

envirotech

CONFIRMATION SAMPLING REPORT

**LOCATED AT:
BURLINGTON RESOURCES
WOODRIVER #2
SECTION 9, TOWNSHIP 30N, RANGE 8W
SAN JUAN COUNTY, NEW MEXICO**

**PREPARED FOR:
CONOCOPHILLIPS
MS. KELSIE GURVITZ
3401 EAST 30TH STREET
FARMINGTON, NEW MEXICO 87401**



45-13226

PROJECT No. 92115-1181

JANUARY 2010



February 9, 2010

Project No. 92115-1181

Ms. Kelsi Gurvitz
ConocoPhillips
3401 East 30th Street
Farmington, NM 87401

Phone (505) 326-9549

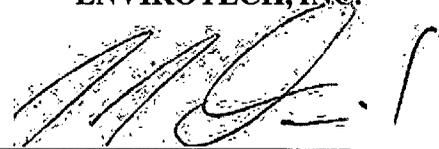
RE: CONFIRMATION SAMPLING REPORT FOR THE WOODRIVER #2 WELL SITE, SAN JUAN COUNTY, NEW MEXICO

Dear Ms. Gurvitz,

Enclosed please find the Confirmation Sampling Report for the Burlington Resources Woodriver #2 well site located in Section 9, Township 30N, Range 8W, San Juan County, New Mexico.

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

Respectfully Submitted,
ENVIROTECH, INC.



James McDaniel
Project Scientist
jmcdaniel@envirotech-inc.com

Enclosure: Confirmation Sampling Report

Cc: Client File No. 92115

**CONOCOPHILLIPS
LOCATED AT
BURLINGTON RESOURCES WOODRIVER #2
SECTION 9, TOWNSHIP 30N, RANGE 8W
SAN JUAN COUNTY, NEW MEXICO**

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INTRODUCTION

Envirotech, Inc. of Farmington, New Mexico, was contracted by ConocoPhillips to provide confirmation sampling for a release resulting from a tank overflow at the Burlington Resources Woodrider #2 well site located in Section 9, Township 30N, Range 8W, San Juan County, New Mexico; see enclosed *Figure 1, Vicinity Map*. Approximately five (5) barrels of oil and condensate were released from the sites above ground storage tank. Activities included sample collection and analysis, documentation, and reporting.

ACTIVITIES PERFORMED

Envirotech, Inc. was contacted on January 14, 2010 with a non-emergency request to respond to a release discovered at the above mentioned location. An above ground tank on-site overflowed and approximately five (5) barrels of oil and condensate flowed around the tank and into a nearby below grade tank (BGT) pit. Upon arrival, a brief site assessment was conducted, and the site was ranked a 10 pursuant to the New Mexico Oil Conservation Department (NMOCD) Guidelines for the Remediation of Leaks, Spills, and Releases due to a wash at less than 1,000 feet from the spill location. This set the closure standard to 1,000 ppm total petroleum hydrocarbons (TPH) and 100 ppm organic vapors (OV) or 10 ppm benzene and 50 ppm total BTEX. A sample was collected from directly beneath the area of the former BGT once it was removed. The sample was analyzed in the field for TPH via USEPA Method 418.1 and for OV using a photo-ionization detector (PID). The sample returned results of 15,100 ppm TPH and 2,514 for OV, which are well above the closure standards determined for this site; see enclosed *Table 1, Analytical Results*. Excavation would begin in the spill area in two (2) sections (Section 1 and Section 2); see enclosed *Appendix B, Field Notes*. A sample was collected from Section 1 at approximately one (1) foot below ground surface (BGS). The sample was analyzed in the field for TPH via USEPA Method 418.1 and for OV using a PID. The sample returned results well above the 1,000 ppm TPH standard and the 100 ppm OV standard determined for this site; see enclosed *Table 1, Analytical Results*. A sample was then collected from the north, west and south walls of the entire excavation, and from the east wall in both Section 1 and Section 2. All five (5) samples were analyzed in the field for TPH via USEPA Method 418.1 and for OV using a PID. The samples collected from the east wall (Section 1) and the north wall of the entire excavation returned results above the 1,000 ppm TPH standard determined for this site, while each of the samples, except for the one (1) collected from the south wall, returned results above the 100 ppm OV standard determined for this site; see enclosed *Table 1, Analytical Results*. Excavation would need to continue in the contaminated area.

