District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NVF1908732743
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Hilcorp Energy Company	OGRID 372171
Contact Name Jennifer Deal	Contact Telephone 505-801-6517
Contact email jdeal@hilcorp.com	Incident # NVF1908732743
Contact mailing address 382 Road 3100, Aztec NM 87410	

DENIED See Email
BY: Cory Smith
DATE: 6/20/19 (505) 334-6178 Ext. 115

Location of Release Source

Latitude 36.8154221 Longitude -107.8779297

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Sunray B 1A	Site Type Gas Well
Date Release Discovered 3/25/2019 @ 11:45am	API# *30-045-23166*

Unit Letter	Section	Township	Range	County
E	15	30N	10W	San Juan

NMOCD
MAY 13 2019
DISTRICT III

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:*)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls) 10.44	Volume Recovered (bbls) 0
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A release of 10.44bbls of oil/condensate was released due to a water level controller micro-switch pulled away from open/close tabs causing water dump to stay closed. The water carried over to the condensate tank causing the tank to overfill. Nothing was recovered. Switch is being fixed. Release remained inside the berm.

(25)

Smith, Cory, EMNRD

From: Smith, Cory, EMNRD
Sent: Thursday, June 20, 2019 11:38 AM
To: Jennifer Deal; Abiodun Adeloye; whitney thomas (l1thomas@blm.gov)
Subject: RE: Initial C-141 - Sunray B 1A

Jennifer,

OCD has reviewed the C-141 Closure request for the below incident and has denied the report because the following.

- No Depth to water determination (An Iwater data base search showing no wells does not provide any information other than there are no well in the 1 section.)
- Sampling does not meeting the requirements of 19.15.29.12 NMAC (20x33 = 660Sqft) (40x6=240Sqft) Did OCD give approval for alternative sampling? If So when?
- No copy of the Sampling notice.
- No description of all remedial activities (please include the dates Example 4-21-19 HEC hauled excavated and hauled 340 yds of soil)

Please review the closure report and resubmit it.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>
Sent: Thursday, March 28, 2019 9:07 AM
To: Jennifer Deal <jdeal@hilcorp.com>; Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Abiodun Adeloye <aadeloye@blm.gov>; whitney thomas (l1thomas@blm.gov) <l1thomas@blm.gov>
Cc: Davin LeBoeuf <dleboeuf@hilcorp.com>
Subject: RE: Initial C-141 - Sunray B 1A

Good morning Jennifer,

The OCD has assigned the referenced incident number to the release. Please include this number on future submittals.

NVF1908732743 SUNRAY B #001A @ 30-045-23166

General Incident Information

Site Name:	SUNRAY B #001A
Well:	[30-045-23166] SUNRAY B #001A
Facility:	
Operator:	[372171] HILCORP ENERGY COMPANY
Status:	Closure Not Approved
Type:	Release Other
District:	Aztec
Incident Location:	E-15-30N-10W Lot 0 FNL 0 FEL
Lat/Long:	36.8154221,-107.8779297 NAD83
Directions:	

Thank you,

Vanessa Fields
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 119
Cell: (505) 419-0463
vanessa.fields@state.nm.us

From: Jennifer Deal <jdeal@hilcorp.com>
Sent: Thursday, March 28, 2019 9:00 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; Abiodun Adeloye <aadeloye@blm.gov>; whitney thomas (l1thomas@blm.gov) <l1thomas@blm.gov>
Cc: Davin LeBoeuf <dleboeuf@hilcorp.com>
Subject: [EXT] Initial C-141 - Sunray B 1A

Good morning,

Please find attached the initial C-141 for a release that occurred at the Sunray B 1A on 3/25/19. A paper copy will be sent out today. Please let me know if you have any questions.

Thank you,

Jennifer Deal
Environmental Specialist
Hilcorp Energy – L48 West
jdeal@hilcorp.com
382 Road 3100

State of New Mexico
Oil Conservation Division

Incident ID	NVF1908732743
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	NVF1908732743
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Jennifer Deal Title: Environmental Specialist

Signature: Jennifer Deal Date: 5/10/2019

email: jdeal@hilcorp.com Telephone: (505) 324-5128

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NVF1908732743
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jennifer Deal Title: Environmental Specialist

