## **RECEIVED**

Form 3160-5 (August 2007)

## UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

ROCCORD

5. Lease Serial No. Jicarilla Contract 413

Do not use this	form for proposals to Use Form 3160-3 (AP	drill or to reenter an	Land Managerlica		· · · · · · · · · · · · · · · · · · ·
SUBMI	T IN TRIPLICATE - Other in	structions on page 2.	7. If Uni	t of CA/Agree	ment, Name and/or No.
1. Type of Well	_		8 Well?	Name and No.	
Oil Well Gas V	Vell Other		Cha	con Jicarilla A	Apache D #1
Name of Operator     Roddy Production Company			9. API V 30-0	Vell No. 043-20144	
3a. Address P.O Box 2221, 4001 N. Butler, Building 71		<ul> <li>b. Phone No. (include area co 432 557 6778</li> </ul>	,	l and Pool or E st Lindrith Ga	xploratory Area Ilup-Dakota
4. Location of Well (Footage, Sec., T. 875' FNL and 1140' FEL, Section 23, T23	R,M., or Survey Description) NR3W		1	ntry or Parish, S ndoval County	
12. CHE	CK THE APPROPRIATE BOX	(ES) TO INDICATE NATUR	E OF NOTICE, REPO	RT OR OTHE	ER DATA
TYPE OF SUBMISSION		TY	PE OF ACTION		
Notice of Intent	Acidize Alter Casing	Deepen Fracture Treat	Production (Sta	ırt/Resume)	Water Shut-Off Well Integrity
✓ Subsequent Report	Casing Repair	New Construction	Recomplete		Other
Final Abandonment Notice	Change Plans Convert to Injection	Plug and Abandon Plug Back	☐ Water Disposal		
determined that the site is ready for Reclamation, seeding and fend analysis, lab results, notifications, or	sing have been completed as	of 9/12/2016 on the Chaco	OIL CONS		
14. I hereby certify that the foregoing is Name (Printed Typed)  Jeremy Divine  Signature	true and correct.	Title Producti			
	THIS SPACE F	OR FEDERAL OR ST	ATE OFFICE U	SE	
Approved by WWW Conditions of approval, if any, are attache	d. Approval of this notice does no	ot warrant or certify	ty	D	10/25/16
that the applicant holds legal or equitable entitle the applicant to conduct operations	title to those rights in the subject l	ease which would Office	BN	1	and the second second
Title 18 U.S.C. Section 1001 and Title 43	U.S.C. Section 1212, make it a cr	rime for any person knowingly a	nd willfully to make to	any department	or agency of the United States any false,

## **GENERAL INSTRUCTIONS**

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

### SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13 - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment.

### **NOTICES**

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and grantingapproval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240



September 23, 2016

Project Number 07151-0019

Mr. Jeremy Divine CrownQuest Operating Post Office Box 2221 Farmington, New Mexico 87401

Phone: (505) 325-5750 Cell: (432) 557-6778

RE: BGT CLOSURE DOCUMENTATION AND CONFIRMATION SAMPLING FOR THE CHACON JICARILLA APACHE D#1 WELL SITE, SANDOVAL COUNTY, NEW MEXICO

Dear Mr. Divine:

Enclosed please find the Field Notes, Summary of Analytical Results, and Analytical Results for confirmation sampling activities performed at the Chacon Jicarilla Apache D #1 well site located in Section 23, Township 23 North, Range 3 West, Sandoval County, New Mexico. Based on the direction of Jicarilla Oil and Gas Administration Representative, Mr. Hobson Sandoval, the regulatory standards for the site were determined to be in accordance with the New Mexico Oil and Gas Conservation Division (NMOCD) and Bureau of Land Management (BLM) risk ranking criteria. Based on the horizontal distance to surface water being less than 200 feet from the location, a depth to groundwater greater than 100 feet, and the well site not being located within a well head protection area, the regulatory standards were determined to be 100 parts per million (ppm) total petroleum hydrocarbons (TPH) Gasoline Range Organics (GRO) and Diesel Range Organics (DRO), 100 ppm organic vapors, 10 ppm benzene, and 50 ppm BTEX.

On July 7, 2016, Envirotech personnel preformed site assessment activities for three (3) areas within the well site: Pump Jack, P&A Marker, and Above-ground Storage Tank (AST). Additionally, the BLM requested that used motor oil impacted soil around the pump jack pad be removed. Envirotech personnel collected one (1) composite soil sample from the area of used oil impacted soil for waste profiling and disposal purposes. The sample was collected into a four (4) ounce glass jar, capped headspace free, and transported on ice, under chain of custody to Envirotech's Analytical Laboratory to be analyzed for Toxicity Characteristics Leaching Procedure (TCLP) Resource and Conservation Recovery Act (RCRA) metals using USEPA Method 6010C. The sample returned results below the regulatory standards and can therefore be accepted into Envirotech's NMOCD permitted Landfarm #2; see enclosed Analytical Results.

On July 21, 2016, Envirotech personnel returned to the site. The areas of concern, *Pump Jack, P&A Marker* and *AST*, were excavated approximately six (6) to 12 inches below ground surface (BGS). One (1) five (5) point composite sample was collected from each location and screened in the field for organic vapors using a photoionization detector (PID) and for TPH using USEPA Method 418.1; see enclosed *Field Notes*. All three (3) areas, *Pump Jack, P&A Marker* and *AST*, returned results above the regulatory standard of 100 ppm for TPH, but below the regulatory standard for organic vapors; see enclosed *Field Notes*.

CrownQuest Operating Chacon Jicarilla Apache D #1 Project Number 07151-0019 Page 2

Envirotech also collected a sample from beneath the former below grade tank (BGT) for closure. The regulatory standard was determined to be in accordance with the New Mexico Administrative Code (NMAC) Closure Criteria for Soils Beneath Below-grade Tanks, Drying Pads associated with Closed-loop systems and Pits where contents are removed. The regulatory standard was determined to be 2,500 mg/kg TPH using USEPA Method 418.1, 1,000 mg/kg GRO and DRO using USEPA Method 8015D, 10 mg/kg Benzene, 50 mg/kg BTEX using USEPA Method 8021B, and 20,000 mg/kg Chlorides using USEPA Method 300.

## **BGT**

One (1) five (5) point composite sample was collected and screened in the field for organic vapors using a PID and TPH using USEPA Method 418.1. The sample returned results below the regulatory standards for TPH and organic vapors; see enclosed *Field Notes*. The sample was placed into a four (4) ounce glass jar, capped headspace free, and transferred on ice, under chain of custody to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015D and USEPA Method 418.1, for benzene and total BTEX using USEPA Method 8021B, and for chlorides using USEPA Method 300. The sample returned results below the regulatory standards for all constituents analyzed; see enclosed *Table 1*, *Summary of Analytical Results* and *Analytical Results*.

## Pump Jack

The area beneath the former pump jack pad was excavated an additional 12 inches BGS. One (1) five (5) point composite soil sample was collected and screened in the field for organic vapors and TPH. The sample returned results above the regulatory standard for TPH, but below the regulatory standard for organic vapors; see enclosed *Field Notes*. The sample was placed into a four (4) ounce glass jar, capped headspace free, and transported on ice, under chain of custody to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015D and for benzene and total BTEX using USEPA Method 8021B. The sample returned results below the regulatory standard for TPH, and for benzene and total BTEX; see enclosed *Table 2*, *Summary of Analytical Results* and *Analytical Results*.

## P&A Marker

The area around the P&A Marker was excavated an additional 12 inches BGS and the area was expanded horizontally an additional five (5) feet. One (1) five (5) point composite sample was collected and screened in the field for organic vapors and TPH. The sample returned results above the regulatory standard for TPH, but below the regulatory standard for organic vapors; see enclosed *Field Notes*. The sample was placed into a four (4) ounce glass jar, capped headspace free, and transported on ice, under chain of custody to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015D and for benzene and total BTEX using USEPA Method 8021B. The sample returned results above the regulatory standard for TPH, but below the regulatory standard for benzene and total BTEX; see enclosed *Table 2*, *Summary of Analytical Results* and *Analytical Results*. Envirotech recommended further excavation and resampling for closure.

# <u>AST</u>

The area beneath the former AST was excavated an additional 12 inches BGS. One (1) five (5) point composite soil sample was collected and screened in the field for organic vapors and TPH. The sample returned results above the regulatory standard for TPH, but below the regulatory standard for organic

vapors; see enclosed *Field Notes*. The sample was placed into a four (4) ounce glass jar, capped headspace free, and transported on ice, under chain of custody to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015D and for benzene and total BTEX using USEPA Method 8021B. The sample returned results slightly above the regulatory standard for TPH, but below the regulatory standard for benzene and total BTEX; see enclosed *Table 2, Summary of Analytical Results* and *Analytical Results*. Jicarilla Oil and Gas Administration (JOGA) representative Mr. Hopson Sandoval and New Mexico Oil Conservation Division (NMOCD) representative Mr. Cory Smith recommended *No Further Action* in regards to this area.

On August 3, 2016, Envirotech personnel returned to the above mentioned site to perform further sampling activities. The area surrounding the P&A marker was excavated an additional 12 inches BGS. One (1) five (5) point composite soil sample was collected and screened for organic vapors and TPH in the field. The sample returned a result above the regulatory standard for TPH, but below the regulatory standard for organic vapors; see enclosed Field Notes. Envirotech recommended further excavation. The area surrounding the P&A marker was excavated an additional 24 inches BGS. One (1) five (5) point composite soil sample was collected from the bottom of the excavation and screened for TPH and organic vapors. The sample returned a result above the regulatory standard for TPH, but below the regulatory standard for organic vapor; see enclosed Field Notes. Envirotech personnel recommended submitting the sample for lab analysis for closure. Additionally, one (1) composite sample was collected from the walls of the excavation. The wall sample was screened in the field for TPH and organic vapors. The sample returned a result slightly above the regulatory standard for TPH, but below the regulatory standard for organic vapors; see enclosed Field Notes. Both samples were place into separate four (4) ounce glass jars, capped headspace free, and transported on ice, under chain of custody to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015D and benzene and total BTEX using USEPA Method 8021B. Both samples returned results below the regulatory standards for all constituents analyzed; see enclosed Analytical Results. Envirotech recommends No Further Action in regards to this project.

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

Respectfully submitted,

ENVIROTECH, INC.

