

1R - 2637

REPORTS

DATE:

10-22-13

Hansen, Edward J., EMNRD

From: Ben J. Arguijo <bjarguijo@basinenv.com>
Sent: Tuesday, October 22, 2013 4:59 PM
To: Hansen, Edward J., EMNRD
Subject: Re: Investigation Workplan and Extension Request Approval (1R-2637) - Plains Chevron Grayburg 6-inch Sec. 6 (Historical) Release Site
Attachments: ChevronGrayburgSec6_DelineationDrilling.pdf;
ChevronGrayburg_SoilChemistryTable.pdf; Rpt_WO_469898_Ver_1_000.pdf

Mr. Hansen,

I am writing to request an extension for submittal of the Groundwater Investigation Plan for the release site known as Chevron Grayburg 6-Inch Sec. 6 (Historical) (NMOCD Reference #1RP-2637, henceforth "Chevron Grayburg").

Pursuant to my email to you dated June 21, 2013, from September 3 through September 4, 2013, a series of thirteen (13) soil borings were advanced at the site in an inferred area of historical contamination believed to be associated with a historic drilling pit and historic tank battery adjacent to the site. The soil borings were advanced in a grid-like pattern to investigate the horizontal and vertical extent of the inferred historical contamination and to determine if the PSH observed in monitor well MW-7 is at least partially attributable to this contamination. The locations of the soil borings are depicted in the attached map, "ChevronGrayburgSec6_DelineationDrilling.pdf". A soil chemistry data table and a laboratory analytical report are also attached.

Field-screens and laboratory analytical results from soil samples collected during the advancement of the soil borings, as well as fingerprint analyses of the PSH in MW-7 and the crude oil in the Chevron Grayburg 6" pipeline, were inconclusive. A corresponding link between the historical contamination and the PSH in MW-7 can neither be proven nor disproved at this time. Therefore, further delineation will be required. To that end, Plains proposes to drill an additional series of soil borings west of MW-7, in an area of pastureland adjacent to the access road bordering the site. Suitable soil borings down- and cross-gradient of MW-7 may be converted into monitor wells. Plains also proposes to strip the Chevron Grayburg 6" line further to the west in an effort to find evidence of a leak (or leaks) that may have been missed during the delineation event conducted on May 28, 2013.

A map depicting the locations of proposed soil borings and/or monitor wells will be submitted to the NMOCD by November 8, 2013.

Please note that permits for the proposed drilling event (and all subsequent drilling events) may be delayed. The land in question is owned by the State of New Mexico and administered by the New Mexico State Land Office. It typically takes two to four months to receive permission to drill on State-owned land.

If you have any questions, please do not hesitate to contact me.

Thank you for your time and consideration.

Respectfully,
Ben J. Arguijo

Ben J. Arguijo
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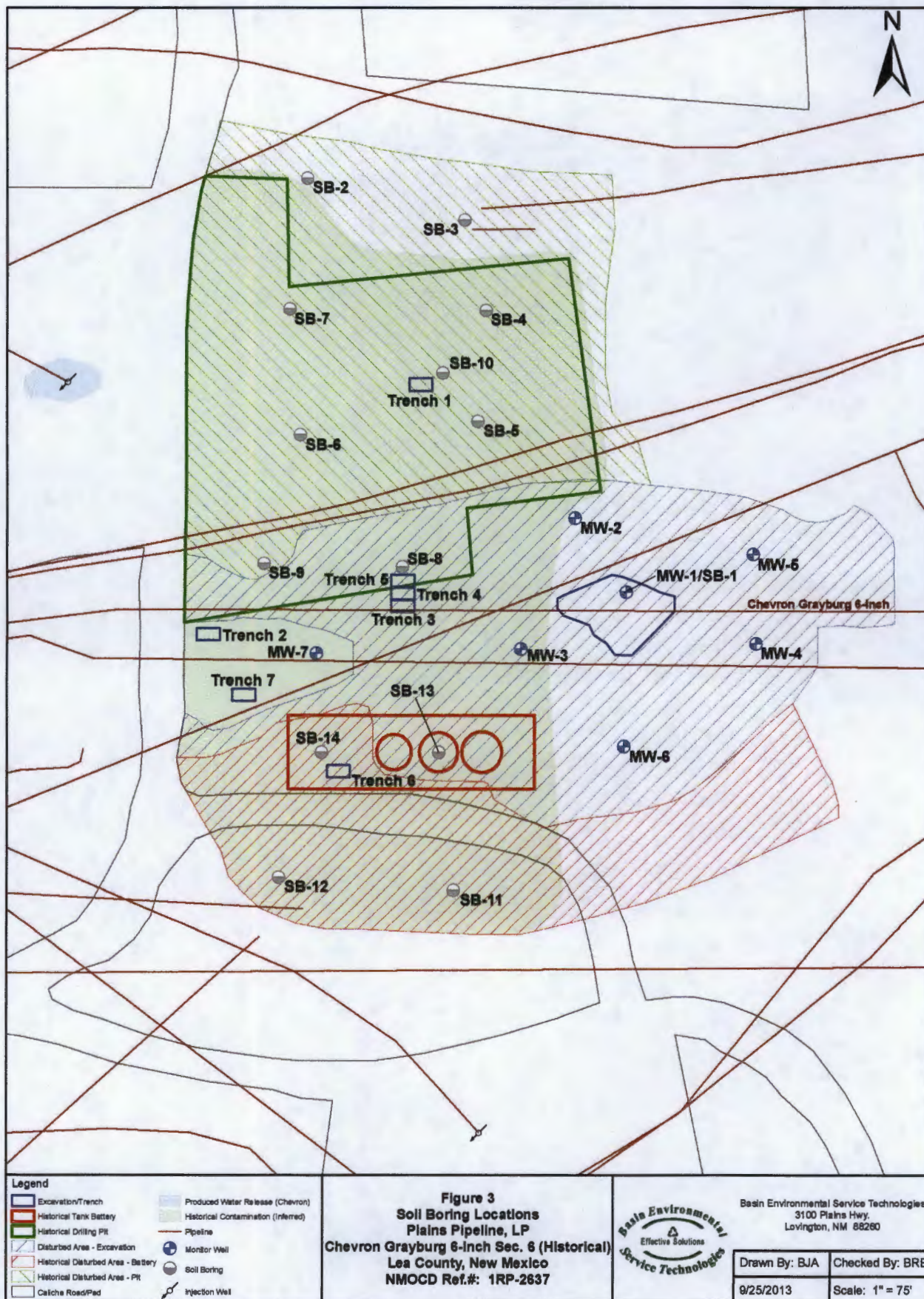


TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

PLAINS PIPELINE, LP
 CHEVRON GRAYBURH 6-INCH SEC. 6 (HISTORICAL)
 LEA COUNTY, NEW MEXICO
 SRS #: CHEVRON GRAYBURG 6-INCH HISTORICAL
 NMOCD REFERENCE #: 1RP-2637

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030							METHOD: 8015M			TOTAL	E 300
				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 ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	CHLORIDE (mg/Kg)
Stockpile	N/A	11/5/2010	Blended	-	-	-	-	-	-	-	2,230	4,210	<156	6,440	-
N-SW	3'	11/12/2010	In-Situ	<0.0010	0.0055	0.0041	0.0053	0.0010	0.0063	0.0159	<15.0	527	28.4	555	34.0
S-SW	5'	11/12/2010	In-Situ	-	-	-	-	-	-	-	21.7	1,740	77.3	1,839	33.8
E-SW	3.5'	11/12/2010	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.9	26.6	<15.9	26.6	65.1
W-SW	6'	11/12/2010	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.6	794	47.8	842	45.0
Floor	7'	11/12/2010	Excavated	-	-	-	-	-	-	-	6,230	15,500	367	22,097	46.3
Release Point @ 24'	24'	4/11/2011	In-Situ	-	-	-	-	-	-	-	625	2,370	17.3	3,010	49.3
South Wall (S-SW)	4'	6/2/2011	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.6	<15.6	<15.6	<15.6	-
Stockpile #1	N/A	6/15/2011	Blended	-	-	-	-	-	-	-	207	3,600	<15.3	3,810	84.5
Stockpile #2	N/A	6/15/2011	Blended	-	-	-	-	-	-	-	134	2,380	<15.5	2,510	57.0
Stockpile #1A	N/A	6/28/2011	Blended	-	-	-	-	-	-	-	133	2,570	131	2,830	74.8
Stockpile	N/A	7/19/2011	Blended	-	-	-	-	-	-	-	<79.1	1,350	<79.1	1,350	84.5
Stockpile	N/A	8/4/2011	Blended	<0.0010	<0.0021	0.00135	0.00468	0.00303	0.00771	0.00906	<15.5	329	18.6	348	87.3
SB-1 @32'	32'	8/30/2011	In-Situ	-	-	-	-	-	-	-	489	2,690	46.5	3,230	-
SB-1 @47'	47'	8/30/2011	In-Situ	-	-	-	-	-	-	-	305	2,330	37.7	2,670	-
SB-1 @62'	62'	8/30/2011	In-Situ	-	-	-	-	-	-	-	487	2,350	<79.3	2,840	-
SB-1 @72'	72'	8/30/2011	In-Situ	-	-	-	-	-	-	-	436	3,190	104.0	3,730	-
MW-2 @ 35'	35'	6/14/2012	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<50.8	<50.8	<50.8	<50.8	-
MW-2 @ 55'	55'	6/14/2012	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<51.5	<51.5	<51.5	<51.5	-
MW-2 @ 75'	75'	6/14/2012	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<50.3	<50.3	<50.3	<50.3	-
MW-2 @ 95'	95'	6/14/2012	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<50.2	59.4	<50.2	59.4	-
MW-3 @ 35'	35'	6/14/2012	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<51.4	<51.4	<51.4	<51.4	-
MW-3 @ 50'	50'	6/14/2012	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<51.6	<51.6	<51.6	<51.6	-
MW-3 @ 65'	65'	6/15/2012	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<52.0	229	<52.0	229	-
MW-3 @ 95'	95'	6/15/2012	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<50.6	159	<50.6	159	-
MW-4 @ 35'	35'	6/18/2012	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<51.7	<51.7	<51.7	<51.7	-
MW-4 @ 55'	55'	6/18/2012	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<51.4	<51.4	<51.4	<51.4	-
MW-4 @ 70'	70'	6/18/2012	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<50.7	<50.7	<50.7	<50.7	-
MW-4 @ 95'	95'	6/18/2012	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<50.4	<50.4	<50.4	<50.4	-