Envirotech, Inc. returned to the site on January 18, 2010 to complete confirmation sampling activities. Prior to Envirotech's arrival, the spill area had been excavated into three (3) sections at final extents of approximately 25' x 14' x 2-10' deep; see enclosed *Figure 2, Site Map*. Samples were collected from each of the three (3) separate bottom sections (Bottom A, Bottom B, and Bottom C), from the east wall in both Section B and Section C, and a composite sample was collected of the north walls of the excavated area; see enclosed *Figure 2, Site Map*. All six (6) of these samples were analyzed in the field for TPH via USEPA Method 418.1 and for OV using a PID. Only the samples collected from the north wall (1,470 ppm TPH) and the Bottom B (403 ppm OV) returned results above the closure standards determined for this site; see enclosed *Table 1, Analytical Results*. Each of these samples

were then collected into four (4)-ounce glass jars, capped headspace free, and transported on ice under chain of custody to be analyzed in Envirotech's laboratory. The sample collected from the north walls was analyzed in Envirotech's laboratory for Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) via USEPA Method 8015, while the sample collected from the Bottom B was analyzed in Envirotech's laboratory for benzene and total BTEX via USEPA Method 8021. Both sample returned results below the 1,000 ppm TPH standard and the 10 ppm benzene and 50 ppm total BTEX standards determined for this site; see enclosed *Table 1, Analytical Results* and *Appendix A, Analytical Results*. No further excavation was required.

Contaminated soil was transported to IEI's NMOCD permitted soil remediation facility located near Crouch Mesa, New Mexico.

SUMMARY AND CONCLUSIONS

Confirmation samples were collected and analyzed from a spill excavation at the Burlington Resources Woodriver #2 well site located in Section 9, Township 30N, Range 8W, San Juan County, New Mexico. All contaminated soil was transported to IEI's NMOCD Permitted Soil Remediation Facility near Crouch Mesa, New Mexico. Envirotech, Inc. recommends that no further action is required in regards to this incident.

STATEMENT OF LIMITATIONS

Envirotech, Inc. has completed the confirmation sampling activities at the Burlington Resources Woodriver #2 well site located in Section 9, Township 30N, Range 8W, San Juan County, New Mexico. The work and services provided by Envirotech, Inc. were in accordance with the New Mexico Oil Conservation Division standards. All observations and conclusions provided here are based on the information and current site conditions found at the site of the incident.

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. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,

Reviewed by:

ENVIROTECH, INC.



James McDaniel
Project Scientist

jmcdaniel@envirotech-inc.com



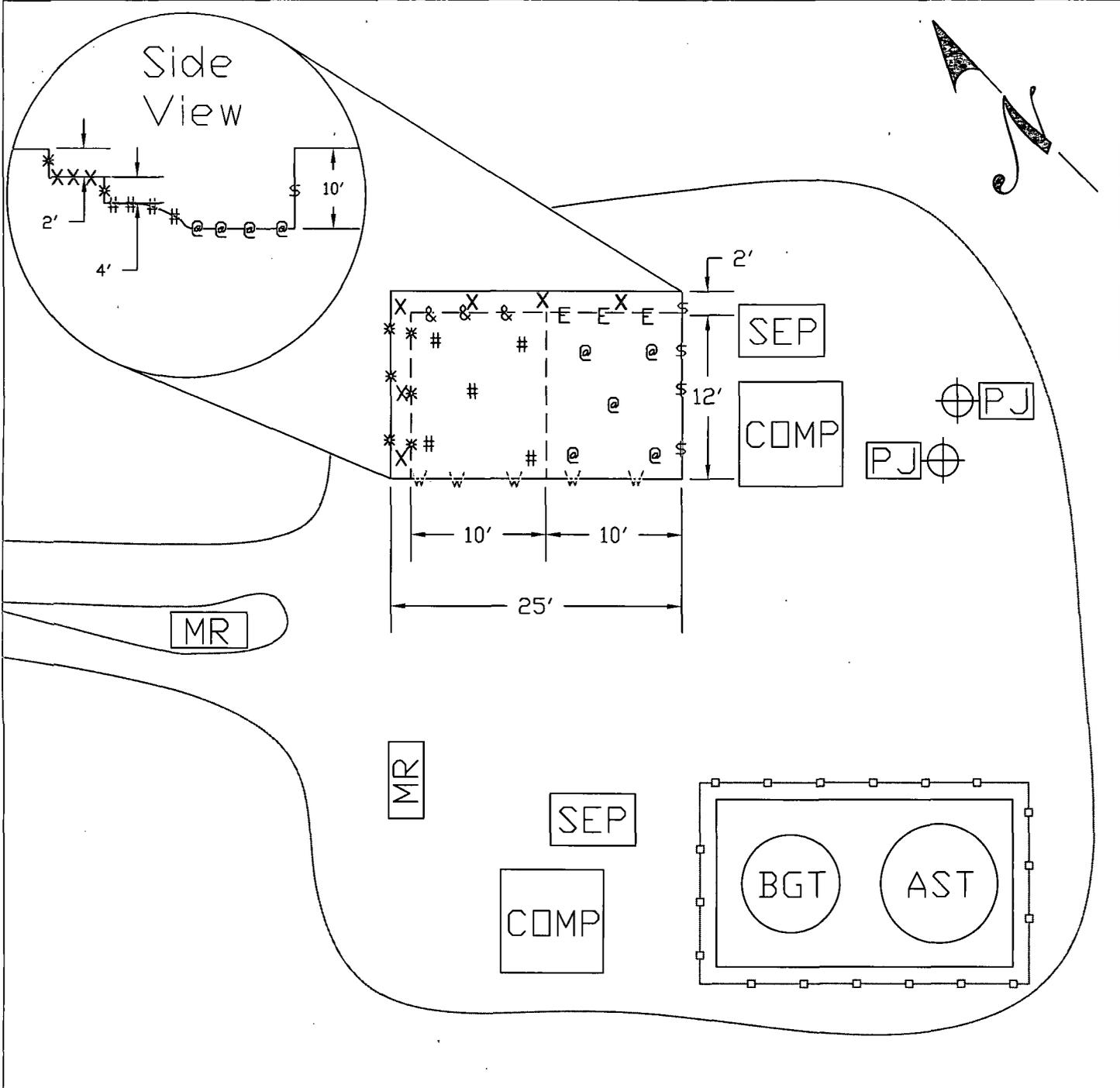
Greg Crabtree, PE
Project Engineer/Manager

