# 3R - 427

# REPORT

# 10/15/2007



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SENT VIA EMAIL and 2007 OCT 18 AM 10 11 CERTIFIED MAIL No. 7099 3400 0018 4215 2452 RETURN RECEIPT REQUESTED Burlington Resources, A wholly owned subsidiary of ConocoPhillips

San Juan Business Unit P.O. Box 4289 Farmington, NM 87402-4289 (505) 326-9700

. And the second

October 15, 2007

Mr. Glenn Von Gonten Hydrologist New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

#### Re: El Paso #1A – Monitor Well Installation and Groundwater Sampling Report

Dear Mr. Von Gonten:

Attached is a copy of Burlington Resources' "Monitor Well Installation and Groundwater Sampling Report" for the El Paso #1A wellsite.

A temporary monitor well was installed at the subject wellsite. Soil and water samples were collected from this well and analyzed for TPH and BTEX constituents. None of the contaminants of concern analyzed for were above the regulatory limits set forth by either the NMOCD or the NMED. We request to plug the temporary monitor well and ask that no further action be required in regards to this incident.

If you have any questions or need additional information, please contact Gregg Wurtz at 505-326-9537.

Sincerely,

D. Johnson

Monica D. Johnson Sr. Environmental Scientist

Attachment: Monitor Well Installation and Groundwater Sampling Report

cc: Gregg Wurtz – ConocoPhillips Company – HSE Consultant Facility and Correspondence Files



### MONITOR WELL INSTALLATION AND GROUNDWATER SAMPLING REPORT

AT:

### BURLINGTON RESOURCES EL PASO #1A SEC 20 TWP 29N RNG 9W SAN JUAN COUNTY, NEW MEXICO

30-045-22778

For:

### MR. GREGG WURTZ CONOCOPHILLIPS 3401 EAST 30<sup>th</sup> Street Farmington, New Mexico 87401

### PROJECT NO. 92115-250 SEPTEMBER 2007

5796 U.S. HIGHWAY 64 • FARMINGTON, NM 87401 • (505) 632-0615

September 28, 2007

Project No. 92115-250

Mr. Gregg Wurtz ConocoPhillips 3401 East 30<sup>th</sup> Street Farmington, New Mexico 87401

ROTEC

OLUTIONS FOR A BETTER TOMORR

Phone: (505) 326-9537 Fax: (505) 599-4005

#### **RE: MONITOR WELL INSTALLATION AND GROUNDWATER SAMPLING REPORT**

Dear Mr. Wurtz:

Enclosed please find one (1) original of the report entitled, Monitor Well Installation and Groundwater Sampling Report. This report details the drilling, monitor well installation, and groundwater sampling for the El Paso #1A well site in San Juan County, New Mexico.

We appreciate the opportunity to be of service. If you should have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted, ENVIROTECH, INC.

Greg W. Crabtree, EIT

Greg W. Crabtree, EIT Environmental Engineer gcrabtree@envirotech-inc.com

Enclosure: One (1) original

Cc: Client file 92115

#### BURLINGTON RESOURCES DRILLING AND GROUNDWATER SAMPLING REPORT EL PASO #1A

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Section4: Field Notes

#### INTRODUCTION

Envirotech, Inc. has completed the installation of a temporary monitor well at the El Paso #1A well site in San Juan County, New Mexico; *see Figure 1, Vicinity Map*. The drilling was completed to assess the potential for groundwater contamination at the site. Contaminated soil was excavated from the sites in late February of 2007. Envirotech was not present during this portion of the project. Two samples were collected from the excavation and analyzed by Envirotech's Laboratory for Benzene, Ethylbenzene, Toluene and Total Xylenes (BTEX) via USEPA Method 8021B and Total Petroleum Hydrocarbons (TPH) via USEPA Method 8015. Results showed that all contaminants of concern analyzed, were below the most stringent NMOCD regulations. The analytical results are presented in *Section 1, Historical Analytical Results* and are also summarized in *Table 1, Summary of Analytical Results*. Water samples were not collected at the time of excavation.

#### DRILLING AND SOIL SAMPLING PERFORMED

On September 21, 2007 Envirotech personnel mobilized to the site to perform monitor well installation at the El Paso #1A well site. One (1) temporary monitor well was installed near the previously excavated area. A drawing of the area excavated was provided to Envirotech by Burlington and the placement of the monitor well was based on this drawing. A copy of this drawing is presented as *Figure 2*. Samples were taken every five (5) feet using a split spoon sampler. The samples were then analyzed with the use of an Organic Vapor Meter (OVM). A soil sample was also collected from the cuttings at the estimated soil water interface. A lithology log was completed on the boring and is included in *Section 2, Lithology Logs*. An updated site map with the estimated area of excavation and monitor well location was also completed and is presented as **Figure 3** in this document.

During the drilling process it appeared the soil water interface was at approximately 9.5-10 feet. The sample at this depth had the highest OVM at 15.5 ppm and was turned into the lab for analysis via USEPA Method 8015 for TPH and Method 8021B for BTEX. The sample was collected from the split spoon at a depth of 10 feet Below Ground Surface (BGS). All contaminants of concern from the analysis were below the most stringent OCD regulations of 100 ppm TPH, 10 ppm Benzene, and 50 ppm for Total BTEX. Laboratory Certificates are presented in *Section 3, Analytical Results* and summarized in *Table 1, Summary of Analytical Results*.

