



J-W OPERATING COMPANY

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Dallas, TX 75222-6406

An Energy Development and Energy Services Company

(972) 661-4812
FAX (866) 870-6824

August 22, 2012

Mr. Chris Canfield, P.G.
State of Colorado
Oil & Gas Conservation Commission
707 Wapiti Court
Suite 204
Rifle, CO 81650

Re: Response to Notice of Alleged Violation (Document No. 200358331)
Big Hole Federal Land Bank 13-1 (API No. 05-081-06242-00)
NENW Section 13, Township 10 North, Range 94 West
Moffat County, Colorado

Mr. Canfield,

I am responding to your letter to Mr. Geronson on August 6, 2012 on behalf of our company. As the operator of Big Hole-Fed Land Bank well number 13-1 J-W Operating Company has endeavored to follow the rules of the Colorado Oil & Gas Conservation Commission to the best of our ability. We appreciate your concerns by citing the applicable COGCC rules related to the unfortunate situation this sudden and accidental release has caused. We would appreciate your consideration of information which may not have been available to you in your initial review of this incident. We are attempting to respond to each of your abatement or corrective action items with the following information.

1. Written explanation of why verbal notification was not made to the COGCC as required by Rule 906.b.(2).

We understand the rule to be *"Spills/releases which exceed twenty (20) barrels of an E&P waste shall be reported on COGCC Spill/Release Report, Form 19, and shall also be verbally reported to the Director as soon as practicable, but not more than twenty-four (24) hours after discovery."* Rolin Geronson, our company's HSE Specialist responding to the scene, estimated the spill to have occurred on 4/24/2012 based on his reconstruction of events which contributed to the incident. Prior to Mr. Geronson's scene assessment, the potential amount of the release was estimated not to exceed five (5) barrels of waste and not to exceed the threshold of Rule 906.b.(2) or (3). During his on-site assessment which occurred on 4/27/2012 and relying upon his judgment of the potential scope of the release, Mr.

RE: Response to Notice of Alleged Violation (Document No. 200358331) cont.

Geronsin made a good-faith effort to timely report the incident by notifying CDPHE via phone call to 877-518-5608 and a follow-up report to phone number 303-692-2709 a few minutes past 12:00PM MDT on the same day. Mr. Geronsin received a confirmation case number of 2012-0296 the same day. A follow-up call from Mr. Geronsin to CDPHE on 5/1/2012 detailing our estimated amount of the release from within the containment area was also made. The rule 906 does not specify a contact number for a reporting party to use and in §906.a the purpose of the section says, "*General. Spills/releases of E&P waste, including produced fluids, shall be controlled and contained immediately upon discovery to **protect the environment, public health, safety, and welfare, and wildlife resources,***" emphasis added. Mr. Geronsin made the straight-forward association of fulfilling the requirement by calling the Colorado Environmental Release and Incident Reporting Hotline of the Colorado Department of Public Health and Environment. I commend Mr. Geronsin's effort to meet the requirements and respectfully ask that our explanation of the circumstances be taken into account and the alleged violation of rule 906.b.(2)&(3) be dismissed.

2. Proof of surface owner notification and consultation as required by Rule 906.c. Enclosed is supporting material labeled Document "A" signed by Mr. Kelly Krattenmaker indicating that he made a timely contact and notification and consulted with John Raftopoulous the known surface owner prior to our remediation effort in fulfillment of our notice requirement. Based on this documentation we again respectfully request that the allegation of violation of Rule 906.c. be dismissed.
3. A revised Form 27 (originally submitted on 07/13/2012) in accordance with Rules 909 and 910 including: GPS coordinates for both points where condensate appeared at the surface. Enclosed is supporting material labeled Documents "B" through "G" which includes our revised Form 27 in accordance with rule 910.(5).c. along with GPS coordinates for all points where condensate appeared and our lab testing data report in accordance rule 910. We believe this information substantially complies with the abatement or corrective action required to be performed by our company as operator along with a Sensitive Area Determination per Rule 909.b.(1), GPS coordinates and sampling depths for all soil samples, soil sample analysis per Rule 910.b.(3)A and Rule 910.b.(3)C.
4. You requested the identity of the location receiving contaminated soils excavated from the release site(s), and a detailed proposal for either remediation or disposal of

RE: Response to Notice of Alleged Violation (Document No. 200358331) cont.

the contaminated soils, a detailed proposal for eliminating the threat to Waters of the State from the abandoned flow line. All GPS coordinates must meet the standards of Rule 215.

Enclosed is supporting material labeled Document "H" detailing our request to remediate the contaminated soil disposal in a approved disposal sit by the most cost-effective means.

We are requesting the COGC consider that the circumstance of the release was not due to a lack of foresight or planning on the part of our company. Factors contributing to error by a contractor could not have been anticipated; nevertheless attempting to anticipate this type of error will become a part of our process improvement plans.

Sincerely,



Jeff Brown, V.P. Engineering
J-W Operating Company
15505 Wright Brothers Drive
Addison, TX 75001

(972) 661-4714 (Office)

(866) 870-6824 (Fax)

jbrown@jwenergy.com email

Attachments Documents A-H

Cc: Kelly Krattenmaker, J-W Operating Company
Rolin Gerosin, J-W Admin Company
JR Wells, J-W Admin Company
Tom Duncan, J-W Admin Company



Document "A" – Surface Owner Notification

From: Kelly Krattenmaker
Sent: Thursday, August 09, 2012 11:02 AM
To: Rolin Geronsin
Cc: Jeff Brown; JR Wells; Shauna Nolte
Subject: Discussion with surface owner of water spill and related contamination

This email is intended to document my discussion with the surface owner of the contaminated land per your request/ COGCC request.

On May 2nd I spoke with John Raftopoulous and told him about the contamination and encouraged him to go by the site and check out the issue as well as how we were addressing the clean up. He did go by and called back the next day. He seemed only to be concerned about his cattle getting into the cleanup site and I told him we were fencing it off that day.

I have not spoken to him since.