Isaac Garcia

Environmental Field Technician igarcia@envirotech-inc.com

Enclosure(s): Field Notes

Summary of Analytical Results

**Analytical Results** 

Cc: Client File Number 07151

CLIENT:	Crown Quest
	07151-009
START DATE:	7/21/16



Environment	al Specialist: & Gercia
C.O.C. No:	
LAT	36.213832

FINISH DATE:	1/21/1	16						LONG	-107.121069
Page #	of	7							
		FIELD	REPORT	r: BELO	OW GROU	IND TAI	NK VERI	FICATION	N
LOCATION NA	ме: С	Chacon J.	casilla	Apach	WELL #:	DHI	Temp Pit:		PERM Pit:
QUAD/UNIT:		SEC:	TWP:			RNG:			PM:
QTR/FOOTAGE:			CNTY:	Sorde	rul	ST: Ne	www	K+C0	
Excavation Approx:					Feet X			4"	Cubic Yardage:
Disposal Facility:		TUT L	and fair			Remediation	Method:		€N/A
Land Owner:	icasil	la Apo	ichi		API:			Pit Volume:	१० ३८६
Construction Material		8 Fiber			Double Walled				
Tem	porary Pit	Groundwater < c	or = 50 feet de	ер	Chloride 600mg	/kg. TPH 100	mg/kg, BTEX	50 mg/kg, Benz	ene 10 mg/kg
Temporary Pit Groundwater 51-100 feet deep Chloride 10,000 mg/kg, TPH 2,500 mg/kg, GRO+DRO 1,000 mg/kg, BTEX 50 mg/kg, Benzene 10 mg/kg									
Temporary Pit Groundwater > or = 100 feet deep Chloride 20,000 mg/kg, TPH 2,500 mg/kg, GRO+DRO 1,000 mg/kg, BTEX 50 mg/kg, Benzene 10 mg/kg									
Perm	nanent Pit	Or BGT	The state of the s	Maria Ma	?	mark that you see the	and the second	are there are only the	The second section of the second
				FI	ELD 418.1 A	NLAYSIS			
SAMPLE DESCRIPTION	ON	TIME	SAMPLE ID	LAB#	WEIGHT	mL FREON	DILUTION	READING	CALC. (mg/kg)
BGT Comp		11:46			5	20	4	36	144
							-		
							-		
PERIMETER			FIELD CH	ILORIDES	RESULTS			PROFILE	
(*	×		SAMPLE ID	READING	CALC. (mg/kg)				
( × :	* *							xxx	X X
			SAMPLE ID	RESULT	IS (mg/kdg)				
1990000	SAMPLES					NOTES:			
THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED I	NALYSIS NZENE	US EPA 8021B/8015M				1			
BTE		8021B/80260B				}			
CHI	ORIDES	EPA300							
TPH	1	418.1			7/21/	WO #:		Who ordered/s	Site Rep.:
asun	Analyst S	ignature			Date	/ ×	-		
Escar	C	evalu			and Table				
Csear	Printed								Pit Closure Verification 2015

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CLIENT:	Crown	~ Quest					Envmtl. Sp	clst: {	3. Garcia
CLIENT/JOB #:	0715	1-0019	63	envii	otec	h	C.O.C. No:		
START DATE:	7/211	16			(800) 362-1		LAT		36.213832
FINISH DATE:	7/21	116	5796	U.S. Hwy 64,	Farmington, Ni	87401	LONG		707.121069
Page #	2	of Z							
	Field Report: Spill Closure Verification								
NMOCD Ranking:		20	6	Depth to	GW: > 1	(GO)	WH Protec	tion Area:	No Yes
NMOCD TPH Clos	ure Std.:	100		Distance to	SW: < Z	00 1			
LOCATION:	Name:	acon J	carilla A	puche	Well#: V	_ (		API:	
	County:	Sendov	١ ,		State: New				
Cause of Release:	(eaki	y Equi	punch	Material Re	leased:	Unknow	Ja.	Amt. Releas	ed: Unknow
QUAD/UNIT		SEC:	15	TWP:	23 N	RNG	_3W	. PM	
Wellhead Lat/Long:			Land J	urisdiction:			QTR Footag	ge:	
Spill Located Approx	ximately:	Vallous	FT.		FROM	PHA	Maiker		
Excavation Approx:	NIA	FT. X	NIK	FT. X	NIB	FT.	Cubic Yarda	age:	NIA
Disposal Facility:	TUT	land (	aim		Remediaton N	Method:	Excave	ntion	
Land Use:				Lease:			Land Owner	r: Ticaril	ام
				IELD 418.	1 ANLAYSI	The second liverage l			
SAMPLE DESCRI	PITION	TIME	SAMPLE I.D.		WEIGHT (g)		DILUTION		CALC. ppm
200 Std		11:07				-		181	
PAA Marke		11:35			5	70	4	786	3144
Pump Fack		11:38			5	20	4	8/	324
AST		11:42			5	20	4	174	696
PAA marker	+1'	12:22			5	20	4	103	412
AST +1'		12:54			5	20	4	118	472
				ı					
		OVM R	esults				Lab Testi	ng	
Sample ID	Field Head	space PID (ppm)	Sample ID	Field Heads	pace PID (ppm)	Sample ID		Analysis Typ	e Time
14 A war ker	13								
Puny Jack	1.8								
74A Market +1	1.6								
AST +1'	1-4								

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# **Table 1, Summary of Analytical Results**

CrownQuest Operating
Chacon Jicarilla Apache D #1
BGT Closure Report
Project Number 07151-0019

			Method 300.0	<b>USEPA Method</b>	<b>USEPA Method 8015</b>	USEPA Method 8021		
Date	Sample Description	Sample Number	Chlorides (mg/kg)	418.1 TPH (mg/kg)	TPH (GRO+DRO) (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)	
NA	New Mexico Administrative Code Standards	NA	20,000	2,500	1,000	10	50	
7/21/2016	BGT	1	49.7	ND	ND	ND	ND	

<sup>\*</sup>Values in BOLD above regulatory limits

<sup>\*</sup>NS - Parameter not sampled

<sup>\*</sup>ND - Parameter not detected

Table 2, Summary of Analytical Results
CrownQuest Operating
Chacon Jicarilla Apache D #1
Confirmation Sampling Report
Project Number 07151-0019

				<b>USEPA Method</b>	USEPA Method 8015	USEPA Me	thod 8021
Date	Sample Description	Sample Number	PID OV (mg/kg)	418.1 TPH (mg/kg)	TPH (GRO+DRO) (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)
NA	New Mexico Oil Conservation Division Standards	NA	100	100	100	10	50
7/21/2016	P&A Marker	1	134	3,144	NS	NS	NS
7/21/2016	Pump Jack	2	1.8	324	67.1	ND	ND
7/21/2016	AST	3	1.2	696	NS	NS	NS
7/21/2016	P&A Marker+1'	4	1.6	412	566	ND	ND
7/21/2016	AST+1'	5	1.4	472	119	ND	ND
8/3/2016	P&A Marker+12"	6	4.1	1,392	NS	NS	NS
8/3/2016	P&A Marker+4.5'	7	0	316	63.8	ND	ND
8/3/2016	Walls	8	0	120	ND	ND	ND

<sup>\*</sup>Values in **BOLD** above regulatory limits \*Closure Sample

\*NS - Parameter not sampled \*ND - Parameter not detected



Client:

CrownQuest Operating

Sample No.: Sample ID:

P&A Marker

Sample Matrix: Preservative:

Soil

Condition:

Cool

Cool and Intact

Project #:

07151-0019

Date Reported:

9/23/2016

Date Sampled: Date Analyzed: 7/21/2016 7/21/2016

Analysis Needed:

TPH-418.1

		Det.
	Concentration	Limit
Parameter	(mg/kg)	(mg/kg)

**Total Petroleum Hydrocarbons** 

3,140

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis

of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

Chacon Jicarilla Apache D #1

Instrument calibrated to 200 ppm standard and zeroed before each sample.

Isaac Garcia

Printed

Felipe Aragon, CES



Client:

CrownQuest Operating

0

07151-0019

Sample No.:

2

Project #: Date Reported:

9/23/2016

Sample ID:

Pump Jack

7/21

Sample Matrix:

Soil

Date Sampled: Date Analyzed: 7/21/2016

Preservative:

Cool

Analysis Needed:

7/21/2016 TPH-418.1

Condition:

Cool and Intact

		Det.
	Concentration	Limit
Parameter	(mg/kg)	(mg/kg)

**Total Petroleum Hydrocarbons** 

324

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis

of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

Chacon Jicarilla Apache D #1

Instrument calibrated to 200 ppm standard and zeroed before each sample.

Analyst

Isaac Garcia

Printed

Review

Felipe Aragon, CE



Client:

CrownQuest Operating

07151-0019

Sample No .:

3

0/15

Sample ID:

Date Reported:

Date Sampled:

9/23/2016

Sample Matrix:

AST Soil 7/21/2016

Preservative:

Cool

Date Analyzed:
Analysis Needed:

Project #:

7/21/2016 TPH-418.1

Condition:

Cool and Intact

	· · · · · · · · · · · · · · · · · · ·	Det.
	Concentration	Limit
Parameter	(mg/kg)	(mg/kg)

**Total Petroleum Hydrocarbons** 

696

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis

of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

Chacon Jicarilla Apache D #1

Instrument calibrated to 200 ppm standard and zeroed before each sample.

Analyst

Review

Isaac Garcia

Printed

Felipe Aragon, CES



Client:

**CrownQuest Operating** 

07151-0019

Sample No.:

Sample ID:

P&A Marker+1' Date Sampled: 9/23/2016

Sample Matrix:

Soil

7/21/2016

Preservative:

Cool

Date Analyzed: 7/21/2016 Analysis Needed: TPH-418.1

Project #:

Date Reported:

Condition:

Cool and Intact

		Det.
	Concentration	Limit
Parameter	(mg/kg)	(mg/kg)

**Total Petroleum Hydrocarbons** 

412

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis

of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

Chacon Jicarilla Apache D #1

Instrument calibrated to 200 ppm standard and zeroed before each sample.

Isaac Garcia

Printed

Felipe Aragon, CES



Client:

CrownQuest Operating

5

Sample No.: Sample ID:

Sample Matrix:

Preservative:

Condition:

AST+1'

Soil Cool

Cool and Intact

Project #:

07151-0019

Date Reported:

9/23/2016

Date Sampled:

7/21/2016

Date Analyzed:

7/21/2016

Analysis Needed:

TPH-418.1

		Det.
	Concentration	Limit
Parameter	(mg/kg)	(mg/kg)

**Total Petroleum Hydrocarbons** 

472

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis

of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

Chacon Jicarilla Apache D #1

Instrument calibrated to 200 ppm standard and zeroed before each sample.

Analyst

Isaac Garcia

Printed

Felipe Aragon, CES Printed



Client:

CrownQuest Operating

07151-0019

Sample No.:

6

Date Reported:

Project #:

9/23/2016

Sample ID:

**BGT Comp** 

Date Sampled:

7/21/2016

Sample Matrix:

Soil

Date Analyzed:

7/21/2016

Preservative:

Cool

Analysis Needed:

TPH-418.1

Condition:

Cool and Intact

× ×		Det.
	Concentration	Limit
Parameter	(mg/kg)	(mg/kg)

**Total Petroleum Hydrocarbons** 

144

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis

of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

Chacon Jicarilla Apache D #1

Instrument calibrated to 200 ppm standard and zeroed before each sample.

Analyst

Isaac Garcia

Printed

Felipe Aragon, CES



# CONTINUOUS CALIBRATION EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Cal	D	to.

21-Jul-16

Parameter	Standard Concentration mg/L	Concentration Reading mg/L	
ТРН	100		
irii	200	181	
	500		
	1000		
	5000		

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

Analyst

9/23/2016

Isaac Garcia

Print Name

9/23/2016

Date

Date

Povious

Felipe Aragon, CES

**Print Name** 



Client:

CrownQuest Operating

Sample No.: Sample ID: 1

.

P&A Marker+12"

Cool and Intact

Sample Matrix:

Soil Cool

Preservative:

leservative.