The aquifer in this area appears to be a perched aquifer with a shale layer acting as the aquitard. The perched aquifer is could be connected hydraulically to the aquifer associated with Largo Wash when the regional water table is high. The anticipated groundwater flow direction would therefore be to the West-Northwest following the flow of Largo wash.

#### **GROUNDWATER SAMPLING**

Envirotech returned to the site on the afternoon of September 21, 2007 to sample the well. Prior to sampling the well the water level was measured. The water level had come up to approximately seven (7) feet BGS. Three (3) well volumes were then bailed from the well using a new disposable bailer. Prior to sampling the temperature, conductivity, and pH was recorded; see Section4, Field Notes. A water sample was then collected in 40-mL VOA vials and capped headspace free. The samples were placed on ice and transported to Envirotech's laboratory for

BTEX analysis. All contaminants of concern were below the drinking water standards set forth by the NMED. Benzene was present in the water sample at 1.4 ppb which is below the 10 ppb regulatory standard. Laboratory Certificates are presented in *Section 3, Analytical Results* and summarized in *Table 1, Summary of Analytical Results*.

#### SUMMARY AND CONCLUSIONS

Envirotech has completed the installation of a temporary monitor well at the El Paso #1A well site. One temporary monitor well was completed to a depth of 10 feet BGS in the down gradient direction from the excavated area. Soil and water samples were collected from this well and analyzed at Envirotech's laboratory for TPH and BTEX constituents. None of the contaminants of concern analyzed for were above the regulatory limits set forth by either the NMOCD or the NMED. Envirotech recommends plugging of the temporary monitor well and a no further action determination be granted with regards to this incident.

#### STATEMENT OF LIMITATIONS

The undersigned has conducted this service at the above referenced site. This work has been conducted and reported in accordance with generally accepted professional practices in geology, engineering, environmental chemistry, and hydrogeology.

We appreciate the opportunity to be of service. Should you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully submitted,

ENVIROTECH, INC.

Greg Crabtree, EIT Environmental Engineer <u>gcrabtree@envirotech-ine.com</u>

**Reviewed By:** 

EDS

Kyle P. Kerr Chief Environmental Scientist/Manager NMCES #299 kpketr@envirotech-inc.com

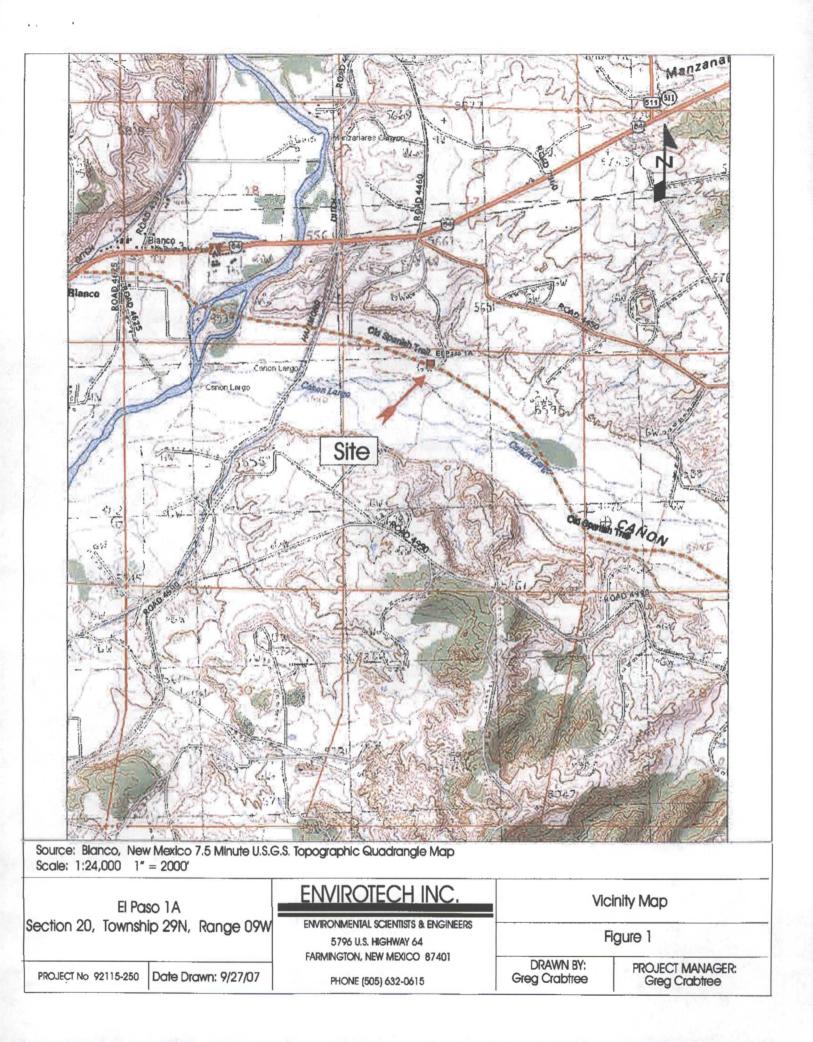
#### FIGURES

Figure 1, Vicinity Map

Figure 2, Burlington Site Map

• •

Figure 3, Site Map



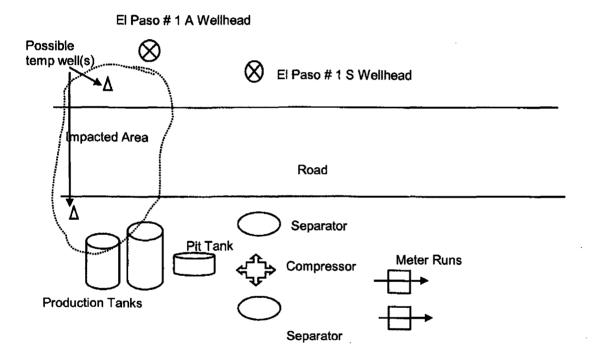
Burlington Resources El Paso # 1 A 500' FNL & 1840' FWL Sec. 20, Twn 29 N, Rng 9 W Lease # NM 0560422 36°43.0' & 107°48.3'