Kelly

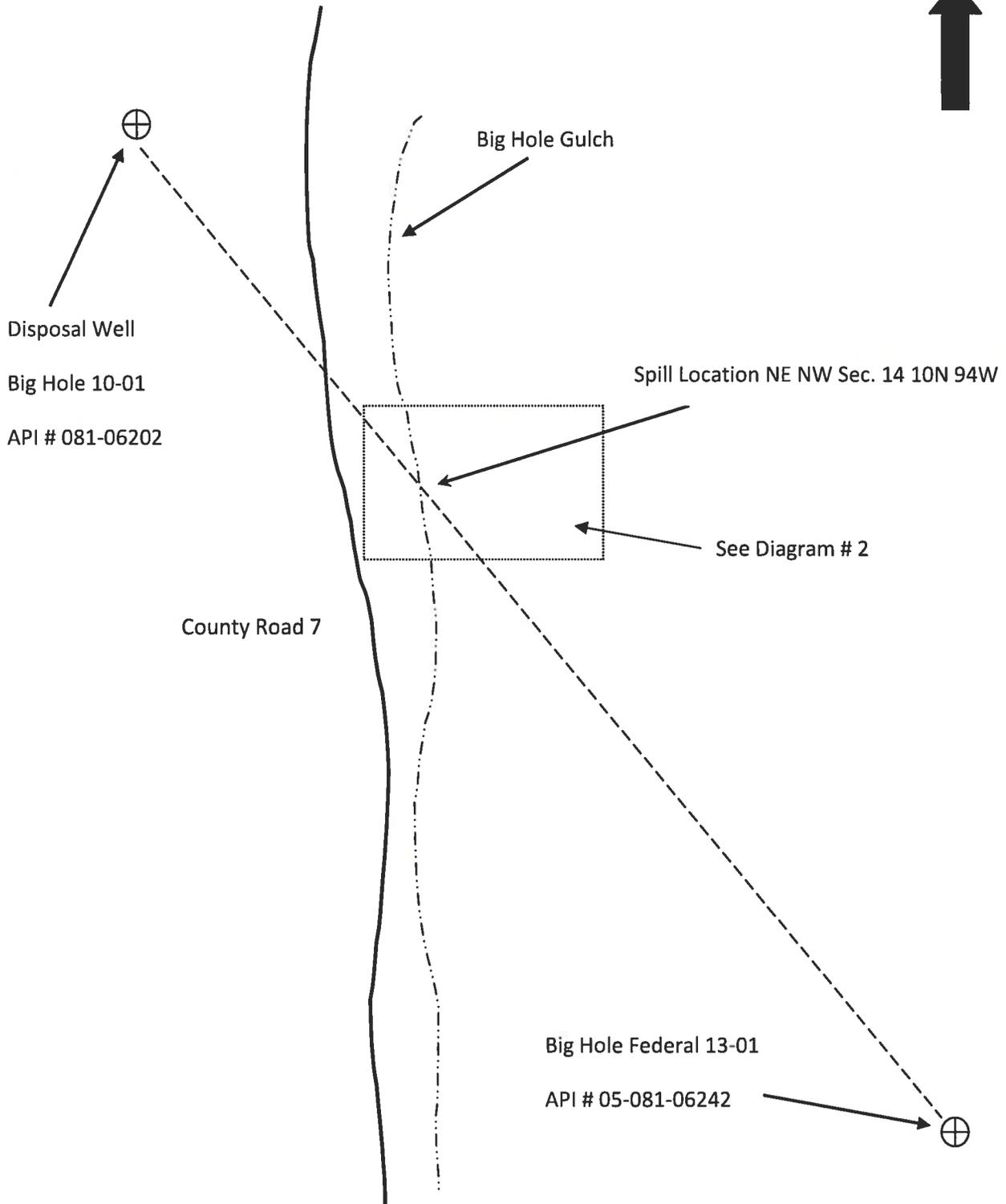
A handwritten signature in blue ink, appearing to read "K. Krattenmaker", is written over a light blue horizontal line.



Document "B"

Diagram #1

North

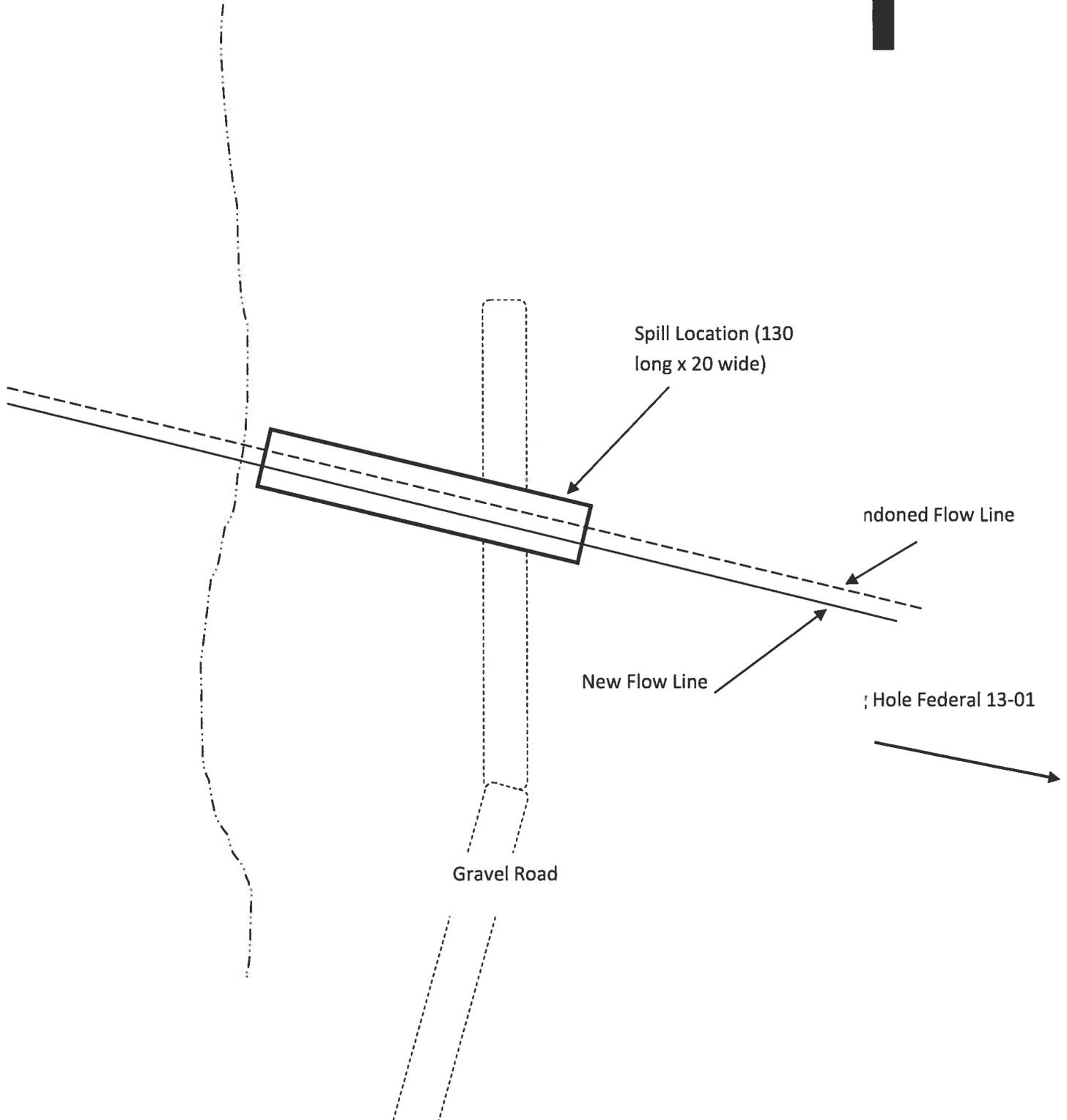




Document "C"

Diagram # 2

h





Document "D"

Document B – GPS Coordinates

The following GPS coordinates apply to this event:

- Big Hole 13-1= 40.83114/-107.9009
- Big Hole 10-1 = 40.83664/-107.94029
- Release location = N40.833447, 107.916313 to N40.833500, W107.917198

J-W Operating Company

Project ID:
 Sample ID: COMPOSITE SAMPLE

ACZ Sample ID: **L94450-01**
 Date Sampled: 05/02/12 10:45
 Date Received: 05/02/12
 Sample Matrix: Soil

Diesel Range Organics (C10-C28)

Analysis Method: **M8015D GC/FID**
 Extract Method: **M3540**

Workgroup: WG322996

Analyst: gk
 Extract Date: 05/16/12 16:43
 Analysis Date: 05/23/12 11:23

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		1000		500	*	mg/Kg	50	300
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	100.2		500	*	%	70	130

May 24, 2012

Report to:

Rolin Geroncin
J-W Operating Company
7074 S. Revere Parkway
Centennial, CO 80112

Bill to:

Shauna Nolte CJ008
J-W Operating Company
PO Box 8489
Longview, TX 75607

cc: Kelly Krattenmaker

Project ID:

ACZ Project ID: L94450

Rolin Geroncin:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 02, 2012. This project has been assigned to ACZ's project number, L94450. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L94450. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

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 June 24, 2012. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/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 raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Tony Antalek has reviewed and approved this report.



