Also attached are letters from the DGF and MPPE vendors confirming the manufacturing time that we discussed in our meeting.

Again, thank you for working with Western to develop a mutually acceptable compliance schedule.

Sincerely,

Mark B. Turri
Manager

Western Refining
Gallup Refinery
Route 3, Box 7
Gallup, NM 87301
Phone 505-722-0202
Cell 505-979-1320
Fax 505-722-0210
mark.turri@wnr.com
www.wnr.com

immediately. Unintended transmission does not constitute waiver of the attorney-client privilege or any other privilege. Unless expressly stated otherwise, nothing contained in this message should be construed as a digital or electronic signature, nor is it intended to reflect an intention to make an agreement by electronic means.

WHITTIER FILTRATION

July 15, 2010

Mr. Alan Leute
Western Refining
Route 3, Box 7
Gallup, NM
87301

Hi Alan,

Our MPPE technology is proprietary technology used for the extraction of hydrocarbons and is only offered by Veolia. As you know there are competing technologies available that you evaluated but are significantly more expensive and/or difficult to operate effectively.

The pilot testing we did at your facility proved that our solution is technically superior to competing technologies for this specific waste stream and met the criteria of your effluent requirements.

Whittier Filtration is the provider of MPPE systems in North and South America. MPP Systems was started by Akzo Nobel over 20 years ago in Holland. In 2007 Veolia purchased the company from Akzo Nobel and added it to Veolia's product line globally. The VWS MPP Systems group in the Netherlands supports Whittier Filtration in technical efforts and supplies the MPPE media. We are both part of the same Veolia Water Solutions and Technology team.

If you have any challenges formulating a comparison of the packages you have received or your staff has any questions, we can assist with any technical or commercial concerns you may have. We can address actual direct cost savings by providing data or cost savings estimates for the MPPE system. Our total package is one that we believe meets your current needs of securing an effective and high-value system for removing trace hydrocarbons in your waste stream. We clearly want to be your complete technology solution provider for this water treatment project.

Thank you for permitting us the opportunity to provide you with this clarification We are flexible to your schedule and can meet with you should you decide that you wish to review any other aspects of this project.

Sincerely,

Bill Sanz
Sales Manager
Whittier Filtration, Inc.

WHITTIER FILTRATION, INC
315 N Puente Street, Unit A
Brea, CA 92335, USA
Tel: 714-986-5300 • Fax. 714-986-5301

VEOLIA
WATER
Solutions & Technologies

WHITTIER FILTRATION

July 15, 2010

Mr. Alan Leute
Western Refining
Route 3, Box 7
Gallup, NM
87301

Hi Alan,

We can confirm that our current lead time on a full scale MPPE unit is twelve (12) months based upon receipt of a signed purchase order.

We would also like to clarify that in supplying our bid, we offer:

- Veolia is the largest water company in the world with equally corresponding technical and financial resources; we offer an extensive array of refinery equipment.
- The Whittier Filtration group has been focused in the Oil and Gas market for over 50 years, with experienced design and service engineers to address your needs.
- We have a proven record of our Brea Project Execution team meeting tight deadlines for oilfield projects nationally and internationally.
- Our Project Execution team are responsive to any detailed design or testing needs.
- We will work closely with your field supervisors and operators to ensure proper operation. Our knowledge of your operations from the operator's perspective is another key factor in our addressing your total needs for this project.

Please let me know if this assists in your evaluation. We look forward to the opportunity to provide Western Refinery with a USA-built system that incorporates our experience and technology and supplies you with a long lasting cost savings solution.

We look forward to meeting you for the award of this project and believe that in supplying this equipment that we are providing an integrated solution. We endeavor to earn your business and to continue to support you as you develop additional projects.

Sincerely,

Bill Sanz
Sales Manager
Whittier Filtration, Inc.

WHITTIER FILTRATION, INC
315 N Puente Street, Unit A
Brea, CA 92335, USA
Tel: 714-986-5300 • Fax: 714-986-5301

VEOLIA
WATER
Solutions & Technologies

Western Refining
Route 3, Box 7
Gallup NM 87301 USA

Montreal, July 16th 2010

Attention: Mr. Alan Leute, Process Design
E-mail: Alan.Leute@WNR.com

Reference: **Western Refining, Gallup Refinery– New Mexico**
Delivery of Dissolved Nitrogen Gas Flotation (DGF) Unit
Poseïdon SATURN Series Clarifier™ DGF

Dear Mr. Alan Leute,

Further to our recent telephone conversation I would like to make the following clarification concerning the DGF unit delivery.

If we receive a confirmed purchase order from the Western Refining Gallup Refinery before the end of August 2010, our delivery will be 23 to 24 weeks after reception of approved drawings (final and without modification), in accordance with our budget proposal Q2273RE2 dated April 26th 2010, at page 6.

In effect, this means that if the drawings are approved within 4 to 6 weeks (see lines 1 and 2 on the schedule below) you should expect the equipment to be ready to leave our manufacturing plant between 27 to 30 weeks after our reception and acceptance of your confirmed purchase order.

Here is our Equipment Delivery and Drawings Submittal Schedule:

1. Submittal of preliminary/critical drawings for your review and approval:	2-4 weeks ARO
2. Return of approved drawings with your comments:	2 weeks after submittal
3. Submittal of certified drawings:	1-2 weeks ARAD
4. Major material received at our manufacturing plant:	4-6 weeks ARAD
5. Start manufacturing/parts fabrication:	6-14 weeks ARAD
6. Start manufacturing/parts assembly:	14-20 weeks ARAD
7. Shop inspection and testing:	21-23 weeks ARAD
8. Shipment of major components:	23-24 weeks ARAD

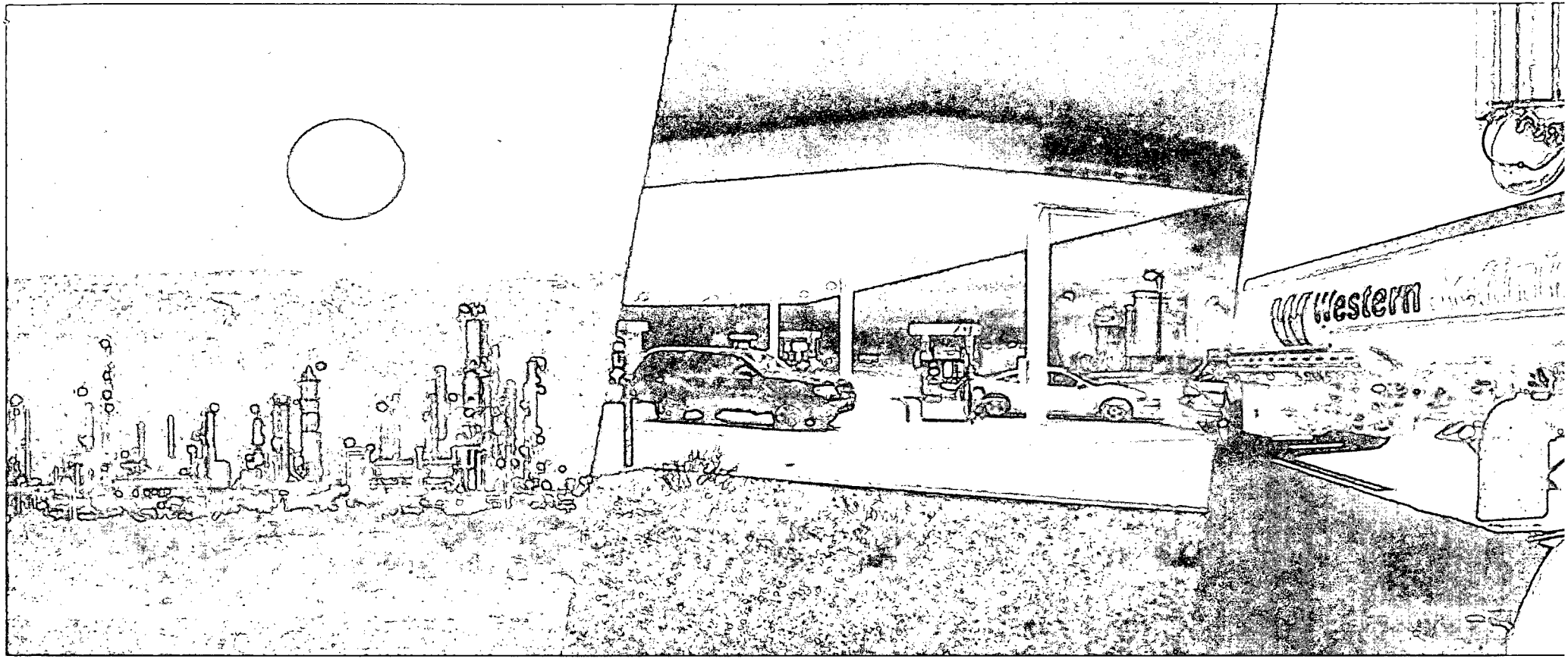
ARO: After Reception of your confirmed Purchase Order
ARAD: After Reception of Approved Drawings, Final and Without Modification

I hope that the above is to your full satisfaction. I remain available should you have any questions or comments and I am looking forward to working with you and Western Refining.

Sincerely,

Alain Saint-Louis, B.Sc., Technical Sales Manager
Direct E-mail: asaintlouis@poseidoninc.com

Les Traitements des Eaux Poseïdon Inc.
1290, Avenue Van Horne, Suite 310, Outremont,
Quebec, Canada. H2V4S2
e-mail : info@poseidoninc.com
Tel : (514) 270-9593
Fax : (514) 270-9355



Western Refining

Overview of New Western Refining Wastewater Treatment System at Gallup Refinery

Western Refining

Outline

- Western's Approach to Meet Regulatory Requirements
- Gallup Refinery Facility Modifications
  - Interim Measures
  - Final WWTP Process Design
- Construction Timeline

Source Reduction – Culture Change

Created a plant wide awareness of minimizing waste to sewer system

- Implemented bi-weekly multi-discipline meetings dedicated to benzene compliance
- Upgraded maintenance activity planning to include considerations to reduce waste sent to the sewer
- Instituted operational practices to eliminate unnecessary hydrocarbon discharges to the sewer from process areas, tankage, loading and unloading areas
- Ongoing review of operating procedures and sample collection to minimize discharges to the sewer

Gallup Refinery Waste Water Treatment Timeline

Western Refining

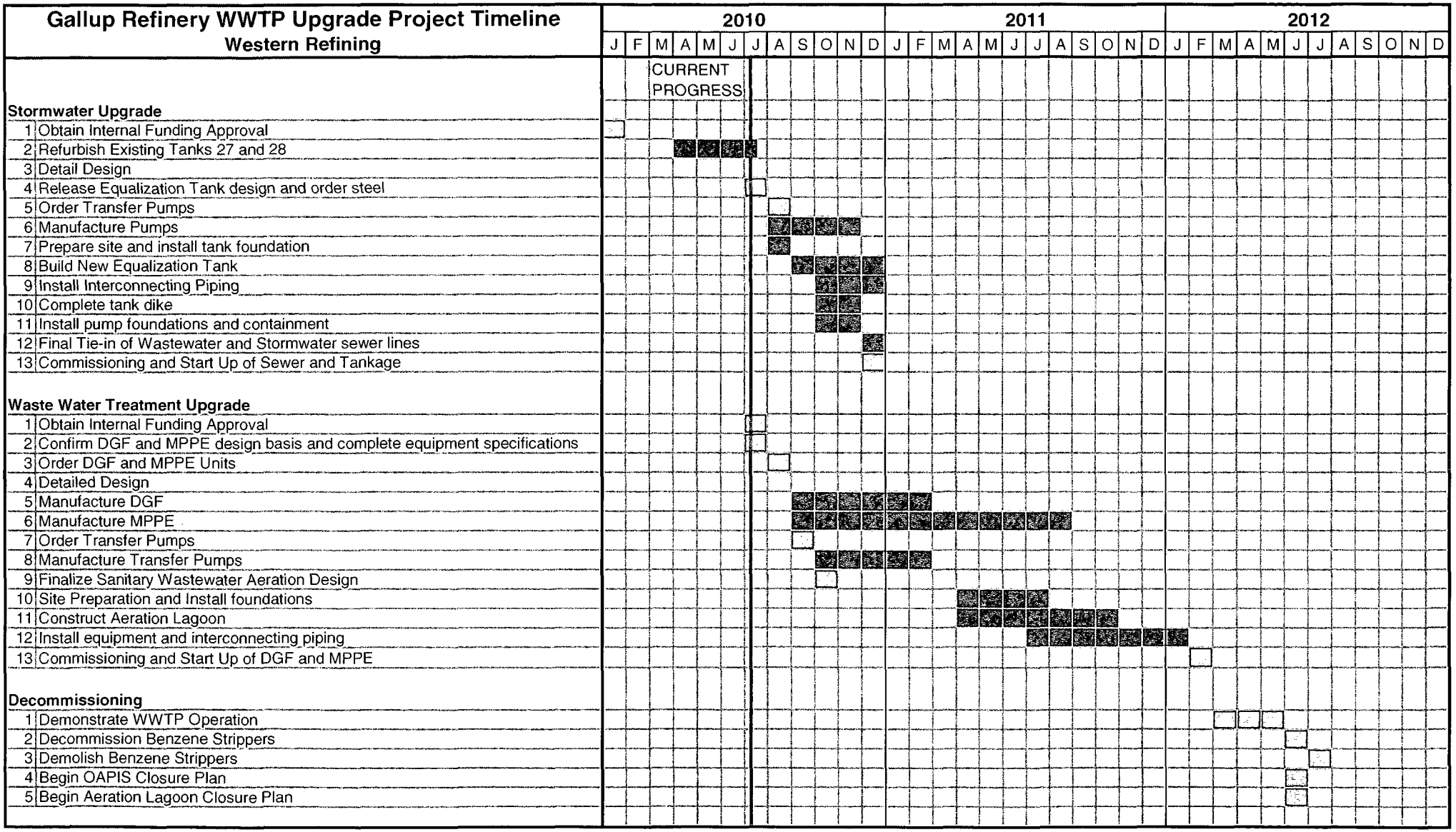
		2007												2008												2009												2010											
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Regulatory Background																																																
1	EPA / NMED RCRA Inspection																																														
2	OCD Permit Issued (close Aeration Lagoons and test alternate treating)																																														
3	EPA / NMED RCRA Inspection Report Received																																														
4	EPA / MED / WNR Enforcement Meeting																																														
5	RCRA CAFO Issued																																														
Benzene Source Reductions																																														
1	Upgraded Air Ducting for Benzene Strippers																																														
2	Installed New Spray Nozzles on Benzene Strippers																																														
3	Infrared Survey of Benzene Strippers																																														
4	Installed new Piping on NAPIS East Bay Inlet																																														
5	NMED Request to Remove Overflow Pipes																																														
6	Installed Baker Tanks for NAPIS Overflows																																														
7	Disconnected Overflow Pipes to Lagoon																																														
8	Source Control Implementation																																														
9	On-site GC Analysis of Benzene in Wastewater																																														
10	New Benzene Stripper Packing Design																																														
11	Removed Splash Plate in South Benzene Stripper																																														
12	Installed 4th Benzene Stripper																																														
13	NMED Request for Stormwater Surge Capacity																																														
14	Installed Baker Tanks for Stormwater Surge Capacity																																														
Interim Measures																																														
1	NMED Interim Measures Work Plan Request																																														
2	WNR Interim Measures Work Plan Submittal																																														
3	NMED Notice of Disapproval for Interim Measures Work Plan																																														
4	WNR Interim Measures Work Plan with Modifications Submittal																																														
5	NMED Approval for Interim Measures Work Plan with Modifications																																														
6	WNR Interim Measures Implementation																																														
Waste Water Treatment Upgrade Design																																														
1	Membrane BioReactor (MBR) Evaluation																																														
2	Brown & Caldwell Preliminary Design																																														
3	Brown & Caldwell Preliminary Design Report Issued																																														
4	Brown & Caldwell Draft Supplement Issued																																														
5	WNR WWTP Upgrade Process Design Report Submittal																																														
6	NMED Notice of Disapproval for WWTP Process Design Report																																														
7	WNR Response to Notice of Disapproval for WWTP Process Design Report																																														
8	WNR Alternative Design Plan Engineering																																														
9	WNR Withdrawal of Design Report Rev A																																														
10	NMED Approval with Modifications for Design Plan Rev A																																														
11	WNR Alternative Design Plan Submittal																																														
12	NMED Notice of Disapproval for Alternate Design Plan																																														
13	Pilot Test on Dissolved Gas Floatation (DGF) Unit																																														
14	Pilot Test on Macro Porous Polymer Extraction (MPPE) Unit																																														
15	WNR Additional Information on Alternate Design Plan Submittal																																														
16	NMED Response to Additional WNR Submittal Information																																														
17	WNR Additional Information on Alternate Design Plan Submittal																																														
18	NMED Approval with Modifications of Alternate Design Plan																																														
19	WNR Additional Information on Alternate Design Plan Submittal																																														
20	WNR Lagoons Closure Plan Submittal																																														
21	NMED Notice of Disapproval for Work Plan																																														
22	WNR Revised Closure Plan Submission																																														
23	NMED Notice of Disapproval for Revised Work Plan																																														

