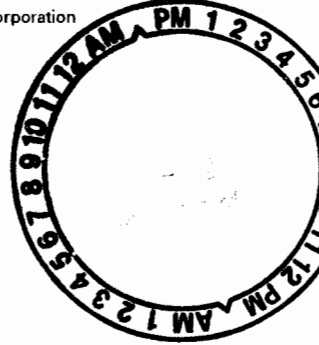




## Western Refining Southwest LLC

A subsidiary of Marathon Petroleum Corporation  
I-40 Exit 39  
Jamestown, NM 87347



February 1, 2021

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

**RE: 2021 RCRA Financial Assurance Cost Estimate  
Marathon Petroleum Company LP, Gallup Refinery  
(dba Western Refining Southwest, LLC)  
EPA ID# NMD000333211**

Dear Mr. Pierard:

Marathon Petroleum Company LP (dba Western Refining Southwest, LLC) Gallup Refinery is submitted the referenced Financial Assurance (FA) Cost Estimates.

This FA 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 Resource Conservation and Recovery Act (RCRA) permit effective December 2, 2013. The FA estimates were prepared in accordance with the Code of Federal Regulations (CFR) Chapter 264 Part 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 2020 with an inflation adjusted estimate of \$1,467,882. To prepare the 2021 estimate, the 2020 estimate of \$1,467,882 was multiplied by an annual inflation factor (AIF) of 1.01. The 2021 estimate is \$1,482,201 (Table 1). The AIF is calculated by taking the previous year's AIF and dividing by the current year's AIF. The AIF is taken from Table 1.1.9 – Implicit Price Deflators for GDP (Bureau of Economic Analysis 2020).

There are two separate provisions in the 2013 RCRA permit, which require FA estimates. These two provisions can be found in Sections II.D.1 and II.D.2. These provisions address the postclosure care of the Land Treatment Unit (LTU) and the Facility-Wide Groundwater Monitoring, respectively. The FA estimate also includes the Solid Waste Management Units and Areas of Concerns (Table 1).

A revised FA estimate for post-closure care of the LTU was prepared in 2010, reflecting the work that had been completed since the first RCRA permit issued in 2000. The FA estimate was revised again in 2019 to account for sampling that took place in 2018. The 2021 FA estimate includes revisions for updated laboratory and labor costs (Table 1A). The FA estimate for 2021 is \$170,498.



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Section II.D.2 requires a FA estimate for 20 years of facility-wide groundwater monitoring starting in February of 2014. The initial estimated cost was \$1,762,340. The FA estimate reflects the previous year's Facility-Wide Ground Water Monitoring Work Plan, updated for 2020 (submitted April 8, 2020). A disapproval for the work plan was received August 31, 2020 and a response to disapproval was submitted January 11, 2021. The Facility-Wide Ground Water Monitoring was estimated for 2021 (Table 1B) and the years following 2021 (Table 1C). The cost estimate for 2021 and subsequent sampling years is \$3,592,606 (Table 1).

The current total FA estimated cost is \$5,245,305 for addressing the Aeration Lagoons pursuant to the CAFO and implementation of the 2013 RCRA Post-Closure Permit.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. John Moore at 505-879-7643.

### Certification

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

Sincerely,

**Western Refining Southwest LLC, Gallup Refinery**

*Robert S. Hanks*

Robert S. Hanks  
Refinery General Manager

Enclosure

cc: D. Cobrain, NMED HWB  
M. Suzuki, NMED HWB  
C. Chavez, NMOCD  
G. McCartney, Marathon Petroleum Company  
A. Kitchen, Marathon Petroleum Company  
K. Luka, Marathon Petroleum Company  
J. Moore, Marathon Gallup Refinery  
H. Jones, Trihydro Corporation



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## **Western Refining Southwest LLC**

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Jamestown, NM 87347

### References

Bureau of Economic Analysis. 2020. Table 1.1.9. Implicit Price Deflators for Gross Domestic Product. December 22.