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

PLAINS PIPELINE, LP
 CHEVRON GRAYBURH 6-INCH SEC. 6 (HISTORICAL)
 LEA COUNTY, NEW MEXICO
 SRS #: CHEVRON GRAYBURG 6-INCH HISTORICAL
 NMOCD REFERENCE #: 1RP-2637

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030							METHOD: 8015M			TOTAL TPH C ₆ -C ₃₅ (mg/Kg)	E 300 CHLORIDE (mg/Kg)
				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 ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)		
MW-5 @ 20'	20'	3/4/2013	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.4	<15.4	<15.4	<15.4	-
MW-5 @ 40'	40'	3/4/2013	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.4	<15.4	<15.4	<15.4	-
MW-5 @ 60'	60'	3/4/2013	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.9	<15.9	<15.9	<15.9	-
MW-5 @ 80'	80'	3/4/2013	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<15.4	<15.4	<15.4	<15.4	-
MW-6 @ 10'	10'	3/5/2013	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<15.4	34.4	<15.4	34.4	-
MW-6 @ 30'	30'	3/5/2013	In-Situ	<0.0010	<0.0020	<0.0010	0.00220	0.00167	0.00387	0.00387	<17.2	<17.2	<17.2	<17.2	-
MW-6 @ 50'	50'	3/5/2013	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.6	<15.6	<15.6	<15.6	-
MW-6 @ 70'	70'	3/5/2013	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.6	<15.6	<15.6	<15.6	-
MW-7 @ 5'	5'	3/5/2013	In-Situ	<0.0011	0.00231	0.00760	0.0133	0.00490	0.0182	0.0281	34.7	2,340	170	2,540	-
MW-7 @ 20'	20'	3/5/2013	In-Situ	0.0118	0.0432	0.295	1.54	0.623	2.16	2.51	832	3,930	189	4,950	-
MW-7 @ 35'	35'	3/5/2013	In-Situ	<0.0052	0.0212	0.155	0.811	0.461	1.27	1.45	551	2,780	143	3,470	-
MW-7 @ 50'	50'	3/5/2013	In-Situ	0.0424	0.203	2.30	3.73	2.31	6.04	8.59	920	3,940	224	5,080	-
MW-7 @ 75'	75'	3/5/2013	In-Situ	0.00563	0.0639	0.643	1.02	0.566	1.59	2.30	631	3,900	240	4,770	-
SB-2 @ 5'	5'	9/3/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<16.0	<16.0	<16.0	<16.0	-
SB-2 @ 30'	30'	9/3/2013	In-Situ	<0.0010	<0.0010	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.6	<15.6	<15.6	<15.6	-
SB-3 @ 5'	5'	9/3/2013	In-Situ	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<15.3	<15.3	<15.3	<15.3	-
SB-3 @ 25'	25'	9/3/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.6	49.4	<15.6	49.4	-
SB-4 @ 5'	5'	9/3/2013	In-Situ	<0.0010	<0.0010	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.2	<15.2	<15.2	<15.2	-
SB-4 @ 25'	25'	9/3/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.7	<15.7	<15.7	<15.7	-
SB-5 @ 5'	5'	9/3/2013	In-Situ	<0.0010	<0.0010	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.4	<15.4	<15.4	<15.4	-
SB-5 @ 20'	20'	9/3/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.8	<15.8	<15.8	<15.8	-
SB-5 @ 40'	40'	9/3/2013	In-Situ	<0.0010	<0.0010	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.6	57.9	<15.6	57.9	-
SB-6 @ 5'	5'	9/3/2013	In-Situ	<0.0053	<0.0053	<0.0053	<0.0106	<0.0053	<0.0106	<0.0106	285	4,010	<80.2	4,300	-
SB-6 @ 20'	20'	9/3/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.7	36.8	<15.7	36.8	-
SB-6 @ 40'	40'	9/3/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	24.1	448	<15.7	472	-
SB-6 @ 60'	60'	9/3/2013	In-Situ	<0.0010	<0.0010	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.4	<15.4	<15.4	<15.4	-
SB-7 @ 5'	5'	9/3/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0022	<16.4	<16.4	<16.4	<16.4	-
SB-7 @ 30'	30'	9/3/2013	In-Situ	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<15.3	<15.3	<15.3	<15.3	-
SB-8 @ 10'	10'	9/4/2013	In-Situ	<0.0054	0.0111	0.124	0.731	0.858	1.59	1.72	597	3,640	<16.0	4,240	-
SB-8 @ 40'	40'	9/4/2013	In-Situ	<0.0052	<0.0052	0.194	0.295	0.281	0.576	0.770	429	2,660	<15.7	3,090	-
SB-8 @ 60'	60'	9/4/2013	In-Situ	<0.0011	0.0011	0.0199	0.0362	0.0366	0.0728	0.0938	168	1,600	<15.6	1,770	-
SB-8 @ 80'	80'	9/4/2013	In-Situ	<0.0052	<0.0052	0.133	0.241	0.230	0.471	0.604	473	3,430	<15.6	3,900	-

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

PLAINS PIPELINE, LP
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 LEA COUNTY, NEW MEXICO
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SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030							METHOD: 8015M			TOTAL	E 300
				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 ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	CHLORIDE (mg/Kg)
SB-9 @ 5'	5'	9/4/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.7	35.3	<15.7	35.3	-
SB-9 @ 20'	20'	9/4/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.7	<15.7	<15.7	<15.7	-
SB-9 @ 40'	40'	9/4/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.8	<15.8	<15.8	<15.8	-
SB-10 @ 5'	5'	9/4/2013	In-Situ	<0.0055	<0.0055	0.0073	<0.0110	0.0133	0.0133	0.0206	<164	3,990	<164	3,990	-
SB-10 @ 25'	25'	9/4/2013	In-Situ	<0.0010	<0.0010	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.8	413	<15.8	413	-
SB-10 @ 55'	55'	9/4/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.9	26.5	<15.9	26.5	-
SB-10 @ 70'	70'	9/4/2013	In-Situ	<0.0010	<0.0010	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.6	<15.6	<15.6	<15.6	-
SB-11 @ 5'	5'	9/4/2013	In-Situ	<0.0011	0.0023	<0.0011	0.0039	0.0075	0.0114	0.0137	87.1	1,080	<15.8	1,170	-
SB-11 @ 25'	25'	9/4/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.9	<15.9	<15.9	<15.9	-
SB-12 @ 5'	5'	9/4/2013	In-Situ	<0.0010	<0.0010	<0.0010	<0.0021	<0.0010	<0.0021	<0.0021	<15.5	41.6	<15.5	41.6	-
SB-12 @ 25'	25'	9/4/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.7	<15.7	<15.7	<15.7	-
SB-13 @ 5'	5'	9/4/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.7	<15.7	<15.7	<15.7	-
SB-13 @ 25'	25'	9/4/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0022	<16.0	<16.0	<16.0	<16.0	-
SB-14 @ 5'	5'	9/4/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.6	<15.6	<15.6	<15.6	-
SB-14 @ 25'	25'	9/4/2013	In-Situ	<0.0011	<0.0011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<15.8	<15.8	<15.8	<15.8	-
NMOCD Standard				10						50				1,000	500

Analytical Report 469898
for
PLAINS ALL AMERICAN EH&S

Project Manager: Ben Arguijo
Chevron Grayburg 6-in Sec. 6 (Historical)

16-SEP-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-14-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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)



16-SEP-13

Project Manager: **Ben Arguijo**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): **469898**
Chevron Grayburg 6-in Sec. 6 (Historical)
Project Address: Lea County, New Mexico

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) 469898. 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. 469898 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.

Respectfully,

Alejandro Montoya

Odessa Laboratory Director

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**PLAINS ALL AMERICAN EH&S, Midland, TX**

Chevron Grayburg 6-in Sec. 6 (Historical)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-2 @ 5'	S	09-03-13 10:35	- 5 ft	469898-001
SB-2 @ 30'	S	09-03-13 11:00	- 30 ft	469898-002
SB-3 @ 5'	S	09-03-13 11:20	- 5 ft	469898-003
SB-3 @ 25'	S	09-03-13 11:40	- 25 ft	469898-004
SB-4 @ 5'	S	09-03-13 12:00	- 5 ft	469898-005
SB-4 @ 25'	S	09-03-13 12:20	- 25 ft	469898-006
SB-5 @ 5'	S	09-03-13 13:05	- 5 ft	469898-007
SB-5 @ 20'	S	09-03-13 13:20	- 20 ft	469898-008
SB-5 @ 40'	S	09-03-13 13:40	- 40 ft	469898-009
SB-6 @ 5'	S	09-03-13 14:05	- 5 ft	469898-010
SB-6 @ 20'	S	09-03-13 14:20	- 20 ft	469898-011
SB-6 @ 40'	S	09-03-13 14:40	- 40 ft	469898-012
SB-6 @ 60'	S	09-03-13 15:00	- 60 ft	469898-013
SB-7 @ 5'	S	09-03-13 15:15	- 5 ft	469898-014
SB-7 @ 30'	S	09-03-13 15:40	- 30 ft	469898-015
SB-8 @ 10'	S	09-04-13 08:40	- 10 ft	469898-016
SB-8 @ 40'	S	09-04-13 09:10	- 40 ft	469898-017
SB-8 @ 60'	S	09-04-13 09:30	- 60 ft	469898-018
SB-8 @ 80'	S	09-04-13 09:50	- 80 ft	469898-019
SB-9 @ 5'	S	09-04-13 10:05	- 5 ft	469898-020
SB-9 @ 20'	S	09-04-13 10:20	- 20 ft	469898-021
SB-9 @ 40'	S	09-04-13 10:40	- 40 ft	469898-022
SB-10 @ 5'	S	09-04-13 11:05	- 5 ft	469898-023
SB-10 @ 25'	S	09-04-13 11:25	- 25 ft	469898-024
SB-10 @ 55'	S	09-04-13 11:55	- 55 ft	469898-025
SB-10 @ 70'	S	09-04-13 12:10	- 70 ft	469898-026
SB-11 @ 5'	S	09-04-13 13:10	- 5 ft	469898-027
SB-11 @ 25'	S	09-04-13 13:30	- 25 ft	469898-028
SB-12 @ 5'	S	09-04-13 13:55	- 5 ft	469898-029
SB-12 @ 25'	S	09-04-13 14:15	- 25 ft	469898-030
SB-13 @ 5'	S	09-04-13 14:30	- 5 ft	469898-031
SB-13 @ 25'	S	09-04-13 14:50	- 25 ft	469898-032
SB-14 @ 5'	S	09-04-13 15:05	- 5 ft	469898-033
SB-14 @ 25'	S	09-04-13 15:25	- 25 ft	469898-034



CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Project ID:
Work Order Number(s): 469898

Report Date: 16-SEP-13
Date Received: 09/06/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-922766 BTEX by SW 8260B
SW8260BTX

Batch 922766, 1,2-Dichloroethane-D4 recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 469898-005.