LEGEND

- Regulatory Activities
- Refinery Activities
- Process Evaluation
- Process/Detail Design
- Construction

Gallup Refinery WWTP Upgrade Project Timeline

Western Refining



Source Reduction – Facility Modifications

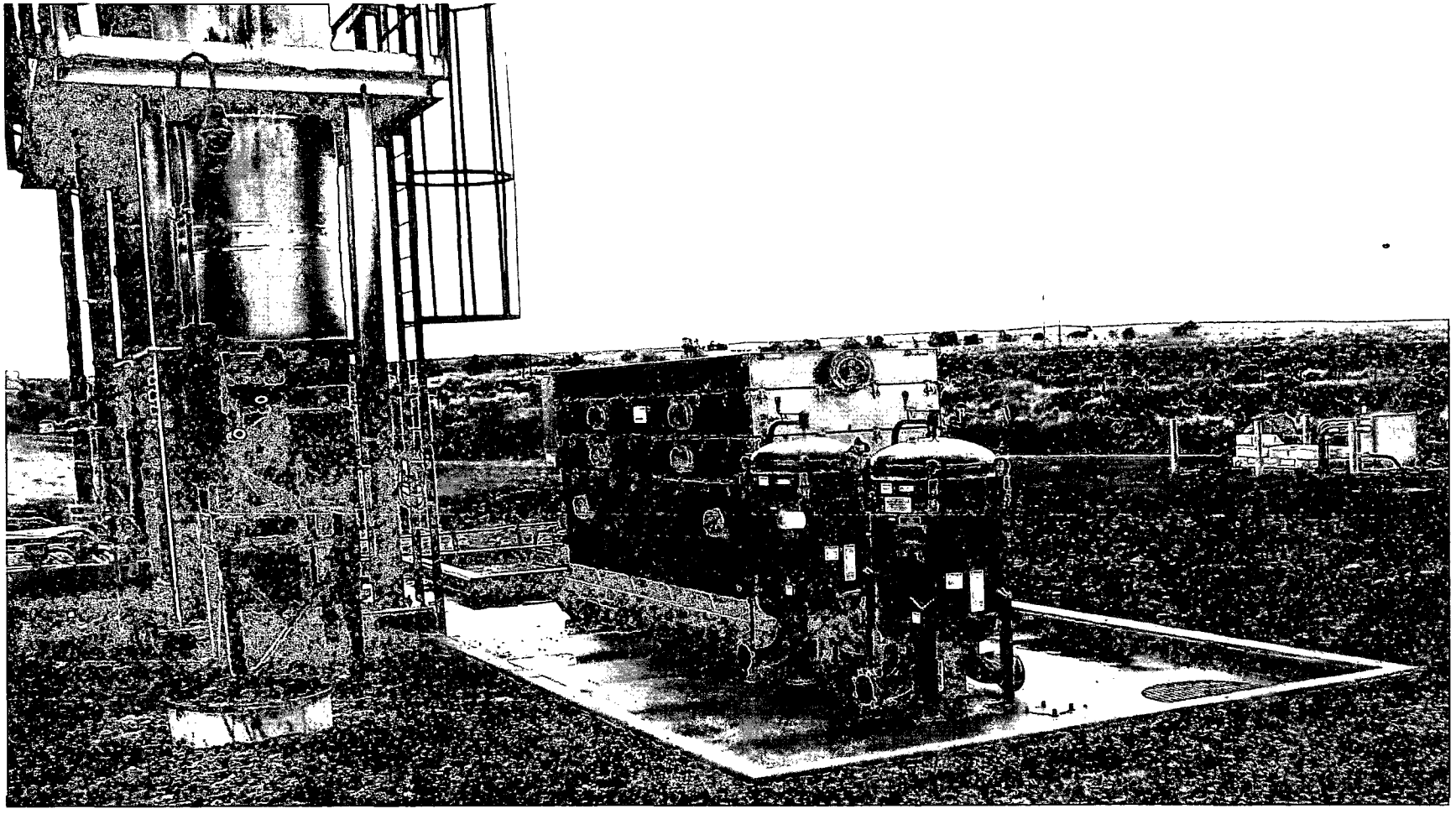
- Added four operators for 24 hour coverage of the API Area
- Optimized Desalter Operation:
  - Installed electronic level controls
  - Ongoing chemical injection optimization
  - Ongoing operations monitoring
- On-site Analysis of Benzene in Wastewater
- Instituted Interim Measures Plan

Facility Modifications – Interim Measures

Benzene Air Stripper 1 & 2 Improvements

- Engineering Analysis of Operation
- New Packing
- New Distribution Nozzles
- New Ultrasonic Flow Meters

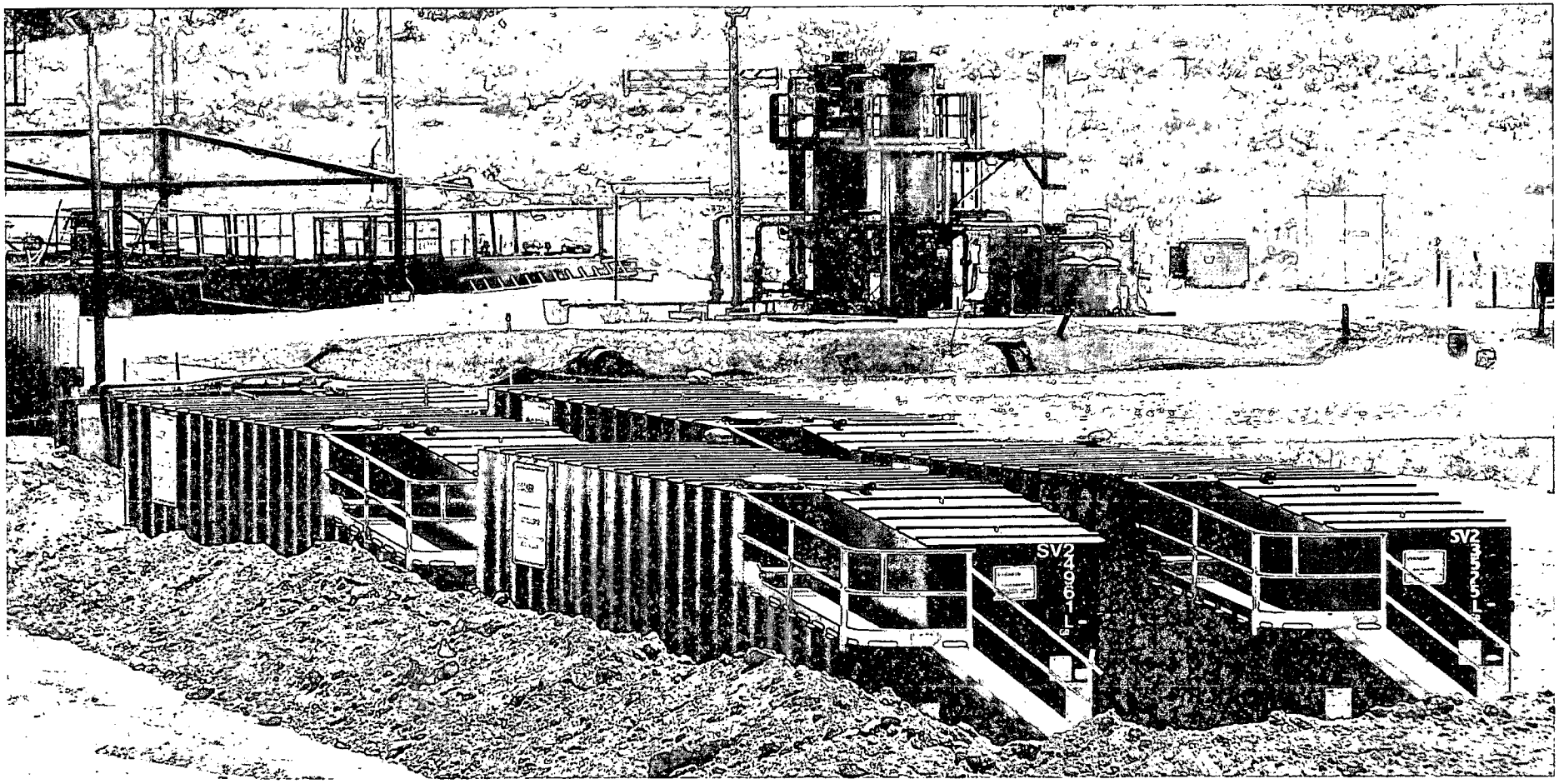
Facility Modifications – Interim Measures



Fourth Benzene Air Stripper

Western Refining

Facility Modifications - Interim Measures

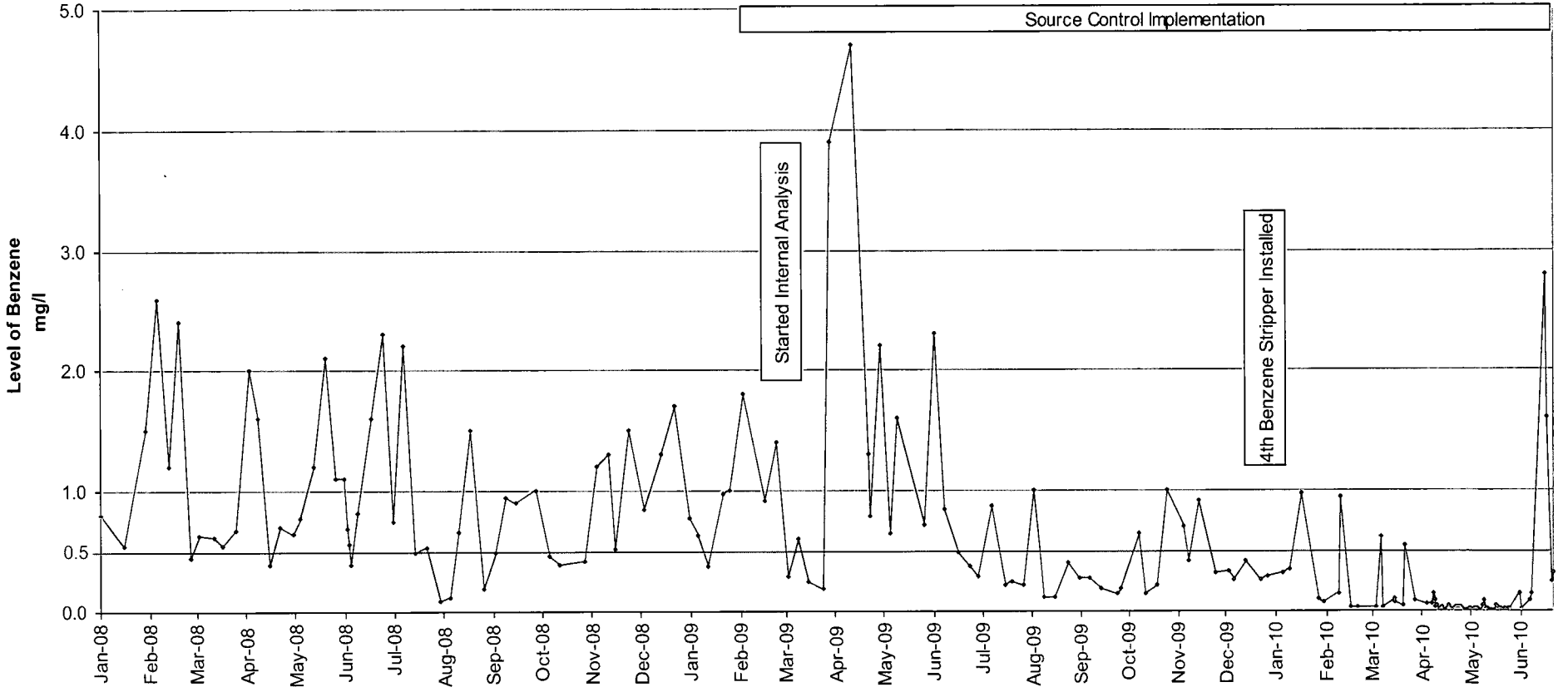


Storm Water Retention

Western Refining

Interim Measures - Results

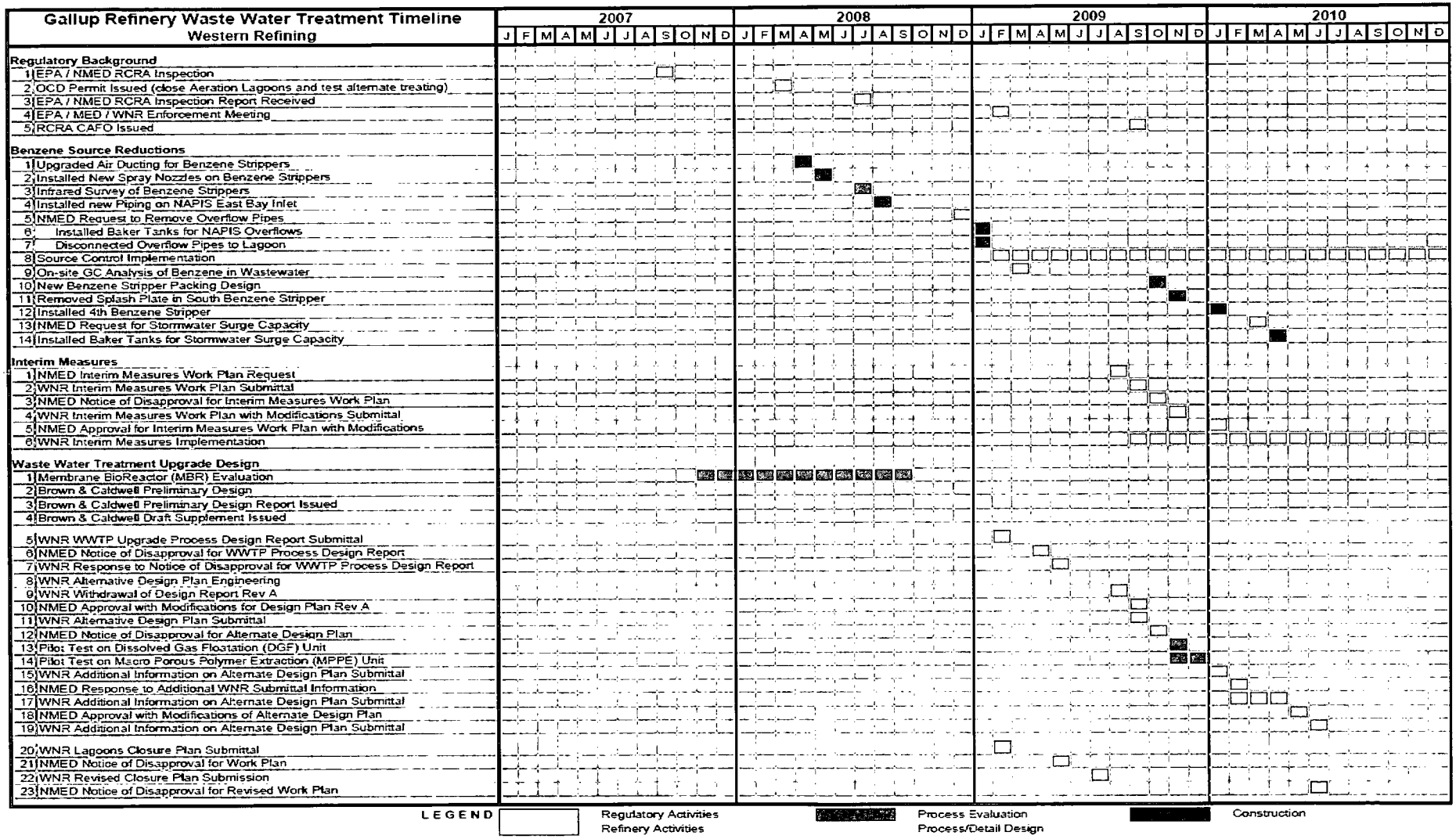
Hall Environmental Analysis Laboratory
Sampling Results



* Outlier of 18 mg/l was not shown in April 2009 samples.