**TABLE 1**  
**JANUARY 2021 COST ESTIMATE FOR RCRA POST-CLOSURE PERMIT**  
**WESTERN REFINING SOUTHWEST, INC. - GALLUP REFINERY**

Waste Management Area	Corrective Action/Project	Investigation Costs	Remediation Costs	O&M Costs	Total Costs	Notes
<b>RCRA Regulated Units</b>						
Land Treatment Unit	Ground Water & Soil Monitoring	\$0	\$0	\$170,498	\$170,498	Post-closure care for LTU, Table 1B updated to reflect work completed through end of 2020
<b>Solid Waste Management Units (SWMUs)</b>						
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	Investigation Work Plan (IWP) deferred	\$0	\$0	\$0	\$0	
SWMU 3 – Empty Container Storage Area/Bundle Cleaning Pad	IWP deferred	\$0	\$0	\$0	\$0	
SWMU 4 – Old Burn Pit	IWP due 6/30/2014	\$0	\$0	\$0	\$0	already capped, IWP submitted 6/24/2014 with additional sampling completed in 2016
SWMU 5 – Landfill Areas	IWP due 9/30/2014	\$0	\$0	\$0	\$0	already capped, IWP submitted 6/24/2014 with additional sampling completed in 2016
SWMU 6 – Tank Farm	IWP deferred	\$0	\$0	\$0	\$0	No final remedy selected; voluntary 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.

**TABLE 1  
JANUARY 2021 COST ESTIMATE FOR RCRA POST-CLOSURE PERMIT  
WESTERN REFINING SOUTHWEST, INC. - GALLUP REFINERY**

<b>Waste Management Area</b>	<b>Corrective Action/Project</b>	<b>Investigation Costs</b>	<b>Remediation Costs</b>	<b>O&amp;M Costs</b>	<b>Total Costs</b>	<b>Notes</b>
SWMU 7 – Fire Training Area	IWP deferred	\$0	\$0	\$0	\$0	already capped, IWP submittal deferred
SWMU 8 – Railroad Rack Lagoon, ditch & fan area	Corrective Action Complete (CAC) without Controls Approved	\$0	\$0	\$0	\$0	Remediation completed and reports approved by NMED
SWMU 9 – Drainage Ditch Near Inactive Landfarm	IWP due 12/30/2018	\$0	\$0	\$0	\$0	IWP completed Dec. 2018
SWMU 10 – Sludge Pits	IWP due 9/20/2014	\$0	\$0	\$0	\$0	IWP submitted 9/16/2014 with investigation conducted in 2015 and 2016
SWMU 11 – Secondary Oil Skimmer	IWP due 11/1/2018	\$0	\$0	\$0	\$0	IWP completed in Oct. 2018
SWMU 12 – Contact Wastewater Collection System <sup>5</sup>	IWP deferred	\$0	\$0	\$0	\$0	
SWMU 13 – Drainage Ditch between N & S Evaporation	IWP due 6/30/2019	\$0	\$0	\$0	\$0	IWP completed in May 2019
SWMU 14 – API Separator	Soil investigation & potential remediation	\$0	\$0	\$0	\$0	NMED granted extensions for Soil investigation & potential remediation date
AOC 15 (NAPIS)	IWP deferred	\$0	\$0	\$0	\$0	
AOC 16 (NAPIS Overflow Tanks)	Release Assessment (RA) due 9/30/2018	\$0	\$0	\$0	\$0	RA submitted
AOC 17 (Railroad Loading/Unloading Facility)	RA due 12/31/2018	\$0	\$0	\$0	\$0	
AOC 18 (Asphalt Tank Farm) IWP	RA due 3/31/2019	\$0	\$0	\$0	\$0	

**TABLE 1**  
**JANUARY 2021 COST ESTIMATE FOR RCRA POST-CLOSURE PERMIT**  
**WESTERN REFINING SOUTHWEST, INC. - GALLUP REFINERY**

<b>Waste Management Area</b>	<b>Corrective Action/Project</b>	<b>Investigation Costs</b>	<b>Remediation Costs</b>	<b>O&amp;M Costs</b>	<b>Total Costs</b>	<b>Notes</b>
AOC 19 (East Fuel Oil Loading Rack)	CAC without Controls Approved	\$0	\$0	\$0	\$0	
AOC 24 (Crude Oil Tank Farm)	RA due 12/31/2019	\$0	\$0	\$0	\$0	
AOC 25 (Tank 573)	CAC without Controls Approved	\$0	\$0	\$0	\$0	
AOC 26 (Process Units) RA	RA due 9/30/2020	\$0	\$0	\$0	\$0	
AOC 27 (Boiler & Cooling Unit Area)	RA due 3/31/2020	\$0	\$0	\$0	\$0	RA submitted
AOC 28 (Warehouse & Maintenance Shop Area)	RA due 6/30/2020	\$0	\$0	\$0	\$0	RA submitted
AOC 29 (Equip. Yard & Drum Storage Area)	RA due 12/31/2020	\$0	\$0	\$0	\$0	RA submitted
AOC 30 (Laboratory)	RA due 6/30/2020	\$0	\$0	\$0	\$0	RA submitted
AOC 31 (Tank 27 & 28)	IWP due 3/31/2021	\$0	\$0	\$0	\$0	
AOC 34 (Scrap Yard)	RA due 6/30/2021	\$0	\$0	\$0	\$0	
AOC 35 (Main Loading Racks, Crude Slop & Ethanol Unloading /Loading rack, Additive Tank Farm, Retail Tank Farm)	IWP due 8/31/2018	\$0	\$0	\$0	\$0	IWP RTC submitted January 2021

