3RP-173

GW monitoring report

DATE: 2004



March 31, 2005

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Certified: 70993400001842167364

RECEINED

Glen Von Gonten New Mexico Oil Conservation Division APR 06 2005 1220 South St. Francis Drive Santa Fe, NM 87505 Environmental Bureau Conservation Division

RE: 2004 Annual Groundwater Investigation and Remediation Reports San Juan Basin, New Mexico

Dear Mr. von Gonten:

As required in Burlington Resources approved Groundwater Investigation and Remediation Plan dated August, 1998, enclosed are the 2004 annual reports for Burlington's groundwater impact sites in the San Juan Basin. Separate reports are enclosed for the following locations:

3RP 66	Cozzens B#1
3RP 69	Hampton #4M
3RP 71	Johnson Federal #4 Metering Station
3717173	Flora Vista (ENTER PRISE FIELD SULCES - FLORADCE VISTA #1
3RP 37	Marcotte Pool Unit #1 (Dum) 30-045-29466
	Sategna #2 (30-045-07974)

If you have questions or additional information is needed, please contact me at (505) 326-9537.

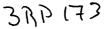
Sincerely,

Gregg Wurtz Sr. Environmental Representative

Attachments - Groundwater Investigation and Remediation Reports

cc:

Denny Foust - NMOCD Aztec WFS - Mark Harvey (Cozzens B#1, Hampton #4M) EPFS - Scott Pope (Johnson Fed. #4,) Facility and Correspondence Files



BURLINGTON RESOURCES 2004 ANNUAL GROUND-WATER

Flora	Vista	No.]
	. \		

SITE DETAILS

Location: Land Type:

2003 ACTIVITIES

Historic petroleum contaminated soil was discovered at the Flora Vista #1 location during a routine production resetting activity in 2003. Approximately 49986 cu yds of contaminated soil was removed and 4446 cu yds of clean soil was removed. The contaminated soil was taken to a commercial landfill facility located on Couch Mesa, Farmington New Mexico. The clean soil was backfilled into the excavation. Ground water was observed in the bottom of the excavation at approximately 25 feet below the ground surface. Field PID measurements were collected during the excavation work to determine the extent of the excavation. Soil samples were collected in the field for laboratory analysis to document clean closure. Field notes of the excavation work are included in Attachment 1. To enhance the remediation of minor amounts of residual petroleum contamination in the excavation 80 bbls of an oxidizer (potassium permanganate) solution was sprayed on the soils to break down the hydrocarbons.

A ground water source well (i.e., Monitoring Well #1) was installed slightly down gradient from the center of the excavation. The soil boring and well construction notes are found in Attachment 1. Groundwater monitoring was conducted quarterly starting in September. A general water quality characterization analysis was performed followed by a more specific BTEX and TPH analysis in subsequent monitoring. The general ground water analysis did not detect any constituents of concern except iron and manganese. The consentrations of iron and manganese could not be linked to the oil and gas operations conducted on location. The managanese consentration may be linked to the potassium permanganate (oxidizer) solution applied to the soil in the open excavation. The oxidizer solution will naturally break down in a short period of time.

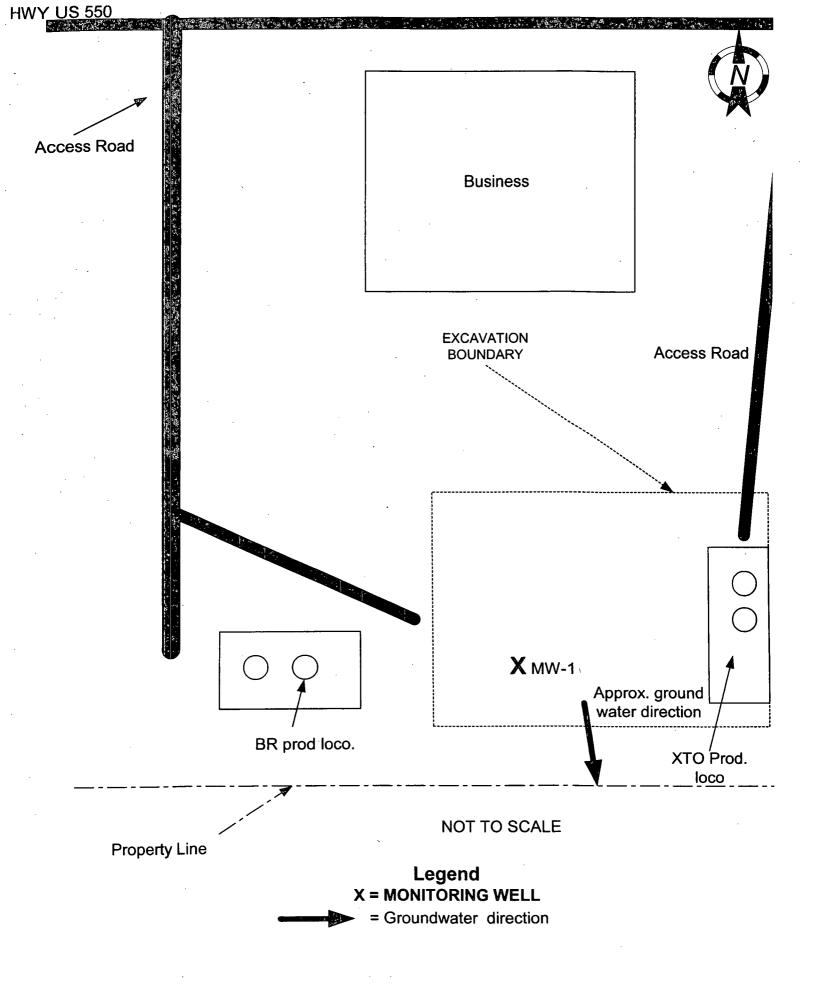
CONCLUSIONS

The petroleum contaminated soils were removed from this location to the extent practical. The soil samples collected for laboratory analysis confirm the soil was removed to an extent below OCD standards (Attachment 1, Field Excavation Work Log and Soil Excavation Analytical Results). The ground water monitoring results through 2004 (Table 1) confirm that the ground water quality is above the WCCC New Mexico Ground Water Standards.

RECOMMENDATIONS

- Burlington Resources proposes to continue quarterly sampling at this site and process of natural passive degradation of hydrocarbons
- Burlington Resources will request official closure of this site when four quarters of ground water analysis demonstrate the water quality is below standards.

Attachments:Figure 1 - Site Map
Table 1 - Groundwater Sampling Results Summary
Attachment 1
Groundwater Analytical Results
Drilling Logs/Wellbore Diagrams
Field excavation work log and soil excavation analytical results



GROUND WATER SAMPLING LOGS AND ANALYTICAL RESULTS

Table 1 Flora Vista #1 Groundwater Monitoring Well Sampling

		Sample	В	Т	E	X	BTEX	DTW (1)
Well Name	MW #	Date	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ft)
			10	750	750	620		
Excavation	n/a	6/20/2003	1700	300	490	5090	7580	standing
Flora Vista #1	1	9/23/2003	7500	20 (J)	660	9220	17380	17.03
		12/16/2003 3/16/2004	7930 6860	10(J)	1180 1160	8.64 8470	9119 16490	20.11
		6/21/2004	4140	S U	430	3120	7690	19.92
		9/30/2004	9080 8520	30J ປ	1410 1340	9980 9390	20500 19250	16.82 20.40

(1) measured from top of casing

(J) Analyte concentration detected a value between MDL and PQL

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:Project Name:_F	Iora Vista Client: Burlington
Location:Well No:MW-1	Development <u>Sampling</u>
Project ManagerMJN	Date <u>3/16/04</u> Start Time <u>0850</u> Weather <u>clear 40s</u>
Depth to Water <u>23.69</u> Depth to	Product <u>na</u> Product Thickness: <u>na</u> Measuring Point <u>TOC</u>
Water Column Height <u>1.66</u> Well Dia.	2"
Sampling Method: Submersible Pump	Centrifugal Pump 📋 Peristaltic Pump 📋 Other 📋
Bottom Valve Bailer	C Double Check Valve Bailer ¹ Stainless-Steel Kemmerer ¹
Criteria: 3 to 5 Casing Volumes of Wate	r Removal X stabilization of Indicator Parameters X Other_or bail dry

	Water Volu		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
1.66 x .16	0.27		0.81

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal)	Comments/ Flow rate
0850	10.60	1200	55.8				0.125	
	7.42	1260	58.6				0.25	
	6.89	1250	58.2				0.38	
0858	6.67	1190	56.7				0.50	
	6.60	1210	58.1				0.625	
,								

Final:							Ferrous		
Time	рН	SC .	Temp	Eh-ORP	D.O.	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
<u>0904</u>	6.92	1200	58.1	4				0.75	clear

COMMENTS well bailing down

INSTRUMENTATION:	pH Meter	Х		Temperat	ure Meter x	
	DO Moni	tor	- <u>. </u>	Other		
Conc	ductivity Mete	r X				
Water Disposal onsite		Sample	ID MW-1 Sample Time_	0908	_	
<u>BTEX</u> VOCs						
MS/MSD	_ BD		BD Name/Time		TB	

Burlington Resources, Inc.

Compound

Project ID:	MISC. GW-SAMPLING
Sample ID:	FLORA VISTA

Benzene, Toluene, Ethylbenzene & Xylene

Analysis Method:	M8021B GC/PI	D
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Extract Method: Method

ACZ Sample ID:	L44982-01
Date Sampled:	03/16/04 9:08
Date Received:	03/17/04

Organic Analytica

Results

Sample Matrix: Ground Water

km
03/24/04 23:41
03/24/04 23:41
50

Compound. (CIAS	Result	ં ભાગતાં - ર	(O) Unlig	MDL	SPOL.
Benzene	000071-43-2	6860		ug/L	20	50
Ethylbenzene	000100-41-4	1160		ug/L	10	50
m p Xylene	01330 20 7	8340		ug/L	20	100
o Xylene	00095-47- 6	130		ug/L	10	50
Toluene	000108-88-3		U	ug/L	10	50
Surrogate Recoveries Surrogate	CAS	% Recovery		(Q) Unite	LQL	• UCL*
Bromofluorobenzene	000460-00-4	105.3		%	83	117

ACZ Labo	ratories, Inc.	-	14	14982	up)		CHAI		
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			<u> </u>				L44982	: Page 8	pf 8

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Yellow - Retain for your records



Gregg Wurtz Burlington Resources, Inc.



March 26, 2004

Project ID: MISC. GW-SAMPLING ACZ Project ID: L44982

3401 E. 30th St. PO BOX 4289 Farmington, NM 87402-4289

Gregg Wurtz:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 17, 2004. This project has been assigned to ACZ's project number, L44982. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 10.0. The enclosed results relate only to the samples received under L44982. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after April 26, 2004. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.

26/Mar/04

Sue Barkey, Project Manager, has reviewed and approved this report in its entirety.





REPAD.01.11.00.01

ALZ Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.

Project ID: MISC. GW-SAMPLING Sample ID: TB031104-01

Benzene, Toluene, Ethylbenzene & Xylene

Analysis Method: M8021B GC/PID

Extract Method: Method

Compound Compound	CAS	Result	QUAL.	XQ: Unite	MDLe	Pet
Benzene	000071-43-2		U	ug/L	0.3	1
Ethylbenzene	000100-41-4		U	ug/L	0.2	1
m p Xylene	01330 20 7	0.5	J	ug/L	0.4	2
o Xylene	00095-47- 6		U	ug/L	0.2	1
Toluene	000108-88-3	0.3	J	ug/L	0.2	1
Surrogate Recoveries Surrogate	own OAS	% Recovery		XQ (Unifs -	ાલાક્ર	UCE
Bromofluorobenzene	000460-00-4	100		%	83	117

ACZ Sample ID: **L44982-02** Date Sampled: 03/16/04 0:00 Date Received: 03/17/04

Analyst: km

Analysis Date: 03/25/04 0:24

1

Extract Date:

Dilution Factor:

Sample Matrix: Ground Water

03/25/04 0:24

Organic Analytical Results



 Laboratories, Inc.

 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

leport Header	Explanations								
Batch	A distinct set of samples analyzed at a speci	fic time							
Found	Value of the QC Type of interest								
Limit	Upper limit for RPD, in %.								
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)								
LCL	Lower Control Limit								
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.								
PCN/SCN	A number assigned to reagents/standards to	trace to the manufacturer's	certificate of analysis						
PQL	Practical Quantitation Limit								
QC	True Value of the Control Sample or the amo	ount added to the Spike							
Rec	Amount of the true value or spike added reco	overed, in % (except for LC	SS, mg/Kg)						
RPD	Relative Percent Difference, calculation used	for Duplicate QC Types							
Upper	Upper Recovery Limit, in % (except for LCS	S, mg/Kg)							
UCL	Upper Control Limit								
Sample	Value of the Sample of interest								
NAMES OF TAXABLE PARTY OF TAXABLE PARTY.	pes								
SURR	Surrogate	LFM	Laboratory Fortified Matrix						
INTS	Internal Standard	LFMD	Laboratory Fortified Matrix Duplicate						
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank						
LCSS	Laboratory Control Sample - Soil	MS/MSD	Matrix Spike/Matrix Spike Duplicate						
LCSW	Laboratory Control Sample - Water	PBS	Prep Blank - Soil						
LFB	Laboratory Fortified Blank	PBW	Prep Blank - Water						
C Sample Ty	pe Explanations								
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REPIN03.11.00.01

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Organic Reference



2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Organic Extended Qualifier Report

Burlington Resources, Inc.

ACZ Project ID: L44982

ACZID WORKNUM PARAMETER METHOD QUAL DESCRIPTION

.

No extended qualifiers associated with this analysis

ALA Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.