Condition:

CrownQuest Operating

Project #:

07151-0019

Date Reported:

9/23/2016

Date Sampled:

8/3/2016

Date Analyzed:

8/3/2016

Analysis Needed:

TPH-418.1

		Det.
	Concentration	Limit
Parameter	(mg/kg)	(mg/kg)

**Total Petroleum Hydrocarbons** 

1,390

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis

of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

Chacon Jicarilla Apache D #1

Instrument calibrated to 200 ppm standard and zeroed before each sample.

Analyst

Isaac Garcia

Printed

Review

Felipe Aragon, CES

Printed

envirotech-inc.com



Client:

CrownQuest Operating

Project #:

07151-0019

Sample No.:

2

Date Reported:

9/23/2016

Sample ID:

P&A Marker+4.5'

9/23/

Sample Matrix:

Soil

Date Sampled: Date Analyzed: 8/3/2016 8/3/2016

Preservative:

Cool

Analysis Needed:

TPH-418.1

Condition:

Cool and Intact

		Det.
	Concentration	Limit
Parameter	(mg/kg)	(mg/kg)

**Total Petroleum Hydrocarbons** 

316

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis

of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

Chacon Jicarilla Apache D #1

Instrument calibrated to 200 ppm standard and zeroed before each sample.

Analyst

Isaac Garcia

Printed

Felipe Aragon, CES



Client:

CrownQuest Operating

Sample No.:

3

Sample ID:

Walls Soil

Sample Matrix: Preservative:

Cool

Condition:

Cool and Intact

Project #:

07151-0019

Date Reported:

9/23/2016

Date Sampled:

8/3/2016

Date Analyzed:

8/3/2016

Analysis Needed:

TPH-418.1

		Det.
"	Concentration	Limit
Parameter	(mg/kg)	(mg/kg)

**Total Petroleum Hydrocarbons** 

120

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis

of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

Chacon Jicarilla Apache D #1

Instrument calibrated to 200 ppm standard and zeroed before each sample.

Analyst

Isaac Garcia

**Printed** 

Felipe Aragon, CES



# CONTINUOUS CALIBRATION EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Cal. Date:

3-Aug-16

Parameter	Standard Concentration mg/L	Concentration Reading mg/L	
ТРН	100		
	200	204	
	500		
	1000		
	5000		

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

Angliet

9/23/2016

Date

Isaac Garcia

Print Name

Review

9/23/2016

Date

Felipe Aragon, CES

**Print Name** 



# **Analytical Report**

## **Report Summary**

Client: Crown Quest Operating Chain Of Custody Number:

Samples Received: 7/7/2016 4:08:00PM

Job Number: 07151-0019 Work Order: P607023

Project Name/Location: Chacon Jicarilla Apache D

#1

Report Reviewed By:	Walter Hinkon	Date:	7/14/16	
	Walter Hinchman, Laboratory Director			
	F 16			
	11 10	Date:	7/14/16	
	Tim Cain, Quality Assurance Officer	_		

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Project Name:

Chacon Jicarilla Apache D #1

PO 2221

Project Number: Farmington NM, 87499 Project Manager: 07151-0019 Greg Crabtree Reported:

14-Jul-16 13:46

## **Analyical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Contaminated Soil	P607023-01A	Solid	07/07/16	07/07/16	Glass Jar, 4 oz.

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Page 2 of 7



Project Name:

Chacon Jicarilla Apache D #1

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported: 14-Jul-16 13:46

## Contaminated Soil P607023-01 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TCLP Metals									
Arsenic	ND	0.05	mg/L	1	1629006	07/13/16	07/13/16	EPA 6010C	
Barium	1.04	0.50	mg/L	1	1629006	07/13/16	07/13/16	EPA 6010C	
Cadmium	ND	0.01	mg/L	1	1629006	07/13/16	07/13/16	EPA 6010C	
Chromium	ND	0.05	mg/L	1	1629006	07/13/16	07/13/16	EPA 6010C	
Lead	ND	0.02	mg/L	1	1629006	07/13/16	07/13/16	EPA 6010C	
Selenium	ND	0.05	mg/L	1	1629006	07/13/16	07/13/16	EPA 6010C	
Silver	ND	0.03	mg/L	1	1629006	07/13/16	07/13/16	EPA 6010C	
TCLP Mercury by EPA 7470A									
Mercury	ND	0.0002	mg/L	1	1629007	07/13/16	07/13/16	EPA 7470A	

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Page 3 of 7



Project Name:

Chacon Jicarilla Apache D #1

PO 2221

Farmington NM, 87499

Project Number: Project Manager:

Reporting

07151-0019

Greg Crabtree

Reported:

RPD

%REC

14-Jul-16 13:46

## **TCLP Metals - Quality Control**

## **Envirotech Analytical Laboratory**

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Note
Batch 1629006 - Metal Water Digestion	EPA 3015A					<del>,,,,</del>				
Blank (1629006-BLK1)				Prepared &	Analyzed:	13-Jul-16				
Arsenic	ND	0.05	mg/L							
Barium	ND	0.50	**							
Cadmium	ND	0.01	**							
Chromium	ND	0.05	18							
Lead	ND	0.02	"							
Selenium	ND	0.05	**							
Silver	ND	0.03	**							
.CS (1629006-BS1)				Prepared &	Analyzed:	13-Jul-16				
Arsenic	0.82	0.05	mg/L	1.00	w 2	81.6	80-120			
Barium	0.93	0.50	**	1.00		93.2	80-120			
Cadmium	0.85	0.01	**	1.00		84.8	80-120			
Chromium	0.86	0.05	**	1.00		86.1	80-120			
Lead	0.83	0.02		1.00		82.7	80-120			
Selenium	0.82	0.05		1.00		82.2	80-120			
Silver	0.84	0.03	**	1.00		84.1	80-120			
Matrix Spike (1629006-MS1)	Source	e: P607023-	01	Prepared &	Analyzed:	13-Jul-16				
Arsenic	0.88	0.05	mg/L	1.00	ND	88.3	75-125			
Barium	1.96	0.50		1.00	1.04	91.9	75-125			
Cadmium	0.84	0.01	**	1.00	ND	84.3	75-125			
Chromium	0.85	0.05	**	1.00	ND	85.3	75-125			
Lead	0.78	0.02	**	1.00	ND	77.7	75-125			
Selenium	0.92	0.05	**	1.00	ND	91.8	75-125			
Silver	0.88	0.03	**	1.00	ND	88.3	75-125			
Matrix Spike Dup (1629006-MSD1)	Sour	ce: P607023-	01	Prepared &	k Analyzed:	13-Jul-16				
Arsenic	0.88	0.05	mg/L	1.00	ND	88.3	75-125	0.0629	20	
Barium	1.92	0.50	*	1.00	1.04	87.4	75-125	2.29	20	
Cadmium	0.84	0.01	"	1.00	ND	83.8	75-125	0.489	20	
Chromium	0.85	0.05	**	1.00	ND	84.6	75-125	0.811	20	
Lead	0.78	0.02	**	1.00	ND	77.7	75-125	0.0286	20	
Selenium	0.92	0.05		1.00	ND	91.6	75-125	0.279	20	
Silver	0.88	0.03		1.00	ND	87.5	75-125	0.935	20	

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Project Name:

Chacon Jicarilla Apache D #1

PO 2221

Project Number:

07151-0019

Reported:

Farmington NM, 87499

Project Manager:

Greg Crabtree

14-Jul-16 13:46

## TCLP Mercury by EPA 7470A - Quality Control

## **Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1629007 - Mercury Water Digestio	n KMNO4									
Blank (1629007-BLK1)				Prepared &	Analyzed:	13-Jul-16				
Mercury	ND	0.0002	mg/L							
LCS (1629007-BS1)				Prepared &	Analyzed:	13-Jul-16				
Mercury	0.002	0.0002	mg/L	0.00229		101	80-120		-	
Matrix Spike (1629007-MS1)	Sou	rce: P607028-	01	Prepared &	Analyzed:	13-Jul-16		W		
Mercury	0.002	0.0002	mg/L	0.00229	ND	102	75-125			
Matrix Spike Dup (1629007-MSD1)	Sou	rce: P607028-	01	Prepared &	Analyzed:	13-Jul-16				
Mercury	0.002	0.0002	mg/L	0.00229	ND	104	75-125	1.47	15	



Project Name:

Chacon Jicarilla Apache D #1

PO 2221

Project Number:

07151-0019

Reported:

Farmington NM, 87499

Project Manager:

**Greg Crabtree** 

14-Jul-16 13:46

## **Notes and Definitions**

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit

NR

Not Reported

dry

Sample results reported on a dry weight basis

RPD

Relative Percent Difference

Client: Crown Ques	+	70.00 M			RUSH?	Lab Use Only			Analysis and						nd Method		
Project: Chacon Ticari	ect: Chacou Ticarilla Apache D# 1						Lab WO#	2		- 1	1.5.	1000					N/N
ampler: To Garaia					3d	ماحا	36070									_	16)
Phone:			2			\$5360 S1850 S1860	ob Number	015			0.0	de text				Lab Number	Pren
Email(s): Bocac Project Manager: Grey C						071	51-0019	p A	120	8.1	y 30		10			Nu o	/tuc
Project Manager: Grey C	rabtree				Pag		1	 	by 8(	y 41	de b	letal	ble 9			Lat	t C
Samp			Sample Date	Sample Time	Matrix		ontainers TYPE/Preservat	GRO/DRO by 8015	BTEX by 8021	тРНЬ	Chloride by 300.0	TCLP Metals	CO Table 910-1	2DZ			Correct Cont/Prep, (e) V/N
Contamineted	1 soil		717116	1:52	5	1-452/	6/ 001				y arti	X				1	y
										19-30							
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			9000		11144												
				-						H			-				
Relinquished by: (Signature)	Date 7/7/16	Time	Received	by: (Signa		Date 7/7/6	Time	**Recei	ved o	on Ice			e On	ly			
Relinquished by: (Signature)	Date	Time	Received	by: (Signa	ture)	Date	Time	T1 AVG Ter			T2_				T3_		
mple Matrix: S - Soil, Sd - Solid, Sg - Sl							Container Ty		_			tic, a	g - ar	nber	glass		
Samples requiring thermal preservation	on must be receive	ed on ice the day t		The second second second	acked in ice a		oove 0 but less th	an 6°C on su	bseque	ent day	ys.						



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# **Analytical Report**

## **Report Summary**

Client: Crown Quest Operating

Chain Of Custody Number:

Samples Received: 7/21/2016 5:28:00PM

Job Number: 07151-0019

Work Order: P607056

Project Name/Location: Chacon Jicarilla Apache D

#1

Report Reviewed By:	Walter Hinking	Date:	8/1/16	
	Walter Hinchman, Laboratory Director	_		
		Date:	8/1/16	
	Tim Cain, Quality Assurance Officer			

Supplement to analytical report generated on: 8/1/16 8:32 am

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Project Name:

Chacon Jicarilla Apache D #1

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported:

01-Aug-16 08:35

# **Analyical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Pump Jack Pad	P607056-01A	Solid	07/21/16	07/21/16	Glass Jar, 4 oz.
BGT Comp.	P607056-02A	Solid	07/21/16	07/21/16	Glass Jar, 4 oz.
P&A Marker + 1'	P607056-03A	Solid	07/21/16	07/21/16	Glass Jar, 4 oz.
AST Comp. + 1'	P607056-04A	Solid	07/21/16	07/21/16	Glass Jar, 4 oz.