gcrabtree@envirotech-inc.com

FIGURES

Figure 1, Vicinity Map

Figure 2, Site Map



LEGEND

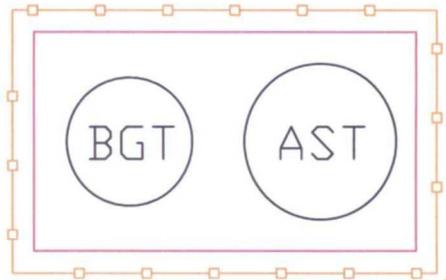
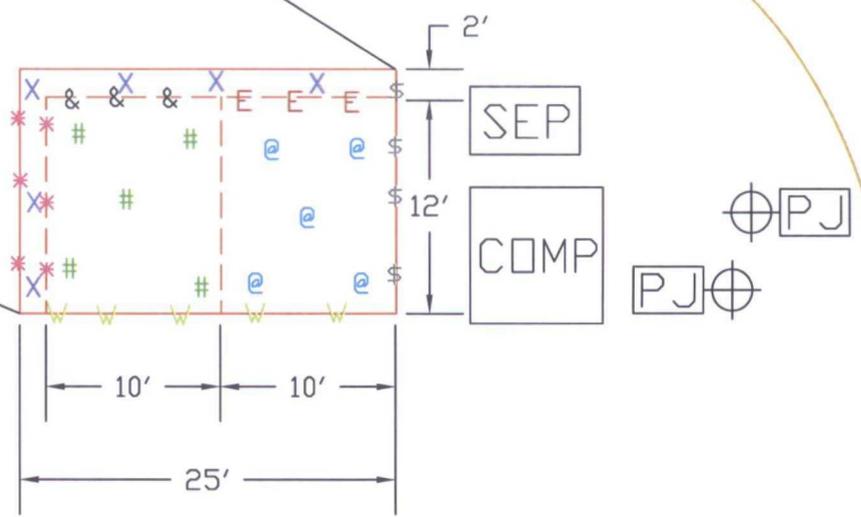
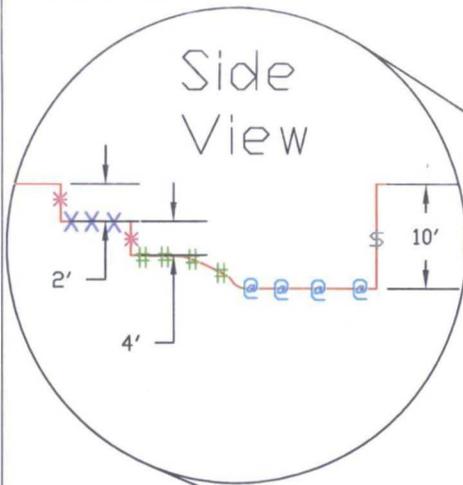
- | | |
|-------------------------------|----------------------------------|
| <input type="checkbox"/> Berm | <input type="checkbox"/> Fencing |
| x Bottom A Composite | * North Wall Composite |
| # Bottom B Composite | \$ South Wall Composite |
| @ Bottom C Composite | w West Wall Composite |
| E East Wall | C Well Head |
| & East Wall | B Well Head |

Site Map

ConocoPhillips
Woodriver #2 Well Site
San Juan County, New Mexico

SCALE: NTS		FIGURE NO. 2	REV
PROJECT NO.92115-1181			
REVISIONS			
NO.	DATE	BY	DESCRIPTION
MAP DRWN	JPM	DATE	1/26/2010





MR

MR

SEP

COMP

LEGEND

- Berm
- x Bottom A Composite
- # Bottom B Composite
- @ Bottom C Composite
- E East Wall C
- & East Wall B
- Fencing
- * North Wall Composite
- \$ South Wall Composite
- w West Wall Composite
- ⊕ Well Head

Site Map

ConocoPhillips
Woodriver #2 Well Site
San Juan County, New Mexico

SCALE: NTS	FIGURE NO. 2	REV
PROJECT NO.92115-1181		
REVISIONS		
NO.	DATE	BY
DESCRIPTION		
MAP DRWN	JPM	DATE 1/26/2010



TABLES

Table 1, Analytical Results

Table 1, Analytical Results
Confirmation Sampling Report
ConocoPhillips
Burlington Resources
Woodriver #2 Well Site
Project No. 92115-1181

