# Basin Environmental Service Technologies, LLC

**Environmental Site Summary & Drilling Work Plan** 

Company: Plains All American Pipeline, LP	Address: 2530 State Highway 214; Denver City, TX 79323 Telephone #: (806)592-2555
Site Name: Former Maljamar Station	NMOCD Reference#: 2RP-2504
Land Owner: US Bureau of Land Management	Address: 620 E. Greene St., Carlsbad, NM 88220-6292
Unit Letter: <u>"E" (SW/NW)</u> Section: 25 Township	: <u>185</u> Range: <u>31E</u> County: <u>Eddy</u> GPS Coordinates: <u>32.719323</u> N <u>-103.828191</u> W
Depth to Ground Water:≈ 315' - 320'	Distance to Surface Water Body: □ <200' □ 200' - 1,000' □ >1,000'
Wellhead Protection Area: <1,000' from Wate	er Source or <200' from Domestic Water Source?  Y
NMOCD Ranking Score: 0 Soil Remediation	on Levels (mg/kg): Benzene: <u>10</u> BTEX: <u>50</u> TPH: <b>100</b> Chloride: <b>100</b>
	□1,000 □ 500
	□ 5,000 □ 1,000
Date/Time of Release: Unknown Ty	pe of Release: Crude Oil Approximate Volume of Release: Unknown

#### Background Information:

In March of 2013, Plains Marketing, LP's (Plains) Maljamar Station crude oil pumping station was decommissioned and dismantled. During the removal of the on-site storage tanks, it was discovered that a release (or series of releases) had occurred at some point in the past. The nature, cause, and extent of the release(s) remains undetermined. Visibly stained, heavily impacted soil from underneath the storage tanks and from within the surrounding earthen containment berm was scraped up and stockpiled on-site in anticipation of additional remediation activities to be conducted at a later date.

On August 27, 2014, a representative of the United States Department of the Interior - Bureau of Land Management's (BLM) Carlsbad Field Office visited the Former Maljamar Station site and observed that soil remediation activities had yet to be conducted. The BLM representative notified Plains via email that additional soil remediation and subsequent revegetation of the site is required.

At the request of Plains, Basin Environmental Service Technologies, LLC (Basin Environmental), assumed remediation duties for the Former Maljamar Station site.

On September 9, 2014, representatives of Basin Environmental, Plains, and the BLM met on-site to determine a path forward to a BLM- and NMOCD-approved closure. Following the meeting, a "Delineation Work Plan" (Delineation Plan) was developed outlining a strategy to investigate the horizontal and vertical extent of contaminated soil. The Delineation Plan was submitted to the NMOCD and BLM for review on September 22, 2014, and approved by both agencies, with the proviso that additional delineation beyond the proposed fifteen-foot (15') trenching depth and/or hard caliche layer may be required.

Remediation of contaminated soil to the north, east, and northwest of the Former Maljamar Station site was conducted by Basin Environmental in conjunction with the remediation of a pipeline release which occurred on February 8, 2006. Details of soil remediation activities were summarized in the "Closure Request, Caprock to Maljamar 4-Inch (231735)", dated February 27, 2007, and on-file with the NMOCD Artesia District Office and BLM Carlsbad Field Office.

#### Summary of Field Activities:

On September 30, 2014, Basin Environmental commenced delineation activities at the site. Pursuant to the Delineation Plan, a series of eleven (11) delineation trenches (TT-1 through TT-11) were advanced to investigate the horizontal and vertical extent of contaminated soil. The trenches were advanced at two-foot (2') intervals, and soil samples collected from the floors of the trenches were field-screened with a photo-ionization detector (PID) and/or chloride test kit. Selected soil samples were submitted to Xenco Laboratories in Odessa, Texas, for confirmatory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), total petroleum hydrocarbons (TPH), and/or chloride using Environmental Protection Agency (EPA) Methods SW 846-8021b, SW 846-8015M, and 300.1, respectively.

Laboratory analytical results indicate vertical delineation in the pastureland adjacent to the site has been achieved. Vertical delineation was not achieved in delineation trenches TT-2, TT-3, TT-5, TT-6, and TT-8. Additional vertical delineation is required in the areas represented by these trenches.

Locations of the delineation trenches are depicted in Attachment #2, "Proposed Soil Boring Location Map". Laboratory analytical results are summarized in Attachment #3. Field-screen results are provided in Attachment #4.

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#### Environmental Site Summary & Drilling Work Plan

#### Proposed Activities:

A total of four (4) soil borings will be advanced inside the fence surrounding the Former Maljamar Station site to further investigate the vertical extent of impacted soil. Locations of the soil borings are depicted in Attachment #2, "Proposed Soil Locations Map".

- Soil boring SB-1 will be advanced in an area characterized by a historic pit, represented by trenches TT-2, TT-3 & TT-5.
- Soil boring SB-2 will be advanced in the area represented by trench TT-6.
- Soil boring SB-3 will be advanced in the area represented by trench TT-8.
- Soil boring SB-4 will be advanced in the footprint of the earthen berm which had surrounded the on-site storage tanks.

The soil borings will be advanced at five-foot (5') intervals until PID readings and visual and olfactory senses suggest contaminants of concern are below the recommended remediation action levels established for the site by the NMOCD. Selected soil samples will be submitted to Xenco Laboratories for confirmatory analysis of BTEX, TPH & chloride concentrations.

Upon receipt of laboratory analytical results, a "Remediation Summary & Site Closure Proposal" (Work Plan) will be developed, outlining an appropriate soil remediation strategy for the site. The Work Plan will be submitted to both the NMOCD and BLM for review and approval by November 15, 2014.

#### Proposed Soil Boring/Monitor Well Locations:

32.719492	_N	-103.828405	w
32.719126	_N	-103.828415	w
32.719213	N	-103.828041	w
32.719323	_N	-103.828197	w

#### Name/Description:

	-	•	
PSE	-1 (Proposed	Soil Boring	SB-1)
PSE	-2 (Proposed	Soil Boring	SB-2)
PSE	-3 (Proposed	Soil Boring	SB-3)
PSE	-4 (Proposed	Soil Boring	SB-4)

#### Attachments:

Attachment #1: Site Location Map

Attachment #2: Proposed Soil Boring Location Map

Attachment #3: Concentrations of Benzene, BTEX, TPH & Chloride in Soil

Attachment #4: Field-Test Results

Attachment #5: Laboratory Analytical Report

Ben J. Arguijo Project Manager





#### ATTACHMENT #3 CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

#### PLAINS MARKETING, LP FORMER MALJAMAR STATION EDDY COUNTY, NEW MEXICO PLAINS SRS: HD0-95-61 FORMER MALJAMAR STATION

						METHOD: E	PA SW 846-	8021B, 503	0		ME	THOD: 801	5M	TDU	300.1
SAMPLE LOCATION	DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	M.P XYLENES (mg/Kg)	O- XYLENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	CHLORIDE (mg/Kg)
TT-1 @ 4'	4'	9/30/2014	In-Situ	-	-	-	-	-	-	-	353	4,660	737	5,750	121
TT-1 @ 8'	8'	9/30/2014	In-Situ	<0.0011	< 0.0023	<0.0011	< 0.0023	<0.0011	<0.0023	<0.0023	<16.9	48.3	<16.9	48.3	178
TT-2 @ 2'	2'	9/30/2014	In-Situ	-	-	-	-	-	-	-	1,870	29,200	6,070	37,100	81.0
TT-2 @ 4'	4'	9/30/2014	In-Situ	-	-	-	-	-	-	-	579	5,330	743	6,650	16.3
TT-2 @ 6'	6'	9/30/2014	In-Situ	<0.0012	0.0033	0.0737	0.103	0.0431	0.146	0.223	714	4,380	503	5,600	8.17
TT-3 @ 4'	4'	9/30/2014	In-Situ	-	-	-	-	-	-	-	2,910	14,700	1,880	19,500	937
TT-3 @ 8'	8'	9/30/2014	In-Situ	-	-	-	-	-	-	-	1,500	8,120	963	10,600	354
TT-4 @ 2'	2'	9/30/2014	In-Situ	-	-	-	-	-	-	-	19.5	526	127	673	84.7
TT-4 @ 6'	6'	9/30/2014	In-Situ	<0.0012	<0.0024	0.0036	0.0045	<0.0012	0.0045	0.0080	48.2	880	134	1,060	67.3
	-														
TT-5 @ 4'	4'	9/30/2014	In-Situ	-	-	-	-	-	-	-	949	7,060	900	8,910	3.03
TT-5 @ 8'	8'	9/30/2014	In-Situ	-	-	-	-	-	-	-	910	4,810	497	6,220	48.6
TT-5 @ 14'	14'	9/30/2014	In-Situ	-	-	-	-	-	-	-	1,660	8,080	896	10,600	74.2
	-														
TT-6 @ 4'	4'	9/30/2014	In-Situ	-	-	-	-	-	-	-	4,090	20,400	2,500	27,000	3.98
TT-6 @ 7'	7'	9/30/2014	In-Situ	-	-	-	-	-	-	-	4,590	18,200	2,250	25,000	14.0
TT-7 @ 2'	2'	9/30/2014	In-Situ	-	-	-	-	-	-	-	47.4	626	88.7	762	<2.17
TT-7 @ 6'	6'	9/30/2014	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<0.0024	<17.9	30.4	<17.9	30.4	6.62
TT-8 @ 4'	4'	9/30/2014	In-Situ	-	-	-	-	-	-	-	1,460	8,340	1,190	11,000	<2.30
TT-8 @ 9.5'	9.5'	9/30/2014	In-Situ	-	-	-	-	-	-	-	2,030	9,240	1,180	12,500	22.5
TT-9 @ 2'	2'	9/30/2014	In-Situ	-	-	-	-	-	-	-	<16.0	<16.0	<16.0	<16.0	<2.13
TT-9 @ 4'	4'	9/30/2014	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<0.0022	<16.6	<16.6	<16.6	<16.6	<2.21
11-10@4'	4'	9/30/2014	In-Situ	-	-	-	-	-	-	-	4,070	17,300	2,440	23,800	<2.34
TT-10 @ 8'	8'	9/30/2014	In-Situ	<0.0012	< 0.0024	0.0044	0.012	<0.0012	0.012	0.0164	159	3,350	708	4,220	<2.40
	a.										10.0		47.0	10-	
-11 @ 2'	2'	9/30/2014	In-Situ	-	-	-	-	-	-	-	<18.3	119	47.9	167	<2.44
-11 @ 4'	4'	9/30/2014	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<0.0024	<18.0	547	142	689	<2.38
	d Demonstration														
NINIOCD Recommende	a Remediat	tion Action L	evei	10						50				5,000	1,000

- = Not analyzed.