Dilution required for -016 and -017 due to sample matrix.

Batch: LBA-922792 BTEX by SW 8260B
SW8260BTX

Batch 922792, 1,2-Dichloroethane-D4 recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 469898-033.

Internal standard, 1,4-Dichlorobenzene-d4, was outside method acceptance criteria for -030. This internal standard is not associated with target compounds.

Batch: LBA-922795 BTEX by SW 8260B
Dilution required for -010, -019 and -023 due to sample matrix.

Batch: LBA-922799 BTEX by SW 8260B
Dilution required for -016 due to sample matrix.

Internal standard, 1,4-Dichlorobenzene-d4, was outside method acceptance criteria for -018. This internal standard is not associated with target compounds.

Certificate of Analysis Summary 469898



PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Project Id:

Contact: Ben Arguijo

Project Location: Lea County, New Mexico

Date Received in Lab: Fri Sep-06-13 03:50 pm

Report Date: 16-SEP-13

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	469898-001	469898-002	469898-003	469898-004	469898-005	469898-006
	<i>Field Id:</i>	SB-2 @ 5'	SB-2 @ 30'	SB-3 @ 5'	SB-3 @ 25'	SB-4 @ 5'	SB-4 @ 25'
	<i>Depth:</i>	5 ft	30 ft	5 ft	25 ft	5 ft	25 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Sep-03-13 10:35	Sep-03-13 11:00	Sep-03-13 11:20	Sep-03-13 11:40	Sep-03-13 12:00	Sep-03-13 12:20
BTEX by SW 8260B SUB: TX104704215	<i>Extracted:</i>	Sep-14-13 15:50	Sep-14-13 18:06	Sep-14-13 18:08	Sep-14-13 18:10	Sep-14-13 18:12	Sep-16-13 12:30
	<i>Analyzed:</i>	Sep-14-13 16:12	Sep-14-13 19:11	Sep-14-13 19:36	Sep-14-13 20:02	Sep-14-13 20:27	Sep-16-13 12:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.00106	ND 0.00103	ND 0.00101	ND 0.00105	ND 0.00103	ND 0.00105
Toluene		ND 0.00106	ND 0.00103	ND 0.00101	ND 0.00105	ND 0.00103	ND 0.00105
Ethylbenzene		ND 0.00106	ND 0.00103	ND 0.00101	ND 0.00105	ND 0.00103	ND 0.00105
m,p-Xylenes		ND 0.00211	ND 0.00207	ND 0.00203	ND 0.00209	ND 0.00206	ND 0.00210
o-Xylene		ND 0.00106	ND 0.00103	ND 0.00101	ND 0.00105	ND 0.00103	ND 0.00105
Total Xylenes		ND 0.00106	ND 0.00103	ND 0.00101	ND 0.00105	ND 0.00103	ND 0.00105
Total BTEX		ND 0.00106	ND 0.00103	ND 0.00101	ND 0.00105	ND 0.00103	ND 0.00105
Percent Moisture	<i>Extracted:</i>	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00
	<i>Analyzed:</i>	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		6.21 1.00	3.64 1.00	1.86 1.00	4.45 1.00	1.90 1.00	5.00 1.00
TPH By SW8015 Mod	<i>Extracted:</i>	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00
	<i>Analyzed:</i>	Sep-12-13 13:11	Sep-12-13 14:33	Sep-12-13 15:03	Sep-12-13 15:31	Sep-12-13 15:58	Sep-12-13 16:25
	<i>Units/RL:</i>	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 15.6	ND 15.3	ND 15.6	ND 15.2	ND 15.7
C12-C28 Diesel Range Hydrocarbons		ND 16.0	ND 15.6	ND 15.3	49.4 15.6	ND 15.2	ND 15.7
C28-C35 Oil Range Hydrocarbons		ND 16.0	ND 15.6	ND 15.3	ND 15.6	ND 15.2	ND 15.7
Total TPH		ND 16.0	ND 15.6	ND 15.3	49.4 15.6	ND 15.2	ND 15.7

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Alejandro Montoya
Odessa Laboratory Director



Project Id:

Contact: Ben Arguijo

Project Location: Lea County, New Mexico

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Date Received in Lab: Fri Sep-06-13 03:50 pm

Report Date: 16-SEP-13

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	469898-007	469898-008	469898-009	469898-010	469898-011	469898-012
	<i>Field Id:</i>	SB-5 @ 5'	SB-5 @ 20'	SB-5 @ 40'	SB-6 @ 5'	SB-6 @ 20'	SB-6 @ 40'
	<i>Depth:</i>	5 ft	20 ft	40 ft	5 ft	20 ft	40 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Sep-03-13 13:05	Sep-03-13 13:20	Sep-03-13 13:40	Sep-03-13 14:05	Sep-03-13 14:20	Sep-03-13 14:40
BTEX by SW 8260B SUB: TX104704215	<i>Extracted:</i>	Sep-14-13 18:16	Sep-14-13 18:18	Sep-14-13 18:20	Sep-16-13 12:32	Sep-14-13 18:22	Sep-14-13 18:24
	<i>Analyzed:</i>	Sep-14-13 21:18	Sep-14-13 21:43	Sep-14-13 22:08	Sep-16-13 13:18	Sep-14-13 22:33	Sep-14-13 22:59
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.00104	ND 0.00106	ND 0.00104	ND 0.00531	ND 0.00106	ND 0.00105
Toluene		ND 0.00104	ND 0.00106	ND 0.00104	ND 0.00531	ND 0.00106	ND 0.00105
Ethylbenzene		ND 0.00104	ND 0.00106	ND 0.00104	ND 0.00531	ND 0.00106	ND 0.00105
m,p-Xylenes		ND 0.00208	ND 0.00213	ND 0.00208	ND 0.0106	ND 0.00213	ND 0.00209
o-Xylene		ND 0.00104	ND 0.00106	ND 0.00104	ND 0.00531	ND 0.00106	ND 0.00105
Total Xylenes		ND 0.00104	ND 0.00106	ND 0.00104	ND 0.00531	ND 0.00106	ND 0.00105
Total BTEX		ND 0.00104	ND 0.00106	ND 0.00104	ND 0.00531	ND 0.00106	ND 0.00105
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		3.07 1.00	5.54 1.00	4.33 1.00	6.85 1.00	5.02 1.00	4.56 1.00
TPH By SW8015 Mod	<i>Extracted:</i>	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00
	<i>Analyzed:</i>	Sep-12-13 16:52	Sep-12-13 17:19	Sep-12-13 17:46	Sep-12-13 18:13	Sep-12-13 19:32	Sep-12-13 19:59
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 15.8	ND 15.6	285 80.2	ND 15.7	24.1 15.7
C12-C28 Diesel Range Hydrocarbons		ND 15.4	ND 15.8	57.9 15.6	4010 80.2	36.8 15.7	448 15.7
C28-C35 Oil Range Hydrocarbons		ND 15.4	ND 15.8	ND 15.6	ND 80.2	ND 15.7	ND 15.7
Total TPH		ND 15.4	ND 15.8	57.9 15.6	4300 80.2	36.8 15.7	472 15.7

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Alejandro Montoya
Odessa Laboratory Director

Certificate of Analysis Summary 469898



PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Project Id:

Contact: Ben Arguijo

Project Location: Lea County, New Mexico

Date Received in Lab: Fri Sep-06-13 03:50 pm

Report Date: 16-SEP-13

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	469898-013	469898-014	469898-015	469898-016	469898-017	469898-018
	<i>Field Id:</i>	SB-6 @ 60'	SB-7 @ 5'	SB-7 @ 30'	SB-8 @ 10'	SB-8 @ 40'	SB-8 @ 60'
	<i>Depth:</i>	60 ft	5 ft	30 ft	10 ft	40 ft	60 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Sep-03-13 15:00	Sep-03-13 15:15	Sep-03-13 15:40	Sep-04-13 08:40	Sep-04-13 09:10	Sep-04-13 09:30
BTEX by SW 8260B SUB: TX104704215	<i>Extracted:</i>	Sep-14-13 18:26	Sep-14-13 18:28	Sep-14-13 18:30	Sep-16-13 14:16	Sep-14-13 18:34	Sep-16-13 13:02
	<i>Analyzed:</i>	Sep-14-13 23:24	Sep-14-13 23:49	Sep-15-13 00:15	Sep-16-13 14:34	Sep-15-13 01:05	Sep-16-13 13:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.00104	ND 0.00108	ND 0.00102	ND 0.00535	ND 0.00524	ND 0.00105
Toluene		ND 0.00104	ND 0.00108	ND 0.00102	0.0111 0.00535	ND 0.00524	0.00112 0.00105
Ethylbenzene		ND 0.00104	ND 0.00108	ND 0.00102	0.124 0.00535	0.194 0.00524	0.0199 0.00105
m,p-Xylenes		ND 0.00208	ND 0.00216	ND 0.00203	0.731 0.0107	0.295 0.0105	0.0362 0.00210
o-Xylene		ND 0.00104	ND 0.00108	ND 0.00102	0.858 0.00535	0.281 0.00524	0.0366 0.00105
Total Xylenes		ND 0.00104	ND 0.00108	ND 0.00102	1.59 0.00535	0.576 0.00524	0.0728 0.00105
Total BTEX		ND 0.00104	ND 0.00108	ND 0.00102	1.72 0.00535	0.770 0.00524	0.0938 0.00105
Percent Moisture	<i>Extracted:</i>	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00
	<i>Analyzed:</i>	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00	Sep-10-13 16:00
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		2.77 1.00	8.30 1.00	2.28 1.00	6.56 1.00	4.62 1.00	4.01 1.00
TPH By SW8015 Mod	<i>Extracted:</i>	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00
	<i>Analyzed:</i>	Sep-12-13 20:24	Sep-12-13 20:50	Sep-12-13 21:15	Sep-12-13 21:41	Sep-12-13 22:06	Sep-12-13 22:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 16.4	ND 15.3	597 16.0	429 15.7	168 15.6
C12-C28 Diesel Range Hydrocarbons		ND 15.4	ND 16.4	ND 15.3	3640 16.0	2660 15.7	1600 15.6
C28-C35 Oil Range Hydrocarbons		ND 15.4	ND 16.4	ND 15.3	ND 16.0	ND 15.7	ND 15.6
Total TPH		ND 15.4	ND 16.4	ND 15.3	4240 16.0	3090 15.7	1770 15.6