Sample Description	Sample Number	Date	USEPA Method 418.1 TPH (ppm)	OVM (ppm)	USEPA Method 8021 Benzene (ppm)	USEPA Method 8021 BTEX (ppm)	USEPA Method 8015 GRO/DRO (ppm)
NMOCD Standards	NA	NA	1,000	100	10.0	50	1000
Directly Beneath Tank	1	1/14/2010	15,100	2514	NS	NS	NS
5 pt Composite - 1' BGS	2	1/14/2010	15,600	2563	NS	NS	NS
East Wall (Sec 1)	3	1/14/2010	15,700	Over Range	NS	NS	NS
North Wall	4	1/14/2010	19,500	2636	NS	NS	NS
West Wall	5	1/14/2010	84	135	NS	NS	NS
East Wall (Sec 2)	6	1/14/2010	352	142	NS	NS	NS
South Wall	7	1/14/2010	108	43.5	NS	NS	NS
Bottom A Composite	1	1/18/2010	884	3.5	NS	NS	NS
East Wall B Composite	2	1/18/2010	388	27.3	NS	NS	NS
Bottom B Composite	3	1/18/2010	932	403	0.008	0.956	NS
Bottom C Composite	4	1/18/2010	600	80.5	NS	NS	NS
East Wall C Composite	5	1/18/2010	100	20.3	NS	NS	NS
North Wall Composite	6	1/18/2010	1,470	84.3	NS	NS	477

NS = Not Sampled

* Values in **BOLD** above regulatory standards

APPENDIX A

Analytical Results



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client: Burlington Project #: 92115-1181
Sample No.: 1 Date Reported: 1/26/2010
Sample ID: Directly Beneath Tank Date Sampled: 1/14/2010
Sample Matrix: Soil Date Analyzed: 1/14/2010
Preservative: Cool Analysis Needed: TPH-418.1
Condition: Cool and Intact

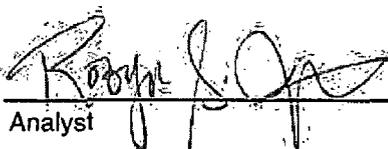
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	15,100	5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

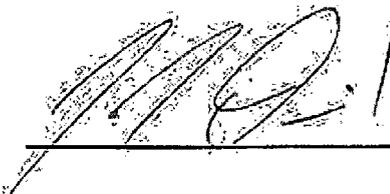
Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Robyn Jones

Printed



Analyst

James McDaniel

Printed



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Burlington	Project #:	92115-1181
Sample No.:	2	Date Reported:	1/26/2010
Sample ID:	5pt Composite - 1' BGS	Date Sampled:	1/14/2010
Sample Matrix:	Soil	Date Analyzed:	1/14/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

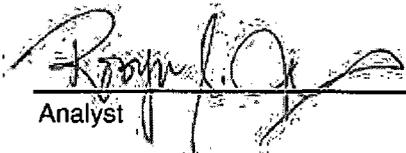
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	15,600	5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Robyn Jones
Printed



James McDaniel
Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client: Burlington Project #: 92115-1181
Sample No.: 3 Date Reported: 1/26/2010
Sample ID: East Wall (Sec 1) Date Sampled: 1/14/2010
Sample Matrix: Soil Date Analyzed: 1/14/2010
Preservative: Cool Analysis Needed: TPH-418.1
Condition: Cool and Intact

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	15,700	5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Analyst

Robyn Jones

Printed

James McDaniel

Printed



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client: Burlington Project #: 92115-1181
Sample No.: 4 Date Reported: 1/26/2010
Sample ID: North Wall Date Sampled: 1/14/2010
Sample Matrix: Soil Date Analyzed: 1/14/2010
Preservative: Cool Analysis Needed: TPH-418.1
Condition: Cool and Intact

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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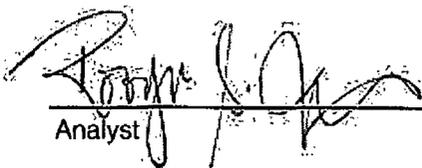
Total Petroleum Hydrocarbons 19,500 5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Robyn Jones

Printed



Analyst

James McDaniel

Printed



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client: Burlington Project #: 92115-1181
Sample No.: 5 Date Reported: 1/26/2010
Sample ID: West Wall Date Sampled: 1/14/2010
Sample Matrix: Soil Date Analyzed: 1/14/2010
Preservative: Cool Analysis Needed: TPH-418.1
Condition: Cool and Intact

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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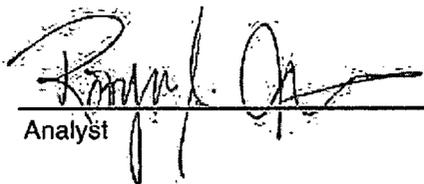
Total Petroleum Hydrocarbons 84 5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Robyn Jones
Printed