#### ATTACHMENT #4 FIELD-TEST RESULTS

#### PLAINS MARKETING, LP FORMER MALJAMAR STATION EDDY COUNTY, NEW MEXICO PLAINS SRS: HD0-95-61 FORMER MALJAMAR STATION

		SAMPLE	Field S	Screens
TRENCH	DATE	DEPTH (bgs)	PID READING	CHLORIDE
TT-1	9/30/2014	2'	1,250	-
	"	4'	1,252	352
		8'	31.2	276
TT-2	"	2'	200	-
		4'	1,464	-
		6'	1,800	<124
TT-3	"	4'	2,343	-
		6'	2,361	-
	=	8'	2,466	432
TT-4	"	2'	11.7	180
	"	4'	4.7	-
	-	6'	208	<124
TT-5	"	4'	1,130	-
	-	6'	1,960	-
	-	8'	1,905	-
		10'	1,578	-
	=	14'	2,339	<124
TT-6	"	4'	1,694	-
		6'	1,529	-
	-	7'	1,884	<124
TT-7	"	2'	524	-
	-	4'	813	-
		6'	1.6	<124
TT-8	"	2'	1.5	-
		4'	1,335	-
	=	6'	1,814	-
		8'	1,736	-
	=	9.5'	1,871	<124
TT-9	"	2'	0.5	-
	"	4'	1.1	<124
TT-10	"	2'	72.5	-
	"	4'	1,654	-
	"	6'	946	-
	"	8'	100	<124
TT-11	"	2'	19.9	-
	"	4'	19.6	<124

# Attachment #5 Laboratory Analytical Report

# Analytical Report 494567

# for PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo

Formar Maljamar Station

#### SRS HD0-95-61

#### 14-OCT-14

Collected By: Client





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054) New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

> Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)



14-OCT-14



Reference: XENCO Report No(s): 494567 Formar Maljamar Station Project Address: NM

#### Ben Arguijo:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 494567. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 494567 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Ams Boah

 

 Kelsey Brooks

 Project Manager

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Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



# Sample Cross Reference 494567



# PLAINS ALL AMERICAN EH&S, Midland, TX

Formar Maljamar Station

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TT-1 @ 4'	S	09-30-14 10:05	- 4 In	494567-001
TT-1 @ 8'	S	09-30-14 10:10	- 8 In	494567-002
TT-2 @ 2'	S	09-30-14 10:30	- 2 In	494567-003
TT-2 @ 4'	S	09-30-14 10:35	- 4 In	494567-004
TT-2 @ 6'	S	09-30-14 10:40	- 6 In	494567-005
TT-3 @ 4'	S	09-30-14 11:00	- 4 In	494567-006
TT-3 @ 8'	S	09-30-14 11:10	- 8 In	494567-007
TT-4 @ 2'	S	09-30-14 11:30	- 2 In	494567-008
TT-4 @ 6'	S	09-30-14 11:40	- 6 In	494567-009
TT-5 @ 4'	S	09-30-14 12:30	- 4 In	494567-010
TT-5 @ 8'	S	09-30-14 12:40	- 8 In	494567-011
TT-5 @ 14'	S	09-30-14 12:55	- 14 In	494567-012
TT-6 @ 4'	S	09-30-14 13:15	- 4 In	494567-013
TT-6 @ 7'	S	09-30-14 13:25	- 7 In	494567-014
TT-7 @ 2'	S	09-30-14 13:50	- 2 In	494567-015
TT-7 @ 6'	S	09-30-14 14:00	- 6 In	494567-016
TT-8 @ 4'	S	09-30-14 14:30	- 4 In	494567-017
TT-8 @ 9.5'	S	09-30-14 14:45	- 9.5 In	494567-018
TT-9 @ 2'	S	09-30-14 15:05	- 2 In	494567-019
TT-9 @ 4'	S	09-30-14 15:10	- 4 In	494567-020
TT-10 @ 4'	S	09-30-14 15:25	- 4 In	494567-021
TT-10 @ 8'	S	09-30-14 15:40	- 8 In	494567-022
TT-11 @ 2'	S	09-30-14 16:05	- 2 In	494567-023
TT-11 @ 4'	S	09-30-14 16:10	- 4 In	494567-024



# CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S Project Name: Formar Maljamar Station

Project ID: SRS HD0-95-61 Work Order Number(s): 494567 
 Report Date:
 14-OCT-14

 Date Received:
 10/03/2014

Sample receipt non conformances and comments:

TT-3 @8' and TT-5 @14' rush for TPH

Sample receipt non conformances and comments per sample:

None



Project Location: NM

# Certificate of Analysis Summary 494567

PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Formar Maljamar Station** 



Date Received in Lab: Fri Oct-03-14 12:30 pm Report Date: 14-OCT-14

oject Location. Trivi								Project Mai	nager:	Kelsey Brook	S		
	Lab Id:	494567-0	001	494567-0	02	494567-0	003	494567-0	004	494567-0	005	494567-0	)06
A marken in Democrate I	Field Id:	TT-1 @	4'	TT-1 @ 3	8'	TT-2 @	2'	TT-2 @	4'	TT-2 @	6'	TT-3 @	4'
Analysis Kequestea	Depth:	4 In		8 In		2 In		4 In		6 In		4 In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	,	SOIL	
	Sampled:	Sep-30-14	10:05	Sep-30-14 1	0:10	Sep-30-14	10:30	Sep-30-14	10:35	Sep-30-14	10:40	Sep-30-14	11:00
BTEX by EPA 8021B	Extracted:			Oct-07-14 0	9:00					Oct-07-14	09:00		
	Analyzed:			Oct-07-14 2	1:03					Oct-07-14	21:19		
	Units/RL:			mg/kg	RL					mg/kg	RL		
Benzene	- I			ND	0.00113					ND	0.00116		
Toluene				ND	0.00225					0.00333	0.00231		
Ethylbenzene				ND	0.00113					0.0737	0.00116		
m_p-Xylenes				ND	0.00225					0.103	0.00231		
o-Xylene				ND	0.00113					0.0431	0.00116		
Total Xylenes				ND	0.00113					0.146	0.00116		
Total BTEX				ND	0.00113					0.223	0.00116		
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-10-14	13:00	Oct-10-14 1	3:00	Oct-10-14 1	13:00	Oct-10-14 1	13:00	Oct-10-14	13:00	Oct-10-14	13:00
SUB: TX104704215	Analyzed:	Oct-11-14	11:45	Oct-11-14 1	1:58	Oct-11-14 1	12:11	Oct-11-14 1	12:25	Oct-11-14	12:38	Oct-11-14	12:51
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		121	10.7	178	22.6	81.0	11.8	16.3	2.26	8.17	2.31	937	107
Percent Moisture	Extracted:												
	Analyzed:	Oct-06-14	16:00	Oct-06-14 1	6:00	Oct-06-14 1	16:00	Oct-06-14 1	16:00	Oct-06-14	16:00	Oct-06-14	16:00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		7.17	1.00	11.6	1.00	15.4	1.00	11.8	1.00	13.7	1.00	6.79	1.00
TPH By SW8015 Mod	Extracted:	Oct-03-14	15:00	Oct-03-14 1	5:00	Oct-03-14 1	15:00	Oct-03-14 1	15:00	Oct-03-14	15:00	Oct-03-14	15:00
	Analyzed:	Oct-03-14	18:51	Oct-03-14 1	9:18	Oct-03-14 2	20:35	Oct-03-14 2	20:59	Oct-03-14	21:23	Oct-03-14 2	21:47
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		353	80.5	ND	16.9	1870	354	579	84.8	714	17.4	2910	161
C12-C28 Diesel Range Hydrocarbons		4660	80.5	48.3	16.9	29200	354	5330	84.8	4380	17.4	14700	161
C28-C35 Oil Range Hydrocarbons		737	80.5	ND	16.9	6070	354	743	84.8	503	17.4	1880	161
Total TPH		5750	80.5	48.3	16.9	37100	354	6650	84.8	5600	17.4	19500	161

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

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Kelsey Brooks Project Manager

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Project Location: NM

# Certificate of Analysis Summary 494567

PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Formar Maljamar Station** 



Date Received in Lab: Fri Oct-03-14 12:30 pm Report Date: 14-OCT-14

oject Location: NM								Ducient Mer		Valaay Drook			
	T-LIJ.	404567.0	07	404567.0	00	40.45.67	000	Project Mai	ager:	Keisey Brooks	5	404567.0	10
	Lab Ia:	494567-0	07	494567-0	08	494567-	009	494567-0	10	494567-0	11	494567-0	)12 
Analysis Requested	Field Id:	TT-3 @	8'	TT-4 @	2'	TT-4 @	6'	TT-5 @	4'	TT-5 @	8'	TT-5 @	14'
	Depth:	8 In		2 In		6 In		4 In		8 In		14 In	
	Matrix:	SOIL		SOIL		SOIL	.	SOIL		SOIL		SOIL	
	Sampled:	Sep-30-14	1:10	Sep-30-14 1	1:30	Sep-30-14	11:40	Sep-30-14 1	2:30	Sep-30-14 1	2:40	Sep-30-14	12:55
BTEX by EPA 8021B	Extracted:					Oct-07-14	09:00						
	Analyzed:					Oct-07-14	21:36						
	Units/RL:					mg/kg	RL						
Benzene						ND	0.00120						
Toluene						ND	0.00239						
Ethylbenzene						0.00357	0.00120						
m_p-Xylenes						0.00445	0.00239						
o-Xylene						ND	0.00120						
Total Xylenes						0.00445	0.00120						
Total BTEX						0.00802	0.00120						
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-10-14	13:00	Oct-10-14 1	3:00	Oct-13-14	11:40	Oct-10-14 1	3:00	Oct-10-14 1	3:00	Oct-13-14	11:40
SUB: TX104704215	Analyzed:	Oct-11-14	13:43	Oct-11-14 1	4:36	Oct-13-14	13:33	Oct-11-14 1	5:15	Oct-11-14 1	5:02	Oct-13-14	13:46
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		354	46.3	84.7	44.8	67.3	4.79	3.03	2.13	48.6	2.63	74.2	11.9
<b>Percent Moisture</b>	Extracted:												
	Analyzed:	Oct-03-14	13:30	Oct-06-14 1	6:00	Oct-06-14	16:00	Oct-06-14 1	6:00	Oct-06-14 1	6:00	Oct-03-14	13:30
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		14.3	1.00	11.8	1.00	16.6	1.00	6.34	1.00	24.5	1.00	16.4	1.00
TPH By SW8015 Mod	Extracted:	Oct-03-14	15:00	Oct-03-14 1	5:00	Oct-03-14	15:00	Oct-03-14 1	5:00	Oct-03-14 1	5:00	Oct-03-14	15:00
	Analyzed:	Oct-03-14 2	22:13	Oct-03-14 2	2:41	Oct-03-14	23:08	Oct-03-14 2	23:35	Oct-04-14 0	0:59	Oct-04-14 (	01:27
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		1500	175	19.5	17.0	48.2	17.9	949	79.9	910	19.8	1660	179
C12-C28 Diesel Range Hydrocarbons		8120	175	526	17.0	880	17.9	7060	79.9	4810	19.8	8080	179
C28-C35 Oil Range Hydrocarbons		963	175	127	17.0	134	17.9	900	79.9	497	19.8	896	179
Total TPH		10600	175	673	17.0	1060	17.9	8910	79.9	6220	19.8	10600	179