Western Refining

Timeline of Progress to Date



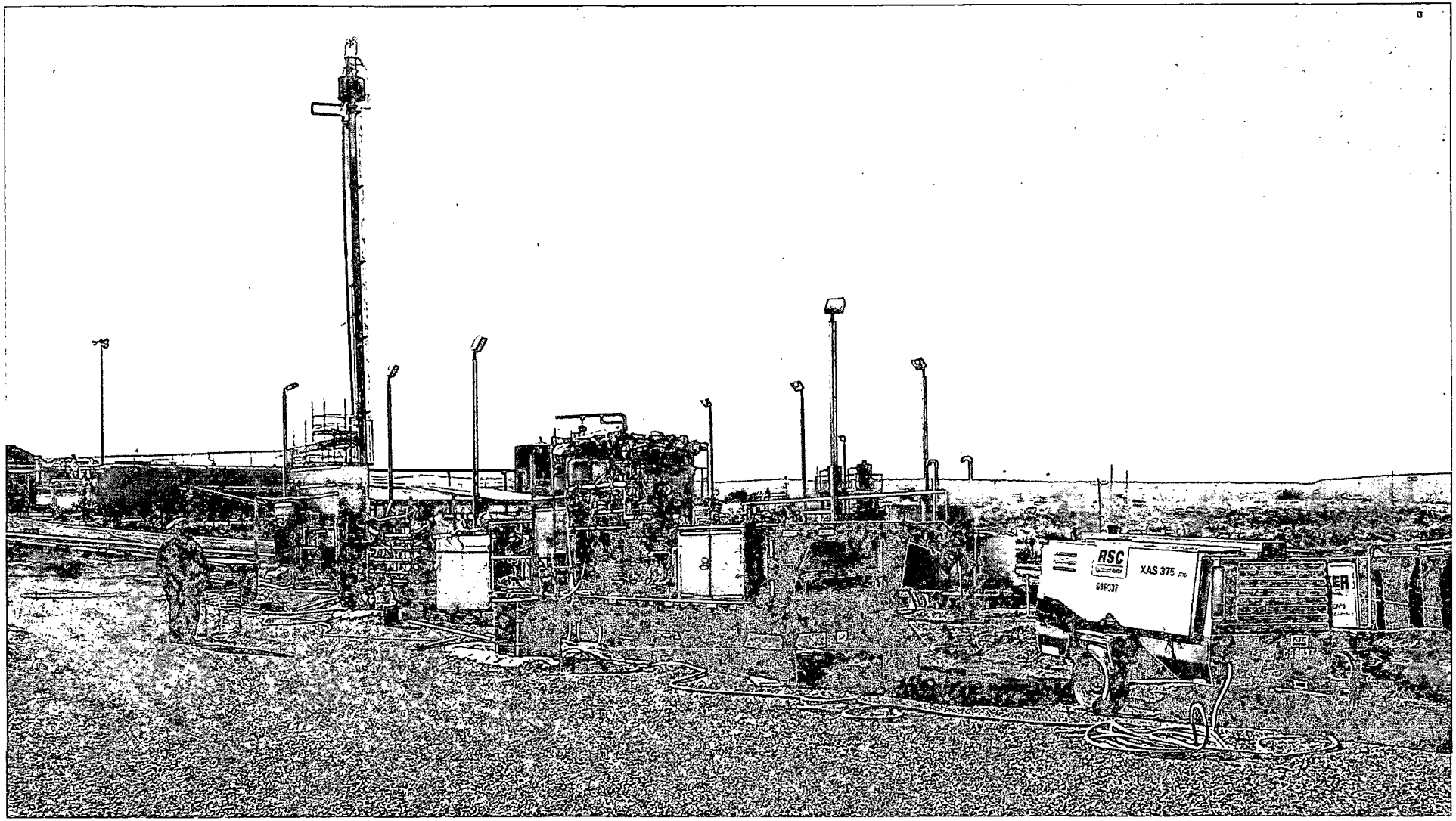
Development of WWTP Process Design

- Discussions with OCD in 2007 - Western began Evaluating/Testing alternate WWT Designs
  - Membrane Bio-Reactor Pilot Test
  - Original Work Plan
  - Plan Withdrawn
  - NMED Plan Approval
- Alternative Design Work Plan proposed

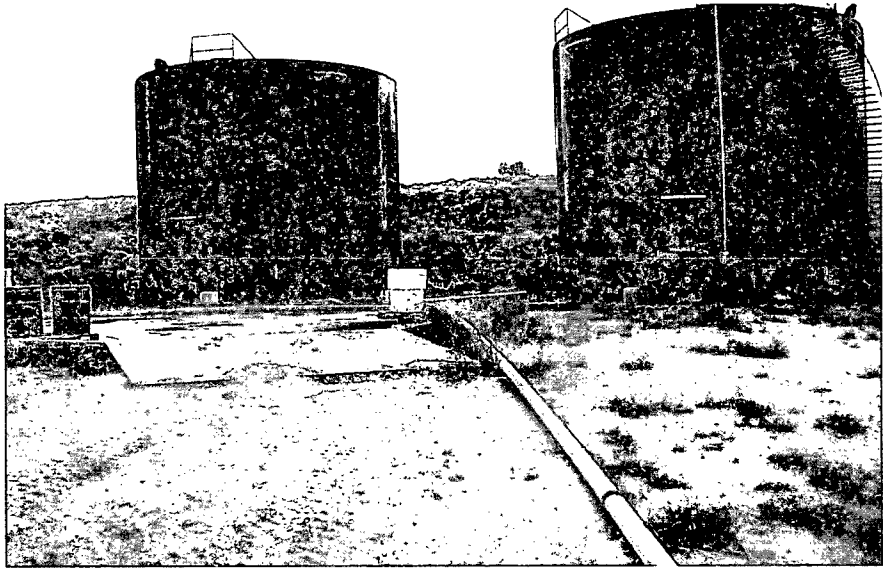
Development of WWTP Process Design

- DGF/MPPE Pilot Trial
- CDM (Camp, Dresser, McGee Inc.)
  - "Fresh Eyes" Design Review
  - Detailed Mechanical Design
  - Construction
- Change in Project Manager – Alan Leute
- Progress to Date

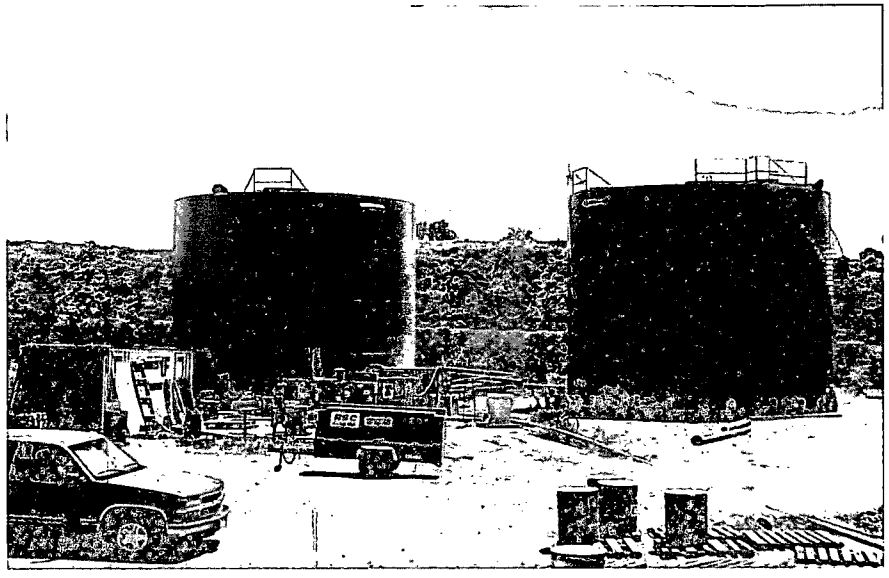
Progress to Date - DGF and MPPE Pilot



Progress to Date – Stormwater Upgrade



Existing Tank 27 & 28 (5,000 bbls each)

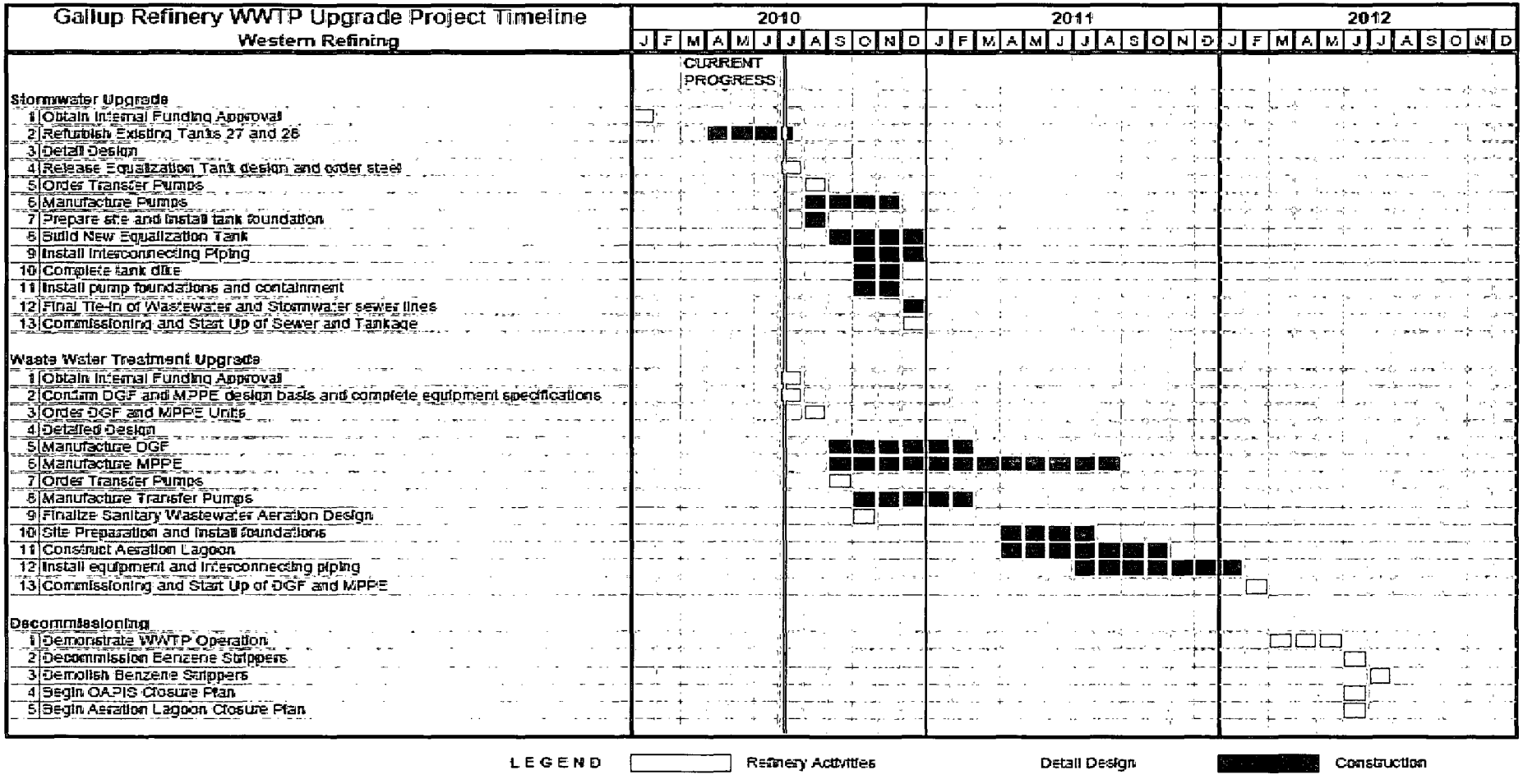


Current Refurbishment

- New 30,000 bbl equalization tank
- Piping and pumps
- Operational In Late 2010

Western Refining

Construction Timeline

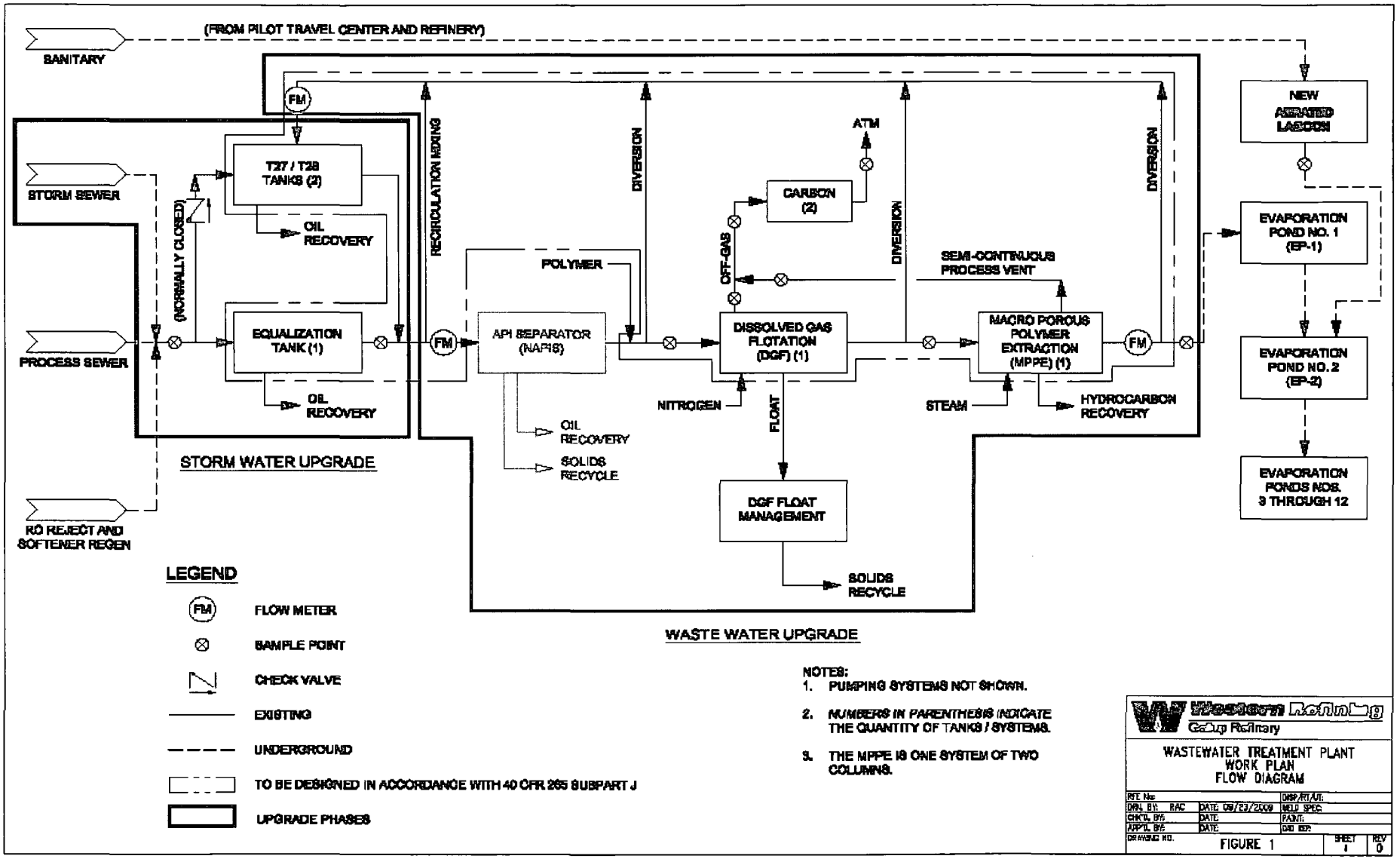


Summary

- Interim measures have resulted in compliance with benzene limits
- Construction Timeline
  - Stormwater system will be operational by year end
  - DGF and MPPE technology purchase 3rd Quarter
  - New waste water treatment plant to be commissioned February 2012

BACKUP

WWTP Flow Diagram



Western Refining
GALLUP REFINERY

WNR LISTED NYSE

Certified Mail #7008 2810 0000 4726 1024

September 24, 2009

John Kieling, Program Manager
New Mexico Environmental Department
Permits Management Program
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

RE: **INTERIM MEASURES WORK PLAN, WESTERN REFINING COMPANY, SOUTHWEST INC., GALLUP REFINERY; EPA ID #NMD000333211**

Dear Mr. Kieling,

Enclosed please find the Western Refining Gallup's ("Gallup") Interim Measures Work Plan (Work Plan) pursuant to Section IV (Compliance Order) item 100.D of the Consent Agreement and Final Order ("CAFO") between Western, NMED and U.S. EPA Region 6.