Signature: Jennifer Deal Date: 5/10/2019

email: jdeal@hilcorp.com Telephone: 505-801-6517

OCD Only

Received by: OCD Date: 05-13-19

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

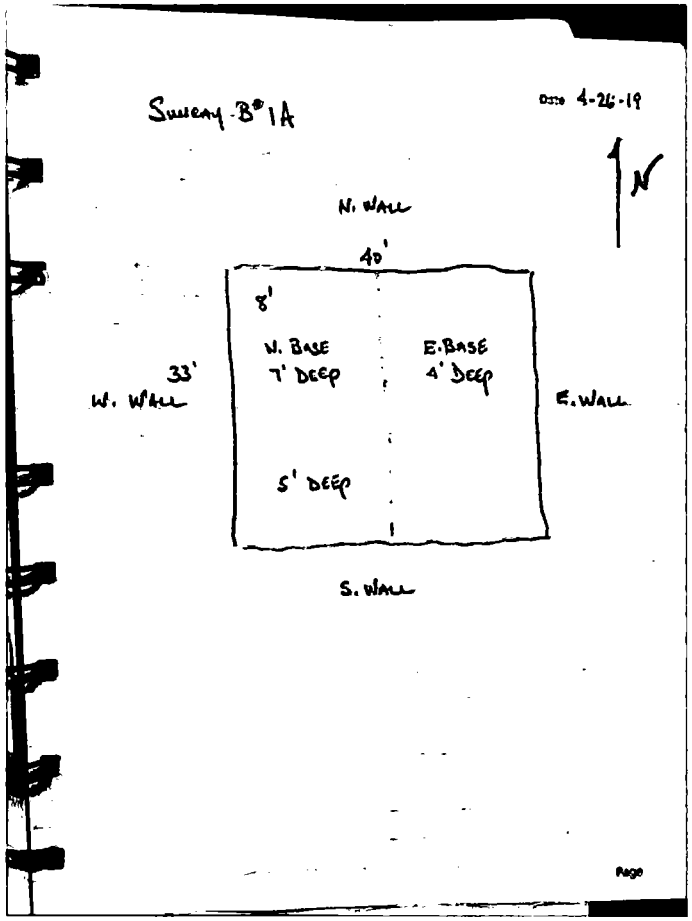
Closure Approved by: Date:

Printed Name: Title:

Site layout

Photographs – Impacted Area (3/25/19)

Field Data


Sweat-B°1A
Date 4-26-19
N
N. WALL
40'
8'
N. BASE
7' DEEP
E. BASE
4' DEEP
33'
W. WALL
E. WALL
5' DEEP
S. WALL
Page

Data table of soil contaminant concentration data

TABLE 1

SOIL ANALYTICAL RESULTS

SUNRAY B 1A

HILCORP ENERGY - L48 WEST

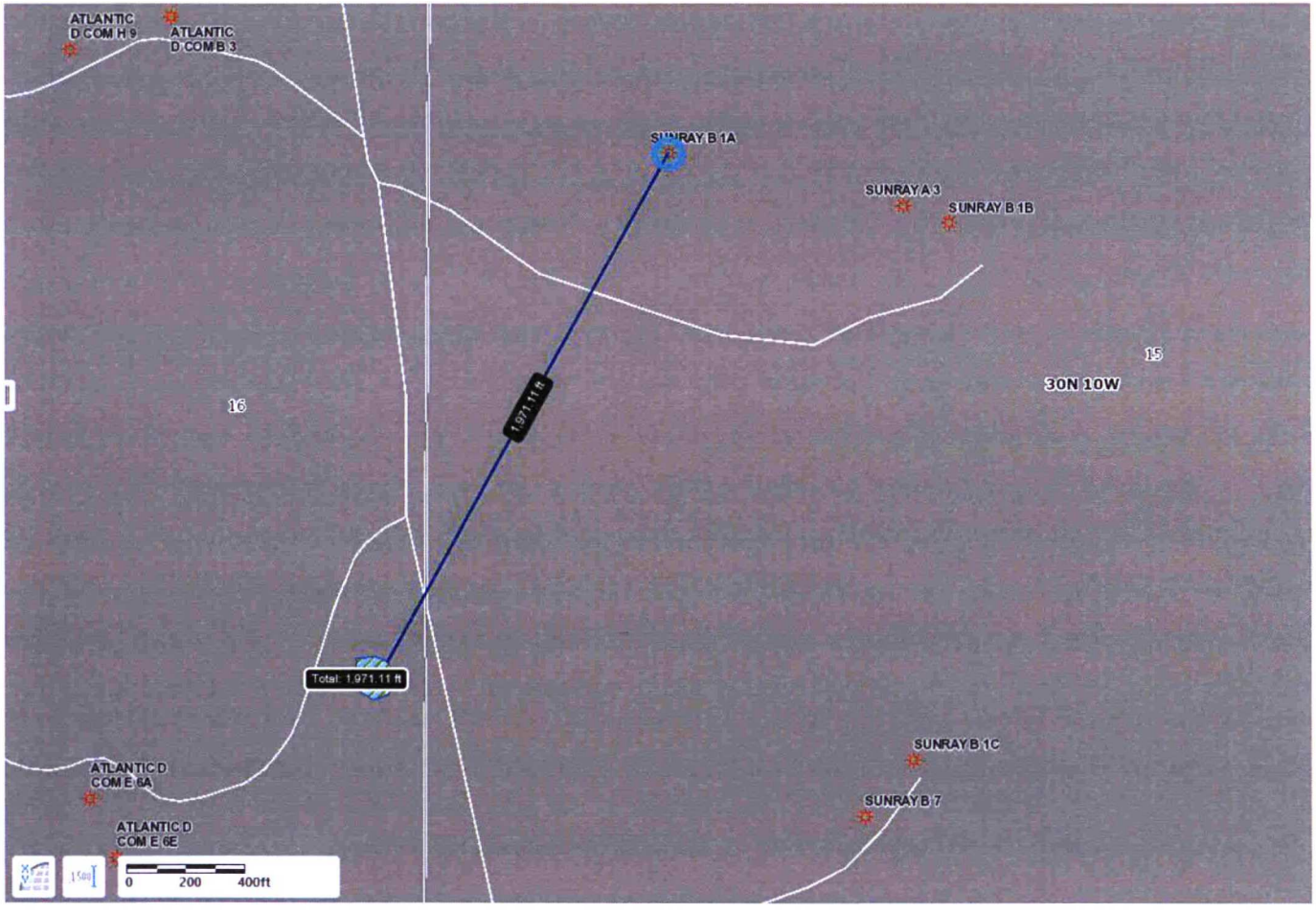
Soil Sample Identification	Sample Date	Field Headspace	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes	Total BTEX	Chlorides (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	MRO+DRO (mg/kg)	TPH (mg/kg)
W Wall	4/26/2019		<0.000505	<0.00505	<0.000505	<0.00152	<0.00505	12.1	<0.101	<4.0	<4.0	<4.0	<4.0
W Base	4/26/2019		<0.0005	<0.005	<0.0005	<0.0015	<0.005	14	<0.1	<4.0	<4.0	<4.0	<4.0
N Wall	4/26/2019		<0.0005	<0.005	<0.0005	<0.0015	<0.005	<10	<0.1	6.14	<4.0	6.14	6.14
E Wall	4/26/2019		<0.0005	<0.005	<0.0005	<0.0015	<0.005	13	<0.1	74.00	24	98.00	98.00
S Wall	4/26/2019		<0.0005	<0.005	<0.0005	<0.0015	<0.005	11	<0.1	<4.0	<4.0	<4.0	<4.0
E Base	4/26/2019		<0.0005	<0.005	<0.0005	<0.0015	<0.005	10.2	<0.1	28.00	8.15	36.15	36.15
NMOCD Standards		NE	10	NE	NE	NE	50	10,000	NE	NE	NE	1,000	2,500