Project Name:

Chacon Jicarilla Apache D#1

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Reported:

Greg Crabtree

01-Aug-16 08:35

## Pump Jack Pad P607056-01 (Solid)

			7.00						
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		100 %	50-	150	1630010	07/22/16	07/27/16	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8015D	
Diesel Range Organics (C10-C28)	67.1	25.0	mg/kg	1	1630011	07/22/16	07/26/16	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		98.6 %	50-	150	1630010	07/22/16	07/27/16	EPA 8015D	
Oil Range Organics (C28-C40+)	169	50.0	mg/kg	1	1630011	07/22/16	07/26/16	EPA 8015D	
Surrogate: n-Nonane		94.9 %	50-	200	1630011	07/22/16	07/26/16	EPA 8015D	



Project Name:

Chacon Jicarilla Apache D#1

PO 2221

Project Number: Farmington NM, 87499 Project Manager: 07151-0019

Greg Crabtree

Reported:

01-Aug-16 08:35

# **BGT Comp.** P607056-02 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021						2	2		
Benzene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		99.8 %	50	-150	1630010	07/22/16	07/27/16	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1630011	07/22/16	07/26/16	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		99.2 %	50	-150	1630010	07/22/16	07/27/16	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1630011	07/22/16	07/26/16	EPA 8015D	
Surrogate: n-Nonane		88.6 %	50	-200	1630011	07/22/16	07/26/16	EPA 8015D	
Total Petroleum Hydrocarbons by 418.1									20. 2
Total Petroleum Hydrocarbons	ND	40.0	mg/kg	1	1631001	07/26/16	07/26/16	EPA 418.1	
Cation/Anion Analysis	<u>×</u>				3			× *	
Chloride	49.7	20.0	mg/kg	1	1630014	07/22/16	07/27/16	EPA 300.0	



Farmington NM, 87499

Project Name:

Chacon Jicarilla Apache D#1

PO 2221

Project Number: Project Manager: 07151-0019 Greg Crabtree Reported: 01-Aug-16 08:35

P&A Marker + 1' P607056-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		100 %	50-	150	1630010	07/22/16	07/27/16	EPA 8021B	
Nonhalogenated Organics by 8015						N	6		
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8015D	
Diesel Range Organics (C10-C28)	566	25.0	mg/kg	1	1630011	07/22/16	07/26/16	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		98.0 %	50-	150	1630010	07/22/16	07/27/16	EPA 8015D	
Oil Range Organics (C28-C40+)	691	50.0	mg/kg	1	1630011	07/22/16	07/26/16	EPA 8015D	
Surrogate: n-Nonane		99.1 %	50-	200	1630011	07/22/16	07/26/16	EPA 8015D	



Project Name:

Chacon Jicarilla Apache D#1

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported:

01-Aug-16 08:35

## AST Comp. + 1' P607056-04 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021			· ·				× ×	8	
Benzene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		99.6 %	50-1	50	1630010	07/22/16	07/27/16	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8015D	
Diesel Range Organics (C10-C28)	119	25.0	mg/kg	1	1630011	07/22/16	07/26/16	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		99.2 %	50-1	50	1630010	07/22/16	07/27/16	EPA 8015D	
Oil Range Organics (C28-C40+)	245	50.0	mg/kg	1	1630011	07/22/16	07/26/16	EPA 8015D	
Surrogate: n-Nonane		89.6%	50-2	200	1630011	07/22/16	07/26/16	EPA 8015D	



Project Name:

Project Manager:

Chacon Jicarilla Apache D #1

PO 2221

Project Number: Farmington NM, 87499

07151-0019

Greg Crabtree

Reported:

01-Aug-16 08:35

## Volatile Organics by EPA 8021 - Quality Control

## **Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1630010 - Purge and Trap EPA 503	0A				4					
Blank (1630010-BLK1)				Prepared: 2	21-Jul-16 A	nalyzed: 2	2-Jul-16			
Benzene	ND	0.10	mg/kg					- 0		
Coluene	ND	0.10	**							
thylbenzene	ND	0.10	"							
,m-Xylene	ND	0.20								
-Xylene	ND	0.10	"							
otal Xylenes	ND	0.10	"							
otal BTEX	ND	0.10	**							
urrogate: 4-Bromochlorobenzene-PID	0.159		"	0.160		99.5	50-150			
CS (1630010-BS1)		o .		Prepared: 2	1-Jul-16 A	nalyzed: 2	2-Jul-16			
enzene	11.6	0.10	mg/kg	10.0		116	70-130			
oluene	11.3	0.10	"	10.0		114	70-130			
thylbenzene	11.3	0.10	,,	10.0		113	70-130			
m-Xylene	22.5	0.20	"	20.0		112	70-130			
-Xylene	11.0	0.10	"	10.0		110	70-130			
urrogate: 4-Bromochlorobenzene-PID	0.162		. "	0.160		101	50-150			6 6
fatrix Spike (1630010-MS1)	Sour	rce: P607050-	01	Prepared: 2	1-Jul-16 A	nalyzed: 2	2-Jul-16			
Benzene	11.4	0.10	mg/kg	10.0	ND	115	54.3-133	8		
oluene	11.3	0.10	"	10.0	0.20	111	61.4-130			
thylbenzene	11.2	0.10	"	10.0	ND	112	61.4-133			
,m-Xylene	22.3	0.20	"	20.0	0.32	110	63.3-131			
-Xylene	11.0	0.10		10.0	0.22	108	63.3-131			
urrogate: 4-Bromochlorobenzene-PID	0.162		"	0.160		102	50-150			
fatrix Spike Dup (1630010-MSD1)	Sour	rce: P607050-	01	Prepared: 2	1-Jul-16 A	nalyzed: 2	2-Jul-16			
enzene	11.1	0.10	mg/kg	10.0	ND	111	54.3-133	3.38	20	
oluene	11.0	0.10	н	10.0	0.20	108	61.4-130	3.38	20	
thylbenzene	10.8	0.10	**	10.0	ND	108	61.4-133	3.42	20	
,m-Xylene	21.6	0.20	"	20.0	0.32	106	63.3-131	3.37	20	
-Xylene	10.6	0,10		10.0	0.22	104	63.3-131	3.25	20	
Surrogate: 4-Bromochlorobenzene-PID	0.164		"	0.160		102	50-150			

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Project Name:

Chacon Jicarilla Apache D #1

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported:

RPD

%REC

01-Aug-16 08:35

## Nonhalogenated Organics by 8015 - Quality Control

## **Envirotech Analytical Laboratory**

		Reporting		<b>Spike</b>	Source		%REC		KPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1630010 - Purge and Trap EPA 5030A	, ,		e	a É ja					2 2	
Blank (1630010-BLK1)			- N	Prepared: 2	1-Jul-16 A	Analyzed: 2	2-Jul-16			
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.166		"	0.160		103	50-150			
LCS (1630010-BS1)				Prepared: 2	1-Jul-16 A	Analyzed: 2	2-Jul-16			
Gasoline Range Organics (C6-C10)	138	20.0	mg/kg	122		113	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.160		"	0.160		100	50-150			
Matrix Spike (1630010-MS1)	Sou	rce: P607050-	01	Prepared: 2	1-Jul-16 A	Analyzed: 2	2-Jul-16			
Gasoline Range Organics (C6-C10)	141	20.0	mg/kg	122	ND	116	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.159		**	0.160		99.3	50-150		9	
Matrix Spike Dup (1630010-MSD1)	Sou	rce: P607050-	01	Prepared: 2	1-Jul-16 A	Analyzed: 2	2-Jul-16		*	
Gasoline Range Organics (C6-C10)	140	20.0	mg/kg	122	ND	115	70-130	0.928	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.163			0.160		102	50-150			



Project Name:

Chacon Jicarilla Apache D #1

PO 2221

Project Number:

07151-0019

Reported:

Farmington NM, 87499

Project Manager: Greg Crabtree

01-Aug-16 08:35

### Nonhalogenated Organics by 8015 - Quality Control

#### **Envirotech Analytical Laboratory**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1630011 - DRO Extraction EPA 3550	DM .								27	
Blank (1630011-BLK1)				Prepared: 2	21-Jul-16 A	Analyzed: 2	5-Jul-16			
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: n-Nonane	45.3		"	50.0		90.6	50-200			
LCS (1630011-BS1)				Prepared: 2	21-Jul-16 A	Analyzed: 2	5-Jul-16			
Diesel Range Organics (C10-C28)	399	25.0	mg/kg	500		79.8	38-132			
Surrogate: n-Nonane	40.5	2	"	50.0		81.0	50-200			
Matrix Spike (1630011-MS1)	Sour	ce: P607050-	01	Prepared: 2	21-Jul-16 A	analyzed: 2	5-Jul-16			
Diesel Range Organics (C10-C28)	1070	25.0	mg/kg	500	685	76.4	38-132			
Surrogate: n-Nonane	44.7		"	50.0		89.4	50-200			
Matrix Spike Dup (1630011-MSD1)	Sour	ce: P607050-	01	Prepared: 2	21-Jul-16 A	analyzed: 2	5-Jul-16			
Diesel Range Organics (C10-C28)	1050	25.0	mg/kg	500	685	72.1	38-132	2.01	20	
Surrogate: n-Nonane	44.5		"	50.0		89.1	50-200			



Project Name:

Chacon Jicarilla Apache D#1

PO 2221

Project Number: Farmington NM, 87499 Project Manager: 07151-0019

Greg Crabtree

Reported:

01-Aug-16 08:35

#### Total Petroleum Hydrocarbons by 418.1 - Quality Control

#### **Envirotech Analytical Laboratory**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1631001 - 418 Freon Extraction									2	
Blank (1631001-BLK1)				Prepared &	Analyzed:	26-Jul-16				8
Total Petroleum Hydrocarbons	ND	40.0	mg/kg							
LCS (1631001-BS1)				Prepared &	Analyzed:	26-Jul-16				
Total Petroleum Hydrocarbons	914	40.0	mg/kg	1000		91.4	80-120			
Matrix Spike (1631001-MS1)	Source	e: P607056-	02	Prepared &	Analyzed:	26-Jul-16				
Total Petroleum Hydrocarbons	932	40.0	mg/kg	1000	ND	93.2	70-130			
Matrix Spike Dup (1631001-MSD1)	Source	e: P607056-	02	Prepared &	Analyzed:	26-Jul-16		s .		
Total Petroleum Hydrocarbons	932	40.0	mg/kg	1000	ND	93.2	70-130	0.00	30	



Project Name:

Chacon Jicarilla Apache D#1

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported:

01-Aug-16 08:35

#### Cation/Anion Analysis - Quality Control

#### **Envirotech Analytical Laboratory**

At	Damle	Reporting	TT-Se-	Spike	Source	%REC	%REC Limits	DDD	RPD Limit	Notes
Analyte	Result	Limit	Units	Level	Result	70REC	Limits	RPD	Limit	Notes
Batch 1630014 - Anion Extraction EPA 300.0								***		
Blank (1630014-BLK1)				Prepared: 2	22-Jul-16 A	Analyzed: 2	7-Jul-16			
Chloride	ND	20.0	mg/kg							
LCS (1630014-BS1)				Prepared: 2	22-Jul-16 A	Analyzed: 2'	7-Jul-16			
Chloride	510	20.0	mg/kg	500		102	90-110			
Matrix Spike (1630014-MS1)	Sour	rce: P607050-	01	Prepared: 2	22-Jul-16 A	nalyzed: 2'	7-Jul-16			
Chloride	1300	20.0	mg/kg	500	768	106	80-120			
Matrix Spike Dup (1630014-MSD1)	Sour	rce: P607050-	01	Prepared: 2	22-Jul-16 A	Analyzed: 2'	7-Jul-16			
Chloride	1320	20.0	mg/kg	500	768	110	80-120	1.48	20	