Thank you for your review of this Work Plan. Please feel free to contact me with any questions.

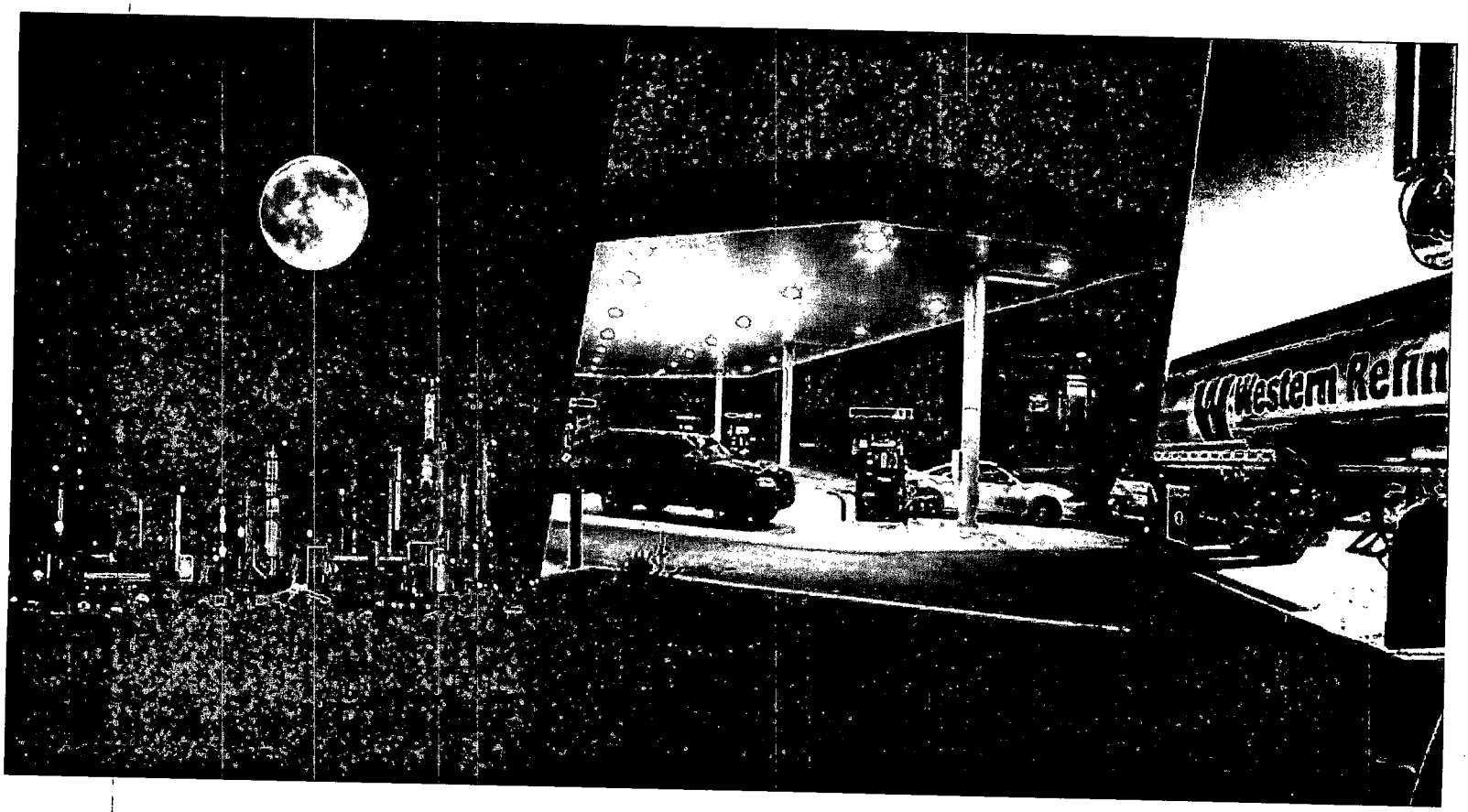
Sincerely,

Ed Riege
Environmental Manager

cc: Hope Monzeglio NMED HWB
Carl Chavez OCD
Mark Turri Western Refining
Ann Allen Western Refining

Interim Measures Work Plan to Comply with RCRA Standards for Discharge of Wastewater to Surface Impoundments

Western Refining
Gallup, New Mexico



September 2009

Interim Measures Work Plan
WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY
EPA ID #NMD000333211
September 2009

Executive Summary

This report describes Western Refining's Interim Measures Work Plan to comply with RCRA standards on discharge of wastewater containing benzene to surface impoundments. The proposed Interim Measures fall into 3 categories: (i) physical/design changes to the wastewater treatment system; (ii) an aggressive monitoring and reporting schedule; and (iii) submittal of status reports to the NMED. The most important element of this plan is to install a fourth stripper prior to the two existing strippers that processes effluent from the new API separator. This new stripper will substantially increase the removal efficiencies of the current stripper system and will consistently result in benzene levels less than 0.5 ppm in our treated wastewater before it enters Aeration Lagoon-1 (AL-1). In addition to the fourth stripper, we propose aggressive monitoring and sampling schedules (divided into three distinct periods). We hope that by establishing compliance well ahead of any mandatory need to do so (the CAFO provides a period of 120 days for Western Refining to come into compliance), we will be able to satisfy our future compliance requirements with a relaxed monitoring schedule (to be set by the NMED).

Since early 2009, many months before the Consent Agreement and Final Order ("CAFO") went into effect, the Gallup Refinery undertook to evaluate, develop and implement a series of improvements to the Refinery's existing wastewater treatment system. The goal is to achieve consistent compliance with RCRA standards for benzene containing wastewater discharges to surface impoundments. A working group of the refinery manager, engineers, and operators was created that meets bi-weekly. Personnel from our sister refinery in El Paso were invited to visit the Gallup Refinery and share their experience. Consultants and manufacturers' representatives were brought on-site and their recommendations were implemented. A temporary tank was located next to the new API separator which allowed all overflows to be contained and later sent through the wastewater treatment system. This ensures that only treated wastewater enters AL-1.

Key issues related to the existing benzene strippers were identified as – improper mixing of air and water; fouling of the internal packing media; and inefficient oil recovery in the new API oil/water separator. A series of steps to improve the performance of the strippers by addressing these key issues were identified. Some have been implemented and others are in progress. Simultaneously, a program of source control to reduce oil reaching the sewers was instituted. A need for rapid screening tests was also identified, and we implemented a testing program at our internal laboratory to provide screening data on a more frequent basis than the analyses done at an external EPA and NMED certified laboratory. Performance of the strippers has been considerably enhanced, and overall benzene levels in the strippers' outlet have dropped substantially. In the past two months, on average, we have maintained outlet benzene levels below 0.5 ppm.

The Interim Measure Work Plan surveyed the compliance requirements of other refineries in the nation and proposes that compliance for the Gallup Refinery be determined based on a rolling annual average calculated from weekly grab samples of our treated wastewater. We present a detailed discussion of this issue in Appendix A.

In summary, our major requests for approval are –

- Western Refining will install a fourth benzene stripper as an interim measure. However, Western Refining proposes that it retain the discretion not to implement measures that would, therefore, be unnecessary to achieve compliance. For example, if improved performance of our existing two strippers meets compliance, the fourth rental stripper may be discontinued.
- Western Refining has proposed an aggressive monitoring plan designed to provide meaningful information to the NMED and Western Refining well enough in advance of the conclusion of the Interim Measures period to allow for adjustments in the Interim Measures. Western Refining seeks approval to sample at different frequencies and report on corresponding different schedules during three (3) discrete periods identified in this plan. Western Refining proposes an increased sampling and reporting protocol as a contingency if our wastewater is found to be out of compliance.
- Western Refining requests approval that compliance be demonstrated by calculating a rolling annual average of weekly grab samples of strippers' effluent tested for benzene. This is a standard applied to other refineries.

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1.0 Introduction and Background

The August 26, 2009 Consent Agreement and Final Order ("CAFO") between and among Western Refining Southwest, Inc. ("Western Refining"), the New Mexico Environment Department ("NMED"), and the U.S. Environmental Protection Agency (EPA) Region 6, Section IV, Paragraph 100.D. requires Western Refining to submit to NMED for approval an Interim Measures Work Plan for "ceasing the discharge of any hazardous wastewater to any surface impoundment, unless such discharge complies with applicable RCRA standards" at Western Refining's Gallup Refinery. In accordance with that requirement, Western Refining seeks NMED's approval to conduct the activities identified in this Interim Measures Work Plan (the "IM Work Plan") which are designed to eliminate the discharge of wastewater exhibiting the toxicity characteristic of benzene from entering Aeration Lagoon 1 (AL-1) at the Gallup Refinery.

In early 2009, many months before the CAFO went into effect, the Gallup Refinery undertook to evaluate, develop and implement a series of improvements to the refinery's existing wastewater treatment system with a goal of achieving consistent compliance with RCRA standards for discharges to surface impoundments.

A working group of the refinery manager, engineers, and operators was created that meets bi-weekly. A list of action items was developed that are being evaluated and implemented. Personnel from our sister refinery in El Paso were invited to visit the Gallup Refinery and share their experience. Consultants and manufacturers' representatives were brought on-site and their recommendations were implemented.

2.0 Current Conditions

Key issues related to the benzene strippers were identified as – improper mixing of air and water; fouling of the internal packing media; and inefficient oil recovery in the new API oil/water separator. A series of steps to improve the performance of the strippers by addressing these key issues were identified. Some have been implemented and others are in progress. Simultaneously, a program of source control to reduce oil reaching the sewers was instituted. A need for rapid screening tests was also identified, and we implemented a testing program at our internal laboratory to provide screening data on a more frequent basis than the analyses done at an external EPA and NMED certified laboratory.

A temporary tank was located next to the new API separator which allowed all overflows to AL-1 to be contained and later sent back through the wastewater treatment system.

Performance of the strippers has been considerably enhanced, and overall benzene levels have dropped substantially in the outlet of the strippers. In the past two months, on average, we have maintained outlet benzene levels below 0.5 ppm.

2.1 Voluntary Measures Implemented

Table 1 lists measures that have been implemented. These are grouped as follows: 1) Source control; 2) Improvements to the performance of the strippers; 3) Improvements to the performance of the new API separator.

Table 1: Recent measures that have been implemented

Measures	Activity	Activity Status
Source Control		
Desalter Optimization	Use NALCO recommendations to optimize the operation of the two desalters.	The Operations staff completed the necessary steps to optimize the desalters and they are currently running efficiently.
Improve Strippers' Performance		
Determine if packing height in the benzene towers requires modification	Determine if there is adequate packing in the tower and if a new packing design would be appropriate	Packing height is adequate. New packing identified and has been stocked for future use. This packing was installed during the last change-out.
Air to Water Ratio in Benzene Strippers	Determine the right mixture of air to water in the current strippers	There is currently adequate air flow; the Process Department will use a pitot tube to verify that the air flow maintains an adequate flow rate.
Specify new distribution nozzles for the Benzene Strippers	Determine what type of spray nozzle would help distribution of benzene contaminated water over the packing	Installed new spray nozzles on strippers one and two; these will provide well-distributed flow of water over the entire packing.
Upgrade air ducting for Benzene Strippers 1 and 2	Find and plug holes in air piping	The new ducting has been fabricated and installed.
Improve New API Separator Performance		
Change API inlet piping	Create larger inlets	The new installed piping will provide an equal flow to both bays
Create second sample point to monitor API inlet	Install new sample point	New sample point is installed
API separator skimmer level	Find a method or mechanical device that will determine the oil level in the API bays.	The Operations Department determined that a visual inspection of the level is adequate.
Put Weir Box back into service	Perform tests to determine if Weir Box functions properly with API separator modifications; reconnect Weir Box level indicator	The Weir Box is in service and no problems with its operation have been encountered

2.2 Voluntary Measures In-Progress

There are additional measures that are in the process of being evaluated. These are also related to - 1) source control; 2) improvements to the performance of the strippers; 3) improvements to the performance of the new API separator. Among such measures, for example, are enhanced process controls in the API separator, such as temperature, level controls, and etc.

These activities are intended to be implemented incrementally until such time as compliance is consistently achieved.

3.0 Proposed Interim Measures Requiring NMED Approval

Although Western Refining believes that the recent sampling results are indicative of progress resulting from evaluation and implementation of the measures listed in Table 1, in order to ensure compliance with the CAFO, Western Refining has identified the following proposed Interim Measures that will be implemented on an expedited schedule upon the effective date of this IM Work Plan. The proposed Interim Measures fall into 3 categories: (i) physical/design changes to the wastewater treatment system; (ii) an aggressive monitoring and reporting schedule; and (iii) submittal of status reports to the NMED.

3.1 Physical/Design Changes

The most significant change is that we have rented an additional stripper which has a removal efficiency rated higher than our current strippers. This is a Carbonair STAT 400 that will assist in controlling benzene along with the two existing strippers which are located after the oil water separator. See Appendix B for a specification sheet, description, and photos of the new rental stripper. (This element was discussed with NMED in the negotiation of the CAFO.)

In order to move this element of the Interim Measures Work Plan along as quickly as possible, Western Refining submitted a technical air permit application to NMED on August 24, prior to the effective date of the CAFO. A conference call was held on September 15, 2009, with the AQB in which Western Refining requested enforcement discretion to install the rental stripper along with pilot wastewater treatment test equipment. The AQB accepted the general outline of the Western Refining proposal and requested some additional information that will be submitted this week.

Once the new rental stripper system is installed we will have an enhanced stripper system made up of three strippers – a single stripper in series with two others in parallel. Flow from the API separator will first flow to one of two filter pots followed by the rental

stripper. Flow will then be split between the two existing strippers, treated further, and then discharged to AL-1. If Gallup can achieve continuous compliance using the rental stripper, then Western Refining proposes that it retains the discretion not to run one or both of the existing strippers.

During the interim period, Western Refining will continue to operate the benzene stripper three (BZ-3) located upstream of the NAPI next to the units whose main influent is desalter effluent.

When compliance is consistently demonstrated during the Interim Measures Period prior to implementation of all above measures, Western Refining proposes that it retain the discretion not to implement measures that would, therefore, be unnecessary to achieve compliance. For example, if improved performance of our existing two strippers meets compliance, the fourth rental stripper may be discontinued.

3.2 Monitoring and Reporting

Western Refining proposes an aggressive monitoring plan designed to provide meaningful information to Western Refining and the NMED. This plan will be implemented well enough in advance of the conclusion of the Interim Measures period to allow for adjustments in the Interim Measures, if needed. Western Refining will commence sampling and analyzing, as described, even in advance of NMED's approval of the IM Work Plan to provide the best database for comparison.

We believe compliance is best demonstrated by calculating a rolling annual average of weekly grab samples which is the standard applied to other refineries (see Appendix A for a detailed discussion).

Western Refining proposes to sample at different frequencies and report on corresponding schedules during three (3) discrete periods identified below. Western Refining proposes an increased sampling and reporting protocol as a contingency under certain circumstances. Table 2 at the end of this section summarizes the different sampling locations and frequencies for BTEX+MTBE monitoring and reporting.

Flows will be monitored at inlets to AL-1 and EP-1 on a daily basis and reported on the fifth business day of each month for the previous month.

Flows through BZ-3 are currently estimated and reported to the NMED/HWB. This will be discontinued at the end of Period 1, as we believe BZ-3 will not need to be monitored any more to determine compliance at AL-1. BZ-3 will continue to be monitored as a part of our air quality permit's emissions monitoring requirements.