Determination of water sources and significant watercourses within ½ mile of the lateral extent of the release

N

Determination of water sources and significant watercourses within ½ mile of the lateral extent of the release

N

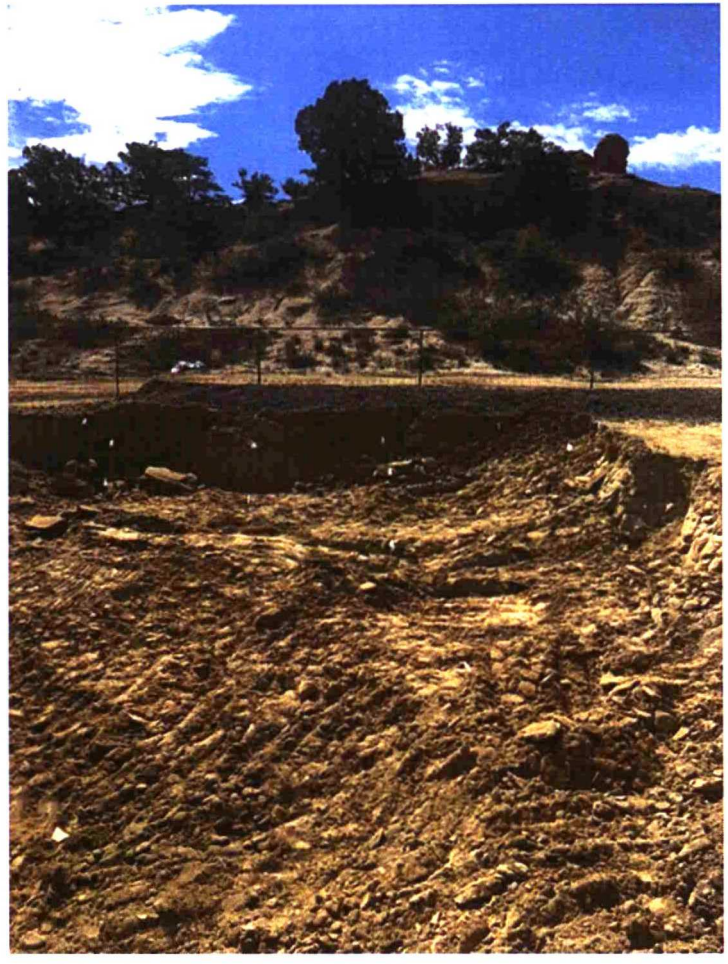


Photographs – 4/26/19 Sampling Event

including date and GIS information

South Wall

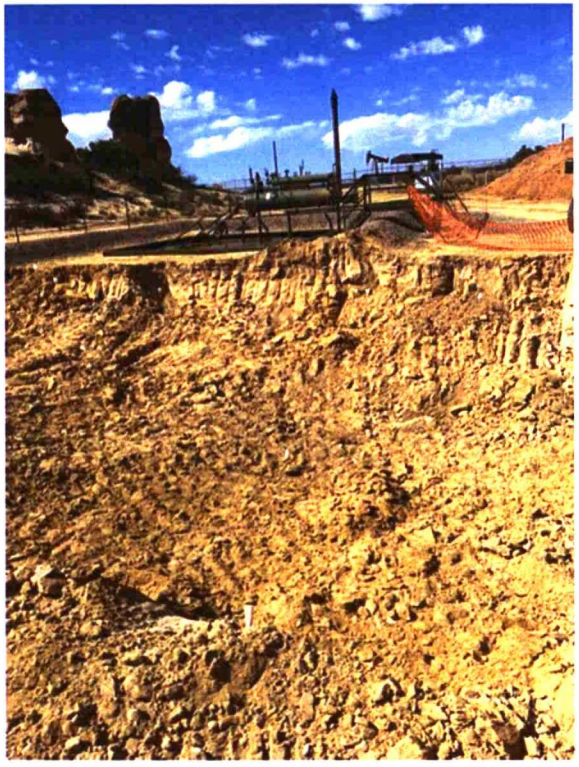
East Wall and East Base



Photographs – 4/26/19 Sampling Event

including date and GIS information

West Base



East Base and East Wall

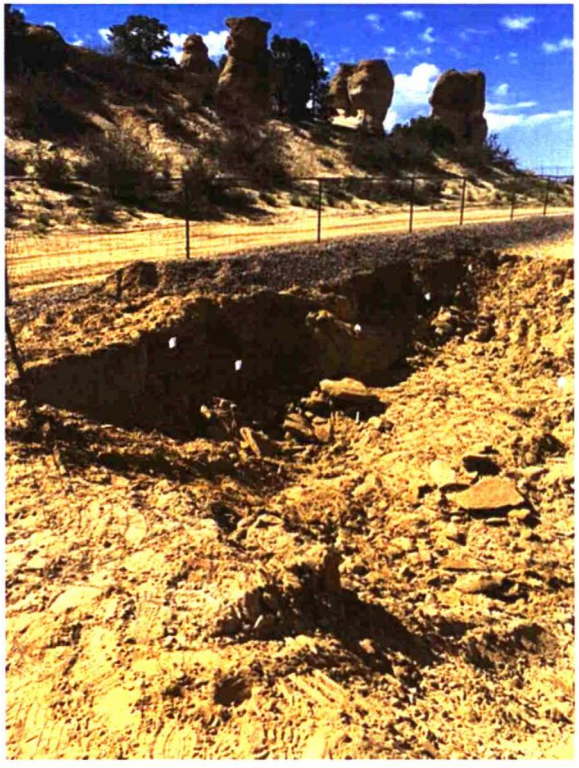
North Wall and North Base

Photographs – 4/26/19 Sampling Event

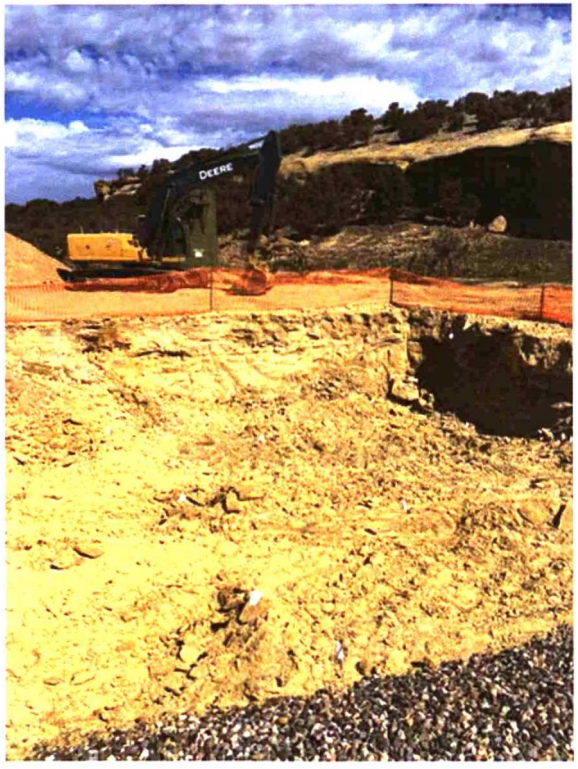
