Chesapeake

SITE CLOSURE REPORT

OGRID # 14179
SPUD 10.1.04
TD 10.25.04

COOPER 7 NO. 1 DRILLING PIT

NMOCD REF: 1RP#753

EPI REF: #160014

UL-D (NW¼ OF THE NW¼) OF SECTION 7, T20S, R37E

~13.5 MILES SOUTHWEST OF HOBBS

LEA COUNTY, NEW MEXICO

LATITUDE: N 32° 35' 35.6" LONGITUDE: W 103° 17' 47.1"

DECEMBER 2006

PREPARED FOR:

Chesapeake

Distribution List

Site Closure Report

Cooper 7 No. 1

Ref. #160014

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STANDARD OF CARE

Site Closure Report

Cooper 7 No. 1 Drilling Pit

NMOCD Ref. 1RP-753; EPI Ref. #160014

The information provided in this report was collected consistent with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993), the NMOCD Unlined Surface Impoundment Closure Guidelines (February, 1993) and 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 derived using currently accepted geologic, hydrogeologic and engineering practices at this time and location. The report was prepared or reviewed by a certified or registered professional with a background in engineering, environmental and/or natural sciences.

This report was prepared by:

David P. Duncan
Civil Engineer

3-02-07
Date

This report was reviewed by:

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Environmentalist Scientist

1 March 2007
Date

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APPENDICES

1.0 Summary

On June 29, 2005, Chesapeake Operating, Inc. retained Environmental Plus, Inc. (EPI) to conduct drilling pit closure work consistent with NMOCD Pit and Below-Grade Tank Guidelines (November, 2004) on the Cooper 7 No.1 drilling pit. The site is located in Lea County, New Mexico in the NW ¼ of the NW ¼ of Section 07, Township 20 South, Range 37 East. More specifically, the site is located approximately 13.5 miles southwest of Hobbs, New Mexico on property owned by Jimmie Cooper (reference *Figures 1 & 2).*

EPI performed GPS surveying, photography and characterization of the site on June 29, 2005. Form C-103 was submitted to the New Mexico Oil Conservation Division (NMOCD) on July 18, 2005 documenting the site and proposed operations. The drilling pit entailed a surface area of approximately 12,800 square feet (ft^2) with a depth of ±8-feet below ground surface (bgs) (reference *Figure 3*).

From July 13 through July 22, 2005, EPI personnel excavated and transported approximately 1,666 cubic yards (yd^3) of material from the drill pit to Sundance Services, Inc., of Eunice, New Mexico for disposal. On July 22, 2005 grab samples were collected from five (5) sample points excavated beneath the pit floor (reference *Figure 4*) with a portion of each sample placed in laboratory provided containers and immediately put on ice for transport to Cardinal Laboratories of Hobbs, New Mexico for quantification of chloride concentrations (reference *Attachment I*). The remaining portion of the sample was analyzed in the field for chloride concentrations utilizing a LaMotte Chloride Test Kit. Field analytical results indicated concentrations ranged from 250 mg/Kg to 5,280 mg/Kg (reference *Table 2*).

From October 3 through October 4, 2005, four (4) soil borings were advanced to different depths at the same location as the previous sample points in the pit bottom with the exception of sample point SP-4 (reference *Figure 5*). A soil boring was not completed at this location as previous analytical results indicated chloride concentrations below 250 mg/Kg at 14-feet bgs (reference *Table 2*). Samples were collected from the soil borings with a portion of each sample placed in laboratory provided containers and immediately put on ice for transport to Cardinal Laboratories of Hobbs, New Mexico for quantification of total petroleum hydrocarbons (TPH) and chloride concentrations (reference *Attachment I*). The remaining portion of each sample was analyzed in the field for the presence of organic vapors utilizing a MiniRae® photoionozation detector (PID) equipped with a 9.8 electron-volt (eV) lamp and chloride concentrations utilizing a LaMotte Chloride Test Kit. Field analytical results indicated organic vapor concentrations ranged from 0.2 to 6.3 parts per million (ppm) and chloride concentrations ranged from 240 to 800 mg/Kg (reference *Table 2*).

2.0 Site Description

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 and generally overlain by sandy soil."

The release site is located in the Eunice Plain physiographic subdivision, described by Nicholson & Clebsch as an area "underlain by a hard caliche surface and is almost entirely covered by reddish-brown dune sand." The thickness of the sand cover ranges from 2-5 feet in most areas to as much as 20-30 feet in drift areas.

2.2 Ecological Description

The area is typically of the Upper Chihuahuan Desert Biome consisting primarily of sandy soil covered with short semi-arid grasses, interspersed with Honey Mesquite and forbs. Mammals represented include Orrd's and Merriam's Kangaroo Rats, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, Mule Deer, Bobcat, Red Fox and Coyote. Reptiles, amphibians and birds are numerous and typical of the area. A survey of Listed, Threatened or Endangered species was not conducted.

2.3 *Area Groundwater*

The unconfined groundwater aquifer at this site was projected to be <50-ft bgs based on water depth data obtained from the New Mexico State Engineers Office and the United States Geological Survey data base. However, groundwater was encountered approximately 31-feet bgs during the advancement of soil boring SB-5B (reference *Appendix III*).

2.4 *Area Water Wells*

There are no water supply wells located within a 1,000- foot radius of the release site (reference *Figure 2*).

2.5 *Area Surface Water Features*

There are no surface water bodies within a 1,000-foot radius of the release site (reference *Figure 2*).

3.0 NMOCD Site Ranking

Contaminant delineation and remedial work done at this site indicate chemical parameters of the soil and physical parameters of the groundwater were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the following New Mexico Oil Conservation Division (NMOCD) publications:

- ***Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)***
- ***Unlined Surface Impoundment Closure Guidelines (February, 1993)***
- ***Pit and Below-Grade Tank Guidelines (November, 2004)***

Acceptable thresholds for contaminants/constituents of concern (CoC) were determined based on the NMOCD Ranking Criteria as follows:

- *Depth to Groundwater (i.e., distance from the lower most acceptable concentration to groundwater);*
- *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).*

Based on the proximity of the site to protectable area water wells, surface water bodies, and depth to groundwater from the lower most contamination, the NMOCD ranking score for the site is 20 points with the soil remedial goals highlighted in the Site Ranking table presented below:

1. Groundwater	2. Wellhead Protection Area	3. Distance to Surface Water
Depth to GW <50 feet: 20 points	If <1,000' from water source, or; <200' from private domestic water source: *20 points*	<200 horizontal feet: *20 points*
Depth to GW 50 to 99 feet: *10 points*		200-1,000 horizontal feet: *10 points*
Depth to GW >100 feet: 0 points	If >1,000' from water source, or; >200' from private domestic water source: *0 points*	>1,000 horizontal feet: *0 points*
Site Rank (1+2+3) = 20 + 0 + 0 = 20 points		

Total Site Ranking Score and Acceptable Remedial Goal Concentrations			
Parameter	20 or >	10	0
Benzene[1]	10 ppm	10 ppm	10 ppm
BTEX[1]	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1,000 ppm	5,000 ppm

[1] A field soil vapor headspace measurement of 100 ppm was substituted for laboratory analyses of the Benzene and BTEX concentration limits.