**TABLE 1  
 JANUARY 2021 COST ESTIMATE FOR RCRA POST-CLOSURE PERMIT  
 WESTERN REFINING SOUTHWEST, INC. - GALLUP REFINERY**

<b>Waste Management Area</b>	<b>Corrective Action/Project</b>	<b>Investigation Costs</b>	<b>Remediation Costs</b>	<b>O&amp;M Costs</b>	<b>Total Costs</b>	<b>Notes</b>
<b>Groundwater</b>						
Site-wide	Facility-Wide Groundwater Monitoring	\$0	\$0	\$0	\$3,592,606	2021 at \$386,938/yr, 12 years at \$266,745 and 4 events of 3-year sampling at \$1,184/yr; see Table 1B and 1C
<b>Other Costs</b>						
Aeration Lagoons	CAFO				\$1,482,201	2020 at \$1,467,882 adjusted by the annual inflation factor of 1.0098 to adjust to 2021.
<b>Total Estimated Costs</b>		\$0	\$0	\$170,498	\$5,245,305	

Note: New estimates for the LTU and Groundwater costs were prepared by revising laboratory and analytical costs. Because they are new estimates, an inflation adjustment was not necessary.

**TABLE 1A**  
**LAND TREATMENT UNIT DETAILED COST ESTIMATE**  
**WESTERN REFINING SOUTHWEST, INC. - GALLUP REFINERY**

**Western Refining Southwest, Inc. - Gallup Refinery**

Activity	Cost Estimate in 2000 Part B Permit Application			Updated 2021 Cost Estimate		
	Material	Cost Frequency (over 30 years)	Estimated Cost	Material	Cost Frequency (remaining 10 years)	2021 Estimated Costs
<b>MONITORING</b>						
Sample by Zone						
ZOI	4 samples at \$1,450	3	\$17,400	4 samples at \$355 <sup>1</sup>	1	\$1,340
Treatment Zone	4 samples at \$1,450	3	\$17,400	4 samples at \$355 <sup>1</sup>	1	\$1,340
Chinle Slope Wash	1 sample at \$1,650	8	\$13,200	1 sample at \$565 <sup>2</sup>	1	\$565
Sonsela	4 samples at \$1,650	8	\$52,800	1 sample at \$565 <sup>2</sup>	1	\$2,260
Sample QC	25% of \$100,800		\$25,200	25% of \$5,505		\$1,376
Mobilization/labor						
ZOI & Treatment Zone	3 events at \$1,000/event		\$3,000	1 event at \$16,000/event		\$16,000
Chinle Slope Wash & Sonsela	8 events at \$2,000/event		\$16,000	1 event at \$4,000/event		\$4,000
<b>COVER ESTABLISHMENT</b>						
Filed Technician	\$10,000		\$10,000	completed		\$0
Microtox	\$300 per test	9	\$2,700	completed		\$0
Soil Amendments	352,000 ft <sup>2</sup> at 0.02/ft <sup>2</sup>		\$7,040	completed		\$0
Establish Vegetative Cover						
Top Soil	7.8 acres at \$2,000/acre		\$15,600	completed		\$0
Level LTU	7.8 acres at \$950/acre		\$7,410	completed		\$0
Plant Seed	7.8 acres at \$750/acre		\$5,850	completed		\$0
Water	1140 Mgal. At \$1/Mgal		\$1,140	completed		\$0
<b>Routine Inspection, Maintenance &amp; Repair</b>						
Site Inspection	Weekly inspection		\$6,000	Weekly inspection		\$52,000
Security Device	\$100 annually		\$3,000	\$220 annually		\$2,200
Run-on/Run-off	\$1,000 annually to maintain perimeter berm		\$30,000	\$2,500 annually to maintain perimeter berm		\$25,000
<b>Prepare Certification</b>						
Certify LTU Closure	120 hours at \$125/hour		\$15,000	120 hours at \$144/hour		\$17,280
Notice in Deed	6 hours at \$150/hour		\$900	6 hours at \$120/hour		\$720
Certify Final Closure	120 hours at \$125/hour		\$15,000	120 hours at \$144/hour		\$17,280
Notice in Deed	6 hours at \$150/hour		\$900	6 hours at \$120/hour		\$720
Total Task			\$265,540			\$142,081
Gallup Overhead		10%	\$26,554			\$14,208
Contingency		10%	\$26,554			\$14,208
<b>TOTAL</b>			<b>\$371,756</b>			<b>\$170,498</b>