including date and GIS information

North Wall

East Wall

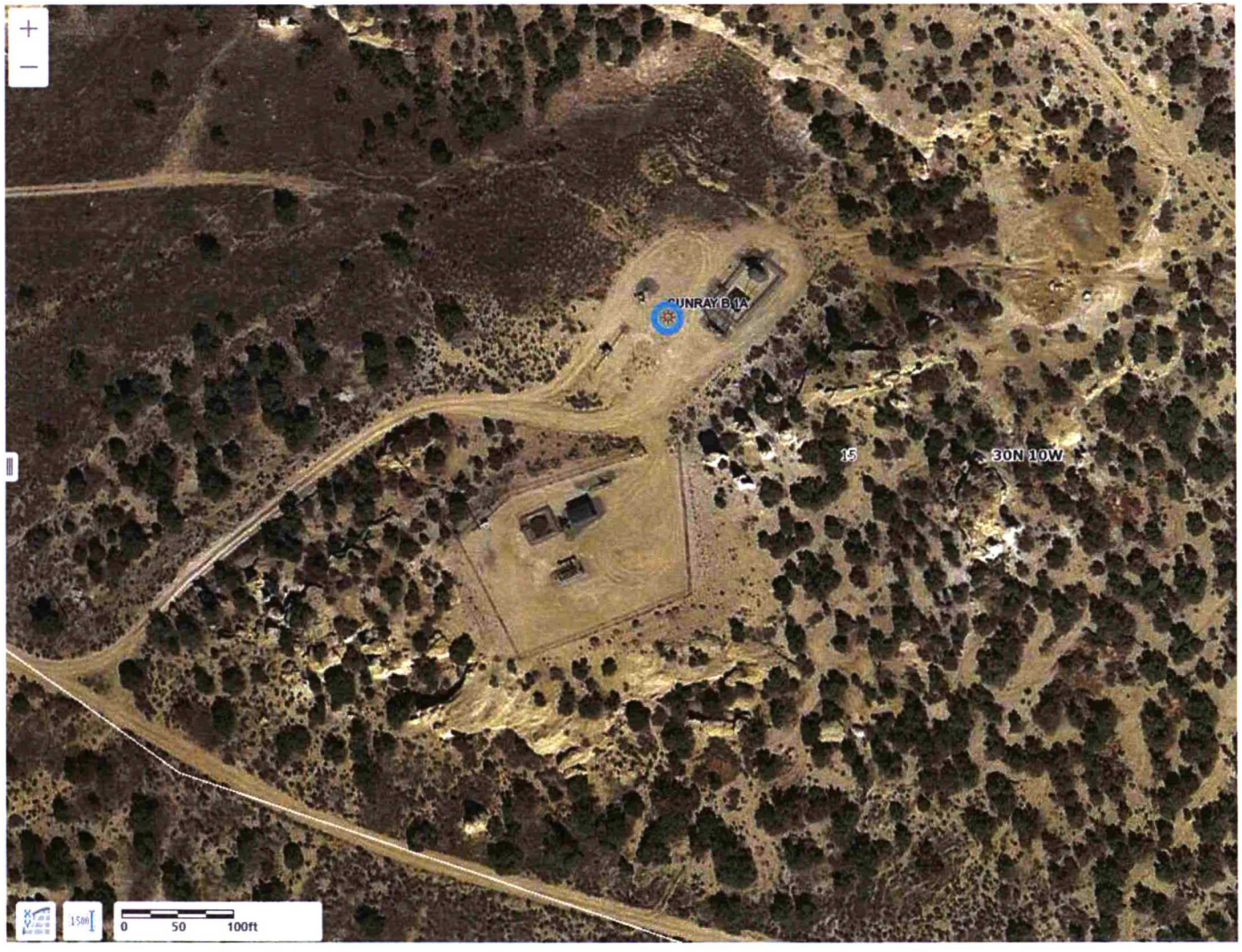


West Base



Topographic/Aerial Maps

N



Sunray B 1A

- Hilcorp hauled approximately 340 yds of soil to IEI and brought in about 340 yds of clean soil
- Excavation size was approximately 33'x40'x6' deep
- Confirmation sampling occurred on April 26, 2019

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

May 06, 2019

HilCorp-Farmington, NM

Sample Delivery Group:	L1093382
Samples Received:	04/27/2019
Project Number:	SUN RAY B #1A
Description:	SUN RAY B #1A
Site:	SUN RAY B #1A
Report To:	Jennifer Deal 382 Road 3100 Aztec, NM 87401