3.2.1 Period 1: First 75 days from the Effective Date of the Interim Measures Work Plan

During Period 1, Western Refining proposes to collect (i) weekly effluent samples of wastewater entering AL-1 and exiting BZ-3 for analyses of benzene, toluene, ethylbenzene, and xylenes plus MTBE (BTEX + MTBE) and (ii) monthly inlet samples of wastewater entering BZ-3 and exiting the New API Separator for analyses of benzene, toluene, ethylbenzene, and xylenes plus MTBE (BTEX + MTBE). The analytical results for each sample will be submitted to NMED within five (5) business days of receipt of report from the external laboratory during Period 1. (The refinery currently is required to provide effluent sampling data 30 days after the end of each month.) The laboratory results will be forwarded to NMED by e-mail or sent in hard copy.

Western Refining also will measure effluent flow rates from the waste streams discharging to AL-1 and EP-1 on a daily basis. The flow rate measurements for the previous month will be submitted to NMED on the fifth business day of each month. Reporting the flow rate by email is acceptable.

Finally, Western Refining will estimate the monthly average gallons per minute through the benzene stripper BZ-3 located in the process area. The flow rate estimate will be submitted to NMED by the fifth business day of each month. Reporting the flow rate by email is acceptable.

3.2.2 Period 2: 75 days to 120 days from the Effective Date of the Interim Measures Work Plan

During Period 2, Western Refining will collect effluent samples two (2) times a week of wastewater entering AL-1 for analyses of benzene, toluene, ethylbenzene, and xylenes plus MTBE (BTEX + MTBE). The analytical results for each sample will be submitted to NMED within five (5) days of receipt of report from the external laboratory during Period 2. (The refinery currently is required to provide effluent sampling data 30 days after the end of each month.) The laboratory results will be forwarded to NMED by e-mail or sent in hard copy.

Western Refining will continue to measure effluent flow rates from the waste streams discharging to AL-1 and EP-1 on a daily basis. The flow rate measurements for the previous month will be submitted to NMED on the fifth business day of each month. Reporting the flow rate by email is acceptable.

3.2.3 Period 3: 120 days from the Effective Date of the Interim Measures Work Plan to startup of new upgraded wastewater treatment system

During Period 3, Western Refining will collect weekly effluent samples of wastewater entering AL-1 for analyses of benzene, toluene, ethylbenzene, and xylenes plus MTBE (BTEX + MTBE). The analytical results for each sample will be submitted to NMED

within five (5) business days of receipt of the report from the external laboratory during Period 3. (The refinery currently is required to provide effluent sampling data 30 days after the end of each month.) The laboratory results will be forwarded to NMED by e-mail or sent in hard copy.

Western Refining will continue to measure effluent flow rates from the waste streams discharging to AL-1 and EP-1 on a daily basis. The flow rate measurements for the previous month will be submitted to NMED on the fifth day of each month. Reporting the flow rate by email is acceptable.

3.2.4 Contingency Sampling and Reporting

In the event that discharges to AL-1 have not achieved a rolling average benzene concentration level less than 0.5 ppm during Period 2 or thereafter, Western Refining will immediately implement the following contingency sampling and reporting activities in addition to the ongoing sampling regime.

a) Beginning on day 121, if an exceedance occurs, Western Refining will collect daily effluent samples of wastewater entering AL-1 and EP-1 for analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX). The effluent wastewater samples will be submitted to a certified off-site laboratory and analyzed using EPA Method 8021B or EPA Method 8260. The analytical results for each sample will be submitted to NMED within four days of collection. The laboratory results may be forwarded to NMED by e-mail or sent in hard copy.

b) Daily effluent wastewater samples will be collected until three consecutive days of achieving the discharge limit of 0.5 mg/L. After this period, Western Refining will again revert to the sampling frequency of Period 3.

c) Western Refining will measure discharge flow rates entering AL-1 and entering Evaporation Pond 1 (EP-1) on a daily basis. The daily discharge flow rates must be submitted to NMED every Friday beginning on day 121. E-mail reporting of this data is acceptable.

3.3 Status Reports

Western Refining believes an important part of implementation of Interim Measures is a regular and frequent series of communications between Western Refining and NMED during the Interim Measures period. Western Refining proposes a monthly summary progress reports on measures being implemented. These reports will be submitted five (5) business days after the end of each month or quarter.

Table 2: Schedule of sampling and reporting in various periods for BTEX + MTBE in treated wastewater entering AL-1

Period	Sample locations	Frequency	Reporting to NMED
Period 1: First 75 days after IM Work Plan approved	Inlet to AL-1 and outlet of BZ-3	Weekly	5 business days after receipt of laboratory reports
Period 2: 75 to 120 days after IM Work Plan approved	Inlet to AL-1	2 times/week	5 business days after receipt of laboratory reports
Period 3: 120 days onwards after IM Work Plan approved	Inlet to AL-1	Weekly	5 business days after receipt of laboratory reports
Contingency – after any non-compliance	Inlet to AL-1	Daily, until three consecutive days of achieving the discharge limit of 0.5 mg/L	Four days after sample collection

4.0 Schedule

Western Refining is prepared to implement this Interim Measures Plan upon NMED HWB approval.

5.0 Summary of Major Approval Requests

- The most important element of the Interim Measures Work Plan is to install a fourth stripper.
- Western Refining has proposed an aggressive monitoring plan designed to provide meaningful information to Western Refining and the NMED well enough in advance of the conclusion of the Interim Measures period to allow for adjustments in the Interim Measures, if needed. Western Refining seeks approval to sample at different frequencies and report on corresponding different schedules during three (3) discrete periods identified in this plan. Additionally, Western Refining proposes an increased sampling and reporting protocol as a contingency if our wastewater is found to be out of compliance.
- Western Refining requests approval that compliance be demonstrated by calculating a rolling average on an annual basis of weekly grab samples of strippers' effluent tested for benzene. This is a standard applied to other refineries.

Appendix A: Sampling Methodology

All effluent wastewater samples described in this plan will be submitted to a certified off-site laboratory and analyzed using EPA Method 8021B or EPA Method 8260.

Based on weekly grab samples, we will then calculate a rolling average to determine compliance. Rolling average is calculated over the days of sample collection until 365 days of data are collected after which the annual average for any given day will be calculated using that day's data and the prior 364 days of data. These quotes from the American Petroleum Institute (API)[1] best describe our situation and suggested strategy –

"A representative sample of solid waste is defined at 40 CFR 260.10. This definition is as follows:

- "*Representative sample* means a sample of a universe or a whole (e.g., waste pile, lagoon, ground water) which can be expected to exhibit the average properties of the universe or whole."
- See *U.S.* v. *WCI Steel*, 72 F.Supp.2d 810, 820 –25 (N.D. OH 1999) (samples from surface impoundment must be representative of the "whole" impoundment, as by random sampling).

"The toxicity characteristic (TC) regulation at 40 CFR 261.24 states that a waste is hazardous if an extract of a *representative sample* of the waste exceeds regulatory levels. Chapter 9 of SW-846[2] describes representative sampling of solid waste in detail. The regulatory objectives of representative sampling are stated in Section 9.1.1.1 of SW-846 and are repeated below, because they clearly describe EPA's intent regarding sampling for characterizing solid wastes.

"The EPA, in its hazardous waste management system, has required that certain solid wastes be analyzed for physical and chemical properties. It is mostly chemical properties that are of concern, and, in the case of a number of chemical contaminants, the EPA has promulgated levels (regulatory thresholds) that cannot be equaled or exceeded. The regulations pertaining to the management of hazardous wastes contain three references regarding the sampling of solid wastes for analytical properties. The first reference, which occurs throughout the regulations, requires that representative samples of waste be collected and defines representative samples as exhibiting average properties of the whole waste. (Page Nine-5, SW-846)

"For example, in the case of a typical wastewater that is generated from the same source and operations on a continuous or intermittent basis, the concentration of a contaminant will vary with time. Thus, a representative sample of wastewater must consist of multiple

[1] These API comments are available at - http://www.uswag.org/2003/sw846jc.pdf
[2] EPA, December 1997, *Test Methods for Evaluating Solid Waste Physical/Chemical Methods*, Office of Solid Waste.

individual measurements in order to exhibit the *average properties* of the universe or whole.

"The language in SW-846 reiterates the regulatory definition of what constitutes a representative sample of waste. It is generally a sample that represents the *average* properties of the *whole* waste and is typically not the concentration of a constituent in a single grab sample, or even in multiple grab samples unless those samples are collected pursuant to a sampling plan that is designed to measure the average properties of the whole waste."

A possible acceptable strategy for determining if wastewater is exceeding the TC level of benzene of 0.5 ppm is suggested by the API –

"One example is a sampling plan used by a petroleum refinery located in EPA Region II that is typical for a continuously generated process wastewater. This wastewater is treated in an activated sludge system that uses surface impoundments for aeration. Therefore, it must demonstrate that the wastewater that enters the impoundments is not a hazardous waste by any of the characteristics of hazardous waste at 40 CFR 261. The specific waste constituent of this concern is benzene and the regulatory target is the Toxicity Characteristic (TC) threshold for benzene.

The refinery utilized the SW-846 recommended approach for defining the upper level of uncertainty in the long-term average in its waste analysis plan. The plan also recognizes that to properly characterize the process wastewater, sampling has to be conducted over an extended period of time to obtain a representative sample.

Samples are collected at the aeration basin influent feed as grab samples at least once each week. These samples are analyzed for benzene. The refinery defines a one-year moving average as representative of its operations, based on its evaluation of the underlying basis of the TC threshold concentrations and the variability of benzene concentrations in its wastewater. The upper limit of a confidence interval calculated as prescribed in SW-846[3] is then compared to the TC regulatory threshold of 0.5 mg/L to determine whether the wastewater is hazardous. The one-year averaging interval is updated on a regular basis (i.e., it is a one-year moving average based on the most recent samples collected).

The one-year averaging approach was selected using the representative sampling concepts in the SW-846 guidance to comply with an evaluation of what a representative time period would be for that facility. The refinery has used this sampling methodology since 1994 and reports its results to EPA Region II on a monthly basis, as requested by EPA."

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[3] The confidence interval is calculated using Equation 8 in Table 9-1 and the appropriate Student's t-values in Table 9-2 of SW-846.

Appendix B: Details of Stat-400 Carbonair Air Stripper

Additional Stripper – Carbonair STAT-400

The fourth stripper we have rented, the Carbonair STAT-400 model, has the following features –

- The material of construction is stainless steel
- Gasket material is Neoprene
- Blower is direct drive
- Self prime transfer pump

We have added filters upstream of the API strippers. The effluent from this unit will be routed through the existing two strippers that are in parallel. The photographs below depict the additional stripper placed next to the existing strippers.

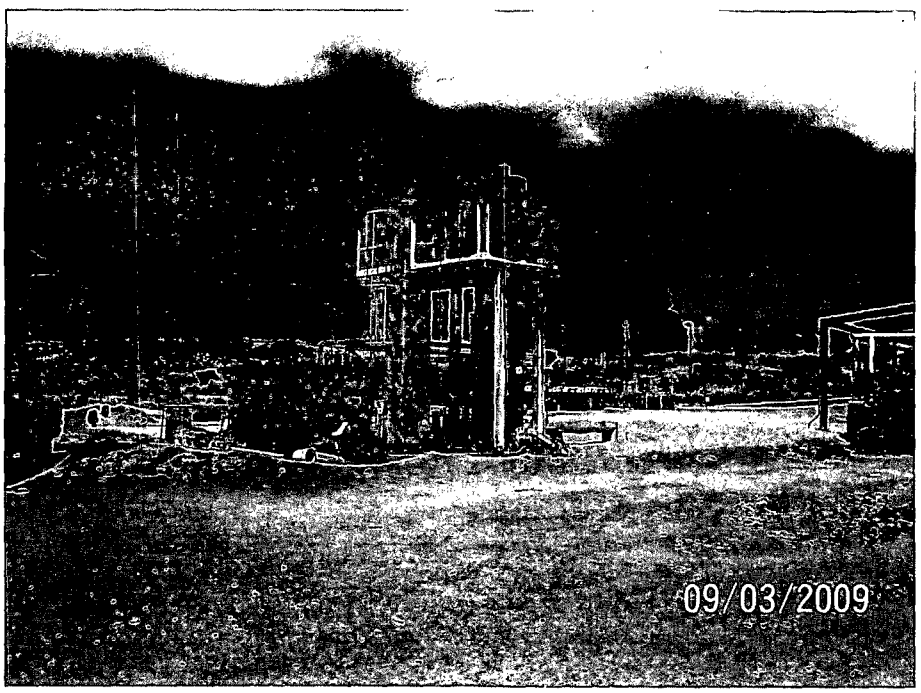


Figure A.1: Photograph of new additional stripper located next to existing strippers.

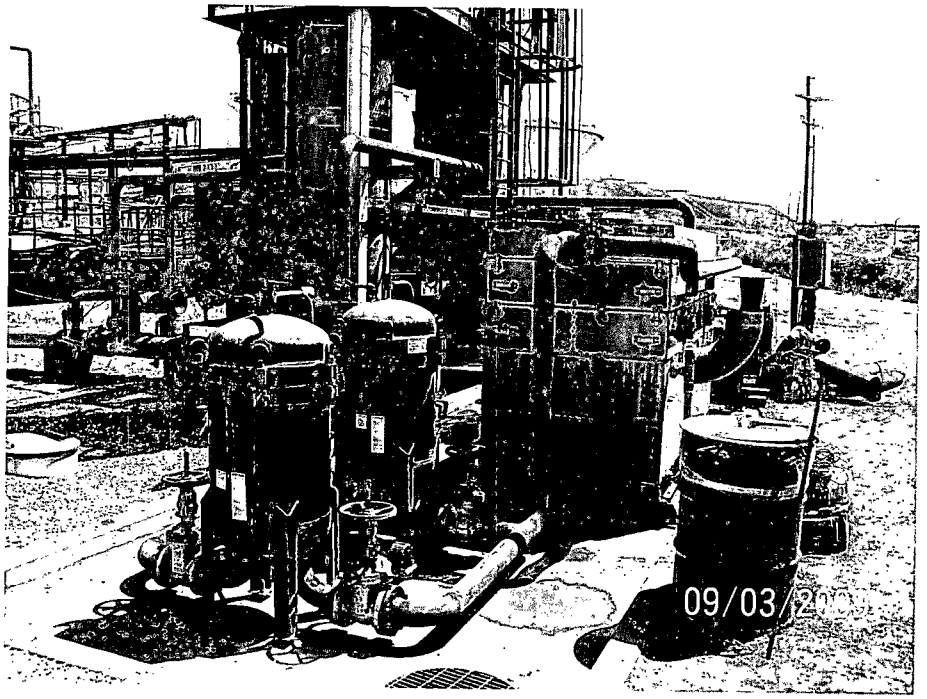


Figure A.2: Looking south at the new additional stripper and the new pre-filters (in blue)

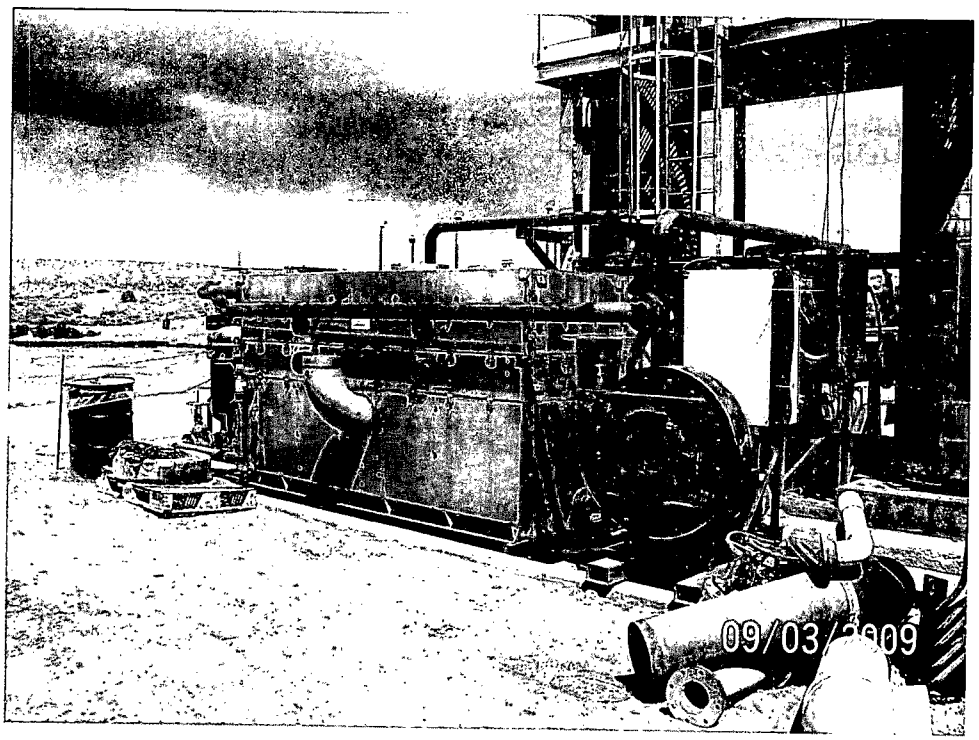


Figure A.3: Looking north-east at the new additional stripper

Carbonair's patented STAT Low Profile Air Strippers are ideally suited for removing volatile organic compounds (VOCs) from water in a variety of applications including industrial process and waste water treatment.