J-W Operating Company

May 24, 2012

Project ID:

ACZ Project ID: L94450

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 1 soil sample from J-W Operating Company on May 2, 2012. The sample was received in good condition. Upon receipt, the sample custodian removed the sample from the cooler, inspected the contents, and logged the sample into ACZ's computerized Laboratory Information Management System (LIMS). The sample was assigned ACZ LIMS project number L94450. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic and organic parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures. In addition the following has been noted with this specific project:

1. Client samples were received at a temperature outside of the acceptable range (See Sample Receipt Form).

J-W Operating Company

Project ID:

Sample ID: COMPOSITE SAMPLE

ACZ Sample ID: **L94450-01**

Date Sampled: 05/02/12 10:45

Date Received: 05/02/12

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP							05/16/12 17:22	aeb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic (TCLP)	M6010B ICP		U	*	mg/L	0.06	0.3	05/18/12 7:17	aeb
Barium (TCLP)	M6010B ICP	0.381		*	mg/L	0.003	0.02	05/18/12 12:11	aeb
Cadmium (TCLP)	M6010B ICP		U	*	mg/L	0.005	0.02	05/18/12 12:11	aeb
Chromium (TCLP)	M6010B ICP		U	*	mg/L	0.01	0.05	05/18/12 7:17	aeb
Lead (TCLP)	M6010B ICP		U	*	mg/L	0.04	0.2	05/18/12 7:17	aeb
Mercury (TCLP)	M7470 CVAA		U	*	mg/L	0.0002	0.001	05/18/12 0:28	erf
Selenium (TCLP)	M6010B ICP		U	*	mg/L	0.06	0.3	05/18/12 7:17	aeb
Silver (TCLP)	M6010B ICP		U	*	mg/L	0.01	0.03	05/18/12 7:17	aeb

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Ignitability in Solids	M1030	not flammable		*				05/22/12 14:00	nrc
pH, Corrosivity	M9045D/M9040C								
pH		7.2			units	0.1	0.1	05/21/12 0:00	nrc
pH measured at		25.3			C	0.1	0.1	05/21/12 0:00	nrc

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
TCLP Metal Extraction	M1311							05/15/12 14:00	ndj
TCLP Volatiles Extraction	M1311							05/16/12 20:10	bsu

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (5) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click:

<http://www.acz.com/public/extqallist.pdf>

J-W Operating Company
 Project ID:

ACZ Project ID: **L94450**

Arsenic (TCLP)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322841													
WG322841ICV	ICV	05/18/12 6:55	II120430-5	4		4.198	mg/L	105	90	110			
WG322841ICB	ICB	05/18/12 6:58				U	mg/L		-0.18	0.18			
WG322674PBS	PBS	05/18/12 7:11				U	mg/L		-0.18	0.18			
WG322674LFB	LFB	05/18/12 7:14	IITCLPSPIK	1		1.069	mg/L	106.9	85	115			
L94450-01DUP	DUP	05/18/12 7:24			U	U	mg/L				0	20	RA
L94450-01MS	MS	05/18/12 7:27	IITCLPSPIK	1	U	1.099	mg/L	109.9	75	125			
L94450-01MSD	MSD	05/18/12 7:31	IITCLPSPIK	1	U	1.099	mg/L	109.9	75	125	0	20	

Barium (TCLP)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322932													
WG322932ICV	ICV	05/18/12 11:49	II120430-5	2		1.9988	mg/L	99.9	90	110			
WG322932ICB	ICB	05/18/12 11:52				U	mg/L		-0.009	0.009			
WG322674PBS	PBS	05/18/12 12:05				.0075	mg/L		-0.009	0.009			
WG322674LFB	LFB	05/18/12 12:08	IITCLPSPIK	20.5		19.124	mg/L	93.3	85	115			
L94450-01DUP	DUP	05/18/12 12:17			.381	.2862	mg/L				28.4	20	RD
L94450-01MS	MS	05/18/12 12:20	IITCLPSPIK	20.5	.381	5.8337	mg/L	26.6	75	125			M2
L94450-01MSD	MSD	05/18/12 12:23	IITCLPSPIK	20.5	.381	6.0085	mg/L	27.5	75	125	2.95	20	M2

Cadmium (TCLP)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322932													
WG322932ICV	ICV	05/18/12 11:49	II120430-5	2		1.9525	mg/L	97.6	90	110			
WG322932ICB	ICB	05/18/12 11:52				U	mg/L		-0.015	0.015			
WG322674PBS	PBS	05/18/12 12:05				U	mg/L		-0.015	0.015			
WG322674LFB	LFB	05/18/12 12:08	IITCLPSPIK	.5		.5374	mg/L	107.5	85	115			
L94450-01DUP	DUP	05/18/12 12:17			U	.007	mg/L				200	20	RA
L94450-01MS	MS	05/18/12 12:20	IITCLPSPIK	.5	U	.5214	mg/L	104.3	75	125			
L94450-01MSD	MSD	05/18/12 12:23	IITCLPSPIK	.5	U	.5162	mg/L	103.2	75	125	1	20	

Chromium (TCLP)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322841													
WG322841ICV	ICV	05/18/12 6:55	II120430-5	2		2.013	mg/L	100.7	90	110			
WG322841ICB	ICB	05/18/12 6:58				U	mg/L		-0.03	0.03			
WG322674PBS	PBS	05/18/12 7:11				U	mg/L		-0.03	0.03			
WG322674LFB	LFB	05/18/12 7:14	IITCLPSPIK	.5		.482	mg/L	96.4	85	115			
L94450-01DUP	DUP	05/18/12 7:24			U	U	mg/L				0	20	RA
L94450-01MS	MS	05/18/12 7:27	IITCLPSPIK	.5	U	.465	mg/L	93	75	125			
L94450-01MSD	MSD	05/18/12 7:31	IITCLPSPIK	.5	U	.466	mg/L	93.2	75	125	0.21	20	

J-W Operating Company
 Project ID:

ACZ Project ID: **L94450**

Lead (TCLP)		M6010B ICP											
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322841													
WG322841ICV	ICV	05/18/12 6:55	II120430-5	4		4.105	mg/L	102.6	90	110			
WG322841ICB	ICB	05/18/12 6:58				U	mg/L		-0.12	0.12			
WG322674PBS	PBS	05/18/12 7:11				U	mg/L		-0.12	0.12			
WG322674LFB	LFB	05/18/12 7:14	II1TCLPSPIK	1		.988	mg/L	98.8	85	115			
L94450-01DUP	DUP	05/18/12 7:24			U	U	mg/L				0	20	RA
L94450-01MS	MS	05/18/12 7:27	II1TCLPSPIK	1	U	.811	mg/L	81.1	75	125			
L94450-01MSD	MSD	05/18/12 7:31	II1TCLPSPIK	1	U	.829	mg/L	82.9	75	125	2.2	20	

Mercury (TCLP)		M7470 CVAA											
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322777													
WG322777ICV	ICV	05/17/12 17:50	II120515-1	.005015		.00513	mg/L	102.3	95	105			
WG322777ICB	ICB	05/17/12 17:52				U	mg/L		-0.0002	0.0002			
WG322882													
WG322882PBW	PBW	05/18/12 0:21				U	mg/L		-0.00044	0.00044			
WG322674PBS	PBS	05/18/12 0:23				U	mg/Kg		-0.0006	0.0006			
WG322674LFB	LFB	05/18/12 0:26	II120507-5	.002002		.00191	mg/L	95.4	85	115			
L94450-01DUP	DUP	05/18/12 0:30			U	U	mg/L				0	20	RA
L94450-01MS	MS	05/18/12 0:32	II120507-5	.002002	U	.00194	mg/L	96.9	85	115			
L94450-01MSD	MSD	05/18/12 0:34	II120507-5	.002002	U	.00192	mg/L	95.9	85	115	1.04	20	