MISC. GW-SAMPLING



ACZ Project ID: L44982 Date Received: 3/17/2004 Received By: coryd

Receipt Verification			
	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			Ö
2) Are the custody seals on the cooler intact?	Ö		
3) Are the custody seals on the sample containers intact?			Ö
4) Is there a Chain of Custody or other directive shipping papers present?	Ö		
5) Is the Chain of Custody complete?	Ö		
6) Is the Chain of Custody in agreement with the samples received?	Ö		
7) Is there enough sample for all requested analyses?	Ö		
8) Are all samples within holding times for requested analyses?	Ö		
9) Were all sample containers received intact?	Ö		
10) Are the temperature blanks present?	Ö		
11) Are the trip blanks (VOA and/or Cyanide) present?	Ö		
12) Are samples requiring no headspace, headspace free?	Ö		
13) Do the samples that require a Foreign Soils Permit have one?			Ö

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Conte	iners			
Cooler Id		Temp (°C)	Rad (µR/hr)	Client must contact ACZ Project Manager if analysis should not proceed
ACZ		0.4	12	for samples received outside of thermal preservation acceptance criteria.

Notes

Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.

MISC. GW-SAMPLING



ACZ Project ID: Date Received: Received By:

L44982 3/17/2004 coryd

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	Y < 2	YG< 2	B < 2	BG< 2	0 < 2	T >12	P >12	N/A	RAD
L44982-01	FLORA VISTA										Ö	
L44982-02	TB031104-01										Ö	
Sample C	ontainer Preservation Leger	d 👘							· · · ·	- 1	1.5	

Abbreviation	Description	Container Type	Preservative/Limits
В	Filtered/Sulfuric	BLUE	pH must be < 2
BG	Filtered/Sulfuric	BLUE GLASS	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
0	Raw/Sulfuric	ORANGE	pH must be < 2
P ¹	Raw/NaOH	PURPLE	pH must be > 12
Т	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

WELL DEVELOPMENT AND SAMPLING LOG

Proiect No	.:		Pro	iect Nam	e:_Flora Vi	sta	Clier	nt:_ <u>Burlingt</u>	on	
Location:_					_		nent <u>Sam</u>		<u></u>	
Project Ma							<u> </u>		me <u>1543</u>	Weather_clear 80s
-	-								<u>a </u> Mea	asuring Point
Water Colu	umn Hei	ght _	5.43	_ Wel	l Dia	2"			,	
Sampling Method: Submersible Pump Centrifugal Pump Peristaltic Pump Other										
		Bot	tom \	/alve Bai	ler X	Double C	heck Valve	Bailer ¹	Stainless-St	eel Kemmerer 1
Criteria:	3 to 5 Ca	asing	g Voli	umes of \	Water Remo	oval X sta	abilization o	f Indicator F	Parameters 2	X Other <u>or bail</u> dry
						Water Vol	ume in Wel			
	x ft of v	_	r[Gallons			Ounces		Gal/oz to be removed
5	.43 x .16	6			0.89					2.66
	•••••				· <u>····</u> ····		<u> </u>			<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>
Time	рH			SC	Temp	ORP	D.O.	Turbidity	Vol Evac	c. Comments/
(military)	(su)	(umh	ios/cm)	(°F)	(millivolts	s) (mg/L)	(NTU)	(gal)	Flow rate
1543	5.91	-	e	620	71.9	<u>are</u> a chai th c	· · · · ·		0.25	silty
	5.93	3	5	570	65.6				0.5	silty
	5.83	3	Ę	530	64.0				0.75	silty
	5.80		5	570	63.9				2	silty
	5.77	7	£	570	63.5				2.25	silty
	5.75	_	5	560	63.5				2.5	silty
<u>1553</u>	5.74	1	5	560	63.5				2.75	silty
		l			[]		[
Final:		2		1997 - 2004 Ali				Ferrous		
	pН	SĈ		Temp	Eh-ORP	D.O.	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
1553	5.74	5	60	63.5					2.75	silty

COMMENTS well bailing down

INSTRUMENTATION:	pH Meter X	Tempera	ature Meter x
	DO Monitor	Other	
Condu	uctivity Meter X		
Water Disposal <u>onsite</u>	Sa	mple ID <u>MW-1</u> Sample Time <u>1555</u>	
Analysis <u>BTEX</u>			
MS/MSD	BD	BD Name/Time	ТВ

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Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.

Project ID:	MISC SAMPLING
Sample ID:	MW-1 FLORA VISTA

Benzene, Toluene, Ethylbenzene & Xylene

M8021B GC/PID Analysis Method:

Extract Method: Method

Dilution Factor: 200 Compound Compound CAS QUAL XQ Units MDL PQL REEDIR Benzene 000071-43-2 4140 60 200 ug/L Ethylbenzene 000100-41-4 430 ug/L 40 200 m p Xylene 01330 20 7 2980 80 400 ug/L o Xylene 00095-47-6 140 ug/L 40 200 J Toluene 000108-88-3 U ug/L 40 200 Surrogate Recoveries Sunopate *** CAS % Recovery Xel Unite ાજાપ UGL 000460-00-4 97 Bromofluorobenzene % 83 117

Organic Analytica Results

ACZ Sample ID:	L46374-01
Date Sampled:	06/21/04 15:55
Date Received:	06/24/04
Sample Matrix:	Ground Water

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07/02/04 14:50

07/02/04 14:50

Analyst:

Extract Date:

Analysis Date:

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f sample(s) received past holding				ains to	complet		- U	U	YES		
analysis before expiration, shall A	ACZ proceed v	vith requeste	d short l	HT anal	yses?		-		NO		
f "NO" then ACZ will contact clie s indicated, ACZ will proceed wit							be quali	liad			
	in the request	analyses,				REQUEST			üse quo	ote num	ber)
	Carl Street St.	<u>8528 - 194</u>		A			.स. 2वें • होसें -				
Quote #:			4	Ś							
Project/PO #: MISC Sa	mpring		4	of Containers							
Shipping Co.:			-	ntai							
Tracking #:			-	ပိ	X						
Reporting State for compliance	testing:]	0 #	BTEX						•
SAMPLE IDENTIFICATION	DATE	TIME	Matrix								
MW-3 Marcore	6/21/04	1430	GW	3	$\left \mathbf{x} \right $			1			
MW-2 Marcore	6/21/04		Gw	9	Ŧ						
MW-1 FIDRA VISTA	6/21/04	1555	GW	9	F						
MW-1 COZZENS	6121104	1650	Gui	a	+						
MW-2 (OZZENS	6/21/04	1705	GW	5	$\left + \right $						
MW-1 Johnson Federal#4	6/22/04	1247	aw	Э	+						
Trup Dinnk	6/22/04	1300	0		+				Ì		
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Matrix SW (Surface Water) · GW	/ (Ground Water)	· WW (Waste V	Vater) · D\	V (Drinki	ng Water)	· SL (Sludge)) · SO (Seil) · OL (Oi	I) · Other ((Specify)	
REMARKS	. No. in issue					14) · SO (Soil) - OL (Oi	I) · Other ((Specify)	
REMARKS	. No. in issue					14) · SO (Soil) · OL (Oi	l) · Other ((Specify)	
REMARKS	. No. in issue					14) · SO (Soil) · OL (Oi	I) · Other ((Specify)	
	. No. in issue					14) · SO (Soil) - OL (Oi	I) · Other	(Specify)	
REMARKS Please provide Serence 1) Marcore 3 2) Klova VISTA 4	te repaired) cozzer) Johns	wt-for 15 ow Feder	each ral	100	atio	M) · OL (Oi	I) · Other I		PAG
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REMARKS Please provide Serence 1) Marcore 3 2) Klova VISTA 4	te repaired) cozzer) Johns	wt-for 15 ow Feder	each /al IME	100	atio	M		Ď	ATE T	MÉ	
REMARKS Piease privide Serence 1) Murcore 3 2) KIOVA VISTA 4 RELINQUISHEDIBI	te repaired) cozzer) Johns	w-t-for 15 ow Feder Datet	each /al IME	100	atio	M		р С -	АТЕ II 23 -	MÉ	
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July 12, 2004

Gregg Wurtz Burlington Resources, Inc. 3401 E. 30th St. PO BOX 4289 Farmington, NM 87402-4289

Project ID: MISC SAMPLING ACZ Project ID: L46374

Gregg Wurtz:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 24, 2004. This project has been assigned to ACZ's project number, L46374. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 10.0. The enclosed results relate only to the samples received under L46374. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after August 12, 2004. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.

12/Jul/04

Sue Barkey, Project Manager, has reviewed and approved this report in its entirety.





REPAD.01.11.00.01

L46374: Page 1 of 7



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 Laboratories, Inc.