James McDaniel
Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client: Burlington Project #: 92115-1181
Sample No.: 6 Date Reported: 1/26/2010
Sample ID: East Wall (Sec 2) Date Sampled: 1/14/2010
Sample Matrix: Soil Date Analyzed: 1/14/2010
Preservative: Cool Analysis Needed: TPH-418.1
Condition: Cool and Intact

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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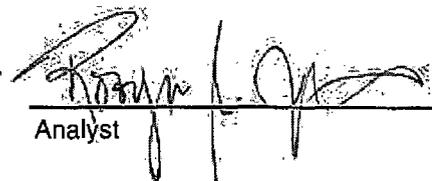
Total Petroleum Hydrocarbons 352 5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Robyn Jones

Printed



Analyst

James McDaniel

Printed



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Burlington	Project #:	92115-1181
Sample No.:	7	Date Reported:	1/26/2010
Sample ID:	South Wall	Date Sampled:	1/14/2010
Sample Matrix:	Soil	Date Analyzed:	1/14/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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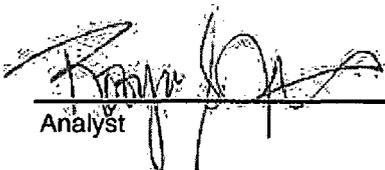
Total Petroleum Hydrocarbons	108	5.0
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ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

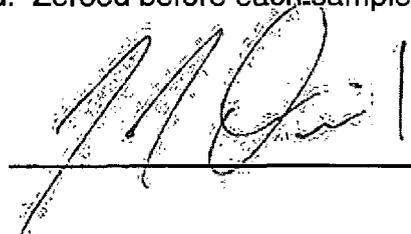
Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Robyn Jones

Printed



James McDaniel

Printed

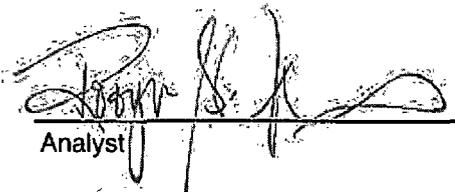


CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 14-Jan-10

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	191
	200	
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.



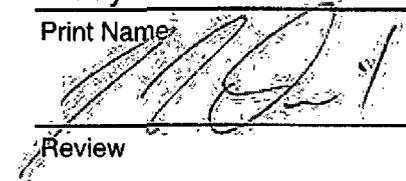
Analyst

1/26/10

Date

Robyn Jones

Print Name



Review

1/26/10

Date

James McDaniel

Print Name



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client: Burlington Project #: 92115-1181
Sample No.: 1 Date Reported: 1/26/2010
Sample ID: Bottom A Composite Date Sampled: 1/18/2010
Sample Matrix: Soil Date Analyzed: 1/18/2010
Preservative: Cool Analysis Needed: TPH-418.1
Condition: Cool and Intact

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	884	5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

James McDaniel

Printed



Greg Crabtree

Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client: Burlington Project #: 92115-1181
Sample No.: 2 Date Reported: 1/26/2010
Sample ID: East Wall B Composite Date Sampled: 1/18/2010
Sample Matrix: Soil Date Analyzed: 1/18/2010
Preservative: Cool Analysis Needed: TPH-418.1
Condition: Cool and Intact

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	388	5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

James McDaniel

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Analyst

Greg Crabtree

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EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Burlington	Project #:	92115-1181
Sample No.:	3	Date Reported:	1/26/2010
Sample ID:	Bottom B Composite	Date Sampled:	1/18/2010
Sample Matrix:	Soil	Date Analyzed:	1/18/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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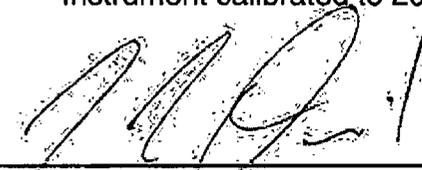
Total Petroleum Hydrocarbons	932	5.0
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ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

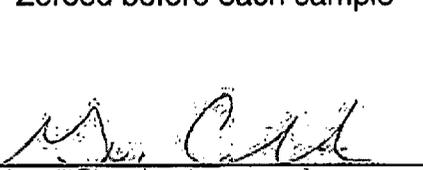
Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

James McDaniel

Printed



Greg Crabtree

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EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client: Burlington Project #: 92115-1181
Sample No.: 4 Date Reported: 1/26/2010
Sample ID: Bottom C Composite Date Sampled: 1/18/2010
Sample Matrix: Soil Date Analyzed: 1/18/2010
Preservative: Cool Analysis Needed: TPH-418.1
Condition: Cool and Intact

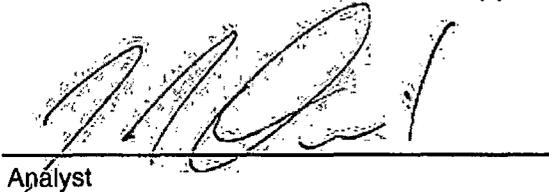
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	600	5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