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

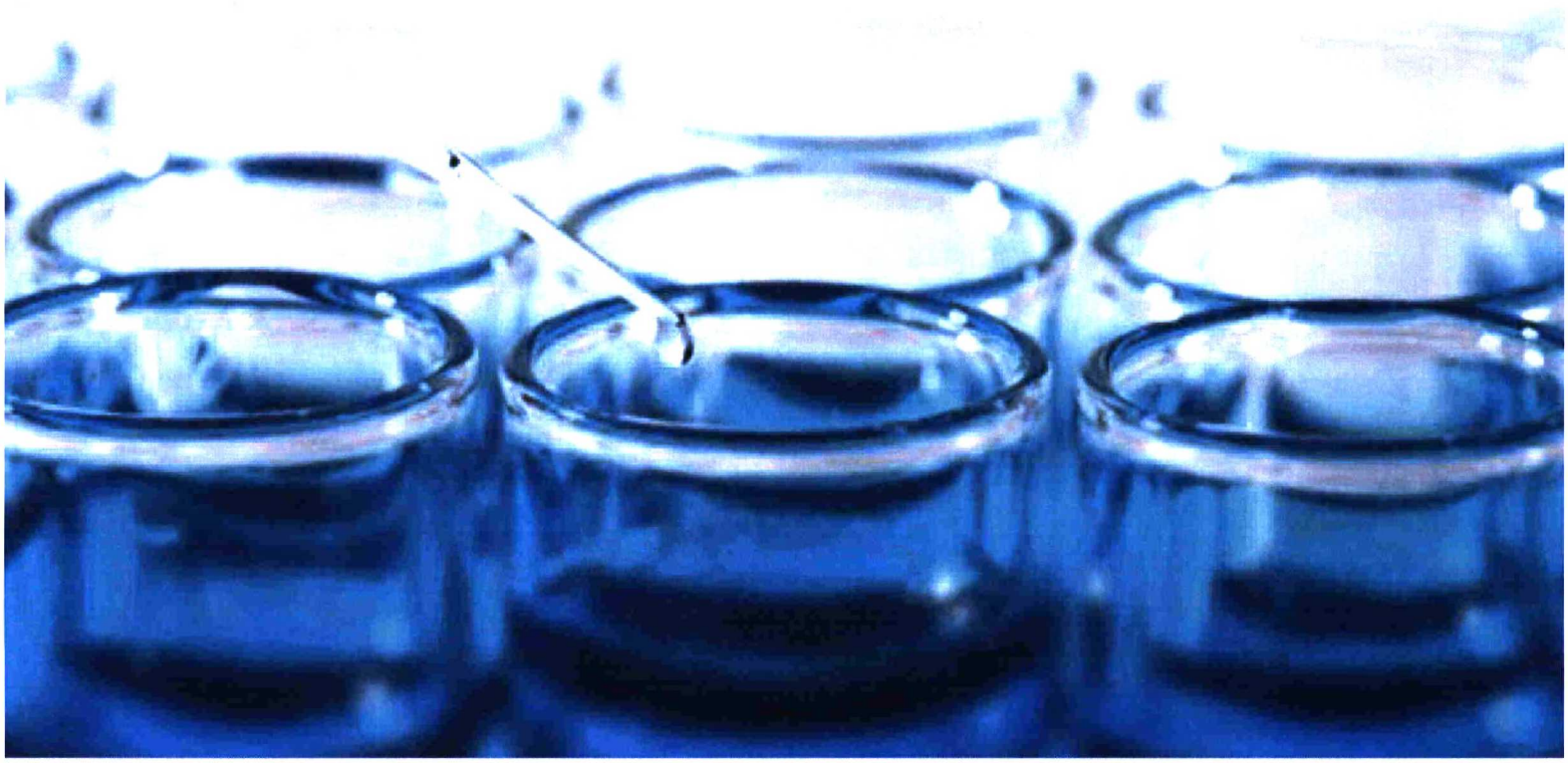


TABLE OF CONTENTS

W WALL L1093382-01 Solid

Collected by: Kurt | Collected date/time: 04/26/19 09:08 | Received date/time: 04/27/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1274268	1	05/03/19 09:40	05/03/19 14:12	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1273392	1.01	04/29/19 00:18	04/30/19 17:15	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1274151	1	05/02/19 05:10	05/02/19 19:09	TJD	Mt. Juliet, TN

W BASE L1093382-02 Solid

Collected by: Kurt | Collected date/time: 04/26/19 09:12 | Received date/time: 04/27/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1274268	1	05/03/19 09:40	05/03/19 14:20	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1273392	1	04/29/19 00:18	04/30/19 17:39	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1274151	1	05/02/19 05:10	05/02/19 19:25	TJD	Mt. Juliet, TN

N WALL L1093382-03 Solid

Collected by: Kurt | Collected date/time: 04/26/19 09:15 | Received date/time: 04/27/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1274268	1	05/03/19 09:40	05/03/19 14:29	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1273392	1	04/29/19 00:18	04/30/19 18:03	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1274151	1	05/02/19 05:10	05/02/19 19:41	TJD	Mt. Juliet, TN

E BASE L1093382-04 Solid

Collected by: Kurt | Collected date/time: 04/26/19 09:23 | Received date/time: 04/27/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1274268	1	05/03/19 09:40	05/03/19 14:37	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1273392	1	04/29/19 00:18	04/30/19 18:27	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1274151	1	05/02/19 05:10	05/02/19 19:57	TJD	Mt. Juliet, TN

S WALL L1093382-05 Solid

Collected by: Kurt | Collected date/time: 04/26/19 09:26 | Received date/time: 04/27/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1274268	1	05/03/19 09:40	05/03/19 14:46	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1273392	1	04/29/19 00:18	04/30/19 18:50	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1274151	1	05/02/19 05:10	05/02/19 20:14	TJD	Mt. Juliet, TN

E WALL L1093382-06 Solid

Collected by: Kurt | Collected date/time: 04/26/19 09:30 | Received date/time: 04/27/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1274268	1	05/03/19 09:40	05/03/19 15:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1273392	1	04/29/19 00:18	04/30/19 19:14	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1274151	1	05/02/19 05:10	05/02/19 20:30	TJD	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 9056A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	12.1		10.0	1	05/03/2019 14:12	WG1274268

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000505	1.01	04/30/2019 17:15	WG1273392
Toluene	ND		0.00505	1.01	04/30/2019 17:15	WG1273392
Ethylbenzene	ND		0.000505	1.01	04/30/2019 17:15	WG1273392
Total Xylene	ND		0.00152	1.01	04/30/2019 17:15	WG1273392
TPH (GC/FID) Low Fraction	ND		0.101	1.01	04/30/2019 17:15	WG1273392
(S) a,a,a-Trifluorotoluene(FID)	*95.4*		*77.0-120*		*04/30/2019 17:15*	WG1273392
(S) a,a,a-Trifluorotoluene(PID)	*98.4*		*72.0-128*		*04/30/2019 17:15*	WG1273392