Surface Gradient

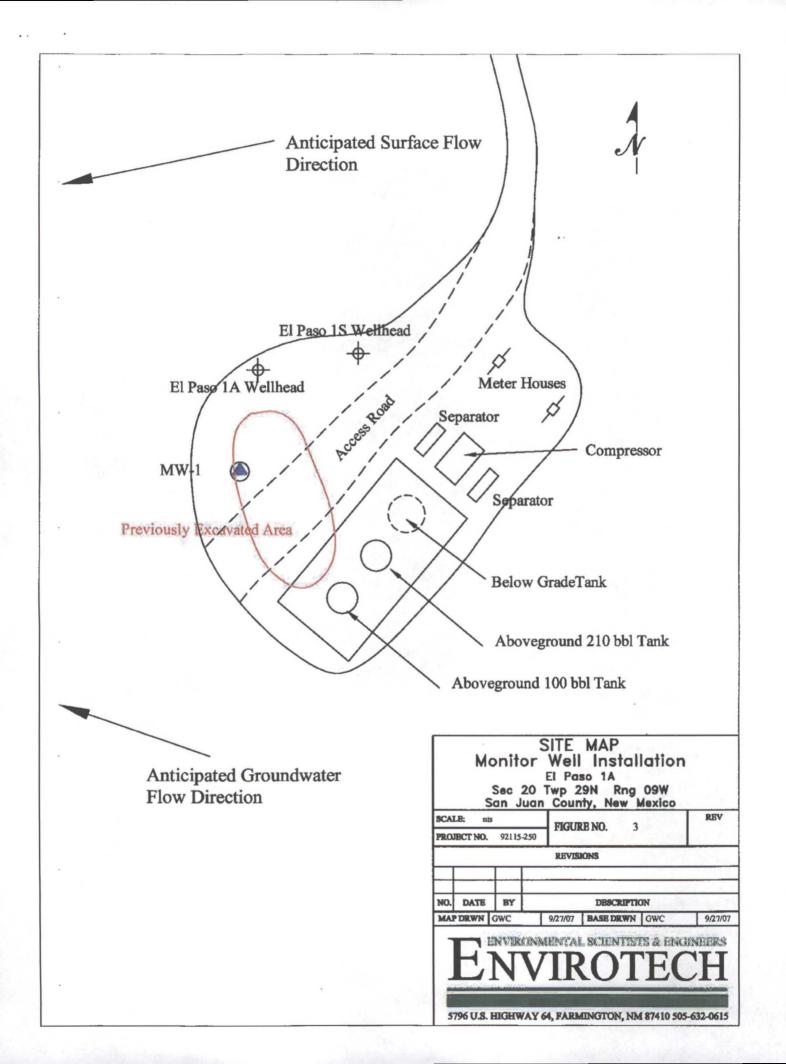
Diagram:

North

• • •



\* Please Note : Not to Scale



TABLES

Table 1:Summary of Analytical Results

Table 1: Summary of Analytical Results

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Soil Samples

				[ <b></b> -]	I
Total BTEX (ppm)	50	0.045	0.0022	0.069	
Benzene (ppm)	10	<b>UN</b>	QN	QN	
TPH (ppm)	100	QN	DN	3.2	
Date		2/27/2007	2/27/2007	9/21/2007	
Sample ID	<b>NMOCD Regulations</b>	SW corner @ 8'	4-wall com @ 6'	10' BGS	

Water Sample

۴,

Ethylebenzene (ppb) Total Xylenes (ppb)	750 620	6 47.8	
Ethyle			
Toluene (ppb)	750	15.2	
Benzene (ppb)	10	DN	
Datë		9/21/2007	
Sample ID	NMOCD Regulations	MW-1	

#### SECTION 1

#### Historical Analytical Results

#### EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Burlington	Project #:	92115-001-2133
Sample ID:	4 - Wali Comp @ 6'	Date Reported:	02-28-07
Laboratory Number:	40210	Date Sampled:	02-27-07
Chain of Custody No:	2133	Date Received:	02-27-07
Sample Matrix:	Soil	Date Extracted:	02-27-07
Preservative:	Cool	Date Analyzed:	02-28-07
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: El Paso 1S.