4.0 Subsurface Soil Investigation

Excavation of pit contents (drilling mud) commenced on July 13, 2005 and continued through July 22, 2005. Approximately 1,666 cubic yards of drilling mud were excavated and disposed of at Sundance Services, Inc., of Eunice, New Mexico.

On July 22, 2005 five (5) sample points (reference *Figure 4*) were excavated beneath the pit floor with grab samples collected at various depths. A portion of each selected sample was placed in laboratory provided containers and submitted to an independent laboratory for analyses of chloride concentrations. The remaining portion was analyzed in the field for chloride concentrations utilizing a LaMotte Chloride Test Kit. Field analyses indicated chloride concentrations ranged from 240 mg/Kg (SP-1 @ 16-ft bgs) to 5,280 mg/Kg (SP-3 @ 14-ft bgs) (reference *Table 2*).

Laboratory analytical data for the soil samples collected on July 22, 2005 indicated chloride concentrations ranged from 112 mg/Kg (SP-4 @ 16-ft bgs) to 4,319 mg/Kg (SP-4 @ 10-ft bgs) (reference *Table 2*).

On October 3 through October 4, 2005, the vertical extent of contamination from the drill pit materials was further determined via four (4) soil borings (reference *Figure 5*) advanced to different depths in the same location as the previous sample points in the pit floor (reference *Figure 4*). During the advancement of the soil borings, soil samples were collected at 26- and 31-feet bgs with a portion of each sample being submitted for laboratory analyses. The remaining portion of each sample was analyzed in the field for organic vapor and chloride concentrations. Field analyses indicated organic vapor concentrations ranged from 0.2 ppm to 6.3 ppm and chloride concentrations ranged from 240 mg/Kg to 800 mg/Kg (reference *Table 2*).

Laboratory analytical data for the soil sample collected from the four (4) soil borings indicated TPH constituent concentrations in SB-1B of 126 mg/Kg at 26-feet bgs and 21 mg/Kg at 31-feet bgs. TPH constituent concentrations in the remaining three (3) soil borings were non-detectable at or above laboratory method detection limits (MDL). Reported chloride concentrations for soil samples collected from the four (4) soil borings ranged from 64 mg/Kg (SB-1B @26-ft bgs) to 976 mg/Kg (SB-5B a@ 26-ft bgs) (reference *Table 2*).

During the excavation process (June 7 through June 16, 2006), soil samples were collected from the sidewalls and bottom of the excavation on six (6) separate events (reference *Figure 6* for location and *Table 3* for analytical results and dates of sampling events). The soil samples were analyzed in the field for chloride concentrations as guidelines for excavation limits. Areas with elevated chloride concentrations were excavated until acceptable field threshold goals were attained. Final soil samples were collected on June 15, 2006. As with previous soil samples, a portion of selective soil samples collected during the excavation process were sent to an independent laboratory for analysis of TPH, BTEX, chloride and sulfate concentrations. Laboratory analytical analyses indicated both TPH and BTEX constituents concentrations were below NMOCD Remedial Threshold goals for all soil samples events. Soil samples collected on June 15, 2006 event indicated chloride concentrations ranged from 75 mg/Kg (SW-3 @ 14-ft. bgs) to 709 mg/Kg (SW-8 @ 14-ft. bgs). Sulfate concentrations ranged from 34.4 mg/Kg (SW-3 @ 14-ft. bgs) to 681 mg/Kg (SW-9 @ 14-ft. bgs) (reference *Figure 7* for location and *Table 3* for analytical results)

5.0 Groundwater Investigation

Groundwater was encountered approximately 31-feet bgs during the advancement of the soil borings. Most of the soil impacted above the NMOCD remedial thresholds for TPH and BTEX constituents had been removed from the pit and disposed at Sundance Services, Inc. of Eunice, New Mexico.

Confirmatory laboratory analytical results for soil samples collected during the advancement of the soil borings indicated TPH constituents were detectable in one soil boring (SB-1B), but were non-detectable at or above laboratory MDL in the other three (3) soil borings (reference *Table 2 and Appendix I*).

Laboratory analytical results for the soil samples collected the during the advancement of the soil borings indicated chloride concentrations ranged from 64 mg/Kg to 976 mg/Kg in the four (4) soil borings (reference *Table 2* and *Appendix I*).

6.0 Remediation and Backfill Procedures

Excavation of the drilling pit contents commenced on July 13, 2005 and continued through July 20, 2005. Approximately 1,666 cubic yards of drilling mud were stabilized and transported to Sundance Services, Inc., for disposal. Excavation of impacted soil resumed on June 7, 2006 and continued through June 16, 2006. During this interval approximately 2,520 cubic yards of impacted soil were removed and disposed at Sundance Services, Inc. Final depth of the excavation ranged from twelve (12) feet to nineteen (19) feet bgs. To prevent downward migration of chloride and sulfates from impacting groundwater, a twenty (20) mil thick polyethylene barrier was installed over the bottom of the excavation on June 20, 2006. The polyethylene barrier was sandwiched between two (2) protective layers of sand six (6) inches or more in depth. Backfill operations began on June 21, 2006 and concluded on June 28, 2006. Backfill operations required the use of approximately 2,880 cubic yards of soil imported from Jimmie Cooper's pit as well as "on site" excavated soil which was below NMOCD remedial threshold limits. After completion of backfill operations, the drill pit and surrounding area were contoured to allow natural drainage. Remaining remediation activity includes seeding of the disturbed area with a seed mixture approved by the landowner.