Ph		M9045D/M9040C											
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322904													
WG322904ICV	ICV	05/21/12 11:30	PCN38642	4		4.01	units	100.3	97	103			
L94450-01DUP	DUP	05/21/12 12:30			7.2	7.21	units				0.1	20	

Selenium (TCLP)		M6010B ICP											
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322841													
WG322841ICV	ICV	05/18/12 6:55	II120430-5	4		4.224	mg/L	105.6	90	110			
WG322841ICB	ICB	05/18/12 6:58				U	mg/L		-0.18	0.18			
WG322674PBS	PBS	05/18/12 7:11				U	mg/L		-0.18	0.18			
WG322674LFB	LFB	05/18/12 7:14	II1TCLPSPIK	1		1.118	mg/L	111.8	85	115			
L94450-01DUP	DUP	05/18/12 7:24			U	U	mg/L				0	20	RA
L94450-01MS	MS	05/18/12 7:27	II1TCLPSPIK	1	U	1.13	mg/L	113	75	125			
L94450-01MSD	MSD	05/18/12 7:31	II1TCLPSPIK	1	U	1.15	mg/L	115	75	125	1.75	20	

J-W Operating Company
 Project ID:

ACZ Project ID: **L94450**

Silver (TCLP)			M6010B ICP										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322841													
WG322841ICV	ICV	05/18/12 6:55	II120430-5	1.003		1.014	mg/L	101.1	90	110			
WG322841ICB	ICB	05/18/12 6:58				U	mg/L		-0.03	0.03			
WG322674PBS	PBS	05/18/12 7:11				U	mg/L		-0.03	0.03			
WG322674LFB	LFB	05/18/12 7:14	II1TCLPSPIK	.5		.496	mg/L	99.2	85	115			
L94450-01DUP	DUP	05/18/12 7:24			U	U	mg/L				0	20	RA
L94450-01MS	MS	05/18/12 7:27	II1TCLPSPIK	.5	U	.509	mg/L	101.8	75	125			
L94450-01MSD	MSD	05/18/12 7:31	II1TCLPSPIK	.5	U	.508	mg/L	101.6	75	125	0.2	20	

J-W Operating Company

ACZ Project ID: **L94450**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94450-01	WG322841	Arsenic (TCLP)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322932	Barium (TCLP)	M6010B ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M6010B ICP	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Cadmium (TCLP)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322841	Chromium (TCLP)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Lead (TCLP)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322882	Mercury (TCLP)	M7470 CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG322841	Selenium (TCLP)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Silver (TCLP)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

J-W Operating Company

Project ID:
 Sample ID: COMPOSITE SAMPLE

ACZ Sample ID: **L94450-01**
 Date Sampled: 05/02/12 10:45
 Date Received: 05/02/12
 Sample Matrix: Soil

Diesel Range Organics (C10-C28)

Analysis Method: **M8015D GC/FID**
 Extract Method: **M3540**

Workgroup: **WG322996**
 Analyst: gk
 Extract Date: 05/16/12 16:43
 Analysis Date: 05/23/12 11:23

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		1000		500	*	mg/Kg	50	300
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	100.2		500	*	%	70	130

J-W Operating Company

Project ID:
 Sample ID: COMPOSITE SAMPLE

ACZ Sample ID: **L94450-01**
 Date Sampled: 05/02/12 10:45
 Date Received: 05/02/12
 Sample Matrix: Soil

Gasoline Range Organics (C6-C10)

Analysis Method: **M8015D GC/FID**
 Extract Method: **3580A**

Workgroup: **WG322651**
 Analyst: pml
 Extract Date: 05/15/12 22:37
 Analysis Date: 05/15/12 22:37

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TVH C6 to C10	TVH	1000		5000	*	mg/Kg	300	300
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
Bromofluorobenzene (TVH)	460-00 4	106.6		5000	*	%	70	130

J-W Operating Company
 Project ID:
 Sample ID: COMPOSITE SAMPLE

ACZ Sample ID: **L94450-01**
 Date Sampled: 05/02/12 10:45
 Date Received: 05/02/12
 Sample Matrix: Soil

Volatile Organics (TCLP) by GC/MS

Analysis Method: **M8260B GC/MS**
 Extract Method: **5030C**

Workgroup: **WG322879**
 Analyst: mss
 Extract Date: 05/18/12 18:30
 Analysis Date: 05/18/12 18:30

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
1,1-Dichloroethene	75-35-4		U	1		mg/L	0.004	0.01
1,2-Dichloroethane	107-06-2		U	1		mg/L	0.004	0.01
1,4-Dichlorobenzene	106-46-7		U	1		mg/L	0.004	0.01
2-Butanone	78-93-3		U	1		mg/L	0.01	0.03
Benzene	71-43-2	.153		1		mg/L	0.004	0.01
Carbon Tetrachloride	56-23-5		U	1		mg/L	0.01	0.03
Chlorobenzene	108-90-7		U	1		mg/L	0.004	0.01
Chloroform	67-66-3		U	1		mg/L	0.004	0.01
Tetrachloroethene	127-18-4		U	1		mg/L	0.004	0.01
Trichloroethene	79-01-6		U	1		mg/L	0.005	0.02
Vinyl Chloride	75-01-4		U	1		mg/L	0.004	0.01
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
Bromofluorobenzene	460-00-4	98.3		1		%	70	130
Dibromofluoromethane	1868-53-7	97.3		1		%	70	130
Toluene-d8	2037-26-5	108.9		1		%	70	130

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
E	Analyte concentration is estimated due to result exceeding calibration range.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
J	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
L	Target analyte response was below the laboratory defined negative threshold.
M	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.
P	Analyte concentration differs from second detector by more than 40%.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
V	High blank data accepted because sample concentration is 10 times higher than blank concentration.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
(3)	EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click:

<http://www.acz.com/public/extquallist.pdf>

J-W Operating Company

ACZ Project ID: **L94450**

Project ID:

Diesel Range Organics (C10-C28)

M8015D GC/FID

WG322996

MS		Sample ID: L94488-01MS			PCN/SCN: TPH120430-3-3G			Analyzed: 05/23/12 13:08			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28	833.3	90000	63800	mg/Kg	-3144.0	70	130			M3	
OTP (surr)				%	0.0	70	130			S8	

MSD		Sample ID: L94488-01MSD			PCN/SCN: TPH120430-3-3G			Analyzed: 05/23/12 13:34			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28	833.3	90000	64600	mg/Kg	-3048.0	70	130	1.25	20	M3	
OTP (surr)				%	0.0	70	130			S8	

LCSS		Sample ID: WG322785LCSS			PCN/SCN: TPH120430-3-30			Analyzed: 05/23/12 10:30			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28	83.3		83.7	mg/Kg	100.4	70	130				
OTP (surr)				%	99.2	70	130				

LCSSD		Sample ID: WG322785LCSSD			PCN/SCN: TPH120430-3-30			Analyzed: 05/23/12 10:57			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28	83.3		88.9	mg/Kg	106.7	70	130	6	20		
OTP (surr)				%	101.7	70	130				

PBS		Sample ID: WG322785PBS						Analyzed: 05/23/12 10:04			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28			U	mg/Kg		-20	20				
OTP (surr)				%	91.7	70	130				