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EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

#### **Quality Assurance Report**

Client:	QA/QC		Project #:	• •	N/A
Sample ID:	02-28-07 QA/0	<b>3</b> C	Date Reported:		02-28-07
Laboratory Number:	40191		Date Sampled:		N/A
Sample Matrix:	Methylene Chlor	ride	Date Received:		N/A
Preservative:	N/A		Date Analyzed:		02-28-07
Condition:	N/A		Analysis Request	ted:	TPH
	Gal Date	LEADRE	CCal RES	% Difference	
Gasoline Range C5 - C10	07-11-05	1.6567E+003	1.6583E+003	0.10%	0 - 15%
Diesel Range C10 - C28	07-11-05	1.8753E+003	1.8791E+003	0.20%	0 - 15%
Blank Concx (mg/L=mg/Kg)	CONTRACTOR	Concentration	CRAMMAN CONTRACTOR	Detection	Ā
Gasoline Range C5 - C10	ALL ALL PROPERTY	ND		0.2	
Diesel Range C10 - C28		ND		0.1	
Total Petroleum Hydrocarbons		ND	v	0.2	
Total Petroleum Hydrocarbons	Sampler		Sc Difference	0.2	21
Total Petroleum Hydrocarbons	Samplaya	ND	0.0%	Sociepto Range	
Total Petroleum Hydrocarbons	States and the second second second second	Duplicate	0.0% 0.0% 2.2%		
Total Petroleum Hydrocarbons Duplicate Conc. (mg/Kg) Gasoline Range C5 - C10 Diesel Range C10 - C28	1.0	1.0 4.5	0.0% 2.2%	Cept Rang 0 - 30% 0 - 30%	
Total Petroleum Hydrocarbons Dublicate Conc. (rng/Kg) Gasoline Range C5 - C10 Diesel Range C10 - C28 Spike Conc. (rng/Kg)	1.0 4.6	1.0 1.5 Spike/Added	0.0% 2.2%	Scept Rang 0 - 30% 0 - 30% 2% <u>Recovery</u>	Miccepil/Range
Total Petroleum Hydrocarbons Duplicate Conc. (mg/Kg) Gasoline Range C5 - C10 Diesel Range C10 - C28	1.0	1.0 4.5	0.0% 2.2%	Cept Rang 0 - 30% 0 - 30%	75 - 125% 75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments:

QA/QC for Samples 40191, 40193 - 40194 and 40210.

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#### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Burllington	Project #:	92115-001-2133
Sample ID:	4 - Wall Comp @ 6'	Date Reported:	02-28-07
Laboratory Number:	40210	Date Sampled:	02-27-07
Chain of Custody:	2133	Date Received:	02-27-07
Sample Matrix:	Soil	Date Analyzed:	02-28-07
Preservative:	Cool	Date Extracted:	02-27-07
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)	
Benzene	ND	1.8	
Toluene	ND	1.7	
Ethylbenzene	2.2	1.5	
p,m-Xylene	ND	2.2	
o-Xylene	ND	1.0	
Total BTEX	2.2		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	97.0 %
	1,4-difluorobenzene	97.0 %
4	Bromochlorobenzene	97.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: El Paso 1S.

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#### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Sample ID:	N/A 02-28-BTEX QA/QC		roject #: late Reported:		N/A 02-28-07
Laboratory Number:	40189		ate Sampled:		N/A
Sample Matrix:	Soll		ate Received:		N/A
Preservative:	N/A	_	ate Analyzed:		02-28-07
Condition:	N/A		nalysis:	• ·	BTEX
Calibration and	ICAI REA	C.CaliRi S Accept Range		Blank Conce	Delect
nen die een die gegeleerste konstruktie <del>die die die die die die die die die die </del>					
Benzene		2.5958E+007	0.2%	ND	0.2
Toluene		3.6296E+007	0.2%	ND	0.2
Ethylbenzene		1.9221E+007	0.2%	ND	0.2
p,m-Xylene		7.6866E+007	0.2%	ND	0.2
	3.2464E+007	3.2529E+007	0.2%	ND	0.1
o-Xylene Dublicate Conce (ug/Kg)	Tranki Sample	Duplicates		Accept Range	Oetec Aulmit
	29.6 18.0 33.4 137 51.4	28.6 17.0 32.4 136 50.4	3.4% 3.4% 5.6% 3.0% 0.7% 1.9%	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	1.8 1.7 1.5 2.2 1.0
Duplicate Conc. (ug/Kg) Benzene Toluene Ethylbenzene p.m-Xylene	29.6 18.0 33.4 137	28.6 17.0 32.4 136 50.4	3.4% 5.6% 3.0% 0.7% 1.9%	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	1.8 1.7 1.5 2.2
Duplicate Conc (Ug/Kg) Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene Spike Conc: (Ug/Kg)	29.6 18.0 33.4 137 51.4 \$\$mole: A 29.6	28.6 17.0 32.4 136 50.4	3.4% 5.6% 3.0% 0.7% 1.9%	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	1.8 1.7 1.5 2.2 1.0
Duplicate Conc. (ug/Kg) Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene SpiketConc: (ug/Kg).	29.6 18.0 33.4 137 51.4	28.6 17.0 32.4 136 50.4	3.4% 5.6% 3.0% 0.7% 1.9%	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	1.8 1.7 1.5 2.2 1.0
Duplicate Conc (Ug/Kg) Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene Spike Conc: (Ug/Kg)	29.6 18.0 33.4 137 51.4 \$\$mole: A 29.6	28.6 17.0 32.4 136 50.4	3.4% 5.6% 3.0% 0.7% 1.9%	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	1.8 1.7 1.5 2.2 1.0 Accept Range 39 - 150
Duplicate Conc (Ug/Kg) Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene SpiketConc: (Ug/Kg)	29.6 18.0 33.4 137 51.4 Samole 1 29.6 18.0	28.6 17.0 32.4 136 50.4	3.4% 5.6% 3.0% 0.7% 1.9% <u>PRecisampla</u> . 79.3 65.0	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	1.8 1.7 1.5 2.2 1.0 <u>Accept Ranges</u> 39 - 150 46 - 148

ND - Parameter not detected at the stated detection limit.

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996. Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 40189 - 40191, 40193 - 40194 and 40210.