Mgal. = million gallons

ZOI = Zone of Incorporation

1 - 8260 @ \$45, 8270 @ \$110, 8015 @ \$60, metals @ \$140

2 - 8260 @ \$45, 8270 @ \$100, 8015 @ \$60, metals @ \$140, pH @ \$115, cation/anions @ \$95



**TABLE 1B (2021)**  
**FACILITY-WIDE GROUNDWATER MONITORING ANNUAL COST ESTIMATE**  
**WESTERN REFINING SOUTHWEST, INC. - GALLUP REFINERY**

Analysis	Frequency	# of Sample Locations	# of Samples <sup>1</sup>	Cost/Sample	Cost per Year
<b>Quarterly Sampling Events</b>					
8260B	Quarterly	67	460	\$45	\$20,700
8011	Quarterly	35	236	\$30	\$7,080
8260 Short	Quarterly	9	72	\$35	\$2,520
WQCC Metals	Quarterly	73	436	\$140	\$61,040
8270C	Quarterly	56	332	\$110	\$36,520
8015B (GRO, DRO)	Quarterly	74	440	\$60	\$26,400
Cations/Anions - General Chemistry	Quarterly	58	340	\$210	\$71,400
BOD / COD	Quarterly	1	4	\$45	\$180
TDS	Quarterly	1	4	\$15	\$60
TSS	Quarterly	1	4	\$15	\$60
1,4-Dioxane <sup>3</sup>	Quarterly	53	166	\$60	\$9,960
Cyanide, Nitrate/Nitrite	Quarterly	15	120	\$50	\$6,000
					\$241,920
Filters	Quarterly	73	292	\$15	\$4,380
Level 4 Data Packet <sup>4</sup>				10% of analysis	\$24,192
					subtotal
					\$270,492
<b>Semi-Annual Sampling Events<sup>2</sup></b>					
8260B	Semi-Annual	11	22	\$45	\$990
WQCC Metals	Semi-Annual	11	22	\$140	\$3,080
8270C	Semi-Annual	11	22	\$110	\$2,420
Cations/Anions	Semi-Annual	12	24	\$95	\$2,280
BOD / COD	Semi-Annual	11	22	\$45	\$990
E-Coli	Semi-Annual	11	22	\$60	\$1,320
					analyses subtotal
					\$11,080
Filters	Semi-Annual	11	88	\$15	\$1,320
Level 4 Data Packet <sup>4</sup>	Semi-Annual			10% of analysis	\$1,108
					subtotal
					\$13,508
<b>Annual Sampling Events<sup>1</sup></b>					
8260B	Annual	16	36	\$45	\$1,620
8011	Annual	2	2	\$30	\$60
WQCC Metals	Annual	16	31	\$140	\$4,340
8270C	Annual	6	12	\$110	\$1,320
8015B (GRO, DRO)	Annual	16	31	\$60	\$1,860
Cations/Anions -General Chemistry	Annual	15	30	\$210	\$6,300
1,4-Dioxane	Annual	3	3	\$60	\$180
Cyanide, Nitrate/Nitrite	Annual	7	10	\$50	\$500
					analyses subtotal
					\$16,180
Filters	Annual	16	16	\$15	\$240
Level 4 Data Packet <sup>4</sup>	Annual			10% of analysis	\$1,618
					subtotal
					\$18,038
Sampling Labor	Three quarterly events		12 Days, 8 hour days	\$83/hour	\$54,000
	Two semiannual Events		2 Days, 10 hour days	\$83/hour	\$6,000
	Combined annual & one quarterly		15 Days, 10 hour days	\$83/hour	\$24,900
					subtotal
					\$84,900
					<b>Annual Total</b>
					<b>\$386,938</b>

1 - # of Samples includes additional QA/QC samples

2 - QA samples included with quarterly sampling event

3 - NMED has requested 2 consecutive events of 1,4-Dioxane for several wells as described in the Facility-Wide Monitoring Plan.

4 - The laboratory charges an additional 10% beyond their routine analytical costs to prepare Level 4 data Packets.