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Alejandro Montoya
Odessa Laboratory Director



Project Id:

Contact: Ben Arguijo

Project Location: Lea County, New Mexico

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Date Received in Lab: Fri Sep-06-13 03:50 pm

Report Date: 16-SEP-13

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	469898-019	469898-020	469898-021	469898-022	469898-023	469898-024
	<i>Field Id:</i>	sB-8 @ 80'	SB-9 @ 5'	SB-9 @ 20'	SB-9 @ 40'	SB-10 @ 5'	SB-10 @ 25'
	<i>Depth:</i>	80 ft	5 ft	20 ft	40 ft	5 ft	25 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Sep-04-13 09:50	Sep-04-13 10:05	Sep-04-13 10:20	Sep-04-13 10:40	Sep-04-13 11:05	Sep-04-13 11:25
BTEX by SW 8260B SUB: TX104704215	<i>Extracted:</i>	Sep-16-13 12:36	Sep-14-13 17:35	Sep-16-13 13:06	Sep-14-13 18:09	Sep-16-13 12:38	Sep-14-13 18:11
	<i>Analyzed:</i>	Sep-16-13 14:09	Sep-14-13 17:57	Sep-16-13 14:08	Sep-14-13 18:25	Sep-16-13 14:34	Sep-14-13 18:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.00516	ND 0.00105	ND 0.00105	ND 0.00106	ND 0.00550	ND 0.00104
Toluene		ND 0.00516	ND 0.00105	ND 0.00105	ND 0.00106	ND 0.00550	ND 0.00104
Ethylbenzene		0.133 0.00516	ND 0.00105	ND 0.00105	ND 0.00106	0.00732 0.00550	ND 0.00104
m,p-Xylenes		0.241 0.0103	ND 0.00209	ND 0.00210	ND 0.00212	ND 0.0110	ND 0.00209
o-Xylene		0.230 0.00516	ND 0.00105	ND 0.00105	ND 0.00106	0.0133 0.00550	ND 0.00104
Total Xylenes		0.471 0.00516	ND 0.00105	ND 0.00105	ND 0.00106	0.0133 0.00550	ND 0.00104
Total BTEX		0.604 0.00516	ND 0.00105	ND 0.00105	ND 0.00106	0.0206 0.00550	ND 0.00104
Percent Moisture	<i>Extracted:</i>	Sep-10-13 16:00	Sep-10-13 16:00	Sep-11-13 12:30	Sep-11-13 12:30	Sep-11-13 12:30	Sep-11-13 12:30
	<i>Analyzed:</i>	Sep-10-13 16:00	Sep-10-13 16:00	Sep-11-13 12:30	Sep-11-13 12:30	Sep-11-13 12:30	Sep-11-13 12:30
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		4.06 1.00	4.52 1.00	4.68 1.00	5.20 1.00	9.15 1.00	5.06 1.00
TPH By SW8015 Mod	<i>Extracted:</i>	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00
	<i>Analyzed:</i>	Sep-12-13 22:56	Sep-12-13 23:22	Sep-13-13 02:02	Sep-13-13 03:20	Sep-13-13 03:47	Sep-13-13 04:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		473 15.6	ND 15.7	ND 15.7	ND 15.8	ND 164	ND 15.8
C12-C28 Diesel Range Hydrocarbons		3430 15.6	35.3 15.7	ND 15.7	ND 15.8	3990 164	413 15.8
C28-C35 Oil Range Hydrocarbons		ND 15.6	ND 15.7	ND 15.7	ND 15.8	ND 164	ND 15.8
Total TPH		3900 15.6	35.3 15.7	ND 15.7	ND 15.8	3990 164	413 15.8

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Alejandro Montoya
Odessa Laboratory Director

Certificate of Analysis Summary 469898



PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Project Id:

Contact: Ben Arguijo

Project Location: Lea County, New Mexico

Date Received in Lab: Fri Sep-06-13 03:50 pm

Report Date: 16-SEP-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	469898-025	469898-026	469898-027	469898-028	469898-029	469898-030
	Field Id:	SB-10 @ 55'	SB-10 @ 70'	SB-11 @ 5'	SB-11 @ 25'	SB-12 @ 5'	SB-12 @ 25'
	Depth:	55 ft	70 ft	5 ft	25 ft	5 ft	25 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-04-13 11:55	Sep-04-13 12:10	Sep-04-13 13:10	Sep-04-13 13:30	Sep-04-13 13:55	Sep-04-13 14:15
BTEX by SW 8260B SUB: TX104704215	Extracted:	Sep-14-13 18:13	Sep-14-13 18:15	Sep-16-13 13:04	Sep-14-13 18:17	Sep-14-13 18:19	Sep-14-13 18:21
	Analyzed:	Sep-14-13 19:17	Sep-14-13 19:43	Sep-16-13 13:42	Sep-14-13 20:10	Sep-14-13 20:35	Sep-14-13 21:02
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.00106	ND 0.00104	ND 0.00105	ND 0.00105	ND 0.00102	ND 0.00106
Toluene		ND 0.00106	ND 0.00104	0.00225 0.00105	ND 0.00105	ND 0.00102	ND 0.00106
Ethylbenzene		ND 0.00106	ND 0.00104	ND 0.00105	ND 0.00105	ND 0.00102	ND 0.00106
m,p-Xylenes		ND 0.00213	ND 0.00209	0.00393 0.00209	ND 0.00210	ND 0.00205	ND 0.00213
o-Xylene		ND 0.00106	ND 0.00104	0.00751 0.00105	ND 0.00105	ND 0.00102	ND 0.00106
Total Xylenes		ND 0.00106	ND 0.00104	0.0114 0.00105	ND 0.00105	ND 0.00102	ND 0.00106
Total BTEX		ND 0.00106	ND 0.00104	0.0137 0.00105	ND 0.00105	ND 0.00102	ND 0.00106
Percent Moisture	Extracted:						
	Analyzed:	Sep-11-13 12:30	Sep-11-13 12:30	Sep-11-13 12:30	Sep-11-13 12:47	Sep-11-13 12:30	Sep-11-13 12:30
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		6.14 1.00	4.09 1.00	5.45 1.00	5.66 1.00	3.01 1.00	5.14 1.00
TPH By SW8015 Mod	Extracted:	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00
	Analyzed:	Sep-13-13 04:39	Sep-13-13 05:06	Sep-13-13 05:32	Sep-13-13 05:58	Sep-13-13 06:24	Sep-13-13 06:50
	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 15.9	ND 15.6	87.1 15.8	ND 15.9	ND 15.5	ND 15.7
C12-C28 Diesel Range Hydrocarbons		26.5 15.9	ND 15.6	1080 15.8	ND 15.9	41.6 15.5	ND 15.7
C28-C35 Oil Range Hydrocarbons		ND 15.9	ND 15.6	ND 15.8	ND 15.9	ND 15.5	ND 15.7
Total TPH		26.5 15.9	ND 15.6	1170 15.8	ND 15.9	41.6 15.5	ND 15.7

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.

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Alejandro Montoya
Odessa Laboratory Director


Project Id:
Contact: Ben Arguijo

Project Location: Lea County, New Mexico

Date Received in Lab: Fri Sep-06-13 03:50 pm

Report Date: 16-SEP-13

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	469898-031	469898-032	469898-033	469898-034		
	<i>Field Id:</i>	SB-13 @ 5'	SB-13 @ 25'	SB-14 @ 5'	SB-14 @ 25'		
	<i>Depth:</i>	5 ft	25 ft	5 ft	25 ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Sep-04-13 14:30	Sep-04-13 14:50	Sep-04-13 15:05	Sep-04-13 15:25		
BTEX by SW 8260B SUB: TX104704215	<i>Extracted:</i>	Sep-14-13 18:23	Sep-14-13 18:25	Sep-14-13 18:27	Sep-14-13 18:29		
	<i>Analyzed:</i>	Sep-14-13 21:28	Sep-14-13 21:54	Sep-14-13 22:20	Sep-14-13 22:46		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
		ND 0.00106	ND 0.00108	ND 0.00105	ND 0.00105		
Benzene		ND 0.00106	ND 0.00108	ND 0.00105	ND 0.00105		
Toluene		ND 0.00106	ND 0.00108	ND 0.00105	ND 0.00105		
Ethylbenzene		ND 0.00106	ND 0.00108	ND 0.00105	ND 0.00105		
m,p-Xylenes		ND 0.00212	ND 0.00217	ND 0.00209	ND 0.00211		
o-Xylene		ND 0.00106	ND 0.00108	ND 0.00105	ND 0.00105		
Total Xylenes		ND 0.00106	ND 0.00108	ND 0.00105	ND 0.00105		
Total BTEX		ND 0.00106	ND 0.00108	ND 0.00105	ND 0.00105		
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Sep-11-13 12:47	Sep-11-13 12:47	Sep-11-13 12:51	Sep-11-13 12:51		
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL		
Percent Moisture		4.89 1.00	6.70 1.00	4.35 1.00	5.18 1.00		
TPH By SW8015 Mod	<i>Extracted:</i>	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00	Sep-11-13 17:00		
	<i>Analyzed:</i>	Sep-13-13 08:08	Sep-13-13 08:35	Sep-13-13 09:02	Sep-13-13 09:29		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
		ND 15.7	ND 16.0	ND 15.6	ND 15.8		
C6-C12 Gasoline Range Hydrocarbons		ND 15.7	ND 16.0	ND 15.6	ND 15.8		
C12-C28 Diesel Range Hydrocarbons		ND 15.7	ND 16.0	ND 15.6	ND 15.8		
C28-C35 Oil Range Hydrocarbons		ND 15.7	ND 16.0	ND 15.6	ND 15.8		
Total TPH		ND 15.7	ND 16.0	ND 15.6	ND 15.8		

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.

