

CERTIFIED MAIL # 7010 1670 0001 3141 1214

March 7, 2016

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

Re: 2016 Financial Assurance Cost Estimate
Western Refining Southwest, Inc. – Gallup Refinery
EPA ID# NMD000333211

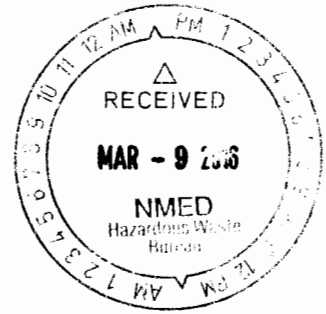
Dear Mr. Kieling:

Western Refining Southwest, Inc. – Gallup Refinery submits the referenced Financial Assurance Cost Estimate. The estimate was prepared for Western by DiSorbo Consulting, LLC, a third party environmental engineering company. This cost estimate includes costs to address those activities specified in the Complaint and Consent Agreement and Final Order (CAFO) (dated August 26, 2009) for implementation of a remedy for Aeration Lagoons AL-1 and AL-2 and the requirements of the RCRA Post-Closure Care Permit (“RCRA Permit”) (effective date 12/2/2013). The initial cost estimates were prepared in accordance with 40 CFR 264.101 and substantially in compliance with the requirements of 40 CFR 264.142 and 264.144.

If you have any questions or would like to discuss the Financial Assurance Cost Estimate, please contact me at (505) 722-0217.

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and



March 7, 2016

belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

A handwritten signature in cursive script that reads "William C. McClain Jr.".

William C. McClain Jr.
Refinery Manager
Western Refining Southwest, Inc. – Gallup Refinery

cc: Ed Riege
Allen Hains

March 7, 2016

Mr. Ed Riege
Environmental Manager
Western Refining Southwest, Inc. – Gallup Refinery
92 Giant Crossing Road
Gallup NM 87301

Re: Western Refining Southwest, Inc. - Gallup Refinery
Financial Assurance Cost Estimate

Dear Mr. Riege:

This cost estimate includes costs to address those activities specified in the Complaint and Consent Agreement and Final Order (CAFO) (dated August 26, 2009) for implementation of a remedy for Aeration Lagoons AL-1 and AL-2 and the requirements of the RCRA Post-Closure Permit ("RCRA Permit") (effective date 12/2/2013). The initial cost estimates were prepared in accordance with 40 CFR 264.101 and substantially in compliance with the requirements of 40 CFR 264.142 and 264.144.

In addressing the requirements of the CAFO, the original 2009 cost estimate for the Aeration Lagoons (\$1,257,000) has been adjusted annually for inflation each year. The most recent update was conducted in January 2015 with an inflation adjusted estimate of \$1,355,964. To prepare the 2016 estimate, the 2015 estimate of \$1,355,964 was multiplied by an annual inflation factor of 1.0% [Implicit Price Deflator (IPD), as taken from the Bureau of Economic Analysis' Table 1.1.9; Implicit price deflator for 2015 / implicit price deflator for 2014 (updated 2/26/2016) = 110.290/109.067 = 1.0%] to yield an updated estimate of \$1,369,524.

There are two separate provisions in the new RCRA Permit, which require cost estimates. The first of which is Provision II.D.1 that specifies, "*The Permittee shall adjust the post-closure estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument used to comply with 40 CFR § 264.145.*" This provision addresses post-closure care of the Land Treatment Unit (LTU).

A revised cost estimate for post-closure care of the LTU was prepared in 2010, reflecting the significant amount of work that had been completed since issuance of the previous RCRA Post-Closure Permit in 2000. The estimated cost in 2010 was \$125,185 (see enclosed Table 1B) and it has been adjusted annually since. The most recent annual adjustment prepared in January 2015 produced an updated cost of \$133,756. Applying an annual inflation factor of 1.0 %, the 2015 estimate of \$133,756 is adjusted to \$135,094 to yield an updated estimate for 2016.