Project Name:

Chacon Jicarilla Apache D #1

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported:

01-Aug-16 08:35

#### **Notes and Definitions**

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit

NR

Not Reported

dry

Sample results reported on a dry weight basis

**RPD** 

Relative Percent Difference

Client: Crown Quest								An	alysis	and	Met	hod		lab (	Only
Project: Crown Quest Sampler: I. Garcia			1d 3d	THE RESIDENCE OF THE PARTY OF T	Lab WO# 07056	+0x0									S) Y/N
				CONTRACTOR DOUGH	b Number	157			0					ber	Srv (
Phone:					1-0019	y 8015	1	1	300.0		0-1			Mun	t/Pr
Email(s): Tsase / Felijie Project Manager: forcy Crabfree			Page	A STATE OF THE PARTY OF THE PAR	THE RESERVE OF THE PERSON NAMED IN	80 b	y 802	418.	e by	stals	le 91			Lab Number	t Con
Sample ID	Sample Date	Sample Time	Matrix	Containers  QTY - Vol/TYPE/Preservative		GRO/DRO by	BTEX by 8021	TPH by 418.1	Chloride by	TCLP Metals	CO Table 910-1	TDS			Correct Cont/Prsrv (s) Y/N
Pump Jack paid	7/21/16	10:31	5	1-40=/	6/100/	X	X	7			1			*	Y
BGT comp.		10:44			Park I result	X	X	X	X					2	
PHA Marker + 1'		12:10				X	X							3	
Pump Jack paid  BGT Comp.  PHA Marker + 1'  AST Comp. +1'		12:38				X	X							4	
							i de la							No. of the last of	
							4					4			
					11										
								4 17 4 17		- P					
Relinquished by: (Signature) Date Time		by (Signa	iture)	Date 7-21/16	Time 1728 **	Rece	ived	on lo			se Or	nly			
Relinquished by: (Signature) Date Time		by: (Signa	iture)	Date		/G Te					-		T3_		-
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other		Container Type:	g - gla	ss, p	- poly	y/pla	stic, a	ag - a	mber	glass					
**Samples requiring thermal preservation must be received on ice the d	e the day they are sampled or received packed in ice at an avg temp above 0 b												100		. 4
Sample(s) dropped off after hours to a secure drop off area.	off area. Chain of Custoo				g info:						4				
					The second of the second										



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## **Analytical Report**

#### **Report Summary**

Client: Crown Quest Operating

Chain Of Custody Number:

Samples Received: 8/3/2016 4:50:00PM

Job Number: 07151-0019 Work Order: P608016

Project Name/Location: Chacon Jicarilla Apache

D#1 07151-0019

11

Report Reviewed By:	Walter Hinchman, Laboratory Director	Date: _	8/11/16	
	Tim Cain, Quality Assurance Officer	Date:	8/11/16	

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



PO 2221

Project Name:

Chacon Jicarilla Apache D#1 07151-0019

Project Number:

07151-0019

Reported:

Farmington NM, 87499 Project Manager:

Greg Crabtree

11-Aug-16 16:30

#### **Analyical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
P + A Marker + 4.5'	P608016-01A	Soil	08/03/16	08/03/16	Glass Jar, 4 oz.
Walls	P608016-02A	Soil	08/03/16	08/03/16	Glass Jar, 4 oz.

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Project Name:

Chacon Jicarilla Apache D#1 07151-0019

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported:

11-Aug-16 16:30

#### P+A Marker + 4.5' P608016-01 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		99.6 %	50-	-150	1633012	08/09/16	08/10/16	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8015D	
Diesel Range Organics (C10-C28)	63.8	25.0	mg/kg	1	1633013	08/10/16	08/10/16	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		103 %	50-	-150	1633012	08/09/16	08/10/16	EPA 8015D	
Oil Range Organics (C28-C40+)	63.0	50.0	mg/kg	1	1633013	08/10/16	08/10/16	EPA 8015D	
Surrogaté: n-Nonané		80.5 %	50-	-200	1633013	08/10/16	08/10/16	EPA 8015D	

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Page 3 of 9



Project Name:

Chacon Jicarilla Apache D#1 07151-0019

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported:

11-Aug-16 16:30

#### Walls P608016-02 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	ı	1633012	08/09/16	08/10/16	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		100 %	50-1	50	1633012	08/09/16	08/10/16	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1633012	08/09/16	08/10/16	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1633013	08/10/16	08/10/16	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		103 %	50-1	50	1633012	08/09/16	08/10/16	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1633013	08/10/16	08/10/16	EPA 8015D	
Surrogate: n-Nonane		83.2 %	50-2	200	1633013	08/10/16	08/10/16	EPA 8015D	

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Page 4 of 9



Project Name:

Chacon Jicarilla Apache D#1 07151-0019

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported: 11-Aug-16 16:30

#### Volatile Organics by EPA 8021 - Quality Control

#### **Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1633012 - Purge and Trap EPA 5030A										
Blank (1633012-BLK1)				Prepared: (	09-Aug-16	Analyzed:	10-Aug-16			
Benzene	ND	0.10	mg/kg					1.		
Toluene	ND	0.10	"							
Ethylbenzene	ND	0.10	**							
p,m-Xylene	ND	0.20	**							
o-Xylene	ND	0.10	**							
Total Xylenes	ND	0.10	**							
Total BTEX	ND	0.10	**							
Surrogate: 4-Bromochlorobenzene-PID	0.159		"	0.160		99.4	50-150			
LCS (1633012-BS1)				Prepared: (	09-Aug-16	Analyzed:	10-Aug-16			
Benzene	10.4	0.10	mg/kg	10.0		104	70-130			
Toluene	10.4	0.10	**	10.0		104	70-130			
Ethylbenzene	10.2	0.10	**	10.0		102	70-130			
p,m-Xylene	20.4	0.20	**	20.0		102	70-130			
o-Xylene	9.99	0.10	*	10.0		99.9	70-130			
Surrogate: 4-Bromochlorobenzene-PID	0.161		pt	0.160		101	50-150			
Matrix Spike (1633012-MS1)	Son	urce: P608016-	01	Prepared:	09-Aug-16	Analyzed:	10-Aug-16			
Benzene	10.5	0.10	mg/kg	10.0	ND	105	54.3-133			
Toluene	10.4	0.10	**	10.0	ND	104	61.4-130			
Ethylbenzene	10.2	0.10	*	10.0	ND	102	61.4-133			
p,m-Xylene	20.4	0.20	**	20,0	ND	102	63.3-131			
o-Xylene	10.0	0.10		10.0	ND	100	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	0.160		"	0.160		100	50-150			,
Matrix Spike Dup (1633012-MSD1)	So	urce: P608016-	01	Prepared:	09-Aug-16	Analyzed:	10-Aug-16			
Benzene	10.8	0.10	mg/kg	10.0	ND	108	54.3-133	3.04	20	
Toluene	10.7	0.10	**	10.0	ND	107	61.4-130	3.03	20	
Ethylbenzene	10.5	0.10	**	10.0	ND	106	61.4-133	3.08	20	
p,m-Xylene	21.0	0.20	**	20.0	ND	105	63.3-131	3.18	20	
o-Xylene	10.3	0.10	**	10.0	ND	103	63.3-131	2.93	20	
Surrogate: 4-Bromochlorobenzene-PID	0.159		#	0.160		99.3	50-150			

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Farmington NM, 87499

Project Name: PO 2221

Chacon Jicarilla Apache D#1 07151-0019

Project Number: Project Manager: 07151-0019

**Greg Crabtree** 

Reported:

11-Aug-16 16:30

#### Nonhalogenated Organics by 8015 - Quality Control

#### **Envirotech Analytical Laboratory**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1633012 - Purge and Trap EPA 5030A										
Blank (1633012-BLK1)				Prepared: 0	9-Aug-16	Analyzed:	10-Aug-16			
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.170		"	0.160		106	50-150			
LCS (1633012-BS1)				Prepared: (	9-Aug-16	Analyzed:	10-Aug-16			
Gasoline Range Organics (C6-C10)	134	20.0	mg/kg	106		127	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.169		"	0.160		105	50-150			
Matrix Spike (1633012-MS1)	Sou	rce: P608016-	01	Prepared: (	9-Aug-16	Analyzed:	10-Aug-16			
Gasoline Range Organics (C6-C10)	132	20.0	mg/kg	106	ND	125	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.167	7	#	0.160		104	50-150			
Matrix Spike Dup (1633012-MSD1)	Sou	rce: P608016-	01	Prepared: (	9-Aug-16	Analyzed:	10-Aug-16			
Gasoline Range Organics (C6-C10)	134	20.0	mg/kg	106	ND	127	70-130	1.20	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	0.163		**	0.160		102	50-150			

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Project Name:

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PO 2221

Project Number: Farmington NM, 87499 Project Manager: 07151-0019

Reported:

**Greg Crabtree** 

11-Aug-16 16:30

#### Nonhalogenated Organics by 8015 - Quality Control

#### **Envirotech Analytical Laboratory**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1633013 - DRO Extraction EPA 3570										
Blank (1633013-BLK1)				Prepared &	Analyzed:	10-Aug-16				
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	**							
Surrogate: n-Nonane	39.8		#	50.0		79.6	50-200			
LCS (1633013-BS1)				Prepared &	Analyzed:	10-Aug-16				
Diesel Range Organics (C10-C28)	376	25.0	mg/kg	500		75.1	38-132			
Surrogate: n-Nonane	40.4		"	50.0		80.8	50-200			
Matrix Spike (1633013-MS1)	Source	e: P608016-	01	Prepared &	Analyzed:	10-Aug-16				
Diesel Range Organics (C10-C28)	435	25.0	mg/kg	500	63.8	74.3	38-132			
Surrogate: n-Nonane	40.9		**	50.0		81.7	50-200			
Matrix Spike Dup (1633013-MSD1)	Source	e: P608016-	01	Prepared &	Analyzed:	10-Aug-16	i			
Diesel Range Organics (C10-C28)	440	25.0	mg/kg	500	63.8	75.2	38-132	1.03	20	
Surrogate: n-Nonane	39.8		"	50.0		79.5	50-200		7	

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

Three Springs + 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fr (800) 362-1879

Page 7 of 9



Project Name:

Chacon Jicarilla Apache D#1 07151-0019

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019 Greg Crabtree Reported: 11-Aug-16 16:30

#### **Notes and Definitions**

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit

NR

Not Reported

dry

Sample results reported on a dry weight basis

RPD

Relative Percent Difference

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Page 8 of 9

and extremely and

Client: Crown Quest			RUSH? Lab Use Only Analysis and Me							Meth	Method lab				
Project: (hacon Ticarillo Apache 1)#1  Sampler: Z. Garcia  Phone:  Small(s): /saac	<u></u>	1d 3d	P608	Lab WO# 3616 b Number 51-0019	6RO/DRO by 8015 + 2/C	121	1.1	Chloride by 300.0		10-1			Lab Number	Correct Cont/Dreny (c) V/N	
Project Manager: Greg Crabbrel			Pag		/	- S	by 80	y 418	de by	letals	ble 9			Lab	100
Sample ID	Sample Date	Sample Time	Matrix		ntainers YPE/Preservati	se GRO/I	BTEX by 8021	TPH by 418.1	Chlori	TCLP Metals	CO Table 910-1	TDS	- Jan		Corre
P+A Marker + 4.5'	8/3/16	1420	S	1-4021	16/0001	X	X							1	Y
PHA Marker + 4.5' Walls	1-	1440	S	1		X	X							2	L
				-	William I		10								
			11	14.			10.5						in a		
		7	1												
			2	1											
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							i year					ic.			
Belinquished by: (Signature) Date Time	Hans		150	8/3/16	Time 1650	**Rece			(Y)		e On	ly			
Relinquished by: (Signature) Date Time	Received by: (Signature) Date Time					T1 AVG Te	– mp °	c_ 4	T2_ 1.0				T3_		-
ample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other					Container Ty	pe: g - gia	ss, p	- poly	//plas	stic, a	g - ar	nber g	glass		- 1
*Sample(s) dropped off after hours to a secure drop off area.	acked in ice f Custody	at an avg temp ab  Notes/Billin	ove 0 but less th	pe: g - gla an 6 °C on su	ss, p	- poly	//plas	stic, a	g - ar	mber (	glass				



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Page 9 of 9

## **COMMERCIAL LANDFARM TICKET**

Ticket No.