FIGURES

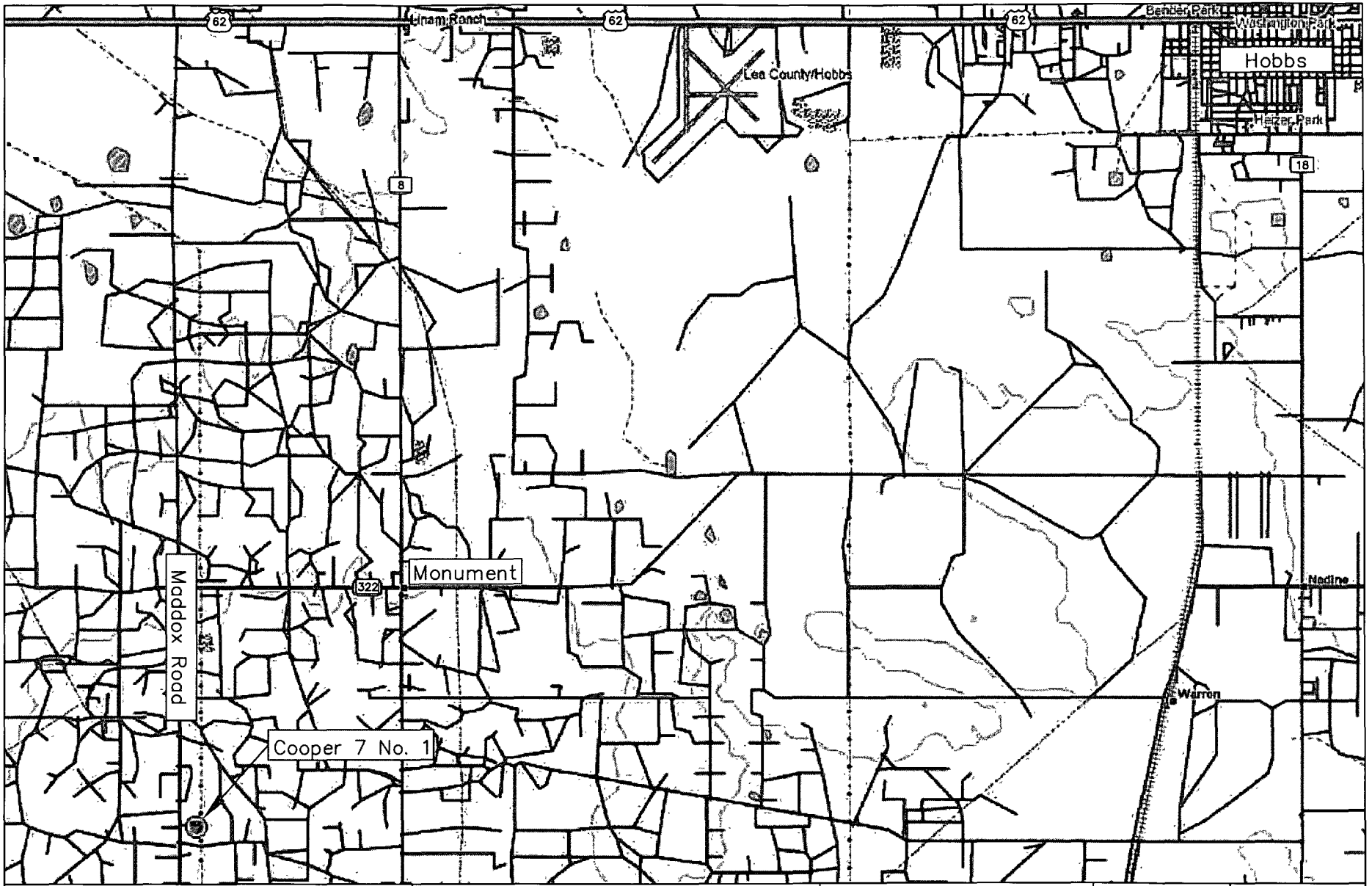

Figure 1 Area Map Chesapeake Energy Cooper 7 No. 1	Lea County, New Mexico NW 1/4 of the NW 1/4, Sec. 07, T20S, R37E N 32° 35' 35.6" W 103° 17' 47.1" Elevation: 3,557 feet amsl	DWG By: Iain Olness July 2005	REVISED: Dec 2006
		0 1.5 3.0 Miles	SHEET 1 of 1
			N