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c) on-zeo (cnc)	Farmington, New Mexico 87401	5796 U.S. Highway 64		FOVIROTECH INC	Relinquished by: (Signature)	Relinquished by: (Signature)	Relinquished by TSignature) Relinquished by TSignature) Received by: (Signature) Relinquished by TSignature) Relinquished by TSignature)					() () () () () () () () () () () () () (	4-WM 2/200 (020 40210 Son/ 1 & X	1/2 Da/A/d augs-oztan	51-2133	Client Aproject Name Project Location E) Fach 15
		Received Intact		Sample Receipt			1 Worten									ANALYSIS / PARAMETERS
	5	5	Y N N/A	leceipt			Date Time $2/27/07/035$	-							Remarks	

CHAIN OF CUSTODY RECORD

2133



#### EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

		• ·	
Client:	<b>Burlington Resources</b>	Project #:	92115-001-2123
Sample ID:	SW Corner @ 8'	Date Reported:	02-26-07
Laboratory Number:	40182	Date Sampled:	02-26-07
Chain of Custody No:	2123	Date Received:	02-26-07
Sample Matrix:	Soil	Date Extracted:	02-26-07
Preservative:	Cool	Date Analyzed:	02-26-07
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: El Paso 1S Spill.

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

#### EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

#### **Quality Assurance Report**

Client:	QA/QC		Project #:	• ·	N/A
Sample ID:	02-26-07 QA/C	C	Date Reported:		02-26-07
Laboratory Number:	40174		Date Sampled:		N/A
Sample Matrix:	Methylene Chlor	ide	Date Received:		N/A
Preservative:	N/A		Date Analyzed:		02-26-07
Condition:	N/A		Analysis Reques	ted:	ТРН
		Cal RF	Cal RE	% Difference	Accepte Range
Gasoline Range C5 - C10	07-11-05	1.3013E+003	1.3026E+003	0.10%	0 - 15%
Diesel Range C10 - C28	07-11-05	1.4456E+003	1.4485E+003	0.20%	0 - 15%
•					
Blank Concelling III Small	A Party of the second s		to all a rear		20
			<u>k</u>	Detection Ult	
Gasoline Range C5 - C10	9)	ND		0.2	
Blank Conc. (mg/L-mg/K Gasoline Range C5 - C10 Diesel Range C10 - C28 Total Petroleum Hydrocarbons		ND ND		0.2 0.1	
Gasoline Range C5 - C10 Diesel Range C10 - C28		ND		0.2	B
Gasoline Range <sup>-</sup> C5 - C10 Diesel Range C10 - C28 Total Petroleum Hydrocarbons Duplicate Conc. (mg/K9)		ND ND	W. Difference	0.2 0.1	
Gasoline Range <sup>°</sup> C5 - C10 Diesel Range <sup>°</sup> C10 - C28 Total Petroleum Hydrocarbons Duplicate <sup>°</sup> Conc <sup>°</sup> (mg/Kg)		ND ND ND		0.2 0.1 0.2	
Gasoline Range C5 - C10	Sample	ND ND ND	%s!Difference	0.2 0.1 0.2 Accept/Range	
Gasoline Range C5 - C10 Diesel Range C10 - C28 Total Petroleum Hydrocarbons Duplicate Conc: (mg/kg) Gasoline Range C5 - C10 Diesel Range C10 - C28	47.9	ND ND ND DUBICATE 47.6 121	0.6% 0.6%	0.2 0.1 0.2 Accept/Range 0 - 30% 0 - 30%	Accept Ranca
Gasoline Range C5 - C10 Diesel Range C10 - C28 Total Petroleum Hydrocarbons Duplicate Conc. (mg/Kg) Gasoline Range C5 - C10	Sample 47.9 122	ND ND ND DUSICate 47.6	0.6% 0.6%	0.2 0.1 0.2 Accept: Range 0 - 30%	Accept Rencie 75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments:

QA/QC for Samples 40174 - 40180 and 40182

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#### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Burlington Resources	Project #:	92115-001-2123
Sample ID:	SW Corner @ 8'	Date Reported:	02-26-07
Laboratory Number:	40182	Date Sampled:	02-26-07
Chain of Custody:	2123	Date Received:	02-26-07
Sample Matrix:	Soil	Date Analyzed:	02-26-07
Preservative:	Cool	Date Extracted:	02-26-07
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)	
Benzene	ND	1.8	
Toluene	6.1	1.7	
Ethylbenzene	ND	1.5	
p,m-Xylene	21.8	2.2	
o-Xylene	17.8	1.0	
Total BTEX	45.7		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	99.0 %
	1,4-difluorobenzene	99.0 %
	Bromochlorobenzene	99.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: El Paso 1S Spill.

