

NM2 - _10_

**RELEASE
RESPONSE
NOTICE**

April 22, 2020

Re: Attn: Brad Jones Bisti Landfarm (711 permit NM-02-0010) Release notification

✖ DELETE ← REPLY ⇐ REPLY ALL → FORWARD ⋮



Enviro, OCD, EMNRD

Thu 4/23/2020 8:34 AM

Mark as unread

To: Devin Hencmann <dhenemann@ltenv.com>;

Brad Jones

Devin,

Thank you for providing notice and implementing the additional sampling required of 19.15.36.15.E(5) NMAC.

Brad

Brad A. Jones

Environmental Engineer

EMNRD Oil Conservation Division

1220 S. Saint Francis Drive

Santa Fe, New Mexico 87505

E-mail: brad.a.jones@state.nm.us

Office: (505) 476-3487

Fax: (505) 476-3462

From: Devin Hencmann <dhenemann@ltenv.com>

Sent: Wednesday, April 22, 2020 3:03 PM

To: Enviro, OCD, EMNRD

Subject: [EXT] Attn: Brad Jones Bisti Landfarm (711 permit NM-02-0010) Release notification

Brad,

Please see the attached release notification for the Bisti Landfarm.

Let me know if you have any questions or Comments.

Thank you,
Devin



A proud member
of WSP

Devin Hencmann
Project Geologist
(970) 385-1096 office
(970) 403-6023 cell
848 East 2nd Avenue, Durango CO 81301
www.ltenv.com



LT Environmental, Inc.

*848 East Second Avenue
Durango, Colorado 81301
970.385.1096*

April 16, 2020

Mr. Brad Jones
New Mexico Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

**RE: Notification of Release
711 Permit NM-02-0010
Western Refining Southwest, Inc.
Bisti Landfarm
San Juan County, New Mexico**

Dear Mr. Jones:

On behalf of Western Refining Southwest, Inc. (Western), LT Environmental (LTE) is submitting soil-sampling data collected at the Bisti Landfarm (the Site) on March 9th, during the first quarter of 2020 (Figure 1). Soil sampling activities were performed in accordance with New Mexico Landfarm permit Number NM-02-0010 (approved under “Rule 711”) and the current requirements set forth in 19.15.36.15 of the New Mexico Administrative Code (NMAC), also known as “Rule 36”. Results of the sampling are presented below, and this report serves as notification that certain constituents exceed the higher of the physical quantification limit (PQL) or background soil concentrations.

SITE DESCRIPTION

The Site occupies approximately 28 acres in the northwest quarter of the southeast quarter of Section 16, Township 25 North, Range 12 West in San Juan County, New Mexico (Figure 1). Petroleum hydrocarbon-impacted soil was originally disposed of at the Site in three treatment cells depending of the origin of the soil: the API Cell, Crude Cell, and Cell 1 (which was closed in 2004 and is no longer active). The Crude Cell is further divided into four source zones containing material originating from Pettigrew, East Line, Bisti, and West Line. These boundaries are shown on Figure 2.

VADOSE ZONE SOIL SAMPLING AND RESULTS

In accordance with Rule 36, semi-annual samples were collected from the vadose zone at depths of approximately 3 feet below native ground surface. For this sampling, four randomly selected, independent samples were collected from each treatment cell: four samples from the Crude Cell and four samples from the API Cell. Samples were analyzed for TPH by EPA Method 418.1, BTEX by EPA Method 8260B, and chloride by EPA Method 300.0.

TPH was detected above the background concentration/laboratory PQL in two samples: West Line Vadose Zone and East Line Vadose Zone. In addition, chloride was detected above the background concentration/laboratory PQL in five samples: Pettigrew Vadose Zone and all four samples collected from the API Cell. TPH and chloride were not detected in any of the remaining samples. In addition, BTEX compounds were not detected above laboratory PQLs in any of the collected samples. Semi-annual vadose-zone analytical results are summarized in Table 1. Sample locations are shown on Figure 3. Laboratory analytical reports are included in Attachment 1.

VADOSE ZONE RELEASE NOTIFICATION AND RECOMMENDATIONS

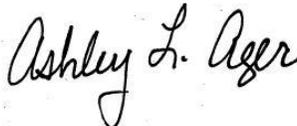
As defined in Subsection E of 19.15.36.15 NMAC, a “release” of several constituents to vadose-zone soils has occurred at the Site. Because a release has occurred in both the Crude Cell and API Cell, Western will conduct a re-sampling event in each cell. Specifically, four randomly selected, independent samples will be collected and analyzed from the vadose zone within each treatment cell. The results of this re-sampling event and a *Release Response Action Plan* will be submitted to NMOCD within 45 days of this notification for review and approval. The *Release Response Action Plan* will address any changes to the operation of the landfarm to prevent further contamination and, if necessary, outline a plan to remediate existing contamination.

Sincerely,

LT ENVIRONMENTAL, INC.