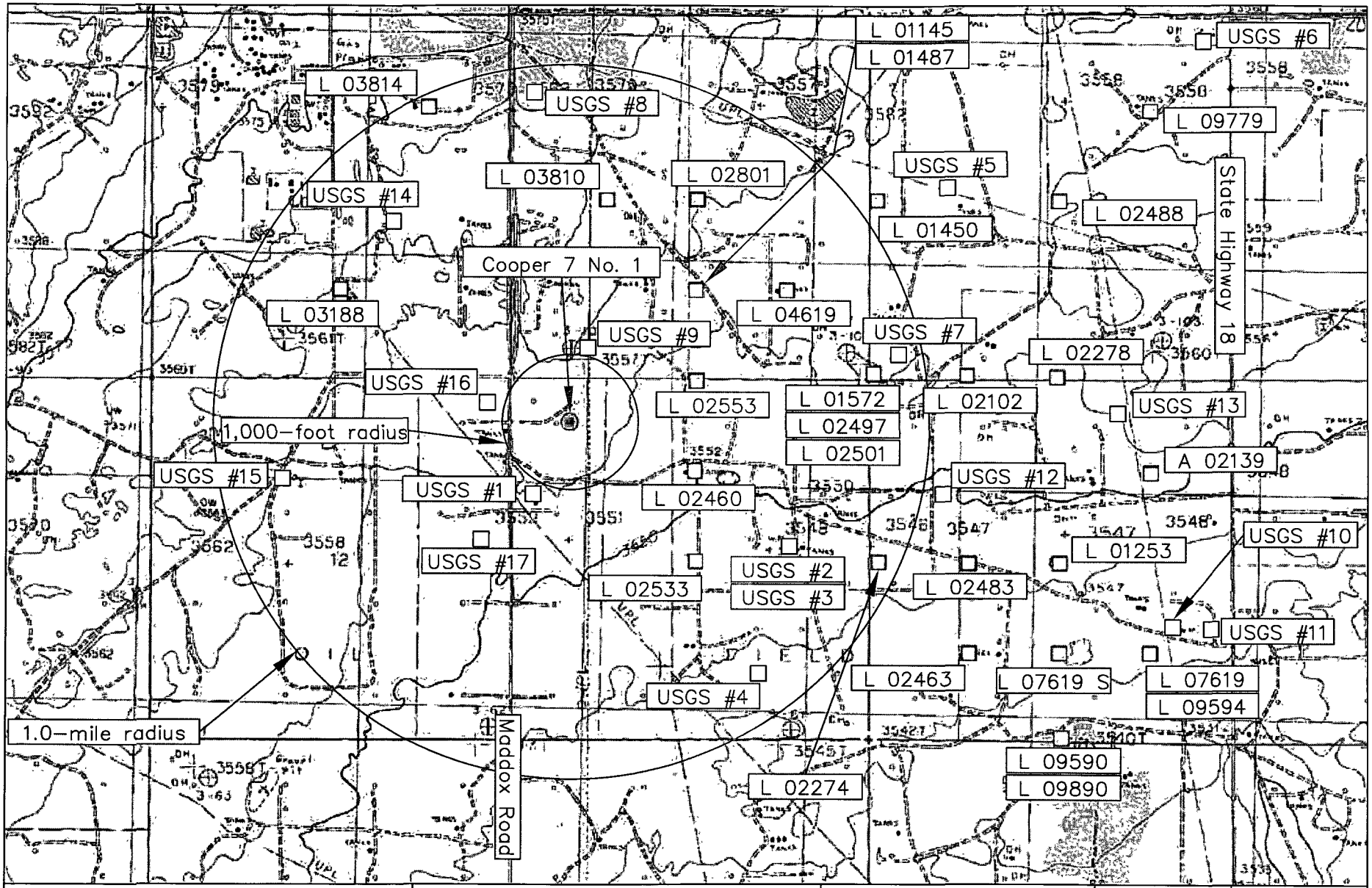

Figure 2 Site Location Map Chesapeake Energy Cooper 7 No. 1	Lea County, New Mexico NW 1/4 of the NW 1/4, Sec. 07, T20S, R37E N 32° 35' 35.6" W 103° 17' 47.1" Elevation: 3,557 feet amsl	DWG By: Iain Olness July 2005	REVISED: Dec 2006
		0 2,000 4,000 Miles	SHEET 1 of 1
			N

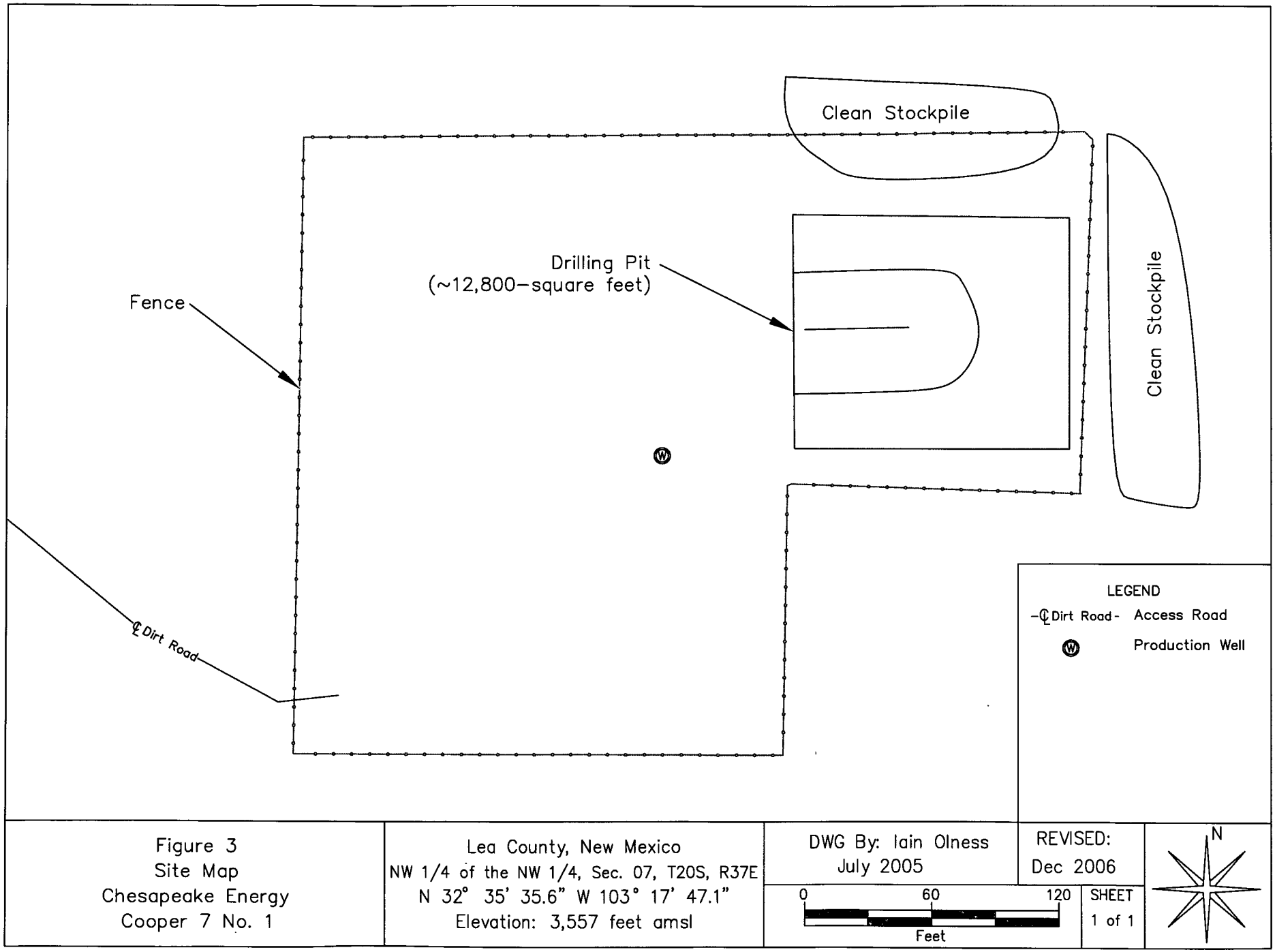

Figure 3 Site Map Chesapeake Energy Cooper 7 No. 1	Lea County, New Mexico NW 1/4 of the NW 1/4, Sec. 07, T20S, R37E N 32° 35' 35.6" W 103° 17' 47.1" Elevation: 3,557 feet amsl	DWG By: Iain Olness July 2005	REVISED: Dec 2006	SHEET 1 of 1