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EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Sample ID: Laboratory Number:	N/A 02-26-BTEX QA/Q 40174	C [	Project #: Date Reported: Date Sampled:		N/A 02-26-07 N/A
Sample Matrix:	Soil	0	Date Received:		N/A
Preservative:	N/A		Date Analyzed:	• /	02-26-07
Condition:	N/A	A	Analysis:	-	BTEX
Calibration and		ST 171 177 33 8 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	%Dim	Blank	Detecta
Detection Limits (Ug/L)	and a fair is define to be the set	Accept.Rang	e.0≈15%	Conc.	
Benzene	3.1113E+007	3.1176E+007	0.2%	ND	0.2
Toluene	5.0741E+007	5.0843E+007	0.2%	ND	0.2
Ethylbenzene	2.3975E+007	2.4023E+007	0.2%	ND	0.2
p,m-Xylene	1.0385E+008	1.0406E+008	0.2%	ND	0.2
o-Xylene	4.6898E+007	4.6992E+007	0.2%	ND	0.1
	58.4	DUDIIceter	ىيە مىمىرىمىيەتىكى بىلىكى يەزىرىنى يېرىكى چەنلەشتەرمى يېچىمىرىمىيە بىلىكى بىلىكى يەزىرىنى يېرىكى چەنلەشتەر بىلى		1.8
Dublicate Conc (ug/(g)) Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene	WARDER_CARDER CONTRACTOR CARDENESS CONTRACT STUDIES CONTRACT STUDIES CONTRACT STUDIES CONTRACT STUDIES CON		1.7% 1.3% 1.1% 0.0% 2.3%	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	1.8 1.7 1.5 2.2 1.0
Benzene Toluene Ethylbenzene p,m-Xylene	58.4 80.0 90.0 900 130	57.4 79.0 89.0 900 127	1.7% 1.3% 1.1% 0.0% 2.3%	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	1.8 1.7 1.5 2.2
Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene Spike/Conc.(Ud/Kd)	58.4 80.0 90.0 900 130	57.4 79.0 89.0 900 127 Amcunt Spiked 5	1.7% 1.3% 1.1% 0.0% 2.3% Spiked Samples	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	1.8 1.7 1.5 2.2 1.0
Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene Spike/Concx(Ug/Kg) Benzene Toluene	58.4 80.0 90.0 900 130 *********************************	57.4 79.0 89.0 900 127 Amcuni Spiked	1.7% 1.3% 1.1% 0.0% 2.3%	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30% (35/Recovery) 99.7% 92.3%	1.8 1.7 1.5 2.2 1.0
Benzene Toluene Ethylbenzene p.m-Xylene o-Xylene SpikeConc (ug/kg) Benzene Toluene Ethylbenzene	58.4 80.0 90.0 900 130	57.4 79.0 89.0 900 127 Amcunt Spiked 5	1.7% 1.3% 1.1% 0.0% 2.3% Spiked Samples	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	1.8 1.7 1.5 2.2 1.0 <u>XAcceptiRange</u> 39 - 150
Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene	58.4 80.0 90.0 900 130 *********************************	57.4 79.0 89.0 900 127 <u>Amount Spiked</u> 3 50.0 50.0	1.7% 1.3% 1.1% 0.0% 2.3% Spiked Samples 108 120	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30% (35/Recovery) 99.7% 92.3%	1.8 1.7 1.5 2.2 1.0 <u>XACCEPURANGE</u> 39 - 150 46 - 148

ND - Parameter not detected at the stated detection limit.

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996. Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using

Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

**Comments:** 

QA/QC for Samples 40174 - 40178 and 40182

notes Analyst

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Review

	CHAIN O	OF CU	STO	NY RE	F CUSTODY RECORD	Δ	2123	23	
Client / Project Name Burlington Resources	Project Location $E/Pase$	SI			ANALY	ANALYSIS / PARAMETERS	METERS		· ·
Sampler: F. McDenald	Client No. 92115-001	001-2123	30 . everie		pZt			Remarks	
Sample No./ Sample Sample Identification Date Time	Lab Number	Sample Matrix		H9T 2108 H9T					
2/24/07 9	40182	Soile		2			Spill		
							-		
	-								
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Relinquished by: (Signature)			Received by	Received by: (Signature)				   	
481-0000		ENVIROTECH INC	TEC				Sample Receipt	Receipt	
	-,							Z >	N/A
		5796 U.S. Highway 64 Farmington, New Mexico 87401	5796 U.S. Highway 64 nington, New Mexico 81	r 64 o 87401			Received Intact	7/	
		(202)	(505) 632-0615				Cool - Ice/Blue Ice	7	
							ø	san juan reproduction 578-129	<b>578-129</b>

#### SECTION 2

Lithology Log

[			AB		GRA	DE WELL COMPL	FTION			
	LOCKING PLUG					/ LITHOLOGY L		MW _	1	
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6	REF I		TIME SAMPL	E HEADSPA	CE LITHOLO	p.	SAMPLE DESCRIPT	TON		DEPTH
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	- TOP GENT			344						]
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		0915	SS	0.7		sand/silt, slightl	v moist light l	orown no odor		5
<sub>2</sub>							,			
-	U NON PAG RUBH				×/25	WL on 9/27/07 at 1354				]
			- c	0.9		sand/silt, dark gray/l	hlant wet slig	bt adar		-
·		0930	SS	15.5		shale, dark gray, we				
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				<b> </b> -						]
4' 8"						· · · · · · · · · · · · · · · · · · ·				-
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· .										
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10'	TOTAL DEPTH									
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	1/2 Sks Bentor Sks Class	nite Chips "A" Cement			-+					-
	Sks Quicko	crete						·····		
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DR	ILLER: Danny Pa Robert Sa	dilla		SIZE:				El Paso #1A		—
	LPER: Robert Sa	Envirotech				EPTH: <u>10</u> <u>9/21/07</u>			/01/07	—
	ILLING COMPANY			E STAR IPI FR T		Split Spoon/Cuttings		PLETED9		—
							VLVLVVIV.			
		n Resources aso #1A		FO		OTECH INC.		<b>N #XX7</b> 1		
		29N Rng 9W	r					<b>MW-</b> 1		
	REVISIONS				5790	AL SCIENTISTS & ENGINEERS 6 U.S. HIGHWAY 64	DATE 9/27/0	07 drawn	GWC P/	-GF 1
BY BY	DATE DATE	JOB <u># 9211</u>	<u>  5-2</u> 50	F.	ARMINGT	ON, NEW MEXICO 87401 505) 632-0615 AbvGridisg.org	SCALE			