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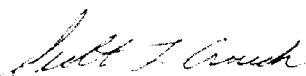
Mr. Ed Riege
March 7, 2016
Page 2

Provision II.D.2 in the new RCRA Permit required that a cost estimate be prepared as follows: *“Within 180 days of the effective date of this Permit, the Permittee shall submit to the NMED for approval a detailed written estimate, in current dollars, of the cost of hiring a third party to perform a cleanup of contaminant releases at or migrating from the Facility in accordance with this Permit (hereafter “Estimated Cost of the Work”). The initial Estimated Cost of the Work shall account for the total costs of post-closure care and monitoring the Land Treatment Unit and conducting the Facility Wide Groundwater Monitoring for a period of 20 years.”* Pursuant to this requirement, a cost estimate was prepared in February 2014 for 20 years of facility-wide groundwater monitoring. The estimated cost was \$1,762,340. Pursuant to RCRA Permit Provision II.D. 3, the Estimated Cost of Work has been updated to subtract the costs of work completed during the previous calendar year and to account for changes to the Facility-Wide Ground Water Monitoring Work Plan. The Facility-Wide Ground Water Monitoring Plan - 2014 Updates for 2015 was updated in February 2015 and the New Mexico Environment Department approved the updated Work Plan on July 24, 2015 with modifications. No adjustment was made for inflation as this is a new cost estimate using current laboratory costs for chemical analyses and current labor rates. The Estimated Cost of Work now includes 18 years of facility-wide groundwater monitoring. Table 1A provides a detailed explanation of the annual cost of implementing facility-wide groundwater monitoring on an annual basis. The updated estimated cost is \$3,409,298.

The current total estimated cost is \$4,913,916 for addressing the Aeration Lagoons pursuant to the CAFO and implementation of the 2013 RCRA Post-Closure Permit. If there are any questions, please contact me at (512) 693-4193.

Sincerely,

DiSorbo Consulting, LLC



Scott T. Crouch, P.G.
Senior Consultant

Enclosure

cc: Allen Hains – Western Refining El Paso

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phone 512.693.4193 | mobile 512.297.3743 | fax 512.279.3118 | scrouch@disorboconsult.com | www.disorboconsult.com

TABLE 1
MARCH 2016 COST ESTIMATE FOR RCRA POST-CLOSURE ORDER
WESTERN REFINING SOUTHWEST, INC. - GALLUP REFINERY

Waste Management Area	Corrective Action/Project	Investigation Costs	Remediation Costs	O&M Costs	Total Costs	Notes
RCRA Regulated Units						
Land Treatment Unit	Ground Water & Soil Monitoring	\$0	\$0	\$135,094	\$135,094	Post-closure care for LTU, Table 1B adjusted for inflation since 2010
Solid Waste Management Units (SWMU's)						
SWMU 1 – Aeration Basin	Soil investigation & potential remediation	\$0	\$0	\$0	\$0	remediation cost estimate developed Nov. 2009 pursuant to EPA CAFO; remedy not selected by NMED under the Permit
SWMU 2 - Evaporation Ponds	IWP due 1/31/2021	\$0	\$0	\$0	\$0	
SWMU 3 – Empty Container Storage Area/Bundle Cleaning Pad	IWP due 3/1/2014	\$0	\$0	\$0	\$0	IWP submitted 2/26/2014
SWMU 4 – Old Burn Pit	IWP due 6/30/2014	\$0	\$0	\$0	\$0	already capped, IWP submitted 6/24/2014
SWMU 5 – Landfill Areas	IWP due 9/30/2014	\$0	\$0	\$0	\$0	already capped, IWP submitted 6/24/2014
SWMU 6 – Tank Farm	IWP due 12/31/2019	\$0	\$0	\$0	\$0	Phase-Separate Hydrocarbon (PSH) recovery is conducted once a quarter at three wells & a small passive bioventing system is present, but the operations costs are minimal and no timeframe for operation is specified. No additional O&M costs are included as these actions would be conducted during other routine monitoring events.
SWMU 7 – Fire Training Area	IWP due 3/31/2015	\$0	\$0	\$0	\$0	already capped, IWP submittal deferred until end of operations in this area per NMED's March 20, 2015 letter