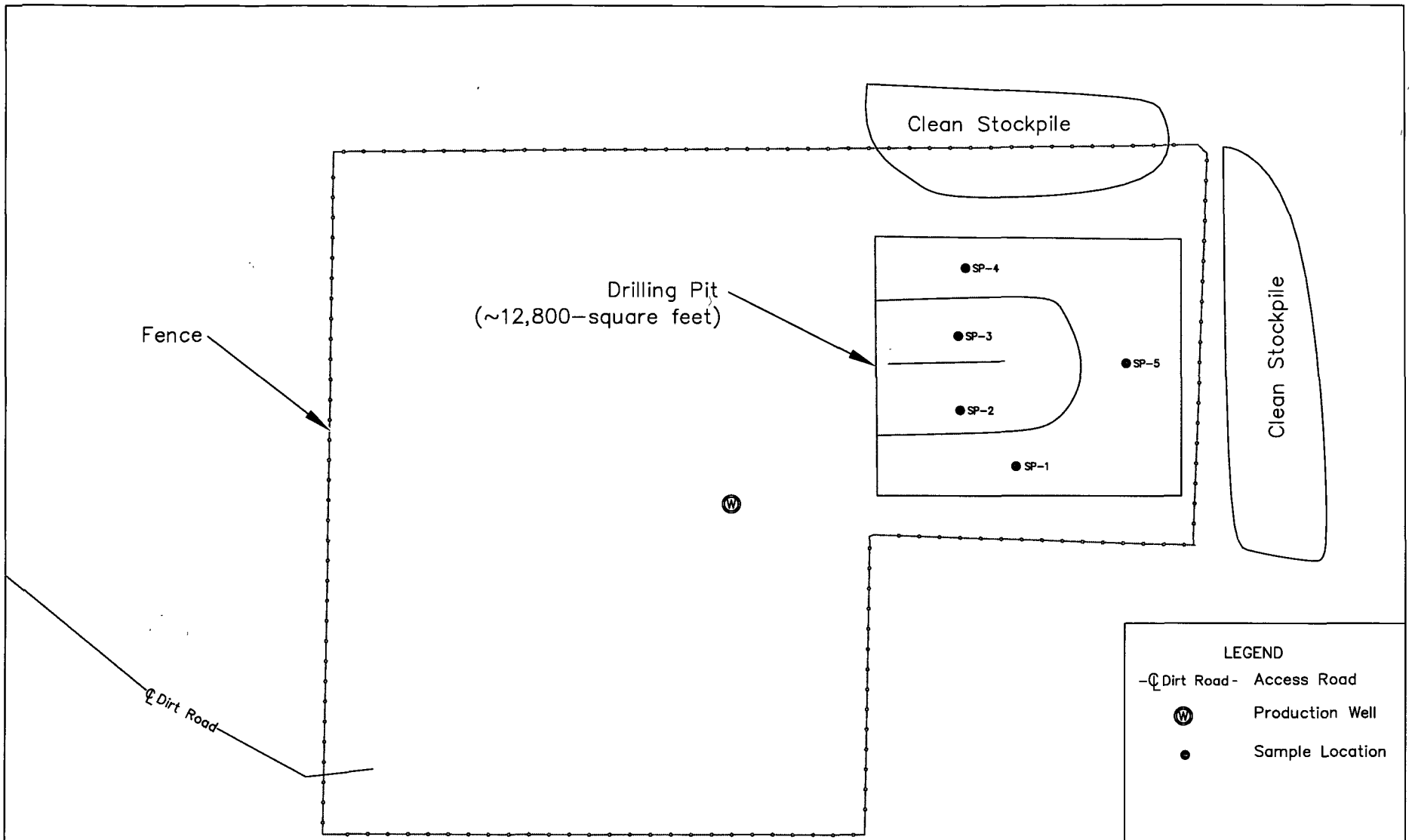

Figure 4 Sample Point Location Map Chesapeake Energy Cooper 7 No. 1	Lea County, New Mexico NW 1/4 of the NW 1/4, Sec. 07, T20S, R37E N 32° 35' 35.6" W 103° 17' 47.1" Elevation: 3,557 feet amsl	DWG By: Iain Olness July 2005	REVISED: Dec 2006	N
		0 60 120 Feet	SHEET 1 of 1	

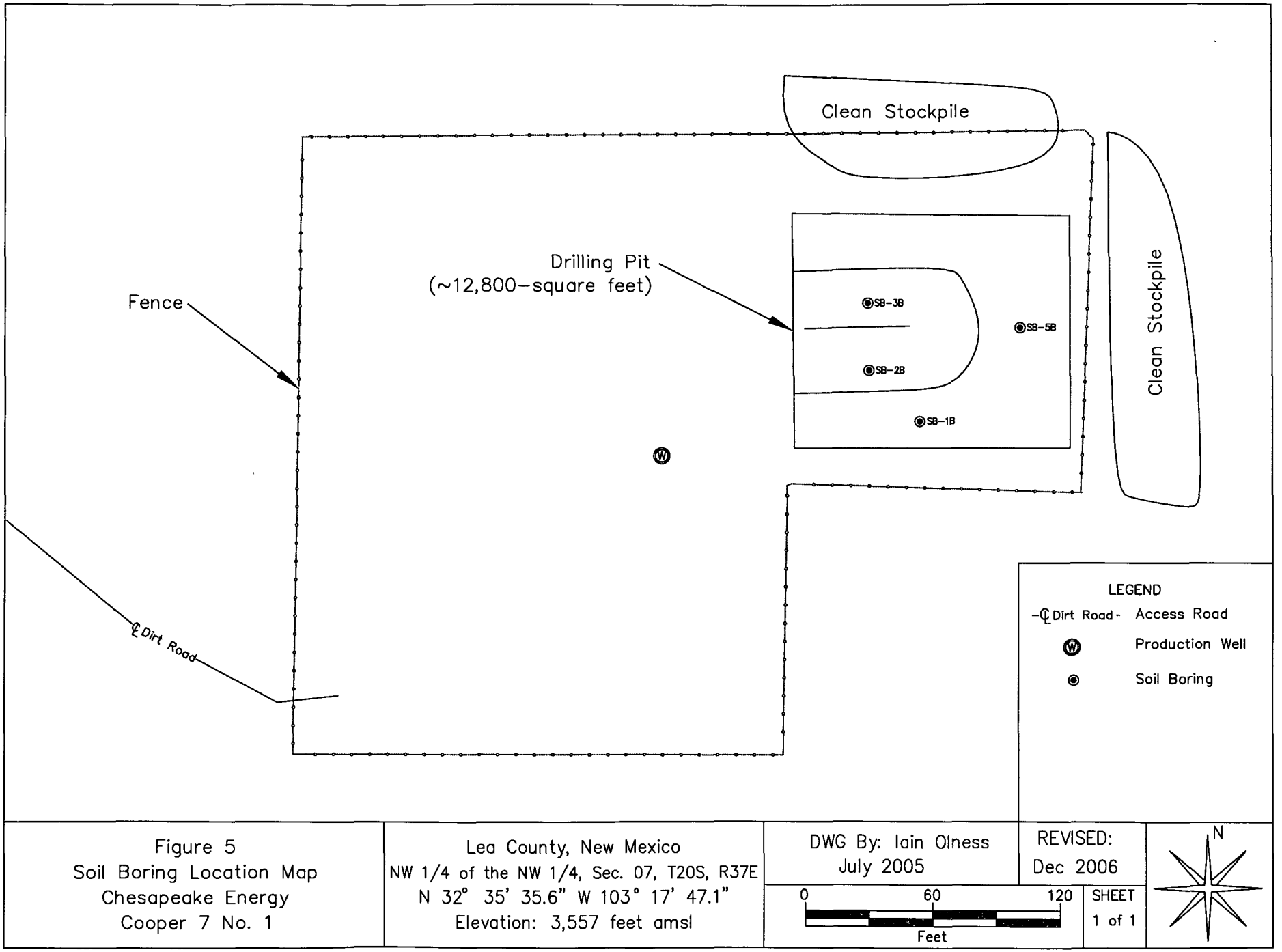

Figure 5 Soil Boring Location Map Chesapeake Energy Cooper 7 No. 1	Lea County, New Mexico NW 1/4 of the NW 1/4, Sec. 07, T20S, R37E N 32° 35' 35.6" W 103° 17' 47.1" Elevation: 3,557 feet amsl	DWG By: Iain Olness July 2005	REVISED: Dec 2006	
			SHEET 1 of 1	