 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493



	- Explanations			
Batch	CARLENDER OF CONTRACTOR OF CONTRACTOR OF CONTRACTOR	amples analyzed at a specil	fic time	
Found				
	Value of the QC			
Limit	Upper limit for RF	,		
Lower	-	Limit, in % (except for LCSS	5, mg/kg)	
LCL	Lower Control Lir			
MDL			•	instrument and annual fluctuations.
PCN/SCN	-	ed to reagents/standards to	trace to the manufacturer's	s certificate of analysis
PQL	Practical Quantita			
QC		Control Sample or the amo	•	
Rec		e value or spike added reco		SS, mg/Kg)
RPD		Difference, calculation used		
Upper	Upper Recovery I	Limit, in % (except for LCSS	S, mg/Kg)	
UCL	Upper Control Lin			
Sample	Value of the Sam	ple of interest		
Sample Ty	pes			
SURR	Surrogate		LFM	Laboratory Fortified Matrix
INTS	Internal Standard		LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate		LRB	Laboratory Reagent Blank
LCSS	Laboratory Contro	•	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSW	Laboratory Contro	ol Sample - Water	PBS	Prep Blank - Soil
LFB	Laboratory Fortifi		PBW	Prep Blank - Water
Sample Ty	pe Explanations			
Planks				an and a state of the second state of the second state is shown as a specific second state of the second state
Blanks		Verifies that there is	no or minimal contaminati	on in the prep method procedure.
Blanks Control Sar	mples	Verifies the accuracy	y of the method, including	the prep procedure.
Control Sar Duplicates		Verifies the accuract Verifies the precision	y of the method, including t n of the instrument and/or i	the prep procedure. method.
Control Sar Duplicates Spikes/Fort	tified Matrix	Verifies the accuract Verifies the precision	y of the method, including	the prep procedure. method.
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Control Sar Duplicates Spikes/Fort	tified Matrix s(Qual) Analyte detected	Verifies the accurac Verifies the precision Determines sample	y of the method, including t n of the instrument and/or i	the prep procedure. method.
Control Sar Duplicates Spikes/Fort 24Otellfiters B H J	tified Matrix ((e tial)) Analyte detected Analysis exceede Analyte concentra	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet	y of the method, including n of the instrument and/or matrix interferences, if any ween MDL and PQL	the prep procedure. method.
Control Sar Duplicates Spikes/Fort ZiQualifiers B H	tified Matrix ((2ticl)) Analyte detected Analysis exceede Analyte concentra Poor spike recove	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of	y of the method, including n of the instrument and/or matrix interferences, if any ween MDL and PQL ther spike in the set fell wit	the prep procedure. method.
Control Sar Duplicates Spikes/Fort 24Otellfiters B H J	tified Matrix ((2ticl)) Analyte detected Analysis exceede Analyte concentra Poor spike recove	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of	y of the method, including n of the instrument and/or matrix interferences, if any ween MDL and PQL ther spike in the set fell wit	the prep procedure. method.
Control Sar Duplicates Spikes/Fort ZiOuraliners B H J R	tified Matrix (Cruci) Analyte detected Analysis exceede Analyte concentra Poor spike recove High Relative Per Analyte was analy	Verifies the accuracy Verifies the precision Determines sample in daily blank and method hold time. ation detected at a value bet ery accepted because the ot rcent Difference (RPD) acce yzed for but not detected at	y of the method, including n of the instrument and/or matrix interferences, if any ween MDL and PQL ther spike in the set fell with pted because sample cond the indicated MDL	the prep procedure. method. r. hin the given limits. centrations are less than 10x the MDL.
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Control Sar Duplicates Spikes/Fort 2/Qualifiers B H J R T U	tified Matrix ((eticl)) Analyte detected Analysis exceede Analyte concentra Poor spike recove High Relative Per Analyte was analy High blank data a	Verifies the accuracy Verifies the precision Determines sample in daily blank and method hold time. ation detected at a value bet ery accepted because the ot rcent Difference (RPD) acce yzed for but not detected at	y of the method, including n of the instrument and/or matrix interferences, if any ween MDL and PQL ther spike in the set fell with pted because sample cond the indicated MDL oncentration is 10 times hig	the prep procedure. method. hin the given limits. centrations are less than 10x the MDL.
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Control Sar Duplicates Spikes/Fort 2 Qualifiers B H J R T U U V W X Z	tified Matrix ((2ttel)) Analyte detected Analyte concentra Poor spike recove High Relative Per Analyte was analy High blank data a Poor recovery for Quality contreol s	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of recent Difference (RPD) acce yzed for but not detected at accepted because sample co silver quality control is acce sample is out of control.	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL ween MDL and PQL wher spike in the set fell with pted because sample condition the indicated MDL procentration is 10 times high apted because Silver often spike in the solution of the indicated because Silver often spike	the prep procedure. method. hin the given limits. centrations are less than 10x the MDL.
Control Sar Duplicates Spikes/Fort E H J R T U V V W X	tified Matrix (Quell) Analyte detected Analyte concentra Poor spike recover High Relative Per Analyte was analy High blank data a Poor recovery for Quality contreol s Poor spike recover	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of recent Difference (RPD) acce yzed for but not detected at accepted because sample co silver quality control is acce sample is out of control.	y of the method, including n of the instrument and/or matrix interferences, if any ween MDL and PQL ther spike in the set fell with pted because sample cond the indicated MDL oncentration is 10 times hig epted because Silver often nple concentration is four t	the prep procedure, method. hin the given limits. centrations are less than 10x the MDL. her than blank concentration precipitates with Chloride.
Control Sar Duplicates Spikes/Fort 2 Qualifiers B H J R T U U V W X Z	tified Matrix ((eticl)) Analyte detected Analyte concentra Poor spike recove High Relative Per Analyte was analy High blank data a Poor recovery for Quality contreol s Poor spike recove Analyte concentra	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of recent Difference (RPD) acce yzed for but not detected at accepted because sample co Silver quality control is acce sample is out of control. ery is accepted because sam	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL ween MDL and PQL wher spike in the set fell with pted because sample concethe indicated MDL procentration is 10 times higher because Silver often anple concentration is four the tector by more than 40%.	the prep procedure. method. hin the given limits. centrations are less than 10x the MDL. her than blank concentration precipitates with Chloride. imes greater than spike concentration.
Control Sar Duplicates Spikes/Fort Edeptetliners B H J R T U V V W X Z P E M	tified Matrix ((2ttel)) Analyte detected Analyte concentra Poor spike recove High Relative Per Analyte was analy High blank data a Poor recovery for Quality contreol s Poor spike recove Analyte concentra Analyte concentra Analyte concentra	Verifies the accurace Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the ot recent Difference (RPD) acce yzed for but not detected at accepted because sample co Silver quality control is acce sample is out of control. ery is accepted because sam ation differs from second det ation is estimated due to res ation is estimated due to ma	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL ween	the prep procedure. method. hin the given limits. centrations are less than 10x the MDL. her than blank concentration precipitates with Chloride. imes greater than spike concentration.
Control Sar Duplicates Spikes/Fort Edeptetliners B H J R T U V V W X Z P E M	tified Matrix ((2ttel)) Analyte detected Analyte concentra Poor spike recove High Relative Per Analyte was analyte High blank data a Poor recovery for Quality contreol s Poor spike recove Analyte concentra Analyte concentra Analyte concentra Analyte concentra	Verifies the accurace Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of recent Difference (RPD) acce yzed for but not detected at accepted because sample co Silver quality control is acce sample is out of control. ery is accepted because sam ation differs from second det ation is estimated due to res ation is estimated due to ma	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL ween MDL and PQL ween MDL and PQL with pited because sample concettration is 10 times higher because Silver often and	the prep procedure, method. hin the given limits. centrations are less than 10x the MDL. wher than blank concentration precipitates with Chloride. imes greater than spike concentration. ange.
Control Sar Duplicates Spikes/Fort 24 Otrallinger B H J R T U V V W X Z P E M Modu Referc (1)	tified Matrix ((2ttel)) Analyte detected Analyte concentra Poor spike recove High Relative Per Analyte was analyte High blank data a Poor recovery for Quality contreol s Poor spike recove Analyte concentra Analyte concentra Analyte concentra Analyte concentra	Verifies the accurace Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the ot recent Difference (RPD) acce yzed for but not detected at accepted because sample co Silver quality control is acce sample is out of control. ery is accepted because sam ation differs from second det ation is estimated due to res ation is estimated due to ma	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL ween MDL and PQL ween MDL and PQL with pited because sample concettration is 10 times higher because Silver often and	the prep procedure, method. hin the given limits. centrations are less than 10x the MDL. wher than blank concentration precipitates with Chloride. imes greater than spike concentration. ange.
Control Sar Duplicates Spikes/Fort E B H J R T U V V W X Z P E M Chood Refere	tified Matrix (Quell) Analyte detected Analyte concentra Poor spike recover High Relative Per Analyte was analyte High blank data a Poor recovery for Quality contreol s Poor spike recover Analyte concentra Analyte concentra Analyte concentra Analyte concentra Mathematical EPA 600/4-83-02	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of recent Difference (RPD) acce yzed for but not detected at accepted because sample co Silver quality control is acce sample is out of control. ery is accepted because sam ation differs from second det ation is estimated due to res ation is estimated due to ma	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL. Ther spike in the set fell with pted because sample condition the indicated MDL oncentration is 10 times highered because Silver often anple concentration is four the tector by more than 40%. The exceeding calibration ratio interferences.	the prep procedure, method. hin the given limits. centrations are less than 10x the MDL. wher than blank concentration precipitates with Chloride. imes greater than spike concentration. ange.
Control Sar Duplicates Spikes/Fort 24 Otrallinger B H J R T U V V W X Z P E M Modu Referc (1)	tified Matrix (Queil) Analyte detected Analyte concentra Poor spike recover High Relative Per Analyte was analyte High blank data a Poor recovery for Quality contreol s Poor spike recover Analyte concentra Analyte concentra Analyte concentra Analyte concentra Analyte concentra Analyte concentra Analyte concentra Analyte concentra Analyte concentra	Verifies the accurace Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bettery accepted because the of recent Difference (RPD) acce yzed for but not detected at accepted because sample cor- silver quality control is acce sample is out of control. ery is accepted because sam ation differs from second det ation is estimated due to res- ation is estimated due to ma	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL ther spike in the set fell with pted because sample condition the indicated MDL procentration is 10 times higher because Silver often an ple concentration is four the tector by more than 40%. Ut exceeding calibration ratix interferences.	the prep procedure, method. hin the given limits. centrations are less than 10x the MDL. ther than blank concentration precipitates with Chloride. imes greater than spike concentration. ange.
Control Sar Duplicates Spikes/Fort 24@trelfifers B H J R T U V V W X Z P E M (hord Refere (1) (2)	tified Matrix ([2ttel]) Analyte detected Analyte concentra Poor spike recove High Relative Per Analyte was analyt High blank data a Poor recovery for Quality contreol s Poor spike recove Analyte concentra Analyte concentra Analyte concentra Analyte concentra BPA 600/4-83-02 EPA 600/4-90/02 EPA 600/R-92/12	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of recent Difference (RPD) acce yzed for but not detected at accepted because sample co Silver quality control is acce sample is out of control. ery is accepted because sample co ation differs from second det ation is estimated due to res ation is estimated due to ma 20. Methods for Chemical Ar 0. Methods for the Determin 29. Methods for the Determin	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL ween the indicated MDL oncentration is 10 times hig epted because sample concentration is four the indicated MDL oncentration is 10 times hig epted because Silver often an under the indicated MDL ween the indicated MDL oncentration is four the indicat	the prep procedure. method. hin the given limits. centrations are less than 10x the MDL. her than blank concentration precipitates with Chloride. imes greater than spike concentration. ange.
Control Sar Duplicates Spikes/Fort E H J R T U V W X Z P E M Chod Refere (1) (2) (3) (5) (6)	tified Matrix ((2tfcl)) Analyte detected Analyte concentra Poor spike recove High Relative Per Analyte was analyte High blank data a Poor recovery for Quality contreol s Poor spike recove Analyte concentra Analyte concentra Analyte concentra Analyte concentra EPA 600/4-83-02 EPA 600/4-90/02 EPA 600/R-92/12 EPA SW-846. Te Standard Method	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of recent Difference (RPD) acce yzed for but not detected at accepted because sample co sample is out of control. ery is accepted because sample co sample is out of control. ery is accepted because sam ation differs from second det ation is estimated due to res ation is estimated due to res ation is estimated due to res ation is estimated due to ma 20. Methods for Chemical Ar 0. Methods for the Determines thethods for the Determines thethods for Evaluating S is for the Examination of Wa	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL ween MDL and PQL ween MDL and PQL ween MDL and PQL with pited because sample concettration is 10 times higher because Silver often and texceeding calibration ratrix interferences.	the prep procedure, method. hin the given limits. centrations are less than 10x the MDL. wher than blank concentration precipitates with Chloride. imes greater than spike concentration. ange. es, March 1983. hds in Drinking Water (I), July 1990. nds in Drinking Water (II), July 1990. vith Update III, December, 1996.
Control Sar Duplicates Spikes/Fort E H J R T U V W X Z P E M Chod Refere (1) (2) (3) (5) (6)	tified Matrix ((2tfcl)) Analyte detected Analyte concentra Poor spike recove High Relative Per Analyte was analyte High blank data a Poor recovery for Quality contreol s Poor spike recove Analyte concentra Analyte concentra Analyte concentra Analyte concentra EPA 600/4-83-02 EPA 600/4-90/02 EPA 600/R-92/12 EPA SW-846. Te Standard Method	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of recent Difference (RPD) acce yzed for but not detected at accepted because sample co silver quality control is acce sample is out of control. ery is accepted because sample co ation differs from second det ation is estimated due to res ation is estimated due to res ation is estimated due to res ation is estimated due to ma 20. Methods for Chemical Ar 0. Methods for the Determining st Methods for Evaluating S	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL ween MDL and PQL ween MDL and PQL ween MDL and PQL with pited because sample concettration is 10 times higher because Silver often and texceeding calibration ratrix interferences.	the prep procedure, method. hin the given limits. centrations are less than 10x the MDL. wher than blank concentration precipitates with Chloride. imes greater than spike concentration. ange. es, March 1983. hds in Drinking Water (I), July 1990. nds in Drinking Water (II), July 1990. vith Update III, December, 1996.
Control Sar Duplicates Spikes/Fort E H J R T U V W X Z P E M Chod Refere (1) (2) (3) (5) (6)	tified Matrix (Quell) Analyte detected Analyte concentra Poor spike recover High Relative Per Analyte was analyte High blank data a Poor recovery for Quality contreol s Poor spike recover Analyte concentra Analyte concentra Analyte concentra Analyte concentra EPA 600/4-83-02 EPA 600/4-90/02 EPA 600/R-92/12 EPA SW-846. Te Standard Method	Verifies the accuracy Verifies the precision Determines sample in daily blank ad method hold time. ation detected at a value bet ery accepted because the of recent Difference (RPD) acce yzed for but not detected at accepted because sample co silver quality control is acce sample is out of control. ery is accepted because sam ation differs from second det ation is estimated due to res ation is estimated due to ma 0. Methods for Chemical Ar 0. Methods for the Determine est Methods for Evaluating S is for the Examination of Wa	y of the method, including in of the instrument and/or in matrix interferences, if any ween MDL and PQL, ther spike in the set fell with pted because sample condition the indicated MDL oncentration is 10 times highered because Silver often inple concentration is four the tector by more than 40%. Ut exceeding calibration ratics interferences.	the prep procedure, method. hin the given limits. centrations are less than 10x the MDL. wher than blank concentration precipitates with Chloride. imes greater than spike concentration. ange. es, March 1983. hds in Drinking Water (I), July 1990. nds in Drinking Water (II), July 1990. vith Update III, December, 1996.

REPIN03.11.00.01

Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.

Qualifier Report

Organic Extended

ACZ Project ID: L46374

ACZID WORKNUM PARAMETER METHOD QUAL DESCRIPTION

L46374-01 WG174314 o Xylene

M8021B GC/PID

MA One spike recovery was outside of the method limits; the duplicate spike and the method control recoveries were within the method limits. **Laboratories, Inc.** 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.

MISC SAMPLING



ACZ Project ID: L46374 Date Received: 6/24/2004 Received By:

trie it

ReceiptVerification			Canaly 2
	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	Х		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	Х		
9) Were all sample containers received intact?	Х		an terretty
10) Are the temperature blanks present?	Х		
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?	Х		
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions; please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
ACZ		1.6	15
	1		
	-		

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc. MISC SAMPLING



ACZ Project ID: Date Received: Received By:

L46374 6/24/2004

Sample Container Preservation

SAMPLE CL	IENT ID	R < 2	G < 2	Y < 2	YG< 2	B < 2	BG< 2	0 < 2	T >12	P >12	N/A	RAD
L46374-01 M	W-1 FLORA VISTA	1									Ö	
Sample Con	italner Preservation Lege	nel en s			and the second			10. 11.	200		2. S. S. S.	5 . S
Abbreviation	Description	Contair	ner Type	Pres	ervative	Limits						
R	Raw/Nitric	RED		pH m	ust be <	3						
В	Filtered/Sulfuric	BLUE		pH m	ust be <	2						
BG	Filtered/Sulfuric	BLUE G	LASS	pH m	ust be <	2						
G	Filtered/Nitric	GREEN		pH m	ust be <	2						
0	Raw/Sulfuric	ORANG	ε	pH m	ust be <	2						
Р	Raw/NaOH	PURPLE	Ē	pH m	ust be >	12						
т	Raw/NaOH Zinc Acetate	TAN		pH m	ust be >	12						
Y	Raw/Sulfuric	YELLO	N	pH m	ust be <	2						
YG	Raw/Sulfuric	YELLOV	V GLASS	i pH m	ust be <	2						
N/A	No preservative needed	Not app	licable									
RAD	Gamma/Beta dose rate	Not app	licable	must	be < 250) µR/hr						

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:		Project	Name: <u>(Flora V</u>	ísta)	Clien	t:_Burlington				
			/-1	Developme						
							e <u>0830</u>	Weather clear 60s		
Depth to Water16.82 Depth to Productna Product Thickness:na Measuring Point										
Water Colun	nn Heigh	t <u>8.53</u>	Well Dia.	2"						
Sampling Me	ethod: S	ubmersible	Pump []	Centrifugal	Pump 🛛	Peristaltic	Pump	Other		
	В	ottom Valve	e Bailer 🗴	Double Che	ck Valve I	Bailer 🗆 S	tainless-Ste	el Kemmerer 🛛		
	5									
Criteria: 3	to 5 Casi	ng Volumes	s of Water Rem	ioval X stabi	lization of	Indicator Par	rameters X	Other <u>or bail</u> dry		
				Water Volum	ne in Well					
	ft of wat	er	Gallons			Ounces		Gal/oz to be removed		
8.5	3 x .16		1.36					4.09		
Time	рН	SC	Temp	ORP	D.O.	Turbidity	Vol Evac.	Comments/		
(military)	(su)	(umhos/c	:m) (°F)	(millivolts)	(mg/L)	(NTU)	(gal)	Flow rate		
0849	6.45	8740	61.5				0.5	clear		
	6.57	8860	62.0				0.75	blackish,silty		
	6.53	9340	62.1				1	brown, silty		
	6.11	9410	61.6				1.75	brown, silty		
	6.39	9560	61.3				2.5	brown, silty		
	6.24	9600	61.4				3.0	brown, silty		
	6.21	9430	61.5				4.0	brown, silty		
<u>0903</u>	6.25	9440	61.2				4.25	brown, silty		
	1	1		1	L		L			

Final:							Ferrous		
Time	pН	SC	Temp	Eh-ORP	D.O.	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
<u>0903</u>	6.25	9440	61.2					4.25	brown, silty
								1	

COMMENTS well bailing down

INSTRUMENTATIO	ON: pH≬	Neter	X		Tempera	ture Meter x
	D	O Moni	tor		Other	
	Conductivit	y Mete	X			
Water Disposal ons	site	_	Sample	ID MW-1 Sample Tim	ne <u>0908</u>	
Analysis <u>B7</u>	<u>'EX</u>					
MS/MSD		BD		BD Name/Tim	1e	TB_tb092104-01

ALZ Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.