J-W Operating Company

ACZ Project ID: **L94450**

Project ID:

Gasoline Range Organics (C6-C10)

M8015D GC/FID

WG322651

AS		Sample ID: L94488-01AS		PCN/SCN: B120503-2-SPIK				Analyzed: 05/15/12 21:25			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TVH C6 TO C10	1250	800	2070	mg/Kg	101.6	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	110.0	70	130				

ASD		Sample ID: L94488-01ASD		PCN/SCN: B120503-2-SPIK				Analyzed: 05/15/12 22:00			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TVH C6 TO C10	1250	800	2130	mg/Kg	106.4	70	130	2.86	20		
BROMOFLUOROBENZENE (TVH) (surr)				%	108.4	70	130				

LCSS		Sample ID: WG322651LCSS		PCN/SCN: B120503-2-SPIK				Analyzed: 05/15/12 18:59			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TVH C6 TO C10	.5		.556	mg/Kg	111.2	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	99.4	70	130				

LCSSD		Sample ID: WG322651LCSSD		PCN/SCN: B120503-2-SPIK				Analyzed: 05/15/12 19:36			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TVH C6 TO C10	.5		.553	mg/Kg	110.6	70	130	0.5	20		
BROMOFLUOROBENZENE (TVH) (surr)				%	100.6	70	130				

PBS		Sample ID: WG322651PBS						Analyzed: 05/15/12 20:12			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TVH C6 TO C10			U	mg/Kg		-.05	.05				
BROMOFLUOROBENZENE (TVH) (surr)				%	102.9	70	130				

J-W Operating Company

ACZ Project ID: **L94450**

Project ID:

Volatile Organics (TCLP) by GC/MS

M8260B GC/MS

WG322879

AS	Sample ID: L94551-01AS		PCN/SCN: V120516-1-AS				Analyzed: 05/18/12 19:25				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
1,1-DICHLOROETHENE	.1	U	.1026	mg/L	104.5	70	130				
1,2-DICHLOROETHANE	.1	U	.0933	mg/L	95.0	70	130				
1,4-DICHLOROBENZENE	.1	U	.095	mg/L	96.6	70	130				
2-BUTANONE	.2	U	.182	mg/L	92.7	70	130				
BENZENE	.1	U	.1043	mg/L	105.9	70	130				
CARBON TETRACHLORIDE	.1	U	.1	mg/L	101.7	70	130				
CHLOROBENZENE	.1	U	.1042	mg/L	105.8	70	130				
CHLOROFORM	.1	U	.0992	mg/L	101.1	70	130				
TETRACHLOROETHENE	.1	U	.1059	mg/L	107.4	53	120				
TRICHLOROETHENE	.1	U	.1003	mg/L	102.0	70	130				
VINYL CHLORIDE	.1	U	.1029	mg/L	106.4	70	130				
BROMOFLUOROBENZENE (surr)				%	96.1	70	130				
DIBROMOFLUOROMETHANE (surr)				%	98.9	70	130				
TOLUENE-D8 (surr)				%	106.4	70	130				

ASD	Sample ID: L94551-01ASD		PCN/SCN: V120516-1-AS				Analyzed: 05/18/12 19:52				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
1,1-DICHLOROETHENE	.1	U	.1025	mg/L	104.4	70	130	0.1	20		
1,2-DICHLOROETHANE	.1	U	.0937	mg/L	95.4	70	130	0.43	20		
1,4-DICHLOROBENZENE	.1	U	.1002	mg/L	101.9	70	130	5.33	20		
2-BUTANONE	.2	U	.184	mg/L	93.7	70	130	1.09	20		
BENZENE	.1	U	.1049	mg/L	106.5	70	130	0.57	20		
CARBON TETRACHLORIDE	.1	U	.101	mg/L	102.7	70	130	1	20		
CHLOROBENZENE	.1	U	.106	mg/L	107.6	70	130	1.71	20		
CHLOROFORM	.1	U	.1002	mg/L	102.1	70	130	1	20		
TETRACHLOROETHENE	.1	U	.1075	mg/L	109.1	53	120	1.5	20		
TRICHLOROETHENE	.1	U	.1017	mg/L	103.4	70	130	1.39	20		
VINYL CHLORIDE	.1	U	.1004	mg/L	103.8	70	130	2.46	20		
BROMOFLUOROBENZENE (surr)				%	97.2	70	130				
DIBROMOFLUOROMETHANE (surr)				%	98.0	70	130				
TOLUENE-D8 (surr)				%	106.2	70	130				

PBS	Sample ID: WG322737PBS						Analyzed: 05/18/12 18:02				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
1,1-DICHLOROETHENE			U	mg/L		-.01	.01				
1,2-DICHLOROETHANE			U	mg/L		-.01	.01				
1,4-DICHLOROBENZENE			U	mg/L		-.01	.01				
2-BUTANONE			U	mg/L		-.03	.03				
BENZENE			U	mg/L		-.01	.01				
CARBON TETRACHLORIDE			U	mg/L		-.03	.03				
CHLOROBENZENE			U	mg/L		-.01	.01				
CHLOROFORM			U	mg/L		-.01	.01				
TETRACHLOROETHENE			U	mg/L		-.01	.01				
TRICHLOROETHENE			U	mg/L		-.02	.02				

J-W Operating Company

ACZ Project ID: **L94450**

Project ID:

VINYL CHLORIDE	U	mg/L		-01	.01
BROMOFLUOROBENZENE (surr)		%	94.8	70	130
DIBROMOFLUOROMETHANE (surr)		%	98.2	70	130
TOLUENE-D8 (surr)		%	105.1	70	130

LCSW		Sample ID: WG322879LCSW			PCN/SCN: V120516-1-CCVL			Analyzed: 05/18/12 16:40			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
1,1-DICHLOROETHENE	.1		.0982	mg/L	98.2	70	130				
1,2-DICHLOROETHANE	.1		.0964	mg/L	96.4	70	130				
1,4-DICHLOROETHANE	.1		.1043	mg/L	104.1	70	130				
2-BUTANONE	.2		.208	mg/L	104.0	70	130				
BENZENE	.1		.099	mg/L	98.7	70	130				
CARBON TETRACHLORIDE	.1		.1	mg/L	99.9	70	130				
CHLOROETHENE	.1		.1036	mg/L	103.3	70	130				
CHLOROFORM	.1		.0974	mg/L	97.4	70	130				
TETRACHLOROETHENE	.1		.1058	mg/L	105.4	53	120				
TRICHLOROETHENE	.1		.0985	mg/L	98.4	70	130				
VINYL CHLORIDE	.1		.1013	mg/L	102.8	70	130				
BROMOFLUOROBENZENE (surr)				%	97.7	70	130				
DIBROMOFLUOROMETHANE (surr)				%	99.6	70	130				
TOLUENE-D8 (surr)				%	105.5	70	130				