#### **SECTION 3**

Analytical Results

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#### EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Burlington	Project #:	92115-250
Sample ID:	10' BGS	Date Reported:	09-25-07
Laboratory Number:	43139	Date Sampled:	09-21-07
Chain of Custody No:	3420	Date Received:	09-21-07
Sample Matrix:	Soil	Date Extracted:	09-24-07
Preservative:	Cool	Date Analyzed:	09-25-07
Condition:	Cool & Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	0.7	0.2
Diesel Range (C10 - C28)	2.5	0.1
Total Petroleum Hydrocarbons	3.2	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Elpaso #1A

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PRACTICAL SOLUTIONS FORMA BETTERTOMORROW

#### EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

#### **Quality Assurance Report**

Client:	QA/QC		Project #:		N/A
Sample ID:	09-25-07 QA/0		Date Reported:	• ·	09-25-07
Laboratory Number:	43138		Date Sampled:		N/A
Sample Matrix:	Methylene Chlor	ide	Date Sampled.		N/A
Preservative:	N/A	100	Date Analyzed:		09-25-07
Condition:	N/A		Analysis Reque		09-23-07 TPH
	l-CallDate		CCARRE	%Difference:	Accept: Range
Gasoline Range C5 - C10	05-07-07	9.9960E+002	1.0000E+003	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	9.9960E+002	1.0000E+003	0.04%	0 - 15%
-Blank Conc. (mg/L=mg/Kg)		Concentration		Detection Limit	
Gasoline Range C5 - C10	-	ND		0.2	r.
Diesel Range C10 - C28		ND		0.1	
Total Petroleum Hydrocarbons		ND		0.2	
Duplicate Conc. (mg/Kg)	Sâmple	Duplicatey	% Difference	Accept#Range	
Gasoline Range C5 - C10	25.6	25.4	0.8%	0 - 30%	٢
Diesel Range C10 - C28	8.4	8.4	0.0%	0 - 30%	
Spike/Conc. (mg/Kg)	Sample	Spike Added	Spike Result	%Recovery	Accept: Range
Gasoline Range C5 - C10	25.6	250	275	99.9%	75 - 125%
Diesel Range C10 - C28	8.4	250	258	99.9%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments:

QA/QC for Samples 43138 - 43139, 43141

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

#### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

4-2 -

Client:	Burlington	Project #:	92115-250
Sample ID:	10' BGS	Date Reported:	09-25-07
Laboratory Number:	<b>43</b> 139	Date Sampled:	09-21-07
Chain of Custody:	3420	Date Received:	09-21-07
Sample Matrix:	Soil	Date Analyzed:	09-25-07
Preservative:	Cool	Date Extracted:	09-24-07
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)	
Benzene	ND	0.9	
Toluene	15.2	1.0	
Ethylbenzene	6.0	1.0	
p,m-Xylene	37.7	1.2	
o-Xylene	10.1	0. <del>9</del>	
Total BTEX	69.0		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Elpaso #1A

Look Analyst

Daeten  $-\infty$ Review

#### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A		Project #:	,	V/A			
Sample ID:	09-25-BTEX QA/QC		Date Reported:	-	₩A )9-25-07			
Laboratory Number:	43138	•	Date Sampled:		N/A			
Sample Matrix:	Soil		Date Received:					
Preservative:	N/A		Date Analyzed:	-	N/A 09-25-07			
Condition:	N/A		Analysis:	4 •	BTEX			
				and a company contraction and a contraction of the second second second second second second second second second				
Callbration and Detection Limits	Reguines	G-Gal RF-	4%Dm ge10:-415%	Blank Conci ++-	Detect.			
Benzene	1.2169E+008	1.2194E+008	0.2%	ND	0.1			
Toluene	1.0804E+008	1.0825E+008	0.2%	ND	0.1			
Ethylbenzene	8.5790E+007	8.5962E+007	0.2%	ND	0.1			
p, <b>m-Xy</b> lene	1.6633E+008	1.6666E+008	0.2%	ND	0.1			
o-Xylene	7.9506E+007	7.9666E+007	0.2%	ND	0.1			
Duplicate(Conc.(L	g/Kg)	Duplicate	*%Diff(+1)	Accept/Range//	Detect/Limit			
Benzene	5.4	5.4	0.0%	0 - 30%	0.9			
Toluene	303	302	0.3%	0 - 30%	1.0			
Ethylbenzene	188	187	0.5%	0 - 30%	1.0			
p,m-Xylene	1,330	1,320	0.8%	0 - 30%	1.2			
o-Xylene	<b>444</b>	443	0.2%	0 - 30%	0.9			
Spike Conc. (ug/K	g)	Amount(Spiked)	Spiked Sample	MiRecovery	Accept Range			
Benzene	5.4	50.0	55.3	99.8%	39 - 150			
Toluene	303	50.0	352	99.8%	46 - 148			
Ethylbenzene	188	50.0	238	99.8%	32 - 160			
p,m-Xylene	1,330	100	1,420	99.3%	46 - 148			
o-Xylene	444	50.0	493	99.8%	46 - 148			
		50.0	433	33.0 /0	40 - 140			
ND - Parameter not de	etected at the stated detection limit.							
References:	Method 5030B, Purge-and-Trap, Test Metho December 1996.	ods for Evaluating	Solid Waste, SW-846	, USEPA,				
	Method 8021B, Aromatic and Halogenated Photolonization and/or Electrolytic Conducti	Volatiles by Gas C	hromatography Using					