Project ID:

Sample ID: MW-1 FLORA VISTA Locator:

Benzene, Toluene, Ethylbenzene & Xylene

Analysis Method: M8021B GC/PID

Extract Method: Method

Compound Compound	CAS	Result	OUAL, XO	তানিজ	MDL	BOL
Benzene	000071-43-2	9080		ug/L	30	100
Ethylbenzene	000100-41-4	1410	*	ug/L	20	100
m p Xylene	01330 20 7	9800	*	ug/L	40	200
o Xylene	00095-47- 6	180		ug/L	20	100
Toluene	000108-88-3	30	J	ug/L	20	100
Surrogate Recoveries						
Surroyale	CAS	% Recovery	XQ	-Unite-	્લ્લિક -	ାପାତା
Bromofluorobenzene	000460-00-4	94		%	83	117

Organic Analytical Results

10/06/04 19:34

10/06/04 19:34

ACZ Sample ID: L48066-06 Date Sampled: 09/30/04 9:08 Date Received: 10/01/04 Sample Matrix: Ground Water

kт

100

Analyst:

Extract Date:

Analysis Date:

Dilution Factor:

WELL DEVELOPMENT AND SAMPLING LOG

			· · · · ·						
Project No.:_ Location: Flo			-				t: <u>Burlington</u> lopment <u>S</u>		
Project Man							•		Weather <u>clear 30s</u>
-									easuring Point <u>TOC</u>
Water Colun							<u></u>		
		· <u></u>							
Sampling Me	ethod: S	ubmer	sible Pum	пр 🗌	Centrifuga	l Pump	Peristaltic	Pump] Other []
	В	ottom	Valve Bai	ler x	Double Ch	neck Valve	Bailer ¹ S	tainless-S	Steel Kemmerer
Criteria: 31	to 5 Casi	ng Vol	umes of \	Nater Rem	oval X stal	bilization of	Indicator Pa	rameters	X Other <u>or bail dry</u>
	·				Water Volu	me in Well			
	ft of wat	er		Gallons			Ounces		Gal/oz to be removed
4.9	5 x .16			.792 x 3					2.376
Time	pН	1	SC	Temp	ORP	D.O.	Turbidity	Vol Eva	
(military)	(su)	(um	nos/cm)	(°F)	(millivolts)) (mg/L)	(NTU)	(gal)	Flow rate
1615	6.10	1	030	59.7				.25	Clear
	6.10	1	030	60.2				.50	Black
	6.06	1	020	60.7				1.0	
	6.20	1	040	60.9				2.0	
<u>1624</u>	6.16	1	010	60.4				2.5	
			-						
	-								
	1	1		1	1	1	1	1	

Final:							Ferrous		
Time	рН	SC	Temp	Eh-ORP	D.O.	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
<u>1624</u>	6.16	1010	60.4					2.5	
			8						

COMMENTS well bailing	down		
INSTRUMENTATION:	pH Meter X	Tempe	rature Meter x
	DO Monitor	Other	
Cond	Juctivity Meter X		
Water Disposal onsite		Sample ID <u>MW-1</u> Sample Time <u>1627</u>	
Analysis <u>BTEX</u>			
MS/MSD	BD	BD Name/Time	TB
		· · ·	

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.

Compound

Project ID:	MISC GW SAMPLES
Sample ID:	FLORA VISTA MW1
Locator:	

Benzene Toluene, Ethylbenzene & Xylene

Analysis Method:	M8021B GC/PID
/ maryolo mourou.	

Extract Method: Method



ACZ Sample ID: L49179-01 Date Sampled: 12/13/04 16:27 12/15/04 Date Received: Sample Matrix: Ground Water

Analyst:	km
Extract Date:	12/21/04 12:37
Analysis Date:	12/21/04 12:37
Dilution Factor:	50

Compound.	CAS	Result	awal, x	QUnits	Mols	PGP .
Benzene	000071-43-2	8520		ug/L	20	50
Ethylbenzene	000100-41-4	1340		ug/L	10	50
m p Xylene	01330 20 7	9300		ug/L	20	100
o Xylene	00095-47- 6	90		ug/L	10	50
Toluene	000108-88-3		U	ug/L	10 ·	50
Surrogate Recoveries		10 de la 18 de la 19 de la compañía				

Surrogate 2	CAS 2	Recovery XQ	:0त0 <u>ि</u>	LCLS	VOL
Bromofluorobenzene	000460-00-4	97.9	%	83	117

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-54	93	CHAIN of
Report to:		
	Address: 3401 30	S-T
Name: GREGG Wurtz Company: BUrlngrond	FARMINGTON NW	
E-mail:	Telephone: 505 326	
Copy of Report to:	A CARACTER CONTRACTS	
Name:	E-mail:	and the second of the second
Company:	Telephone:	
Invoice to		
Name: SAME AS Above	Email:	,\$° 847,β°, 307,β°, 41, β°, β, β, β, β, β
Company:	Telephone:	<u>, , , , , , , , , , , , , , , , , , , </u>
If sample(s) received past holding time (HT), or if insufficient H		YES
analysis before expiration, shall ACZ proceed with requested s If "NO" then ACZ will contact client for further instruction. If n		NO
is indicated, ACZ will proceed with the requested analyses, eve		1.
PROJECT INFORMATION	ANALYSES REQUESTED (attach lis	
Quote #:	ers	
Project/PO#: MISC- GROUND Water Sampi	of Containers	
Reporting state for compliance testing:	of Cont	
Are any samples NRC licensable material?	atrix #	
	\mathcal{A}	
	$W \supset I$	
	Wall	
	-11 2 1	
	w 2 1	
TB 120904-01 121304 1720 0		
	、	
Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL	. (Oil) · Other (Specify)
KEMAKAS	แก่วงสังการของสารสารสารการที่มีในเป็นไปกระการเริ่มก็รับไปที่สาร รับได้	
PLEASE DROVIDE SEDAN	ATTE REDORT F	
PLEASE DROVIDE SEPAR EACH LOCATION		
EACH LOCATION		
Please refer to ACZ's terms & condit	ions located on the reverse side of this CC	C
RELINQUISHED BY		DATE:TIME
D KOR (NEE) 12-13-042		12/15/04/000
SAMPLED BY		
Martin Nee as per		
Gregn WELNTZ		
KMG/2/15/04		

•



December 30, 2004

Report to: Gregg Wurtz Burlington Resources, Inc. 3401 E. 30th St. PO BOX 4289 Farmington, NM 87499 Bill to: Gregg Wurtz Burlington Resources, Inc. 3401 E. 30th St. PO BOX 4289 Farmington, NM 87499

Project ID: MISC GW SAMPLES ACZ Project ID: L49179

Gregg Wurtz:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 15, 2004. This project has been assigned to ACZ's project number, L49179. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L49179. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 30, 2005. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.

30/Dec/04

Sue Barkey, Project Manager, has reviewed and approved this report in its entirety.





REPAD.01.11.00.01



 Laboratories, Inc.

 2773 Downhill Drive
 Steamboat Springs, CO 80487 (800) 334-5493



Report Heade	r Explanations	14 States States					
Batch	A distinct set of samples analyzed at a specific time	•					
Found	Value of the QC Type of interest						
Limit	Upper limit for RPD, in %.						
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)						
LCL	Lower Control Limit						
MDL	Method Detection Limit. Same as Minimum Reporti	ing Limit. Allows for	instrument and annual fluctuations.				
PCN/SCN	A number assigned to reagents/standards to trace t	o the manufacturer's	certificate of analysis				
PQL	Practical Quantitation Limit						
QC	True Value of the Control Sample or the amount add	ded to the Spike					
Rec	Amount of the true value or spike added recovered,	in % (except for LCS	SS, mg/Kg)				
RPD	Relative Percent Difference, calculation used for Du	plicate QC Types					
Upper	Upper Recovery Limit, in % (except for LCSS, mg/	≺g)					
UCL	Upper Control Limit						
Sample	Value of the Sample of interest						
QC Sample Ty	ypes						
SURR	Surrogate	LFM	Laboratory Fortified Matrix				
INTS	Internal Standard	LFMD	Laboratory Fortified Matrix Duplicate				
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank				
LCSS	Laboratory Control Sample - Soil	MS/MSD	Matrix Spike/Matrix Spike Duplicate				
LCSW	Laboratory Control Sample - Water	PBS	Prep Blank - Soil				
LFB	Laboratory Fortified Blank	PBW	Prep Blank - Water				
QC Sample Ty	ype Explanations	经济自己 机合金属					
Blanks	Verifies that there is no or	minimal contamination	on in the prep method procedure.				
Control Sa	amples Verifies the accuracy of the	e method, including t	he prep procedure.				
Duplicates	Verifies the precision of the	e instrument and/or r	nethod.				
Figure 1 and 1	rtified Matrix Determines sample matrix	interferences, if any					
ACZ Qualifier							
В	Analyte detected in daily blank						
Н	Analysis exceeded method hold time.						
J	Analyte concentration detected at a value between						
R	Poor spike recovery accepted because the other sp						
Т	High Relative Percent Difference (RPD) accepted b		centrations are less than 10x the MDL.				
U	Analyte was analyzed for but not detected at the inc						
V	High blank data accepted because sample concent	-					
w	Poor recovery for Silver quality control is accepted t	because Silver often	precipitates with Chloride.				
X	Quality contreol sample is out of control.						
Z	Poor spike recovery is accepted because sample of		imes greater than spike concentration.				
P	Analyte concentration differs from second detector	•					
E	Analyte concentration is estimated due to result exc	-	ange.				
M Method Refer	Analyte concentration is estimated due to matrix int	enerences.					
(1)	EPA 600/4-83-020. Methods for Chemical Analysis	of Water and Waste	es, March 1983.				
(2)	EPA 600/4-90/020. Methods for the Determination	of Organic Compour	nds in Drinking Water (I), July 1990.				
(3)	EPA 600/R-92/129. Methods for the Determination	of Organic Compour	nds in Drinking Water (II), July 1990.				
(5)	EPA SW-846. Test Methods for Evaluating Solid W	/aste, Third Edition v	vith Update III, December, 1996.				
(6)	Standard Methods for the Examination of Water and	d Wastewater, 19th e	edition, 1995.				
Comments							
(1)							
· /	QC results calculated from raw data. Results may		unded values are used in the calculations.				
(2)	QC results calculated from raw data. Results may Organic analyses are reported on an "as received"		unded values are used in the calculations.				

REPIN03.11.00.01

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Burlington Resources, Inc.

ACZ Project ID: L49179

ACZID WORKNUM PARAMETER METHOD QUAL DESCRIPTION

No extended qualifiers associated with this analysis

Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.

MISC GW SAMPLES



ACZ Project ID: L49179 Date Received: 12/15/2004 Received By:

Receipt Verification			
	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	Х		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?		Х	
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	Х		
8) Are all samples within holding times for requested analyses?	Х		
9) Were all sample containers received intact?	Х		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			Х
12) Are samples requiring no headspace, headspace free?	X		
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions: please describe

"Sampled by" not relinquished

Contact (For any discrepancies, the client must be contacted)

Gregg Wurtz was contacted. Gregg indicated who did the sampling.

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
acz		8.5	13
·····	1		
	+		

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

REPAD.03.11.00.01

Notes

Burlington Resources, Inc.

MISC GW SAMPLES



ACZ Project ID: Date Received: Received By:

L49179 12/15/2004

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	Y < 2	YG<2	B < 2	BG< 2	0 < 2	T >12	P >12	N/A	RAD
L49179-01	FLORA VISTA MW1										X	
SampleC	ontainer Preservation Legen	d.	8 8								S. S.	

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: <u>30001.0</u> Location:_Flora Vista I Project Manager Depth to Water <u>17</u> Water Column Height	No. 1 <u>MJN</u> .03 Dep	Well N	ict <u>na</u> l	3/03	Start Time	Devel = <u>1328</u>	<u>Burlington Resources</u> opment <u>Sampling</u> Weather <u>sunny 80s</u> uring Point <u>TOC</u>	
Sampling Method: Sul	bmersible Pur	np 🗖	Centrifugal	Pump 📋	Peristaltic	Pump 🔲	Other	
20	Bottom Valve Bailer x Double Check Valve Bailer Stainless-Steel Kemmerer							
	1		Water Volum	ne in Well				
Gal/ft x ft of wate	r	Gallons			Ounces		Gai/oz to be removed	
8.23 x .16	8.23 x .16 1.33 x 3 3.99							
Time pH (military) (su)	SC (umhos/cm)	Temp (°¢)⊭	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)	Comments/ Flow rate	
1328 6.87	1360	74.8			,	0.5	silty	
6.89	1430	73.2			· · · · · ·	1	silty	

Time (military)	pH (su)	SC (umhos/cm)	Temp (°€)F	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)	Comments/ Flow rate
1328	6.87	1360	74.8				0.5	silty
	6.89	1430	73.2			<u></u>	1	silty
	6.84	1590	74.4				1.5	silty
	6.90	1550	71.5				2.75	silty
<u> </u>	6.92	1500	70.5				3.75	silty
	6.96	1490	70.4				4.0	silty
1352	7.01	1510	70.4				4.25	silty
	<u></u> ⊢∽					<u>,,,,</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		

Final:							Ferrous		· · · · · · · · · · · · · · · · · · ·
Time	рН	sc	Temp	Eh-ORP	D.O	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
<u>1352</u>	7.01	1510	70.4					4.25	silty
				l					

COMMENTS: Well needs additional development

INSTRUMENTATION:	pH Meter X		Temperature Meter	X
	DO Monitor		Other	
Cond	uctivity Meter X		`	
Water Disposal onsite	Sample ID_Flora	Vista 1 MW-1	Sample Time_	1355
BTEX VOCs Alkalinit	y TDS Cations	Anions Nitrate Nitrite Ar	nmonia TKN <u>NMWQCC</u>	<u>Metals</u>
Total Phosphorus				
MS/MSD	BD	BD Name/Tim	e	ТВ

ALZ Laboratories, Inc.