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Kelsey Brooks Project Manager

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Project Location: NM

# Certificate of Analysis Summary 494567

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Formar Maljamar Station



Date Received in Lab: Fri Oct-03-14 12:30 pm Report Date: 14-OCT-14

Toject Location: NW								Project Mai	nager:	Kelsey Brook	5		
	Lab Id:	494567-0	)13	494567-0	14	494567-0	15	494567-0	16	494567-0	17	494567-0	)18
An alugia Deguested	Field Id:	TT-6 @	4'	TT-6@	7'	TT-7@	2'	TT-7@	6'	TT-8 @	4'	TT-8 @ 9	9.5'
Anaiysis Kequesiea	Depth:	4 In		7 In		2 In		6 In		4 In		9.5 In	L
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-30-14	13:15	Sep-30-14 1	3:25	Sep-30-14 1	3:50	Sep-30-14 1	14:00	Sep-30-14	14:30	Sep-30-14	14:45
BTEX by EPA 8021B	Extracted:							Oct-07-14 (	)9:00				
-	Analyzed:							Oct-07-14 2	21:52				
	Units/RL:							mg/kg	RL				
Benzene	-							ND	0.00119				
Toluene								ND	0.00237				
Ethylbenzene								ND	0.00119				
m_p-Xylenes								ND	0.00237				
o-Xylene								ND	0.00119				
Total Xylenes								ND	0.00119				
Total BTEX								ND	0.00119				
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-10-14	13:00	Oct-10-14 1	3:00	Oct-10-14 1	3:00	Oct-10-14 1	3:00	Oct-10-14	3:00	Oct-10-14	13:00
SUB: TX104704215	Analyzed:	Oct-11-14	19:50	Oct-11-14 2	3:20	Oct-11-14 1	6:33	Oct-11-14 1	6:47	Oct-11-14	7:00	Oct-11-14	17:13
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3.98	2.65	14.0	2.18	ND	2.17	6.62	2.38	ND	2.30	22.5	3.93
Percent Moisture	Extracted:												
	Analyzed:	Oct-06-14	16:00	Oct-06-14 1	6:00	Oct-06-14 1	6:00	Oct-06-14 1	6:00	Oct-06-14	6:00	Oct-06-14	16:00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		24.9	1.00	8.55	1.00	8.44	1.00	16.2	1.00	13.3	1.00	23.6	1.00
TPH By SW8015 Mod	Extracted:	Oct-03-14	15:00	Oct-03-14 1	5:00	Oct-03-14 1	5:00	Oct-03-14 1	5:00	Oct-03-14	5:00	Oct-03-14	15:00
	Analyzed:	Oct-04-14 (	01:51	Oct-04-14 0	02:20	Oct-04-14 0	02:48	Oct-06-14 1	0:07	Oct-04-14 (	)3:43	Oct-04-14 (	04:12
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		4090	398	4590	327	47.4	16.4	ND	17.9	1460	173	2030	196
C12-C28 Diesel Range Hydrocarbons		20400	398	18200	327	626	16.4	30.4	17.9	8340	173	9240	196
C28-C35 Oil Range Hydrocarbons		2500	398	2250	327	88.7	16.4	ND	17.9	1190	173	1180	196
Total TPH		27000	398	25000	327	762	16.4	30.4	17.9	11000	173	12500	196

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Kelsey Brooks Project Manager



Project Location: NM

# Certificate of Analysis Summary 494567

PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Formar Maljamar Station** 



Date Received in Lab: Fri Oct-03-14 12:30 pm Report Date: 14-OCT-14

oject Location. This								Project Mar	nager:	Kelsey Brook	s		
	Lab Id:	494567-0	19	494567-0′	20	494567-0	21	494567-0	)22	494567-0	)23	494567-	-024
Amahaia Dogwootod	Field Id:	TT-9@	2'	TT-9 @ 4	4'	TT-10 @	4'	TT-10 @	8'	TT-11 @	2'	TT-11 @	<i>@</i> 4'
Ahaiysis Kequesiea	Depth:	2 In	ļ	4 In		4 In	ļ	8 In		2 In		4 In	1
	Matrix:	SOIL	ļ	SOIL		SOIL	ļ	SOIL		SOIL		SOII	Ĺ.
	Sampled:	Sep-30-14 1	15:05	Sep-30-14 1	5:10	Sep-30-14 1	15:25	Sep-30-14 1	15:40	Sep-30-14	16:05	Sep-30-14	16:10
BTEX by EPA 8021B	Extracted:			Oct-07-14 0	9:00			Oct-07-14 (	09:00			Oct-07-14	09:00
-	Analyzed:			Oct-07-14 2	.2:09	1	ļ	Oct-07-14 2	22:25	1		Oct-07-14	22:41
	Units/RL:		1	mg/kg	RL	I	J	mg/kg	RL	1		mg/kg	RL
Benzene				ND	0.00111			ND	0.00120	. <u> </u>		ND	0.00120
Toluene				ND	0.00222			ND	0.00241	. <u></u>		ND	0.00240
Ethylbenzene				ND	0.00111			0.00436	0.00120	. <u></u>		ND	0.00120
m_p-Xylenes				ND	0.00222			0.0120	0.00241	. <u></u>		ND	0.00240
o-Xylene				ND	0.00111			ND	0.00120			ND	0.00120
Total Xylenes				ND	0.00111			0.0120	0.00120	I		ND	0.00120
Total BTEX				ND	0.00111			0.0164	0.00120	. <u> </u>		ND	0.00120
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-10-14 1	13:00	Oct-10-14 1	3:00	Oct-10-14 1	3:00	Oct-10-14 1	13:00	Oct-10-14 1	13:00	Oct-10-14	13:00
SUB: TX104704215	Analyzed:	Oct-11-14 1	17:26	Oct-11-14 1	7:39	Oct-11-14 1	7:52	Oct-11-14 1	18:05	Oct-11-14 !	18:45	Oct-11-14	20:29
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		ND	2.13	ND	2.21	ND	2.34	ND	2.40	ND	2.44	ND	2.38
Percent Moisture	Extracted:						ļ						
	Analyzed:	Oct-06-14 1	16:00	Oct-06-14 1	6:00	Oct-06-14 1	6:00	Oct-06-14 1	16:00	Oct-06-14 1	16:00	Oct-06-14	16:00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		6.37	1.00	9.99	1.00	14.8	1.00	17.0	1.00	18.0	1.00	16.8	1.00
TPH By SW8015 Mod	Extracted:	Oct-03-14 1	15:00	Oct-03-14 1	5:00	Oct-03-14 1	5:00	Oct-03-14 1	15:00	Oct-03-14 !	15:00	Oct-03-14	15:00
	Analyzed:	Oct-04-14 (	)4:40	Oct-04-14 0	5:07	Oct-04-14 1	4:13	Oct-04-14 1	14:38	Oct-04-14 1	15:03	Oct-04-14	15:28
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.0	ND	16.6	4070	175	159	90.1	ND	18.3	ND	18.0
C12-C28 Diesel Range Hydrocarbons		ND	16.0	ND	16.6	17300	175	3350	90.1	119	18.3	547	18.0
C28-C35 Oil Range Hydrocarbons		ND	16.0	ND	16.6	2440	175	708	90.1	47.9	18.3	142	18.0
Total TPH		ND	16.0	ND	16.6	23800	175	4220	90.1	167	18.3	689	18.0

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# **Flagging Criteria**



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit
- MDL Method Detection LimitSDL Sample Detection LimitLOD Limit of DetectionPQL Practical Quantitation LimitMQL Method Quantitation LimitLOQ Limit of Quantitation
- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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# **Project Name: Formar Maljamar Station**

Work Or Lab Batch	r <b>ders :</b> 49456 #: 952189	57, Sample: 494567-001 / SMP	Batel	Project ID: h: 1 Matrix	SRS HD0-9 Soil	5-61	
Units:	mg/kg	Date Analyzed: 10/03/14 18:51	SU	RROGATE R	ECOVERY	STUDY	
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		128	99.6	129	70-135	
o-Terpheny	1		61.8	49.8	124	70-135	
Lab Batch	<b>#:</b> 952189	Sample: 494567-002 / SMP	Batel	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 10/03/14 19:18	SU	RROGATE R	ECOVERY	STUDY	
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooc	tane		112	99.7	112	70-135	
o-Terpheny	1		58.8	49.9	118	70-135	
Lab Batch	#: 952189	Sample: 494567-003 / SMP	Batcl	h: 1 Matrix	: Soil	1	
Units:	mg/kg	Date Analyzed: 10/03/14 20:35	SU	RROGATE R	ECOVERY	STUDY	
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		112	99.8	112	70-135	
o-Terpheny	1		55.9	49.9	112	70-135	
Lab Batch	#: 952189	Sample: 494567-004 / SMP	Batel	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 10/03/14 20:59	SU	RROGATE R	ECOVERY	STUDY	
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooc	tane		123	99.7	123	70-135	
o-Terpheny	1		63.0	49.9	126	70-135	
Lab Batch	#: 952189	Sample: 494567-005 / SMP	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 10/03/14 21:23	SU	RROGATE R	ECOVERY	STUDY	
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane	Analytes	130	100	130	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# **Project Name: Formar Maljamar Station**