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Alejandro Montoya
Odessa Laboratory Director



- 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 Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** 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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(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922643

Sample: 469898-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 13:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	57.6	50.0	115	70-135	

Lab Batch #: 922643

Sample: 469898-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 14:33

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	52.1	50.0	104	70-135	

Lab Batch #: 922643

Sample: 469898-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 15:03

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.2	100	99	70-135	
o-Terphenyl	50.7	50.0	101	70-135	

Lab Batch #: 922643

Sample: 469898-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 15:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.5	113	70-135	
o-Terphenyl	62.4	49.8	125	70-135	

Lab Batch #: 922643

Sample: 469898-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 15:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.6	99.6	99	70-135	
o-Terphenyl	50.3	49.8	101	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] = $100 \times A / B$

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

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922643

Sample: 469898-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 09/12/13 16:25		SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1-Chlorooctane		111	99.5	112	70-135
o-Terphenyl		60.6	49.8	122	70-135

Lab Batch #: 922643

Sample: 469898-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 09/12/13 16:52		SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1-Chlorooctane		94.3	99.5	95	70-135
o-Terphenyl		50.5	49.8	101	70-135

Lab Batch #: 922643

Sample: 469898-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 09/12/13 17:19		SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1-Chlorooctane		88.4	99.7	89	70-135
o-Terphenyl		46.5	49.9	93	70-135

Lab Batch #: 922643

Sample: 469898-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 09/12/13 17:46		SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1-Chlorooctane		95.5	99.6	96	70-135
o-Terphenyl		50.9	49.8	102	70-135

Lab Batch #: 922643

Sample: 469898-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 09/12/13 18:13		SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1-Chlorooctane		107	99.6	107	70-135
o-Terphenyl		57.3	49.8	115	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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922643

Sample: 469898-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 19:32

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	93.0	99.5	93	70-135	
o-Terphenyl	45.6	49.8	92	70-135	

Lab Batch #: 922643

Sample: 469898-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 19:59

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	115	99.9	115	70-135	
o-Terphenyl	63.3	50.0	127	70-135	

Lab Batch #: 922643

Sample: 469898-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 20:24

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	83.9	99.5	84	70-135	
o-Terphenyl	42.4	49.8	85	70-135	

Lab Batch #: 922643

Sample: 469898-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 20:50

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	88.6	100	89	70-135	
o-Terphenyl	45.0	50.0	90	70-135	

Lab Batch #: 922643

Sample: 469898-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 21:15

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	91.6	100	92	70-135	
o-Terphenyl	45.4	50.0	91	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] = $100 * A / B$

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

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922643

Sample: 469898-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 21:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.5	114	70-135	
o-Terphenyl	53.0	49.8	106	70-135	

Lab Batch #: 922643

Sample: 469898-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 22:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	53.0	49.9	106	70-135	

Lab Batch #: 922643

Sample: 469898-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 22:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-135	
o-Terphenyl	52.0	49.9	104	70-135	

Lab Batch #: 922643

Sample: 469898-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 22:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.9	118	70-135	
o-Terphenyl	58.6	50.0	117	70-135	

Lab Batch #: 922643

Sample: 469898-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 23:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.9	100	70-135	
o-Terphenyl	51.3	50.0	103	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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922646

Sample: 469898-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 02:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	99.9	92	70-135	
o-Terphenyl	45.5	50.0	91	70-135	

Lab Batch #: 922646

Sample: 469898-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 03:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.9	99.8	88	70-135	
o-Terphenyl	49.1	49.9	98	70-135	

Lab Batch #: 922646

Sample: 469898-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 03:47

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.6	110	70-135	
o-Terphenyl	60.0	49.8	120	70-135	

Lab Batch #: 922646

Sample: 469898-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 04:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.2	99.8	95	70-135	
o-Terphenyl	53.2	49.9	107	70-135	

Lab Batch #: 922646

Sample: 469898-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 04:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.6	99.7	99	70-135	
o-Terphenyl	53.3	49.9	107	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922646

Sample: 469898-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 05:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.2	99.5	91	70-135	
o-Terphenyl	50.1	49.8	101	70-135	

Lab Batch #: 922646

Sample: 469898-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 05:32

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.0	99.9	97	70-135	
o-Terphenyl	54.7	50.0	109	70-135	

Lab Batch #: 922646

Sample: 469898-028 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 05:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.0	99.9	94	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 922646

Sample: 469898-029 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 06:24

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	99.9	93	70-135	
o-Terphenyl	50.9	50.0	102	70-135	

Lab Batch #: 922646

Sample: 469898-030 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 06:50

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.6	99.6	99	70-135	
o-Terphenyl	56.0	49.8	112	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922646

Sample: 469898-031 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 08:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.5	99.7	100	70-135	
o-Terphenyl	57.9	49.9	116	70-135	

Lab Batch #: 922646

Sample: 469898-032 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 08:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.8	100	70-135	
o-Terphenyl	57.0	49.9	114	70-135	

Lab Batch #: 922646

Sample: 469898-033 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 09:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.6	104	70-135	
o-Terphenyl	59.1	49.8	119	70-135	

Lab Batch #: 922646

Sample: 469898-034 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 09:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.7	101	70-135	
o-Terphenyl	59.8	49.9	120	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] = $100 * A / B$

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

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922766

Sample: 469898-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 16:12

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0494	0.0500	99	74-126	
1,2-Dichloroethane-D4	0.0488	0.0500	98	80-120	
Toluene-D8	0.0502	0.0500	100	73-132	
4-Bromofluorobenzene	0.0518	0.0500	104	58-152	

Lab Batch #: 922792

Sample: 469898-021 / RE

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 16:12

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0531	0.0500	106	74-126	
1,2-Dichloroethane-D4	0.0530	0.0500	106	80-120	
Toluene-D8	0.0519	0.0500	104	73-132	
4-Bromofluorobenzene	0.0521	0.0500	104	58-152	

Lab Batch #: 922792

Sample: 469898-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 17:57

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0560	0.0500	112	74-126	
1,2-Dichloroethane-D4	0.0542	0.0500	108	80-120	
Toluene-D8	0.0517	0.0500	103	73-132	
4-Bromofluorobenzene	0.0532	0.0500	106	58-152	

Lab Batch #: 922792

Sample: 469898-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 18:25

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0554	0.0500	111	74-126	
1,2-Dichloroethane-D4	0.0549	0.0500	110	80-120	
Toluene-D8	0.0509	0.0500	102	73-132	
4-Bromofluorobenzene	0.0509	0.0500	102	58-152	

* 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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922792

Sample: 469898-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 18:51

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0499	0.0500	100	74-126	
1,2-Dichloroethane-D4	0.0521	0.0500	104	80-120	
Toluene-D8	0.0517	0.0500	103	73-132	
4-Bromofluorobenzene	0.0523	0.0500	105	58-152	

Lab Batch #: 922766

Sample: 469898-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 19:11

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0522	0.0500	104	74-126	
1,2-Dichloroethane-D4	0.0520	0.0500	104	80-120	
Toluene-D8	0.0502	0.0500	100	73-132	
4-Bromofluorobenzene	0.0502	0.0500	100	58-152	

Lab Batch #: 922792

Sample: 469898-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 19:17

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0542	0.0500	108	74-126	
1,2-Dichloroethane-D4	0.0511	0.0500	102	80-120	
Toluene-D8	0.0507	0.0500	101	73-132	
4-Bromofluorobenzene	0.0529	0.0500	106	58-152	

Lab Batch #: 922766

Sample: 469898-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 19:36

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0495	0.0500	99	74-126	
1,2-Dichloroethane-D4	0.0548	0.0500	110	80-120	
Toluene-D8	0.0506	0.0500	101	73-132	
4-Bromofluorobenzene	0.0519	0.0500	104	58-152	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922792

Sample: 469898-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 19:43

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0528	0.0500	106	74-126	
1,2-Dichloroethane-D4	0.0508	0.0500	102	80-120	
Toluene-D8	0.0520	0.0500	104	73-132	
4-Bromofluorobenzene	0.0525	0.0500	105	58-152	

Lab Batch #: 922766

Sample: 469898-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 20:02

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0432	0.0500	86	74-126	
1,2-Dichloroethane-D4	0.0420	0.0500	84	80-120	
Toluene-D8	0.0492	0.0500	98	73-132	
4-Bromofluorobenzene	0.0516	0.0500	103	58-152	

Lab Batch #: 922792

Sample: 469898-028 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 20:10

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0530	0.0500	106	74-126	
1,2-Dichloroethane-D4	0.0501	0.0500	100	80-120	
Toluene-D8	0.0522	0.0500	104	73-132	
4-Bromofluorobenzene	0.0530	0.0500	106	58-152	

Lab Batch #: 922766

Sample: 469898-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 20:27

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0539	0.0500	108	74-126	
1,2-Dichloroethane-D4	0.0605	0.0500	121	80-120	**
Toluene-D8	0.0511	0.0500	102	73-132	
4-Bromofluorobenzene	0.0510	0.0500	102	58-152	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922792

Sample: 469898-029 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 20:35

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0567	0.0500	113	74-126	
1,2-Dichloroethane-D4	0.0573	0.0500	115	80-120	
Toluene-D8	0.0502	0.0500	100	73-132	
4-Bromofluorobenzene	0.0567	0.0500	113	58-152	

Lab Batch #: 922792

Sample: 469898-030 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 21:02

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0488	0.0500	98	74-126	
1,2-Dichloroethane-D4	0.0512	0.0500	102	80-120	
Toluene-D8	0.0530	0.0500	106	73-132	
4-Bromofluorobenzene	0.0533	0.0500	107	58-152	