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Burlington Resources, Inc.

Project ID:	
Sample ID:	FLORA VISTA MW-1

SM 3030 B

SM 3030 B

M150.1 - Electrometric

M375.3 - Gravimetric

ACZ Sample ID:L43111-01Date Sampled:09/23/03 13:55Date Received:09/26/03Sample Matrix:Ground Water

Metals Analysis		,						
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date 💦	Analyst
Arsenic, dissolved	M200.8 ICP-MS	0.0088		mg/L	0.0001	0.0005	10/07/03 9:58	lcj
Barium, dissolved	M200.7 ICP	0.253		mg/L	0.003	0.01	10/17/03 22:44	scp
Cadmium, dissolved	M200.8 ICP-MS		U	mg/L	0.0001	0.0005	10/07/03 9:58	lcj
Calcium, dissolved	M200.7 ICP	164		mg/L	0.2	1	10/13/03 4:40	scp
Chromium, dissolved	M200.8 ICP-MS	0.0002	в	mg/L	0.0001	0.0005	10/07/03 9:58	lcj
Copper, dissolved	M200.8 ICP-MS		U *	mg/L	0.0005	0.003	10/07/03 9:58	lcj
/ Iron, dissolved	M200.7 ICP	4.28		mg/L	0.01	0.05	10/13/03 4:40	scp
Magnesium, dissolved	M200.7 ICP	18.7		mg/L	0.2	1	10/13/03 4:40	scp
Manganese, dissolved	M200.7 ICP	3.410	*	mg/L	0.005	0.03	10/13/03 4:40	scp
Potassium, dissolved	M200.7 ICP	2.9		mg/L	0.3	1	10/18/03 14:56	wfg
Sodium, dissolved	M200.7 ICP	105	*	mg/L	0.3	1	10/17/03 22:44	scp
Zinc, dissolved	M200.7 ICP		U	mg/L	0.01	0.05	10/13/03 4:40	scp
Wet Chemistry								
Parameter	EPA Method	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration							
Bicarbonate as		502		mg/L	2	10	10/04/03 0:00	jjc
CaCO3								
Carbonate as CaCO3	1		U	mg/L	2	10	10/04/03 0:00	jjc
Hydroxide as CaCO3			U	mg/L	2	10	10/04/03 0:00	jjc
Total Alkalinity		502		mg/L	2	10	10/04/03 0:00	jjc
Cation-Anion Balance	Calculation				•			
Cation-Anion Balance		-1.7		%			10/20/03 0:00	calc
Sum of Anions		15.4		meq/L	0.1	0.5	10/20/03 0:00	calc
Sum of Cations		14.9		meq/L	0.1	0.5	10/20/03 0:00	calc
Chloride	M325.2 - Colorimetric	48		mg/L	1	5	10/09/03 15:27	ksj
Conductivity @25C	M120.1 - Meter	1100		umhos/cm	1	10	10/15/03 16:02	mah
	014 0000 D							

7.3

190

н

Lab Filtration

Acidification

pH (lab)

Sulfate

Lab Filtration &

* Please refer to Extended Qualifier Report for detail.

L43111: Page 2 of 23

09/29/03 18:13

10/02/03 11:21

10/15/03 16:02

10/15/03 11:36

0.1

10

units

mg/L

0.1

50

jjr

wfg

mah

jjc

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.

Project ID:

FLORA VISTA MW-1 Sample ID:

Benzene, Toluene, Ethylbenzene & Xylene

M8021B GC/PID Analysis Method:

Method Extract Method:

Organic Analytica Results

ACZ Sample ID: L43111-01

Date Sampled: 09/23/03 13:55 Date Received: 09/26/03 Sample Matrix: Ground Water

Extract Date: Analysis Date:	km 10/02/03 2:00 10/02/03 2:00 50
---------------------------------	--

Compound Compound	GAS	Result	OUAL	XQ	Units	MDL	POL
Benzene	000071-43-2	7500		*	ug/L	20	50
Ethylbenzene	000100-41-4	660		*	ug/L	10	50
m p Xylene	01330 20 7	8550		*	ug/L	20	100
o Xylene	00095-47- 6	670		٠	ug/L	10	50
Toluene	000108-88-3	20	J	*	ug/L	10	50
Surrogate Recoveries Surrogate	CAS	. % Recovery	tat s	XQ	Units	i.ci.	UGL
Bromofluorobenzene	000460-00-4	91.5		*	%	84	114

Bromofluorobenzene

REPOR.01.01.01.02



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Report Heade	Explanations				
Batch	A distinct set of samples analyzed	at a specific time			
Found	Value of the QC Type of interest				
Limit	Upper limit for RPD, in %.				
Lower	Lower Recovery Limit, in % (except	ot for LCSS, mg/Kg)			
LCL	Lower Control Limit				
MDL	Method Detection Limit. Same as	Minimum Reporting Lin	nit. Allows for	instrument and annual fluctuations.	
PCN/SCN	A number assigned to reagents/sta	indards to trace to the i	manufacturer's	certificate of analysis	
PQL	Practical Quantitation Limit				
QC	True Value of the Control Sample of	or the amount added to	the Spike		
Rec	Amount of the true value or spike a	dded recovered, in % ((except for LCS	SS, mg/Kg)	
RPD	Relative Percent Difference, calcul	ation used for Duplicate	e QC Types		
Upper	Upper Recovery Limit, in % (except	ot for LCSS, mg/Kg)			• •
UCL	Upper Control Limit				
Sample	Value of the Sample of interest				
QC Sample Ty	pes				
SURR	Surrogate		LFM	Laboratory Fortified Matrix	
INTS	Internal Standard		LFMD	Laboratory Fortified Matrix Duplicate	
DUP	Sample Duplicate		LRB	Laboratory Reagent Blank	
LCSS	Laboratory Control Sample - Soil		MS/MSD	Matrix Spike/Matrix Spike Duplicate	
LCSW	Laboratory Control Sample - Water		PBS	Prep Blank - Soil	· · ·
LFB	Laboratory Fortified Blank		PBW	Prep Blank - Water	
QC Sample Ty	pe Explanations				
Blanks	Verifies th	at there is no or minim	al contaminatio	on in the prep method procedure.	
				in an and prop mounda procedule.	
Control Sa	mples Verifies th	e accuracy of the meth			
Control Sa Duplicates	•	e accuracy of the methe precision of the instru-	nod, including f	he prep procedure.	
Duplicates	Verifies th	-	nod, including f ument and/or i	he prep procedure. nethod.	
Duplicates	Verifies th tified Matrix Determine	e precision of the instr	nod, including f ument and/or i	he prep procedure. nethod.	
Duplicates Spikes/For	Verifies th tified Matrix Determine	e precision of the instr	nod, including f ument and/or i	he prep procedure. nethod.	
Duplicates Spikes/For	Verifies th tified Matrix Determine (Qrfal)	e precision of the instr s sample matrix interfe	nod, including f ument and/or i	he prep procedure. nethod.	
Duplicates Spikes/For ACZQUalifier B	Verifies th tified Matrix Determine (Qual) Analyte detected in daily blank	e precision of the instr es sample matrix interfe ne.	nod, including f ument and/or r erences, if any	he prep procedure. nethod.	
Duplicates Spikes/For Aczeoualitien B H	Verifies th tified Matrix Determine (Qrnal) Analyte detected in daily blank Analysis exceeded method hold tim Analyte concentration detected at a Poor spike recovery accepted beca	e precision of the instr es sample matrix interfe ne. a value between MDL a suse the other spike in	nod, including f ument and/or r erences, if any and PQL the set fell with	he prep procedure. nethod.	
Duplicates Spikes/For Acz400allifien B H J	Verifies th tified Matrix Determine (Qrnal) Analyte detected in daily blank Analysis exceeded method hold tim Analyte concentration detected at a Poor spike recovery accepted beca	e precision of the instr es sample matrix interfe ne. a value between MDL a suse the other spike in	nod, including f ument and/or r erences, if any and PQL the set fell with	he prep procedure. nethod.	
Duplicates Spikes/For Ac2201allifier B H J R	Verifies the tified Matrix Determine ((c)(rfd)). Analyte detected in daily blank Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (f Analyte was analyzed for but not de	e precision of the instra es sample matrix interfe ne. a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated	nod, including f ument and/or r erences, if any and PQL the set fell with re sample conc d MDL	he prep procedure. method. nin the given limits. entrations are less than 10x the MDL.	
Duplicates Spikes/For Act Qualifier B H J R T	Verifies the tified Matrix Determine (Qual) Analyte detected in daily blank Analysis exceeded method hold time Analyte concentration detected at a Poor spike recovery accepted because High Relative Percent Difference (F Analyte was analyzed for but not do High blank data accepted because	e precision of the instru- es sample matrix interferences ne. A value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration	nod, including f ument and/or r erences, if any and PQL the set fell with the sample cond d MDL is 10 times hig	he prep procedure. nethod. nin the given limits. centrations are less than 10x the MDL. her than blank concentration	
Duplicates Spikes/For Aczoualitien B H J R T U	Verifies the tified Matrix Determine (Qrtef)) Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (f Analyte was analyzed for but not d High blank data accepted because Poor recovery for Silver quality cor	e precision of the instru- es sample matrix interferences a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus	nod, including f ument and/or r erences, if any and PQL the set fell with the sample cond d MDL is 10 times hig	he prep procedure. nethod. nin the given limits. centrations are less than 10x the MDL. her than blank concentration	
Duplicates Spikes/For Ac2201allifier B H J R T U V V W X	Verifies the tified Matrix Determine (Qrfel)) Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (f Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality control sample is out of co	e precision of the instra es sample matrix interfe ne. a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl.	nod, including f ument and/or r erences, if any and PQL the set fell with e sample conc d MDL is 10 times hig se Silver often	he prep procedure. nethod. hin the given limits. centrations are less than 10x the MDL. her than blank concentration precipitates with Chloride.	
Duplicates Spikes/For ACZOUALIMET B H J R T U V V W X Z	Verifies the tified Matrix Determine (Qrtraft) Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (ff Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality corr Quality contreol sample is out of co	e precision of the instra es sample matrix interfe- ne. a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl. ecause sample concent	nod, including f ument and/or r erences, if any and PQL the set fell with e sample cond d MDL is 10 times hig se Silver often tration is four t	he prep procedure. nethod. nin the given limits. centrations are less than 10x the MDL. her than blank concentration	
Duplicates Spikes/For Acc2CQUalifier B H J R T U V V W X Z P	Verifies the itified Matrix Determine ((Ottel)) Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (F Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality corr Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from s	e precision of the instra es sample matrix interfe- ne. a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl. ecause sample concent second detector by mo	nod, including f ument and/or r erences, if any and PQL the set fell with e sample conc d MDL is 10 times hig se Silver often tration is four t re than 40%.	he prep procedure. nethod. hin the given limits. sentrations are less than 10x the MDL. her than blank concentration precipitates with Chloride.	
Duplicates Spikes/For ACZCULIIII B H J R T U V V V W X Z P E	Verifies the initial Matrix Determine (Creal): Analyte detected in daily blank Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (F Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality com Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from s Analyte concentration is estimated	e precision of the instru- es sample matrix interferences a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl. ecause sample concent second detector by mo due to result exceedin	nod, including f ument and/or r erences, if any and PQL the set fell with e sample conc d MDL is 10 times hig se Silver often tration is four t re than 40%. g calibration ra	he prep procedure. nethod. hin the given limits. sentrations are less than 10x the MDL. her than blank concentration precipitates with Chloride.	
Duplicates Spikes/For Acc2CoLalifien B H J R T U V V W X Z P E M	Verifies the tified Matrix Determine (Creal): Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (F Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality con Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from s Analyte concentration is estimated Analyte concentration is estimated	e precision of the instru- es sample matrix interferences a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl. ecause sample concent second detector by mo due to result exceedin	nod, including f ument and/or r erences, if any and PQL the set fell with e sample conc d MDL is 10 times hig se Silver often tration is four t re than 40%. g calibration ra	he prep procedure. nethod. hin the given limits. sentrations are less than 10x the MDL. her than blank concentration precipitates with Chloride.	
Duplicates Spikes/For ACZ Qualifier B H J R T U V V V V X Z P E E M M	Verifies the tified Matrix Determine (Qrfal)) Analyte detected in daily blank Analysis exceeded method hold time Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (f Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality com Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from a Analyte concentration is estimated Analyte concentration is estimated Analyte concentration is estimated	e precision of the instru- es sample matrix interferences a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl. accuse sample concent second detector by mo due to result exceedin due to matrix interfere	nod, including f ument and/or r erences, if any and PQL the set fell with e sample conc d MDL is 10 times hig se Silver often tration is four t re than 40%. g calibration ra nces.	he prep procedure. nethod. hin the given limits. centrations are less than 10x the MDL. her than blank concentration precipitates with Chloride. imes greater than spike concentration. ange.	
Duplicates Spikes/For ACZOUALIMEN B H J R T U V V W X Z P E E M Msthort Roler (1)	Verifies the tified Matrix Determine (Qtrail) Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (ff Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality corr Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from s Analyte concentration is estimated Analyte concentration is estimated EPA 600/4-83-020. Methods for C	e precision of the instru- es sample matrix interfe- es sample matrix interfe- ne. A value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl. ecause sample concentration due to result exceedin due to matrix interfere hemical Analysis of Wa	nod, including f ument and/or r erences, if any and PQL the set fell with e sample cond d MDL is 10 times hig se Silver often tration is four t re than 40%. g calibration ra nces.	he prep procedure. method. Anin the given limits. sentrations are less than 10x the MDL. her than blank concentration precipitates with Chloride. imes greater than spike concentration. ange. as, March 1983.	
Duplicates Spikes/For ACZCQUALIFIEN B H J R T U V W X Z P E E M Method Reten (1) (2)	Verifies the itified Matrix Determine (Qrtraft) Analyte detected in daily blank Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (f Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality corr Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from s Analyte concentration is estimated Analyte concentration is estimated EPA 600/4-83-020. Methods for C EPA 600/4-90/020. Methods for the	e precision of the instru- es sample matrix interfe- as sample matrix interfe- ne. A value between MDL as suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl. Second detector by mo- due to result exceedin- due to matrix interfere hemical Analysis of Wa e Determination of Org	nod, including f ument and/or r erences, if any and PQL the set fell with e sample conc d MDL is 10 times hig se Silver often tration is four t re than 40%. g calibration ra nces.	he prep procedure. method. Anin the given limits. sentrations are less than 10x the MDL. her than blank concentration precipitates with Chloride. imes greater than spike concentration. ange. es, March 1983. ads in Drinking Water (I), July 1990.	
Duplicates Spikes/For ACZ QUalifier B H J R T U V W X Z P E E M Msthod Refer (1) (2) (3)	Verifies the initial Matrix Determine (Qrtraft) Analyte detected in daily blank Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (F Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality con Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from s Analyte concentration is estimated Analyte concentration is estimated EPA 600/4-83-020. Methods for th EPA 600/R-92/129. Methods for th	e precision of the instru- es sample matrix interfe- a value between MDL a nuse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl. ecause sample concent due to result exceedin due to matrix interfere hemical Analysis of Wa e Determination of Org	nod, including f ument and/or r erences, if any and PQL the set fell with e sample conc d MDL is 10 times hig se Silver often tration is four t re than 40%. g calibration ra nces. ater and Waste ganic Compoun ganic Compoun	he prep procedure. method. Anin the given limits. sentrations are less than 10x the MDL. her than blank concentration precipitates with Chloride. imes greater than spike concentration. ange. Ange.	
Duplicates Spikes/For ACZ QUalifier B H J R T U V W X Z P E E M M M Short Roler (1) (2) (3) (5)	Verifies the initial Matrix Determine (Creal): Analyte detected in daily blank Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (F Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality corr Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from a Analyte concentration is estimated Analyte concentration is estimated Analyte concentration is estimated EPA 600/4-83-020. Methods for C EPA 600/R-92/129. Methods for the EPA SW-846. Test Methods for E	e precision of the instru- es sample matrix interfe- a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus entrol. Eacuse sample concent autor detector by mo due to result exceedin due to matrix interfere hemical Analysis of Wa e Determination of Org valuating Solid Waste,	nod, including f ument and/or r erences, if any and PQL the set fell with e sample conc d MDL is 10 times hig se Silver often tration is four t re than 40%. g calibration re nces. ater and Waste ganic Compour ganic Compour Third Edition v	he prep procedure. method. An in the given limits. tentrations are less than 10x the MDL. ther than blank concentration precipitates with Chloride. times greater than spike concentration. ange. Pes, March 1983. ands in Drinking Water (II), July 1990. nds in Drinking Water (II), July 1990. with Update III, December, 1996.	
Duplicates Spikes/For ACZ/QUalifier B H J R T U V W X Z P E E M M Method Rolor (1) (2) (3) (5) (6)	Verifies the initial Matrix Determine (Qrtraft) Analyte detected in daily blank Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (F Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality con Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from s Analyte concentration is estimated Analyte concentration is estimated EPA 600/4-83-020. Methods for th EPA 600/R-92/129. Methods for th	e precision of the instru- es sample matrix interfe- a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus entrol. Eacuse sample concent autor detector by mo due to result exceedin due to matrix interfere hemical Analysis of Wa e Determination of Org valuating Solid Waste,	nod, including f ument and/or r erences, if any and PQL the set fell with e sample conc d MDL is 10 times hig se Silver often tration is four t re than 40%. g calibration re nces. ater and Waste ganic Compour ganic Compour Third Edition v	he prep procedure. method. An in the given limits. tentrations are less than 10x the MDL. ther than blank concentration precipitates with Chloride. times greater than spike concentration. ange. Pes, March 1983. ands in Drinking Water (II), July 1990. nds in Drinking Water (II), July 1990. with Update III, December, 1996.	
Duplicates Spikes/For ACZCQUALIFIEN B H J R T U V W X Z P E M Mshort Rotor (1) (2) (3) (5) (6) Comments	Verifies the tified Matrix Determine (Qrtal) Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (f Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality corr Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from s Analyte concentration is estimated Analyte concentration is estimated EPA 600/4-83-020. Methods for C EPA 600/4-90/020. Methods for the EPA SW-846. Test Methods for Ev Standard Methods for the Examina	e precision of the instru- es sample matrix interfe- a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl. ecause sample concen- second detector by mo due to result exceedin due to matrix interfere hemical Analysis of Wa e Determination of Org valuating Solid Waste, tion of Water and Was	nod, including f ument and/or r erences, if any and PQL the set fell with e sample cond d MDL is 10 times hig se Silver often tration is four t re than 40%. g calibration ra nces. ater and Waste ganic Compour ganic Compour ganic Compour tiewater, 19th	he prep procedure. method. Anin the given limits. sentrations are less than 10x the MDL. her than blank concentration precipitates with Chloride. imes greater than spike concentration. ange. es, March 1983. ads in Drinking Water (II), July 1990. nds in Drinking Water (II), July 1990. with Update III, December, 1996. edition, 1995.	
Duplicates Spikes/For ACZ/QUalifier B H J R T U V W X Z P E E M M Method Rolor (1) (2) (3) (5) (6)	Verifies the tified Matrix Determine (Qrtal) Analyte detected in daily blank Analyte concentration detected at a Poor spike recovery accepted beca High Relative Percent Difference (f Analyte was analyzed for but not de High blank data accepted because Poor recovery for Silver quality corr Quality contreol sample is out of co Poor spike recovery is accepted be Analyte concentration differs from s Analyte concentration is estimated Analyte concentration is estimated EPA 600/4-83-020. Methods for C EPA 600/4-90/020. Methods for the EPA SW-846. Test Methods for Ev Standard Methods for the Examina	e precision of the instru- es sample matrix interfe- a value between MDL a suse the other spike in RPD) accepted becaus etected at the indicated sample concentration trol is accepted becaus introl. accuse sample concent due to result exceedin due to matrix interfere hemical Analysis of Wa e Determination of Org traluating Solid Waste, tion of Water and Was a. Results may vary s	nod, including f ument and/or r erences, if any and PQL the set fell with e sample conc d MDL is 10 times hig se Silver often tration is four t re than 40%. g calibration ra nces. ater and Waste ganic Compour ganic Compour ganic Compour third Edition v stewater, 19th atewater, 19th	he prep procedure. method. An in the given limits. tentrations are less than 10x the MDL. ther than blank concentration precipitates with Chloride. times greater than spike concentration. ange. Pes, March 1983. ands in Drinking Water (II), July 1990. nds in Drinking Water (II), July 1990. with Update III, December, 1996.	