Work Or Lab Batch	r <b>ders :</b> 49456 #: 952189	57, Sample: 494567-006 / SMP	Project ID: SRS HD0-95-61 Batch: 1 Matrix: Soil							
Units:	mg/kg	Date Analyzed: 10/03/14 21:47	SU	RROGATE R	ECOVERY	STUDY				
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chlorooct	tane		123	99.9	123	70-135				
o-Terpheny	1		58.2	50.0	116	70-135				
Lab Batch	#: 952189	Sample: 494567-007 / SMP	Batch: 1 Matrix: Soil							
Units:	mg/kg	Date Analyzed: 10/03/14 22:13	SU	RROGATE R	ECOVERY	STUDY				
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	tane		114	99.9	114	70-135				
o-Terpheny	1		45.5	50.0	91	70-135				
Lab Batch	#: 952189	Sample: 494567-008 / SMP	Batcl	h: 1 Matrix:	Soil					
Units:	mg/kg	Date Analyzed: 10/03/14 22:41	SU	RROGATE R	ECOVERY	STUDY				
	TPH By SW8015 Mod			True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes								
1-Chlorooct	tane		112	99.7	112	70-135				
o-Terpheny	1		60.3	49.9	121	70-135				
Lab Batch	#: 952189	Sample: 494567-0097 SMP	Batch: 1 Matrix: Soil							
Units:	mg/kg	<b>Date Analyzed:</b> 10/03/14 23:08	SU	RROGATE RI	ECOVERY	STUDY				
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	tane		118	99.8	118	70-135				
o-Terpheny	1		64.2	49.9	129	70-135				
Lab Batch	<b>#:</b> 952189	Sample: 494567-010 / SMP	Batcl	h: 1 Matrix:	Soil					
Units:	mg/kg	Date Analyzed: 10/03/14 23:35	SU	RROGATE R	ECOVERYS	STUDY				
	TPH By SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	tane		123	99.8	123	70-135				
				1	1					

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# **Project Name: Formar Maljamar Station**

Work Or Lab Batch	r <b>ders :</b> 49456 #: 952189	57, Sample: 494567-011 / SMP	Project ID: SRS HD0-95-61 Batch: 1 Matrix: Soil							
Units:	mg/kg	<b>Date Analyzed:</b> 10/04/14 00:59	SU	RROGATE R	ECOVERY S	STUDY				
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chlorooct	tane		129	99.8	129	70-135				
o-Terpheny	1		64.6	49.9	129	70-135				
Lab Batch	#: 952189	Sample: 494567-012 / SMP	Batch: 1 Matrix: Soil							
Units:	mg/kg	Date Analyzed: 10/04/14 01:27	SU	RROGATE R	ECOVERY S	STUDY				
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	tane		115	100	115	70-135				
o-Terpheny	1		64.5	50.0	129	70-135				
Lab Batch	#: 952189	Sample: 494567-013 / SMP	Batcl	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 10/04/14 01:51	SU	RROGATE R	ECOVERY	STUDY				
	TPH By SW8015 Mod			True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes								
1-Chlorooct	tane		118	99.6	118	70-135				
o-Terpheny	1		39.2	49.8	79	70-135				
Lab Batch	#: 952189	Sample: 494567-014 / SMP	Batch	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 10/04/14 02:20	SU	RROGATE R	ECOVERY S	STUDY				
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	tane		125	99.6	126	70-135				
o-Terpheny	1		62.0	49.8	124	70-135				
Lab Batch	#: 952189	Sample: 494567-015 / SMP	Batcl	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 10/04/14 02:48	SU	RROGATE R	ECOVERY S	STUDY				
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	tane		126	99.8	126	70-135				
o Ternhenv	erphenyl			10.0	100					

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# **Project Name: Formar Maljamar Station**

Work Or Lab Batch	r <b>ders :</b> 49456 #: 952189	57, Sample: 494567-017 / SMP	<ul> <li>Project ID: SRS HD0-95-61</li> <li>Batch: 1 Matrix: Soil</li> </ul>							
Units:	mg/kg	Date Analyzed: 10/04/14 03:43	SU	RROGATE R	ECOVERYS	STUDY				
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chlorooct	tane		120	99.8	120	70-135				
o-Terpheny	1		63.0	49.9	126	70-135				
Lab Batch	#: 952189	Sample: 494567-018 / SMP	Batch: 1 Matrix: Soil							
Units:	mg/kg	Date Analyzed: 10/04/14 04:12	SU	RROGATE R	ECOVERYS	STUDY				
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	tane		125	99.7	125	70-135				
o-Terpheny	ſ		63.7	49.9	128	70-135				
Lab Batch	#: 952189	Sample: 494567-019 / SMP	Batcl	h: 1 Matrix:	Soil					
Units:	mg/kg	Date Analyzed: 10/04/14 04:40	SU	RROGATE R	ECOVERY	STUDY				
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chlorooct	tane		114	99.9	114	70-135				
o-Terpheny	1		59.7	50.0	119	70-135				
Lab Batch	#: 952189	Sample: 494567-020 / SMP	Batel	h: 1 Matrix:	Soil					
Units:	mg/kg	Date Analyzed: 10/04/14 05:07	SU	RROGATE R	ECOVERY	STUDY				
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	tane		108	99.9	108	70-135				
o-Terpheny	1		57.3	50.0	115	70-135				
Lab Batch	#: 952196	Sample: 494567-021 / SMP	Batcl	h: 1 Matrix:	Soil					
Units:	mg/kg	Date Analyzed: 10/04/14 14:13	SU	RROGATE R	ECOVERYS	STUDY				
	TPH By SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	tane		129	99.7	129	70-135				
o-Terpheny	1		(17	40.0	120	50.125				

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# **Project Name: Formar Maljamar Station**

Work Or Lab Batch	rders : 49456 #: 952196	57, Sample: 494567-022 / SMP	Project ID: SRS HD0-95-61 Batch: 1 Matrix: Soil							
Units:	mg/kg	<b>Date Analyzed:</b> 10/04/14 14:38	SU	RROGATE R	ECOVERY S	STUDY				
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chlorooc	tane		129	99.7	129	70-135				
o-Terpheny	1		59.7	49.9	120	70-135				
Lab Batch	#: 952196	Sample: 494567-023 / SMP	Batch: 1 Matrix: Soil							
Units:	mg/kg	Date Analyzed: 10/04/14 15:03	SU	RROGATE R	ECOVERY S	STUDY				
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooc	tane	Anaryus	123	100	123	70-135				
o-Terpheny	/1		63.8	50.0	128	70-135				
Lab Batch	#: 952196	Sample: 494567-024 / SMP	Batc	h: 1 Matrix	: Soil	10 100				
Units:	mg/kg	Date Analyzed: 10/04/14 15:28	SU	RROGATE R	ECOVERY	STUDY				
	TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chlorooc	tane		118	99.9	118	70-135				
o-Terpheny	/1		63.8	50.0	128	70-135				
Lab Batch	#: 952189	Sample: 494567-016 / SMP	Batel	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 10/06/14 10:07	SU	RROGATE R	ECOVERY S	STUDY				
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooc	tane		109	99.9	109	70-135				
o-Terpheny	rl		56.8	50.0	114	70-135				
Lab Batch	#: 952300	Sample: 494567-002 / SMP	Batcl	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 10/07/14 21:03	SU	RROGATE R	ECOVERY S	STUDY				
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluor	obenzene		0.0320	0.0300	107	80-120				
4-Bromoflu	orohonzono		0.0200	0.0200	102	80.120				

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# **Project Name: Formar Maljamar Station**

Work Or Lab Batch	rders : 49456 #: 952300	57, Sample: 494567-005 / SMP	Project ID: SRS HD0-95-61 Batch: 1 Matrix: Soil						
Units:	mg/kg	Date Analyzed: 10/07/14 21:19	SUI	RROGATE R	ECOVERY	STUDY			
	BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluor	obenzene		0.0277	0.0300	92	80-120			
4-Bromoflu	orobenzene		0.0319	0.0300	106	80-120			
Lab Batch	#: 952300	Sample: 494567-009 / SMP	Batch	: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 10/07/14 21:36	SUI	RROGATE R	ECOVERY	STUDY			
	BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1 4-Difluor	obenzene	Anarytes	0.0305	0.0300	102	80.120			
4-Bromoflu	orobenzene		0.0336	0.0300	102	80-120			
Lab Batch	#• 952300	Sample: 494567-016 / SMP	Batch	• 1 Matrix	· Soil	00-120			
Units.	mg/kg	<b>Date Analyzed:</b> $10/07/14.21.52$	CLU						
omus.	ing/kg	Date Analyzed: 10/07/14/21.52	501	KRUGATE R	ECOVERY	STUDY			
	BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1 4-Difluor	obenzene		0.0317	0.0300	106	80-120			
4-Bromoflu	lorobenzene		0.0312	0.0300	100	80-120			
Lab Batch	#: 952300	Sample: 494567-020 / SMP	Batch	: 1 Matrix	Soil	00 120			
Units:	mg/kg	<b>Date Analyzed:</b> 10/07/14 22:09	SUDDOCATE DECOVEDV STUDV						
	6 6		501	KKOGATE K		51001			
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	obenzene		0.0323	0.0300	108	80-120			
4-Bromoflu	iorobenzene		0.0314	0.0300	105	80-120			
Lab Batch	#: 952300	Sample: 494567-022 / SMP	Batch	: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 10/07/14 22:25	SUI	RROGATE R	ECOVERY	STUDY			
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	obenzene		0.0301	0.0300	100	80-120			
4-Bromoflu	iorobenzene		0.0325	0.0300	108	80-120			

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# **Project Name: Formar Maljamar Station**