STAT low profile air strippers combine high removal efficiencies of VOCs, flexibility, and ease of maintenance and durability. Since 1992, Carbonair has provided thousands of STAT low profile air strippers in a myriad of applications and configurations. Many of these are still operating today.

STAT Standard Design Features

All STAT models are made of high quality 304 stainless steel and have 125 lb flanged inlet and outlet connections to ensure the integrity of piping connections. The trays and sump sections come equipped with clean out ports that facilitate easy inspection and routine cleaning of the aeration trays. The aerations trays are connected using adjustable over-center latching stainless steel clips, making assembly and disassembly quick and easy, while ensuring a tight fit and good seal to prevent leaks. All STAT aeration trays come equipped with an anti-bypass valve that prevents air from bypassing the aeration trays by flowing up through the down comers. This eliminates the need to "prime" the system at startup and ensures that the first drop of water that goes through the air strippers is treated as well as the last.

STATs configured for pump out discharge have sumps that are sized to minimize pump cycling and to maintain sufficient air distribution across the aeration trays. STATs come with direct coupled industrial grade blowers as standard equipment. All STATs are equipped with a low pressure switch mounted on the blower to shut down the water input upstream in the event of a blower failure, thereby ensuring that no untreated water is passing through to discharge.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 6
DALLAS, TEXAS

IN THE MATTER OF:	§	
	§	DOCKET NO. RCRA-06-2009-0936
	§	
WESTERN REFINING	§	
SOUTHWEST, INC.	§	
Route 3, Box 7	§	
Gallup, New Mexico 87301	§	
	§	
ID # NMD000333211	§	COMPLAINT AND
	§	CONSENT AGREEMENT AND
	§	FINAL ORDER
	§	
RESPONDENT	§	

COMPLAINT AND CONSENT AGREEMENT AND FINAL ORDER

The Director, Compliance Assurance and Enforcement Division, United States Environmental Protection Agency, Region 6 ("EPA") as Complainant, the New Mexico Environment Department ("NMED") as Plaintiff-Intervenor, and Western Refining Southwest, Inc., with a facility near Gallup, New Mexico ("Respondent") in the above referenced action, have consented to the terms of this Complaint and Consent Agreement and Final Order ("CAFO").

NOW THEREFORE, before the taking of any testimony, without any adjudication of any issues of law or fact herein, the parties agree to the terms of this CAFO.

I. PRELIMINARY STATEMENT

1) This proceeding for the assessment of civil penalties and compliance order was instituted by EPA pursuant to Section 3008 of the Resource Conservation and Recovery Act ("RCRA"),

42 U.S.C. § 6928 and is simultaneously commenced and concluded through the issuance of this CAFO under 40 C.F.R. § 22.13(b) and 22.18(b)(2) and (3).

2) NMED and Respondent agreed to settlement of NMED's action before the filing of a complaint and, thus, NMED simultaneously commences and concludes its action pursuant to Rules 22.13(b) and 22.18(b) of the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance of Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits (the "CROP"), 40 C.F.R. §§ 22.13(b) and 22.18(b). NMED is the designated State Agency responsible for carrying out the RCRA program in New Mexico. The State of New Mexico's authority to implement the base RCRA program is the New Mexico Statutes 1978 Annotated (NMSA), Sections 74-1-8 and 74-4-4 (as amended). The New Mexico Administrative Code ("NMAC") Title 20, Chapter 4, Part 1, was promulgated and adopted under the NMSA, Hazardous Waste Act. The NMAC incorporates by reference certain sections of the federal hazardous waste regulations found in Title 40, Code of Federal Regulations (40 C.F.R.). NMED hereby joins as a party of interest pursuant to 40 C.F.R. § 22.11(a), because it has an interest relating to the cause of action, this final order would impair its ability to protect its interest, and no existing party adequately represents its interests. All parties consent to NMED's joinder in this proceeding.

3) Respondent admits the jurisdictional allegations herein; however, Respondent neither admits nor denies the specific factual allegations and conclusions of law contained in this CAFO. This CAFO states a claim upon which relief may be granted.

4) Respondent explicitly waives any right to contest the allegations and its right to appeal the proposed final order contained in this CAFO, and waives all defenses which have been raised or could have been raised to the claims set forth in the CAFO. This CAFO shall not be

admissible against Respondent in a civil proceeding unless the proceeding is brought by EPA and/or Respondent-Intervenor to enforce this CAFO.

5) This CAFO resolves only those claims of EPA and the NMED for the violations which are alleged herein.

6) Respondent consents to the issuance of the CAFO hereinafter recited and consents to the assessment and payment of stated civil penalty in the amount and by the method set out in this CAFO.

II.
FINDINGS OF FACT AND CONCLUSIONS OF LAW

7) Western Refining Southwest, Inc. ("Respondent") was qualified to do business in the State of New Mexico on February 20, 1974. Respondent is an Arizona Corporation.

8) Respondent owns and operates a petroleum refinery in Jamestown, New Mexico, approximately 17 miles East of Gallup, New Mexico.

9) Respondent is a "person" as the term is defined in Section 1004 (15) of RCRA, 42 U.S.C. § 6903 (15), NMAC § 20.4.1.100 [40 CFR § 260.10].

10) Respondent is the "owner" and "operator" of the facility described, above, as those terms are defined at NMAC § 20.4.1.100 [40 CFR § 260.10].

11) Respondent is a "Large Quantity Generator" of hazardous waste as that term is defined in NMAC § 20.4.1.100 [40 CFR § 260.10]. Respondent's EPA Identification Number is NMD000333211.

12) Respondent's operations, along with all Respondent-owned contiguous land and structures, other appurtenances and improvements on Respondent-owned land, is a "facility" as the term is defined in the New Mexico Administrative Code ("NMAC") § 20.4.1.100 [Title 40 Code of Federal Regulations ("CFR") § 260.10].

13) Pursuant to RCRA 3007(a), 42 U.S.C. § 6928, on September 11-13, 2007, Representatives of EPA conducted a RCRA Compliance Evaluation Inspection (Inspection) at Respondent's facility. Respondent engaged in written and oral exchanges of information with EPA on a voluntary basis thereafter relating to RCRA compliance issues at Respondent's facility.

III.
EPA VIOLATIONS

14) Complainant incorporates by reference the facts, allegations, and conclusions of law contained in paragraphs 1-13 of this Complaint and CAFO.

EPA VIOLATION I – LAND-DISPOSING PROHIBITED HAZARDOUS WASTE

15) During the Inspection, EPA Representatives observed two Benzene/Air Strippers and an American Petroleum Institute ("API") oil/water separator (known as the "New API Separator").

16) Respondent's Representatives stated that the New API Separator treats the facility's process wastewater to remove oily secondary materials. Respondent's Representatives stated that oily secondary materials that are removed from the New API Separator are routed to tanks for storage. Respondent's Representatives stated that the wastewater from the New API Separator is pumped to the top of the Benzene Strippers. The water flows down through the strippers while air is blown upward to remove benzene from the wastewater. Respondent's Representatives stated that after the wastewater flows through the Benzene Strippers, it is discharged to Aeration Lagoon #1 ("AL-1").

17) During the Inspection, EPA Representatives observed the pipe that discharges flows from the Benzene Strippers to AL-1.

18) During the Inspection, Respondent's Representatives provided the EPA Representatives with analytical data showing the concentration of Benzene in water discharged to AL-1. The data indicated that the concentration of Benzene was 4.4 milligrams per Liter (mg/L).

19) During the Inspection, EPA Representatives observed another pipe that discharges into AL-1. The pipe was discharging liquids at the time of the observation.

20) Respondent's Representatives stated that the pipe was the Overflow Pipe from the New API Separator. Respondent's Representatives stated that when wastewater flow to the New API Separator exceeded the unit's ability to process the volume, the overflow was directly discharged to AL-1. The Overflow Pipe was removed from service the week of January 5, 2009, and overflows since that time have been routed to a semi-permanent/temporary tank.

21) During the Inspection, Respondent's Representatives provided the EPA Representatives with analytical data showing the concentration of Benzene in wastewater discharged from the New API Separator. The data indicated that the concentration of Benzene was between 11.0 and 16.0 mg/L.

22) The wastewater being discharged to AL-1 was being "disposed" as that term is defined at NMAC § 20.4.1.200 [40 CFR 261.2], by being discarded into a surface impoundment, a land-based unit.

23) The wastewater is therefore a "solid waste" as that term is defined at NMAC § 20.4.1.200 [40 CFR 261.2].

24) A solid waste which contains benzene in concentrations above 0.5 mg/L is also a "hazardous waste" as that term is defined at NMAC § 20.4.1.200 [40 CFR 261.3], carries the characteristic of toxicity, and has the EPA Hazardous Waste Number of D018 as listed in NMAC 20.4.1.200 [40 CFR § 261.24].

25) Pursuant to the Land Disposal Restrictions at NMAC § 20.4.1.800 [40 CFR § 268.40] and RCRA § 3004, untreated hazardous waste with the toxicity characteristic of benzene (D018) is prohibited from land disposal unless it meets the treatment standards listed in NMAC § 20.4.1.800 [40 CFR § 268.40 & 268.48].

26) Respondent failed to comply with the Land Disposal Restrictions listed in Paragraph 25, above.

27) Therefore, Respondent violated NMAC § 20.4.1.800 [40 CFR § 268.40], by land disposing untreated hazardous waste.

EPA VIOLATION II – OPERATING A SURFACE IMPOUNDMENT WITHOUT A RCRA PERMIT

28) As presented in Violation I above, during the Inspection, EPA Representatives observed wastewater from the New API Separator and wastewater from the benzene strippers being discharged into AL-1.

29) AL-1 is a "Surface Impoundment" as that term is defined at NMAC § 20.4.1.100 [40 CFR § 260.10].

30) AL-1 is a "Hazardous Waste Management Unit", as that term is defined at NMAC § 20.4.1.100 [40 CFR § 260.10].

31) Pursuant to NMAC 20.4.1.900 & 901 [40 C.F.R. § 270.1, 270.10, & 270.17 & RCRA § 3005 & 3004], owners and operators of hazardous waste management units must have permits during the active life of the facilities. Owners/operators of surface impoundments must have post-closure permits, file a part B permit application, and meet the specific requirements – minimum technology requirements ("MTR") – for surface impoundments.

32) At the time of the Inspection, Respondent did not have a RCRA Permit to operate the surface impoundment for hazardous waste management, and the impoundment did not meet MTR.

33) Therefore, Respondent violated NMAC 20.4.1.900 & 901 [40 C.F.R. § 270.1, 270.10, & 270.17 & RCRA § 3005 & 3004], by failing to have a RCRA Permit.

EPA VIOLATION III – STORING HAZARDOUS WASTE IN TANKS WITHOUT A RCRA PERMIT

34) During the Inspection, EPA Representatives observed two storage tanks Z-84-T1 and Z-84-T2.

35) Respondent's Representatives stated that tanks Z-84-T1 and Z-84-T2 were storing oily wastewater – specifically, oil-bearing hazardous secondary materials that were recovered from an overflow event from the New API Separator into Aeration Lagoons AL-1 and AL-2, and Evaporation Pond 1.

36) Respondent's Representative stated that the spill occurred in August 2005.

37) In Respondent's letter to EPA, dated October 24, 2007, Respondent stated that the material stored in tanks Z-84-T1 and Z-84-T2 was recovered oil from Respondent's lagoons and ponds and that the material was being sent to the Motiva Refinery in Norco, Louisiana for recycling. Respondent provided analytical results of samples taken on September 17, 2007, of the material stored in tanks Z-84-T1 and Z-84-T2. The analytical data indicated that the materials contained benzene at a concentration of 21 mg/L.

38) Pursuant to NMAC 20.4.1.200 [40 C.F.R. Section 261.4(a)(12)(ii)], oil-bearing hazardous secondary materials generated at petroleum refineries are not solid wastes if they are returned to the refining process, without first being accumulated speculatively.

39) Pursuant to NMAC § 20.4.1.200 [40 CFR 261.1(c)(8)], a material is "accumulated speculatively" if 75% of the material has not been recycled during the calendar year (commencing on January 1).

40) The oil-bearing hazardous secondary materials stored in tanks Z-84-T1 and Z-84-T2 were generated in August 2005 and were still being stored on site during the time of the Inspection in September 2007. The material subsequently was sent to the Motiva Refinery in Norco, Louisiana for recycling by the end of 2007.

41) At the time of the Inspection, Respondent could not provide documentation that 75% of the material had been recycled.

42) Therefore, the materials referenced in Paragraphs 35 - 37, above, are not excluded from the definition of solid waste, and are, therefore "solid wastes" as that term is defined at NMAC § 20.4.1.200 [40 CFR 261.2].

43) The materials referenced in Paragraphs 35 - 37, above, are also "hazardous waste" as that term is defined at NMAC § 20.4.1.200 [40 CFR 261.3], because they contain benzene in concentrations above 0.5 mg/L. These materials exhibit the characteristic of toxicity, and carry the EPA Hazardous Waste Number of D018 as listed in NMAC 20.4.1.200 [40 CFR § 261.24].

44) Tanks Z-84-T1 and Z-84-T2 are a "Hazardous Waste Management Unit", as that term is defined at NMAC § 20.4.1.100 [40 CFR § 260.10].

45) Pursuant to NMAC 20.4.1.900 & 901 [40 C.F.R. § 270.1 & 270.10], owners/operators of hazardous waste storage units [tanks] must have a permit during the active life of the units unless they meet the requirements for exemption in NMAC 20.4.1.300 [40 C.F.R. § 262.34].

46) Pursuant to the permit exemption requirements in NMAC 20.4.1.300 [40 C.F.R. § 262.34], large quantity generators of hazardous waste may store hazardous waste in tanks for less than ninety days, without a permit, provided that the tanks meet the requirements of NMAC 20.4.1.600 [40 C.F.R. § 265, Subpart J].

47) Tanks Z-84-T1 and Z-84-T2 were not built and/or designed as hazardous waste storage tanks and do not meet the requirements of NMAC 20.4.1.600 [40 C.F.R. § 265, Subpart J].

48) On January 1, 2007, the materials stored in tanks Z-84-T1 and Z-84-T2 became solid wastes and hazardous wastes as described in paragraphs 42 and 43, above.

49) At the time of the Inspection, Respondent was storing hazardous waste for longer than ninety days.

50) Therefore, Respondent failed to meet the permit exemption requirements in NMAC 20.4.1.300 [40 C.F.R. § 262.34].

51) Respondent does not have a RCRA permit.

52) Therefore, Respondent failed to meet the requirements of NMAC 20.4.1.900 & 901 [40 C.F.R. § 270.1 & 270.10], by failing to obtain a RCRA permit.

EPA VIOLATION IV – OPERATING A WASTE PILE WITHOUT A RCRA PERMIT

53) During the Inspection, EPA Representatives observed a concrete pad used for cleaning heat exchanger bundle [tubes] – (the "Bundle Cleaning Pad"). EPA Representatives further observed a pile of unknown material on the Bundle Cleaning Pad and a heat exchanger bundle lying on top of the pile.

54) EPA Representatives observed that sludge had fallen off the heat exchanger bundle onto the pile

55) Respondent's Representatives stated they did not know what the pile of material was at the time when the EPA Representatives observed it, but later stated that the material was soil which was excavated near the Acid Soluble Oil ("ASO") neutralization drum in the Alkylation unit – ASO soil.

56) In Respondent's October 24, 2007 letter to EPA, Respondent reaffirmed that the material was ASO soil.