Lab Batch #: 922766

Sample: 469898-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 21:18

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0497	0.0500	99	74-126	
1,2-Dichloroethane-D4	0.0534	0.0500	107	80-120	
Toluene-D8	0.0492	0.0500	98	73-132	
4-Bromofluorobenzene	0.0522	0.0500	104	58-152	

Lab Batch #: 922792

Sample: 469898-031 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 21:28

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0571	0.0500	114	74-126	
1,2-Dichloroethane-D4	0.0575	0.0500	115	80-120	
Toluene-D8	0.0503	0.0500	101	73-132	
4-Bromofluorobenzene	0.0502	0.0500	100	58-152	

* 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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922766

Sample: 469898-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 21:43

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0518	0.0500	104	74-126	
1,2-Dichloroethane-D4	0.0526	0.0500	105	80-120	
Toluene-D8	0.0520	0.0500	104	73-132	
4-Bromofluorobenzene	0.0497	0.0500	99	58-152	

Lab Batch #: 922792

Sample: 469898-032 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 21:54

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0533	0.0500	107	74-126	
1,2-Dichloroethane-D4	0.0510	0.0500	102	80-120	
Toluene-D8	0.0514	0.0500	103	73-132	
4-Bromofluorobenzene	0.0540	0.0500	108	58-152	

Lab Batch #: 922766

Sample: 469898-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 22:08

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0435	0.0500	87	74-126	
1,2-Dichloroethane-D4	0.0506	0.0500	101	80-120	
Toluene-D8	0.0509	0.0500	102	73-132	
4-Bromofluorobenzene	0.0519	0.0500	104	58-152	

Lab Batch #: 922792

Sample: 469898-033 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 22:20

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0583	0.0500	117	74-126	
1,2-Dichloroethane-D4	0.0610	0.0500	122	80-120	**
Toluene-D8	0.0503	0.0500	101	73-132	
4-Bromofluorobenzene	0.0536	0.0500	107	58-152	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922766

Sample: 469898-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 22:33

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0525	0.0500	105	74-126	
1,2-Dichloroethane-D4	0.0523	0.0500	105	80-120	
Toluene-D8	0.0517	0.0500	103	73-132	
4-Bromofluorobenzene	0.0495	0.0500	99	58-152	

Lab Batch #: 922792

Sample: 469898-034 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 22:46

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0531	0.0500	106	74-126	
1,2-Dichloroethane-D4	0.0542	0.0500	108	80-120	
Toluene-D8	0.0527	0.0500	105	73-132	
4-Bromofluorobenzene	0.0542	0.0500	108	58-152	

Lab Batch #: 922766

Sample: 469898-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 22:59

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0484	0.0500	97	74-126	
1,2-Dichloroethane-D4	0.0560	0.0500	112	80-120	
Toluene-D8	0.0539	0.0500	108	73-132	
4-Bromofluorobenzene	0.0539	0.0500	108	58-152	

Lab Batch #: 922766

Sample: 469898-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 23:24

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0513	0.0500	103	74-126	
1,2-Dichloroethane-D4	0.0516	0.0500	103	80-120	
Toluene-D8	0.0520	0.0500	104	73-132	
4-Bromofluorobenzene	0.0514	0.0500	103	58-152	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922766

Sample: 469898-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 23:49

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0540	0.0500	108	74-126	
1,2-Dichloroethane-D4	0.0549	0.0500	110	80-120	
Toluene-D8	0.0524	0.0500	105	73-132	
4-Bromofluorobenzene	0.0516	0.0500	103	58-152	

Lab Batch #: 922766

Sample: 469898-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/15/13 00:15

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0523	0.0500	105	74-126	
1,2-Dichloroethane-D4	0.0535	0.0500	107	80-120	
Toluene-D8	0.0517	0.0500	103	73-132	
4-Bromofluorobenzene	0.0488	0.0500	98	58-152	

Lab Batch #: 922766

Sample: 469898-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/15/13 01:05

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0517	0.0500	103	74-126	
1,2-Dichloroethane-D4	0.0515	0.0500	103	80-120	
Toluene-D8	0.0568	0.0500	114	73-132	
4-Bromofluorobenzene	0.0650	0.0500	130	58-152	

Lab Batch #: 922795

Sample: 469898-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 12:53

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0506	0.0500	101	74-126	
1,2-Dichloroethane-D4	0.0459	0.0500	92	80-120	
Toluene-D8	0.0485	0.0500	97	73-132	
4-Bromofluorobenzene	0.0523	0.0500	105	58-152	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922799

Sample: 469898-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 13:17

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0521	0.0500	104	74-126	
1,2-Dichloroethane-D4	0.0483	0.0500	97	80-120	
Toluene-D8	0.0542	0.0500	108	73-132	
4-Bromofluorobenzene	0.0762	0.0500	152	58-152	

Lab Batch #: 922795

Sample: 469898-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 13:18

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0539	0.0500	108	74-126	
1,2-Dichloroethane-D4	0.0551	0.0500	110	80-120	
Toluene-D8	0.0501	0.0500	100	73-132	
4-Bromofluorobenzene	0.0633	0.0500	127	58-152	

Lab Batch #: 922799

Sample: 469898-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 13:42

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0524	0.0500	105	74-126	
1,2-Dichloroethane-D4	0.0568	0.0500	114	80-120	
Toluene-D8	0.0559	0.0500	112	73-132	
4-Bromofluorobenzene	0.0664	0.0500	133	58-152	

Lab Batch #: 922799

Sample: 469898-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 14:08

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0513	0.0500	103	74-126	
1,2-Dichloroethane-D4	0.0530	0.0500	106	80-120	
Toluene-D8	0.0551	0.0500	110	73-132	
4-Bromofluorobenzene	0.0565	0.0500	113	58-152	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922795

Sample: 469898-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 14:09

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0526	0.0500	105	74-126	
1,2-Dichloroethane-D4	0.0584	0.0500	117	80-120	
Toluene-D8	0.0491	0.0500	98	73-132	
4-Bromofluorobenzene	0.0719	0.0500	144	58-152	

Lab Batch #: 922799

Sample: 469898-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 14:34

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0516	0.0500	103	74-126	
1,2-Dichloroethane-D4	0.0535	0.0500	107	80-120	
Toluene-D8	0.0513	0.0500	103	73-132	
4-Bromofluorobenzene	0.0675	0.0500	135	58-152	

Lab Batch #: 922795

Sample: 469898-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 14:34

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0495	0.0500	99	74-126	
1,2-Dichloroethane-D4	0.0573	0.0500	115	80-120	
Toluene-D8	0.0551	0.0500	110	73-132	
4-Bromofluorobenzene	0.0711	0.0500	142	58-152	

Lab Batch #: 922643

Sample: 643753-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/12/13 12:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	51.7	50.0	103	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922646

Sample: 643755-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/13/13 01:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.5	100	93	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 922766

Sample: 643876-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/14/13 15:00

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0490	0.0500	98	74-126	
1,2-Dichloroethane-D4	0.0449	0.0500	90	80-120	
Toluene-D8	0.0488	0.0500	98	73-132	
4-Bromofluorobenzene	0.0521	0.0500	104	58-152	

Lab Batch #: 922792

Sample: 643892-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/14/13 15:01

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0483	0.0500	97	74-126	
1,2-Dichloroethane-D4	0.0470	0.0500	94	80-120	
Toluene-D8	0.0502	0.0500	100	73-132	
4-Bromofluorobenzene	0.0524	0.0500	105	58-152	

Lab Batch #: 922795

Sample: 643897-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/16/13 12:01

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0510	0.0500	102	74-126	
1,2-Dichloroethane-D4	0.0522	0.0500	104	80-120	
Toluene-D8	0.0470	0.0500	94	73-132	
4-Bromofluorobenzene	0.0531	0.0500	106	58-152	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922799

Sample: 643900-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/16/13 12:50

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0578	0.0500	116	74-126	
1,2-Dichloroethane-D4	0.0561	0.0500	112	80-120	
Toluene-D8	0.0539	0.0500	108	73-132	
4-Bromofluorobenzene	0.0561	0.0500	112	58-152	

Lab Batch #: 922643

Sample: 643753-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/12/13 11:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	52.1	50.0	104	70-135	

Lab Batch #: 922646

Sample: 643755-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/13/13 00:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	54.8	50.0	110	70-135	

Lab Batch #: 922766

Sample: 643876-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/14/13 14:06

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0494	0.0500	99	74-126	
1,2-Dichloroethane-D4	0.0461	0.0500	92	80-120	
Toluene-D8	0.0494	0.0500	99	73-132	
4-Bromofluorobenzene	0.0494	0.0500	99	58-152	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922792

Sample: 643892-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/14/13 14:09

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0481	0.0500	96	74-126	
1,2-Dichloroethane-D4	0.0462	0.0500	92	80-120	
Toluene-D8	0.0483	0.0500	97	73-132	
4-Bromofluorobenzene	0.0496	0.0500	99	58-152	

Lab Batch #: 922795

Sample: 643897-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/16/13 11:09

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0506	0.0500	101	74-126	
1,2-Dichloroethane-D4	0.0511	0.0500	102	80-120	
Toluene-D8	0.0479	0.0500	96	73-132	
4-Bromofluorobenzene	0.0505	0.0500	101	58-152	

Lab Batch #: 922799

Sample: 643900-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/16/13 11:57

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0495	0.0500	99	74-126	
1,2-Dichloroethane-D4	0.0476	0.0500	95	80-120	
Toluene-D8	0.0495	0.0500	99	73-132	
4-Bromofluorobenzene	0.0498	0.0500	100	58-152	

Lab Batch #: 922643

Sample: 643753-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/12/13 11:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	46.9	50.0	94	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] = $100 * A / B$

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

Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922646

Sample: 643755-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/13/13 01:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

Lab Batch #: 922643

Sample: 469898-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 13:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	48.5	49.9	97	70-135	

Lab Batch #: 922646

Sample: 469898-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/13/13 02:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.9	117	70-135	
o-Terphenyl	35.1	50.0	70	70-135	

Lab Batch #: 922766

Sample: 469898-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 16:37

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0472	0.0500	94	74-126	
1,2-Dichloroethane-D4	0.0510	0.0500	102	80-120	
Toluene-D8	0.0494	0.0500	99	73-132	
4-Bromofluorobenzene	0.0525	0.0500	105	58-152	