James McDaniel

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Greg Crabtree

Printed



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client: Burlington Project #: 92115-1181
Sample No.: 5 Date Reported: 1/26/2010
Sample ID: East Wall C Composite Date Sampled: 1/18/2010
Sample Matrix: Soil Date Analyzed: 1/18/2010
Preservative: Cool Analysis Needed: TPH-418.1
Condition: Cool and Intact

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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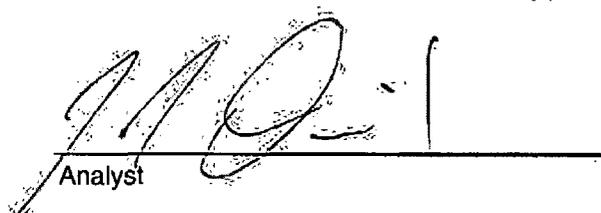
Total Petroleum Hydrocarbons 100 5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

James McDaniel

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Greg Crabtree

Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client: Burlington Project #: 92115-1181
Sample No.: 6 Date Reported: 1/26/2010
Sample ID: North Wall Composite Date Sampled: 1/18/2010
Sample Matrix: Soil Date Analyzed: 1/18/2010
Preservative: Cool Analysis Needed: TPH-418.1
Condition: Cool and Intact

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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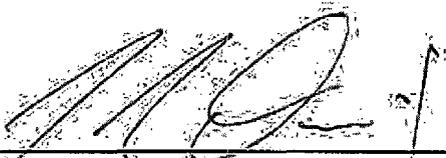
Total Petroleum Hydrocarbons 1,470 5.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Woodriver #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

James McDaniel

Printed



Analyst

Greg Crabtree

Printed



CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 18-Jan-10

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	210
	200	
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.



Analyst

1/26/10

Date

James McDaniel

Print Name



Review

1/26/10

Date

Greg Crabtree

Print Name



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

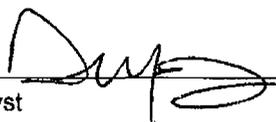
Client:	Burlington	Project #:	92115-1181
Sample ID:	N Wall Comp	Date Reported:	01-19-10
Laboratory Number:	52976	Date Sampled:	01-18-10
Chain of Custody No:	8666	Date Received:	01-18-10
Sample Matrix:	Soil	Date Extracted:	01-18-10
Preservative:	Cool	Date Analyzed:	01-19-10
Condition:	Intact	Analysis Requested:	8015 TPH

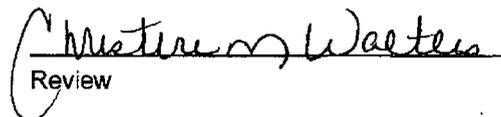
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	84.7	0.2
Diesel Range (C10 - C28)	392	0.1
Total Petroleum Hydrocarbons	477	0.2

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: **Woodriver #2**


Analyst


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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:	01-19-10 QA/QC	Date Reported:	01-19-10
Laboratory Number:	52976	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-19-10
Condition:	N/A	Analysis Requested:	TPH

	Cal Date	Cal RE	C-Cal RE	% Difference	Accept Range
Gasoline Range C5 - C10	05-07-07	8.7723E+002	8.7758E+002	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	9.7148E+002	9.7187E+002	0.04%	0 - 15%

Blank Conc. (mg/L-µg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

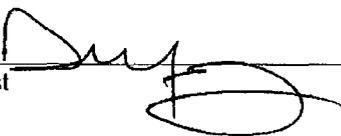
Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept Range
Gasoline Range C5 - C10	84.7	82.1	3.1%	0 - 30%
Diesel Range C10 - C28	392	385	1.6%	0 - 30%

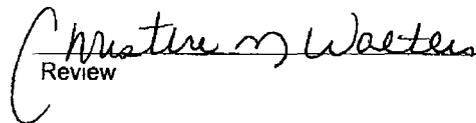
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
Gasoline Range C5 - C10	84.7	250	313	93.4%	75 - 125%
Diesel Range C10 - C28	392	250	613	95.5%	75 - 125%

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 52976 and 52978 - 52985.

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Review 



Client:	Burlington	Project #:	92115-1181
Sample ID:	Bottom B Composite	Date Reported:	01-19-10
Laboratory Number:	52977	Date Sampled:	01-18-10
Chain of Custody:	8666	Date Received:	01-18-10
Sample Matrix:	Soil	Date Analyzed:	01-19-10
Preservative:	Cool	Date Extracted:	01-18-10
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	8.0	0.9
Toluene	94.0	1.0
Ethylbenzene	52.6	1.0
p,m-Xylene	569	1.2
o-Xylene	232	0.9
Total BTEX	956	

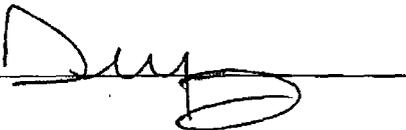
ND - Parameter not detected at the stated detection limit.