57) The ASO soil described above, is a "solid waste" as that term is defined at NMAC § 20.4.1.200 [40 CFR 261.2].

58) Pursuant to NMAC 20.4.1.200 [40 CFR § 261.32], waste generated from cleaning heat exchanger bundles, at petroleum refineries, is classified by EPA as a hazardous waste from a specific source and has the EPA Hazardous Waste Number of K050.

59) Pursuant to NMAC 20.4.1.200 [40 CFR § 261.3(a)(2)(iv)], a mixture of a solid waste and a waste listed in 20.4.1.200 [40 CFR § 261.32], is also a listed hazardous waste.

60) Therefore the ASO soil is a hazardous waste.

61) Respondent's Representatives stated that Respondent also dewaters sludge from the New API Separator on the Bundle Cleaning Pad.

62) Pursuant to NMAC 20.4.1.200 [40 CFR § 261.32], wastes generated from API Separator Sludge, at petroleum refineries, is classified by EPA as a hazardous waste from a specific source and has the EPA Hazardous Waste Number of K051.

63) The ASO soil and the API Separator Sludge are managed as hazardous waste piles, a "hazardous waste management unit" as that term is defined at NMAC § 20.4.1.100 [40 CFR § 260.10].

64) Pursuant to NMAC 20.4.1.900 & 901 [40 C.F.R. § 270.1, 270.10, & 270.18 and RCRA § 3005], owners and operators of hazardous waste management units must have permits during the active life of the facilities. Owners/operators of waste piles must have post-closure permits, file a part B permit application, and meet the specific technical requirements for waste piles.

65) Respondent does not have a RCRA permit and Respondent's waste piles do not meet the technical requirements.

66) Therefore, Respondent has violated NMAC 20.4.1.900 & 901 [40 C.F.R. § 270.1, 270.10, & 270.18 and RCRA § 3005] by failing to obtain a RCRA permit.

EPA VIOLATION V – STORING HAZARDOUS WASTE WITHOUT A PERMIT

67) During the Inspection, EPA Representatives observed an open, unlabeled container ("drum") of oily material near the Bundle Cleaning Pad.

68) Respondent's Representatives stated that the drum contained sludge from the weir box of the New API Separator.

69) Pursuant to NMAC 20.4.1.200 [40 CFR § 261.3], sludge generated from primary oil/water/solids separation, at petroleum refineries, is classified by EPA as a hazardous waste from a non-specific source and has the EPA Hazardous Waste Number of F037.

70) Pursuant to the permit exemption requirements in NMAC 20.4.1.300 [40 C.F.R. § 262.34], large quantity generators of hazardous waste may store hazardous waste in containers without a permit as long as the containers are labeled with the words "Hazardous Waste" and marked with the date upon which accumulation [storage] began, and the generator complies with container storage requirements of NMAC 20.4.1.600 [40 C.F.R. § 265, Subpart I] (keeps containers closed).

71) Respondent did not label the drum with the words "Hazardous Waste", did not mark the date that accumulation began, and did not close the drum.

72) Therefore, Respondent failed to meet the permit exemption requirements in NMAC 20.4.1.300 [40 C.F.R. § 262.34].

73) Respondent does not have a RCRA permit.

74) Therefore, Respondent failed to meet the requirements of NMAC 20.4.1.900 & 901 [40 C.F.R. § 270.1 & 270.10], by failing to obtain a RCRA permit.

EPA VIOLATION VI – FAILING TO MAKE HAZARDOUS WASTE DETERMINATIONS

75) During the Inspection, EPA Representatives observed "super sacks" of charcoal filter material, which had been removed from the Thiosulfate Unit, being stored at the less-than-ninety-day hazardous waste storage area.

76) Respondent's Representatives did not have analytical data which could identify the hazardous characteristics of the material identified in Paragraph 75, nor did they have documentation that could attest to its potential listing as a hazardous waste.

77) During the Inspection, EPA Representatives also observed a leaking vacuum truck contaminating surface soil.

78) Respondent's Representatives did not know the identity of the material that was leaking from the vacuum truck.

79) The materials identified in Paragraphs 75 - 78, above are "solid waste" as that term is defined at NMAC § 20.4.1.200 [40 CFR 261.2].

80) Pursuant to NMAC § 20.4.1.300 [40 C.F.R. § 262.11], a person who generates a solid waste, must determine if that waste is a hazardous waste.

81) Pursuant to NMAC § 20.4.1.300 [40 C.F.R. § 262.40], a generator must keep records of hazardous waste determinations for three years.

82) Respondent had not made hazardous waste determinations on the two waste streams identified in Paragraphs 75 - 78, above, and/or had not kept records of hazardous waste determinations.

83) Therefore, Respondent has failed to meet the requirements of NMAC § 20.4.1.300 [40 C.F.R. § 262.11] and/or NMAC § 20.4.1.300 [40 C.F.R. § 262.40].

EPA VIOLATION VII – TREATING HAZARDOUS WASTE WITHOUT A RCRA PERMIT

84) During the Inspection, EPA Representatives observed two Benzene/Air Strippers used by Respondent to remove benzene from contaminated process wastewater.

85) The Benzene/Air Strippers are used by Respondent for "treatment" of hazardous waste, as that term is defined at NMAC § 20.4.1.100 [40 CFR § 260.10].

86) The Benzene/Air Strippers are a "Hazardous Waste Management Unit", as that term is defined at NMAC § 20.4.1.100 [40 CFR § 260.10].

87) Pursuant to NMAC 20.4.1.900 [40 C.F.R. § 270.1, 270.10 and RCRA § 3005], owners and operators of hazardous waste management units must have permits during the active life of the facilities, unless they meet the requirements for exemption in NMAC 20.4.1.300 [40 C.F.R. § 262.34].

88) Pursuant to the permit exemption requirements in NMAC 20.4.1.300 [40 C.F.R. § 262.34], large quantity generators of hazardous waste may store [and treat] hazardous waste in containers or tanks for less than ninety days, without a permit, provided that the containers and/or tanks meet all of the requirements listed in this subpart, including NMAC 20.4.1.600 [40 C.F.R. § 265, Subpart I] for containers and 20.4.1.600 [40 C.F.R. § 265, Subpart J] for tanks.

89) The Benzene/Air Strippers do not meet the definition of "container(s)" as that term is defined at NMAC § 20.4.1.100 [40 CFR § 260.10].

90) The Benzene/Air Strippers do not meet the definition of tanks as described at NMAC 20.4.1.600 [40 C.F.R. § 265, Subpart J].

91) Therefore, Respondent has failed to meet the permit exemption requirements in NMAC 20.4.1.300 [40 C.F.R. § 262.34].

92) Respondent does not have a RCRA permit.

93) Therefore, Respondent failed to meet the requirements of NMAC 20.4.1.900 & 901 [40 C.F.R. § 270.1 & 270.10], by failing to obtain a RCRA permit.

EPA VIOLATION VIII – FAILING TO MEET SOLID WASTE EXCLUSION REQUIREMENTS

94) At the time of the Inspection, Respondent's representatives stated that oil-bearing hazardous secondary materials were being stored on site.

95) Respondent's Representatives stated that oil-bearing hazardous secondary materials are recycled off-site at the Motiva Refinery in Norco, Louisiana.

96) Pursuant to NMAC 20.4.1.200 [40 C.F.R. § 261.4(a)(12)], oil-bearing hazardous secondary materials generated at a petroleum refinery which are inserted back into the refining process (thermal cracking/coking units) are not solid wastes.

97) However, to enjoy the above stated exclusion, Respondent must keep documentation to demonstrate that the coke products do not exhibit a characteristic of hazardous waste.

98) At the time of the Inspection, Respondent did not have analytical data to show that the coke products did not exhibit a characteristic of hazardous waste.

99) Therefore, Respondent failed to meet the solid waste exclusion requirements for oil-bearing hazardous secondary materials.

IV.
COMPLIANCE ORDER

100) Pursuant to 42 U.S.C. § 6928, Respondent is hereby ORDERED to take the following actions and provide evidence of compliance within the time period specified below:

A. Respondent, pursuant to RCRA regulation, shall provide documentation demonstrating completion of the selected remedy at AL-1 and AL-2 in accordance with the plan and schedule established in a Lagoon Corrective Measures Implementation

Workplan[1] when approved by NMED. The Respondent has submitted a workplan for the closure of AL-1 and AL-2 to NMED, another submission is due on or before July 31, 2009. The Lagoon Corrective Measures Implementation Workplan must be approved by NMED. The Respondent must comply with all NMED's requirements for closure including any established schedules. NMED will respond to the submitted Lagoon Corrective Measures Implementation Workplan within the timeframe outlined in 20.4.2. NMAC. Upon NMED approval, all deadlines, work/design requirements, and sampling and monitoring requirements in the Lagoon Corrective Measures Implementation Workplan shall become part of, and enforceable under, this CAFO.

B. Respondent shall cease the operation of, and dismantle, all existing Benzene/Air Strippers at its facility. All Benzene Strippers must be permanently removed from service within 90 days of demonstrating that the upgraded wastewater treatment system is achieving treatment criteria as specified in an approved Process Design Report for Wastewater Treatment Plant Workplan (described in paragraph C below).

C. Respondent shall design, construct, properly permit, and commence operation of an upgraded wastewater treatment system as approved by NMED and the New Mexico Energy, Minerals and Natural Resource Department, Oil Conservation Division ("OCD") and that is capable of treating all wastewater in accordance with the schedule established in a Process Design Report for Wastewater Treatment Plant Workplan[2] when approved by the NMED and the OCD. The Respondent submitted, on May 30, 2009, a Process Design Report for Wastewater Treatment System Workplan for NMED and OCD

[1] Respondent has informed EPA that this will be the title of the described Workplan. Any change in title of the Workplan shall not circumvent the obligation to submit the described Workplan.

[2] Respondent has informed EPA that this will be the title of the described Workplan. Any change in title of the Workplan shall not circumvent the obligation to submit the described Workplan.

approval for the design and construction of the upgraded wastewater treatment system. Upon NMED and OCD approval, all deadlines, work/design requirements, and sampling and monitoring requirements in a Process Design Report for Wastewater Treatment System Workplan shall become part of, and enforceable under, this CAFO.

D. Respondent shall, within 30 days following the effective date of this CAFO, submit to NMED for approval an Interim Measures Workplan for ceasing the discharge of any hazardous wastewater to any surface impoundment, unless such discharge complies with applicable RCRA standards. Discharge of any hazardous wastewater to any surface impoundment shall cease within 120 days following NMED's approval of the Interim Measures Workplan, unless such discharge complies with applicable RCRA requirements. If air strippers are used during this interim period under the approved Interim Measures Workplan, this CAFO shall constitute authorization, for purposes of RCRA compliance, for such air strippers. However, all air strippers shall be subject to the removal described in paragraph B (except for dismantling) once the upgraded wastewater treatment system is achieving treatment criteria as specified in an approved Process Design Report for Wastewater Treatment Plant Workplan. All deadlines, work/design requirements, and sampling and monitoring requirements in the Interim Measures Workplan, as approved by NMED, shall become part of, and enforceable under, this CAFO.

E. Western shall commence operation of the upgraded wastewater treatment system by a date certain established in the approved Process Design Report for Wastewater Treatment System Workplan. The tanks and ancillary equipment in the upgraded wastewater treatment system that are in operation downstream of the API Separator shall be compliant with 40 C.F.R. § 262.34(a) (RCRA Permit Exemption Requirements for

Generators) and Respondent, if needed, shall secure any necessary permitting. Upon commencing operation of the upgraded wastewater treatment system, Respondent shall, at the same time, commence operation of a diversion tank system to handle wastewater that does not meet discharge standards from the above described upgraded wastewater treatment system. The construction of the diversion tank system shall be addressed in the Process Design Report for Wastewater Treatment System Workplan which must be approved by NMED and OCD. Upon NMED and OCD approval, all deadlines, work/design requirements, and sampling and monitoring requirements in a Process Design Report for Wastewater Treatment System Workplan shall become part of, and enforceable under, this CAFO.

F. In regard to the upgraded wastewater treatment system and diversion tank system, as described in paragraphs 100 C and 100 E, Respondent shall be responsible for the proper design, construction, and, if needed, permitting of all associated tanks, pipes, and ancillary equipment, in addition to, and including, the upgraded waste water treatment system and diversion tank system. The tanks and ancillary equipment in the upgraded wastewater treatment system that are in operation downstream of the API Separator and any diversion tank that is in operation downstream of the API Separator shall be compliant with 40 C.F.R. § 262.34(a) (RCRA Permit Exemption Requirements for Generators) and Respondent, if needed, shall secure any necessary permitting.

G. Respondent shall limit volatile organic ("VO") air emissions from the upgraded waste water treatment system described in paragraph 100 C and 100 E to the limits in 40 CFR 265 subpart CC. If after the upgraded wastewater treatment system is operable, Respondent exceeds this RCRA air emission level, Respondent shall, within 90 days from the date on which Respondent becomes aware that it is exceeding this RCRA air

emission level, submit a VO Air Emissions Workplan for review and approval to NMED for the design and construction of a mechanism to capture, treat, and/or recycle the benzene air emissions from the waste water treatment system. Upon NMED approval, all deadlines, work/design requirements, and sampling and monitoring requirements in the VO Air Emissions Workplan shall become part of, and enforceable under, this CAFO.

H. In order to financially assure the closure of AL-1 and AL-2 and the removal of the benzene strippers under this CAFO, Respondent shall establish and provide financial assurance for the benefit of the EPA utilizing one of the financial mechanisms established pursuant to the New Mexico authorized hazardous waste regulations. Respondent shall provide to EPA and NMED a detailed written cost estimate, including supporting documentation, for the work within 60 days of the effective date of this CAFO. If Respondent already utilizes the corporate financial test or the corporate guarantee for any environmental obligations or financial assurance it is required to meet or provide to the State of New Mexico, Respondent shall submit to New Mexico an updated financial mechanism. Respondent will provide the financial assurance or update the existing financial assurance mechanism within 30 days of EPA's approval of the cost estimate.

101) In all instances in which this CAFO requires written submissions to EPA and NMED, each submission must be accompanied by the following certification signed by a "responsible official:"

> I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

For the purpose of this certification, a "responsible official" of a Respondent means a person with the authority to bind Respondent as to the truth, accuracy, and completeness of all certified information.

102) All documents required under this CAFO shall be sent to the following persons:

Joel Dougherty (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA Region 6, Suite 1200
1445 Ross Ave.
Dallas, TX 75202-2733

Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

V.
CIVIL PENALTY AND TERMS OF SETTLEMENT

A. PENALTY PROVISIONS

EPA PENALTY

103) Pursuant to the authority granted in Section 3008 of RCRA, 42 U.S.C. § 6928, and upon consideration of the entire record herein, including the above referenced Findings of Fact and Conclusions of Law, which are hereby adopted and made a part hereof, and upon consideration of the extent of deviation from the statutory or regulatory requirement, the duration of the violations, the economic benefit derived from non-compliance, and the Respondent's compliance history and/or good faith efforts to comply with the applicable regulations, and the October 1990 RCRA Civil Penalty Policy (as revised in 2003), it is ORDERED that Respondent be assessed a civil penalty of Seven Hundred Thirty Four Thousand and Eight Dollars and No Cents ($734,008.00).

104) Within sixty (60) days of Respondent's receipt of this fully executed CAFO, Respondent shall pay the assessed civil penalty by cashier's or certified check, made payable to "Treasurer, United States of America, EPA - Region 6" or in one of the alternatives provided in the collection information section below:

A. **CHECK PAYMENTS:**

U.S. Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
PO Box 979077
St. Louis, MO 63197-9000

B. **WIRE TRANSFERS:**

Wire transfers should be directed to the Federal Reserve Bank of New York

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York, NY 10045

Field Tag 4200 of the Fedwire message should read "D 68010727 Environmental Protection Agency"

C. **OVERNIGHT MAIL:**

U.S. Bank
1005 Convention Plaza
Mail Station SL-MO-C2GL
St. Louis, MO 63101
Contact: Natalie Pearson
314-418-4087

D. **ACH (also known as REX or remittance express)**

Automated Clearinghouse (ACH) for receiving U.S. currency
PNC Bank
808 17th Street, NW
Washington, DC 20074
Contact – Jesse White 301-887-6548
ABA = 051036706

Transaction Code 22 - checking
Environmental Protection Agency
Account 310006
CTX Format

E. ON LINE PAYMENT:

There is an On Line Payment Option available through the Dept. of Treasury. This payment option can be accessed from the information below:

WWW.PAY.GOV
Enter "sfo 1.1" in the search field;
Open form and complete required fields.