The sampling requirements addressed in the table are per the Facility-Wide Ground Water Monitoring Work Plan - Updates for 2020 (dated Apr. 2020 - pending approval).

**TABLE 1C (AFTER 2021)**  
**FACILITY-WIDE GROUNDWATER MONITORING ANNUAL COST ESTIMATE**  
**WESTERN REFINING SOUTHWEST, INC. - GALLUP REFINERY**

Analysis	Frequency	# of Sample Locations	# of Samples <sup>1</sup>	Cost/Sample	Cost per Year
<b>Quarterly Sampling Events</b>					
8260B	Quarterly	28	240	\$45	\$10,800
8011	Quarterly	16	112	\$30	\$3,360
8260 Short	Quarterly	9	72	\$35	\$2,520
WQCC Metals	Quarterly	34	196	\$140	\$27,440
8270C	Quarterly	17	116	\$110	\$12,760
8015B (GRO, DRO)	Quarterly	35	236	\$60	\$14,160
Cations/Anions -General Chemistry	Quarterly	19	148	\$210	\$31,080
BOD / COD	Quarterly	1	4	\$45	\$180
TDS	Quarterly	4	16	\$15	\$240
TSS	Quarterly	4	16	\$15	\$240
1,4-Dioxane	Quarterly	14	52	\$60	\$3,120
Cyanide, Nitrate/Nitrite	Quarterly	15	108	\$50	\$5,400
				analyses subtotal	\$111,300
Filters	Quarterly	34	136	\$15	\$2,040
Level 4 Data Packet <sup>3</sup>				10% of analysis	\$11,130
				subtotal	\$124,470
<b>Semi-Annual Sampling Events<sup>2</sup></b>					
8260B	Semi-Annual	11	22	\$45	\$990
WQCC Metals	Semi-Annual	11	22	\$140	\$3,080
8270C	Semi-Annual	11	22	\$110	\$2,420
Cations/Anions	Semi-Annual	12	24	\$95	\$2,280
BOD / COD	Semi-Annual	11	22	\$45	\$990
E-Coli	Semi-Annual	11	22	\$60	\$1,320
				analyses subtotal	\$11,080
Filters	Semi-Annual	11	88	\$15	\$1,320
Level 4 Data Packet <sup>3</sup>	Semi-Annual			10% of analysis	\$1,108
				subtotal	\$13,508
<b>Annual Sampling Events</b>					
8260B	Annual	55	95	\$45	\$4,275
8011	Annual	21	36	\$30	\$1,080
WQCC Metals	Annual	55	82	\$140	\$11,480
8270C	Annual	45	69	\$110	\$7,590
8015B (GRO, DRO)	Annual	55	82	\$60	\$4,920
Cations/Anions -General Chemistry	Annual	54	81	\$210	\$17,010
1,4-Dioxane	Annual	42	66	\$60	\$3,960
Cyanide, Nitrate/Nitrite	Annual	7	13	\$50	\$650
				analyses subtotal	\$50,965
Filters	Annual	55	55	\$15	\$825
Level 4 Data Packet <sup>3</sup>	Annual			10% of analysis	\$5,097
				subtotal	\$56,887
<b>Three-Year Sampling Events (next event 2023)</b>					
8260B	Every third year	1	3	\$45	\$135
8270C	Every third year	1	3	\$110	\$330
WQCC Metals	Every third year	1	3	\$140	\$420
Cyanide, Nitrate/Nitrite	Every third year	1	3	\$50	\$150
				analyses subtotal	\$1,035
Filters	Every third year	1	3	\$15	\$45
Level 4 Data Packet <sup>3</sup>	Every third year			10% of analysis	\$104
				subtotal	\$1,184
Sampling Labor	Three quarterly events		8 Days, 8 hour days	\$83/hour	\$36,000
	Two semiannual Events		2 Days, 10 hour days	\$83/hour	\$6,000
	Combined annual & one quarterly		18 Days, 10 hour days	\$83/hour	\$29,880
				subtotal	\$71,880
<b>Annual Total</b>					<b>\$266,745</b>
<b>Annual Total Including 3-year event</b>					<b>\$267,928</b>

1 - # of Samples includes additional QA/QC samples

2 - QA samples included with quarterly sampling event

3 - The laboratory charges an additional 10% beyond their routine analytical costs to prepare Level 4 data Packets.

The sampling requirements addressed in the table are per the Facility-Wide Ground Water Monitoring Work Plan - Updates for 2020 (dated Apr. 2020 - pending approval).

MKTF wells moved to annual for future sampling events per NMED discussion.