Stuart Hyde, LG
Project Geologist



Ashley Ager, PG
Senior Geologist

cc: Greg McCartney, Marathon Petroleum Company LP

Attachments:

Figure 1: Site Location Map

Figure 2: Site Map

Figure 3: Vadose Zone Sample Location Map

Table 1: 2020 Semi-Annual Vadose Zone Soil Analytical Results

Attachment 1: Analytical Laboratory Reports

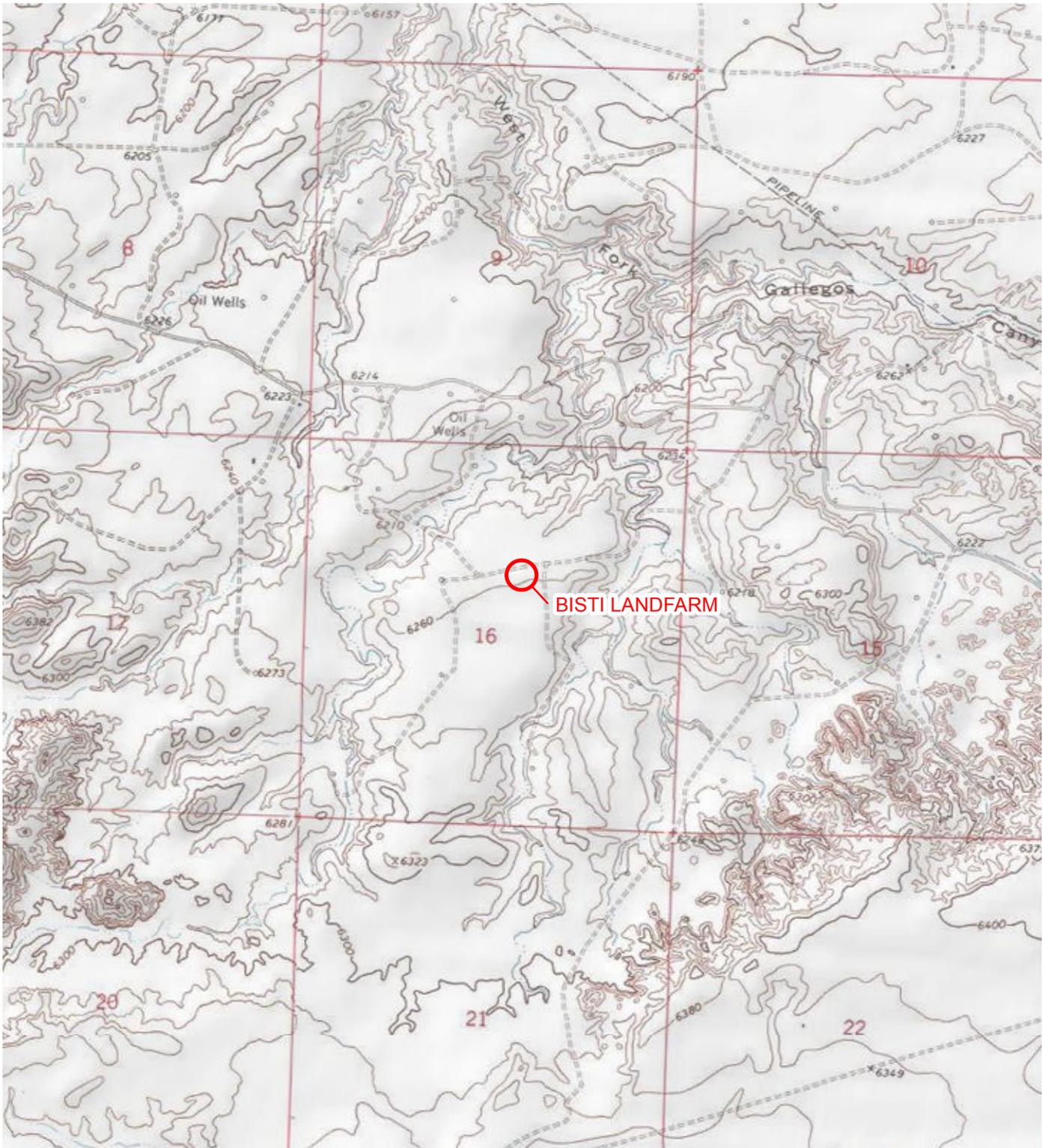
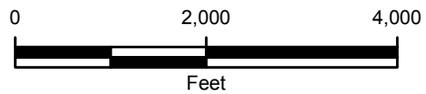