REPIN03.11.00.01

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2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Burlington Resources, Inc.



ACZ Project ID: L43111

greater than positive method reporting limit.

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L43111-01	WG163030	Copper, dissolved	M200.8 ICP-MS	MA	One spike recovery was outside of the method limits; the duplicate spike and the method control recoveries were within the method limits.
	WG163330	Manganese, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
	WG163546	Sodium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M200.7 ICP	ZK	Target analyte detected in the blank as a negative result at or above the negative method limit (i.e. high negative bias). Sample concentration is at a minimum ten times

EXTQUAL.11.20.02.01

L43111: Page 4 of 23

Location:_Flora Vista No. 1 Well Project ManagerMJN	ect Name: <u>Burlington Flora Vista</u> No: <u>MW-1</u> Date <u>12/16/03</u> Start Time duct <u>na</u> Product Thickness <u>na</u> 2"	
Sampling Method: Submersible Pump	Centrifugal Pump Peristaltic Double Check Valve Bailer Sta	Pump Other Pump Other Pump Kemmerer Pump Pump Pump Pump Pump Pump Pump Pump

Criteria: 3 to 5 Casing Volumes of Water Removal X stabilization of Indicator Parameters X Other_____

	Water Vol	ume in Well	
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
5.24 x .16	0.84 x 3		2.52

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)	Comments/ Flow rate
1010	6.55	2220	53.6			in an a literature autor	.25	Grey Heavy Silt
	6.52	2310	54.8				.5	Grey Heavy Silt
	6.51	2380	58.1				.75	Grey Heavy Silt
	6.51	2410	59.1			·	1.0	Grey Heavy Silt
	6.50	2410	59.0				1.25	Grey Heavy Silt
	6.52	2430	59.1				1.75	Grey Heavy Silt
<u> </u>	6.53	2430	59.0				2.0	Grey Heavy Silt
	6.51	2420	59.1				2.25	Grey Heavy Silt
	6.51	2410	59.2	· · · · ·			3.5	Grey Heavy Silt
1025	6.50	2390	59.2				5.75	Grey Heavy Silt

Final:				
		Ferrous		
Time DH SC	Temp Eh-ORP D.O.	Turbidity Iron		
			Vol Evac. Com	
Time pH SC 1025 6.5 2390				
1025 6.5 2390	59.2		5.75 Grev	Heavy Silt

INSTRUMENTATION:	pH Meter X		Temperature Meter	X
	DO Monitor		Other	
Condu	ctivity Meter X			
Water Disposal <u>onsite</u>	Sample ID_Flora	Vista 1 MW-1	Sample Time_	1030
BTEX VOCs Alkalinity	TDS Cations A	Anions Nitrate Nitrite Ammo	nia TKN <u>NMWQCC</u>	Metals
Total Phosphorus				
MS/MSD	BD	BD Name/Time		ТВ
	,			

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Burlington Resources, Inc.

Project ID:	MISC. GW SAMPLING
Sample ID:	MW-1 FLORA VISTA

Benzene, Toluene, Ethylbenzene & Xylene

Analysis Method:	M8021B	GC/PID
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Extract Method: Method

Organic Analytica Reality

ACZ Sample ID: L44072-13

Date Sampled:	12/16/03 10:30
Date Received:	12/17/03
Sample Matrix:	Ground Water

Analyst:	km
Extract Date:	12/20/03 2:03
Analysis Date:	12/20/03 2:03
Dilution Factor:	50

Compound Compound	CAS	Result	QUAL	O Units	MDL	PQL	
Benzene	000071-43-2	7930		ug/L	20	50	
Ethylbenzene	000100-41-4	1180		ug/L	10	50	
m p Xylene	01330 20 7	8480		ug/L	20	100	
o Xylene	00095-47- 6	160		ug/L	10	50	
Toluene	000108-88-3	10	J	ug/L	10	50	
Surrogate Recoveries Surrogate	CAS	% Recovery		Q Units	LOL	UGH:	
Bromofluorobenzene	000460-00-4	90.5		%	84	114	