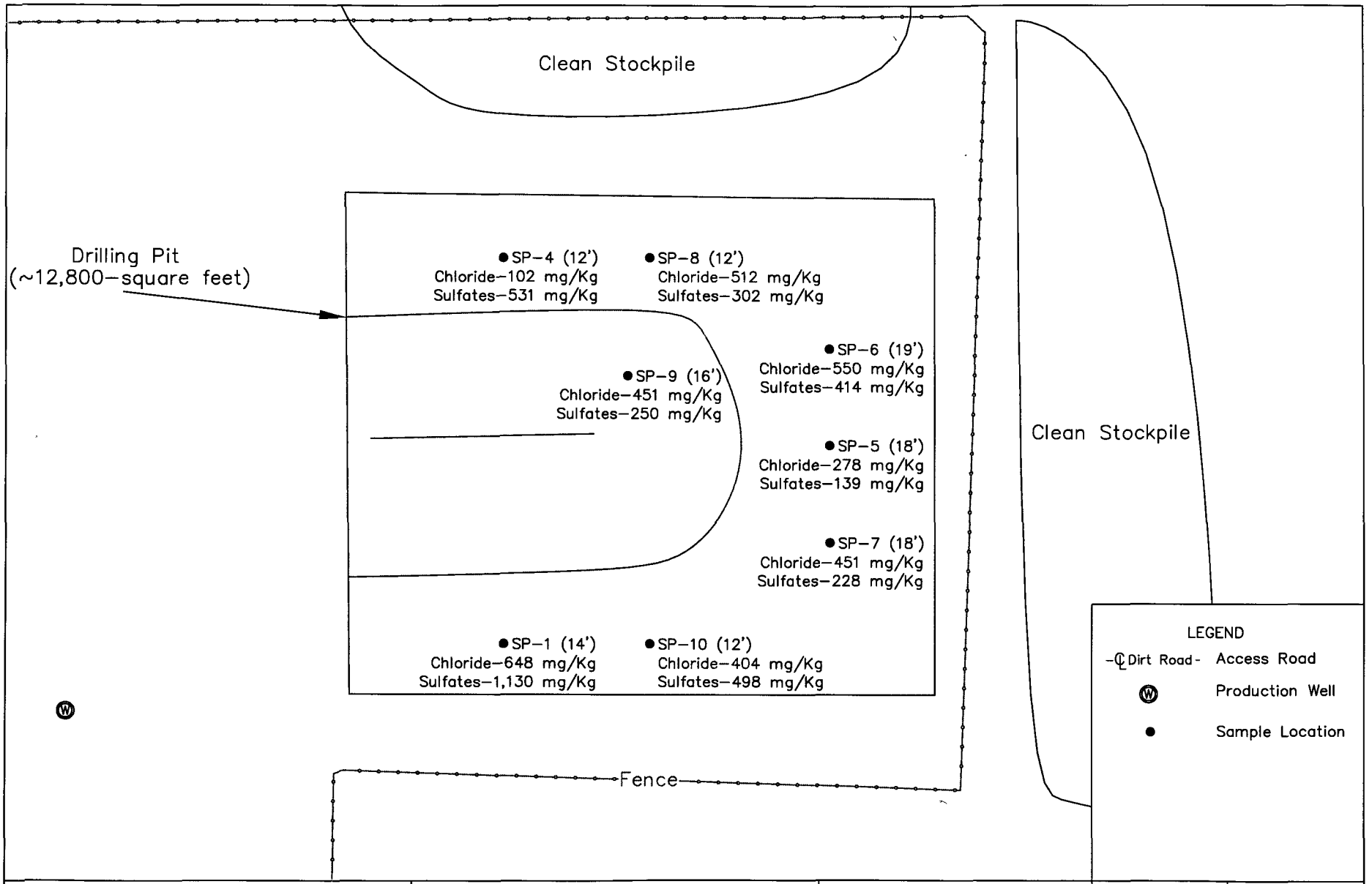

Figure 6 Sample Map #1 June 7–14, 2006 Chesapeake Energy Cooper 7 No. 1	Lea County, New Mexico NW 1/4 of the NW 1/4, Sec. 07, T20S, R37E N 32° 35' 35.6" W 103° 17' 47.1" Elevation: 3,557 feet amsl	DWG By: Iain Olness July 2005	REVISED: Dec 2006	N
		0 30 60 Feet	SHEET 1 of 1	