IMAGE COURTESY OF ESRI/USGS

LEGEND

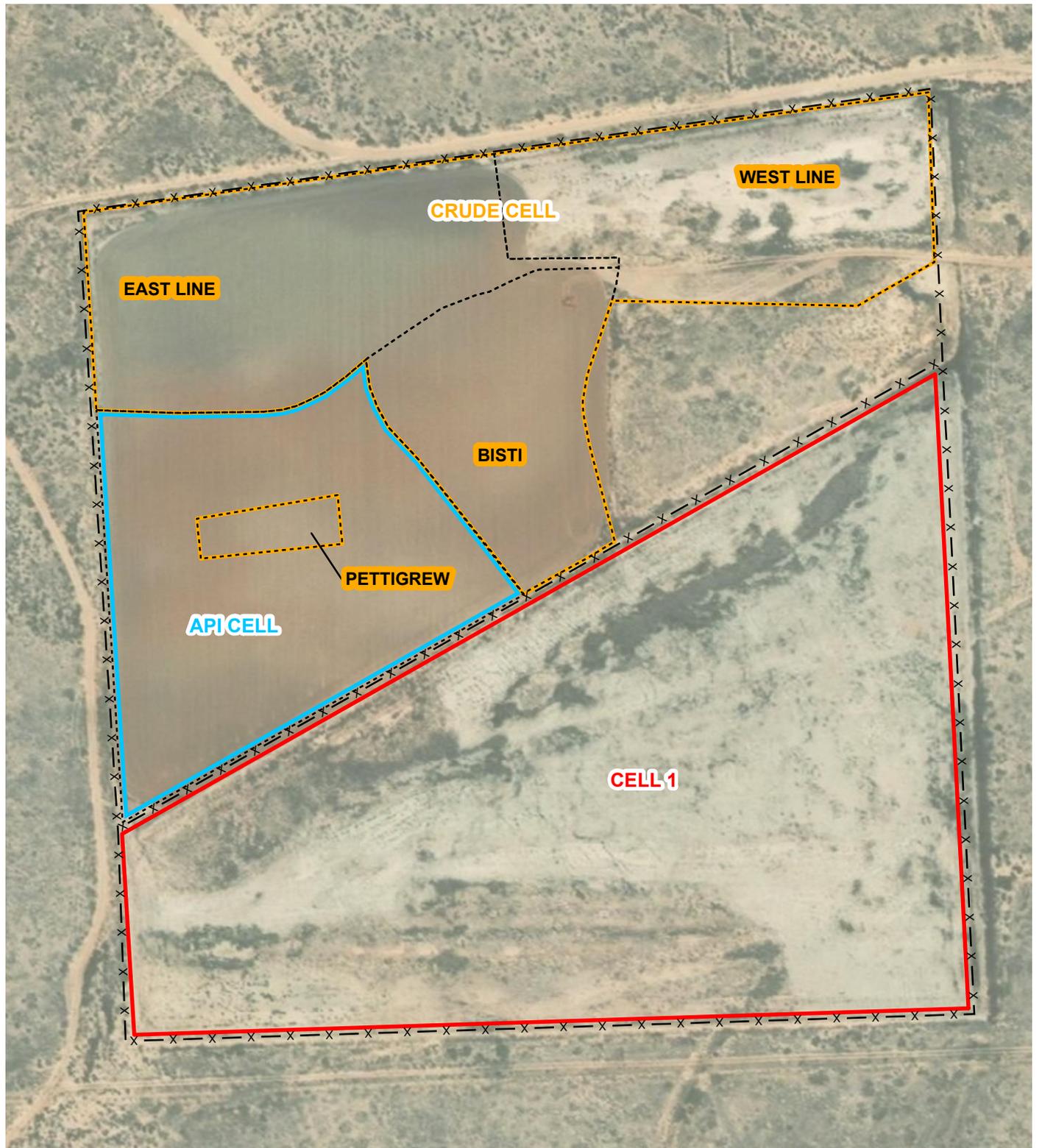
 SITE LOCATION



NEW MEXICO

FIGURE 1
SITE LOCATION MAP
BISTI LANDFARM
SEC 16 T25N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.