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.00	1	05/02/2019 19:09	WG1274151
C28-C40 Oil Range	ND		4.00	1	05/02/2019 19:09	WG1274151
(S) o-Terphenyl	*79.0*		*18.0-148*		*05/02/2019 19:09*	WG1274151

Wet Chemistry by Method 9056A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	14.0		10.0	1	05/03/2019 14:20	WG1274268

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	04/30/2019 17:39	WG1273392
Toluene	ND		0.00500	1	04/30/2019 17:39	WG1273392
Ethylbenzene	ND		0.000500	1	04/30/2019 17:39	WG1273392
Total Xylene	ND		0.00150	1	04/30/2019 17:39	WG1273392
TPH (GC/FID) Low Fraction	ND		0.100	1	04/30/2019 17:39	WG1273392
(S) a,a,a-Trifluorotoluene(FID)	*97.5*		*77.0-120*		*04/30/2019 17:39*	WG1273392
(S) a,a,a-Trifluorotoluene(PID)	*102*		*72.0-128*		*04/30/2019 17:39*	WG1273392

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.00	1	05/02/2019 19:25	WG1274151
C28-C40 Oil Range	ND		4.00	1	05/02/2019 19:25	WG1274151
(S) o-Terphenyl	*86.0*		*18.0-148*		*05/02/2019 19:25*	WG1274151

Wet Chemistry by Method 9056A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	ND		10.0	1	05/03/2019 14:29	WG1274268

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	04/30/2019 18:03	WG1273392
Toluene	ND		0.00500	1	04/30/2019 18:03	WG1273392
Ethylbenzene	ND		0.000500	1	04/30/2019 18:03	WG1273392
Total Xylene	ND		0.00150	1	04/30/2019 18:03	WG1273392
TPH (GC/FID) Low Fraction	ND		0.100	1	04/30/2019 18:03	WG1273392
(S) a,a,a-Trifluorotoluene(FID)	*96.6*		*77.0-120*		*04/30/2019 18:03*	WG1273392
(S) a,a,a-Trifluorotoluene(PID)	*101*		*72.0-128*		*04/30/2019 18:03*	WG1273392

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	6.14		4.00	1	05/02/2019 19:41	WG1274151
C28-C40 Oil Range	ND		4.00	1	05/02/2019 19:41	WG1274151
(S) o-Terphenyl	*80.0*		*18.0-148*		*05/02/2019 19:41*	WG1274151

Wet Chemistry by Method 9056A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	10.2		10.0	1	05/03/2019 14:37	WG1274268

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	04/30/2019 18:27	WG1273392
Toluene	ND		0.00500	1	04/30/2019 18:27	WG1273392
Ethylbenzene	ND		0.000500	1	04/30/2019 18:27	WG1273392
Total Xylene	ND		0.00150	1	04/30/2019 18:27	WG1273392
TPH (GC/FID) Low Fraction	ND		0.100	1	04/30/2019 18:27	WG1273392
(S) a,a,a-Trifluorotoluene(FID)	*97.1*		*77.0-120*		*04/30/2019 18:27*	WG1273392
(S) a,a,a-Trifluorotoluene(PID)	*100*		*72.0-128*		*04/30/2019 18:27*	WG1273392

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	28.0		4.00	1	05/02/2019 19:57	WG1274151
C28-C40 Oil Range	8.15		4.00	1	05/02/2019 19:57	WG1274151
(S) o-Terphenyl	*77.4*		*18.0-148*		*05/02/2019 19:57*	WG1274151

Wet Chemistry by Method 9056A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	10.8		10.0	1	05/03/2019 14:46	WG1274268

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	04/30/2019 18:50	WG1273392
Toluene	ND		0.00500	1	04/30/2019 18:50	WG1273392
Ethylbenzene	ND		0.000500	1	04/30/2019 18:50	WG1273392
Total Xylene	ND		0.00150	1	04/30/2019 18:50	WG1273392
TPH (GC/FID) Low Fraction	ND		0.100	1	04/30/2019 18:50	WG1273392
(S) a,a,a-Trifluorotoluene(FID)	*98.8*		*77.0-120*		*04/30/2019 18:50*	WG1273392
(S) a,a,a-Trifluorotoluene(PID)	*103*		*72.0-128*		*04/30/2019 18:50*	WG1273392

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.00	1	05/02/2019 20:14	WG1274151
C28-C40 Oil Range	ND		4.00	1	05/02/2019 20:14	WG1274151
(S) o-Terphenyl	*83.0*		*18.0-148*		*05/02/2019 20:14*	WG1274151

Wet Chemistry by Method 9056A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chloride	13.4		10.0	1	05/03/2019 15:11	WG1274268