LCSWD		Sample ID: WG322879LCSWD			PCN/SCN: V120516-1-CCVL			Analyzed: 05/18/12 17:08			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
1,1-DICHLOROETHENE	.1		.1017	mg/L	101.7	70	130	3.5	20		
1,2-DICHLOROETHANE	.1		.0989	mg/L	98.9	70	130	2.6	20		
1,4-DICHLOROETHANE	.1		.106	mg/L	105.8	70	130	1.6	20		
2-BUTANONE	.2		.204	mg/L	102.0	70	130	1.9	20		
BENZENE	.1		.1017	mg/L	101.4	70	130	2.7	20		
CARBON TETRACHLORIDE	.1		.102	mg/L	101.8	70	130	2	20		
CHLOROETHENE	.1		.1057	mg/L	105.4	70	130	2	20		
CHLOROFORM	.1		.1006	mg/L	100.7	70	130	3.2	20		
TETRACHLOROETHENE	.1		.1088	mg/L	108.4	53	120	2.8	20		
TRICHLOROETHENE	.1		.102	mg/L	101.9	70	130	3.5	20		
VINYL CHLORIDE	.1		.1014	mg/L	102.9	70	130	0.1	20		
BROMOFLUOROBENZENE (surr)				%	97.3	70	130				
DIBROMOFLUOROMETHANE (surr)				%	99.2	70	130				
TOLUENE-D8 (surr)				%	105.4	70	130				

PBW		Sample ID: WG322879PBW			PCN/SCN: V120516-1-CCVL			Analyzed: 05/18/12 17:35			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
1,1-DICHLOROETHENE			U	mg/L		-01	.01				
1,2-DICHLOROETHANE			U	mg/L		-01	.01				
1,4-DICHLOROETHANE			U	mg/L		-01	.01				
2-BUTANONE			U	mg/L		-03	.03				
BENZENE			U	mg/L		-01	.01				
CARBON TETRACHLORIDE			U	mg/L		-03	.03				
CHLOROETHENE			U	mg/L		-01	.01				
CHLOROFORM			U	mg/L		-01	.01				

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TETRACHLOROETHENE	U	mg/L	-01	.01	
TRICHLOROETHENE	U	mg/L	-02	.02	
VINYL CHLORIDE	U	mg/L	-01	.01	
BROMOFLUOROBENZENE (surr)		%	95.9	70	130
DIBROMOFLUOROMETHANE (surr)		%	96.9	70	130
TOLUENE-D8 (surr)		%	106.1	70	130

J-W Operating Company

ACZ Project ID: **L94450**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94450-01	WG322996	*All Compounds*	M8015D GC/FID	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG322651		M8015D GC/FID	Q10	Sample received in inappropriate sample container.
	WG322785		M3540	D1	Sample required dilution due to matrix.

J-W Operating Company

ACZ Project ID: **L94450**

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Ignitability in Solids

M1030

J-W Operating Company

ACZ Project ID: L94450
 Date Received: 05/02/2012 14:20
 Received By:
 Date Printed: 5/9/2012

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?			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?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Is the trip blank for Cyanide present?			X
12) Is the trip blank for VOA present?			X
13) Are samples requiring no headspace, headspace free?			X
14) 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)
Na15265	20.1	15

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

Notes

J-W Operating Company

ACZ Project ID: L94450
 Date Received: 05/02/2012 14:20
 Received By:
 Date Printed: 5/9/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94450-01	COMPOSITE SAMPLE									X		<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Hydrochloric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L94450

CHAIN of CUSTODY

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

Report to

Name: Rolin Geronsin
Company: J-W Operating Co
E-mail: rgeronsin@jwenergy.com

Address: 7074 S. Revere Parkway
Centennial, CO. 80112
Telephone: 303-887-9770

Copy of Report to

Name: Kelly Krattenmaker
Company: J-W Operating Co

E-mail: KKrattenmaker@jwenergy.com
Telephone: 720-385-3075

In order to

Name: Shauna Nolte
Company: J-W Operating Co
E-mail: snolte@jwenergy.com

Address: P.O. Box 8489
Longview, TX. 75607
Telephone: 720-385-3090

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requester's short HT analysis? YES [X] NO []

If not, then ACZ will contact client for further instructions. Expense: \$150 and \$100. Sampled ACZ will proceed with the request for analysis even HT expires and data is not used.

Are samples for SDWA Compliance Monitoring? Yes [] No [X]

If yes, please include state forms. Results will be reported to PQI for Colorado

Sampler's Name: Sampler's site Information State Zip code Time Zone

PROJECT INFORMATION

Quote #: Big-Hole-Field
Project/PO #:
Reporting state for compliance testing:
Check box if samples include NRC licensed material? []

Table with columns: # of Containers, Matrix, and sample details. Includes rows for Spoil Sample #1, Spoil Sample #2, Peripheral #1, and Peripheral #2.

Matrix SW (Surface Water) - GW (Ground Water) - WW (Waste Water) - DW (Drinking Water) - SL (Sludge) - SO (Soil) - OL (Oil) - Other (Specify)

REMARKS

Blank area for remarks.

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

Table with columns: REQUESTED BY, DATE/TIME, RECEIVED BY, DATE/TIME. Includes signatures and dates.



L94450 Chain of Custody

FORM
27
Rev 6/99

State of Colorado
Oil and Gas Conservation Commission



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

FOR OGCC USE ONLY

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:
 Spill Complaint
 Inspection NOAV
 Tracking No: _____

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

OGCC Operator Number: <u>44350</u>	Contact Name and Telephone: <u>Kelly Krattenmaker</u>
Name of Operator: <u>J-W Operating</u>	No: <u>303-422-4990</u>
Address: <u>7074 S. Revere Pkwy</u>	Fax: <u>303-422-0178</u>
City: <u>Centennial</u> State: <u>CO</u> Zip: <u>80112</u>	

API Number: <u>05-081-06242</u>	County: <u>Moffat</u>
Facility Name: <u>Big Hole</u>	Facility Number: _____
Well Name: <u>Big Hole Federal</u>	Well Number: <u>05-081-06242</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>NE NW 14 10N 94W</u>	Latitude: <u>N40.833447</u> Longitude: <u>107.916313</u>

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Crude Oil & Condensate

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Dry land cattle grazing

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Mixed clay, sand, silt

Potential receptors (water wells within 1/4 mi, surface waters, etc.): None

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>1500 cubic yards fo soil</u>	<u>visual examination</u>
<input checked="" type="checkbox"/> Vegetation	<u>grasses, a few willow shrubs</u>	<u>visual examination</u>
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Release into flow line was stopped immediately upon discovery.

Describe how source ls to be removed:

All contaminated soil was excavated and piled, on a pit liner, at a nearby location.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Soil will either be treated via remediation with chemical or biological agents or it will be disposed of at a nearby (Milner landfill) landfill.

FORM
27
Rev 6/99

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80203
(303)894-2100 Fax:(303)894-2109



Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

Page 2
REMEDIATION WORKPLAN (Cont.)

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Ground water was not impacted.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

The excavation was filled in and the area was reseeded on May 11th.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? Y N If yes, describe:

The site will be examined at monthly intervals to be certain that the reseeding effort was successful. The affected area will be deemed complete when a 75% vegetative cover is determined to exist.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

All contaminated soils will be either remediated or placed into a qualified landfill. The Milner landfill is under investigation for potential final disposition of this soil.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 4/28/12 Date Site Investigation Completed: 5/1/12 Date Remediation Plan Submitted: 7/13/12
Remediation Start Date: 5/8/12 Anticipated Completion Date: 5/11/12 Actual Completion Date: 5/11/12

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Rolin Geronsin Signed: [Signature]
Title: Regional Compliance Date: 7/13/12