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Waste Management Area	Corrective Action/Project	Investigation Costs	Remediation Costs	O&M Costs	Total Costs	Notes
SWMU 8 – Railroad Rack Lagoon, ditch & fan area	NFA Petition	\$0	\$0	\$0	\$0	Remediation completed and reports approved by NMED; only NFA petition and permit mod remains to be completed.
SWMU 9 – Drainage Ditch Near Inactive Landfarm	IWP due 6/30/2015	\$0	\$0	\$0	\$0	IWP submittal deferred until unspecified future date per NMED's March 20, 2015 letter
SWMU 10 – Sludge Pits	IWP due 9/20/2014	\$0	\$0	\$0	\$0	IWP submitted 9/16/2014
SWMU 11 – Secondary Oil Skimmer	IWP due 6/31/2016	\$0	\$0	\$0	\$0	
SWMU 12 – Contact Wastewater Collection System ⁵	IWP due 9/30/2016	\$0	\$0	\$0	\$0	
SWMU 13 – Drainage Ditch between N & S Evaporation	IWP due 6/30/2016	\$0	\$0	\$0	\$0	
SWMU 14 – API Separator	Soil investigation & potential remediation	\$0		\$0	\$0	
AOC 15 (NAPIS)	IWP due 9/30/2016	\$0	\$0	\$0	\$0	
& AOC 16 (NAPIS Overflow Tanks) IWP	IWP due 9/30/2016	\$0	\$0	\$0	\$0	
AOC 17 (Railroad Loading/Unloading Facility) RA	Release Assessment due 12/31/2016	\$0	\$0	\$0	\$0	
AOC 18 (Asphalt Tank Farm) IWP	IWP due 6/30/2017	\$0	\$0	\$0	\$0	
AOC 19 (East Fuel Oil Loading Rack) RA	RA due 6/30/2017	\$0	\$0	\$0	\$0	

TABLE 1
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WESTERN REFINING SOUTHWEST, INC. - GALLUP REFINERY

Waste Management Area	Corrective Action/Project	Investigation Costs	Remediation Costs	O&M Costs	Total Costs	Notes
AOC 20 (Crude Slop & Ethanol Unloading Facility) RA	RA due 9/30/2017	\$0	\$0	\$0		
AOC 21 (Mail Loading Racks) RA	RA due 12/31/2017	\$0	\$0	\$0	\$0	
AOC 22 (Loading Rack Additive Tank Farm) IWP	IWP due 3/31/2018	\$0	\$0	\$0	\$0	
AOC 23 (Retail Fuel Tank Farm) IWP	IWP due 3/31/2018	\$0	\$0	\$0	\$0	
AOC 24 (Crude Oil Tank Farm) IWP	IWP due 6/30/2018	\$0	\$0	\$0	\$0	
AOC 25 (Tank 573) RA	RA due 12/31/2016	\$0	\$0	\$0	\$0	
AOC 26 (Process Units) RA	RA due 4/30/2021	\$0	\$0	\$0	\$0	
AOC 27 (Boiler & Cooling Unit Area) RA	RA due 9/30/2018	\$0	\$0	\$0	\$0	
AOC 28 (Warehouse & Maintenance Shop Area) RA	RA due 12/31/2018	\$0	\$0	\$0	\$0	
AOC 29 (Equip. Yard & Drum Storage Area) RA	RA due 3/31/2019	\$0	\$0	\$0	\$0	
AOC 30 (Laboratory) RA	RA due 6/30/2019	\$0	\$0	\$0	\$0	
AOC 31 (Tank 27 & 28) IWP	IWP due 9/30/2019	\$0	\$0	\$0	\$0	
AOC 32 (Flare & Ancillary Tanks) IWP	IWP due 12/31/2019	\$0	\$0	\$0	\$0	
AOC 33 (Storm Water Collection System) IWP	IWP due 3/31/2020	\$0	\$0	\$0	\$0	