LEGEND

- x — x FENCE
- APPROXIMATE SOURCE IDENTITY BOUNDARY
- CELL 1 BOUNDARY
- API CELL BOUNDARY
- CRUDE CELL BOUNDARY

IMAGE COURTESY OF ESRI

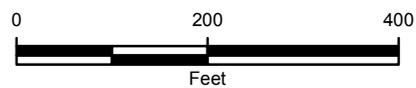
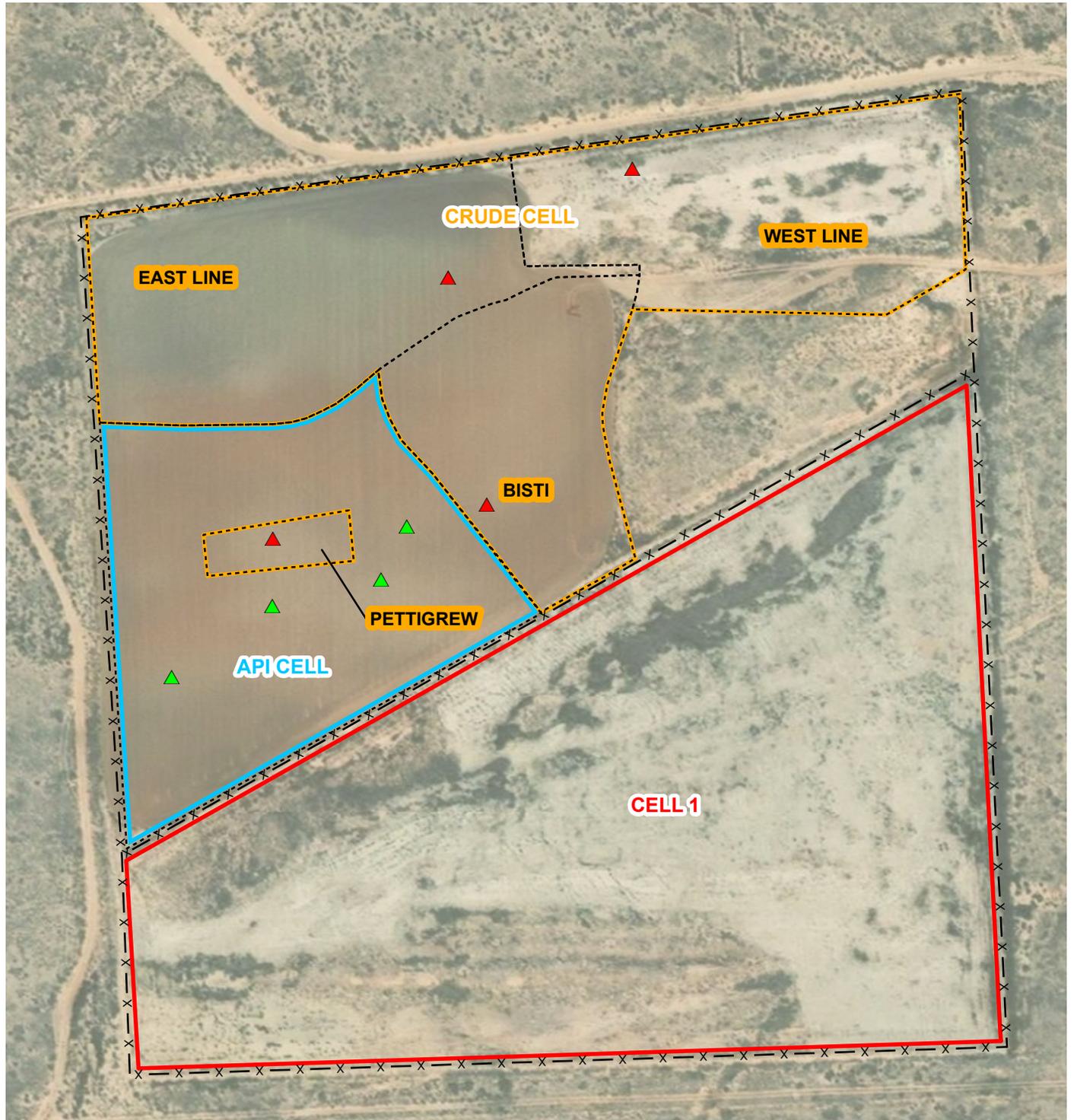


FIGURE 2
 SITE MAP
 BISTI LANDFARM
 SEC 16 T25N R12W
 SAN JUAN COUNTY, NEW MEXICO
 WESTERN REFINING SOUTHWEST, INC.





LEGEND

- ▲ API CELL VADOSE ZONE SAMPLE
- ▲ CRUDE CELL VADOSE ZONE SAMPLE
- x — x FENCE
- - - - - APPROXIMATE SOURCE IDENTITY BOUNDARY
- CELL 1 BOUNDARY
- API CELL BOUNDARY
- CRUDE CELL BOUNDARY

IMAGE COURTESY OF ESRI

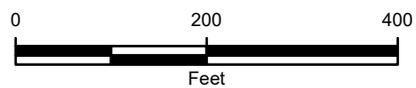


FIGURE 3
VADOSE ZONE SAMPLE LOCATION MAP
BISTI LANDFARM
SEC 16 T25N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.



**TABLE 1
2020 SEMI-ANNUAL VADOSE ZONE SOIL ANALYTICAL RESULTS**

**BISTI LANDFARM
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.**

Cell	Source Area	Sample ID	Sample Date	TPH 418.1 (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
Crude Cell	West Line	West Line Vadose Zone	9-Mar-20	340	<0.025	<0.050	<0.050	<0.10	<0.10	<60
	East Line	East Line Vadose Zone	9-Mar-20	32	<0.025	<0.049	<0.049	<0.099	<0.099	<60
	Bisti	Bisti Vadose Zone	9-Mar-20	<20	<0.023	<0.047	<0.047	<0.094	<0.094	<60
	Pettigrew	Pettigrew Vadose Zone	9-Mar-20	<20	<0.023	<0.047	<0.047	<0.094	<0.094	650
API Cell	API	API Vadose Zone 1	9-Mar-20	<19	<0.024	<0.049	<0.049	<0.098	<0.098	130
		API Vadose Zone 2	9-Mar-20	<20	<0.024	<0.048	<0.048	<0.096	<0.096	1,900
		API Vadose Zone 3	9-Mar-20	<20	<0.025	<0.050	<0.050	<0.10	<0.099	540
		API Vadose Zone 4	9-Mar-20	<18	<0.024	<0.047	<0.047	<0.094	<0.094	240
Background Sample Result			27-Mar-98 and 1-Sep-15	<20	<0.05	<0.05	<0.05	<0.05	<0.1	<50

Notes:

mg/kg - milligrams per kilograms

DRO - diesel range organics

GRO - gasoline range organics

TPH- total petroleum hydrocarbons

NE - not established

NA - not analyzed

< indicates result is less than the stated laboratory method practical quantitation limit