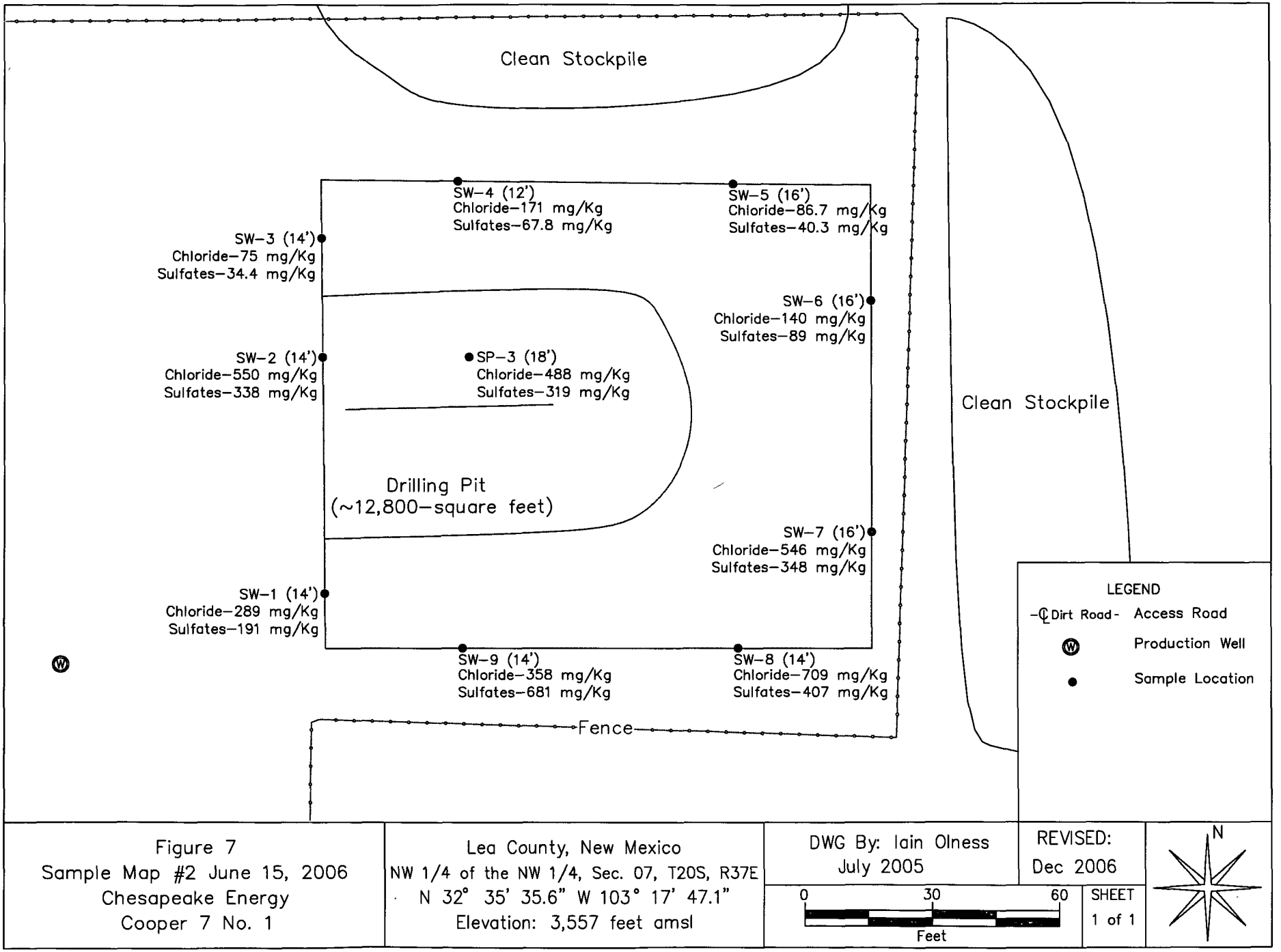

Figure 7
Sample Map #2 June 15, 2006
Chesapeake Energy
Cooper 7 No. 1

Lea County, New Mexico
NW 1/4 of the NW 1/4, Sec. 07, T20S, R37E
N 32° 35' 35.6" W 103° 17' 47.1"
Elevation: 3,557 feet amsl

DWG By: Iain Olness
July 2005

REVISED:
Dec 2006

SHEET
1 of 1

TABLES

TABLE 1

Well Data

Chesapeake Energy Cooper 7 No.1 (NMOCD Ref. 1RP-753; EPI Ref. #160014)

Well Number	Diversion[A]	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Well Depth (ft bgs)	Depth to Water (ft bgs)
L 02460	3	Moran Drilling Co	PRO	20 S	37 E	07 2 1	N 32° 35' 28 41"	W 103° 17' 25 25"	09-Jan-54	82	38
L 02533	0	Moran Drilling Co	PRO	20 S	37 E	07 2 3	N 32° 35' 15 33"	W 103° 17' 25 23"	24-Apr-54	82	34
USGS #1				20 S	37 E	07 1 3 1			10-Apr-68		27 04
USGS #2				20 S	37 E	07 2 4 3			29-Jan-91		25 06
USGS #3				20 S	37 E	07 2 4 3			29-Mar-54		26 37
USGS #4				20 S	37 E	07 4 3 2			10-Apr-68		26 44
L 01450	3	Ohio Oil Co.	PRO	20 S	37 E	05 1 3	N 32° 36' 7 65"	W 103° 16' 54 36"			
L 01572	3	Exploration Drilling Co	PRO	20 S	37 E	05 3 3 1	N 32° 35' 41 47"	W 103° 16' 54 37"	16-Sep-52	70	
L 02102	3	E F Moran, Inc	PRO	20 S	37 E	05 3 4	N 32° 35' 41 43"	W 103° 16' 38 9"	20-Mar-53	70	46
L 02278	3	Laughlin Estate	DOM	20 S	37 E	05 4 3	N 32° 35' 41 39"	W 103° 16' 23 43"	01-Feb-61	65	37
L 02488	3	The Texas Co	PRO	20 S	37 E	05 2 3	N 32° 36' 7 57"	W 103° 16' 23 45"	03-Feb-54	63	32
L 02497	3	Amerada Petroleum Corp	PRO	20 S	37 E	05 3 3 3	N 32° 35' 41 47"	W 103° 16' 54 37"	10-Mar-54		35
L 02501	3	Amerada Petroleum Corp	PRO	20 S	37 E	05 3 3 3	N 32° 35' 41 47"	W 103° 16' 54 37"			
L 09779	3	Dolores Nash Davis	DOM	20 S	37 E	05 2 2 2	N 32° 36' 20 62"	W 103° 16' 8 01"	15-Jan-85	50	40
USGS #5				20 S	37 E	05 1 3 4			14-Mar-06		30 75
USGS #6				20 S	37 E	05 2 2 2			30-Jan-76		26 82
USGS #7				20 S	37 E	05 3 3 3			10-Apr-68		30 2
L 01145	3	Gulf Oil Corporation	PRO	20 S	37 E	06 4 1 4	N 32° 35' 54 6"	W 103° 17' 25 25"	01-May-37	75	35
L 01487	3	Gulf Oil Corporation	PRO	20 S	37 E	06 4 1 4	N 32° 35' 54 6"	W 103° 17' 25 25"			
L 02553	3	Gulf Oil Corporation	PRO	20 S	37 E	06 4 3 4	N 32° 35' 41 49"	W 103° 17' 25 26"	13-May-54	85	40
L 02801	3	Amerada Petroleum Corp	PRO	20 S	37 E	06 2 3 3	N 32° 36' 7 7"	W 103° 17' 25 24"			
L 03810	3	The Texas Co	PRO	20 S	37 E	06 1 4 4	N 32° 36' 7 72"	W 103° 17' 40 67"	09-Mar-58	86	37
L 04619	3	Gulf Oil Corporation	PRO	20 S	37 E	06 4 2 3	N 32° 35' 54 58"	W 103° 17' 9 81"	29-Mar-61	86	36
USGS #8				20 S	37 E	06 1 1 3			12-Feb-81		22 94
USGS #9				20 S	37 E	06 3 3 4			23-Jan-96		28 81
L 01253	3	Gulf Oil Corporation	PRO	20 S	37 E	08 2 3 1	N 32° 35' 15 21"	W 103° 16' 23 42"			
A 02139	3	Gackle Drilling Co	PRO	20 S	37 E	08 2 2 2	N 32° 35' 28 26"	W 103° 16' 7 95"	19-Mar-53	80	38
L 02274	3	Sinclair Oil & Gas Co	PRO	20'S	37 E	08 1 3	N 32° 35' 15 28"	W 103° 16' 54 35"	05-Jul-53	70	38
L 02463	3	Amerada Petroleum Corp	PRO	20 S	37 E	08 3 2 1	N 32° 35' 2 16"	W 103° 16' 38 87"	22-Jan-54	86	30
L 02483	3	Moran Drilling Co	PRO	20 S	37 E	08 1 4 4	N 32° 35' 15 25"	W 103° 16' 38 88"	16-Feb-54	84	34
L 07619	15 57	Jim Cooper	IRR	20 S	37 E	08 4 2 2	N 32° 35' 2 08"	W 103° 16' 7 95"			
L 07619 S		Jim Cooper	IRR	20 S	37 E	08 4 1 1	N 32° 35' 2 12"	W 103° 16' 23 41"			
L 09590	3	Jimmy Cooper	DOM	20 S	37 E	08 4	N 32° 34' 49 04"	W 103° 16' 23 41"	03-Dec-84	70	35
L 09594	0	Jimmy Cooper	DOM	20 S	37 E	08 4 2	N 32° 35' 2 08"	W 103° 16' 7.95"			
L 09890	0	Jimmy Cooper	EXP	20 S	37 E	08 4	N 32° 34' 49 04"	W 103° 16' 23 41"	03-Dec-84	70	35
USGS #10				20 S	37 E	08 4 2 3			04-Feb-76		19 86
USGS #11				20 S	37 E	08 4 2 4			03-Mar-66		40 43
USGS #12				20 S	37 E	17 1 3 2			23-Jan-96		26 6
USGS #13				20 S	37 E	18 2 1 2			29-Jan-91		27 28
L 03188	3	Amerada Petroleum Corp	PRO	20 S	36 E	01 4 1 2	N 32° 35' 54 66"	W 103° 18' 26 59"			
L 03814	3	W C Byrd	DOM	20 S	36 E	01 2 2 2	N 32° 36' 20 84"	W 103° 18' 11 05"	04-Sep-58	60	40
USGS #14				20 S	36 E	01 4 1 2			11-Apr-68		26 28
USGS #15				20 S	36 E	12 1 4 1			11-Apr-68		29 65R
									27-Jan-71		28 25
USGS #16				20 S	36 E	12 2 2 2			08-Sep-67		27 72
USGS #17				20 S	36 E	12 2 4 4			01-Mar-61		25 65