REPOR.01.01.01.02



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773 Downhill L		LOT REVENUES THE AND THE REPORT OF THE ADDRESS	A SHARE I A REAL CONSIGNOR . THE MADE WATER	
eport Header	Explanations			
Batch		nples analyzed at a specific t	ime	
Found	Value of the QC Typ	pe of interest		
Limit	Upper limit for RPD,	, in %.		
Lower	Lower Recovery Lin	nit, in % (except for LCSS, n	ng/Kg)	
LCL	Lower Control Limit			
MDL	Method Detection Li	imit. Same as Minimum Rep	orting Limit. Allows for	instrument and annual fluctuations.
PCN/SCN	A number assigned	to reagents/standards to trac	ce to the manufacturer's	certificate of analysis
PQL	Practical Quantitatio	on Limit	Р.,	-
QC	True Value of the Co	ontrol Sample or the amount	added to the Spike	
Rec	Amount of the true v	value or spike added recover	ed, in % (except for LC	SS, mg/Kg)
RPD	Relative Percent Dif	ference, calculation used for	Duplicate QC Types	
	*	nit, in % (except for LCSS, n	•	
UCL	Upper Control Limit			
Sample	Value of the Sample			
C Sample Ty	Construction of the second			
SURR	Surrogate		LFM	Laboratory Fortified Matrix
INTS	Internal Standard		LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate		LRB	Laboratory Reagent Blank
LCSS	Laboratory Control S	Sample - Soil	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSW	Laboratory Control S	Sample - Water	PBS	Prep Blank - Soil
LFB	Laboratory Fortified	Blank	PBW	Prep Blank - Water
	Edbordtory i oranoa	e anti-		
	pe Explanations			
			or minimal contamination	on in the prep method procedure.
C Sample Ty	pe Explanations			
C Sample Ty Blanks	pe Explanations	Verifies that there is no	f the method, including t	the prep procedure.
C Sample Ty Blanks Control Sar Duplicates Spikes/Fort	pe Explanations mples tified Matrix	Verifies that there is no Verifies the accuracy of	f the method, including f f the instrument and/or i	the prep procedure. method.
C Sample Ty Blanks Control Sar Duplicates Spikes/Fort	pe Explanations mples tified Matrix (Qual)	Verifies that there is no Verifies the accuracy of Verifies the precision of Determines sample ma	f the method, including f f the instrument and/or i	the prep procedure. method.
CSampletty Blanks Control Sar Duplicates Spikes/Fort CZQUalificas B	pe Explanations mples lified Matrix (Qual) Analyte detected in (Verifies that there is no Verifies the accuracy of Verifies the precision of Determines sample ma daily blank	f the method, including f f the instrument and/or i	the prep procedure. method.
CSample Ty Blanks Control Sar Duplicates Spikes/Fort CUalifiers B H	pe Explanations mples lified Matrix (Qual) Analyte detected in a Analysis exceeded r	Verifies that there is no Verifies the accuracy of Verifies the precision of Determines sample ma daily blank method hold time.	f the method, including f f the instrument and/or i trix interferences, if any	the prep procedure. method.
C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Cualifiers B H J	pe Explanations mples lified Matrix (Qual) Analyte detected in o Analysis exceeded r Analysis exceeded r	Verifies that there is no Verifies the accuracy of Verifies the precision of Determines sample ma daily blank method hold time. on detected at a value betwee	f the method, including f f the instrument and/or i trix interferences, if any en MDL and PQL	the prep procedure. method. /
C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Cualifiers B H J R	per Explanations mples tified Matrix (Qual) Analyte detected in (Analyte concentratio Poor spike recovery	Verifies that there is no Verifies the accuracy of Verifies the precision of Determines sample ma daily blank method hold time. on detected at a value betwee accepted because the other	f the method, including f f the instrument and/or i trix interferences, if any en MDL and PQL r spike in the set fell with	the prep procedure. method. , ,
Sample By Blanks Control Sar Duplicates Spikes/Fort Conalifiers B H J R T	perExplanations mples tified Matrix (Quel) Analyte detected in of Analytes exceeded r Analyte concentratio Poor spike recovery High Relative Percel	Verifies that there is no Verifies the accuracy of Verifies the precision of Determines sample ma daily blank method hold time. on detected at a value betwee accepted because the other nt Difference (RPD) accepte	f the method, including f f the instrument and/or i trix interferences, if any en MDL and PQL r spike in the set fell with d because sample cond	the prep procedure. method. /
CSampletty Blanks Control Sar Duplicates Spikes/Fort C 4 Qualificas B H J R T U	pe Explanations mples lified Matrix (Qtral) Analyte detected in (Analyte detected in (Analyte concentratio Poor spike recovery High Relative Percent Analyte was analyze	Verifies that there is no Verifies the accuracy of Verifies the precision of Determines sample ma daily blank method hold time. on detected at a value betwee accepted because the other nt Difference (RPD) accepte ed for but not detected at the	f the method, including f f the instrument and/or i trix interferences, if any en MDL and PQL r spike in the set fell with d because sample cond indicated MDL	the prep procedure. method. /. hin the given limits. centrations are less than 10x the MDL.
Sample Ty Blanks Control Sar Duplicates Spikes/Fort Constitutions B H J R T U U V	pe Explanations mples lified Matrix (Qva) Analyte detected in a Analyte detected in a Analyte concentratio Poor spike recovery High Relative Percen Analyte was analyze High blank data acco	Verifies that there is no Verifies the accuracy of Verifies the precision of Determines sample ma daily blank method hold time. on detected at a value betwee accepted because the other nt Difference (RPD) accepte ed for but not detected at the epted because sample conce	f the method, including f f the instrument and/or in trix interferences, if any en MDL and PQL r spike in the set fell with d because sample cond indicated MDL entration is 10 times high	the prep procedure. method. // hin the given limits. centrations are less than 10x the MDL.
Sample Ty Blanks Control Sar Duplicates Spikes/Fort Cualifiers B H J R T U V V	pe Explanations mples lified Matrix (Qval) Analyte detected in a Analyte detected in a Analyte concentratio Poor spike recovery High Relative Percei Analyte was analyze High blank data accor Poor recovery for Sil	Verifies that there is no Verifies the accuracy of Verifies the precision of Determines sample ma daily blank method hold time. In detected at a value betwee accepted because the other nt Difference (RPD) accepte ed for but not detected at the epted because sample conce liver quality control is accepted	f the method, including f f the instrument and/or in trix interferences, if any en MDL and PQL r spike in the set fell with d because sample cond indicated MDL entration is 10 times high	the prep procedure. method. // hin the given limits. centrations are less than 10x the MDL.
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Field Excavation Work Log and Soil Excavation Analytical Results

S: / grndwatr/GW-Sites/Cozzens/99Annual.doc

Burlington Resources

Field Notes

June 19:

This pit remediation was started at an earlier date with an original size of $40' \times 47' \times 16'$ for a total approximation of 1114 cubic yards. Beginning on this date – ramped down on west wall; hit water at 25'. Removed an additional 924 cubic yards of soil; 50% was contaminated and 50% was not.

16 feet – PID 1585 ppm 23 feet – PID 830 ppm 25 feet – water

June 20:

Obtained water sample and delivered to On-Site Lab. Continued digging on west wall. A four-point composite on this wall showed a head space reading of 98.8 ppm. This composite sample was also delivered to On-Site Lab. Of the approximated 1152 cubic yards removed on this day, 50% was estimated to be contaminated and 50% was not.

June 23:

Stripped out and moved gas line from wellhead to dehydrator. Stripped out farm tap line. Worked on north wall, stair-stepping to northeast. A four-point composite on this wall showed a head space reading of 20 ppm. This composite sample was taken to On-Site Lab. Of the approximated 296 cubic yards removed this day, 50% was contaminated and 50% was not.

Burlington Resources

June 24:

Started stripping overburden on south wall. Removed contaminated soil. A three-point composite reading showed a headspace reading of 56.6 ppm. Of the approximated 1167 cubic yards of soil removed this day, 40% was contaminated and 60% was not.

June 25:

Stripped overburden on east wall in a 25' x 90' x 12' strip. Ramped in on north wall. Found a highly contaminated small area (10' x 10') running to surface. This area was located just to the west of Merrion Oil Company water tank.

Started removing contamination. East wall was still determined to be contaminated. Of approximated 1222 cubic yards removed this day, 20% was contaminated and 80% was not.

June 26:

Continued to remove contaminated soil from east side. On the west side of the Merrion Oil Company water tank, another old extremely contaminated pit was discovered. The contamination continued underneath the Merrion tank. Merrion Oil removed this tank and pipes to the tank. Of the approximated 713 cubic yards of soil removed this day, 100% was contaminated.

June 27:

Started ramping down to remove another 25' strip on east wall. Removed approximately 741 cubic yards of non-contaminated soil this day.

Burlington Resources

June 30:

Started removing contamination from strip – east wall began to appear less contaminated on the south end. Approximately 50' of east wall cleaned up, but a 4' x 30' strip on northeast corner did not. A sample of this contamination was delivered to On-Site Lab. Directed by Burlington representative to avoid row of large cottonwood trees on east side of excavation ; contamination was running northeast in the direction of these trees, so overburden was stripped. Of the approximated 1514 cubic yards of soil removed on this day, 80% was contaminated and 20% was clean.

July 1:

Overnight, a great deal of contaminated soil located on east wall fell out. Were able to remove most of it before overburden fell; however, a sample was not available to obtain from this area. Continued to strip overburden on northeast corner. Removed enough contaminated soil to assess this area as no longer being contaminated. Of the approximated 600 cubic yards of soil removed this day, 25% was contaminated, and 75% was not.

July 2:

Backfilled pit

July 7:

Backfilled pit and bladed location. Moved equipment.

Burlington Resources

SUMMARY:

June 19	924 cubic yards
June 20	1152 cubic yards
June 23	296 cubic yards
June 24	1167 cubic yards
June 25	1222 cubic yards
June 26	713 cubic yards
June 27	741 cubic yards
June 30	1514 cubic yards
July 1	600 cubic yards

8329 cubic yards

1114 previously removed

9443 total cubic yards

277 truck loads contaminated soil @ 18 cubic yards / truckload = 4986 cubic yards taken to Eco-Systems' land farm.

247 truckloads uncontaminated soil @ 18 cubic yards / truckload = 4446 cubic yards taken to location to fill pit.

RECORD OF SUBSURFACE EXPLORATION

Lodestar Ser	nces,	INC						f	Page	1 of 1
PO Box 3681 Farmington, Nev (505) 334-2791	v Mexi	co 87499			Project N Project N Project L	umber	Burling 300	gton Re	esourc Phas	es Flora Vista 1
Elevation 5534' Borehole Location center of former pit GWL Depth 15.47 Logged By MJN Drilled By Envirotech Date/Time Started September 2, 2003 Date/Time Completed September 2, 2003				Client Pe Drilling N	I On-Site ors On-Site rsonnel On-	M Nee K Padilla, T. Benally e Envirotech n-Site G Wurtz CME 75 Hollow Stem Auger				
Depth (Feet)		Sample Interval	Sample Type & Recovery (%)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)		Monitorii nits: NDU BH	-	Drilling Conditions & Blow Counts
		<u>18-20</u> 20-22 22-24	85 50 80	0-18 ' Backfill material in former excavated pit. Brown clayey sand with grave and cobbles encountered at 8-13 ft. 18-20.5' colar change to gray, old hc odor, sandv clav 20.5-21.5 clean well sorted sand, gray, medium size grains. 21.5-22.0 clay, gray 22-28' Clayey sand, gray, sand is med-fine grained.		18 20.5 21.5 22	0 0 0 0			cobbles and gavel 8 and 13 feet

Comments:

Borehole logged on cuttings 0-18 feet. Water at 18.9' bgs @0928, 18.15' bgs @0933, 17.15'@ 0938, 17.55' @ 0943

Geologist Signature

Off: (505) 327-1072 FAX: (505) 327-1496

June 23, 2003

Sample of free standing water in bottom of excavation.

P.O. Box 3788

Shiprock, NM 87420

Off: (505) 368-4065

Greg Wurtz Burlington Resources 3535 E. 30th Street P.O. Box 4289 Farmington, NM 87499 TEL: (505) 326-9700 FAX (505) 326-9725

RE: Burlington Resources

Dear Greg Wurtz:

Order No.: 0306038

iiná bá, Ltd. received 1 sample on 6/20/2003 for the analyses presented in the following report.

iiná bá

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

David Cox

Off: (505) 327-1072 FAX: (505) 327-1496

P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

jiná bá, Ltd.

Date: 23-Jun-03

CLIENT:	Burlington Resources		
Project: Lab Order:	Burlington Resources 0306038	CASE NARRATIVE	

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

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All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).



P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

Off: (505) 327-1072 FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 23-Jun-03

		Result	POL Qual Units	DF Date Analyzed
Lab ID:	0306 0 38-001A		Matrix:	AQUEOUS
Project:	Burlington Resources		. **	6/20/2003 8:42:00 AM
Work Order:	0306038		Client Sample ID:	
CLIENT:	Burlington Resources		-	Burlington Resources

Parameter	Result	PQL Q	ual Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021	В		Analyst: JEM
Benzene	1700	2 5	µg/L	50	6/20/2003
Toluene	300	25	µg/L	50	6/20/2003
Ethylbenzene	490	25	µg/L	50	6/20/2003
m,p-Xylene	4700	50	µg/L	50	6/20/2003
o-Xylene	390	25	µg/L	50	6/20/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above Upper Quantitation Limit - UQL

Page 1 of 1

ILIRG OG for life's sake) 612 E. Murray Dr. • P. O. E for life's sake) 612 E. Murray Dr. • P. O. E Purchase Order No.: Job No. Purchase Order No.: Job No. Region Company Company Zuty Address Zuty City, State, Zip Sampling Location:	Date:	of RESULTS TO			Page
oler: SAMPLE ID	PLE MATRIX PRES.		2.2.1.5. C.Q		LABID
930/200842	424 CE 1/2 H2 0 HG	2			1311 in 1 - 1 in 1
	5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Heceived by.			Date/Time 6/1 c/03 123
Relinquished by: // ////////////////////////////////	Date/Time Cate/Time		ed by:		
ient: (Client Signatu		Rush		10 Working Days	Special Instructions:
Dist	Distribution: White - On Site Yellow - LAB P	Pink – Sampler	npler Goldenrod – Client		

Off: (505) 327-1072 FAX: (505) 327-1496

iiná bá

P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

July 10; 2003

Greg Wurtz Burlington Resources 3535 E. 30th Street P.O. Box 4289 Farmington, NM 87499

TEL: (505) 326-9537 FAX (505) 599-4005

RE: Flora Vista 1

Dear Greg Wurtz:

Order No.: 0307002

iiná bá, Ltd. received 1 sample on 7/1/2003 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

David Cox

Off: (505) 327-1072 FAX: (505) 327-1496

tiná bá

P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

iiná bá, Ltd.

Date: 10-Jul-03

CLIENT:	Burlington Resources	
Project: Lab Order:	Flora Vista 1 0307002	CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s), the quality control summary report(s) or the sample receipt checklist.

Off: (505) 327-1072 FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 10-Jul-03

CLIENT:	Burlington Resources			ent Sample Info		
Work Order: Project:	0307002 Flora Vista l			lient Sample ID Collection Date		1155)3 11:55:00 AM
Lab ID:	0307002-001A			Matrix	: SOIL	1
Parameter		Result	PQL Qual	Units	DF	Date Analyzed
DIESEL RANGE	ORGANICS		SW8015B			Analyst: JEM
T/R Hydrocarbo	ns: C10-C28	ND	60.2	mg/Kg-dry	1	7/9/2003

GASOLINE RANGE ORGANICS		SW8015		Analyst:		
T/R Hydrocarbons: C6-C10	ND	5.42	mg/Kg-dry	25	7/9/2003	
PERCENT MOISTURE		D2216			Analyst:	
Percent Moisture	17	0.1	wt%	1	7/9/2003	

Qualifiers:

- J Analyte detected below Practical Quantitation Limit
- B Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above Upper Quantitation Limit - UQL

Page 1 of 1

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

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VY YANG HA)))))))))	· · ·					•
(for life's sake) 612 E. Murray Dr. • P. O. Box 2606 • Farmington NM 87499 (505) 327-1072 • FAX: (505) 327-1496	Date: 606 • Farmington NM 87499 XX: (505) 327-1496		3		· ·	Pageof	
Purchana Order No.			Name 🦾 🛶			Title	
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1 2 4 2 4 7		าร3 38	City, State, Zip	2p 5 25 25 25 25 25 25 25 25 25 25 25 25 2			
City. State, Zip 1-3 Y W. W. F. O. V. P. R. K.	1199 - 2269	1)	Telephone No.	1:7		efax No.	
Sampling Location:		•			ANALYSIS REQUESTED	ESTED	
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SAMPLE IDENTIFICATION	SAMPLE MATRIX PRES.						0
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and the second second			ed by:			Date/Time	
Relinquished by:	Date/Time	Received by:	ed by:			Date/Time	
Method of Shipment:		Rush		24-48 Hours	10 Working Days	ecial Instructions:	
	Date				\. 	12.5°C	1
(Client Signature <u>Must</u> Accompany Request)		•	•		<i></i>		
Distribution	Distribution: White - On Site Yellow - LAB F	Pink - Sampler		Goldenrod – Client			

Off: (505) 327-1072 FAX: (505) 327-1496

June 25, 2003

Greg Wurtz Burlington Resources 3535 E. 30th Street P.O. Box 4289 Farmington, NM 87499

TEL: 505-326-9700 FAX 505-326-9725

RE: Flora Vista 1

Order No.: 0306043

Dear Greg Wurtz:

iiná bá, Ltd. received 2 samples on 6/23/2003 for the analyses presented in the following report.

iiná bá

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

David Cox

Off: (505) 368-4065

Off: (505) 327-1072 FAX: (505) 327-1496

iiná bá

P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

iiná bá. Ltd.