BOLD indicates results exceed the higher of the background sample result or practical quantitation limit





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

March 25, 2020

Gregory J. McCartney
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4135
FAX:

RE: 2020 Bisti Landfarm Semi Annual

OrderNo.: 2003469

Dear Gregory J. McCartney:

Hall Environmental Analysis Laboratory received 10 sample(s) on 3/10/2020 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003469

Date Reported: 3/25/2020

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: West Line Vadose

Project: 2020 Bisti Landfarm Semi Annual

Collection Date: 3/9/2020 12:06:00 PM

Lab ID: 2003469-001

Matrix: SOIL

Received Date: 3/10/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: CFC
Petroleum Hydrocarbons, TR	340	19		mg/Kg	1	3/18/2020	51052
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	3/14/2020 3:18:39 PM	51105
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	3/14/2020 7:13:00 AM	51068
Toluene	ND	0.050		mg/Kg	1	3/14/2020 7:13:00 AM	51068
Ethylbenzene	ND	0.050		mg/Kg	1	3/14/2020 7:13:00 AM	51068
Xylenes, Total	ND	0.10		mg/Kg	1	3/14/2020 7:13:00 AM	51068
Surr: 1,2-Dichloroethane-d4	82.6	70-130		%Rec	1	3/14/2020 7:13:00 AM	51068
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	3/14/2020 7:13:00 AM	51068
Surr: Dibromofluoromethane	96.5	70-130		%Rec	1	3/14/2020 7:13:00 AM	51068
Surr: Toluene-d8	101	70-130		%Rec	1	3/14/2020 7:13:00 AM	51068

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003469

Date Reported: 3/25/2020

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: East Line Vadose

Project: 2020 Bisti Landfarm Semi Annual

Collection Date: 3/9/2020 12:01:00 PM

Lab ID: 2003469-002

Matrix: SOIL

Received Date: 3/10/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: CFC
Petroleum Hydrocarbons, TR	32	19		mg/Kg	1	3/18/2020	51052
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	3/14/2020 3:31:04 PM	51105
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	3/14/2020 8:38:28 AM	51068
Toluene	ND	0.049		mg/Kg	1	3/14/2020 8:38:28 AM	51068
Ethylbenzene	ND	0.049		mg/Kg	1	3/14/2020 8:38:28 AM	51068
Xylenes, Total	ND	0.099		mg/Kg	1	3/14/2020 8:38:28 AM	51068
Surr: 1,2-Dichloroethane-d4	86.0	70-130		%Rec	1	3/14/2020 8:38:28 AM	51068
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	3/14/2020 8:38:28 AM	51068
Surr: Dibromofluoromethane	92.2	70-130		%Rec	1	3/14/2020 8:38:28 AM	51068
Surr: Toluene-d8	101	70-130		%Rec	1	3/14/2020 8:38:28 AM	51068

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003469

Date Reported: 3/25/2020

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Bisti Vadose

Project: 2020 Bisti Landfarm Semi Annual

Collection Date: 3/9/2020 12:04:00 PM

Lab ID: 2003469-003

Matrix: SOIL

Received Date: 3/10/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: CFC
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	3/18/2020	51052
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	3/14/2020 3:43:28 PM	51105
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.023		mg/Kg	1	3/14/2020 9:06:57 AM	51068
Toluene	ND	0.047		mg/Kg	1	3/14/2020 9:06:57 AM	51068
Ethylbenzene	ND	0.047		mg/Kg	1	3/14/2020 9:06:57 AM	51068
Xylenes, Total	ND	0.094		mg/Kg	1	3/14/2020 9:06:57 AM	51068
Surr: 1,2-Dichloroethane-d4	77.7	70-130		%Rec	1	3/14/2020 9:06:57 AM	51068
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	3/14/2020 9:06:57 AM	51068
Surr: Dibromofluoromethane	97.3	70-130		%Rec	1	3/14/2020 9:06:57 AM	51068
Surr: Toluene-d8	98.6	70-130		%Rec	1	3/14/2020 9:06:57 AM	51068

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003469

Date Reported: 3/25/2020

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Pettigrew Vadose

Project: 2020 Bisti Landfarm Semi Annual

Collection Date: 3/9/2020 12:00:00 PM

Lab ID: 2003469-004

Matrix: SOIL

Received Date: 3/10/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: CFC
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	3/18/2020	51052
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	650	60		mg/Kg	20	3/14/2020 3:55:52 PM	51105
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.023		mg/Kg	1	3/14/2020 9:35:28 AM	51068
Toluene	ND	0.047		mg/Kg	1	3/14/2020 9:35:28 AM	51068
Ethylbenzene	ND	0.047		mg/Kg	1	3/14/2020 9:35:28 AM	51068
Xylenes, Total	ND	0.094		mg/Kg	1	3/14/2020 9:35:28 AM	51068
Surr: 1,2-Dichloroethane-d4	84.4	70-130		%Rec	1	3/14/2020 9:35:28 AM	51068
Surr: 4-Bromofluorobenzene	94.6	70-130		%Rec	1	3/14/2020 9:35:28 AM	51068
Surr: Dibromofluoromethane	92.0	70-130		%Rec	1	3/14/2020 9:35:28 AM	51068
Surr: Toluene-d8	106	70-130		%Rec	1	3/14/2020 9:35:28 AM	51068