* 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

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922792

Sample: 469898-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 16:38

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0534	0.0500	107	74-126	
1,2-Dichloroethane-D4	0.0536	0.0500	107	80-120	
Toluene-D8	0.0490	0.0500	98	73-132	
4-Bromofluorobenzene	0.0485	0.0500	97	58-152	

Lab Batch #: 922795

Sample: 469898-010 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 15:01

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0510	0.0500	102	74-126	
1,2-Dichloroethane-D4	0.0598	0.0500	120	80-120	
Toluene-D8	0.0531	0.0500	106	73-132	
4-Bromofluorobenzene	0.0685	0.0500	137	58-152	

Lab Batch #: 922799

Sample: 469898-018 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 15:01

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0499	0.0500	100	74-126	
1,2-Dichloroethane-D4	0.0484	0.0500	97	80-120	
Toluene-D8	0.0528	0.0500	106	73-132	
4-Bromofluorobenzene	0.0688	0.0500	138	58-152	

Lab Batch #: 922643

Sample: 469898-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/12/13 14:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	46.9	50.0	94	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Orders : 469898, 469898

Project ID:

Lab Batch #: 922766

Sample: 469898-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 17:03

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0488	0.0500	98	74-126	
1,2-Dichloroethane-D4	0.0498	0.0500	100	80-120	
Toluene-D8	0.0493	0.0500	99	73-132	
4-Bromofluorobenzene	0.0512	0.0500	102	58-152	

Lab Batch #: 922792

Sample: 469898-021 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/14/13 17:04

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0525	0.0500	105	74-126	
1,2-Dichloroethane-D4	0.0498	0.0500	100	80-120	
Toluene-D8	0.0486	0.0500	97	73-132	
4-Bromofluorobenzene	0.0490	0.0500	98	58-152	

Lab Batch #: 922795

Sample: 469898-010 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 15:27

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0508	0.0500	102	74-126	
1,2-Dichloroethane-D4	0.0599	0.0500	120	80-120	
Toluene-D8	0.0525	0.0500	105	73-132	
4-Bromofluorobenzene	0.0698	0.0500	140	58-152	

Lab Batch #: 922799

Sample: 469898-018 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/16/13 15:27

SURROGATE RECOVERY STUDY

BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Dibromofluoromethane	0.0509	0.0500	102	74-126	
1,2-Dichloroethane-D4	0.0472	0.0500	94	80-120	
Toluene-D8	0.0516	0.0500	103	73-132	
4-Bromofluorobenzene	0.0711	0.0500	142	58-152	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Order #: 469898

Project ID:

Lab Batch #: 922766

Sample: 643876-1-BKS

Matrix: Solid

Date Analyzed: 09/14/2013

Date Prepared: 09/14/2013

Analyst: ZHO

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

BTEX by SW 8260B	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Benzene	<0.00100	0 100	0.108	108	62-132	
Toluene	<0.00100	0 100	0.107	107	66-124	
Ethylbenzene	<0.00100	0 100	0.116	116	71-134	
m,p-Xylenes	<0.00200	0 200	0.226	113	69-128	
o-Xylene	<0.00100	0 100	0.112	112	72-131	

Lab Batch #: 922792

Sample: 643892-1-BKS

Matrix: Solid

Date Analyzed: 09/14/2013

Date Prepared: 09/14/2013

Analyst: SAD

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

BTEX by SW 8260B	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Benzene	<0.00100	0 100	0.117	117	62-132	
Toluene	<0.00100	0 100	0.117	117	66-124	
Ethylbenzene	<0.00100	0 100	0.120	120	71-134	
m,p-Xylenes	<0.00200	0 200	0.249	125	69-128	
o-Xylene	<0.00100	0 100	0.116	116	72-131	

Lab Batch #: 922795

Sample: 643897-1-BKS

Matrix: Solid

Date Analyzed: 09/16/2013

Date Prepared: 09/16/2013

Analyst: SAD

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

BTEX by SW 8260B	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Benzene	<0.00100	0 100	0.106	106	62-132	
Toluene	<0.00100	0 100	0.0974	97	66-124	
Ethylbenzene	<0.00100	0 100	0.113	113	71-134	
m,p-Xylenes	<0.00200	0 200	0.223	112	69-128	
o-Xylene	<0.00100	0 100	0.109	109	72-131	

Blank Spike Recovery [D] = 100*[C]/[B]

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

BRL - Below Reporting Limit



Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Order #: 469898

Project ID:

Lab Batch #: 922799

Sample: 643900-1-BKS

Matrix: Solid

Date Analyzed: 09/16/2013

Date Prepared: 09/16/2013

Analyst: SAD

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

BTEX by SW 8260B						
Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	<0.00100	0.100	0.110	110	62-132	
Toluene	<0.00100	0.100	0.109	109	66-124	
Ethylbenzene	<0.00100	0.100	0.111	111	71-134	
m,p-Xylenes	<0.00200	0.200	0.229	115	69-128	
o-Xylene	<0.00100	0.100	0.109	109	72-131	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

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

BRL - Below Reporting Limit

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Order #: 469898, 469898

Analyst: ARM

Date Prepared: 09/11/2013

Project ID:

Date Analyzed: 09/12/2013

Lab Batch ID: 922643

Sample: 643753-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	969	97	1000	862	86	12	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1040	104	1000	923	92	12	70-135	35	

Analyst: ARM

Date Prepared: 09/11/2013

Date Analyzed: 09/13/2013

Lab Batch ID: 922646

Sample: 643755-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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
Analytes											
C6 C12 Gasoline Range Hydrocarbons	<15.0	1000	940	94	1000	924	92	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1070	107	1000	1010	101	6	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: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Order #: 469898

Lab Batch #: 922646

Date Analyzed: 09/13/2013

Date Prepared: 09/11/2013

Project ID:

Analyst: ARM

QC- Sample ID: 469898-021 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

TPH by SW8015 Mod		MATRIX / MATRIX SPIKE RECOVERY STUDY				
Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R
C6-C12 Gasoline Range Hydrocarbons		<15.7	1050	985	94	70-135
C12-C28 Diesel Range Hydrocarbons		<15.7	1050	1050	100	70-135

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

3RL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Order #: 469898

Project ID:

Lab Batch ID: 922766

QC- Sample ID: 469898-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/14/2013

Date Prepared: 09/14/2013

Analyst: ZHO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00107	0.107	0.121	113	0.107	0.116	108	4	62-132	25	
Toluene	<0.00107	0.107	0.109	102	0.107	0.107	100	2	66-124	25	
Ethylbenzene	<0.00107	0.107	0.122	114	0.107	0.121	113	1	71-134	25	
m,p-Xylenes	<0.00214	0.214	0.238	111	0.213	0.237	111	0	69-128	25	
o-Xylene	<0.00107	0.107	0.114	107	0.107	0.114	107	0	72-131	25	

Lab Batch ID: 922792

QC- Sample ID: 469898-021 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/14/2013

Date Prepared: 09/14/2013

Analyst: SAD

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00210	0.210	0.223	106	0.210	0.215	102	4	62-132	25	
Toluene	<0.00210	0.210	0.216	103	0.210	0.209	100	3	66-124	25	
Ethylbenzene	<0.00210	0.210	0.224	107	0.210	0.217	103	3	71-134	25	
m,p-Xylenes	<0.00420	0.420	0.464	110	0.420	0.435	104	6	69-128	25	
o-Xylene	<0.00210	0.210	0.225	107	0.210	0.216	103	4	72-131	25	

Matrix Spike Percent Recovery $[D] = 100 \cdot (C-A)/B$
Relative Percent Difference $RPD = 200 \cdot |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \cdot (F-A)/E$

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: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Order #: 469898
Lab Batch ID: 922795
Date Analyzed: 09/16/2013
Reporting Units: mg/kg

Project ID:
QC- Sample ID: 469898-010 S Batch #: 1 Matrix: Soil
Date Prepared: 09/16/2013 Analyst: SAD

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260B		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		<0.00537	0.537	0.503	94	0.531	0.530	100	5	62-132	25	
Toluene		<0.00537	0.537	0.527	98	0.531	0.545	103	3	66-124	25	
Ethylbenzene		<0.00537	0.537	0.461	86	0.531	0.505	95	9	71-134	25	
m,p-Xylenes		<0.0107	1.07	0.897	84	1.06	0.955	90	6	69-128	25	
o-Xylene		<0.00537	0.537	0.445	83	0.531	0.462	87	4	72-131	25	

Lab Batch ID: 922799
Date Analyzed: 09/16/2013
Reporting Units: mg/kg

QC- Sample ID: 469898-018 S Batch #: 1 Matrix: Soil
Date Prepared: 09/16/2013 Analyst: SAD

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260B		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		<0.00103	0.103	0.115	112	0.104	0.116	112	1	62-132	25	
Toluene		0.00112	0.103	0.122	117	0.104	0.120	114	2	66-124	25	
Ethylbenzene		0.0199	0.103	0.126	103	0.104	0.127	103	1	71-134	25	
m,p-Xylenes		0.0362	0.206	0.248	103	0.208	0.246	101	1	69-128	25	
o-Xylene		0.0366	0.103	0.136	97	0.104	0.135	95	1	72-131	25	

Matrix Spike Percent Recovery $[D] = 100 \cdot (C-A)/B$
Relative Percent Difference $RPD = 200 \cdot |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \cdot (F-A)/E$

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: Chevron Grayburg 6-in Sec. 6 (Historical)



Work Order # : 469898

Lab Batch ID: 922643

Date Analyzed: 09/12/2013

Reporting Units: mg/kg

Project ID:

QC- Sample ID: 469898-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 09/11/2013

Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<16.0	1060	931	88	1070	968	90	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.0	1060	962	91	1070	1020	95	6	70-135	35	

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.