Work Or Lab Batch	rders: 49456 n#: 952300	57, Sample: 494567-024 / SMP	Project ID:SRS HD0-95-61MPBatch:1Matrix:Soil								
Units:	mg/kg	Date Analyzed: 10/07/14 22:41	SUI	RROGATE R	ECOVERY	STUDY					
	BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
		Analytes			[D]						
1,4-Difluor	robenzene		0.0311	0.0300	104	80-120					
4-Bromoflu	uorobenzene		0.0302	0.0300	101	80-120					
Lab Batch	<b>h #:</b> 952189	Sample: 662476-1-BLK / B	BLK Batch: 1 Matrix: Solid								
Units:	mg/kg	Date Analyzed: 10/03/14 17:37	SUI	RROGATE R	ECOVERY	STUDY					
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooc	ctane		117	100	117	70-135					
o-Terpheny	yl		60.3	50.0	121	70-135					
Lab Batch	<b>h #:</b> 952196	Sample: 662478-1-BLK / B	LK Batch	: 1 Matrix	: Solid						
Units:	mg/kg	Date Analyzed: 10/04/14 06:31	SUI	RROGATE R	ECOVERY	STUDY					
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
		Analytes		100		70.407					
1-Chlorooc	ctane		116	100	116	70-135					
0-1 erpneny	y1		61.8	50.0	124	70-135					
	1#: 952300	Sample: 002535-1-BLK / B	LK Batch		: 50110						
Units:	mg/kg	Date Analyzed: 10/07/14 10:47	SUI	RROGATE R	ECOVERY	STUDY					
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1,4-Difluor	robenzene		0.0297	0.0300	99	80-120					
4-Bromoflu	uorobenzene		0.0264	0.0300	88	80-120					
Lab Batch	n#: 952189	Sample: 662476-1-BKS / B	KS Batch	: 1 Matrix	: Solid						
Units:	mg/kg	Date Analyzed: 10/03/14 18:02	SUI	RROGATE R	ECOVERY	STUDY					
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooc	ctane		125	100	125	70-135					
o-Terpheny	yl		63.5	50.0	127	70-135					

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# **Project Name: Formar Maljamar Station**

Work Or	rders: 49456	57, Samula: 662478 1 BKS / B	Project ID: SRS HD0-95-61							
Units:	mg/kg	<b>Date Analyzed:</b> 10/04/14 06:59		DDOCATE D	FCOVEDV	STUDV				
			50			Control				
	TPH	By SW8015 Mod	Found [A]	Amount [B]	Recovery %R	Limits %R	Flags			
		Analytes			[D]					
1-Chlorooc	tane		115	100	115	70-135				
o-Terpheny	<b>1</b>		59.9	50.0	120	70-135				
Lab Batch	#: 952300	Sample: 662535-1-BKS / B	KS Batel	h: 1 Matrix	: Solid					
Units:	mg/kg	Date Analyzed: 10/07/14 11:04	SU	RROGATE R	ECOVERY S	STUDY				
	BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
1.1.5:0		Analytes								
1,4-Difluor	obenzene		0.0298	0.0300	99	80-120				
4-Bromoflu	lorobenzene		0.0295	0.0300	98	80-120				
Lab Batch	#: 952189	<b>Sample:</b> 662476-1-BSD7B	SD Batcl	h: 1 Matrix	Solid					
Units:	mg/kg	<b>Date Analyzed:</b> 10/03/14 18:26	SU	RROGATE R	ECOVERY S	STUDY				
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chlorooc	tane		127	100	127	70-135				
o-Terpheny	rl		63.9	50.0	128	70-135				
Lab Batch	#: 952196	Sample: 662478-1-BSD / B	SD Batel	h: 1 Matrix	: Solid					
Units:	mg/kg	Date Analyzed: 10/04/14 07:24	SURROGATE RECOVERY STUDY							
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooc	tane		123	100	123	70-135				
o-Terpheny	rl		64.2	50.0	128	70-135				
Lab Batch	#: 952300	Sample: 662535-1-BSD / B	SD Batc	h: 1 Matrix	Solid					
Units:	mg/kg	Date Analyzed: 10/07/14 11:20	SU	RROGATE R	ECOVERY S	STUDY				
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluor	obenzene		0.0300	0.0300	100	80-120				
4-Bromoflu	orobenzene		0.0283	0.0300	94	80-120				

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# **Project Name: Formar Maljamar Station**

Work Or	rders: 49456	57, Sample: 494567.002 S / MS	Project ID: SRS HD0-95-61								
Units:	mg/kg	<b>Date Analyzed:</b> 10/03/14 20:07	S Date	BROCATE P	FCOVERV	STUDV					
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
		Analytes			[D]						
1-Chlorooc	tane		121	99.6	121	70-135					
o-Terpheny	1		57.4 49.8 115 70-135								
Lab Batch	#: 952196	Sample: 494551-001 S / MS	5 Batch	h: 1 Matrix	: Soil						
Units:	mg/kg	Date Analyzed: 10/04/14 08:21	SURROGATE RECOVERY STUDY								
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooc	tane	·	116	99.7	116	70-135					
o-Terpheny	ſ		60.0	49.9	120	70-135					
Lab Batch	#: 952300	Sample: 494551-001 S / MS	S Batcl	h: 1 Matrix:	: Soil						
Units:	mg/kg	Date Analyzed: 10/07/14 11:36	SU	RROGATE R	ECOVERYS	STUDY					
	BTEX by EPA 8021B			True Amount [B]	Recovery %R	Control Limits %R	Flags				
		Analytes									
1,4-Difluor	obenzene		0.0351	0.0300	117	80-120					
4-Bromoflu	lorobenzene		0.0346	0.0300	115	80-120					
Lab Batch	#: 952196	Sample: 494551-001 SD / N	MSD Batch: 1 Matrix: Soil								
Units:	mg/kg	Date Analyzed: 10/04/14 08:46	SU	RROGATE R	ECOVERY	STUDY					
	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooc	tane		127	99.7	127	70-135					
o-Terpheny	1		64.3	49.9	129	70-135					
Lab Batch	#: 952300	Sample: 494551-001 SD / M	ASD Batcl	h: 1 Matrix	Soil						
Units:	mg/kg	Date Analyzed: 10/07/14 11:53	SU	RROGATE R	ECOVERY	STUDY					
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1,4-Difluor	,4-Difluorobenzene			0.0300	112	80-120					
4-Bromoflu	orobanzana		0.0225	0.0200	112	00.100					

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



# **Blank Spike Recovery**



# Project Name: Formar Maljamar Station

Work Order #:	'ork Order #: 494567				Project ID	SRS	S HD0-95-61			
Lab Batch #:	952736	S	ample: 662809-	1-BKS	Matrix	: Solid				
Date Analyzed:	10/11/2014 <b>I</b>	Date Pre	pared: 10/10/20	014	Analyst: BHRE					
<b>Reporting Units:</b>	mg/kg	B	atch #: 1	BLANK /B	LANK SPI	KE REC	OVERY S	STUDY		
Inorga	nic Anions by EPA 300/300.1		Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags		
	Analytes				[C]	[D]				
Chloride			<2.00	20.0	19.7	99	80-120			
Lab Batch #:	952738	Sample: 662811-1-BKS			Matrix	x: Solid				
Date Analyzed:	10/11/2014 <b>I</b>	Date Pre	pared: 10/10/20	014	Analyst	: BHRE				
<b>Reporting Units:</b>	mg/kg	B	Batch #: 1 BLANK /BLANK SPIKE RECO				OVERY S	STUDY		
Inorga	nic Anions by EPA 300/300.1		Blank Result	Spike Added	Blank Spike Bogult	Blank Spike	Control Limits	Flags		
	Analytes		[A]	[D]	[C]	50 K [D]	70 K			
Chloride			<2.00	20.0	19.6	98	80-120			
Lab Batch #:	952870	S	ample: 662875-	1-BKS	Matrix	: Solid				
Date Analyzed:	10/13/2014 I	Date Pre	pared: 10/13/2	014	Analyst	: BHRE				
<b>Reporting Units:</b>	mg/kg	B	atch #: 1	BLANK /B	LANK SPI	KE REC	OVERY S	STUDY		
Inorga	nic Anions by EPA 300/300.1		Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags		
	Analytes				[C]	[D]				
Chloride			<10.0	100	98.3	98	80-120			



# **BS / BSD Recoveries**



#### **Project Name: Formar Maljamar Station**

Work Order #: 4945	567							Proj	ject ID:	SRS HD0-9	95-61	
Analyst: ARM		Da	ate Prepareo	<b>d:</b> 10/07/20	14	<b>Date Analyzed:</b> 10/07/2014						
Lab Batch ID: 952300	Sample: 662535-1-E	BKS	KSBatch #: 1Matrix: Solid									
Units: mg/kg		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
BTEX	by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene		<0.00100	0.100	0.0912	91	0.100	0.0897	90	2	70-130	35	
Toluene		<0.00200	0.100	0.0963	96	0.100	0.0947	95	2	70-130	35	
Ethylbenzene		<0.00100	0.100	0.0999	100	0.100	0.0978	98	2	71-129	35	
m_p-Xylenes		< 0.00200	0.200	0.205	103	0.200	0.200	100	2	70-135	35	
o-Xylene		< 0.00100	0.100	0.0956	96	0.100	0.0933	93	2	71-133	35	
Analyst: ARM		D	ate Prepareo	<b>d:</b> 10/03/20	14			Date A	nalyzed:	10/03/2014		
Lab Batch ID: 952189	Sample: 662476-1-E	BKS	Batch	<b>#:</b> 1					Matrix: S	Solid		
Units: mg/kg			BLANK	/BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	DY	
TPH B Analytes	y SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Rat	nge Hydrocarbons	<15.0	1000	967	97	1000	978	98	1	70-135	35	
C12-C28 Diesel Rang	ge Hydrocarbons	<15.0	1000	1130	113	1000	1180	118	4	70-135	35	

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



# **BS / BSD Recoveries**



#### **Project Name:** Formar Maljamar Station

Work Order #:         494567           Project ID:         SRS HD0-95-61												
Analyst:	ARM	<b>Date Prepared:</b> 10/03/2014					<b>Date Analyzed:</b> 10/04/2014					
Lab Batch ID:	<b>Sample:</b> 662478-1-E	KS	<b>Batch #:</b> 1 Matrix: Solid									
Units:	mg/kg		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY						ΟY			
Angle	TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analy	tes		(=)		- J	[2]						
C6-C12 Ga	asoline Range Hydrocarbons	<15.0	1000	921	92	1000	998	100	8	70-135	35	
C12-C28 I	Diesel Range Hydrocarbons	<15.0	1000	1200	120	1000	1160	116	3	70-135	35	

Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries **Project Name: Formar Maljamar Station**



Work Order #: 494567 Lab Batch #: 952189 10/02/2014 Anolar а. D (

C12-C28 Diesel Range Hydrocarbons

Project ID: SRS HD0-95-61

114

70-135

1340

Date Analyzed QC- Sample ID	: 10/03/2014 <b>:</b> 494567-002 S	Date Prepar Batcl	e Prepared:         10/03/2014         Analyst:         ARM           Batch #:         1         Matrix:         Soil						
Reporting Unit	s: mg/kg		MAT	TRIX / MA	TRIX SPIKE	RECO	VERY STU	DY	
	TPH by SW8015 Mod Analytes	P Si F	nrent mple esult [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag	
C6-C12 Gasolin	e Range Hydrocarbons	<	16.9	1130	1050	93	70-135		