TABLE 1
MARCH 2016 COST ESTIMATE FOR RCRA POST-CLOSURE ORDER
WESTERN REFINING SOUTHWEST, INC. - GALLUP REFINERY

Waste Management Area	Corrective Action/Project	Investigation Costs	Remediation Costs	O&M Costs	Total Costs	Notes
AOC 34 (Scrap Yard) IWP	IWP due 6/30/2020	\$0	\$0	\$0	\$0	
Groundwater						
Site-wide	Facility-Wide Groundwater Monitoring	\$0	\$0	\$0	\$3,409,298	2 years (2016 & 2017) at \$296,657/yr and 16 years (beyond 2017) at \$175,999/yr, see Table 1A
Other Costs						
	Total Estimated Costs	\$0	\$0	\$135,094	\$3,544,392	

TABLE 1A (2016 & 2017)
Facility-Wide Groundwater Monitoring Annual Cost Estimate
Western Refining Southwest, Inc. - Gallup Refinery

Analysis	Frequency	# of Sample Locations	# of Samples ¹	Cost/Sample	Cost per Year
Quarterly Sampling Events					
8260B	Quarterly	47	208	\$120	\$24,960
8021	Quarterly	7	36	\$55	\$1,980
8015B (GRO, DRO)	Quarterly	54	233	\$100	\$23,300
8270C	Quarterly	41	215	\$300	\$64,500
Cations/Anions -General Chemistry	Quarterly	57	179	\$170	\$30,430
WQCC Metals	Quarterly	52	228	\$225	\$51,300
Cyanide, Nitrates	Quarterly	1	4	\$70	\$280
Filters			52	\$15	\$780
Level 4 Data Packet				15% of analysis	\$29,471
subtotal					\$227,001
Semi-Annual Sampling Events					
8260B	Semi-Annual	11	22	\$120	\$2,640
8270C	Semi-Annual	11	22	\$300	\$6,600
Cations/Anions	Semi-Annual	12	24	\$170	\$4,080
WQCC Metals	Semi-Annual	11	22	\$225	\$4,950
BOD / COD	Semi-Annual	11	22	\$90	\$1,980
Filters	Semi-Annual		22	\$15	\$330
Level 4 Data Packet	Semi-Annual			15% of analysis	\$3,038
subtotal					\$23,618
Annual Sampling Events					
8260B	Annual	21	26	\$120	\$3,120
8015B (GRO, DRO)	Annual	20	22	\$100	\$2,200
8270C	Annual	6	7	\$300	\$2,100
Cations/Anions	Annual	19	21	\$170	\$3,570
WQCC Metals	Annual	20	22	\$225	\$4,950
Cyanide, Nitrates	Annual	7	8	\$70	\$560
BOD / COD	Annual	1	2	\$90	\$180
TDS	Annual	1	2	\$20	\$40
Filters	Annual		20	\$15	\$300
Level 4 Data Packet	Annual			15% of analysis	\$2,508
subtotal					\$19,528
Three-Year Sampling Events					
8260B	Every third year	2	0.7	\$120	\$84
8270C	Every third year	2	0.7	\$300	\$210
WQCC Metals	Every third year	2	0.7	\$225	\$158
Cyanide, Nitrates	Every third year	2	0.7	\$70	\$49
Filters	Every third year		1	\$15	\$15
Level 4 Data Packet	Every third year			15% of analysis	\$75
subtotal					\$591
Sampling Labor	Three quarterly events		10 Days, 8 hour days	\$72/hour	\$17,280
	Combined annual, one quarterly & three-year event		15 Days, 8 hour days	\$72/hour	\$8,640
subtotal					\$25,920
Annual Total					\$296,657

1 - # of Samples includes additional QA/QC samples

The sampling requirements addressed in the table are per NMED's July 24, 2015 Approval with Modifications letter on the Facility-Wide Ground Water Monitoring Work Plan - 2014 Updates for 2015 (dated February 23, 2015) and the subsequent revisions to the Monitoring Work Plan dated September 21, 2015. Western's change to the Work Plan addressed in NMED's comment 10.e will result in removal of this annual sampling provision.