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003469

Date Reported: 3/25/2020

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: API-1 Vadose

Project: 2020 Bisti Landfarm Semi Annual

Collection Date: 3/9/2020 12:07:00 PM

Lab ID: 2003469-005

Matrix: SOIL

Received Date: 3/10/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: CFC
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	3/18/2020	51052
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	130	60		mg/Kg	20	3/14/2020 4:08:16 PM	51105
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	3/14/2020 10:03:53 AM	51068
Toluene	ND	0.049		mg/Kg	1	3/14/2020 10:03:53 AM	51068
Ethylbenzene	ND	0.049		mg/Kg	1	3/14/2020 10:03:53 AM	51068
Xylenes, Total	ND	0.098		mg/Kg	1	3/14/2020 10:03:53 AM	51068
Surr: 1,2-Dichloroethane-d4	85.2	70-130		%Rec	1	3/14/2020 10:03:53 AM	51068
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	3/14/2020 10:03:53 AM	51068
Surr: Dibromofluoromethane	97.9	70-130		%Rec	1	3/14/2020 10:03:53 AM	51068
Surr: Toluene-d8	101	70-130		%Rec	1	3/14/2020 10:03:53 AM	51068

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003469

Date Reported: 3/25/2020

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: API-2 Vadose

Project: 2020 Bisti Landfarm Semi Annual

Collection Date: 3/9/2020 12:08:00 PM

Lab ID: 2003469-006

Matrix: SOIL

Received Date: 3/10/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: CFC
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	3/18/2020	51052
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	1900	60		mg/Kg	20	3/14/2020 4:20:41 PM	51105
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	3/14/2020 10:32:26 AM	51068
Toluene	ND	0.048		mg/Kg	1	3/14/2020 10:32:26 AM	51068
Ethylbenzene	ND	0.048		mg/Kg	1	3/14/2020 10:32:26 AM	51068
Xylenes, Total	ND	0.096		mg/Kg	1	3/14/2020 10:32:26 AM	51068
Surr: 1,2-Dichloroethane-d4	88.9	70-130		%Rec	1	3/14/2020 10:32:26 AM	51068
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	3/14/2020 10:32:26 AM	51068
Surr: Dibromofluoromethane	98.0	70-130		%Rec	1	3/14/2020 10:32:26 AM	51068
Surr: Toluene-d8	99.6	70-130		%Rec	1	3/14/2020 10:32:26 AM	51068

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003469

Date Reported: 3/25/2020

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: API-3 Vadose

Project: 2020 Bisti Landfarm Semi Annual

Collection Date: 3/9/2020 12:05:00 PM

Lab ID: 2003469-007

Matrix: SOIL

Received Date: 3/10/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: CFC
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	3/18/2020	51052
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	540	60		mg/Kg	20	3/14/2020 4:33:06 PM	51105
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	3/14/2020 1:23:59 PM	51068
Toluene	ND	0.050		mg/Kg	1	3/14/2020 1:23:59 PM	51068
Ethylbenzene	ND	0.050		mg/Kg	1	3/14/2020 1:23:59 PM	51068
Xylenes, Total	ND	0.099		mg/Kg	1	3/14/2020 1:23:59 PM	51068
Surr: 1,2-Dichloroethane-d4	84.2	70-130		%Rec	1	3/14/2020 1:23:59 PM	51068
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	3/14/2020 1:23:59 PM	51068
Surr: Dibromofluoromethane	93.3	70-130		%Rec	1	3/14/2020 1:23:59 PM	51068
Surr: Toluene-d8	100	70-130		%Rec	1	3/14/2020 1:23:59 PM	51068

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003469

Date Reported: 3/25/2020

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: API-4 Vadose

Project: 2020 Bisti Landfarm Semi Annual

Collection Date: 3/9/2020 12:06:00 PM

Lab ID: 2003469-008

Matrix: SOIL

Received Date: 3/10/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: CFC
Petroleum Hydrocarbons, TR	ND	18		mg/Kg	1	3/18/2020	51052
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	240	60		mg/Kg	20	3/14/2020 4:45:30 PM	51105
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	3/14/2020 1:52:42 PM	51068
Toluene	ND	0.047		mg/Kg	1	3/14/2020 1:52:42 PM	51068
Ethylbenzene	ND	0.047		mg/Kg	1	3/14/2020 1:52:42 PM	51068
Xylenes, Total	ND	0.094		mg/Kg	1	3/14/2020 1:52:42 PM	51068
Surr: 1,2-Dichloroethane-d4	84.0	70-130		%Rec	1	3/14/2020 1:52:42 PM	51068
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	3/14/2020 1:52:42 PM	51068
Surr: Dibromofluoromethane	93.4	70-130		%Rec	1	3/14/2020 1:52:42 PM	51068
Surr: Toluene-d8	101	70-130		%Rec	1	3/14/2020 1:52:42 PM	51068