48.3

1130

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference [E] = 200\*(C-A)/(C+B)All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



## Form 3 - MS / MSD Recoveries

#### **Project Name: Formar Maljamar Station**



<b>Work Order # :</b> 494	567						Project II	D: SRS H	D0-95-61			
Lab Batch ID: 952	300 Q	C- Sample ID:	494551	-001 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed: 10/0	07/2014 <b>I</b>	Date Prepared:	10/07/2	014	An	alyst: A	ARM					
Reporting Units: mg/	kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY S	STUDY		
BTE	X by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]		[D]	[E]		[G]				
Benzene		<0.00107	0.107	0.0932	87	0.108	0.0840	78	10	70-130	35	
Toluene		<0.00215	0.107	0.0902	84	0.108	0.0840	78	7	70-130	35	
Ethylbenzene		< 0.00107	0.107	0.0830	78	0.108	0.0794	74	4	71-129	35	
m_p-Xylenes		< 0.00215	0.215	0.169	79	0.215	0.162	75	4	70-135	35	
o-Xylene		<0.00107	0.107	0.0804	75	0.108	0.0770	71	4	71-133	35	
Lab Batch ID: 952	736 Q	C- Sample ID:	494567	-005 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed: 10/1	11/2014 <b>I</b>	Date Prepared:	10/10/2	014	An	alyst: E	BHRE					
Date Analyzed:10/2Reporting Units:mg/2	11/2014 <b>I</b> /kg	Date Prepared:	10/10/2 M	014 A <b>TRIX SPIK</b> I	An E / MAT	alyst: E RIX SPI	BHRE <b>KE DUPLICA</b>	TE REC	OVERYS	STUDY		
Date Analyzed:   10/1     Reporting Units:   mg/     Inorganic A	11/2014 I kg nions by EPA 300/300.1	Date Prepared: Parent Sample Pocult	10/10/2 M Spike	014 ATRIX SPIK Spiked Sample Result	An E / MAT Spiked Sample	RIX SPI	BHRE KE DUPLICA Duplicate Spiked Sample	TE REC	OVERY S	STUDY Control Limits	Control Limits	Flag
Date Analyzed:   10/2     Reporting Units:   mg/     Inorganic A	11/2014 I <sup>(kg)</sup> nions by EPA 300/300.1 Analytes	Date Prepared: Parent Sample Result [A]	10/10/2 M Spike Added [B]	014 <b>ATRIX SPIK</b> <b>Spiked Sample</b> <b>Result</b> [C]	An E / MAT Spiked Sample %R [D]	Aalyst: E RIX SPI Spike Added [E]	3HRE KE DUPLICA Duplicate Spiked Sample Result [F]	TE REC Spiked Dup. %R [G]	OVERY S RPD %	STUDY Control Limits %R	Control Limits %RPD	Flag
Date Analyzed: 10/7 Reporting Units: mg/ Inorganic A Chloride	11/2014 I <sup>7kg</sup> nions by EPA 300/300.1 Analytes	Parent Sample Result [A] 8.17	10/10/2 M Spike Added [B] 23.1	014 ATRIX SPIK Spiked Sample Result [C] 31.3	An E / MAT Spiked Sample %R [D] 100	alyst: E RIX SPI Spike Added [E] 23.1	BHRE KE DUPLICA Duplicate Spiked Sample Result [F] 31.2	TE RECO Spiked Dup. %R [G] 100	OVERY S RPD %	STUDY Control Limits %R 80-120	Control Limits %RPD 20	Flag
Date Analyzed:       10/2         Reporting Units:       mg/2         Inorganic A         Chloride         Lab Batch ID:       952	11/2014 I kg nions by EPA 300/300.1 Analytes 736 Q	Parent Sample Result [A] 8.17 C- Sample ID:	10/10/2 M Spike Added [B] 23.1 494567	014 <b>ATRIX SPIK</b> <b>Spiked Sample</b> <b>Result</b> [C] 31.3 -010 S	An E / MAT Spiked Sample %R [D] 100 Ba	RIX SPI Spike Added [E] 23.1 tch #:	3HRE KE DUPLICA Duplicate Spiked Sample Result [F] 31.2 1 Matrix	TE REC Spiked Dup. %R [G] 100 x: Soil	OVERY S RPD %	STUDY Control Limits %R 80-120	Control Limits %RPD	Flag
Date Analyzed:10/7Reporting Units:mg/Inorganic AChlorideLab Batch ID:952Date Analyzed:10/7	11/2014     I       'kg	Parent Sample Result [A] 8.17 C- Sample ID: Date Prepared:	10/10/20 M Spike Added [B] 23.1 494567- 10/10/20	014 ATRIX SPIK Spiked Sample Result [C] 31.3 010 S 014	An E / MAT Spiked Sample %R [D] 100 Ba An	RIX SPI Spike Added [E] 23.1 tch #: nalyst: F	HRE KE DUPLICA Duplicate Spiked Sample Result [F] 31.2 1 Matrix BHRE	TE REC Spiked Dup. %R [G] 100 x: Soil	OVERY S RPD %	STUDY Control Limits %R 80-120	Control Limits %RPD 20	Flag
Date Analyzed:10/7Reporting Units:mg/7Inorganic AChlorideLab Batch ID:952Date Analyzed:10/7Reporting Units:mg/7	11/2014     I       kg	Parent Sample Result [A] 8.17 C- Sample ID: Date Prepared:	10/10/2 M Spike Added [B] 23.1 494567 10/10/2 M	014 ATRIX SPIK Spiked Sample Result [C] 31.3 010 S 014 ATRIX SPIK	An E / MAT Spiked Sample %R [D] 100 Ba An E / MAT	RIX SPI Spike Added [E] 23.1 .tch #: nalyst: E RIX SPI	3HRE KE DUPLICA Duplicate Spiked Sample Result [F] 31.2 1 Matrix 3HRE KE DUPLICA	TE REC Spiked Dup. %R [G] 100 k: Soil TE REC	OVERY S RPD % 0 OVERY S	STUDY Control Limits %R 80-120 STUDY	Control Limits %RPD 20	Flag
Date Analyzed:       10/7         Reporting Units:       mg/         Inorganic A         Chloride         Lab Batch ID:       952         Date Analyzed:       10/7         Reporting Units:       mg/         Inorganic A         Inorganic A	11/2014     I       kg     Image: Constraint of the system of the syste	Date Prepared: Parent Sample Result [A] 8.17 C- Sample ID: Date Prepared: Parent Sample Result [A]	10/10/2 <sup>1</sup> M Spike Added [B] 23.1 494567 10/10/2 <sup>1</sup> M Spike Added	014 ATRIX SPIKI Spiked Sample Result [C] 31.3 010 S 014 ATRIX SPIKI Spiked Sample Result [C]	An E / MAT Spiked Sample %R [D] 100 Ba An E / MAT Spiked Sample %R	Adlyst: F RIX SPI Spike Added [E] 23.1 tch #: alyst: F RIX SPI Spike Added	3HRE KE DUPLICA Duplicate Spiked Sample Result [F] 31.2 1 Matrix 3HRE KE DUPLICA Duplicate Spiked Sample Result [F]	TE REC Spiked Dup. %R [G] 100 x: Soil TE REC Spiked Dup. %R [C]	OVERY S RPD % 0 OVERY S RPD %	STUDY Control Limits %R 80-120 STUDY Control Limits %R	Control Limits %RPD 20 20 Control Limits %RPD	Flag Flag
Date Analyzed:       10/7         Reporting Units:       mg/         Inorganic A         Chloride         Lab Batch ID:       952         Date Analyzed:       10/7         Reporting Units:       mg/         Inorganic A         Inorganic A         Inorganic A	11/2014     I       'kg	Parent Sample Result [A] 8.17 C- Sample ID: Date Prepared: Parent Sample Result [A]	10/10/2 M Spike Added [B] 23.1 494567 10/10/2 M Spike Added [B]	014 ATRIX SPIK Spiked Sample Result [C] 31.3 010 S 014 ATRIX SPIK Spiked Sample Result [C]	An E / MAT Spiked Sample %R [D] 100 Ba An E / MAT Spiked Sample %R [D]	RIX SPI Spike Added [E] 23.1 tch #: nalyst: E RIX SPI Spike Added [E]	HRE KE DUPLICA Duplicate Spiked Sample Result [F] 31.2 1 Matrix BHRE KE DUPLICA Duplicate Spiked Sample Result [F]	TE REC Spiked Dup. %R [G] 100 k: Soil TE REC Spiked Dup. %R [G]	OVERY S RPD % 0 OVERY S RPD %	STUDY Control Limits %R 80-120 STUDY Control Limits %R	Control Limits %RPD 20 Control Limits %RPD	Flag

Matrix Spike Percent Recovery  $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$  Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



## Form 3 - MS / MSD Recoveries

#### **Project Name: Formar Maljamar Station**



Work Order # :	494567						Project II	D: SRS H	D0-95-61			
Lab Batch ID:	952738	QC- Sample ID:	494567	-013 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	10/11/2014	Date Prepared:	10/10/2	014	Ar	nalyst: I	BHRE					
<b>Reporting Units:</b>	mg/kg		Ν	IATRIX SPIK	E / MAT	'RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Inorgan	nic Anions by EPA 300/300.1	Parent Sample Posult	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]		%R [D]	E]	Kesuit [F]	%K [G]	<b>7</b> 0	%0K	%KPD	
Chloride		3.98	26.5	29.9	98	26.5	29.9	98	0	80-120	20	
Lab Batch ID:	952738	QC- Sample ID:	494567	-014 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	10/11/2014	Date Prepared:	10/10/2	014	Ar	nalyst: H	BHRE					
<b>Reporting Units:</b>	mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Inorgan	nic Anions by EPA 300/300.1	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	[B]	[C]	/0K [D]	[E]	Kesun [F]	[G]	70	/0K	70KI D	
Chloride		14.0	21.8	36.3	102	21.8	36.5	103	1	80-120	20	
Lab Batch ID:	952870	QC- Sample ID:	494630	-001 S	Ba	tch #:	1 Matrix	<b>k:</b> Sludge	•		-	<u> </u>
Date Analyzed:	10/13/2014	Date Prepared:	10/13/2	014	Ar	nalyst: H	BHRE					
<b>Reporting Units:</b>	mg/kg		Ν	IATRIX SPIK	E / MAT	'RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Inorgan	nic Anions by EPA 300/300.1	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample Bosult [F]	Spiked Dup. % P	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	[B]		[D]	[E]	Acsunt [F]	[G]	70	70K	70 KI D	
Chloride		47.0	27.9	79.5	116	27.9	79.3	116	0	80-120	20	