T-N-T Environmental, Inc.

09266 #70 CR 405 • Lindrith, NM 87029 CROANG VEST 7-22-16 Customer: Well Name & Number: Charge Code: 3242 ay authore #: 505-486-5881 Trucking Co.: 3+B VAC Driver (print): Marciano

Delivery Ticket No.:

Truck No.: Once material is loaded it is your responsibility to secure your load.

By signing, you are releasing T-n-T Environmental Inc., its owners and its employees of any and all liabilities.

by sig	y signing, you are releasing 1-11-1 Environmental inc., its owners and its employees of any and all habilities.											
ITEM	PAINT FILTER	CHLORIDE	0511	TRASH		ed Soil	Tank B	ottoms	Drilling	Fluid	0	2
NO.	TEST RATIO	RESULTS	CELL	CHARGE	YRDS	BBLS	YRDS	BBLS	YRDS	BBLS	Comments	Driver Signature
1	1-1	135	2		10							Misto
2	1-1	17-	2		20					5	•	m. SO
3	1	135	7		20		-					11-50
4	1-1	140	2		15	-						of Jes
5												
6											×	,
7												
8												

#### MATERIAL

	B = Backfill	T = Top	osoil	S = San	drock	G = Gravel		
ITEM NO.	DRIVER'S SIGNATURE	TYPE	YRDS	ITEM NO.	DRIVE	ER'S SIGNATURE	TYPE	YRDS
1				8				71
2				9				
3				10				
4				11		,		
5				12				
6				13				
7				14		1		
	1 1			, /	7		REPROGRAF	HICS 0313107

## **COMMERCIAL LANDFARM TICKET**

T-N-T Environmental, Inc. #70 CR 405 • Lindrith, NM 87029

09290

Ticket No.

Date:	8-8	3-16			_Cus	tomer	K	odo	ly	Orodi	uction			
Well N	lame 8	& Numb	er:	Chac	on	Tic	D.	# 1	/ .		uction			
Custo	mer R	ер: 🔟	rey				-				Charge Code: _		V-	
Trucki	ng Co	: B	P	Svoc	۱	Driver	(print	): <u> </u>	>y/o	in B	Charge Code: Phone #: Delivery Ticket No.: _	505	9/7-	1987
Truck	No.:	BB=	4	s your re	enonei	hility to		ro voi	ır load		Delivery Ticket No.:_	646	6	. 4
											employees of any and all			
ITEM	PAINT FILTER	CHLORIDE	CELL	TRASH		ed Soil	Tank B	ottoms	Drillin	g Fluid	Comments	Dri	Driver Signature	
NO.	TEST RATIO	RESULTS	OLLL	CHARGE	YRDS	BBLS	YRDS	BBLS	YRDS	BBLS	Commonio	511	voi Oigilati	
1	- (	110	2		26	9		Œ				Della	The	
2	v .					100		A 192				1	1	
3														
4						* 2								
5	- 1	-	-			10 2	•	2	x * 1			5.3		
6										* * *				
7								2						
8			1						-					
								MΔ	TERI	ΔΙ				
				B = Bac	kfill	T	= Top				ndrock G = Gravel			
ITEM NO.		DRIVER	'S SIG	NATURE		TY	PE	YRI	os	NO.	DRIVER'S SIGNATURE		TYPE	YRDS
1					and the latest and th		Y I			8				
2						1				9				
3			7		· ·					10		, i		
4										11				2-
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6				1 1				2		13				
7	7 -									14				
Data	12-	- 8-	16	т	T A#	ndan	1/	10	16	2	recent.		REPROGRAP	HICS 0313101

COPIES: WHITE - Landfarm YELLOW - Customer PINK - Transporter GOLD - Landfarm

## COMMERCIAL LANDFARM TICKET

Ticket No.

T-N-T Environmental, Inc.

09291 #70 CR 405 • Lindrith, NM 87029 Date:  $\sqrt{-9-16}$  Customer: Crown Ques-Well Name & Number: Customer Rep: //evenu Charge Code: Dustin Briand Phone #: 320-1211 Trucking Co .: BER Driver (print): Delivery Ticket No.: (24(0(0 Truck No.: Once material is loaded it is your responsibility to secure your load. By signing, you are releasing T-n-T Environmental Inc., its owners and its employees of any and all liabilities. PAINT Impacted Soil Tank Bottoms **Drilling Fluid** TRASH ITEM FILTER CHLORIDE **Driver Signature** Comments NO. TEST RESULTS CHARGE YRDS BBLS YRDS BBLS YRDS BBLS RATIO 1 0 2 3 4 5 6 7 8

#### MATERIAL

	B = Backfill	T = Top	osoil	S = S	androck G = Gravel	Shirt water	48 79
ITEM NO.	DRIVER'S SIGNATURE	- TYPE	YRDS	ITEM NO.	DRIVER'S SIGNATURE	TYPE	YRDS
1				8			
2				9			
3				10			
4				11			
5				12			
6				13			
7				14			
-						DEDDOCDAD	HICS 031310T

Date 8/9/16 T-N-T Attendant COPIES: WHITE - Landfarm YELLOW - Customer PINK - Transporter GOLD - Landfarm



CROWNQUEST OPERATING, LLC

August 10, 2016

Attn: Guillermo DeHererra

P.O. Box 146, #6 Dulce Rock Drive

Dulce, NM 87528

RE: Chacon Jicarilla Apache D#1 BGT Closure

Dear Guillermo,

This is Roddy Productions notification of our intent to close the Below Grade Tank on the Chacon Jicarilla Apache D#1 API# 30-043-21044, UL-A, S-23, T23N, R3W. Included is the closure plan, lab analysis and approval from Mr. Hobson Sandoval the Jicarilla Apache Nation EPO. It is our intent to close the BGT in the last two weeks of August 2016. Roddy Production will notify Jason Sandoval 48 hours before operations begin. Let me know if you have any questions.

Sincerely,

Jeremy Divine

Roddy Production/CrownQuest Operating

432 557 6778



dPro™

Track Shipments

to print USPS shipping labels and save:





USPS - 1171999991703404107688

Go ti

USPS 9171999991703404107688

#### Delivered

time: 14:14:00 date : 2016-08-15 location : DULCE, NM

#### Available for Pickup

time: 10:46:00 date: 2016-08-13 location: DULCE, NM

Clear

#### Closure and Reclamation Plan Roddy Production Co., Inc. Chacon Jicarilla Apache D#1 Production Single Wall BGT API 30-043-20144, UL-A, S-23, T23N, R3W

In Accordance with Rule 19.15.17.13 NMAC, the following plan describes the general closure requirements of below grade tanks on Roddy Production Co. locations in the San Juan Basin of New Mexico. This is Roddy Production's standard closure plan for all BGT's under Rule 19.15.17 NMAC and operated by Roddy Production Co. For closures that do not conform to this standard closure plan, a separate BGT specific closure plan will be developed and utilized.

#### Closure Conditions and Timing for BGT:

- Within 60 days of cessation of operation Roddy Production will:
  - o Remove all Liquids/ sludge and dispose of in a division approved manner
- Within 72 hrs or 1 week prior to closure Roddy Production will:
  - Give notice to surface owners by certified mail. For public entities by email as specified on variance page.
  - o Give notice to District Division verbally and in writing/email
- Within 6 months of cessation of operation Roddy Production will:
  - o Remove BGT and dispose, recycle, reuse or reclaim in a division approved manner
  - o Remove unused onsite equipment associated with the BGT
- Within 60 Days of closure Roddy Production will:
  - Send the District Division a closure report per 19.15.17.13.F

#### **General Plan Requirements:**

- Prior to initiating any BGT closure except in case of emergency, Roddy Production will notify the surface owner of the intent to close the BGT by certified mail no later than 72 hrs or 1 week before closure and a copy of this notification will be included in the closure report. In case of emergency, the surface owner of record will be notified as soon as practical.
- 2. Notice of the closure will be given to the Aztec District office between 72 hrs and 1 week of the scheduled closure via email or phone. The notification of closure will include the following.
  - a. Operators Name (Roddy Production)
  - b. Well name and API number
  - c. Location (USTR)
- All liquids will be removed from the BGT following cessation of operation. Produced water will be
  disposed of at one of the following NMOCD approved facilities depending on the proximity to the BGT
  site: Agua Moss Pretty Lady SWD #1 (Permit#1034-A), Agua Moss Sunco SWD #1 (Permit# CL1-005) or
  Basin Disposal (Permit #-NM 01-005), T-n-T Environmental (permit# NM-01-0008)
- Solids and sludge's will be shoveled or vacuumed out for disposal at Envirotech (Permit # -NM01-0011), T-n-T Environmental (permit# NM-01-0008) or JFJ Land Farm/ Industrial Ecosystems Inc. (Permit # NM 01-0010B)
- 5. Roddy Production will obtain prior approval from NMOCD to dispose, recycle, reuse or reclaim the BGT and provide documentation of the disposition of the BGT in the closure report. Steel materials will be recycled or reused as approved by the Division. Fiberglass tanks will be empty, cut up or shredded and EPA cleaned without soils or contaminated material for disposal as solid waste. Fiberglass and liner materials will meet the conditions of 19.15.35 NMAC. Disposal will be at a licensed disposal facility, presently San Juan Regional Landfill operated by Waste Management under NMED Permit SWM-052426

- Any Equipment associated with the BGT that is no longer required for some other purpose, following the closure will be removed from location.
- 7. Following the removal of the tank and any liner material, Roddy Production will test the soils beneath the BGT as follows: If depth to groundwater cannot be identified the most stringent standard will be followed.

		TABLE I	
losure criteria for soils ben	eath Below Gra	de Tanks, Drying pads a	ssociated with
Closed Loop system	s and pits wher	e contents are removed	1
Depth below bottom of	Constituent	Method*	Limit**
pit to groundwater less			
than 10,000 mg/L TDS	1		
and the second s	Chloride	EPA 300.0	600 mg/kg
	TPH	EPA SW-846	100 mg/kg
≤50 feet		Method 418.1	7
	BTEX	EPA SW-846 Method	50 mg/kg
		801B or 8260B	
	Benzene	EPA SW-846 Method	10 mg/kg
the state of the s		8021B or 8015M	
	Chloride	EPA 300.0	10,000 mg/kg
	TPH	EPA SW-846	2,500 mg/kg
		Method 418.1	
51 feet-100 feet	GRO+DRO	EPA SW-846	1,000 mg/kg
		Method 8015M	
	BTEX	EPA SW-846 Method	50 mg/kg
		801B or 8260B	
	Benzene	EPA SW-846 Method	10 mg/kg
		8021B or 8015M	
* *	Chloride	EPA 300.0	20,000 mg/kg
	TPH	EPA SW-846	2,500 mg/kg
		Method 418.1	<del>-</del> -
> 100 feet	GRO+DRO	EPA SW-846	1,000 mg/kg
		Method 8015M	
	BTEX	EPA SW-846 Method	50 mg/kg
		801B or 8260B	
	Benzene	EPA SW-846 Method	10 mg/kg
		8021B or 8015M	_ ~

<sup>\*</sup> Or test method approved by the division

- a) At a minimum, a five point composite sample will be taken to include any obvious stained or wet soils or any other evidence of contamination.
  - b) The laboratory sample shall be analyzed for the constituents listed in Table I of 19.15.17.13
    - (1) Or other test methods approved by the Division
    - (2) Numerical limits or natural background level, whichever is greater



<sup>\*\*</sup> Numerical limits or natural background, whichever is greater

#### (19.15.17.13 MAC-Ro, 19.15.17.13 NMAC 3/28/2013)

- If the Division and/or Roddy Production determine there is a release, Roddy Production will comply with 19.15.17.13.C.3b
- 9. Upon completion of the tank removal, the excavation will be backfilled with non-waste earthen material and covered with a minimum of one foot of top soil or background thickness whichever is greater and to existing grade. The surface will be re-contoured to match the native grade and prevent ponding.

For those portions of the former BGT area that are no longer required for production activities, Roddy Production will seed the disturbed areas the first favorable growing season after the BGT is covered. Seeding will be accomplished via drilling on the contour whenever practical, or by other Division approved methods. Roddy Production will notify the Division when reclamation or re-vegetation is complete.

Reclamation of the BGT shall be considered complete when:

- a. Vegetative cover reflects a life form ratio of +/- 50% of pre disturbance levels.
- Total percentage plant cover of at least 70% of pre disturbance levels (excluding noxious weeds)
   OR
- c. Pursuant to 19.15.17.13.H.5d Roddy Production will comply with obligations imposed by other applicable federal or tribal agencies in which their re-vegetation and reclamation requirements provide equal or better protection of fresh water, human health and the environment.
- For those portions of the former BGT area required for production activities, reseeding will be done at well abandonment, and following the procedure noted above.

#### Closure Report:

All closure activities will include proper documentation and will be submitted to the NMOCD within 60 days of the BGT closure on a Closure Report Using Division Form C-144. The report will include the following:

- Proof of Closure Notice (Surface Owner & NMOCD)
- · Backfilling and cover installation
- Confirmation sampling analytical results
- Disposal Facility Name(s) and permit number(s)
- Application Rate & seeding techniques
- Photo documentation of reclamation



## **Analytical Report**

#### **Report Summary**

Client: Crown Quest Operating

Chain Of Custody Number:

Samples Received: 7/21/2016 5:28:00PM

Job Number: 07151-0019 Work Order: P607056

Project Name/Location: Chacon Jicarilla Apache D

#1

Report Reviewed By:	Walter Hindung	Date:	8/1/16		
	Walter Hinchman, Laboratory Director	_			
	7	Date:	8/1/16		
	Tim Cain Quality Assurance Officer			The state of the state of	

Supplement to analytical report generated on: 8/1/16 8:32 am

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.





Project Name:

Chacon Jicarilla Apache D #1

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported: 01-Aug-16 08:35

#### **Analyical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Pump Jack Pad	P607056-01A	Solid	07/21/16	07/21/16	Glass Jar, 4 oz.
BGT Comp.	P607056-02A	Solid	07/21/16	07/21/16	Glass Jar, 4 oz.
P&A Marker + I'	P607056-03A	Solid	07/21/16	07/21/16	Glass Jar, 4 oz.
AST Comp. + 1'	P607056-04A	Solid	07/21/16	07/21/16	Glass Jar, 4 oz.



Project Name:

Chacon Jicarilla Apache D#1

PO 2221

Farmington NM, 87499

Project Number: Project Manager: 07151-0019

Greg Crabtree

Reported:

01-Aug-16 08:35

#### BGT Comp. P607056-02 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1 .	1630010	07/22/16	07/27/16	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		99.8 %	50	-150	1630010	07/22/16	07/27/16	EPA 8021B	
Nonhalogenated Organics by 8015		De la companya de la							
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1630010	07/22/16	07/27/16	EPA 8015D	9
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1630011	07/22/16	07/26/16	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		99.2 %	50	-150	1630010	07/22/16	07/27/16	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1630011	07/22/16	07/26/16	EPA 8015D	
Surrogate: n-Nonane		88.6 %	50	-200	1630011	07/22/16	07/26/16	EPA 8015D	
Total Petroleum Hydrocarbons by 418.1						2	75		
Total Petroleum Hydrocarbons	ND	40.0	mg/kg	t	1631001	07/26/16	07/26/16	EPA 418,1	0
Cation/Anion Analysis				de se estado de la composição de la comp	No.	20.101	Contractor and Williams Co. Security	1	
Chloride	49.7	20.0	mg/kg	1	1630014	07/22/16	07/27/16	EPA 300.0	

From:

Trey Tixier

Sent:

Thursday, August 04, 2016 12:04 PM Jeremy Divine

To: Subject:

Fwd: Chacon Jicarilla D#1

#### Sent from my iPhone

#### Begin forwarded message:

From: Hobson Sandoval <a href="mailto:sandoval-99@yahoo.com">hsandoval-99@yahoo.com</a>

Date: August 4, 2016 at 11:54:05 AM MDT

To: "ttixier@crownquest.com" <ttixier@crownquest.com>
Cc: Cordell Tecube <cltecube@yahoo.com>, Jason Sandoval

<jasonsandoval@jicarillaoga.com>, Orson Harrison

<orsonharrison@jicarillaoga.com>, "guillermo.deherera@jicarillaoga.com"

<guillermo.deherera@jicarillaoga.com>

Subject: Chacon Jicarilla D#1

Reply-To: Hobson Sandoval <a href="mailto:shandoval-99@yahoo.com">hsandoval-99@yahoo.com</a>

The labs are good for this site; they are ND for BGT. So, go ahead and back fill the below grade tank (BGT)

Sent from Yahoo Mail on Android

From:

Jeremy Divine

Sent:

Tuesday, July 19, 2016 10:31 AM

To:

'Hobson Sandoval'; 'Jason Sandoval'; 'rswitzer@blm.gov'; Smith, Cory, EMNRD

Cc: Subject: Trey Tixier; 'Isaac Garicia'; Felipe Aragon Chacon Jicarilla Apache D#1 BGT

All,

We are scheduled to pull the BGT on the CJA D#1 on Thursday morning 7/21 at 9:00 am. We will be conducting field sampling and removing contaminated soil until areas are clean. Once field analysis are below standards, five point composite samples will be taken to the lab for analysis. Let me know if you have any questions or would like to re schedule.

#### **Thanks**

Jeremy Divine
Cell. 432 557 6778

<u>Idivine@crownquest.com</u>
4001 N. Butler, Building 7101
Farmington, NM 87499

# CrownQuest Operating

From:

Sent: To:

Thursday, August 04, 2016 12:04 PM Jeremy Divine

Subject:

Fwd: Back fill BGT at Chacon Jicarilla D#1

#### Sent from my iPhone

#### Begin forwarded message:

From: Hobson Sandoval <a href="mailto:sandoval-99@yahoo.com">sandoval <a href="mailto:sandoval-99@yahoo.com">sandoval-99@yahoo.com</a>

Date: August 4, 2016 at 12:00:46 PM MDT

To: "ttixier@crownquest.com" <ttixier@crownquest.com>

Cc: Hobson Sandoval < hsandoval 99@yahoo.com >, Guillermo DeHerrera

<guillermo.deherrera@jicarillaoga.com>, Jason Sandoval

<jasonsandoval@jicarillaoga.com>, Cordell Tecube <<u>cltecube@yahoo.com</u>>, Orson Harrison

<orsonharrison@jicarillaoga.com>

Subject: Back fill BGT at Chacon Jicarilla D#1

Reply-To: Hobson Sandoval <a href="mailto:hsandoval-99@yahoo.com">hsandoval-99@yahoo.com</a>

The approval to back fill at this site is for the BGT only. The lab samples for soil around the well head were taken yesterday. The results should be back by Next Wednesday, Aug. 10, 2016 according to Isaac Garcia of Envirotech.

Sent from Yahoo Mail on Android

From: Sent:

Jeremy Divine

Friday, August 12, 2016 3:33 PM

To:

'Hobson Sandoval': Guillermo (guillermo deherrera@iicarillagga.com); jasonsandoval@jicarillagga.com; 'rswitzer@blm.gov'; Smith, Cory, EMNRD; Reuben Perea; alfredvigil@jicarillaoga.com; Bryce Hammond, BLM Supervisor; 'Sandoval, Kurt'

Cc: Subject: **Trey Tixier** FW: Crown Quest, Chacon Jic Apache D1, P608016

Attachments:

P608016A.PDF

All,

Here are the lab results from around the P&A marker on the Chacon Jicarilla Apache D#1. The bottom and side walls are below the 100 ppm. Once we are finished with the reclamation on the Amerada Jicarilla #4 we will move to the CJA D#1. Let me know if you have any questions and have a good weekend.

**Thanks** 

Jeremy Divine Cell. 432 557 6778 Jdivine@crownquest.com 4001 N. Butler, Building 7101 Farmington, NM 87499

## CrownQuest Operating

Roddy Production Co.

From: Timothy Cain [mailto:tcain@envirotech-inc.com]

Sent: Friday, August 12, 2016 3:20 PM

To: Jeremy Divine <idivine@crownquest.com>

Cc: laboratory <a href="mailto:laboratory@envirotech-inc.com">laboratory@envirotech-inc.com</a>; Isaac Garicia

<igarcia@envirotech-inc.com>; Greg Crabtree <gcrabtree@envirotech-inc.com>

Subject: FW: Crown Quest, Chacon Jic Apache D1, P608016

Jerry,

Attached is the report for the Chacon Jic Apache D1 Project. Let us know if you have any questions.

#### **Tim Cain**

**Envirotech Analytical Laboratory** Quality Assurance Officer Office 505-632-0615 tcain@envirotech-inc.com 5796 U.S. Highway 64, Farmington NM 87401



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"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete." – Richard Buckminster Fuller

From: Timothy Cain

Sent: Thursday, August 11, 2016 6:12 PM

**To:** Greg Crabtree <gcrabtree@envirotech-inc.com>; enviro admin <enviroadmin@envirotech-inc.com>; Isaac Garicia <igarcia@envirotech-inc.com>; Felipe Aragon <faragon@envirotech-inc.com>; Kory Peine <kpeine@envirotech-inc.com>

inc.com>

Cc: laboratory < <a href="mailto:laboratory@envirotech-inc.com">!aboratory@envirotech-inc.com</a>

Subject: Crown Quest, Chacon Jic Apache D1, P608016

#### **Tim Cain**

Envirotech Analytical Laboratory Quality Assurance Officer Office 505-632-0615 tcain@envirotech-inc.com 5796 U.S. Highway 64, Farmington NM 87401



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"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete." – Richard Buckminster Fuller

From:

Jeremy Divine

Sent:

Monday, August 15, 2016 10:58 AM

To:

jasonsandoval@jicarillaoga.com; Guillermo (guillermo.deherrera@jicarillaoga.com); 'Hobson Sandoval'; alfredvigil@jicarillaoga.com; 'rswitzer@blm.gov'; Reuben Perea; Bryce Hammond, BLM Supervisor; 'Sandoval, Kurt'; Smith,

Cory, EMNRD; Annette Torivio (annettetorivio@jicarillaoga.com)
Trey Tixier

Cc:

Subject:

48 hour notice to start reclamation of Chacon Jicarilla Apache D#1 30-043-20144 UL-A, S-23, T23N, R3W

All,

We are going to start reclamation on Roddy Production Chacon Jicarilla Apache D#1 in 48 hours. During this process the BGT will also be closed and reclaimed. Please let me know if you have any questions.

**Thanks** 

Jeremy Divine Cell. 432 557 6778 Jdivine@crownquest.com 4001 N. Butler, Building 7101 Farmington, NM 87499

# CrownQuest Operating

From:

Jeremy Divine

Sent:

Monday, August 01, 2016 1:22 PM

To:

Guillermo (guillermo deherrera@jicarillaoga.com); Jason Sandoval; 'Sandoval, Kurt'; Reuben Perea;

alfredvigil@jicarillaoga.com; Bryce Hammond, BLM Supervisor; 'Hobson Sandoval'; 'rswitzer@blm.gov'; Smith, Cory,

**EMNRD** 

Cc:

Trey Tixier; 'Isaac Garicia'; Felipe Aragon

Subject: Attachments: Roddy Production Chacon Jicarilla Apache D#1 and Amerada Jicarilla #1 Soil Analysis Results

P607057A.PDF; P607056 FINAL 01 Aug 16 0835.pdf

All,

Here are the test results from the Chacon Jicarilla Apache D#1 and Amerada Jicarilla #4 (legacy well). The Amerada Jicarilla #4 is below 1000 ppm and is ready to reclaim if approved. On the Chacon Jicarilla Apache D#1 we still have high TPH levels around the P&A marker area that will need to be dug out. Right now we are scheduled to continue digging on Wednesday the Aug. 3<sup>rd</sup>. There are several issues that we will need to address on the other results. The diesel and gasoline organics levels were below 100 ppm on the pump jack pad and slightly over 100 ppm on the oil tank but the oil organics were above 100 ppm on all. In the past oil organics were not included but now they considered on a case by case project. Please advise on what standard Roddy Production will need to follow.

Jeremy Divine
Cell. 432 557 6778
Jdivine@crownquest.com
4001 N. Butler, Building 7101
Farmington, NM 87499

# **CrownQuest Operating**

From:

Jeremy Divine

Sent:

Friday, August 26, 2016 2:16 PM

To:

Guillermo (guillermo deherrera@jicarillaoga.com); jasonsandoval@jicarillaoga.com; alfredvigil@jicarillaoga.com;

'rswitzer@blm.gov'; Reuben Perea; Bryce Hammond, BLM Supervisor, 'Sandoval, Kurt'; 'Hobson Sandoval'; Annette Torivio

(annettetorivio@jicarillaoga.com)

Cc:

Subject:

Trey Tixier
Roddy Production 48 hour notice to start seeding operations

All,

Roddy Production will start seeding operations on the following locations starting next week. Below is the seed mix and volume to be used. Please let Trey Tixier or I know if you have any questions.

Amerada Jicarilla #2 30-039-22448, Contract #167 Amerada Jicarilla #4 30-039-22585, Contract #167 Chacon Jicarilla Apache D#1 30-043-20144, Contract #413 Chacon Jicarilla Apache D#110 30-043-20433, Contract #55A

The seed mixture and application rates for the Jicarilla Apache Nation (south reservation blend <12" Precip) Vegetative Community will be as follows:

Species	Variety	Pound/Acre (PLS)
Blue Grama	Hachita	.6
Galleta	Viva	.8
Indian Rice Grass	Paloma or Nezpar	1.1
Western Wheatgrass	Arriba or Barton	3.2
<b>Pubescent Wheatgrass</b>	Luna	2.1
Crested Wheatgrass	Ephraim or Hycrest	1.5
Blue Flax	Appar	.3
Palmar Penstemon	Cedar	1.0
		Total: 10.6

Jeremy Divine
Cell. 432 557 6778

Jdivine@crownquest.com
4001 N. Butler, Building 7101
Farmington, NM 87499

## CrownQuest Operating



# NON HAZARDOUS MANIFEST CE 19

		RATOR		1 - 11	75.4			
Gally Preduction		EPA						
P & BOX 2321	119 /161	_ (0.4						
Farmington UM		Styling Location						
Phone _505 325 5 750		Phone						
Description of Wasterfale	Industrial Waste Cotte #		Total Country	Unit of	Container			
Fiber Glass tank		5W065	1	420				
			•					
	3/2/1							
ereby certify that the above-described as				12 8 8				
Arming fon , NM 27402 reby administrating receipt of the above-d	secribed materials for	Truck Number Truck Type  I hereby acknowled received from gone	ge that the a	bove-described location and w	materials we			
stom Meros	9-16-16	Driver Signature	180	n fished below.	9-16 1)			
draga Meros	9-16-16	Dates Surabase	180	isted below.	9-16 1			
Acquilleros	9-/16-/16 Shipmont Date	ATION ACTION	118	Jenes I below	9-/6/) Delivery Deli			
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Nor Signalure  Nor Signalure  Domina Land	9-/16-/16 Shipmont Date	Other Street Address San Bank		coasat	9-/6 // Delivery Dele			
Nor Signal Lands  Address  P.O. Barc 295	9-/16-/16 Shipmont Date	Other Street Address San Bank			Q-/6 /A			
Wing Address  In Name Dominal Lands  Advance P.O. Base 216  Elementaria   INE 67413	9-/16-/16 Shipmont Date	Other Street Address San Bank			9-16 /) Delivery Date			



	Waste Profile #
Requested Disposal Facility: 80% Act Land F.//	SW065 WCA Sales Rep: Chantell Griffith
	·
I. Generator Information	Date: september 15, 2016
Generator Name: Roddy Production Co.	
Generator Site Address: Chacon Jicarilla Apac	he D#1 AFF#30-043-20144 ULA 5-23,T23N AJW
City: County: Spaleval	State: N. M. Zip:
Generator Mailing Address(If Different): P.O. Box	2221
City: Farnington County: SAN JUAN	State: N.M. Zip: 87499.
Generator Contact Name (print): Jeremy Divin	e
Phone Number: 432-557-6778	Fax Number: 505-326-6819
Ila. Transporter Information	
Transporter Name: Knock out Roustahout	Transporter Contact Name: Edgar Meraz
Transporter Address: 6811 Prinen Lane.	•
City: 505-324-026 County: SAN JUAN	State: N.M., Zip: 87402
Phone Number: FAPMington	Fax Number:
IIb. Billing Information	
Bill To: Roddy Production Co.	
Billing Address: P.D. Doy 2221	
City: FARM Insten County: SAN Sugn	State: 1), M Zip: 87499.
Name of Waste: Fiber GIASS tonk	
Process Generating Waste:	
TANK was used to store produced w	Alenan ma Oil Wall aide . Inla !!
	•
plugged a tank now has to be disposed	
Type of Waste: _X_ Industrial Process Waste F	Pollution Control Waste
	owderLiquidOther:
Method of Shipment: X Bulk Bagged	Other:
	ns Gallons Other:
	eekly Monthly Other
Special Handling Instructions:	
IV Depresentative Semple Continuation	
IV. Representative Sample Certification Is the representative sample collected to prepare this profile	and laboratory analysis, collected in accordance with U.S.
EPA 40 CFR 261.20( c ) guidelines or equivalent rules?	YesNo
Sample Date: Type of Sample: Comp	osite Sample Grab Sample
Laboratory:	Sample ID Numbers:
Sampler's Employer:	
Sampler's Name (printed):	Signature:

Waste Profile #

V. Physic	cal Characteris	tics of Waste						
Characteristic C	omponents				% by weight (range)			
1. Fiber 6	lass							
2. Open to	V							
3. TANK I	vas cut up	into Spieces	& SteAM CK	Aned-				
4.								
5.								
Color	Odor (describe)	Free Liquids	% Solids	pH:	Flash Point:	Phenol		
Tan	None	Yes _X_No	100%		۰F			
		Content %		cluding Peguir	red Parameters provide	ppm ded for this Profile		
	The State of the State				led Farameters provi	ded for dils Frome		
following Pestici	des and/or Herbicione, Methoxychlor,	ess contain regulated les: Chlordane, Endr Toxaphene, 2,4-D, o	in, Heptachlor (	and it	Yes or <u>火</u> No	) ,		
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR  Yes or  No 261.23?								
	contain regulated of ed in 40 CFR Part	oncentrations of Pol 761?	ychlorinated Bip	henyls	Yes or _X_ No	)		
defined in 40 CF	R 261.31, 261.32,	oncentrations of liste 261.33, including RC	RA F-Listed Sc		Yes or <u>_X</u> No	)		
		oncentrations of 2,3, CCD), or any other of		d in 40 CR	Yes or <u>X</u> No			
		defined by Federal			Yes or _χ No	)		
regulations?		te as defined by Fed		4	Yes or No	)		
Is this a regulate regulations?	d Medical or Infecti	ous Waste as define	d by Federal ar	d/or State	Yes or X_No			
Is this waste gen	erated at a Federal	Superfund Clean U	p Site?		Yes or X No	)		
I hereby certify the description of the Analytical Results further certify the attempt to deliver waste material the condition pertainifacility/recycling of the company has individual warrant authorized Representations of the	waste material being simulaterial Safety Die to by utilizing this professed any waste not acility against any of not altered the formulaterial that he/she is autilized the sentative Name Arganizative Signature	y knowledge and beling offered for disposata Sheets submitted offile, neither myself raste which is classified from accepting by provided herein. Odamages resulting from or content of this pathorized to sign this of the content of this pathorized to sign this of the content of this pathorized to sign this of the content of this pathorized to sign this of the content of this pathorized to sign this of the content of this pathorized to sign this of the content of this pathorized to sign this of the content of this pathorized to sign this of the content of t	sal and all know d are truthful an nor any other er ied as toxic was y law. I shall im ur company her om this certifica profile sheet as	n or suspected complete an apployee of the te, hazardous mediately give eby agrees to tion being inaccorovided by A shalf of the General Companion:    Sept	dy Production y Name , 14 2016	n disclosed. All of the waste. I of for disposal or waste, or any other y change or sposal further certify that The undersigned		
Raday T	Bloese, I	rges AE	Rody Sign	Blesse		9   15   2016 Date		





















































































