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	04/30/2019 19:14	WG1273392
Toluene	ND		0.00500	1	04/30/2019 19:14	WG1273392
Ethylbenzene	ND		0.000500	1	04/30/2019 19:14	WG1273392
Total Xylene	ND		0.00150	1	04/30/2019 19:14	WG1273392
TPH (GC/FID) Low Fraction	ND		0.100	1	04/30/2019 19:14	WG1273392
(S) a,a,a-Trifluorotoluene(FID)	*97.0*		*77.0-120*		*04/30/2019 19:14*	WG1273392
(S) a,a,a-Trifluorotoluene(PID)	*101*		*72.0-128*		*04/30/2019 19:14*	WG1273392

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	74.0		4.00	1	05/02/2019 20:30	WG1274151
C28-C40 Oil Range	24.0		4.00	1	05/02/2019 20:30	WG1274151
(S) o-Terphenyl	*94.0*		*18.0-148*		*05/02/2019 20:30*	WG1274151

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3408105-1 05/03/19 11:48

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		0.795	10.0

Laboratory Control Sample (LCS)

(LCS) R3408105-2 05/03/19 11:56

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	195	97.6	80.0-120	

L1093382-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1093382-06 05/03/19 15:11 • (MS) R3408105-4 05/03/19 15:20 • (MSD) R3408105-5 05/03/19 15:28

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	500	13.4	511	523	99.5	102	1	80.0-120			2.38	15

Method Blank (MB)

(MB) R3406920-5 04/30/19 11:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	U		0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*98.1*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*102*			*72.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3406920-1 04/30/19 09:01 • (LCSD) R3406920-2 04/30/19 09:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0452	0.0530	90.5	106	76.0-121			15.9	20
Toluene	0.0500	0.0464	0.0535	92.7	107	80.0-120			14.4	20
Ethylbenzene	0.0500	0.0470	0.0546	94.1	109	80.0-124			15.0	20
Total Xylene	0.150	0.138	0.159	91.7	106	37.0-160			14.8	20
(S) a,a,a-Trifluorotoluene(FID)				*97.6*	*98.3*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*101*	*101*	*72.0-128*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3406920-3 04/30/19 09:50 • (LCSD) R3406920-4 04/30/19 10:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.16	5.84	93.9	106	72.0-127			12.2	20
(S) a,a,a-Trifluorotoluene(FID)				*104*	*105*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*107*	*108*	*72.0-128*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.

HilCorp-Farmington, NM

382 Road 3100
Aztec, NM 87401

Billing Information:

PO Box 61529
Houston, TX 77208
khoekstra@hilcorp.com

Report to: JENNIFER DEAL

Email To: jdeal@hilcorp.com

Project Description:

City/State Collected:

Phone: 505-486-9543
Fax:

Client Project #

Lab Project #

Collected by (print): KURT

Site/Facility ID # SUNRAY B# 1A

P.O. #

Collected by (signature): Kurt Hoekstra

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately
Packed on Ice N ___ Y X

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1093382

Table # F070

Acctnum: HILCORANM

Template:

Prelogin:

TSR: 288 - Daphne Richards

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH 8015 - DRO, GRO, H2O	BTEX 8021	CHLORIDE	Pres Chk	Remarks	Sample # (lab only)
W. WALL	Comp	Soil		4-26	9:08	1	X	X	X			
W. BASE	"	"		"	9:12	1	X	X	X			
N. WALL	"	"		"	9:15	1	X	X	X			
E. BASE	"	"		"	9:23	1	X	X	X			
S. WALL	"	"		"	9:26	1	X	X	X			
E. WALL	"	"		"	9:30	1	X	X	X			

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 7305 8947 5010

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Kurt Hoekstra	4-26-19	3:12	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) KWillis

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 4.2 °C Bottles Received: 6

Date: 4/27/19 Time: 845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

1093382

Pyrene	1,000 mg/kg2
Organic Compounds in Ground Water	
Benzene	<5 µg/l[3]
Toluene	<560 µg/l[3]
Ethylbenzene	<700 µg/l[3]
Xylenes (Total)	<1,400 µg/l[3,4]
Inorganics in Soils	
Electrical Conductivity (EC)	< 1.1x background
Sodium Adsorption Ratio (SAR)	<12[5]
pH	6-9
Inorganics in Ground Water	
Total Dissolved Solids (TDS)	<1.25 x background[3]
Chlorides	<1.25 x background[3]
Sulfates	<1.25 x background[3]
Metals in Soils	
Arsenic	0.39 mg/kg[2]
Barium (LDNR True Total Barium)	15,000 mg/kg[2]
Boron (Hot Water Soluble)	2 mg/l[3]
Cadmium	70 mg/kg[3,6]
Chromium (III)	120,000 mg/kg[2]
Chromium (VI)	23 mg/kg[2,6]
Copper	3,100 mg/kg[2]
Lead (inorganic)	400 mg/kg[2]
Mercury	23 mg/kg[2]
Nickel (soluble salts)	1,600 mg/kg[2,6]
Selenium	390 mg/kg[2,6]
Silver	390 mg/kg[2]
Zinc	23,000 mg/kg[2,6]
Liquid Hydrocarbons in Soils and Ground Water	
Liquid hydrocarbons including condensate and oil	Below detection level