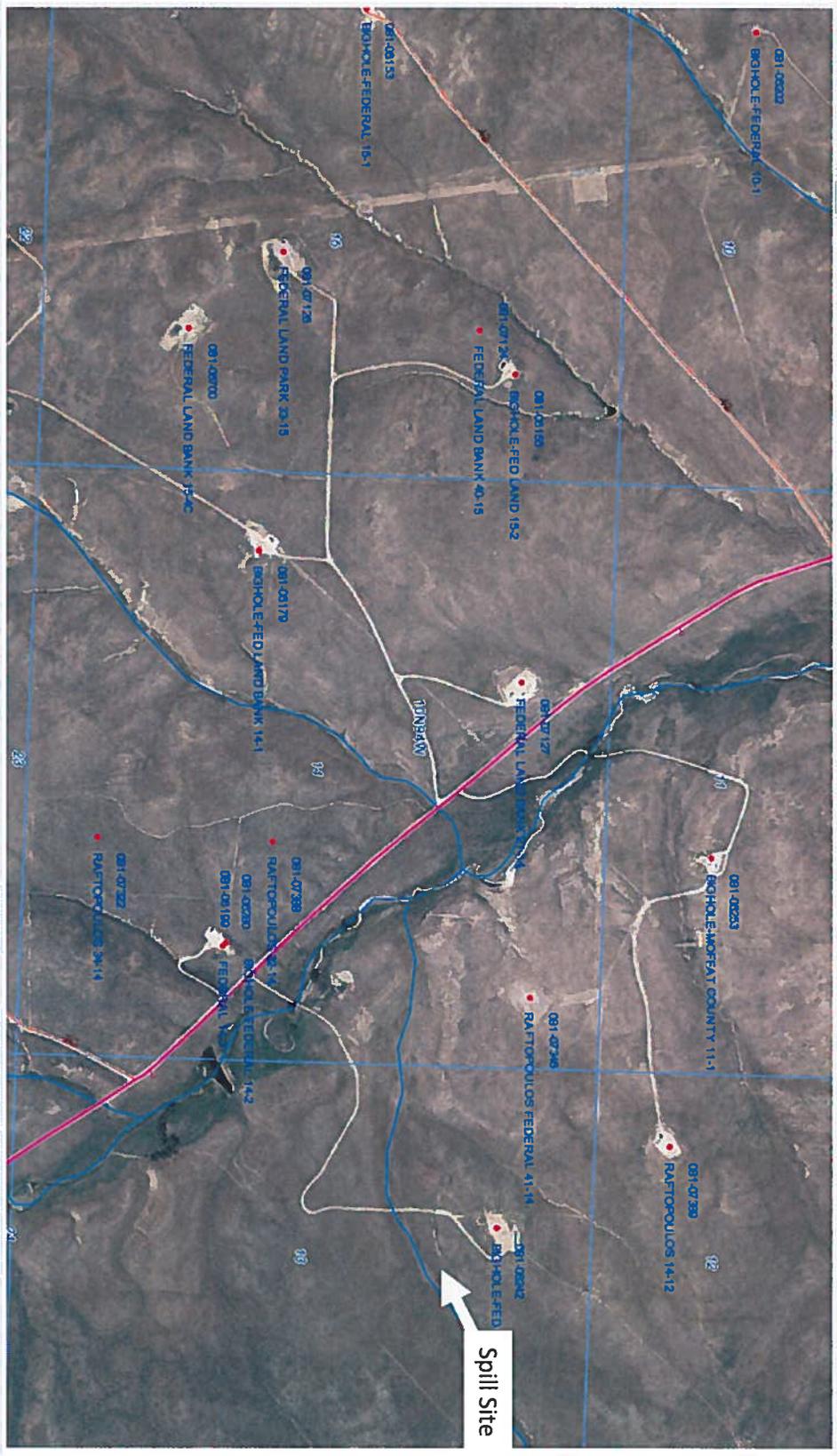
OGCC Approved: _____ Title: _____ Date: _____

Document "F"

Zoom Selection Results Intersect Add Point Redline Copy Lat/Long Help

Layers

- O&G Facilities
 - Wells
 - Well Name
 - Well API #
 - Pits
 - PendingPermits
 - Pending2A (Diamond)
 - Permits
 - Well Status
- COGCC Data
 - COGCC Locations
 - Directionals
 - COGCC Rules
 - O&G Fields
 - Sample Lacs
 - SeismicPermits
 - Roads & RRS
 - Water Resources
 - SectWpRng
 - Wildlife DOW
 - State Lands
 - Indian Lands
 - BLM Lands
 - Surface Lands
 - Places
- Counties_Zoom
 - CityPolygons
 - Surface Owner
- Special Projects
 - Soil Surveys
 - Geology
 - Topos24K
 - 1990s Aerials
 - Photo Date
 - 2005 Aerials
 - 2009 Aerials
 - 2011 Aerials





Rolin Geronsin, CSP
J-W Energy
7074 S. Revere Pkwy
Centennial, CO 80112

7/13/12

Chris Canfield, PG
COGCC
707 Wapiti Ct.
Suite 204
Rifle, CO 81650

Mr. Canfield,

Please accept this letter as a response to your email of July 5, 2012. I will address each of your comments below.

- 1) You noted "The location given appears to be incorrect. The subject well (API No. 05-081-06242) is in Section 13 T10N R94W, not Section 14."
Response: The location provided on Form 19 is correct. The release occurred along a flow line that connects well 05-081-06242 (Big Hole Federal 13-01) to a water disposal well, 081-06202 (Big Hole Federal 10-01) in this area.
- 2) You wrote, "The form did not include a map as required by COGCC Rule 906.b.(5)."
Response: A map is provided with this report.
- 3) "No information was provided regarding an estimate of the volume of oil spilled and oil recovered despite the narrative stating that oil and condensate were forced (by produced water) into the soil and to the surface."
Response: Based upon the analytical results generated from ACZ Laboratories of the composite sample we estimate that approximately 16 barrels of oil and or condensate was released into the soil that surrounded the flow line at the spill site. A copy of the analytical report's relevant page is attached to this report.
- 4) "Distance to the nearest surface water."
Response: The spill, at the time it was discovered, was within five (5) to ten (10) feet of a dry unnamed tributary of Big Hole Gulch. Please see the map provided with this report.
- 5) "Please elaborate on how much of the flow path is off of the pad and whether the release threatened either of the surface water drainage features flanking the pad."
Response: The entire spill area is away from the subject well (API No. 05-081-06242). Please see the map provided with this report. The release did not impact the surface drainage.
- 6) "Please revise and resubmit your Form 19 to address the above-mentioned deficiencies and questions."
Response: A revised Form 19 is being submitted and is appended to this report.



7) "Given the volume of the release, I will require you to submit a Form 27 Site Investigation and Remediation Work Plan.

Response: A Form 27 is appended to this report.

8) Form 19

Response: Form 19 was completed and submitted on May 2nd. The report was submitted via fax to the COGCC offices at 303-894-2109.

9) Reporting of the event:

Response:

- a. An online report was made to the National Response Center on April 27th at 12:00 pm MDT
- b. The CDPHE was contacted that same day. Event number 2012-0296 was generated for this incident.
- c. EPA Regional officer 'Marty' contacted Rolin Geronsin on the 30th of April. On May 2nd the EPA considered this a 'closed' issue. This communication was entirely verbal.

Please contact me with any questions or comments.