Date: 25-Jun-03

CLIENT:	Burlington Resources	
Project: Lab Order:	Flora Vista 1 0306043	CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s), the quality control summary report(s) or the sample receipt checklist.

Page 1 of 1

Off: (505) 327-1072 FAX: (505) 327-1496

ANALYTICAL REPORT

P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

Date: 25-Jun-03

Parameter		Result	PQL Qual Units	DF	Date Analyzed	
Lab ID:	0306043-001A		Matrix	SOIL		
Project:	Flora Vista l				003 2:23:00 PM	
Work Order:	0306043		Client Sample ID	: 03062	01423	
CLIENT:	Burlington Resources		Client Sample Info	: West	Wall 3pt. Comp.	
		· · · · · · · · · · · · · · · · · · ·				

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DIESEL RANGE ORGANICS T/R Hydrocarbons: C10-C28	ND	SW8015B 25.0	mg/Kg	1	Analyst: JEM 6/24/2003	
GASOLINE RANGE ORGANICS T/R Hydrocarbons: C6-C10	ND	SW8015B 4.50	mg/Kg	25	Analyst: JEM 6/23/2003	

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

- J Analyte detected below Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- * Value exceeds Maximum Contaminant Level
- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted precision limits
- E Value above Upper Quantitation Limit UQL

Page 1 of 2

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P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

Off: (505) 327-1072 FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 25-Jun-03

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CLIENT: Work Order: Project: Lab ID:	Burlington Resources 0306043 Flora Vista 1 0306043-002A		C	lient Sample I Collection Dat	D: 03062	2003 11:30:00 AM
Parameter	-	Result	PQL Qual	Units	DF	Date Analyzed
DIESEL RANGE		ND	SW8015B 25.0	mg/Kg	1	Analyst: JEM 6/24/2003
GASOLINE RAI	NGE ORGANICS ns: C6-C10	ND	SW8015B 4.50	mg/Kg	25	Analyst: JEM 6/23/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above Upper Quantitation Limit - UQL

Page 2 of 2

iná bá, Ltd.

Sample Receipt Checklist

Client Name: BUR1001		Date and Time	Received:	6/23/2003
Vork Order Number: 0306043		Received by:	HNR	
Checklist completed by Heren Co	123/03 Date	Reviewed by:	Jin Janas	4/23/03 Date
1atrix: Carrier nan	ne: <u>Courier</u>			
hipping container/cooler in good condition?	Yes 🔽	No :	Not Present	
ustody seals intact on shippping container/cooler?	Yes	No	Not Present ⊻	
ustody seals intact on sample bottles?	Yes	No No	Not Present 🔽	
hain of custody present?	Yes 🔽	No		
hain of custody signed when relinquished and received?	Yes 🖌	No		
hain of custody agrees with sample labels?	Yes 🖌	No		· .
amples in proper container/bottle?	Yes 🗹	No		· ·
ample containers intact?	Yes 🖌	No		. •
ufficient sample volume for indicated test?	Yes 🖌	No		
Il samples received within holding time?	Yes 🗹	No		
ontainer/Temp Blank temperature in compliance?	Yes 🗹	No		· ·
/ater - VOA vials have zero headspace? No VOA vials s	ubmitted 🗹	Yes .	No	
/ater - pH acceptable upon receipt?	Yes V	¥) No 🗌		
Adjusted?	(Checked by:		
				· · · ·
ny No and/or NA (not applicable) response must be detailed in th	e comments sect	ion below.		
lient contacted: Date contacted:		Persor	n contacted:	
Regarding:			,	
ontacted by: Regarding:				and a second of the second and
omments:	·			
				· .
prrective Action:		·····		
······································				.
	······			

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una oa	Date: <u>6/23/03</u>	6/3	3/03		Pageof	
(tor life's sake) 4 612 E. Murray Dr. • P. O. Box 2606 • Farmington NM 87499 (505) 327-1072 • FAX: (505) 327-1496	06 - Farmington NM 87499 X. (505) 327-1496					
Purchase Order No.: Job No.		· C	Name Charle Wunda	·N	Title	
Name Greg Wartz		TRO DT ST.	Company Zury Internet	J		
BSCO COMPANY JUNITON KRYDUNDED BS2 Address P.O.B. + 289	Lebt.	งอย เบรอ	City, State, Zip			
City, Stat	87499-4289	8	Telephone No.	Τe	Telefax No.	1
Sampling Location:				ANALYSIS REQUESTED	STED	
Flow Dista 1		SY9N	/ / / /	/ / /		1
Sampler: Kon Dedwick		Numbe Vumbe	level 1			
SAMPLE IDENTIFICATION	SAMPLE MATRIX PRES.					
0300.20 14 23 West Will 301 Comp 4/2	1423551					
11/2 0 - King 1 (Jall 3 of Com	1//30 - 52/1	`				
N. M. C.					· · · · ·	
Relinquished by: K - (C/) Dec Mark		Recei	Received by: 44 CA. CL- 1		Date/Time (Date/Time)	ter!
Relinquished by:	Date/Time	Rece	Received by:		Date/Time	
Relinquished by:	Date/Time	Recei	Received by:		Date/Time	
Method of Shipment:		Rush	24-48 Hours	10 Working Days	Special Instructions:	
Authorized by: Collicut Standture Must Accompany Berlinet)	Date	· • • •			Carlo A e e	
(chiefit official and a tradition of the	- 1	`				
Distribution	Distribution: White - On Site Yellow - LAB	Pink – Sampler	ampler Goldenrod – Client			

Off: (505) 327-1072 FAX: (505) 327-1496

July 02, 2003

Greg Wurtz Burlington Resources 3535 E. 30th Street P.O. Box 4289 Farmington, NM 87499

TEL: 505-326-9700 FAX 505-326-9725

RE: Flora Vista 1

Dear Greg Wurtz:

Order No.: 0306050

iiná bá, Ltd. received 2 samples on 6/25/2003 for the analyses presented in the following report.

iiná bá

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

David Cox

P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

Off: (505) 327-1072 FAX: (505) 327-1496

iiná bá

P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

iiná bá. Ltd.

Date: 02-Jul-03

CLIENT:	Burlington Resources	
Project: Lab Order:	Flora Vista 1 0306050	CASE NARRATIVE
		· · · · · · · · · · · · · · · · · · ·

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s), the quality control summary report(s) or the sample receipt checklist.

Off: (505) 327-1072 FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 02-Jul-O3

CLIENT:	Burlington Resources			Client	Sample Info:	South V	Wall 3pt. Comp.
Work Order:	0306050			Clien	t Sample ID:	030624	41634
Project:	Flora Vista 1			Col	lection Date:	6/24/20	003 4:34:00 PM
Lab ID:	0306050-001A				Matrix:	SOIL	·
Parameter		Result	POL	Qual Ur	its	DF	Date Analyzed

Farameter			<u> </u>			
DIESEL RANGE ORGANICS T/R Hydrocarbons: C10-C28	ND	SW8015I 25.0	B mg/Kg	1	Analyst: JEM 6/26/2003	
GASOLINE RANGE ORGANICS T/R Hydrocarbons: C6-C10	ND	SW8015 4.50	B mg/Kg	25 [.]	Analyst: JEM 6/30/2003	

Qualifiers:

- J Analyte detected below Practical Quantitation Limit
- B Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above Upper Quantitation Limit - UQL

Page 1 of 2

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065

iiná bá

Off: (505) 327-1072 FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 02-Jul-03

Parameter		Result	PQL Qual	Units	DF	Date Analyzed
Lab ID:	0306050-002A			Matrix:	SOIL	·····
Project:	Flora Vista l			Collection Date:		003 4:11:00 PM
Work Order:	0306050			lient Sample ID:		•
CLIENT:	Burlington Resources		Cli	ent Sample Info:	East W	Vall Grab

	SW802	1B		Analy	st: JEM
ND	25	µg/Kg	25	6/26/2003	
170	25	µg/Kg	25	6/26/2003	
1400	50	µg/Kg	25	6/26/2003	
160	25	µg/Kg	25	6/26/2003	
ND	50	µg/Kg	25	6/26/2003	
	170 1400 160	SW802 ND 25 170 25 1400 50 160 25	SW8021B ND 25 μg/Kg 170 25 μg/Kg 1400 50 μg/Kg 160 25 μg/Kg	SW8021B ND 25 μg/Kg 25 170 25 μg/Kg 25 1400 50 μg/Kg 25 160 25 μg/Kg 25	SW8021B Analy ND 25 µg/Kg 25 6/26/2003 170 25 µg/Kg 25 6/26/2003 1400 50 µg/Kg 25 6/26/2003 160 25 µg/Kg 25 6/26/2003

Qualifiers:

- J Analyte detected below Practical Quantitation Limit
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Page 2 of 2

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

P.O. Box 3788 Shiprock, NM 87420

Off: (505) 368-4065



505) 527-1450

U U

una oa	Date: 60203	1254	S			Page / of /
(for life's sake) 4 612 E. Murray Dr. • P. O. B. (505) 327-1072 •	612 E. Murray Dr. • P. O. Box 2606 • Farmington NM 87499 (505) 327-1072 • FAX: (505) 327-1496	*			<u>-</u>	:
Purchase Order No.: Job No.			Name $\left< \frac{1}{r_{reg}} \right>$	Lant Curt		Title
Name (Jrac LUINTZ		TR DT 2	Company			
Company 2500	Dept.	1043 111	Mailing Address	s		
Address		ารร เราะ เราะ	City, State, Zip	a		
City, State, Zip			Telephone No.	Ġ		Telefax No.
Sampling Location:					ANALYSIS REQUESTED	ESTED
Frend Distan		SJƏI	$\sqrt{2}$			
Sampler		Numbe Numbe	No the second se	- ANA		
SAMPLE IDENTIFICATION	MPLE MATRIX PRES)				
	TIME IVIATINA					
24 1604 CRATTERATE UPI LOND	1.00 2000	_				V1020509020
- (2x 25/6/1 CAState 1 20	-27/1/ Doil 100-		4			1 - 003A
Relinquished by:	Date/Time */ 2 7/ 2 / 2 / 3	Received by:	0	marc		Date/Time //2 /03</td
Relinquished by:	Date/Time	Received by:	ed by:			Date/Time
Relinquished by:	Date/Time	Received by:	ed by:			Date/Time
Method of Shipment:	-	Rush		24-48 Hours	10 Working Days	Special Instructions:
Authorized by:	Date					
(Cilefit Signature <u>Musi</u> Accordinatify request)		•				
Distri	Distribution: White - On Site Yellow - LAB Pir	Pink - Sampler	1	Goldenrod – Client		

DRILLING LOGS/WELLBORE DIAGRAMS

S: / grndwatr/GW-Sites/Cozzens/99Annual.doc

MONITORING WELL INSTALodestar Services, IncPO Box 3861Farmington, New Mexico 87499(505) 334-2791Elevation5534'Well LocationCenter of forrGWL Depth17.55 beneathInstalled ByEnvirotechDate/Time Started9/2/03	ner pit a ground surface	- -	Proje Proje On-Site Personi	oject Nam cct Numbe ct Location e Geologis nel On-Sit ors On-Sit nel On-Sit	r <u>30003.0</u> Cost Cod n <u>US Highway 516 MM 8</u> st <u>M. Nee</u> e <u>K. Padilla, T. Benally</u> e <u>Envirotech</u>	le
Date/Time Completed 9/2/03		-				
Depths in Reference Item	to Ground Surface Material	Depth			Top of Protective Casing	
1011		(feet)				0.0
Top of Protective Casing	Flush to grade				Top of Riser	0.33
Bottom of Protective Casing Top of Permanent Borehole Casing	vault	na na			Ground Surface	0.0
Bottom of Permanent Borehole Casing		na			· .	
Top of Concrete	2 bags quickcrete	0.0				
Bottom of Concrete		-0.5				
Top of Grout	4 96# bags portland	-0.5			1	
Bottom of Grout	with 5% hole plug	-7.0				
Top of Well Riser	2" flush threaded	33				
Bottom of Well Riser	schedule 40 pvc	-11.02		000		
Top of Well Screen	10 slot schedule 40 flush threaded pvc	-11.02		∞	Top of Seal	<u>-7.0</u>
Bottom of Well Screen	nush un caucu pvc	-26.02		\sim		
Top of Peltonite Seal	1 bag 3/8 bentonite	-7.0		$\overline{\mathbf{x}}$		
Bottom of Peltonite Seal	chips	-9.6			Top of Gravel Pack	9.6
Top of Gravel Pack	8 #50 bags 10-20 silica sand	-9.6	-		Top of Screen	11.02
Bottom of Gravel Pack	sinca sand	-23.2				

Comments: Water level is 15.47 beneath top of casing

Top of Natural Cave-In

Top of Groundwater

Total Depth of Borehole

Bottom of Natural Cave-In

4

Geologist Signature

-23.2 -28

-15.8

-28'

Bottom of Screen

Bottom of Borehole

_-26.02

-28.0