Matrix Spike Percent Recovery  $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD =  $200^{\circ}|(C-F)/(C+F)|$  Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



## Form 3 - MS / MSD Recoveries

#### **Project Name: Formar Maljamar Station**



Work Order # :	494567						Project II	D: SRS H	D0-95-61					
Lab Batch ID:	952870	QC- Sample ID:	495045-0	002 S	Ba	tch #:	1 Matri	x: Soil						
Date Analyzed:	10/14/2014	Date Prepared:	10/13/20	14	Ar	alyst: ]	BHRE							
<b>Reporting Units:</b>	mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
Inorga	nic Anions by EPA 300/300.1	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag		
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Kesult [F]	%R [G]	%	%R	%RPD			
Chloride		<9.96	99.6	98.6	99	99.6	98.8	99	0	80-120	20			
Lab Batch ID:	952196	QC- Sample ID:	494551-0	001 S	Ba	tch #:	1 Matri	x: Soil						
Date Analyzed:	10/04/2014	Date Prepared:	10/03/20	14	Ar	halyst:	ARM							
<b>Reporting Units:</b>	mg/kg		M	ATRIX SPIK	E / MAT	'RIX SPI	IKE DUPLICA	TE REC	OVERY	STUDY				
,	ГРН By SW8015 Mod	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample Begult [F]	Spiked Dup.	RPD	Control Limits	Control Limits	Flag		
	Analytes	[A]	[B]	[C]	/0K [D]	[E]	Kesuit [F]	[G]	70	70K	70KI D			
C6-C12 Gasolin	e Range Hydrocarbons	<16.1	1070	1040	97	1070	1260	118	19	70-135	35			
C12-C28 Diesel	Range Hydrocarbons	622	1070	1820	112	1070	1910	120	5	70-135	35			

Matrix Spike Percent Recovery [D] = 100\*(C-A)/BRelative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery  $[G] = 100^{*}(F-A)/E$ 





### **Project Name: Formar Maljamar Station**

Work Order #: 494567					
Lab Batch #: 952117			Project I	D: SRS HD	0-95-61
<b>Date Analyzed:</b> 10/03/2014 13:30 <b>Date I</b>	Prepared: 10/03/2014	4 Ana	lyst:WRU		
QC- Sample ID: 494529-001 D	<b>Batch #:</b> 1	Mat	t <b>rix:</b> Soil		
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	15.9	12.2	26	20	F
Lab Batch #: 952117					
<b>Date Analyzed:</b> 10/03/2014 13:30 <b>Date I</b>	Prepared: 10/03/2014	4 Ana	lyst:WRU		
QC- Sample ID: 494543-004 D	<b>Batch #:</b> 1	Mat	t <b>rix:</b> Soil		
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[D]			
Percent Moisture	3.14	18.7	142	20	F
Lab Batch #: 952276 Date Analyzed: 10/06/2014 16:00 Date I	Prepared: 10/06/2014	4 Ana	lyst: WRU		
<b>QC- Sample ID:</b> 494567-001 D	<b>Batch #:</b> 1	Mat	t <b>rix:</b> Soil		
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.17	7.66	7	20	
Lab Batch #: 952276 Date Analyzed: 10/06/2014 16:00 Date I	Prepared: 10/06/2014	4 Ana	lyst: WRU		
QC- Sample ID: 49456/-013 D			DUDI 10	ATE DEC	OVEDV
Reporting Units: %	SAMPLE	SAMPLE			OVERY
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	24.9	13.0	63	20	F

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) |

All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit





### **Project Name: Formar Maljamar Station**

Work Order #: 494567

Lab Batch #: 952278 Date Analyzed: 10/06/2014 16:00 QC- Sample ID: 494567-021 D	<b>Date Prepared:</b> 10/06/20 <b>Batch #:</b> 1	14 Ana Ma	<b>Project I</b> lyst: WRU trix: Soil	D: SRS HD	0-95-61
<b>Reporting Units:</b> %	SAMPLE	C / SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte	Parent Sampl Result [A]	e Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	14.8	14.7	1	20	

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

	Houston: 4143 Greenb ircool-c	riar Dr. Stafford,	CHAI TX 77477 (28	N OF	C Ode	<b>UST</b> ssa: 126	FOD 500 Wes	t I-20 East	CO Odessa,	<b>RD</b> TX 79765	(432)563	-1800	LAB Field I	Pa W.O billable	age <u>1</u> #: Hrs:	_of_3_ _4	945	67	* Container Type Codes VA Vial Amber ES Encore Sampler VC Vial Clear TS TerraCore Sampler VP Vial Pre-preserved AC Air Canister GA Glass Amber TB Tedlar Bag GC Glass Clear ZB Zip Lock Bag			
Comp	any: Basin Environmental Service Te	chnologies, LL	с	Phone:	(575	)396-23	378	TAT W	ork Da	ys = D	Need	results	oy:			Tir	ne:		PC Plastic Clear Other			
Addre	ss: 3100 Plains Hwy.			Fax:	(575	)396-14	429	(	Std (5	-7D) 5H	Irs 1D	2D 3D	4D 5D	7D 10	D 14D	Other			Size(s): 202, 402, 802, 1602, 3202 , 1Gal			
City:	Lovington		State: NM	Zip:	8826	50		L		/	AN	ALYS	ES RE	QUE	STED				** Preservative Type Codes			
PM/At	tn: Ben Arguijo		Email:	bjarguijo	@basii	nenv.cor	m	Cont Type * VC	GC	GC							1		A. None E. HCL I. Ice			
Projec	t ID: Former Maljamar Station SRS HD0-95-61			PO#:	PAA-	C. Brya	nt	Pres Type**	- 1	Í									B. HNO <sub>3</sub> F. MeOH J. MCAA H <sub>2</sub> SO <sub>4</sub> G. Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K. ZnAc&NaOH D. NaOH H. NaHSO <sub>4</sub> L Asbc Acid&NaOH			
nvoice	e To: Camille Bryant Plains All Ar	merican		Quote #	÷			60										PAH biv if				
Sampl Ben J.	er Name: Arguijo	Circle One I Semi-Annua	Event: Daily I Annual	Weekly N/A	Mont	hly Qu	artely	ample is by 82	Н	loride								d Sample Run	GW Ground Water S Soil/Sediment/Solid WW Waste Water W Wipe DW Drinking Water A Air			
ample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (YIN)	Total # of containers	Ex Volatile		ð								Hol (CALL_)	SW Surface Water O Oil OW Ocean/Sea Water T Tissue PL Product-Liquid U Urine PS Product-Solid B Blood SL Sludge			
ŝ								# Cont	Lab On	ly:									REMARKS			
_1	TT-1 @ 4'	9/30/2014	1005	S			1		Х	х						E.			Hold for BTEX			
_2	TT-1 @ 8'	9/30/2014	1010	S			1		Х	Х					1000	1						
_3	TT-2 @ 2'	9/30/2014	1030	S			1		Х	x	1	át.										
_4	TT-2 @ 4'	9/30/2014	1035	S			1		Х	x		1.000										
_5	TT-2 @ 6'	9/30/2014	1040	s			1		х	X						1						
_6	TT-3 @ 4'	9/30/2014	1100	S			1		Х	x												
_7	TT-3 @ 8'	9/30/2014	1110	S	. U		1		Х	x									Ruch TPH MB			
_8	TT-4 @ 2'	9/30/2014	1130	s			1		х	x									VIUSIT III IIV			
_9	TT-4 @ 6'	9/30/2014	1140	S			1		Х	X	1 ***					1						
_0	TT-5 @ 4'	9/30/2014	1230	S			1		х	X			11									
	Reg. Program / Clean-up Std	STATE	for Certs &	Regs	QA	VQC L	evel 8	Certifica	tion		EDDs		COC &	Labels	(	Coolers	Temp '	C	Lab Use Only YES NO N/A			
ther:	TRRP DW NPDES LPST DryCln	FL TX GA N AL NM Othe	C SC NJ PA r:	OK LA	1 2 NELAC	3 4 C DoD-E	CLP A	FCEE QAP ther:	P	ADaPT XLS Othe	SEDD	ERPIMS	Match I Absent	ncomplete Unclear	1	2	30	-1	Non-Conformances found?			
1	Relinquished by		Affiliat	ion	101	Date		Time		R	eceived	by	Affili	ation	Da	ate	T	me	Received on Wet Ice?			
2	MAG		Disne	nv:	10/.	2/19		0955	) (	ceru	2 the	esende	SMG	5	10-2	)-1M	9:	57	Received with proper preservatives?			
3	1						-												VOCs rec'd w/o headspace?			
4							-		-	Ri	nel	unit.	m	10 -	10-2	.14	11.	20	pH verified-acceptable, excl VOCs?			
201	aboratories: Hobbs 575 302 755	0 Dollas 214	002 0200	Housto	- 20	4 9 4 9	4000	0.1	120 50	1	1 vou	Noin	Ner	100	103	IT	It.	50				

Exa Laboratories: Hobbs 5/5-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330 C. FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

C.O.C. Serial #

Final 1.000

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Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full. Revision Date: Nov 12, 2009