105) The case name and docket number (In the Matter of Western Refining Southwest, Inc., Docket No. RCRA-06-2009-0936) shall be clearly typed on the check to ensure proper credit. Respondent shall send simultaneous notices of such payments, including copies of the money order, cashier's check or certified check to the following:

Lorena S. Vaughn (6RC-D)
Regional Hearing Clerk
U.S. EPA - Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Ragan Broyles (6EN-H)
Associate Director, Hazardous Waste Enforcement Branch
U.S. EPA - Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

David Edelstein (6RC-ER)
RCRA Legal Branch
Office of Regional Counsel
U.S. EPA - Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

106) Your adherence to this request will ensure proper credit is given when penalties are received in the Region.

107) Pursuant to 31 U.S.C. § 3717 and 40 C.F.R. § 13.11, unless otherwise prohibited by law, EPA will assess interest and late payment penalties on outstanding debts owed to the United States and a charge to cover the costs of processing and handling a delinquent claim. Interest on the civil penalty assessed in this CAFO will begin to accrue on the effective date of the CAFO and will be recovered by EPA on any amount of the civil penalty that is not paid within sixty (60) calendar days of the effective date of the CAFO and will be assessed at the rate of the United States Treasury tax and loan rate in accordance with 40 C.F.R. § 13.11(a). Moreover, the costs of the Agency's administrative handling of overdue debts will be charged and assessed monthly throughout the period the debt is overdue. 40 C.F.R. § 13.11(b). EPA will also assess a $15.00 administrative handling charge for administrative costs on unpaid penalties for the first thirty (30) day period after the payment is due and an additional $15.00 for each subsequent thirty (30) day period the penalty remains unpaid. In addition, a penalty charge of up to six percent per year will be assessed monthly on any portion of the debt which remains delinquent more than ninety (90) days. 40 C.F.R. § 13.11(c). Should a penalty charge on the debt be required, it shall accrue from the first day payment is delinquent. 31 C.F.R. § 901.9(d). Other penalties for failure to make a payment may also apply.

NMED PENALTY

108) NMED does not seek a penalty upon consideration of the entire record herein, including the above referenced Findings of Fact and Conclusions of Law.

B. GENERAL PROVISIONS

PARTIES BOUND

109) The provisions of this CAFO shall apply to and be binding upon the parties to this action, their officers, directors, agents, employees, successors, and assigns. The undersigned

representative of each party to this CAFO certifies that he or she is fully authorized by the party whom he or she represents to enter into the terms and conditions of this CAFO and to execute and to legally bind that party to it.

STIPULATED PENALTIES

110) In addition to any other remedies or sanctions available to EPA, if Respondent fails or refuses to comply with any provision of this CAFO, Respondent shall pay stipulated penalties in the following amounts for each day during which each failure or refusal to comply continues:

Period of Failure to Comply	Penalty Per Violation Per Day
1st through 15th day	$ 1000.00
16th through 30th day	$ 1500.00
31st day and beyond	$ 2000.00

111) Penalties shall accrue from the date of the noncompliance until the date the violation is corrected, as determined by EPA.

112) The payment of stipulated penalties shall be made by mailing a cashier's check or certified check payable to the Treasurer of the United States, within thirty (30) days of receipt of a demand letter for payment to the following address:

Regional Hearing Clerk (6RC-D)
U.S. EPA, Region 6
Cincinnati Finance Center
PO Box 979077
St. Louis, MO 63197-9000

113) The case name and docket number (In the Matter of Western Refining Southwest, Inc., Docket No. RCRA-06-2009-0936) shall be clearly typed on the check to ensure proper credit. Respondent shall send simultaneous notices of such payments, including copies of the money order, cashier's check or certified check to the following:

Lorena S. Vaughn (6RC-D)
Regional Hearing Clerk
U.S. EPA - Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Ragan Broyles (6EN-H)
Associate Director, Hazardous Waste Enforcement Branch
U.S. EPA - Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

David Edelstein (6RC-ER)
RCRA Legal Branch
Office of Regional Counsel
U.S. EPA - Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

114) Adherence to these procedures will ensure proper credit when payments are received. In addition, the provisions of Paragraph 107 concerning interest, penalties, and administrative costs also apply.

DISPUTE RESOLUTION

115) If Respondent objects to any decision or directive of EPA or NMED in regard to compliance with this CAFO, Respondent shall notify the following persons in writing of its objections, and the basis for those objections, within fifteen (15) calendar days of receipt of EPA's or NMED's decision or directive:

Ragan Broyles (6EN-H)
Associate Director, Hazardous Waste Enforcement Branch
U.S. EPA - Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

David Edelstein (6RC-ER)
RCRA Legal Branch
Office of Regional Counsel
U.S. EPA - Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

116) The Associate Director for Hazardous Waste Enforcement or his designee, and Respondent shall then have an additional thirty (30) calendar days from EPA's receipt of Respondent's written objections to attempt to resolve the dispute informally. If an agreement is reached between the Associate Director for Hazardous Waste Enforcement or his designee, and Respondent, the agreement shall be reduced to writing and signed by the Associate Director for Hazardous Waste Enforcement or his designee, and Respondent and incorporated by reference into this CAFO.

117) If no agreement is reached between the Associate Director for Hazardous Waste Enforcement or his designee and Respondent within that time period, the dispute shall be submitted to the Director of the Compliance Assurance and Enforcement Division or his/her designee ("Division Director") for formal dispute resolution. The Division Director and Respondent shall then have a 15-day period to resolve the dispute. If an agreement is reached between the Division Director and Respondent, the resolution shall be reduced to writing and signed by the Division Director and Respondent and incorporated by reference into this CAFO. If the Division Director and Respondent are unable to reach agreement within this 15-day period, the Division Director shall provide a written statement of EPA's decision to Respondent, which shall be binding upon Respondent and incorporated by reference into the CAFO.

118) If the Dispute Resolution process results in a modification of this CAFO, the modified CAFO must be approved by the Regional Judicial Officer and filed pursuant to the Modification Section.

FORCE MAJEURE

119) Respondent shall perform all requirements under this CAFO with the time limits established under this CAFO, unless the performance is delayed or made impossible by a force majeure. For purposes of this CAFO, a force majeure is defined as any event arising from causes beyond the anticipation or control of the Respondent, including but not limited to acts of nature (e.g., floods, tornados, hurricanes) and acts of people (e.g., riots, strikes, wars, terrorism). Force majeure and impossibility do not include financial inability to complete the Work required under this CAFO or increased cost of performance or any changes in Respondents' business or economic circumstances. Force majeure does include inability to perform caused by a permit authority's delay in permit approval, or authorization necessary to performance when Respondent has timely and completely applied for or sought a permit, approval, or authorization to which it is entitled.

120) If any event occurs or has occurred that may delay or make impossible the performance of any obligation under this CAFO, whether or not caused by a force majeure event, the affected Respondent shall notify EPA within 72 hours (phone, email, or written correspondence) of when the Respondent knew or should have known that the event might cause a delay or impossibility of performance. Such notice shall: identify the event causing the delay or impossibility, or anticipated to cause delay or impossibility, and, if delay, the anticipated duration of the delay; provide Respondent's rationale for attributing such delay or impossibility to a force majeure event; state the measures taken or to be taken to prevent or minimize the delay or impossibility; estimate the timetable for implementation of those

measures; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health or the environment. Respondent shall undertake best efforts to avoid and minimize the delay or impossibility. Failure to comply with the notice provision of this action shall waive any claim of force majeure by the Respondent. Respondent shall be deemed to have notice of any circumstances of which its contractors had or should have had notice.

121) If EPA determines that a delay in performance or anticipated delay of a requirement under this CAFO is or was attributable to a force majeure, then the time period for performance of that requirement will be extended as deemed necessary by EPA and stipulated penalties shall not be assessed for any such delay. If EPA determines that impossibility of performance of a requirement under this CAFO is or was attributable to a force majeure, then the deadline for that requirement shall be waived, and the time periods for any other requirements that are directly affected by the impossibility of performance shall be extended as deemed necessary by EPA, and stipulated penalties shall not be assessed for any waived or extended requirements. If EPA determines that the delay or impossibility, or anticipated delay or impossibility, has been or will be caused by a force majeure, then EPA will notify Respondents, in writing, of the length of the extension or waivers, if any, for performance of such obligations affected by the force majeure. Any such extensions or waivers shall not alter Respondents' obligation to perform or complete other tasks required by the CAFO which are not directly affected by the force majeure.

122) If EPA disagrees with Respondent's assertion of a force majeure, then Respondent may elect to invoke the dispute resolution provision, and shall follow the procedures set forth in the Dispute Resolution section. In any such proceeding, Respondent shall have the burden of demonstrating by a preponderance of the evidence that the delay or impossibility, or

anticipated delay or impossibility, has been or will be caused by a force majeure, that the duration of the delay or the extension or waiver sought was or will be warranted under the circumstances, and that best efforts were exercised to avoid and mitigate the effects of the delay or impossibility. If Respondent satisfies this burden, then the time for performance of such obligation will be extended by EPA for such time as is necessary to complete such obligation as determined by EPA, or waived if performance is impossible, and no stipulated penalties shall be assessed for any such delay, extension, or waiver.

NOTIFICATION

123) Unless otherwise specified elsewhere in this CAFO, whenever notice is required to be given, whenever a report or other document is required to be forwarded by one party to another, or whenever a submission or demonstration is required to be made, it shall be directed to the individuals specified below at the addresses given (in addition to any other notices required by law or regulation), unless these individuals or their successors give notice in writing to the other parties that another individual has been designated to receive the communication:

EPA:	Ragan Broyles (6EN-H) Associate Director, Hazardous Waste Enforcement Branch U.S. EPA Region 6, Suite 1200 1445 Ross Ave. Dallas, TX 75202-2733 Broyles.ragan@epa.gov
NMED:	Chief Hazardous Waste Bureau New Mexico Environment Department 2905 Rodeo Park Drive East, Building 1 Santa Fe, NM 87505-6303
Respondent:	Mark Turri Western Refining Southwest, Inc., Gallup Refinery Route 3, Box 7 Gallup, NM 87301

MODIFICATION

124) The terms, conditions, and compliance requirements of this CAFO may not be modified or amended except upon the written agreement of all parties, and such modification or amendment being filed with the Regional Hearing Clerk. Where a modification agreed upon by all parties constitutes a material change to any term of this CAFO, it shall be effective upon approval by a Regional Judicial Officer.

RETENTION OF ENFORCEMENT RIGHTS

125) EPA and NMED do not waive any rights or remedies available to EPA and NMED for any other violations by Respondent of Federal or State laws, regulations, or permitting conditions.

126) Except as specifically provided in this CAFO, nothing herein shall limit the power and authority of EPA, NMED, The State of New Mexico, or the United States to take, direct, or order all actions to protect public health, welfare, or the environment, or prevent, abate or minimize an actual or threatened release of hazardous substances, pollutants, contaminants, hazardous substances on, at or from Respondent's facility. Furthermore, nothing in this CAFO shall be construed to prevent or limit EPA's or NMED's civil and criminal authorities, or that of other Federal, State, or local agencies or departments to obtain penalties or injunctive relief under other Federal, State, or local laws or regulations.

INDEMNIFICATION OF EPA

127) Neither EPA, NMED, The State of New Mexico, nor the United States Government shall be liable for any injuries or damages to person or property resulting from the acts or omissions of Respondent, their officers, directors, employees, agents, receivers, trustees, successors, assigns, or contractors in carrying out the activities required by this CAFO, nor

shall EPA, NMED, The State of New Mexico, or the United States Government be held out as a party to any contract entered into by Respondent in carrying out the activities required by this CAFO.

RECORD PRESERVATION

128) Respondent shall preserve, during the pendency of this CAFO, all records and documents in its possession or in the possession of its divisions, employees, agents, contractors, or successors which are required to be prepared pursuant to this CAFO regardless of any document retention policy to the contrary.

COSTS

129) Each party shall bear its own costs and attorney's fees. Furthermore, Respondent specifically waives its right to seek reimbursement of its costs and attorney's fees under the Equal Access to Justice Act, 5 U.S.C. § 504, as amended by the Small Business Regulatory Enforcement Fairness Act, 5 U.S.C. § 801 *et. seq.*, and any regulations promulgated pursuant to those Acts.

TERMINATION

130) At such time as Respondent believes that it has complied with all terms and conditions of this CAFO, it may request that EPA concur whether the requirements of this CAFO have been satisfied. Such request shall be in writing and shall provide the necessary documentation to establish whether there has been full compliance with the terms and conditions of this CAFO. EPA will respond to said request in writing within 90 days of receipt of the request. This CAFO shall terminate when all actions required to be taken by this CAFO have been completed, and Respondent has been notified by the EPA in writing that this CAFO has been satisfied and terminated.

EFFECTIVE DATE

131) This CAFO, and any subsequent modifications, become effective upon filing with the Regional Hearing Clerk.

THE UNDERSIGNED PARTIES CONSENT TO THE ENTRY OF THIS CONSENT AGREEMENT AND FINAL ORDER:

FOR RESPONDENT:

Date: 8/14/09

Western Refining Southwest, Inc.

FOR THE COMPLAINANT:

Date: 8/20/09

John Blevins
Director, Compliance Assurance
and Enforcement Division
US EPA, Region 6

FOR THE PLAINTIFF-INTERVENOR:

Date: 8/18/09

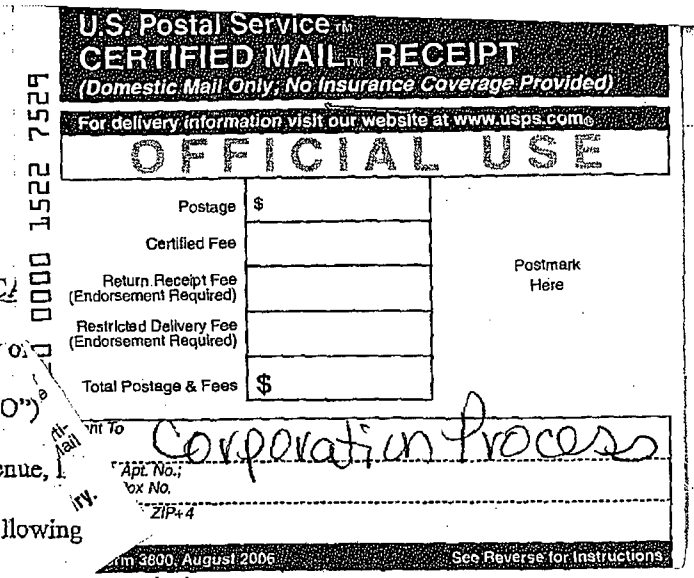
Marcy Leavitt, Director
Water and Waste Management Division
New Mexico Environment Department

FINAL ORDER

Pursuant to the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, 40 C.F.R. Part 22, the foregoing Consent Agreement is hereby ratified. This Final Order shall not in any case affect the right of EPA or the United States to pursue appropriate injunctive or other equitable relief or criminal sanctions for any violations of law. This Final Order shall resolve only those causes of action alleged herein. Nothing in this Final Order shall be construed to waive, extinguish or otherwise affect Respondent's (or its officers, agents, servants, employees, successors, or assigns) obligation to comply with all applicable federal, state, and local statutes and regulations, including the regulations that were the subject of this action. Respondent is ordered to comply with the terms of settlement and the civil penalty payment instructions as set forth in the Consent Agreement. Pursuant to 40 C.F.R. § 22.31(b) this Final Order shall become effective upon filing with the Regional Hearing Clerk.

Date: August 26, 2009

Regional Judicial Officer



CERTIFIC

I hereby certify that on the 2/0 day o

Consent Agreement and Final Order ("CAFO")

Clerk, U.S. EPA - Region 6, 1445 Ross Avenue,

correct copy of the CAFO was sent to the following

The Corporation Process Company
205 E Bender Ste 150 Hobbs New Mexico 88240
As Registered Agent for Western Refining Southwest, Inc.

CERTIFIED MAIL - RETURN RECEIPT REQUESTED: 7007 3020 0000 1522 7529

Lori Jackson