TABLE 1A (After 2017)
Facility-Wide Groundwater Monitoring Annual Cost Estimate
Western Refining Southwest, Inc. - Gallup Refinery

Analysis	Frequency	# of Sample Locations	# of Samples ¹	Cost/Sample	Cost per Year
Quarterly Sampling Events					
8260B	Quarterly	10	59	\$120	\$7,080
8021	Quarterly	7	41	\$55	\$2,255
8015B (GRO, DRO)	Quarterly	17	85	\$100	\$8,500
8270C	Quarterly	5	32	\$300	\$9,600
Cations/Anions -General Chemistry	Quarterly	10	52	\$170	\$8,840
WQCC Metals	Quarterly	15	77	\$225	\$17,325
Cyanide, Nitrates	Quarterly	1	6	\$70	\$420
Filters			77	\$15	\$1,155
Level 4 Data Packet				15% of analysis	\$8,103
subtotal					\$63,278
Semi-Annual Sampling Events					
8260B	Semi-Annual	11	22	\$120	\$2,640
8270C	Semi-Annual	11	22	\$300	\$6,600
Cations/Anions	Semi-Annual	12	24	\$170	\$4,080
WQCC Metals	Semi-Annual	11	22	\$225	\$4,950
BOD / COD	Semi-Annual	11	22	\$90	\$1,980
Filters	Semi-Annual		22	\$15	\$330
Level 4 Data Packet	Semi-Annual			15% of analysis	\$3,038
subtotal					\$23,618
Annual Sampling Events					
8260B	Annual	58	68	\$120	\$8,160
8015B (GRO, DRO)	Annual	57	64	\$100	\$6,400
8270C	Annual	42	46	\$300	\$13,800
Cations/Anions	Annual	55	61	\$170	\$10,370
WQCC Metals	Annual	57	63	\$225	\$14,175
Cyanide, Nitrates	Annual	7	8	\$70	\$560
BOD / COD	Annual	1	2	\$90	\$180
TDS	Annual	1	2	\$20	\$40
Filters	Annual		57	\$15	\$855
Level 4 Data Packet	Annual			15% of analysis	\$8,053
subtotal					\$62,593
Three-Year Sampling Events					
8260B	Every third year	2	0.7	\$120	\$84
8270C	Every third year	2	0.7	\$300	\$210
WQCC Metals	Every third year	2	0.7	\$225	\$158
Cyanide, Nitrates	Every third year	2	0.7	\$70	\$49
Filters	Every third year		1	\$15	\$15
Level 4 Data Packet	Every third year			15% of analysis	\$75
subtotal					\$591
Sampling Labor	Three quarterly events		10 Days, 8 hour days	\$72/hour	\$17,280
	Combined annual, one quarterly & three-year event		15 Days, 8 hour days	\$72/hour	\$8,640
subtotal					\$25,920
Annual Total					\$175,999

1 - # of Samples includes additional QA/QC samples

The sampling requirements addressed in the table are per NMED's July 24, 2015 Approval with Modifications letter on the Facility-Wide Ground Water Monitoring Work Plan - 2014 Updates for 2015 (dated February 23, 2015) and the subsequent revisions to the Monitoring Work Plan dated September 21, 2015. In addition, Western's changes to the Work Plan addressed in NMED's comment 10.e is incorporated (i.e., removal of additional annual sampling provision) and after 2017 the MKTF wells and STP wells are assumed to be sampled annually for the full list of requested analytes instead of quarterly.