Project Name: Chevron Grayburg 6-in Sec. 6 (Historical)

Work Order #: 469898

Lab Batch #: 922451

Project ID:

Date Analyzed: 09/10/2013 16:00

Date Prepared: 09/10/2013

Analyst: WRU

QC- Sample ID: 469898-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	6.21	6.14	1	20	

Lab Batch #: 922551

Date Analyzed: 09/11/2013 10:45

Date Prepared: 09/11/2013

Analyst: WRU

QC- Sample ID: 470027-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	8.40	8.50	1	20	

Lab Batch #: 922553

Date Analyzed: 09/11/2013 12:51

Date Prepared: 09/11/2013

Analyst: WRU

QC- Sample ID: 469898-033 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	4.35	4.45	2	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



CHAIN OF CUSTODY RECORD

Page 1 of 4

Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

LAB W.O #:

Field billable Hrs :

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
PA Plastic Amber	PC Plastic Clear
PC Plastic Clear	
Other	

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal
40ml, 125 ml, 250 ml, 500 ml, 1L, Other

** Preservative Type Codes

A. None	E. HCL	I. Ice
B. HNO ₃	F. MeOH	J. MCAA
H ₂ SO ₄	G. Na ₂ S ₂ O ₃	K. ZnAc&NaOH
D. NaOH	H. NaHSO ₄	L. Asbc Acid&NaOH
O.		

* Matrix Type Codes

GW Ground Water	S. Soil/Sediment/Solid
WW Waste Water	W. Wipe
DW Drinking Water	A. Air
SW Surface Water	O. Oil
OW Ocean/Sea Water	T. Tissue
PL Product-Liquid	U. Urine
PS Product-Solid	B. Blood
SL Sludge	
Other	

Company: Basin Environmental Service Technologies, LLC		Phone: (575)396-2378
Address: 3100 Plains Hwy.		Fax: (575)396-1429
City: Lovington	State: NM	Zip: 88260
PM/Attn: Ben Arguijo	Email: bjarguijo@basinenr.com	
Project ID: Chevron Grayburg 8-Inch Sec. 6 (Historical) SRS Chevron Grayburg 6-Inch Historical		PO#: PAA-J. Henry
Invoice To: Jason Henry Plains All American		Quote #:
Sampler Signature:		Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A

TAT Work Days = D Need results by: Time: _____
Std (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

ANALYSES REQUESTED

Sample ID	Collect Date	Collect Time	Batch Code	Flow Rate (L/min)	Flow Rate (mL/min)	Flow Rate (mL/hr)	GC	GC										
							BTEX	TPH										
1	SB-2 @ 5'	9/3/13	1035	S		1	X	X										
2	SB-2 @ 30'	9/3/13	1100	S		1	X	X										
3	SB-3 @ 5'	9/3/13	1120	S		1	X	X										
4	SB-3 @ 25'	9/3/13	1140	S		1	X	X										
5	SB-4 @ 5'	9/3/13	1200	S		1	X	X										
6	SB-4 @ 25'	9/3/13	1220	S		1	X	X										
7	SB-5 @ 5'	9/3/13	1305	S		1	X	X										
8	SB-5 @ 20'	9/3/13	1320	S		1	X	X										
9	SB-5 @ 40'	9/3/13	1340	S		1	X	X										
0	SB-6 @ 5'	9/3/13	1405	S		1	X	X										

Lab Only:

REMARKS

Reg. Program / Chain-of-Custody		STATE for Certs & Regs		QA/QC Level & Certification		EDDs		COO & Labels		Coolers Temp °C		Lab Use Only		YES NO N/A	
CTLs	TRRP DW NPDES LPST DryCln	FL TX GA NC SC NJ PA OK LA	AL NM Other:	1 2 3 4 CLP AFCEE QAPP	ADAPT SEDD ERPIMS	Match Incomplete	Match Incomplete	1 2 3 6-7	1 2 3 6-7	1 2 3 6-7	1 2 3 6-7	Non-Conformances found?			
Other:				NELAC DoD-ELAP Other:	XLS Other:	Absent Unclear	Absent Unclear					Samples intact upon arrival?			
Relinquished by:		Affiliation:		Date:		Time:		Received by:		Affiliation:		Date:		Time:	
1		BasinEnv.		9/6/13		1315		Jenna Arguijo		BasinEnv.		9/6/13		1316	
2		BasinEnv.		9/6/13		1552		Parker Peters		MS		9-6-13		1552	
3															
4															

B&A Laboratories: Hobbs 575-392-7550 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

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



CHAIN OF CUSTODY RECORD

Page 2 of 4

Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

LAB W.O # :

Field billable Hrs :

* 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
PA	Plastic Amber	PC	Plastic Clear
PC	Plastic Clear		
Other			

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal
40ml, 125 ml, 250 ml, 500 ml, 1L, Other

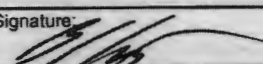
** Preservative Type Codes

A. None E. HCL I. Ice
B. HNO_3 F. MeOH J. MCAA
 H_2SO_4 G. $\text{Na}_2\text{S}_2\text{O}_3$ K. $\text{ZnAc}\&\text{NaOH}$
D. NaOH H. NaHSO_4 L. Asbc Acid&NaOH
O.

A Matrix Type Codes

GW	Ground Water	S	Soil/Sediment/Solid
WW	Waste Water	W	Wipe
DW	Drinking Water	A	Air
SW	Surface Water	O	Oil
OW	Ocean/Sea Water	T	Tissue
PL	Product-Liquid	U	Urine
PS	Product-Solid	B	Blood
SL	Sludge		
Other			

REMARKS

Company: Basin Environmental Service Technologies, LLC										Phone: (575)396-2378		TAT Work Days = D Need results by: _____ Time: _____																																																																																																																																																																																																																																			
Address: 3100 Plains Hwy.										Fax: (575)396-1429		Std (5-7D) 5Hrs 1D 2D 3D 4D <u>5D 7D</u> 10D 14D Other _____																																																																																																																																																																																																																																			
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Project ID: Chevron Grayburg 6-Inch Sec. 6 (Historical) SRS Chevron Grayburg 6-Inch Historical							PO#: PAA-J. Henry			GC			GC																																																																																																																																																																																																																																		
Invoice To: Jason Henry Plains All American							Quote #:			GC			GC																																																																																																																																																																																																																																		
Sampler Signature: 					Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A					GC			GC																																																																																																																																																																																																																																		
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B&A Laboratories: Hobbs 575-392-7550 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

C.O.C. Serial #

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LAB W.O # :

Field billable Hrs :

* Container Type Codes

VA	Vial Amber	ES	Encore Sampler
VC	Vial Clear	TS	TeraCore Sampler
VP	Vial Pre-preserved	AC	Air Canister
GA	Glass Amber	TB	Tedlar Bag
GC	Glass Clear	ZB	Zip Lock Bag
PA	Plastic Amber	PC	Plastic Clear
PC	Plastic Clear		
Other			

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal,
40ml, 125 ml, 250 ml, 500 ml, 1L, Other

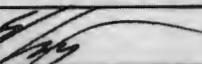
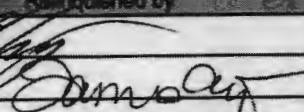
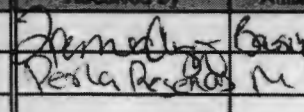
** Preservative Type Codes

A. None E. HCL I. Ice
B. HNO_3 F. MeOH J. MCAA
 H_2SO_4 G. $\text{Na}_2\text{S}_2\text{O}_3$ K. $\text{ZnAc}\&\text{NaOH}$
D. NaOH H. NaHSO_4 L. Asbic Acid&NaOH

^ Matrix Type Codes

GW	Ground Water	S	Soil/Sediment/Solid
WW	Waste Water	W	Wipe
DW	Drinking Water	A	Air
SW	Surface Water	O	Oil
OW	Ocean/Sea Water	T	Tissue
PL	Product-Liquid	U	Urine
PS	Product-Solid	B	Blood
SL	Sludge		
Other			

REMARKS

Company: Basin Environmental Service Technologies, LLC		Phone: (575)396-2378		TAT Work Days = D Need results by: _____ Time: _____		PC Plastic Clear Other: _____																	
Address: 3100 Plains Hwy.		Fax: (575)396-1429		Std (5-7D) 5Hrs 1D 2D 3D 4D <u>5D 7D</u> 10D 14D Other _____		Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal 40ml, 125 ml, 250 ml, 500 ml, 1L, Other _____																	
City: Lovington		State: NM Zip: 88260		ANALYSES REQUESTED		** Preservative Type Codes																	
PM/Attn: Ben Arguijo		Email: bjarguijo@basinenv.com		<table border="1"> <tr> <td>GC</td> <td>GC</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>I</td> <td>I</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		GC	GC							I	I							A. None E. HCL I. Ice B. HNO ₃ F. MeOH J. MCAA C. H ₂ SO ₄ G. Na ₂ S ₂ O ₃ K. ZnAc&NaOH D. NaOH H. NaHSO ₄ L. Asbc Acid&NaOH O. _____	
GC	GC																						
I	I																						
Project ID: Chevron Grayburg 6-Inch Sec. 6 (Historical) SRS Chevron Grayburg 6-Inch Historical		PO#: PAA-J. Henry						* Matrix Type Codes															
Invoice To: Jason Henry Plains All American		Quote #:						GW Ground Water S Soil/Sediment/Solid WW Waste Water W Wipe DW Drinking Water A Air SW Surface Water O Oil OW Ocean/Sea Water T Tissue PL Product-Liquid U Urine PS Product-Solid B Blood SL Sludge Other _____															
Sampler Signature: 		Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A						REMARKS															
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2	SB-13 @ 25'	9/4/13	1450	S		1	X X																
3	SB-14 @ 5'	9/4/13	1505	S		1	X X																
4	SB-14 @ 5'	9/4/13	1525	S		1	X X																
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Relinquished by		Affiliation		Date Time		Received by		Affiliation		Date Time		Samples intact upon arrival?		X									
		BasinEnv		9/6/13 1315				BasinEnv		9/6/13 1316		Received on Wet Ice?		X									
2		BasinEnv		9/6/13 1552		Pecola Resources		MS		9-6-13 1552		Labeled with proper preservatives?		X									
3												Received within holding time?		X									
4												Custody seals intact?		X									
												VOCs rec'd w/o headspace?		X									
												Proper containers used?		X									
												pH verified-acceptable, excl VOCs?		X									
												Received on time to meet HTs?		X									

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Final 1.000



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 09/06/2013 03:50:00 PM

Work Order #: 469898

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	6.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample 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 indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	N/A
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst: _____ PH Device/Lot#: _____

Checklist completed by: Candace James
Candace James

Date: 09/09/2013

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks

Date: 09/09/2013