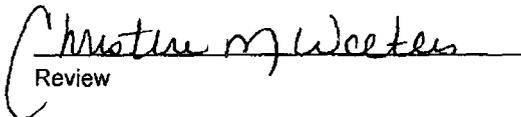
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	92.0 %
	1,4-difluorobenzene	88.3 %
	Bromochlorobenzene	97.0 %

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: **Woodriver #2**

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	01-19-BT QA/QC	Date Reported:	01-19-10
Laboratory Number:	52977	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-19-10
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	Cal RF	Cal RF	% Dil	Blank Conc	Detect Limit
		Accept. Range	0 - 15%		
Benzene	3.6988E+005	3.7062E+005	0.2%	ND	0.1
Toluene	3.6039E+005	3.6111E+005	0.2%	ND	0.1
Ethylbenzene	3.3852E+005	3.3920E+005	0.2%	ND	0.1
p,m-Xylene	7.9293E+005	7.9452E+005	0.2%	ND	0.1
o-Xylene	3.1868E+005	3.1932E+005	0.2%	ND	0.1

Duplicate Conc (ug/Kg)	Sample	Duplicate	% Diff	Accept Range	Detect Limit
Benzene	8.0	7.8	2.5%	0 - 30%	0.9
Toluene	94.0	91.7	2.4%	0 - 30%	1.0
Ethylbenzene	52.6	55.8	6.1%	0 - 30%	1.0
p,m-Xylene	569	555	2.5%	0 - 30%	1.2
o-Xylene	232	212	8.4%	0 - 30%	0.9

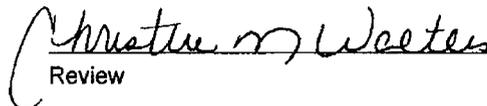
Spike Conc (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	8.0	50.0	55.7	96.0%	39 - 150
Toluene	94.0	50.0	143	99.0%	46 - 148
Ethylbenzene	52.6	50.0	101	98.5%	32 - 160
p,m-Xylene	569	100	665	99.3%	46 - 148
o-Xylene	232	50.0	281	99.7%	46 - 148

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 52977 - 52985


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CHAIN OF CUSTODY RECORD

8666

Client: Burlington	Project Name / Location: Woodriver #2	ANALYSIS / PARAMETERS											
Client Address:	Sampler Name: J McDaniel	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE	Sample Cool	Sample Intact
Client Phone No.:	Client No.: 92115-1181												

Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE	Sample Cool	Sample Intact		
						HgCl ₂	HCl	Other														
N Wall Composite	1/18/10	1215	52976	Soil Solid	1/4oz			X	X											✓	✓	
Bottom B Composite	1/18/10	1121	52977	Soil Solid	1/4oz			X	X											✓	✓	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	

Relinquished by: (Signature) 	Date 1/18/10	Time 1405	Received by: (Signature) 	Date 1/18/10	Time 1405
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

RUSTE

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Analytical Laboratory

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APPENDIX B

Field Notes

Client: Berlington



Location No:

C.O.C. No:

FIELD REPORT: SPILL CLOSURE VERIFICATION

PAGE NO: OF

LOCATION: NAME: Wagon Driver WELL #: 2
 QUAD/UNIT: G SEC: 9 TWP: 70N R9G 9W PM: AMM CNTY: SS ST: NM
 QTR/FOOTAGE: 1455' EN 1750' EEL CONTRACTOR: Kelly O'Neil

DATE STARTED: 1/14/10
 DATE FINISHED:
 ENVIRONMENTAL SPECIALIST: R Jones

EXCAVATION APPROX: FT. X FT. X FT. DEEP CUBIC YARDAGE:

DISPOSAL FACILITY: REMEDIATION METHOD:

LAND USE: Gasim LEASE: LAND OWNER: Encl

CAUSE OF RELEASE: Leaking Tank MATERIAL RELEASED: Condensate / Oil

SPILE LOCATED APPROXIMATELY: FT. FROM
 DEPTH TO GROUNDWATER: 130' NEAREST WATER SOURCE: 71,000' NEAREST SURFACE WATER: 21,000'
 NMOCD RANKING SCORE: 10 NMOCD TPH CLOSURE STD: 1,000 PPM

SOIL AND EXCAVATION DESCRIPTION:

Initial Excavation
~~Sec 1~~ 1' deep
 Sec 2 1.5' deep

SAMPLE DESCRIPTION	TIME	SAMPLE ID	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm
100-STD (126')	8:46	1					197	
Soil - Cond - 15 RLS	9:40	2		5.0	20	4	3400	13600
East Wall (Sec 1)	11:07	3		5.0	20	4	3928	15712
North Wall	11:20	4		5.0	20	4	4064	16256
West Wall	11:35	5		5.0	20	4	21	84
East Wall (Sec 2)	11:42	6		5.0	20	4	88	352
South Wall	11:50	7		5.0	20	4	27	108