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003469

Date Reported: 3/25/2020

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: Crude Cell Treatment

Project: 2020 Bisti Landfarm Semi Annual

Collection Date: 3/9/2020 12:04:00 PM

Lab ID: 2003469-009

Matrix: SOIL

Received Date: 3/10/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: CFC
Petroleum Hydrocarbons, TR	110	18		mg/Kg	1	3/18/2020	51052
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND	60		mg/Kg	20	3/14/2020 5:22:45 PM	51105
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/14/2020 2:21:22 PM	51068
Surr: BFB	97.6	70-130		%Rec	1	3/14/2020 2:21:22 PM	51068
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	23	9.8		mg/Kg	1	3/18/2020 1:49:56 PM	51086
Surr: DNOP	92.8	55.1-146		%Rec	1	3/18/2020 1:49:56 PM	51086

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003469

Date Reported: 3/25/2020

CLIENT: Western Refining Southwest, Inc.

Client Sample ID: API Cell Treatment

Project: 2020 Bisti Landfarm Semi Annual

Collection Date: 3/9/2020 12:09:00 PM

Lab ID: 2003469-010

Matrix: SOIL

Received Date: 3/10/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: CFC
Petroleum Hydrocarbons, TR	36	19		mg/Kg	1	3/18/2020	51052
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	190	61		mg/Kg	20	3/14/2020 5:35:09 PM	51105
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/14/2020 2:50:02 PM	51068
Surr: BFB	95.4	70-130		%Rec	1	3/14/2020 2:50:02 PM	51068
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	11	9.9		mg/Kg	1	3/18/2020 2:33:55 PM	51086
Surr: DNOP	88.4	55.1-146		%Rec	1	3/18/2020 2:33:55 PM	51086

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2003469

25-Mar-20

Client: Western Refining Southwest, Inc.

Project: 2020 Bisti Landfarm Semi Annual

Sample ID: MB-51105	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 51105	RunNo: 67316								
Prep Date: 3/13/2020	Analysis Date: 3/14/2020	SeqNo: 2320124	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-51105	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 51105	RunNo: 67316								
Prep Date: 3/13/2020	Analysis Date: 3/14/2020	SeqNo: 2320125	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2003469

25-Mar-20

Client: Western Refining Southwest, Inc.
Project: 2020 Bisti Landfarm Semi Annual

Sample ID: MB-51052	SampType: MBLK	TestCode: EPA Method 418.1: TPH								
Client ID: PBS	Batch ID: 51052	RunNo: 67391								
Prep Date: 3/13/2020	Analysis Date: 3/18/2020	SeqNo: 2324193	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID: LCS-51052	SampType: LCS	TestCode: EPA Method 418.1: TPH								
Client ID: LCSS	Batch ID: 51052	RunNo: 67391								
Prep Date: 3/13/2020	Analysis Date: 3/18/2020	SeqNo: 2324194	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	120	20	100.0	0	124	62.5	123			S

Sample ID: LCSD-51052	SampType: LCSD	TestCode: EPA Method 418.1: TPH								
Client ID: LCSS02	Batch ID: 51052	RunNo: 67391								
Prep Date: 3/13/2020	Analysis Date: 3/18/2020	SeqNo: 2324195	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	120	20	100.0	0	125	62.5	123	0.943	20	S

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2003469

25-Mar-20

Client: Western Refining Southwest, Inc.
Project: 2020 Bisti Landfarm Semi Annual

Sample ID: LCS-51086	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 51086		RunNo: 67313							
Prep Date: 3/13/2020	Analysis Date: 3/16/2020		SeqNo: 2320643		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	107	70	130			
Surr: DNOP	5.2		5.000		105	55.1	146			

Sample ID: MB-51086	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 51086		RunNo: 67313							
Prep Date: 3/13/2020	Analysis Date: 3/16/2020		SeqNo: 2320644		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	11		10.00		109	55.1	146			

Sample ID: LCS-51100	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 51100		RunNo: 67313							
Prep Date: 3/13/2020	Analysis Date: 3/17/2020		SeqNo: 2321410		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.2		5.000		84.7	55.1	146			

Sample ID: MB-51100	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 51100		RunNo: 67313							
Prep Date: 3/13/2020	Analysis Date: 3/17/2020		SeqNo: 2321412		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0		10.00		90.4	55.1	146			

Sample ID: LCS-51201	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 51201		RunNo: 67313							
Prep Date: 3/18/2020	Analysis Date: 3/20/2020		SeqNo: 2326279		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		77.7	55.1	146			

Sample ID: MB-51201	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 51201		RunNo: 67313							
Prep Date: 3/18/2020	Analysis Date: 3/20/2020		SeqNo: 2326281		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.6		10.00		86.0	55.1	146			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2003469

25-Mar-20

Client: Western Refining Southwest, Inc.
Project: 2020 Bisti Landfarm Semi Annual