TABLE 1B
Land Treatment Unit Detailed Cost Estimate
Western Refining Southwest, Inc. - Gallup Refinery

Activity	Cost Estimate in 2000 Part B Permit Application			Updated 2010 Cost Estimate				
	Material	Cost Frequency (over 30 years)	Estimated Cost	Material	Cost Frequency (remaining 20 years)	Revised Costs	Inflation Adjustment ³	2010 Estimated Costs
MONITORING								
Sample by Zone								
ZOI	4 samples at \$1,450	3	\$17,400	4 samples at \$709 ¹	2	\$5,672	0	\$5,672
Treatment Zone	4 samples at \$1,450	3	\$17,400	4 samples at \$709 ¹	2	\$5,672	0	\$5,672
Chinle Slope Wash	1 sample at \$1,650	8	\$13,200	1 sample at \$834 ²	2	\$1,668	0	\$1,668
Sonsela	4 samples at \$1,650	8	\$52,800	4 samples at \$834 ²	2	\$6,672	0	\$6,672
Sample QC	25% of \$100,800		\$25,200	25% of \$19,684		\$4,921	0	\$4,921
Mobilization/labor								
ZOI & Treatment Zone	3 events at \$1,000/event		\$3,000	2 events at \$1,000/event		\$2,000	\$500.80	\$2,501
Chinle Slope Wash & Sonsela	8 events at \$2,000/event		\$16,000	2 events at \$2,000/event		\$4,000	\$1,001.60	\$5,002
COVER ESTABLISHMENT								
Filed Technician	\$10,000		\$10,000	completed		\$0		\$0
Microtox	\$300 per test	9	\$2,700	completed		\$0		\$0
Soil Amendments	352,000 ft ² at 0.02/ft ²		\$7,040	completed		\$0		\$0
Establish Vegetative Cover								
Top Soil	7.8 acres at \$2,000/acre		\$15,600	completed		\$0		\$0
Level LTU	7.8 acres at \$950/acre		\$7,410	completed		\$0		\$0
Plant Seed	7.8 acres at \$750/acre		\$5,850	completed		\$0		\$0
Water	1140 Mgal. At \$1/Mgal		\$1,140	completed		\$0		\$0
Routine Inspection, Maintenance & Repair								
Site Inspection	Weekly inspection		\$6,000	Weekly inspection (remaining 20 years)		\$4,000	\$1,001.60	\$5,002
Security Device	\$100 annually		\$3,000	\$100 annually		\$2,000	\$500.80	\$2,501
Runon/Runoff	\$1,000 annually to maintain perimeter berm		\$30,000	\$1,000 annually to maintain perimeter berm		\$20,000	\$5,008.00	\$25,008
Prepare Certification								
Certify LTU Closure	120 hours at \$125/hour		\$15,000	120 hours at \$125/hour		\$15,000	\$3,756.00	\$18,756
Notice in Deed	6 hours at \$150/hour		\$900	6 hours at \$150/hour		\$900	\$225.36	\$1,125
Certify Final Closure	120 hours at \$125/hour		\$15,000	120 hours at \$125/hour		\$15,000	\$3,756.00	\$18,756
Notice in Deed	6 hours at \$150/hour		\$900	6 hours at \$150/hour		\$900	\$225.36	\$1,125
Total Task			\$265,540					\$104,381
Gallup Overhead		10%	\$26,554					\$10,402
Contingency		10%	\$26,554					\$10,402
TOTAL			\$371,756					\$125,185

Mgal. = million gallons

ZOI = Zone of Incorporation

1 - 8260 @ \$120, 8270 @ \$280, 8015 @ \$80, metals @ \$229

2 - 8260 @ \$120, 8270 @ \$280, 8015 @ \$80, metals @ \$229, pH @ \$35, cation/anions @ \$90

3- Inflation adjustment for costs in the original 2000 estimate. Annual inflation adjustment for years 2001 through 2010 based on implicit price deflator of US Gross National Product of most recent year divided by previous year; 2001=2.06%, 2002=2.17%, 2003=1.3%, 2004=1.67%, 2005=2.37%, 2006=3.03%, 2007=2.94%, 2008=3.95%, 2009=2.18%, 2010=0.96%; cumulative adjustment of 25.04%