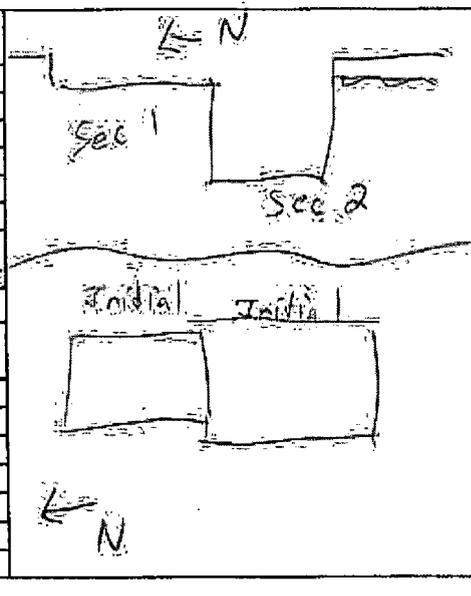
SPILL PERIMETER

OVM RESULTS

SPILL PROFILE



SAMPLE ID	FIELD HEADSPACE (ppm)	PID
100-STD	45.2	
1	25.3	
2	OVH	
3	26.36	
4	17.5	
5	14.2	
6	43.5	



LAB SAMPLES		
SAMPLE ID	ANALYSIS	TIME

TRAVEL NOTES: CALLED OUT: ONSITE:

Client: Burlington



Location No:

C.O.C. No:

FIELD REPORT: SPILL CLOSURE VERIFICATION

PAGE NO: 1 OF

DATE STARTED: 1/18/10

DATE FINISHED: 1/18/10

LOCATION: NAME: Woodover WELL #: 72

QUAD/UNIT: 15 SEC: 9 TWP: 37N RNG: 2W PM 14PM CNTY: 55 ST: NM

ENVIRONMENTAL SPECIALIST: JPM

QTR/FOOTAGE: 14.55 FNL 17.50 FEL CONTRACTOR: Kelly Oilfield

EXCAVATION APPROX: FT. X FT. X FT. DEEP. CUBIC YARDAGE:

DISPOSAL FACILITY: IBI REMEDIATION METHOD: Landfilling

LAND USE: Grazing LEASE: 07850 LAND OWNER: Feed

CAUSE OF RELEASE: Leaking Tank MATERIAL RELEASED: Condensate

SPILL LOCATED APPROXIMATELY: FT. FROM

DEPTH TO GROUNDWATER: 150' NEAREST WATER SOURCE: 71000 NEAREST SURFACE WATER: <1000'

NMOC D RANKING SCORE: 10 NMOC D TPH CLOSURE STD: 1000 PPM

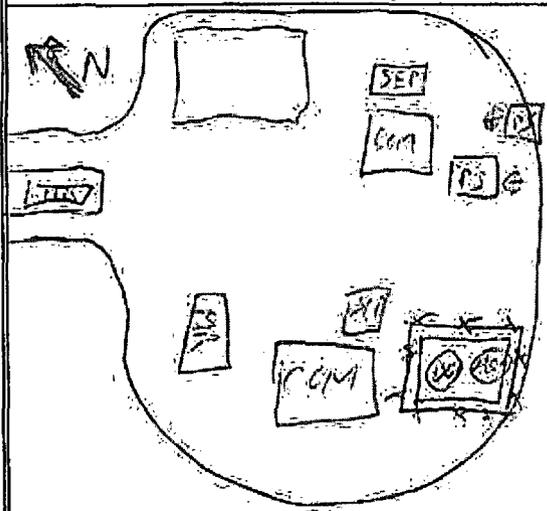
SOIL AND EXCAVATION DESCRIPTION:

SAMPLE DESCRIPTION	TIME	SAMPLE ID	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm
200 STD	0740	-	-	-	-	-	210	-
Bottom A Cond	1005	-	1	5.0	20	4	331	884
East Wall B Cond	1112	-	2	5.0	20	4	97	388
Bottom B Cond	1121	-	3	5.0	20	4	233	930
Bottom C Cond	1130	-	4	5.0	20	4	150	600
East Wall C Cond	1152	-	5	5.0	20	4	25	100
N Wall Cond	1215	-	6	5.0	20	4	302	1472

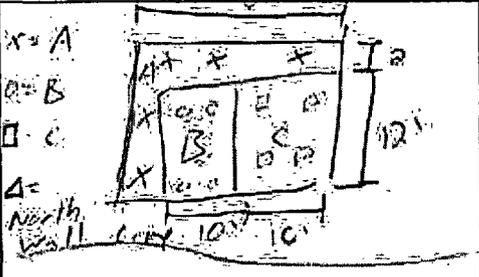
SPILL PERIMETER

OVM RESULTS

SPILL PROFILE



SAMPLE ID	FIELD HEADSPACE PID (ppm)
100 STD	100
Bottom A	3.5
East Wall B	27.5
Bottom B	40.3
Bottom C	80.5
E Wall C	20.3
N Wall Cond	84.3



LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
Bottom B	802.1	1121
N Wall Cond	801.5	1215

TRAVEL NOTES: CALLED OUT: ONSITE: