

# SOIL REMEDIATION, CLOSURE DOCUMENTATION, AND FINAL C-141

Conoco Federal #1 Battery Ref. #160004

UL-L (NW¼ of the SW¼) of Section 17, R32E, T18S Latitude 32°44'48.099"N and Longitude 103°47'44.925"W Elevation ~3,765'amsl

~8.5 miles south of Maljamar, Lea County, New Mexico

March 2005

Prepared by

Environmental Plus, Inc. 2100 Avenue O P.O. Box 1558 Eunice, New Mexico 88231 Tele 505•394•3481 FAX 505•394•2601

Chesipeake 147179 dichty - fPACO603427327 Unsped - ePACO603427478 Incident - n PACO603427527 appl. - pPACO603427527



Hobbs OCD

### **STANDARD OF CARE**

Soil Remediation, Closure Documentation, and Final C-141

Conoco Federal #1 Battery Ref. #160004

The information provided in this report was collected consistent with the Mexico Oil Conservation Division (NMOCD) Guidelines New for Remediation of Leaks, Spills and Releases (August 13, 1993), the NMOCD Unlined Surface Impoundment Closure Guidelines (February 1993), and the Environmental Plus, Inc. (EPI) Standard Operating Procedures and Quality Assurance/Quality Control Plan. The conclusions are based on field observations and laboratory analytical reports as presented in the report. Recommendations follow NMOCD guidance and represent the professional opinions of EPI staff. These opinions were arrived at with currently accepted geologic, hydrogeologic and engineering practices at this time The report was prepared or reviewed by a certified or and location. professional with a registered ΕPΙ background in engineering, environmental, and/or the natural sciences.

This report was prepared by:

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Patrick W. McCasland

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This report was reviewed by:

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NMOCD New	NMOCD - New Mevico Oil Concernation Division			

**Distribution** List

Chesapeake

NMOCD - New Mexico Oil Conservation Division NMSLO - New Mexico State Land Office

Chesapeake - Chesapeake EPI - Environmental Plus, Inc. BLM - U.S. Department of Interior Bureau of Land Management

CONOCO FEDERAL #1 BATTERY

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# **1.0 INTRODUCTION**

This site is located in UL-L (NW<sup>1</sup>/<sub>4</sub> of the SW<sup>1</sup>/<sub>4</sub>) of Section 17, R32E, T18S at a latitude of 32°44'48.099"N and a longitude of 103°47'44.925"W, approximately 8.5 miles south of Maljamar, Lea County, New Mexico on property owned by the US Department of the Interior BLM. A topographical map is included in Attachment I. The estimated 125 barrel (bbl) crude oil leak occurred on December 27, 2004 at 10:00 AM at the Chesapeake Conoco Federal #1 Tank Battery and was due to an improper valve configuration. Approximately 110 bbls was recovered and returned to the tank. The release impacted approximately 444 square feet (ft<sup>2</sup>) inside the berm; 2,534 ft<sup>2</sup> on the caliche pad; and 4,567 ft<sup>2</sup> off the caliched location. The total affected surface area was approximately 7,545 ft<sup>2</sup>. Based on water well information from the New Mexico Office of the State Engineer, groundwater was estimated to occur approximately 460-feet below ground surface ('bgs). There are no surface water bodies or domestic or agricultural water wells observed to be within a 1,000-foot radius of the site. This gives the site a 0 point New Mexico Oil Conservation Division (NMOCD) ranking score that applies the following remedial guidelines for the "constituents/contaminants of concern" (CoCs):

CONSTITUENTS/CONTAMINANTS OF CONCERN	REMEDIAL GOAL
Benzene	10 mg/Kg
BTEX (the mass sum of benzene, toluene, ethylbenzene, and xylenes)	50 mg/Kg
Total Petroleum Hydrocarbon Using EPA method 8015m (TPH <sup>8015m</sup> )	5,000 mg/Kg
Chloride	Chloride residuals can not be capable of impacting local groundwater above the New Mexico Water Quality Control Commission standard of 250 mg/L.

On December 28, 2004, Chesapeake retained Environmental Plus, Inc. (EPI) to mitigate, delineate and remediate the release consistent with the NMOCD guidelines. Mitigation and remediation began on December 28, 2004. The impacted caliche around the tanks and the surface area northwest of the tanks on the pad down to a depth of approximately 1'bgs was excavated and disposed in the NMOCD approved and permitted Artesia Aeration Landfarm. The excavated area was backfilled with clean caliche, compacted and the facility berm reconstructed to a height of approximately 3-feet. Approximately 3-feet of soil (608 cubic yards (yd<sup>3</sup>)) was excavated from the remainder of the release area and blended with local clean soil. Analytical results from laboratory analysis of the blended soil samples and the excavation sidewall and bottom samples were all less than the CoC remedial goals. The excavation was backfilled with the remediated soil and contoured to the natural grade. The site will be reseeded in the spring of 2005. EPI, on behalf of Chesapeake, requests that the NMOCD require "no further action" at this site.

# 2.0 ENVIRONMENTAL MEDIA CHARACTERIZATION

Chemical parameters of the soil and groundwater were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the New Mexico Oil Conservation Division (NMOCD) guidelines published in the following documents:

- Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)
- Unlined Surface Impoundment Closure Guidelines (February 1993)

Acceptable thresholds for contaminants/constituents of concern (CoCs), i.e., TPH, benzene, and the mass sum of benzene, toluene, ethylbenzene, and total xylene (BTEX), were determined based on the NMOCD Ranking Criteria as follows:

- Depth to Ground water, i.e., distance from the lower most acceptable concentration to the ground water,
- Wellhead Protection Area, i.e., distance from fresh water supply wells, and
- Distance to Surface Water Body, i.e., horizontal distance to all down gradient surface water bodies.

### 2.1 GEOLOGICAL DESCRIPTION

The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico" (A. Nicholson and A. Clebsch, 1961), describes the near surface geology of southern Lea County as an intergrade of the Quaternary Alluvium (QA) sediments, i.e., fine to medium sand, with the mostly eroded Cenozoic Ogallala (CO) formation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche.

### 2.2 ECOLOGICAL DESCRIPTION

The area is typical of the Upper Chihuahuan Desert Biome consisting primarily of hummocky sand hills covered with Harvard Shin Oak (Querqus harvardi) interspersed with Honey Mesquite (Prosopis glandulosa) along with typical desert grasses and weeds. Mammals represented, include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, and the Mule Deer. Reptiles, amphibians, and birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

### 2.3 AREA GROUND WATER

The New Mexico Office of the State Engineer water well database indicates groundwater occurring in the area at approximately 460'bgs. According to the USGS, the groundwater elevation decreases generally to the southeast.

### 2.4 AREA WATER WELLS

The New Mexico Office of the State Engineer records two water wells in T18S R32E but none in Section 17. The nearest well (CP-00672) is approximately 0.8

mile northwest of the site in Section 7 at a similar elevation with a 1985 recorded water level of 460'bgs. The other well (CP-00566) is located approximately 2 miles north in Section 4 with a 1977 recorded water level of 65'bgs at a higher elevation. Because of the similar elevations of the site and well CP-00672, groundwater is estimated to occur at the site at approximately 460'bgs.

		Cł	nesap	eake Cor	noco Fede	ral #1 Batte	ry Area	Water Level Information	
	Ture	Daa	Can	Fasting	Morthing	Data	Water	Distance and Direction from Site	Elevation
Well Number	TWS	Ring	Sec	Easting	Noruning	Date	'bgs	Distance and Direction from Site	'amsl
CP 00566	18S	32E	4	615011	3627072	6/3/1977	65	11,950 feet northeast	3,861
CP 00672	18S	32E	7	612526	3624741	1/29/1985	460	4,615 feet northwest	3,759
						Sit	e: Ches	apeake Conoco Federal #1 Battery	3,765
Source: New Me	exico O	ffice of	the St	tate Engine	er Database.	Elevations in	terpolated	from the USGS Topographical map.	

#### 2.5 AREA SURFACE WATER BODIES

There are no permanent or intermittent surface water bodies within a 1,000-foot radius of the site.

# 3.0 NMOCD SITE RANKING

Based on the proximity of the site to protectable area water wells, surface water bodies, and depth to ground water, the site has an NMOCD ranking score of 0 points with the soil remedial goals highlighted below in the Site Ranking Matrix.

1. Gro	ound Water	2. V	Wellhead Protection Area	3. Distance to Surface Water Body
points	GW <50 feet: 20 GW 50 to 99 ts		' from water source, or;<200' vate domestic water source: 20	<200 horizontal feet: 20 points 200-100 horizontal feet: 10 points
If Depth to points	GW >100 feet: 0		' from water source, or; >200' vate domestic water source: $\theta$	>1000 horizontal fect: 0 points
Ground water	Score = 0	Wellhead	Protection Area Score= 0	Surface Water Score= 0
Site Rank (	(1+2+3) = 0 + 0	+ 0 =	0 points	
Total S	ite Ranking So	core and	l Acceptable Remedial G	oal Concentrations
Parameter	>19		10-19	0-9
Benzene <sup>1</sup>	10 ррт		10 ppm	10 ppm
BTEX <sup>1</sup>	50 ppm		50 ppm	50 ppm
ТРН	100 ppm		1000 ppm	5000 ppm

### 4.0 SOIL DELINEATION

On December 28, 2004, Chesapeake retained Environmental Plus, Inc. (EPI) to mitigate, delineate and remediate the release consistent with the NMOCD guidelines. Mitigation and remediation began on December 28, 2004. The impacted caliche around the tanks and the surface area northwest of the tanks on the facility pad down to a depth of approximately 1'bgs was excavated and disposed in the NMOCD approved and permitted Artesia Aeration Landfarm. The excavated area was backfilled with clean caliche, compacted and the facility berm reconstructed to a height of approximately 3-feet. Approximately 3-feet of soil (608 cubic yards (yd<sup>3</sup>)) was excavated from the remainder of the release area and blended with local clean soil. Composite samples of the excavation sidewalls and bottom were collected on December 30, 2004 and submitted to Environmental Lab of Texas (ELT) in Odessa, Texas for quantification of the CoCs. Analytical results from laboratory analyses of the excavation sidewall and bottom samples were all less than the CoC remedial goals. On January 5, 2005, composite samples were collected from the blended soil pile quadrants and submitted to ELT for quantification of the CoCs. Analytical results from laboratory analysis of the blended soil samples were all less than the CoC remedial goals. Subsequently, the excavation was backfilled with the remediated soil and contoured to the natural grade. The laboratory reports are included and the analytical results summarized in Attachment III and illustrated below. The site map showing the affected area is included in Attachment I.



Chesapeake Energy Conoco Federal #1 Tank Battery Total Petroleum Hydrocarbon 8015M (TPH) Delineation

#### Chesapeake Energy Conoco Federal #1 Tank Battery Benzene Delineation



BTEX Remedial Goal

Chesapeake





### 5.0 GROUND WATER INVESTIGATION

The CoC delineation information collected during remediation of the release does not warrant a groundwater investigation and concludes that this release did not impact ground water in excess of the WQCC standards.

### **6.0 CLOSURE JUSTIFICATION**

The information provided in this report documents achievement of the NMOCD site specific CoC remedial goals. EPI, on behalf of Chesapeake, requests that the NMOCD require "no further action" at this site. The site will be reseeded in the spring of 2005. The final NMOCD form C-141 is included in Attachment V.

Chesapeake

# ATTACHMENT I: SITE MAPS



CONOCO FEDERAL #1 BATTERY

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CONOCO FEDERAL #1 BATTERY



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CONOCO FEDERAL #1 BATTERY

# ATTACHMENT II: PHOTOGRAPHS

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Chesapeake Conoco Federal#1 Tank Battery – Final Contour



Chesapeake Conoco Federal#1 Tank Battery – Final Contour

# ATTACHMENT III: ANALYTICAL REPORTS AND SUMMARY

															Chesapeake
			Che UL-L See	sapeake ction 17, T	Conoco Federa 18S, R32E Lea C Analytical Results	ico F∈ 32E L cal Re	ederal #1 ea County sults	Battery New Mexi	8						
Sample Location	Sampling Interval	Sample	Sample ID	Sample Date	VOC <sup>2</sup> GRO <sup>3</sup>	GRO <sup>3</sup>	DRO⁴	HTPH (GRO+DRO )	BTEX <sup>5</sup>	Benzene	Toluene	Benzene Toluene Ethylbenzene p/m-Xylene o-Xylene	p/m-Xylene	o-Xylene	Chloride
	feet below ground surface	neeribiin			mqq	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
North Sidewall	0-3-feet	Composite	CCF#1 NSW	12/30/2004	1484	84.5	183	268	3.1130	0.1070	0.6010	0.6070	1.1600	0.6380	Q
North Flowpath	3-feet	Composite	CCF#1 N@3'	12/30/2004	100	QN	ΩŅ	DN	DN	QN	DN	QN	QN	DN	42.5
Southwest Sidewall	0-3-feet	Composite	CCF#1 SWSW	12/30/2004	188	QN	J[9.98]	ND	ND	QN	DN	DN	DN	DN	ND
Southwest Flowpath	3-feet	Composite	CCF#1 SW@3	12/30/2004	83.9	QN	DN	DN	DN	QN	DN	Q	g	Q	QN
Southeast Sidewall	0-3-feet	Composite	CCF#1 SESW	12/30/2004	495	10.2	64.6	74.8	QN	QN	QN	QN	g	an	QN
Southeast Flowpath	3-feet	Composite	CCF#1 SE@3'	12/30/2004	34.3	Q	DN	g	QN	Q	Q	QN	Q	QN	QN
Southwest Flowpath	ć						4	4	(	4			4	<u>(</u>	4
	Surrace	Composite	CCF#1 SWPSur	12/30/2004	4.ŭ	Ð	R	N	R	n	Ŋ	D	Ŋ	Ŋ	Q
Southwest Flowpath on Drill Pit	3-feet	Composite	CCF#1 SWP3'	12/30/2004	19.5	Q	QN	QN	0.1360	Q	0.0304	0.0456	0.0600	J[0.0222]	Q
Blending Cell	2-feet	Composite	CCF#1Blending Cell	12/30/2004	514	651	1660	2310	12.7076	0.0476	1.4800	2.8800	5.8100	2.4900	Q
Blending Cell	2-feet - northside	Composite	SCCR1504N	1/5/2005	227	291	899	1190	3.8060	QN	0.2160	0.7600	1.8700	0.9600	63.8
Blending Cell	2-feet - southside	Composite	SCCR1504S	1/5/2005	352	250	776	1030	3.3810	Q	0.2760	0.6870	1.5300	0.8880	g
Blending Cell	2-feet - eastside	Composite	SCCR1504E	1/5/2005	289	229	667	896	2.7390	g	0.1250	0.5430	1.2500	0.8210	42.5
Blending Cell	2-feet -westside	Composite	SCCR1504W	1/5/2005	386	164	532	696	1.3952	QN	0.0712	0.3020	0.7030	0.3190	21.3
			Method De	Method Detection Limits		10	10	10	0.0250	0.0250	0.0250	0.0250	0.0250	0.0250	0
			NMOCD Re	NMOCD Remedial Goals	100	-	1	5000	50.0000	10.0000	1	:	:		WQCC
WQCC <sup>1</sup> - New Mexico	Water Quality Cont	rol Commission, cl	WQCC <sup>1</sup> - New Mexico Water Quality Control Commission, chloride residuals cannot be	e capable of in	pacting	local gr	roundwater c	capable of impacting local groundwater or surface water above 250 mg/L	er above :	250 mg/L.					
VOC <sup>2</sup> - Volatile organic compounds/constituents	c compounds/consti	tuents													
GRO <sup>3</sup> - Gasoline Range Organics (C <sub>6</sub> - C <sub>12</sub> )	ge Organics (C <sub>6</sub> - C <sub>1</sub>	2)													
DRO <sup>4</sup> - Diesel Range Organics (C <sub>12</sub> - C <sub>35</sub> )	Organics (C <sub>12</sub> - C <sub>35</sub> )														
BTEX <sup>5</sup> - The mass su	m of benzene, toluer	ne, ethylbenzene, r	BTEX $^5$ - The mass sum of benzene, toluene, ethylbenzene, m/p-xylene, and o-xylene.												
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CONOCO FEDERAL #1 BATTERY



# **Analytical Report**

**Prepared for:** 

Pat McCasland Chesapeake Energy 5014 Carlsbad Highway Hobbs, NM 88240

Project: Conoco Federal #1 Project Number: None Given Location: None Given

Lab Order Number: 5A05016

Report Date: 01/11/05

– Chesapeake Energy	Project:	Conoco Federal #1		Fax: (505) 391-6679
5014 Carlsbad Highway	Project Number:	None Given		Reported:
Hobbs NM, 88240	Project Manager:	Pat McCasland		01/11/05 16:25

#### ANALYTICAL REPORT FOR SAMPLES

CCF#1 NSW CCF#1 N@3'	5A05016-01	Soil	12/20/04 00:00	
CCF#1 N@3'			12/30/04 09:00	01/05/05 13:36
Cer#Indo	5A05016-02	Soil	12/30/04 09:03	01/05/05 13:36
CCF#1 SWSW	5A05016-03	Soil	12/30/04 09:05	01/05/05 13:36
CCF#1 SW@3'	5A05016-04	Soil	12/30/04 09:07	01/05/05 13:36
CCF#1 SESW	5A05016-05	Soil	12/30/04 09:10	01/05/05 13:36
CCF#1 SE@3'	5A05016-06	Soil	12/30/04 09:12	01/05/05 13:36
CCF#1 SWPSur	5A05016-07	Soil	12/30/04 11:00	01/05/05 13:36
CCF#1 SW P 3'	5A05016-08	Soil	12/30/04 11:05	01/05/05 13:36
CCF#1 Blending Cell	5A05016-09	Soil	12/30/04 14:14	01/05/05 13:36

**Reported:** 01/11/05 16:25

#### Organics by GC

#### **Environmental Lab of Texas**

	······································	Deporting				<u></u>		· · · · · · · · · · · · · · · · · · ·	
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CCF#1 NSW (5A05016-01) Soil									
Benzene	0.107	0.0250	mg/kg dry	25	EA51003	01/06/05	01/09/05	EPA 8021B	
Toluene	0.601	0.0250	"	11		"		n	
Ethylbenzene	0.607	0.0250	"	.,	**	н		n	
Xylene (p/m)	1.16	0.0250	"	"	"	"	"	**	
Xylene (0)	0.638	0.0250	н	u	"	34	"	**	
Surrogate: a,a,a-Trifluorotoluene		143 %	80-12	20	u	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		144 %	80-12	20	"	a	"	**	S-04
Gasoline Range Organics C6-C12	84.5	10.0	mg/kg dry	1	EA50509	01/05/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	183	10.0				v	15	"	
Total Hydrocarbon C6-C35	268	10.0			"	U	**	"	
Surrogate: 1-Chlorooctane		108 %	70-13	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		83.6 %	70-13	30	"	"	"	"	
CCF#1 N@3' (5A05016-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	ND	0.0250	"	11	n	и	"		
Ethylbenzene	ND	0.0250	0	"	"	"	"	**	
Xylene (p/m)	ND	0.0250	"	11	р	0	U		
Xylene (o)	ND	0.0250	"		н	u	"		
Surrogate: a,a,a-Trifluorotoluene		96.4 %	80-12	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	80-12	20	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA50509	01/05/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	н	"	"	ħ	н		
Total Hydrocarbon C6-C35	ND	10.0	"	"	н	"	"	"	
Surrogate: 1-Chlorooctane		107 %	70-13	30	"	"	"	"	
Surrogate: I-Chlorooctadecane		76.8 %	70-13	30	"	"	11	"	
CCF#1 SWSW (5A05016-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"		"	11	
Ethylbenzene	ND	0.0250	"	"		n	"	"	
Xylene (p/m)	ND	0.0250	"	"	н	"	"	"	
Xylene (0)	ND	0.0250	н			11	н	9	
Surrogate: a,a,a-Trifluorotoluene		109 %	80-12	20	"	"	"	н	
Surrogate: 4-Bromofluorobenzene		113 %	80-12	20	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA50509	01/05/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	J [9.98]	10.0	"	11	"	11	"		J
Total Hydrocarbon C6-C35	ND	10.0	D			U.	"	"	

Environmental Lab of Texas

Chesapeake Energy			Project: Con	oco Feder	ral #1			Fax: (50:	5) 391-6679
5014 Carlsbad Highway		•	Number: Non					-	orted:
Hobbs NM, 88240		Project N	fanager: Pat ]	McCaslan	d			01/11/	05 16:25
		0	rganics by	y GC					
		Environ	mental La	ab of T	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
CCF#1 SWSW (5A05016-03) Soil									
Surrogate: 1-Chlorooctane		100 %	70-1.	30	EA50509	01/05/05	01 07 05	EPA 8015M	
Surrogate: 1-Chlorooctadecane		76.0 %	70-13	30	"	"	"	"	
CCF#1 SW@3' (5A05016-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	ND	0.0250	n	"	"	"	14		
Ethylbenzene	ND	0.0250	14	**		"	н		
Xylene (p/m)	ND	0.0250	u	"		"	**	"	
Xylene (o)	ND	0.0250	"			"	"	"	
Surrogate: a,a,a-Trifluorotoluene		98.3 %	80-12	20	"	n	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	80-12	0	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA50509	01/05/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0				"	u.	"	
Total Hydrocarbon C6-C35	ND	10.0	v	u		**	n		
Surrogate: I-Chlorooctane		103 %	70-13	0	"	"	"	н .	
Surrogate: 1-Chlorooctadecane		75.0 %	70-13	0	"	"	"	"	
CCF#1 SESW (5A05016-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	ND	0.0250	n			u		n,	
Ethylbenzene	ND	0.0250	u	**	"	"		. 11	
Xylene (p/m)	ND	0.0250	"	"	"	*	"	*	
Xylene (o)	ND	0.0250	"		"	"	<b>н</b>		
Surrogate: a,a,a-Trifluorotoluene		102 %	80-12	0	"	"	"	11	
Surrogate: 4-Bromofluorobenzene		119 %	80-12	0	"	"	"	n	
Gasoline Range Organics C6-C12	10.2	10.0	mg/kg dry	1	EA50509	01/05/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	64.6	10.0		*		"	*1	· •	
Total Hydrocarbon C6-C35	74.8	10.0	"		м	II	*1	**	
Surrogate: 1-Chlorooctane		104 %	70-13	0	"	"	"	"	
Surrogate: 1-Chlorooctadecane		76.8 %	70-13	0	"	"	"	"	

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#### Organics by GC

#### **Environmental Lab of Texas**

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CCF#1 SE@3' (5A05016-06) Soil				······					
Benzene	ND	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	ND	0.0250	"	**	"		**	"	
Ethylbenzene	ND	0.0250	**	11	"	n			
Xylene (p/m)	ND	0.0250	н		н	"	μ	"	
Xylene (0)	ND	0.0250	u	"	"		"	11	
Surrogate: a,a,a-Trifluorotoluene	¥	102 %	80-1	120	n	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	80-1	120	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA50509	01/05/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	**	"	"	u	и	
Total Hydrocarbon C6-C35	ND	10.0	n	"	н	"	u	11	
Surrogate: 1-Chlorooctane		98.0 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		72.6 %	70-1	130	"	"	"	"	
CCF#1 SWPSur (5A05016-07) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	ND	0.0250	н	**	U.	"	"	11	
Ethylbenzene	ND	0.0250	n	•	n	"		"	
Xylene (p/m)	ND	0.0250	н	**	"	"	н		
Xylene (0)	ND	0.0250	и 			"	n	н	
Surrogate: a,a,a-Trifluorotoluene		106 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		115 %	80-1	120	".	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA50509	01/05/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	11		"	n	"	н	
Total Hydrocarbon C6-C35	ND	10.0	11	H	11	"	*1	"	
Surrogate: 1-Chlorooctane		82.8 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.2 %	70-1	130	"	"	"	"	
CCF#1 SW P 3' (5A05016-08) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	0.0304	0.0250	"		"	"		n	
Ethylbenzene	0.0456	0.0250		"	н	"		н	
Xylene (p/m)	0.0600	0.0250	"			н	11	"	
Xylene (0)	J [0.0222]	0.0250	n	п	u	*	"	н	J
Surrogate: a,a,a-Trifluorotoluene		100 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		114 %	80-1	120	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA50509	01/05/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	u	"	n	"	н	n	
Total Hydrocarbon C6-C35	ND	10.0	"	u		n	U.	"	

Environmental Lab of Texas

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#### Organics by GC

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit		Dilution	Batch	Prepared	Analyzed	Method	Notes
CCF#1 SW P 3' (5A05016-08) Soil									
Surrogate: 1-Chlorooctane		94.8 %	70-1	30	EA50509	01 05 05	01 07 05	EPA 8015M	
Surrogate: 1-Chlorooctadecane		78.4 %	70-1	30	"	"	"	"	
CCF#1 Blending Cell (5A05016-09) Soil									
Benzene	0.0476	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	1.48	0.0250	n	Þ	**	u	n	n	
Ethylbenzene	2.88	0.0250	*		"	n	*	**	
Xylene (p/m)	5.81	0.0250	"	•	"	**		n	
Xylene (0)	2.49	0.0250	"	"	"		n	n	
Surrogate: a,a,a-Trifluorotoluene		154 %	80-1	20	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		168 %	80-1	20	"	"	"	"	S-04
Gasoline Range Organics C6-C12	651	10.0	mg/kg dry	1	EA50509	01/05/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	1660	10.0		"	"	u	n	"	
Total Hydrocarbon C6-C35	2310	10.0	"	"		**	н		
Surrogate: 1-Chlorooctane		114 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		109 %	70-1	30	"	"	"	"	

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### General Chemistry Parameters by EPA / Standard Methods

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
CCF#1 NSW (5A05016-01) Soil						-		<u>.                                    </u>	
Chloride	ND	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	16.5		%	"	EA50511	01/05/05	01/06/05	% calculation	
CCF#1 N@3' (5A05016-02) Soil									
Chloride	42.5	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	6.5		%	u.	EA50511	01/05/05	01/06/05	% calculation	
CCF#1 SWSW (5A05016-03) Soil		<u></u>							
Chloride	ND	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	0.2		%	"	EA50511	01/05/05	01/06/05	% calculation	
CCF#1 SW@3' (5A05016-04) Soil									
Chloride	ND	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	4.1		%	ч	EA50511	01/05/05	01/06/05	% calculation	
CCF#1 SESW (5A05016-05) Soil									
Chloride	ND	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	0.4		%	"	EA50511	01/05/05	01/06/05	% calculation	
CCF#1 SE@3' (5A05016-06) Soil									
Chloride	ND	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	8.5		%	"	EA50511	01/05/05	01/06/05	% calculation	
CCF#1 SWPSur (5A05016-07) Soil									
Chloride	ND	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	18.1		%	"	EA50511	01/05/05	01/06/05	% calculation	
CCF#1 SW P 3' (5A05016-08) Soil									
Chloride	ND	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	4.8		%	"	EA50511	01/05/05	01/06/05	% calculation	

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Chesapeake Energy	Project: C	Conoco Federal #1	Fax: (505) 391-6679
5014 Carlsbad Highway	Project Number: N	None Given	Reported:
Hobbs NM, 88240	Project Manager: Pa	at McCasland	01/11/05 16:25

#### General Chemistry Parameters by EPA / Standard Methods

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
CCF#1 Blending Cell (5A05016-09) Soil								
Chloride	ND	2.50 mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	1.6	%		EA50511	01/05/05	01/06/05	% calculation	

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#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

	<b>D</b> 1	Reporting	** '4	Spike	Source	AVREC.	%REC		RPD	<b>N</b> T (
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EA50509 - Solvent Extraction (GC)										
Blank (EA50509-BLK1)				Prepared: 0	01/05/05 Ai	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0								
Surrogate: 1-Chlorooctane	38.9		mg kg	50.0		77.8	70-130	·		,
Surrogate: 1-Chlorooctadecane	36.4		"	50.0		72.8	70-130			
Blank (EA50509-BLK2)				Prepared: 0	01/06/05 Ar	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet			_				
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	0							
Surrogate: 1-Chlorooctane	39.0		mg kg	50.0		78.0	70-130			
Surrogate: 1-Chlorooctadecane	38.3		"	50.0		76.6	70-130			
LCS (EA50509-BS1)				Prepared: 0	01/05/05 Ar	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	478	10.0	mg/kg wet	500		95.6	75-125			
Diesel Range Organics >C12-C35	502	10.0	"	500		100	75-125			
Total Hydrocarbon C6-C35	980	10.0		1000		98.0	75-125			
Surrogate: 1-Chlorooctane	49.3	<u> </u>	mg kg	50.0		98.6	70-130			
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130			
LCS (EA50509-BS2)				Prepared: 0	1/06/05 Ar	nalyzed: 01	/07/05	_		
Gasoline Range Organics C6-C12	475	10.0	mg/kg wet	500		95.0	75-125			
Diesel Range Organics >C12-C35	490	10.0	"	500		<b>98</b> .0	75-125			
Total Hydrocarbon C6-C35	965	10.0	"	1000		96.5	75-125			
Surrogate: 1-Chlorooctane	48.4		mg kg	50.0		96.8	70-130			
Surrogate: 1-Chlorooctadecane	36.6		"	50.0		73.2	70-130			
Calibration Check (EA50509-CCV1)				Prepared: 0	1/05/05 Ar	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	553		mg/kg	500		111	80-120			
Diesel Range Organics >C12-C35	576		*	500		115	80-120			
Total Hydrocarbon C6-C35	1130			1000		113	80-120			
Surrogate: 1-Chlorooctane	58.7		"	50.0		117	70-130			
Surrogate: 1-Chlorooctadecane	39.0		**	50.0		78.0	70-130			

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### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analista	Decelt	Reporting		Spike	Source	4/BEG	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EA50509 - Solvent Extraction (GC)										
Calibration Check (EA50509-CCV2)				Prepared: (	01/06/05 A	analyzed: 0	1/07/05			
Gasoline Range Organics C6-C12	545		mg/kg	500		109	80-120	· · · · · ·		•
Diesel Range Organics >C12-C35	568		"	500		114	80-120			
Total Hydrocarbon C6-C35	1110		"	1000		111	80-120			
Surrogate: 1-Chlorooctane	57.3		"	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	38.0		"	50.0		76.0	70-130			
Matrix Spike (EA50509-MS1)	Sou	rce: 5A05010	5-04	Prepared: (	)1/05/05 A	nalyzed: 01	1/07/05			
Gasoline Range Organics C6-C12	543	10.0	mg/kg dry	521	ND	104	75-125			**
Diesel Range Organics >C12-C35	593	10.0	"	521	ND	114	75-125			
Total Hydrocarbon C6-C35	1140	10.0	"	1040	ND	110	75-125			
Surrogate: 1-Chlorooctane	59.4		mg kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	44.5		"	50.0		89.0	70-130			
Matrix Spike (EA50509-MS2)	Sour	rce: 5A06011	-10	Prepared: (	1/06/05 A	nalyzed: 01	1/07/05			
Gasoline Range Organics C6-C12	632	10.0	mg/kg dry	574	6.96	109	75-125			
Diesel Range Organics >C12-C35	794	10.0		574	162	110	75-125			
Total Hydrocarbon C6-C35	1430	10.0	н	1150	162	110	75-125			
Surrogate: 1-Chlorooctane	52.9		mg kg	50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	42.6		"	50.0		85.2	70-130			
Matrix Spike Dup (EA50509-MSD1)	Sour	ce: 5A05016	i-04	Prepared: 0	1/05/05 A	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	579	10.0	mg/kg dry	521	ND	111	75-125	6.42	20	
Diesel Range Organics >C12-C35	580	10.0	"	521	ND	111	75-125	2.22	20	
Fotal Hydrocarbon C6-C35	1160	10.0	"	1040	ND	112	75-125	1.74	20	
Surrogate: 1-Chlorooctane	60.0		mg kg	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	38.4		"	50.0		76.8	70-130			
Matrix Spike Dup (EA50509-MSD2)	Sour	ce: 5A06011		Prepared: 0	1/06/05 A	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	644	10.0	mg/kg dry	574	6.96	111	75-125	1.88	20	
Diesel Range Organics >C12-C35	770	10.0		574	162	106	75-125	3.07	20	
Total Hydrocarbon C6-C35	1410	10.0		1150	162	109	75-125	1.41	20	
Surrogate: 1-Chlorooctane	53.0		mg kg	50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	42.5		"	50.0		85.0	70-130			

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#### **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

		Reporting	<b>.</b>	Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EA51003 - EPA 5030C (GC)										
Blank (EA51003-BLK1)				Prepared &	Analyzed:	01/06/05				
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250								
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	н							
Xylene (0)	ND	0.0250								
Surrogate: a,a,a-Trifluorotoluene	84.8		ug kg	100		84.8	80-120			
Surrogate: 4-Bromofluorobenzene	97.7		"	100		97.7	80-120			
LCS (EA51003-BS1)				Prepared &	Analyzed:	01/06/05				
Benzene	91.3		ug/kg	100		91.3	80-120			
Toluene	95.5		••	100		95.5	80-120			
Ethylbenzene	104			100		104	80-120			
Xylene (p/m)	231		и	200		116	80-120			
Xylene (0)	112		**	100		112	80-120			
Surrogate: a,a,a-Trifluorotoluene	115		"	100		115	80-120			
Surrogate: 4-Bromofluorobenzene	119		"	100		119	80-120			
Calibration Check (EA51003-CCV1)				Prepared: 0	1/06/05 A	nalyzed: 01	/09/05			
Benzene	99.9		ug/kg	100		99.9	80-120			
Toluene	104		"	100		104	80-120			
Ethylbenzene	99.4		"	100		99.4	80-120			
Xylene (p/m)	215		в	200		108	80-120			
Xylene (0)	101		**	100		101	80-120			
Surrogate: a,a,a-Trifluorotoluene	117		"	100		117	80-120			
Surrogate: 4-Bromofluorobenzene	115		"	100		115	80-120			
Matrix Spike (EA51003-MS1)	Sou	rce: 5A05015	-08	Prepared: 0	1/06/05 Ai	nalyzed: 01	/09/05			
Benzene	101		ug/kg	100	ND	101	80-120			
Toluene	106		"	100	ND	106	80-120			
Ethylbenzene	106		"	100	ND	106	80-120			
Xylene (p/m)	232		"	200	ND	116	80-120			
	105		'n	100	ND	105	80-120			
Xylene (0)	105			100	THE	105	00 120			
Xylene (0) Surrogate: a,a,a-Trifluorotoluene	105			100		115	80-120	····		

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#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EA51003 - EPA 5030C (GC)									`	
Matrix Spike Dup (EA51003-MSD1)	Sour	ce: 5A05015-08	3	Prepared: 0	01/06/05 A	nalyzed: 01	/09/05			
Benzene	99.0		ug/kg	100	ND	99.0	80-120	2.00	20	
Toluene	104		"	100	ND	104	80-120	1.90	20	
Ethylbenzene	107		н	100	ND	107	80-120	0.939	20	
Xylene (p/m)	236		"	200	ND	118	80-120	1.71	20	
Xylene (0)	110		97	100	ND	110	80-120	4.65	20	
Surrogate: a,a,a-Trifluorotoluene	115		"	100		115	80-120			•
Surrogate: 4-Bromofluorobenzene	119		"	100		119	80-120			

#### Batch EA51105 - EPA 5030C (GC)

Blank (EA51105-BLK1)		Prepared & Analyzed: 01/10/05									
Benzene	ND	0.0250	mg/kg wet								
Toluene	ND	0.0250	"								
Ethylbenzene	ND	0.0250	**								
Xylene (p/m)	ND	0.0250									
Xylene (0)	ND	0.0250	"								
Surrogate: a,a,a-Trifluorotoluene	107		ug kg	100	107	80-120					
Surrogate: 4-Bromofluorobenzene	90.1		"	100	90.1	80-120					
LCS (EA51105-BS1)				Prepared & Ana	lyzed: 01/10/05						
Benzene	93.5		ug/kg	100	93.5	80-120	· · · · · · · · · · · · · · · · · · ·				
Toluene	97.9		"	100	97.9	80-120					
Ethylbenzene	102		"	100	102	80-120					
Xylene (p/m)	224		н	200	112	80-120					
Xylene (o)	106		н	100	106	80-120					
Surrogate: a,a,a-Trifluorotoluene	106		"	100	106	80-120					
Surrogate: 4-Bromofluorobenzene	116		"	100	116	80-120					

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#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit Unit:	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA51105 - EPA 5030C (GC)									
Calibration Check (EA51105-CCV1)			Prepared &	& Analyzed	: 01/10/05				
Benzene	99.4	ug/kg	g 100		99.4	80-120			
Toluene	102	"	100		102	80-120			
Ethylbenzene	96.9	"	100	100 96.9		80-120			
Xylene (p/m)	208	"	200		104	80-120			
Xylene (0)	98.0	н	100		98.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	120	"	100		120	80-120			
Surrogate: 4-Bromofluorobenzene	112	"	100		112	80-120			
Matrix Spike (EA51105-MS1)	Sour	ce: 5A06011-05	Prepared &	& Analyzed:	01/10/05				
Benzene	97.4	ug/kį	100	ND	97.4	80-120			
Toluene	105	"	100	ND	105	80-120			
Ethylbenzene	106	"	100	ND	106	80-120			
Xylene (p/m)	234	11	200	ND	117	80-120			
Xylene (o)	110	"	100	ND	110	80-120			
Surrogate: a,a,a-Trifluorotoluene	117	"	100		117	80-120			
Surrogate: 4-Bromofluorobenzene	119	0	100		119	80-120			
Matrix Spike Dup (EA51105-MSD1)	Sour	ce: 5A06011-05	Prepared &	& Analyzed:	01/10/05				
Benzene	103	ug/kg	100	ND	103	80-120	5.59	20	
Toluene	108		100	ND	108	80-120	2.82	20	
Ethylbenzene	108	n	100	ND	108	80-120	1.87	20	
Xyiene (p/m)	236	11	200	ND	118	80-120	0.851	20	
Xylene (0)	109	"	100	ND	109	80-120	0.913	20	
Surrogate: a,a,a-Trifluorotoluene	110	"	100	·	110	80-120			
Surrogate: 4-Bromofluorobenzene	118	"	100		118	80-120			

Environmental Lab of Texas

Chesapeake Energy		Р	roject: Co	noco Federal	#1	•			Fax: (505)	391 <b>-6</b> 679			
5014 Carlsbad Highway			umber: Noi						Repo	rted:			
Hobbs NM, 88240				McCasland					01/11/05 16:25				
Concred Ch	emistry Para	motors by		Standard	Moth	ode Ou		trol					
General Ch	-	Environn				ous - Qua	inty COn	11 01					
		Reporting	**	Spike	Source		%REC		RPD	<b></b> .			
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes			
Batch EA50511 - General Preparation (P	rep)												
Blank (EA50511-BLK1)				Prepared: (	1/05/05	Analyzed: 0	1/06/05						
% Moisture	0.001		%										
Duplicate (EA50511-DUP1)	Sour	rce: 5A04009-	-01	Prepared: (	1/05/05	Analyzed: 0	1/06/05						
% Moisture	8.9		%		8.4			5.78	20				
Batch EA51006 - Water Extraction													
Blank (EA51006-BLK1)				Prepared: 0	1/06/05	Analyzed: 0	1/10/05						
Chloride	ND	2.50	mg/kg Wet										
Matrix Spike (EA51006-MS1)	Sour	·ce: 5A05016-	-01	Prepared: 0	1/06/05	Analyzed: 0	1/10/05						
Chloride	436	2.50	mg/kg Wet	500	0.00	87.2	80-120			<u> </u>			
Matrix Spike Dup (EA51006-MSD1)	Sour	re: 5A05016-	-01	Prepared: 0	1/06/05	Analyzed: 0	1/10/05						
	447	2.50	mg/kg Wet	500	0.00	89.4	80-120	2.49	20				
			00										
Reference (EA51006-SRM1)	<u></u>			•	1/06/05	Analyzed: 0			7				
Chloride	5100	2.50	mg/kg Wet	5000		102	80-120						

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 13 of 14

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Addeb NM, 88340       Project Manuger: Pat McCalind       01/1103 10.23         State       Notes and Definitions       States and Definitions         State       Detected but below the Reporting Limit, therefore, result is an estimated concentration (CLP J-Fing)       Addre NOT DEFECTED         Addre NOT DEFECTED       Addre NOT DEFECTED or on above the reporting limit       Addre NOT DEFECTED or a down the reporting limit         Mode Agened       Addre NOT DEFECTED or a down the reporting limit       Addre NOT DEFECTED or a down the reporting limit         Mode Agened       Addre NOT DEFECTED or a down the reporting limit       Addre NOT DEFECTED or a down the reporting limit         Mode Agened       Addre NOT DEFECTED or a down the reporting limit       Addre NOT DEFECTED or a down the reporting limit         Mode Agened       Addre NOT DEFECTED or a down the reporting limit       Addre NoT DEFECTED or a down the reporting limit         Mode Agened       Addre NoT DEFECTED or a down the reporting limit       Addre NoT DEFECTED or a down the reporting limit         Mode Agened       Addre NoT DEFECTED or a down the reporting limit       Addre NoT DEFECTED or a down the reporting limit         Mode Agened       Detected by Devector Composition Splite       Addre NoT DEFECTED or a down the report down the repo		ake Energy rIsbad Highway	Project: Conoco Federal #1 Project Number: None Given	Reported:
Geometry for this sample is outside of established control limits due to a sample matrix effect. Date of below the Reporting Limit, therefore, result is an estimated concentration (CLP J-Flag). Series Analyse DETECTED Analyse DETECTED or or above the reporting limit Was Reported. Series Approved By:		-		01/11/05 16:25
Detected but below the Reporting Limit, therefore, result is an estimated concentration (CLP J-Flag). Analyse DETECTED Analyse NTI DETECTED is at shows the regoring time. Sample results operated on a dy weight basis By Sample results operated on a dy weight basis By Saturbase Coursed by Bits Catabase Course Differences By Date:			Notes and Definitions	
DEF: Analyse DEFECTED   No Analyse NOT DEFECTED or advowe the reporting limit.   No No Ne Poproted   No Sample result: sponted on a dry weight basis   DD: Laboure:   Lo: Laboure:   Addition of the sponted Laboure:   No Marine Space   DD: Laboure:   Addition: Laboure:   Additio	S-04	The surrogate recovery for this sample is outside	e of established control limits due to a sample matrix effect.	
No Analyse NOT DETICTED at or above the reporting limit.   No Not Reported   try Sergite results reported of an ady weight busis.   Liberatory Centrol Spite.   No Marit Spike   Dagit of Deticted of the individual of the sergit of the individual of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.   Ryour Marter Each of Texas	l	Detected but below the Reporting Limit; therefo	ore, result is an estimated concentration (CLP J-Flag).	
NK Not Reported   Igo Sample results reported on a dy weight basis   RCD Editive Precent Difference   LSD Laboratory Control Splic   MS Marins Splic   Marin Splic Difference   Papticate   Report Approved By:	DET	Analyte DETECTED		
In Supple reality reported on a dy weight basis  In Katarée Perceau Difference  Lis Laboratory Control Splic  Advines Splic  Date:	ND	Analyte NOT DETECTED at or above the reporting li	imit	
R2D       Relative Percent Difference.         L3S       Laboratory Control Splice.         N3       Matrix Splite         Tage       Diplicate    Report Approved By:	NR	Not Reported		
CG Labentory Control Spice Mark Spike Day Dupticate  Report Approved By:  Report Approved By:  Report Approved By:  Readed Control Co	dry	Sample results reported on a dry weight basis		
Mars Spile Type Dupticate  Age of Mars Spile Type Dupticate  Age of Mars Spile  Age of Age of Texas  Age of Age	RPD	Relative Percent Difference		
Duptors         Report Approved By:	LCS	Laboratory Control Spike		
Report Approved By:	MS	Matrix Spike		
Raland K. Tuttle, Lab Manager       Jeanne Mc Murrey, Inorg. Tech Director         Celey D. Keene, Lab Director, Org. Tech Director       James L. Hawkins, Chemist/Geologist         Peggy Allen, QA Officer       Sandra Sanchez, Lab Tech.         This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.       If you have received this material in error, please notify us immediately at 432-563-1800.         If you have received this material in error, please notify us immediately at 432-563-1800.       The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.       Page 14	Dup	Duplicate		
Raland K. Tuttle, Lab Manager       Jeanne Mc Murrey, Inorg. Tech Director         Celey D. Keene, Lab Director, Org. Tech Director       James L. Hawkins, Chemist/Geologist         Peggy Allen, QA Officer       Sandra Sanchez, Lab Tech.         This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.       If you have received this material in error, please notify us immediately at 432-563-1800.         Environmental Lab of Texas       The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.				
Celey D. Keene, Lab Director, Org. Tech Director       James L. Hawkins, Chemist/Geologist         Peggy Allen, QA Officer       Sandra Sanchez, Lab Tech.         This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.       If you have received this material in error, please notify us immediately at 432-563-1800.         Invironmental Lab of Texas       The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.         Page 14	Repor	t Approved By: Raland 1	K. Juil	
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Environmental Lab of Texas The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas. Page 14	Ralan Celey	d K. Tuttle, Lab Manager D. Keene, Lab Director, Org. Tech Director	Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist	
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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713	Ralan Celey Peggy This r inform	d K. Tuttle, Lab Manager D. Keene, Lab Director, Org. Tech Director Allen, QA Officer naterial is intended only for the use of the indiv nation that is privileged and confidential.	Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech. vidual (s) or entity to whom it is addressed, and may contain	
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Environmertal Lab of Texas, 12600 West I-20 East Phone: 915-563-18 Odessa Texas 79763 Fax: 915-563-17 Project Manager: Pat McCasland Company Name: Chosapeake Erergy Company Address: 5014 Carlsbad H Company Address: 5014 Carlsbad H City/State/Zip: Hobbs NM CS240 Telephone No: 505-441-1268 Br						CCF#1 SWP8ur							F.		Special Instructions	Relinquished	Relinquished	ġ	
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# **Environmental Lab of Texas** Variance / Corrective Action Report - Sample Log-In

Client: CH	resapeake Freizy
Date/Time:	01-05-05@1336
Order #:	54 05016
Initials:	JMM

### Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	OS C
Shipping container/cooler in good condition?	Yes	No	NIA
Custody Seals intact on shipping container/cooler?	Yes	No	Not present MA
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Ves)	No	
Chain of Custody signed when relinquished and received?	res	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Kes	No	
Sample Matrix and properties same as on chain of custody?	(res)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	Ves	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	(res)	No	
All samples received within sufficient hold time?	Ves	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations:

#### Variance Documentation: Date/Time:

Contact Person: Regarding:	Date/Time:	Contacted by:
Corrective Action Taken:		
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#### 12600 West 1-20 East - Odessa, Texas 79765

# Analytical Report

Prepared for:

Pat McCasland Chesapeake Energy 5014 Carlsbad Highway Hobbs, NM 88240

Project: Conoco Federal #1 Project Number: None Given Location: None Given

Lab Order Number: 5A06003

Report Date: 01/12/05

Chesapeake Energy	Project:	Conoco Federal #1	Fa
5014 Carlsbad Highway	Project Number:	None Given	
Hobbs NM, 88240	Project Manager:	Pat McCasland	

l

#### Fax: (505) 391-6679

**Reported:** 01/12/05 10:03

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SCCF1504N	5A06003-01	Soil	01/05/05 15:35	01/06/05 09:30
SCCF1504S	5A06003-02	Soil	01/05/05 15:37	01/06/05 09:30
SCCF1504E	5A06003-03	Soil	01/05/05 15:39	01/06/05 09:30
SCCF1504W	5A06003-04	Soil	01/05/05 15:41	01/06/05 09:30

**Reported:** 01/12/05 10:03

#### Organics by GC

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SCCF1504N (5A06003-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	0.216	0.0250	"	*1	"	"	н	"	
Ethylbenzene	0.760	0.0250	*				*		
Xylene (p/m)	1.87	0.0250	n	"	"	n	п	"	
Xylene (0)	0.960	0.0250	"	"	n	n		"	
Surrogate: a,a,a-Trifluorotoluene		117 %	80-1.	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		151 %	80-1.	20	"	"	"	"	S-0
Gasoline Range Organics C6-C12	291	10.0	mg/kg dry	1	EA50509	01/06/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	899	10.0	н		"	•	"		
Fotal Hydrocarbon C6-C35	1190	10.0	n	**	μ	"	*	н	
Surrogate: 1-Chlorooctane		104 %	70-1.	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		93.0 %	70-1.	30	"	"	"	"	
SCCF1504S (5A06003-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Foluene	0.276	0.0250	"		"	0	**	"	
Ethylbenzene	0.687	0.0250		•	"	u		н	
Kylene (p/m)	1.53	0.0250	н		N	n			
Kylene (o)	0.888	0.0250	"	п	"		μ		
Surrogate: a,a,a-Trifluorotoluene		112 %	80-12	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		128 %	80-12	20	"	"	"	"	S-0-
Gasoline Range Organics C6-C12	250	10.0	mg/kg dry	1	EA50509	01/06/05	01/10/05	EPA 8015M	
Diesel Range Organics >C12-C35	776	10.0	"	"		"	**	"	
Total Hydrocarbon C6-C35	1030	10.0	"	"		u	"	11	
Surrogate: 1-Chlorooctane		113 %	70-1.	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		99.4 %	70-13	30	"	"	"	"	
SCCF1504E (5A06003-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	0.125	0.0250	**	"	и	"	"	**	
Ethylbenzene	0.543	0.0250	"		*	"	н	**	
Kylene (p/m)	1.25	0.0250	n			"	N	<b>19</b>	
Xylene (o)	0.821	0.0250	н	н	*	н	н	**	
Surrogate: a,a,a-Trifluorotoluene		124 %	80-12	20	"	"	"	"	S-0-
Surrogate: 4-Bromofluorobenzene		139 %	80-12	20	"	"	"	"	S-0-
Gasoline Range Organics C6-C12	229	10.0	mg/kg dry	1	EA50509	01/06/05	01/07/05	EPA 8015M	
Diesel Range Organics >C12-C35	667	10.0	**		"	"		"	
Total Hydrocarbon C6-C35	896	10.0	"	"	"		**	IF	
Environmental Lab of Texas			The per	den in ehin n	an and some last a	41	-1	ance with the samples	

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Page 2 of 10

#### Project: Conoco Federal #1 Project Number: None Given Project Manager: Pat McCasland

01/12/05 10:03

#### Organics by GC

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SCCF1504E (5A06003-03) Soil									
Surrogate: 1-Chlorooctane		108 %	70-1	130	EA50509	01 06 05	01 07:05	EPA 8015M	
Surrogate: 1-Chlorooctadecane		93.4 %	70-1	130	"	"	"	"	
SCCF1504W (5A06003-04) Soil									
Benzene	ND	0.0250	mg/kg dry	. 25	EA51105	01/10/05	01/10/05	EPA 8021B	
Toluene	0.0712	0.0250	"	"	н	"		"	
Ethylbenzene	0.302	0.0250	"	IT	"				
Xylene (p/m)	0.703	0.0250	"		11	11	"	"	
Xylene (0)	0.319	0.0250	"	•	n	"	"	li i	
Surrogate: a,a,a-Trifluorotoluene		116 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	164	10.0	mg/kg dry	1	EA50509	01/06/05	01/10/05	EPA 8015M	
Diesel Range Organics >C12-C35	532	10.0	"	17			"	"	
Total Hydrocarbon C6-C35	696	10.0	"		н	"	n	н	
Surrogate: 1-Chlorooctane		111%	70-1	30	n	"	"	"	
Surrogate: 1-Chlorooctadecane		87.6%	70-1	30	"	"	"	"	

Environmental Lab of Texas

Chesapeake Energy 5014 Carlsbad Highway Hobbs NM, 88240

#### Project: Conoco Federal #1 Project Number: None Given Project Manager: Pat McCasland

**Reported:** 01/12/05 10:03

#### General Chemistry Parameters by EPA / Standard Methods

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit		Dilution	Batch	Prepared	Analyzed	Method	Notes
SCCF1504N (5A06003-01) Soil						-			
Chloride	63.8	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	5.9		%	**	EA50621	01/06/05	01/07/05	% calculation	
SCCF1504S (5A06003-02) Soil								.*	
Chloride	ND	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	5.5		%	"	EA50621	01/06/05	01/07/05	% calculation	
SCCF1504E (5A06003-03) Soil	· ·								
Chloride	42.5	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	5.7		%	"	EA50621	01/06/05	01/07/05	% calculation	
SCCF1504W (5A06003-04) Soil							_		
Chloride	21.3	2.50	mg/kg Wet	1	EA51006	01/06/05	01/10/05	SW 846 9253	
% Moisture	5.6		%	"	EA50621	01/06/05	01/07/05	% calculation	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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**Reported:** 01/12/05 10:03

#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

	D cl4	Reporting	T le ite	Spike	Source	NDEC	%REC	DDD	RPD	37.4
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EA50509 - Solvent Extraction (GC)										
Blank (EA50509-BLK1)				Prepared: (	)1/05/05 Ar	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0								
Total Hydrocarbon C6-C35	ND	10.0	в							
Surrogate: 1-Chlorooctane	38.9		mg kg	50.0		77.8	70-130			
Surrogate: 1-Chlorooctadecane	36.4		15	50.0		72.8	70-130			
Blank (EA50509-BLK2)				Prepared: (	)1/06/05 Ar	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet						·	
Diesel Range Organics >C12-C35	ND	10.0								
Total Hydrocarbon C6-C35	ND	10.0								
Surrogate: 1-Chlorooctane	39.0		mg 'kg	50.0		78.0	70-130			
Surrogate: 1-Chlorooctadecane	38.3		"	50.0		76.6	70-130			
LCS (EA50509-BS1)				Prepared: 0	)1/05/05 Ar	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	478	10.0	mg/kg wet	500		95.6	75-125			
Diesel Range Organics >C12-C35	502	10.0		500		100	75-125			
Total Hydrocarbon C6-C35	980	10.0	"	1000		98.0	75-125			
Surrogate: 1-Chlorooctane	49.3		mg kg	50.0		98.6	70-130			
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130			
LCS (EA50509-BS2)				Prepared: 0	)1/06/05 Ar	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	475	10.0	mg/kg wet	500		95.0	75-125			
Diesel Range Organics >C12-C35	490	10.0	"	500		98.0	75-125			
Total Hydrocarbon C6-C35	965	10.0	"	1000		96.5	75-125			
Surrogate: 1-Chlorooctane	48.4		mg kg	50.0		96.8	70-130			
Surrogate: 1-Chlorooctadecane	36.6		"	50.0		73.2	70-130			
Calibration Check (EA50509-CCV1)				Prepared: 0	01/05/05 Ar	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	553		mg/kg	500		111	80-120			
Diesel Range Organics >C12-C35	576		**	500		115	80-120			
Total Hydrocarbon C6-C35	1130		"	1000		113	80-120			
Surrogate: 1-Chlorooctane	58.7		"	50.0		117	70-130			
Surrogate: 1-Chlorooctadecane	39.0		"	50.0		78.0	70-130			

Environmental Lab of Texas

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Chesapeake Energy 5014 Carlsbad Highway Hobbs NM, 88240 Project: Conoco Federal #1 Project Number: None Given Project Manager: Pat McCasland Fax: (505) 391-6679

**Reported:** 01/12/05 10:03

#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA50509 - Solvent Extraction (GC)										
Calibration Check (EA50509-CCV2)				Prepared: (	01/06/05 A	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	545		mg/kg	500		109	80-120			
Diesel Range Organics >C12-C35	568			500		114	80-120			
Total Hydrocarbon C6-C35	1110		U II	1000		111	80-120			
Surrogate: 1-Chlorooctane	57.3		"	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	38.0		"	50.0		76.0	70-130			
Matrix Spike (EA50509-MS1)	Sou	rce: 5A05010	i-04	Prepared: 0	)1/05/05 Ai	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	543	10.0	mg/kg dry	521	ND	104	75-125			
Diesel Range Organics >C12-C35	593	10.0	n	521	ND	114	75-125			
Total Hydrocarbon C6-C35	1140	10.0	*	1040	ND	110	75-125			
Surrogate: 1-Chlorooctane	59.4		mg kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	44.5		"	50.0		89.0	70-130			
Matrix Spike (EA50509-MS2)	Sou	rce: 5A06011	-10	Prepared: 0	1/06/05 Ar	alyzed: 01	/07/05			
Gasoline Range Organics C6-C12	632	10.0	mg/kg dry	574	6.96	109	75-125			
Diesel Range Organics >C12-C35	794	10.0	"	574	162	110	75-125			
Fotal Hydrocarbon C6-C35	1430	10.0	н	1150	162	110	75-125			
Surrogate: 1-Chlorooctane	52.9		mg kg	50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	42.6		"	50.0		85.2	70-130			
Matrix Spike Dup (EA50509-MSD1)	Sou	rce: 5A05016	-04	Prepared: 0	1/05/05 Ar	alyzed: 01	/07/05			
Gasoline Range Organics C6-C12	579	10.0	mg/kg dry	521	ND	111	75-125	6.42	20	
Diesel Range Organics >C12-C35	580	10.0		521	ND	111	75-125	2.22	20	
Total Hydrocarbon C6-C35	1160	10.0	"	1040	ND	112	75-125	1.74	20	
Surrogate: 1-Chlorooctane	60.0		mg kg	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	38.4		"	50.0		76.8	70-130			
Matrix Spike Dup (EA50509-MSD2)	Sou	rce: 5A06011	-10	Prepared: 0	1/06/05 Ar	nalyzed: 01	/07/05			
Gasoline Range Organics C6-C12	644	10.0	mg/kg dry	574	6.96	111	75-125	1.88	20	
Diesel Range Organics >C12-C35	770	10.0	"	574	162	106	75-125	3.07	20	
Total Hydrocarbon C6-C35	1410	10.0	"	1150	162	109	75-125	1.41	20	
Surrogate: 1-Chlorooctane	53.0		mg kg	50.0		106	70-130			
Surrogate: I-Chlorooctadecane	42.5		"	50.0		85.0	70-130			

Environmental Lab of Texas

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Project: Conoco Federal #1 Project Number: None Given Project Manager: Pat McCasland Fax: (505) 391-6679

Reported:

01/12/05 10:03

#### Organics by GC - Quality Control

#### **Environmental Lab of Texas**

				·	<u></u>					
		Reporting	<b>.</b>	Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EA51105 - EPA 5030C (GC)										
Blank (EA51105-BLK1)				Prepared &	Analyzed:	01/10/05				
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	n							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	U U							
Xylene (0)	ND	0.0250	н							
Surrogate: a,a,a-Trifluorotoluene	107		ug kg	100		107	80-120			
Surrogate: 4-Bromofluorobenzene	90.1		"	100		90.1	80-120			
LCS (EA51105-BS1)				Prepared &	Analyzed:	01/10/05				
Benzene	93.5		ug/kg	100		93.5	80-120			
Toluene	97.9		"	100		97.9	80-120			
Ethylbenzene	102		"	100		102	80-120			
Xylene (p/m)	224		۳	200		112	80-120			
Xylene (o)	106		н	100		106	80-120			
Surrogate: a,a,a-Trifluorotoluene	106		"	100		106	80-120			
Surrogate: 4-Bromofluorobenzene	116		0	100		116	80-120			
Calibration Check (EA51105-CCV1)				Prepared &	: Analyzed:	01/10/05				
Benzene	99.4		ug/kg	100		99.4	80-120	·		
Toluene	102		"	100		102	80-120			
Ethylbenzene	96.9		"	100		96.9	80-120			
Xylene (p/m)	208			200		104	80-120			
Xylene (o)	98.0		"	100		98.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	120		"	100		120	80-120			
Surrogate: 4-Bromofluorobenzene	112		"	100		112	80-120			
Matrix Spike (EA51105-MS1)	Sou	rce: 5A06011	-05	Prepared &	Analyzed:	01/10/05				
Benzene	97.4		ug/kg	100	ND	97.4	80-120			
Toluene	105		"	100	ND	105	80-120			
Ethylbenzene	106		"	100	ND	106	80-120			
Xylene (p/m)	234		"	200	ND	117	80-120			
Xylene (o)	110		"	100	ND	110	80-120			
Surrogate: a,a,a-Trifluorotoluene	117		"	100		117	80-120			
Surrogate: 4-Bromofluorobenzene	119		"	100		119	80-120			

Environmental Lab of Texas

#### Project: Conoco Federal #1 Project Number: None Given Project Manager: Pat McCasland

**Reported:** 01/12/05 10:03

#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

		Reporting	Spike	Source		%REC		RPD	
Analyte	Result	Limit Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EA51105 - EPA 5030C (GC)									
Matrix Spike Dup (EA51105-MSD1)	Sour	ce: 5A06011-05	Prepared &	Analyzed:	01/10/05			• •	
Benzene	103	ug/kg	100	ND	103	80-120	5.59	20	
Toluene	108	H	100	ND	108	80-120	2.82	20	
Ethylbenzene	108	U	100	ND	108	80-120	1.87	20	
Xylene (p/m)	236	*	200	ND	118	80-120	0.851	20	
Xylene (0)	109		100	ND	109	80-120	0.913	20	
Surrogate: a,a,a-Trifluorotoluene	110	"	100		110	80-120			
Surrogate: 4-Bromofluorobenzene	118	"	100		118	80-120			

Environmental Lab of Texas

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Chesapeake Energy 5014 Carlsbad Highway Hobbs NM, 88240

Reported:

01/12/05 10:03

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control

**Environmental Lab of Texas** 

								·		
		Reporting		Spike	Source	e	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EA50621 - General Preparation (Prep	)									
Blank (EA50621-BLK1)				Prepared: (	01/06/05	Analyzed: 0	1/07/05			
% Moisture	0.001		%							
Duplicate (EA50621-DUP1)	Sour	Source: 5A05017-01 Pre				Analyzed: 0	1/07/05			
% Solids	96.8		%		93.8			3.15	20	
Batch EA51006 - Water Extraction		<u> </u>							<u></u>	
Blank (EA51006-BLK1)				Prepared: (	01/06/05	Analyzed: 0	1/10/05			
Chloride	ND	2.50	mg/kg Wet							
Matrix Spike (EA51006-MS1)	Sourc	e: 5A05016	-01	Prepared: (	01/06/05	Analyzed: 0	1/10/05			
Chloride	436	2.50	mg/kg Wet	500	0.00	87.2	80-120			
Matrix Spike Dup (EA51006-MSD1)	Sour	e: 5A05016	-01	Prepared: (	)1/06/05	Analyzed: 0	1/10/05			
Chloride	447	2.50	mg/kg Wet	500	0.00	89.4	80-120	2.49	20	
Reference (EA51006-SRM1)				Prepared: (	)1/06/05	Analyzed: 0	1/10/05			
Chloride	5100	2.50	mg/kg Wet	5000		102	80-120			

Environmental Lab of Texas

5014 Ca	ake Energy rIsbad Highway IM, 88240	Project: Project Number: Project Manager:		Fax: (505) 391-6679 <b>Reported:</b> 01/12/05 10:03
		Notes and Defi	initions	······································
S-04	The surrogate recovery for this sample is outside	e of established control li	mits due to a sample matrix effect.	
DET	Analyte DETECTED			
ND	Analyte NOT DETECTED at or above the reporting li	mit		
NR	Not Reported			
dry	Sample results reported on a dry weight basis			
RPD	Relative Percent Difference			
LCS	Laboratory Control Spike			
MS	Matrix Spike			· · ·
Dup	Duplicate			·

Report Approved By:

Raland K tout 1/12/2005 Date:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

	Conoco Federal #1					Analyze For	30	Metala Volatiles Semivolatiles Beactivity Corrosivity Ignitiabilty Chlorides Chlorides RUSH TAT RAT HZUS					*				Sample Containers I(Y) N Termaroture I from Removed	Time Laboratory Comments:	1	0530
		Project Loc:	PO#:			TOTAL	1 2 0	Other (Specify) TDS/CL/SAR/F TPH 418.1 TPH 418.1005555555555 TPH901530545059	X	X	V V							Date		101-060510
	Project Name: Project #:	Projec			1			Mone (Viber(Specify) Water Budge fio2	X	X	X									an a
								H2O HO <sup>®</sup> N HCI HCI ONH										C.C.		TO KAT TELEVICE
				g		รัษุธิร		Time Sampled No. of Containers	1	3:37 1 X	-						asland ASAP	Persined by A	Lä.	た Ciarrox人
<b>57 111C</b> 1800 1713				<b>Bradley Blevins</b>	riters			bəlqnusZ ətsU	01/05/2004	01/05/2004	01/05/2004						FAX RESULTS TO Pat McCas	DCC C	Time	10400
Lat of rexas, inc. Phone: 915-563-1800 Fax: 915-563-1713	q				Ĩ												FAX RESUL	Date // - 6	Date	000-10
	Project Manager: <u>Pat McCasland</u> Company Name: Chesapeake	ress;	/Tap:	Telephone No: 505-441-1268	ture:				SCCF1504N	SCCF1504S	SCUP1604B						tions	aburden	(Ala A.R.	Y WARD-
<b>INTVITUUMENTAI</b> 12600 West I-20 East Odessa Texas 79763	Project Man Company N	Company Address:	City/State/Zip:	Telephone	Sampler Signature:			C. AND									Special Instructions	Relinquisbed:	Relinquished:	12814

# Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: <u>Chesapeake</u>
Date/Time: 01-06-05 @ 0930
Order #: 5A 0600 3
Initials:JMM

### Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	-210 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals Intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present>
Chain of custody present?	(res)	No	
Sample Instructions complete on Chain of Custody?	Ves	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	Ves	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	res	No	
Samples in proper container/bottle?	Ves	No	
Samples properly preserved?	res	No	
Sample bottles intact?	(FES)	No	
Preservations documented on Chain of Custody?	(res)	No	
Containers documented on Chain of Custody?	(res)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(res)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person:	Date/Time:	Contacted by:
Regarding:		
• • •		
	•	

Corrective Action Taken:

\*\*

# ATTACHMENT IV: AREA WATER INFORMATION AND BLM REPORT OF UNDESIRABLE EVENT

New Mexico Office of the State Engineer

Page 1 of 1

New Mexico Office of the State Engineer Well Reports and Downloads						
Township: 188 Range: 32E	Sections:					
NAD27 X: Y:	Zone: Search Radius:					
County: Basin:	Number: Suffix:					
Owner Name: (First) (Last)	← Non-Domestic ← Domestic					
Well / Surface Data Report Avg Depth to Water Report						
Water Column Report						
Člear Form	WATERS Menu Help					
***************************************	<u>, , , , , , , , , , , , , , , , , , , </u>					

#### AVERAGE DEPTH OF WATER REPORT 12/27/2004

							(Depth	Water in	Feet)
Bsn	Tws	Rng Sec	Zone	x	Ŷ	Wells	Min	Max	Avg
CP	1 <b>85</b>	32E 04				1	65	65	65
CP	185	32E 07				1	4 60	460	460

Record Count: 2

http://iwaters.ose.state.nm.us:7001/iWATERS/WellAndSurfaceDispatcher

12/27/2004

Form NM 3162-1 (July 1991)

#### UNITED STATES DEPARTMENT OF THE INTERIOR Bureau of Land Management New Mexico State Office

#### **REPORT OF UNDESIRABLE EVENT**

DATE OF OCCURRENCE/DISCOVERY: <u>12/27/2004</u> TIME OF OCCURRENCE: <u>10:00:00 AM</u>

DATE REPORTED TO BLM: <u>12/27/2004</u> TIME REPORTED: <u>3:00 PM</u>

BLM OFFICE REPORTED TO: (RESOURCE AREA/DISTRICT/OTHER): Carslbad, NM

LOCATION: <u>NW¼ of the SW¼</u> SECTION <u>17</u> T.<u>18S</u> R.<u>32E</u>

MERIDIAN 32°44'48.099"N 103°47'44.925"W

COUNTY: Lea STATE: <u>New Mexico</u> WELL NAME: <u>Conoco Federal #1 Battery</u>

OPERATOR: COMPANY NAME Chesapeake Energy PHONE No. 505.391.1462 CONTACT PERSON'S NAME: Brad Blevins SURFACE OWNER: \_\_\_\_\_\_ MINERAL OWNER: \_\_\_\_\_\_

(FEDERAL/INDIAN/FEE/STATE)

LEASE NO.: \_\_\_\_\_ RIGHT-OFWAY No.: \_\_\_\_\_

UNIT NAME / COMMUNITIZATION AGREEMENT No.: \_\_\_\_\_

TYPE OF EVENT, CIRCLE APPROPRIATE ITEM(S) :

BLOWOUT, FIRE, FATALITY, INJURY, PROPERTY DAMAGE, OIL SPILL, SALTWATER

SPILL, OIL AND SALTWATER SPILL, TOXIC FLUID SPILL, HAZARDOUS MATERIAL SPILL,

UNCONTROLLED FLOW OF WELLBORE FLUIDS, OTHER (SPECIFY) : Crude Oil

CAUSE OF EVENT: Crude Oil Storage Tank overflowed

HazMat Notified: (for spills)

Law Enforcement Notified: (for thefts)

CAUSE AND EXTENT OF PERSONAL INJURIES/CAUSE OF DEATH(S):

Safety Officer Notified: \_\_\_\_\_

EFFECTS OF EVENT: \_\_\_\_\_

LENGTH OF TIME TO CONTROL BLOWOUT OR FIRE: \_\_\_\_\_

VOLUMES DISCHARGED: OIL 125 bbls WATER\_\_\_\_\_ GAS\_\_\_\_\_

OTHER AGENCIES NOTIFIED: \_New Mexico Oil Conservation Division - Hobbs, NM\_\_\_\_\_

# ATTACHMENT V: SITE INFORMATION & METRICS FORM AND FINAL FORM C-141

-

Chesapeake			NMOCD Not	ified				
Chaconaolia	Incident Date Chesapeake E		12-27-04 @					
Chesapeake	Chesapeake E	nergy	12-27-04 @					
SITE: Conoco Federal #	<b>#1 Battery</b>	Assigne	d Site Reference #:					
Company: Chesapeake E	lnergy		NATIONAL RESPON	SE CENTER - 800.424.8802				
Street Address:			Notified Date/Time	::				
	arlsbad Highwa		Notified by: Brad B	levins				
City, State, Zip: Hobbs, New Mexico 88240 Person Notified:								
Representative: Brad Blev			NRC Report# :					
Representative Telephone:	: 505.391.14	62						
Telephone:								
Fluid volume released (bb	ls): 125 bbls		ecovered (bbls): 11					
			s and submit form C-1 uses >500 mcf Natural					
5-25 bbls: Submit form C-1	41 within 15 days	(Also applies	to unauthorized releas	es of 50-500 mcf Natural Gas)				
Leak, Spill, or Pit (LSP) N								
Source of contamination:								
Land Owner, i.e., BLM, ST			nd Management					
	' x 80'							
LSP Area: insic	le of berm=444	sqft; on pad	=2,534 sqft; off pa	ad=4,567 sqft				
Total Affected Area=7,5	45ft <sup>2</sup>	_ <b>_</b>	- +	-				
Location of Reference Poi								
Location distance and dire	ection from RP							
Latitude: 32°44'48.09								
Longitude: 103°47'44.9								
Elevation above mean sea		65'amsl						
Feet from South Section								
Feet from West Section L								
Location- Unit or 1/41/4:	NW¼ of the SV	<u>N 1/4</u>	Unit Let	ter: L				
Location- Section: 17								
Location- Township: T185	3							
Location- Range: R32E								
			<u></u>					
Surface water body within				· · · · · · · · · · · · · · · · · · ·				
Domestic water wells with								
Agricultural water wells w			ione					
Agricultural water wells w				······································				
Public water supply wells			none					
Public water supply wells								
Depth from land surface t Depth of contamination (1		(DG) 460'b	<u></u>					
Depth to ground water (D		W/)		······································				
1. Ground Water		llhead Prote	ection Area	3. Distance to Surface Water Body				
If Depth to GW <50			<u></u>	<pre></pre>				
feet: 20 points	If <1000' fro	m water sour	ce, or;<200' from	points				
If Depth to GW 50 to 99			arce: 20 points	200-100 horizontal feet:				
feet: 10 points	1			10 points				
If Depth to GW >100	If >1000' fro	m water sour	ce, or; >200'	>1000 horizontal feet: 0				
feet: 0 points								
Ground water Score = 0	Wellhead Prote			Surface Water Score= 0				
Site Rank $(1+2+3) = 0$			·· ·	······································				
Total Site Ranking Score :	and Acceptable	Concentratio	ons					
			0-19	0-9				
Parameter >1		10	) ppm	10 ppm				
Benzene <sup>1</sup> 10 p	pm	I(	EP	<u> </u>				
			) ppm	50 ppm				
Benzene <sup>1</sup> 10 p	pm	50 100						

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<u>District I</u> 1625 N. French	Dr Hobbs	NM 88240	State of New Mexico						Form C-141			
District II			Energy Minerals and Natural Resources							Revis	sed October 10, 2003	
District III		esia, NM 88210	Oil Conservation Division					ion		Sub	mit 2 Co	pies to appropriate
1000 Rio Braze District IV	os Road, Azte	c, NM 87410	1220 South St. Francis I				Dr.		D		ffice in accordance Rule 116 on back	
1220 S. St. Fra	ncis Dr., Sant	a Fe, NM 87505			Santa	Fe, N	M 87505	5				side of form
		Releas	se Not	ifica	tior	1 an	d Corr	ective A	ctio	n		
OPER	ATOR							Initial Re	port	$\boxtimes$	Final	Report
	Company	: Chesapeal	ce Energ	y				t: Brad Ble	vins			
Address 5014 Car	lsbad H	ighway Hob	bs, New	Mexi	co 88	3240	Telepho 505.391	one No. 1 <b>.1462</b>				
Facility N	ame						Facility	Туре		·		
		1 Battery re			4			Oil Storage al Owner	Tan		ase No	
Surface C	wner:	Bureau of L								Le	ase no	
							RELE			st/West L		
Unit Letter	Section 17	Township T18S	Range	Feet f	rom	Line	n/South	Feet from the	Ea	st/west I,	ine	County: Lea
L			R32E									L
		Latit		*44'48				tude: <u>103°4</u> SE	47'44	.925"W	-	
Type of R	elease		1	AIU			RELEA Release	<u>5E</u>	Volu	me Recov	vered	
Crude Oil						5 barr				0 barrels		······································
Source of Crude Oil		Tank			1			Occurrence 00:00 AM		and Hou 7-04 @ 1		•
	diate Not	ice Given?			If Y	ES, To	o Whom?					
L			Not Requ	uired	Lari	ry Joh	nson					<u> </u>
By Whom? Brad Blev					1	e and 1	Hour a) 1:45 PN	л				
Was a Wat					If Y			lume Impacting the Watercourse.				
If a Water	course wa	S Impacted, I		ully.*	NA							
NA					-							
		roblem and F ank Crude o					Free flui	ds were vacu	umed	up and r	eturne	d to the tank.
		ted soil was s										
		cted and Clea						· - · · · · · · · · · · · · · · · · · ·				
		$ea = 7,545 ft^2$										
		of in the Art Il the excava										
		EX, i.e., the										
	. <u></u>											
		t the informa 10CD rules a										
notificatio	ins and pe	erform correc	tive action	ns for	releas	es wh	ich may e	ndanger publ	lic hea	alth or th	e envi	ronment. The
acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability												
should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report												
does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or												
regulations. OIL CONSERVATION DIVISION												
Signature:	_ tab	Mulunte	et fr,	<u>B</u> K	fler	ine	_	<u>UIL CON</u>	SER	VATIO	<u>N DI V</u>	<u>1510N</u>
Printed N	ame: Bra	d Blevins					Appro	oved by Distr	ict Su	upervisor	:	
E-mail Ad	dress: BE	Blevins@CH	[KEnerg	y.com			Appro	oval Date:		E	xpirati	on Date:
Title: Fie	ld Techni	cian					Condi	itions of App	roval	: А	ttachee	i 🖸
Date: N		2005	Phone:	505.3	91.14	62						
A 1	4 1 1	anal Chast	a If NIas		_							

Attach Additional Sheets If Necessary

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March 21, 2005

Mr. Larry Johnson Environmental Engineer New Mexico Oil Conservation Division 1625 North French Hobbs, New Mexico 88240

Subject: Chesapeake Energy final C-141 and supporting documentation

Re: Conoco Federal #1 Battery, ref. #160004
UL-L (NW<sup>1</sup>/<sub>4</sub> of the SW<sup>1</sup>/<sub>4</sub>) of Section 17, T18S, R32E,
Latitude 32°44'48.099"N and Longitude 103°47'44.925"W
Landowner: Bureau of Land Management
Driving Directions: From the intersection of US 82 and Lea County Road 126 in Maljamar,
New Mexico go south on LCR 126 5.3 miles to NMSR 529, cross NMSR529 and go 3.5 miles,
then right on caliche road 0.1 miles, then left 0.2 miles to the Chesapeake Conoco Federal #1
Battery

Dear Mr. Johnson,

Environmental Plus, Inc. (EPI), on behalf of Chesapeake Energy Corporation, submits the attached final New Mexico Oil Conservation Division (NMOCD) form C-141 and supporting documentation for the above referenced site and requests that "no further action" be required at the site.

All official communication should be directed to:

Hobbs OCD

Brad Blevins Chesapeake Energy Corporation 5014 Carlsbad Highway Hobbs, New Mexico 88240 bblevins@chkenergy.com

If there are any questions please call Mr. Cody Miller or myself at the office or at 505.631.8447 and 505.390.7864, respectively or Brad Blevins at 505.391.1462.



Sincerely,

Mailar

Pat McCasland EPI Technical Services Manager (enviplus1@aol.com)

cc: Brad Blevins, Chesapeake (bblevins@chkenergy.com) Curtis Blake, Chesapeake (cblake@chkenergy.com) Jim Amos, BLM (james\_amos@nm.blm.gov) Paul Evans, (paul\_evans@nm.blm.gov) file

# Chesapeake

٨		Site Informa	tion and	Incident Date:	NMOCD Notified: 12-27-04 @			
Chesap	eake	Metri	cs	12/27/2004 @ 10:00:00 AM	1:45 PM			
SITE: Conoco I	Federal #1 Batte	ery	Assigned Site Reference #: 16	0004				
Company: Che	sapeake Energy							
Street Address:	- <b></b>							
Mailing Address	: 5014 Carlsba	d Highway						
City, State, Zip: Hobbs, New Mexico 88240								
Representative: 1		<u></u>						
Representative T	elephone: 50	5.391.1462						
Telephone:								
Fluid volume rel				Recovered (bbls): 110 b				
	>25 b			within 24 hrs and submit form C-141 with	hin 15 days.			
	5 25 bbles Submit			horized releases >500 mcf Natural Gas) Also applies to unauthorized releases of 5	50.500 mof Notural Gas)			
Leak, Spill, or P					60-500 mer (valuia) Gas)			
Source of contar								
Land Owner, i.e.				Management	······································			
LSP Dimensions		, Ouler. Durea						
LSP Area:		$rm - 4.4.4 \text{ ft}^2$ or	n nad-2 53	34 ft <sup>2</sup> ; off pad=4,567 ft <sup>2</sup> Total Af	facted Area $-7545 \text{ ft}^2$			
Location of Refe			<u>1 pau-2,5.</u>	10tal Al				
Location distance								
	44'48.099"N							
Longitude: 103								
Elevation above		3,765'am	21		······································			
Feet from South			<u> </u>					
Feet from West					,			
Location-Unit o		of the SW1/4		Unit Letter: L				
Location- Sectio								
Location- Towns								
Location- Range								
Booution Runge					· · · · · · · · · · · · · · · · · · ·			
Surface water bo	dy within 1000	' radius of sit	e: none					
Domestic water								
Domestic water								
Agricultural wat				ne				
Agricultural wat								
Public water sup				one	·····			
Depth from land								
Depth of contam		~3'bgs						
Depth to ground			~457-fee	t				
	ound Water			ellhead Protection Area	3. Distance to Surface Water Body			
If Depth to GW		nts If -		m water source, or;<200' from	<200 horizontal feet: 20 points			
If Depth to GW				stic water source: 20 points	200-100 horizontal feet: 10 points			
		If v		m water source, or; >200' from				
If Depth to GW	>100 teet: 0 poi	nte i		stic water source: 0 points	>1000 horizontal feet: 0 points			
Ground water Score = 0 Wellhead Protection Area Score = 0 Surface Water Score = 0								
Site Rank (1+2+		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·			
		Total Site R	anking Sc	ore and Acceptable Concentrat	tions			
Parameter	>1			10-19	0-9			
Benzene <sup>1</sup>	10 pj			10 ppm	10 ppm			
BTEX <sup>1</sup>	50 pj		-	50 ppm	50 ppm			
TPH	100 p		1	1000 ppm	5000 ppm			
			may be su	bstituted for lab analysis				

<sup>1</sup>100 ppm field VOC headspace measurement may be substituted for lab analysis

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State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

# **Release Notification and Corrective Action**

OPERATOR	Initial Report	Final Report
Name of Company	Contact	
Chesapeake Energy	Brad Blevins	
Address	Telephone No.	
5014 Carlsbad Highway Hobbs, New Mexico 88240	505.391.1462	
Facility Name	Facility Type	
Conoco Federal #1 Battery ref.#160004	Crude Oil Storage Tank	
Surface Owner: Bureau of Land Management	Mineral Owner	Lease No.

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County:	Lea
17	17	T18S	R32E					_	

Latitude: 32°44'48.099''N

Longitude: 103°47'44.925"W

# NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered						
Crude Oil	125 barrels	110 barrels						
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery						
Crude Oil Storage Tank	12/27/2004 @ 10:00:00 AM	12-27-04 @ 1:00 PM						
Was Immediate Notice Given?	If YES, To Whom?	<b>1</b>						
🖾 Yes 🔲 No 🗌 Not Required	Larry Johnson							
By Whom?	Date and Hour							
Brad Blevins	12-27-04 @ 1:45 PM							
Was a Watercourse Reached? 🗌 Yes 🛛 No	If YES, Volume Impacting the Watero	course.						
	NA							
If a Watercourse was Impacted, Describe Fully.*								
NA								
Describe Cause of Problem and Remedial Action Taken.*: Crude Oil	Storage Tank overflowed because of an	improper valve configuration.						
Recovered fluids place back in tank								
Describe Area Affected and Cleanup Action Taken.*: The site was delinea								
CoC impact. 126 cubic yards of soil impacted above the NMOCD CoC rem	edial goals was disposed of in NMOCE	Dapproved Artesia Aeration						
Landfarm, the remainder was blended on site to less than the CoC remedial		5000  mg/Kg, Benzene = $10  mg/Kg$ ,						
and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xyl	enes = $50 \text{ mg/Kg}$ .							
I hereby certify that the information given above is true and complete to the	best of my knowledge and understand t	hat pursuant to NMOCD rules and						
regulations all operators are required to report and/or file certain release not								
public health or the environment. The acceptance of a C-141 report by the I	MOCD marked as "Final Report" does	s not relieve the operator of liability						
should their operations have failed to adequately investigate and remediate of	contamination that pose a threat to groun	nd water, surface water, human						
health or the environment. In addition, NMOCD acceptance of a C-141 rep	ort does not relieve the operator of resp	onsibility for compliance with any						
other federal, state, or local laws and/or regulations.								
1 milalani	OIL CONSERVA	<b>ATION DIVISION</b>						
Signature: Jas Milasland Str for B. Blevins								
Printed Name: Brad Blevins / Approved by District Supervisor:								
Title: Field Technician	Approval Date: Expiration Date:							
Email: bblevins@chkenergy.com	-1 ··	•						
		Attached						
Date: <i>Warch 21, 2005</i> Phone: 505.391.1462	Conditions of Approval:	Attached						

\* Attach Additional Sheets If Necessary