Sincerely

Rolin Geronsin, CSP
J-W Energy
303-887-9770

FORM
24
Rev 2/03

Document "G"

[Click here to reset form](#)

**State of Colorado
Oil and Gas Conservation Commission**

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



FOR OGCC USE ONLY

SOIL ANALYSIS REPORT FORM

OGCC Operator Number: <u>44350</u>	Contact Name and Telephone: <u>Kelly Krattenmaker</u>	Complete the Attachment Checklist <table border="1"> <tr> <td></td> <td>Oper</td> <td>OGCC</td> </tr> <tr> <td>Analysis</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Sample Location Map</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>		Oper	OGCC	Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample Location Map	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Oper		OGCC								
Analysis	<input checked="" type="checkbox"/>		<input type="checkbox"/>								
Sample Location Map	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
Name of Operator: <u>J-W Operating</u>	No: <u>303-422-4990</u>										
Address: <u>7074 S. Revere Pkwy</u>	Fax: <u>303-422-0178</u>										
City: <u>Centennial</u> State: <u>CO</u> Zip: <u>80112</u>											

Source of Sample Collection: SPILL PIT WELL FLOWLINE GAS PLANT BATTERY

SAMPLE POINT INFORMATION (Sample Location Map Must Be Attached)

Date Sample(s) Taken: 5/1/2012

Sample Point Description: Along the extent of the excavation to remove contaminated soil along flow line

If Well, API Number: Not applicable Well Name: Not applicable Well Number: Not applicable

QtrQtr: NE NW Section: 14 Township: 10N Range: 94W Meridian: 6th

Footage From Exterior Section Lines: _____

Latitude: N40.833447 Longitude: 107.916313 County: Moffatt

Field Name: Big Hole Field Number: _____

LABORATORY RESULTS

Initial Test Results Interim Test Results Final Test Results

Name of Laboratory: ACZ Laboratories Phone: 800-334-5493

Matrix of Sample: Soil Water Soil and Water

FIELD MEASUREMENTS

pH Not taken pH unit Electrical Conductivity Not taken mmhos/cr

Sodium Adsorption Ratio: Not taken TDS: Not taken mg/kg

LABORATORY RESULTS

pH 7.2 pH unit Electrical Conductivity _____ mmhos/cr

Sodium Adsorption Ratio: _____ TDS: _____ mg/kg

TPH (8015 modified): 1000 mg/kg PID FID Hanby Other (check one)

TRPH (418.1): _____ mg/kg PID FID Hanby Other

BTEX (METHOD 602) Complete this section only if requested.

Benzene: _____ ug/l Ethylbenzene: _____ ug/ Toluene: _____ ug/ Xylenes: _____ ug/l

TOTAL METALS Complete this section only if requested.

Arsenic: _____ mg/kg Barium: _____ mg/kg Cadmium: _____ mg/kg

Chromium: _____ mg/kg Cyanide: _____ mg/kg Fluoride: _____ mg/kg

Lead: _____ mg/kg Mercury: _____ mg/kg Selenium: _____ mg/kg

Silver: _____ mg/kg

Print Name: Rolin Geronsin Signed: Rolin Geronsin
Title: Compliance Specialist Date: 8/21/12



Profile # _____

Milner Landfill (Twin Landfill Corporation) • P.O. Box 774362 • 1049 Crawford Avenue
Steamboat Springs, Colorado 80477 • voice 970/875-0355 • fax 815/377-2495 • office@twinenviro.com

Phantom Landfill (Twin Landfill Corporation of Fremont County) • 2500 Fremont County Road 67
Penrose, Colorado 81240 • voice 719/372-6671 • fax 815/377-2495 • phantom@twinenviro.com

Trinidad (Twin Landfill Corporation of Fremont County) 3602 Freedom Road, Trinidad, Colorado 81082
voice 719/846-4030 • fax 815/377-2495 • trinidad@twinenviro.com rev 04/11

Disposal Site Destination (check one) Milner Phantom Other

WASTE PROFILE FORM

In order for Twin to decide whether it can lawfully and safely accept your waste for delivery, it must obtain the following information about your waste. The form should be filled out completely by someone knowledgeable about the waste and hazardous waste rules. The Generator makes a hazardous waste determination and is responsible for its waste from cradle to grave. All related analysis must be included with this form, and if future analysis differs from what was submitted, the analytical results must be sent to Twin immediately. All information on this form must be typed or printed in black ink.

I. Generator Information (NOT Consultant, Contractor, Transporter, or Abatement Firm)

- 1. Generator Name: J-W Operating Company
- 2. Address: 7074 S. Revere Pkwy
Centennial, CO 80112
- 3. Contact: Rolin Geronsin Phone: 720-385-3062
Fax: 866-741-4182 Email: rgerison@jwenergy.com
- 4. Location of Waste Generation: Well 50-081-06242 Big Hole Federal 13-01

II. Waste Information

- 1. Common Name of Waste: soil with crude oil
- 2. Detailed Description of Process Generating Waste Leak from waste water line to disposal well from well 50-081-06242
- 3. Is This a Hazardous Waste as Defined by Federal, State or Local Laws or Regulations? Yes No

III. Physical Characteristics of Waste

- 1. Color: Gray to dark brown
- 2. Odor: None Mild Strong Describe Petroleum
- 3. Physical State: Solid Semi-Solid(sludge) Liquid Other _____
- 4. Percent Solids (if known): _____ %
- 5. Waste will be delivered to the site in: Bulk Drum Other _____
- 6. Anticipated Volume: 1500 Tons Yards Drums Gallons Other _____
- 7. Frequency: One-time Weekly Monthly Other _____

IV. Consultant or Abatement Firm Information

- 1. Consultant/Abatement Firm: _____
- 2. Address: _____

- 3. Contact: _____ Phone: _____ Fax: _____ Email: _____

V. Laboratory Information

1. Laboratory Name: ACZ Laboratories, Inc.

2. Contact: Tony Antalek Phone: 8003345493 Fax: _____ Email: _____

Attach results and chain of custody docs for all analyses performed on the subject waste within the previous 12 months.

VI. Random Sampling

Twin performs random sampling and analysis for hazardous waste characteristics and constituents of wastes provisionally accepted at the site. If your waste is selected for random sampling, a sample will be collected at the time of receipt of the waste. If the results of random sampling and analysis indicate that the waste was hazardous, the Generator shall pay for said analysis, and be financially and legally responsible for retrieval, transport, and disposal of the hazardous waste at no cost to Twin. By execution of this document, the Generator agrees to indemnify Twin from, and agrees to defend Twin against, all liabilities associated with the handling of Generator's hazardous waste. In addition the Generator shall be responsible for all cleanup costs associated with contamination of any Twin facility as a result of delivery of hazardous waste to the facility.

VII. Certification

WHO IS RESPONSIBLE FOR PAYMENT FOR SERVICES? J-W Operating Company

I hereby certify that I am the Generator, or I am authorized by the Generator to provide the information submitted in this form including any attached documents and to enter into this Agreement on the Generator's behalf. I have made a complete and thorough investigation of all matters relevant to completion of this form. This investigation included laboratory analysis, where applicable, performed in accordance with 6CCR 1007-3 Section 261.20(c) on a representative sample of the waste. All required information concerning the waste, including the results of all laboratory analyses has been provided in this form and the attached documents. I further hereby certify that such information is complete and accurate and that all known or suspected hazardous constituents/characteristics or safety hazards associated with the waste have been disclosed herein. I understand that the waste may be subject to random sampling and conditions described in Section VI of this form, that any waste that is non-conforming (along with the reagent with which Twin has mixed the waste) will be returned to me, and that Twin will not be responsible for expenses related to transportation, storage and handling of the non-conforming waste.

Name: _____ (Print or type) _____ (Signature)

Title: _____ Date: _____

VIII. Waste Acceptance

The waste, as represented by information contained in this document, is provisionally accepted for disposal at _____ Landfill (see Sections VI and VII of this form).

Signature of Authorized Twin Representative Date: _____

Does Responsible Party have Approved Credit? _____ Account Number _____

IX. Waste Rejection

The waste, as represented by information contained in this document, is NOT accepted for disposal at the _____ Landfill for the following reasons: _____

Signature of Authorized Twin Representative