QA/QC for Samples 43138 - 43139 Comments: Analyst

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PRACTICAL SOUUTIONSLOR AND ETTER TOMORROW

#### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Burlington	Project #:	92115-250
Sample ID:	MW - 1	Date Reported:	09-25-07
Chain of Custody:	3420	Date Sampled:	09-21-07
Laboratory Number:	43140	Date Received:	09-21-07
Sample Matrix:	Water	Date Analyzed:	09-25-07
Preservative:	Cool / HCL	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	1.4	1	0.2
Toluene	0.5	1	0.2
Ethylbenzene	ND	1	0.2
p,m-Xylene	0.3	1	0.2
o-Xylene	ND	1	0.1

#### **Total BTEX**

#### 2.2

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:		Parameter	Percent Recovery				
		fluorobenzene	97 %				
		1,4-difluorobenzene	97 %				
		4-bromochlorobenzene	97 %				
References:	Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.						
		21B, Aromatic and Halogenated Volatiles by Gation and/or Electrolytic Conductivity Detectors,					

L Analyst

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

#### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client: Sample ID: Laboratory Number: Sample Matrix: Preservative: Condition:	N/A 09-25-BTEX QA/Q 43140 Water N/A N/A		Project #: Date Reported: Date Sampled: Date Received: Date Analyzed: Analysis:	•.	N/A 09-25-07 N/A N/A 09-25-07 BTEX
Calibration, and	<b>USENRE</b>		%Diff	Blank	Detect
Detection Limits (ug/L):		Accept Rand	ge;0.2715%)	Conce	
Benzene	1.2157E+008	1.2194E+008	0.30%	ND	0.2
Toluene	1.0793E+008	1.0825E+008	0.30%	ND	0.2
Ethylbenzene	8.5704E+007	8.5962E+007	0.30%	ND	0.2
p,m-Xylene	1.6616E+008	1.6666E+008	0.30%	ND	0.2
o-Xylene	7.9427E+007	7.9666E+007	0.30%	ND	0.1
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	4° • · · · · ·	***
Benzene Toluene Ethylbenzene p.m-Xylene o-Xylene	1.4 0.5 ND 0.3 ND	1.4 0.5 ND 0.3 ND	0.0% 0.0% 0.0% 0.0% 0.0%	0 - 30% 0 - 30% 0 - 30% 0 - 30% 0 - 30%	<b>.</b>
Toluene Ethylbenzene p.m-Xylene	0.5 ND 0.3 ND	0.5 ND 0.3 ND	0.0% 0.0% 0.0%	0 - 30% 0 - 30% 0 - 30% 0 - 30%	AcceptiLumits
Toluene Ethylbenzene p.m-Xylene o-Xylene	0.5 ND 0.3 ND	0.5 ND 0.3 ND	0.0% 0.0% 0.0% 0.0%	0 - 30% 0 - 30% 0 - 30% 0 - 30%	Acceptiumis
Toluene Ethylbenzene p.m-Xylene o-Xylene Spike:Conc (ug(L)	0.5 ND 0.3 ND	0.5 ND 0.3 ND	0.0% 0.0% 0.0% 9.0%	0 - 30% 0 - 30% 0 - 30% 0 - 30%	and an
Toluene Ethylbenzene p.m-Xylene o-Xylene Spike:Conc (ug/L) Benzene	0.5 ND 0.3 ND Semple 1.7	0.5 ND 0.3 ND	0.0% 0.0% 0.0% /Spiked:Sample 51.3	0 - 30% 0 - 30% 0 - 30% 0 - 30%	<b>39 - 150</b>
Toluene Ethylbenzene p.m-Xylene o-Xylene Spike:Conc:/(ug/L) Benzene Toluene	0.5 ND 0.3 ND Sample 11 1.4 0.5	0.5 ND 0.3 ND Mount/Spiked 50.0 50.0	0.0% 0.0% 0.0% /Spiked Sample 51.3 50.4	0 - 30% 0 - 30% 0 - 30% 0 - 30%	39 - 150 46 - 148

ND - Parameter not detected at the stated detection limit.

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996. Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for sample 43139 Analyst

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-/Loca	le:	052					<u> </u>										5796 1
Project Name / Location:	Sampler Name: G. Crabbree	Client No.: 92415-250	Lab No.	43139	43140						•						
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			Sample Sample	5-0	67 I								Y				
			San Da	9/21/07	9/21/07	 								lature)	lature)		
Client: Bur (mr. her-	Client Address: 3401 E. 30th	Client Phone No.: 326 - 4700	Sample No./ Identification	10'B6S	MW-1								Relinquished by: (Signatule)	Relinquished by (Signature)	Relinquished by: (Signature)		

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3420

SECTION 4

Field Notes

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#### ENVIROTECH INC. FARMINGTON, NM 5796 HIGHWAY 64 MONITOR WELL DATA

Date: 9/21/07

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Project No: 9245-250

Project Name:

Chain of Custody No:

Location: El PASo IA-

Project Manager: G.C.Aller

Sampler: Goe

MONITOR WELL DATA

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Notes: TOC = Top of Casing Bailed = 3 well volummes:

1.25" well = 0.19 gal/ft. 2.00" well = 0.49 gal/ft. 4.00" well = 1.96 gal/ft. Note well diameter if not one of the above.

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