Sample ID: 2003469-001ams	SampType: MS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: West Line Vadose	Batch ID: 51068	RunNo: 67303								
Prep Date: 3/12/2020	Analysis Date: 3/14/2020	SeqNo: 2319857	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.023	0.9242	0	116	70	130			
Toluene	1.1	0.046	0.9242	0	114	70	130			
Ethylbenzene	1.1	0.046	0.9242	0	119	70	130			
Xylenes, Total	3.3	0.092	2.773	0	120	70	130			
Surr: 1,2-Dichloroethane-d4	0.40		0.4621		85.6	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.4621		97.0	70	130			
Surr: Dibromofluoromethane	0.44		0.4621		94.3	70	130			
Surr: Toluene-d8	0.47		0.4621		101	70	130			

Sample ID: 2003469-001amsd	SampType: MSD	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: West Line Vadose	Batch ID: 51068	RunNo: 67303								
Prep Date: 3/12/2020	Analysis Date: 3/14/2020	SeqNo: 2319858	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9843	0	112	70	130	2.76	20	
Toluene	1.1	0.049	0.9843	0	110	70	130	2.24	20	
Ethylbenzene	1.1	0.049	0.9843	0	116	70	130	4.38	0	
Xylenes, Total	3.4	0.098	2.953	0	115	70	130	2.50	0	
Surr: 1,2-Dichloroethane-d4	0.42		0.4921		85.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.46		0.4921		94.2	70	130	0	0	
Surr: Dibromofluoromethane	0.47		0.4921		94.9	70	130	0	0	
Surr: Toluene-d8	0.49		0.4921		99.6	70	130	0	0	

Sample ID: ics-51068	SampType: LCS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSS	Batch ID: 51068	RunNo: 67303								
Prep Date: 3/12/2020	Analysis Date: 3/14/2020	SeqNo: 2319874	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	106	70	130			
Toluene	1.0	0.050	1.000	0	104	70	130			
Ethylbenzene	1.1	0.050	1.000	0	108	70	130			
Xylenes, Total	3.2	0.10	3.000	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	0.42		0.5000		84.6	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		91.1	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		93.4	70	130			
Surr: Toluene-d8	0.49		0.5000		97.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2003469

25-Mar-20

Client: Western Refining Southwest, Inc.

Project: 2020 Bisti Landfarm Semi Annual

Sample ID: mb-51068	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: 51068	RunNo: 67303								
Prep Date: 3/12/2020	Analysis Date: 3/14/2020	SeqNo: 2319876			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.45		0.5000		90.5	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.6	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		95.6	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2003469

25-Mar-20

Client: Western Refining Southwest, Inc.

Project: 2020 Bisti Landfarm Semi Annual

Sample ID: ics-51068	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 51068	RunNo: 67303								
Prep Date: 3/12/2020	Analysis Date: 3/14/2020	SeqNo: 2319913			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.0	70	130			
Surr: BFB	490		500.0		97.8	70	130			

Sample ID: mb-51068	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 51068	RunNo: 67303								
Prep Date: 3/12/2020	Analysis Date: 3/14/2020	SeqNo: 2319915			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	480		500.0		96.3	70	130			

Qualifiers:

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

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

Sample Log-In Check List

Client Name: **Western Refining Southw** Work Order Number: **2003469** RcptNo: 1

Received By: **Yazmine Garduno** 3/10/2020 8:15:00 AM *Yazmine Garduno*
 Completed By: **Leah Baca** 3/11/2020 10:31:22 AM *Leah Baca*
 Reviewed By: **ENH** 3/11/20

Chain of Custody

1. Is Chain of Custody sufficiently complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes No NA
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: **DAD 3/11/20**

Special Handling (if applicable)

15. 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: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good				
2	2.9	Good				

Chain-of-Custody Record

Client: Greg McCartney
 Mailing Address: 5391 S. Main St Room M-17081
Highway, 011 45840
 Phone #: 419-421-2338
 email or Fax#: gjmcartney@marathonpetroleum.com
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Az Compliance Other

Accreditation: NELAC Other
 EDD (Type) PDF

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
3/9/20	1206	Soil	WestLine Vadose	14oz jar	Cool	-001
	1201		East Line Vadose			-002
	1204		Bisti vadose			-003
	1200		Pettigrew vadose			-004
	1207		API-1 vadose			-005
	1208		API-2 vadose			-006
	1205		API-3 vadose			-007
	1206		API-4 vadose			-008
	1204		Grude Cell Treatment			-009
	1209		API Cell Treatment			-010

Date: 3/9/20 1337
 Relinquished by: Cartney M
 Date: 3/9/20 1903
 Relinquished by: Christopher Wheeler

Turn-Around Time:
 Standard Rush

Project Name:
2000 Bisti Landfarm - Semi Annual

Project #:
029520002

Project Manager:
Devin Heremann

Sampler: cm/mm
 On Ice: Yes No
 # of Coolers: 2

Cooler Temp (including CP): 14 to 15

Container Type and #
 Preservative Type
 HEAL No.
28101-201
2003469



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

Analysis Request	
TPH: 8015D (GRO / DRO / MRO)	
8081 Pesticides/8082 PCB's	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	
Chloride	
TPH (Method 418.1)	

Remarks: cc: dheremann@tenv.com
~~cmginn@tenv.com~~
Bill to: 450018 3750

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.