Lab	Houston: 4143 Greent roool-c	oriar Dr. Stafford,	CHAI TX 77477 (28	N OF	Ode:	<b>US</b> ssa: 12	600 We	DY RE	CO Odessa,	<b>RD</b> TX 79765	(432)563	1800	LAB Field	Pa W.O i	uge_2_ # : Hrs :	_of_3_ 	1949	567	* Container Type Codes VA Vial Amber ES Encore Sampler VC Vial Clear TS TerraCore Sampler VP Vial Pre-preserved AC Air Canister GA Glass Amber TB Tedlar Bag GC Glass Clear ZB Zip Lock Bag			
Compar	y: Basin Environmental Service Te	echnologies, LL	С	Phone:	(575	)396-2	378	TAT W	ork Da	ys=D	Need	results I	ov:	onicipio	110.	Tir	ne:	_	PA Plastic Amber PC Plastic Clear PC Plastic Clear Other			
Address	: 3100 Plains Hwy.			Fax:	(575	)396-1-	429	1	Std (5	-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other								Size(s): 20z, 40z, 80z, 160z, 320z , 1Gal				
City:	Lovington		State: NM	Zip:	8826	60		1		/	AN	ALYS	ES RE	QUE	STED	ounor		_	** Preservative Type Codes			
PM/Attn	Ben Arguijo		Email:	bjarguijo	@basi	nenv.co	m	Cont Type *	GC	GC						1			A. None E. HCL   Ice			
Project I	D: Former Maljamar Station SRS HD0-95-61			PO#:	PAA-	C. Brya	int	Pres Type**	i	I									B. HNO <sub>3</sub> F. MeOH J. MCAA H <sub>2</sub> SO <sub>4</sub> G. Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K. ZnAc&NaOH D. NaOH H. NaHSO <sub>4</sub> L Asbc Acid&NaOH			
nvoice <sup>-</sup>	ro: Camille Bryant Plains All A	merican		Quote #	:			60										PAH IV If				
Sampler Ben J. A	Name: rguljo	Circle One Semi-Annua	Event: Daily I Annual	Weekly N/A	Mont	hly Qu	uartely	ample is by 82	ГРН	loride								d Sample Run PH Or	GW Ground Water S Soil/Sediment/Solid WW Waste Water W Wipe DW Drinking Water A Air			
ample #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field Filtered	Integrity OK (Y/N)	Total # of containers	Ex Volatile		ç								Hold (CALL) on Highest 7	SW Surface Water O Oil OW Ocean/Sea Water T Tissue PL Product-Liquid U Urine PS Product-Solid B Blood SL Sludge			
S								# Cont	Lab Onl	γ: Γ									REMARKS			
_1	TT-5 @ 8'	9/30/2014	1240	S			1		Х	X				1.1					Hold for BTEX			
_2	TT-5 @ 14'	9/30/2014	1255	S			1		х	X	_				1	1			Ruch TPH 2/1B			
_3	TT-6 @ 4'	9/30/2014	1315	S			1		х	X							1					
_4	TT-6 @ 7'	9/30/2014	1325	S			1		Х	х												
_5	TT-7 @ 2'	9/30/2014	1350	S			1		х	X												
_6	TT-7 @ 6'	9/30/2014	1400	S			1		х	x		-										
_7	TT-8 @ 4'	9/30/2014	1430	S			1		х	x												
_8	TT-8 @ 9.5'	9/30/2014	1445	S			1		X	X	100											
_9	TT-9 @ 2'	9/30/2014	1505	S			1		Х	Х							-	-				
_0	TT-9 @ 4'	9/30/2014	1510	S			1		Х	Х												
R	eg. Program / Clean-up Std	STATE	for Certs &	Regs	Q	AVQC I	_evel	& Certifica	ition		EDDs		COC &	Labels	(	Coolers	Temp °	0	Lab Use Only YES NO N/A			
CTLs TF	RP DW NPDES LPST DryCln	FL TX GA N AL NM Othe	C SC NJ PA	OK LA	1 2 NELAC	3 4 C DoD-I	CLP .	AFCEE QAP Other:	P	ADaPT XLS Othe	SEDD E	RPIMS	Match I Absent	ncomplete Unclear	1	2	30	-1	Non-Conformances found?			
	Relinquished by		Affiliat	ion		Date		Time		Re	eceived I	by	Affili	ation	Da	ate	Ti	me	Received on Wet Ice?			
2	MA		Dismi	nv.	19	2/19	1	095	5	terl	crhe	sever	M	S	10-0	2-14	9:5.	5	Labeled with proper preservatives?			
3	///					_	-				_								VOCs rec'd w/o headspace?			
4							-	-		DA	111	-	1.0		1	1.1	1	-	pH verified-acceptable, excl VOCs?			
8410	aratariaa, Habba 575 200 755	0. D. II. 014	000 0000	11		1 0 10	1000			12K	Ulum	m	Xen	CO,	10-3	14	12:	50				

B&A Laboratories: Hobbs 5/5-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330 FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

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Lab	Houston: 4143 Green iroool-c	briar Dr. Stafford,	CHAI TX 77477 (28	N OF	C Ode	US Issa: 12	<b>TO</b>	DY RE	CO Odessa,	RD TX 79765	(432)563	-1800	LAB Field	Pa W.O i billable	ige_3_ # : Hrs :	_of_3_ _4	- 94 S	567	* Container Typ VA Vial Amber ES I VC Vial Clear TS VP Vial Pre-preserved AC GA Glass Amber TB GC Glass Clear ZB PA Plastic Amber PC	De Codes Encore Sampler TerraCore Sampler Air Canister Tedlar Bag Zip Lock Bag Plactie Close
Compar	ny: Basin Environmental Service T	echnologies, LL	с	Phone:	(575	5)396-2	2378	TAT W	ork Da	ys = D	Need	results	by:			Tir	ne.		PC Plastic Clear Other	Plastic Clear
Address	<sup>s:</sup> 3100 Plains Hwy.			Fax:	(575	5)396-1	429	1 /	Std (5	-7D) 5f	Irs 1D	2D 3D	4D 5D	7D 10	D 14D	Other			Size(s): 20z, 40z, 80z, 160z, 320z	z , 1Gal
City:	Lovington		State: NM	Zip:	8826	60		C		~	A	ALYS	ES RE	EQUES	STED	ound		_	** Preservative T	vpe Codes
PM/Attn	Ben Arguijo		Email:	bjarguijo	@basi	nenv.co	om	Cont Type *	GC	GC				1		1			A None E HCL L K	
Project	D: Former Maljamar Station SRS HD0-95-61			PO#:	PAA	-C. Brya	ant	Pres Type**	1	1									- B. HNO <sub>3</sub> F. MeOH J. M H <sub>2</sub> SO <sub>4</sub> G. Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K. ZnA D. NaOH H. NaHSO <sub>4</sub> L A	/CAA /CAA c&NaOH Asbc Acid&NaOH
nvoice '	To: Camille Bryant Plains All A	merican		Quote #				00				5						AH M M	0	
Sampler Ben J. A	Name: rguijo	Circle One Semi-Annua	Event: Daily I Annual	Weekly N/A	Mont	hly Q	uartely	ample is by 82(	Hd	loride	1							I Sample Run F	GW Ground Water S Sc WW Waste Water W W DW Drinking Water A Ai	Codes pil/Sediment/Solid ipe
imple #	Sample ID	Collect Date	Collect Time	Matrix Code ^	Field	Integrity OK (V/N)	Total # of containers	Ex Volatile		ບົ								Hold CALL	SW Surface Water O Oil OW Ocean/Sea Water T Tis PL Product-Liquid U Ur PS Product-Solid B Bk	i ssue rine Dod
ŝ								# Cont	Lab Onl	y:	<u></u>	11.1		-	-	-			REMAR	(S
_1	TT-10 @ 4'	9/30/2014	1525	S			1		х	X									Hold for B	TEX
_2	TT-10 @ 8'	9/30/2014	1540	S			1		х	X				1.2.7						
_3	TT-11 @ 2'	9/30/2014	1605	S			1		X	X										
_4	TT-11 @ 4'	9/30/2014	1610	S	210	1	1		х	X					1.77					_
_5										1.00										
_6										14						11				
7		11	100	2.00												1				
8																				
9				12.0							-									-
0																	-			
R	eg. Program / Clean-up Std	STATE	for Certs &	Regs	Q	A/QC	Level	& Certifica	ition		EDDs	1	COC 8	Labels	C	Coolers	Temp '	°C	Lab Use Only	YES NO N/A
TLs TF her:	RRP DW NPDES LPST DryCln	FL TX GA N AL NM Othe	C SC NJ PA r:	OK LA	1 2 NELAC	3 4 C DoD-	CLP	AFCEE QAP Other:	P	ADaPT	SEDD	ERPIMS	Match I Absent	Incomplete	1	2	3	).[	Non-Conformances found?	
	Relinquished by		Affiliat	ion		Date		Time		R	eceived	by	Affili	ation	Da	ate	T	ime	Samples intact upon arrival? Received on Wet Ice?	
2	1/11		thsing	ni.	10,	12/1	4	095	5	YON	CIR	esend	M	S	10-2	7-14	9:	55	Labeled with proper preservatives? Received within holding time?	===
2					1		-				_	_			-				Custody seals intact? VOCs rec'd w/o headspace?	===
4										Rin	nD	1	14		10 -	2 1.1	0		Proper containers used? pH verified-acceptable, excl VOCs? Received on time to most HTs?	====
0 A 1 -	hereferies, U.S.L. 575 200 75		000 0000							pll	Ruch	van	Ken	20	10-5	-14	12:	30	reserved on time to meet H18?	

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Work Order #: 494567

## **XENCO** Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S Date/ Time Received: 10/03/2014 12:30:00 PM

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

**Temperature Measuring device used :** 

		Comments	
#1 *Temperature of cooler(s)?		.7	
#2 *Shipping container in good condition?	?	Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping con	tainer/ cooler?	N/A	
#5 Custody Seals intact on sample bottle	s?	N/A	
#6 *Custody Seals Signed and dated?		N/A	
#7 *Chain of Custody present?		Yes	
#8 Sample instructions complete on Chai	n of Custody?	Yes	
#9 Any missing/extra samples?		No	
#10 Chain of Custody signed when reling	uished/ received?	Yes	
#11 Chain of Custody agrees with sample	e label(s)?	Yes	
#12 Container label(s) legible and intact?		Yes	
#13 Sample matrix/ properties agree with	Chain of Custody?	Yes	
#14 Samples in proper container/ bottle?		Yes	
#15 Samples properly preserved?		Yes	
#16 Sample container(s) intact?		Yes	
#17 Sufficient sample amount for indicate	ed test(s)?	Yes	
#18 All samples received within hold time	?	Yes	
#19 Subcontract of sample(s)?		Yes	
#20 VOC samples have zero headspace	(less than 1/4 inch bubble)?	N/A	
#21 <2 for all samples preserved with HN	03,HCL, H2SO4?	N/A	
#22 >10 for all samples preserved with N	aAsO2+NaOH, ZnAc+NaOH?	N/A	

#### \* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Date: 10/03/2014

Checklist completed by: Marshoah Kelsey Brooks Checklist reviewed by: Marshoah Kelsey Brooks

Date: 10/03/2014