* = Data obtained from the New Mexico Office of the State Engineer Website (http://waters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet1) and a USGS Database on file at EPI's Office
Well locations shown on Figure 2

[A] = in acre feet per annum
PRO = 72-12-1 Prospecting or Development of a Natural Resource
IRR = Irrigation
DOM = Domestic
EXP = Exploration
quarters are 1=NW, 2=NE, 3=SW, 4=SE, quarters are biggest to smallest

TABLE 2

Summary of Soil Boring Soil Sample Field Analyses and Laboratory Analytical Results

Chesapeake Energy - Cooper 7 No. 1 (NMOCD Ref 1RP-753; EPI Ref.# 160014)

Sample I.D.	Depth (feet)	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Total BTEX (mg/Kg)	TPH (as Diesel) (mg/Kg)	TPH (as gasoline) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)
SP-1	10	22-Jul-05	--	1,400	--	--	--	--	--	1,280
	12	22-Jul-05	--	1,600	--	--	--	--	--	--
	14	22-Jul-05	--	560	--	--	--	--	--	--
	16	22-Jul-05	--	250	--	--	--	--	--	--
	18	22-Jul-05	--	640	--	--	--	--	--	992
	20	22-Jul-05	--	1,020	--	--	--	--	--	--
	22	22-Jul-05	--	800	--	--	--	--	--	--
	24	22-Jul-05	--	560	--	--	--	--	--	464
SP-2	10	22-Jul-05	--	1,060	--	--	--	--	--	864
	12	22-Jul-05	--	880	--	--	--	--	--	--
	14	22-Jul-05	--	880	--	--	--	--	--	--
	16	22-Jul-05	--	1,060	--	--	--	--	--	992
	18	22-Jul-05	--	1,200	--	--	--	--	--	--
	20	22-Jan-05	--	780	--	--	--	--	--	--
	22	22-Jul-05	--	2,020	--	--	--	--	--	-
	24	22-Jul-05	--	660	--	--	--	--	--	720
SP-3	10	22-Jul-05	--	1,920	--	--	--	--	--	2,351
	12	22-Jul-05	--	1,540	--	--	--	--	--	--
	14	22-Jul-05	--	5,280	--	--	--	--	--	--
	16	22-Jul-05	--	2,500	--	--	--	--	--	3,199
	18	22-Jul-05	--	1,040	--	--	--	--	--	--
	20	22-Jul-05	--	1,120	--	--	--	--	--	--
	14	22-Jul-05	--	680	--	--	--	--	--	--
	24	22-Jul-05		640	--	--	--	--	--	544
SP-4	10	22-Jul-05	--	1,760	--	--	--	--	--	4,319
	12	22-Jul-05	--	320	--	--	--	--	--	--
	14	22-Jul-05	--	250	--	--	--	--	--	128
	16	22-Jul-05	--	250	--	--	--	--	--	112

TABLE 2

Summary of Soil Boring Soil Sample Field Analyses and Laboratory Analytical Results

Chesapeake Energy - Cooper 7 No. 1 (NMOCD Ref 1RP-753; EPI Ref.# 160014)

Sample I.D.	Depth (feet)	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Total BTEX (mg/Kg)	TPH (as Diesel) (mg/Kg)	TPH (as gasoline) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)
SP-5	10	22-Jul-05	--	3,160	--	--	--	--	--	3,039
	12	22-Jul-05	--	2,000	--	--	--	--	--	--
	14	22-Jul-05	--	2,120	--	--	--	--	--	--
	16	22-Jul-05	--	2,480	--	--	--	--	--	4,159
	18	22-Jul-05	--	1,940	--	--	--	--	--	--
	20	22-Jul-05	--	1,460	--	--	--	--	--	--
	22	22-Jul-05	--	640	--	--	--	--	--	--
	24	22-Jul-05	--	420	--	--	--	--	--	384
SB-1B	26	03-Oct-05	4.2	240	-- [A]	-- [A]	126	<10.0	126	64
	31	03-Oct-05	2.2	320	-- [A]	-- [A]	21	<10.0	21	96
SB-2B	26	04-Oct-05	0.5	240	-- [A]	-- [A]	<10.0	<10.0	<10.0	144
	31	04-Oct-05	0.2	400	-- [A]	-- [A]	<10.0	<10.0	<10.0	368
SB-3B	26	04-Oct-05	3.5	720	-- [A]	-- [A]	<10.0	<10.0	<10.0	672
	31	04-Oct-05	6.3	480	-- [A]	-- [A]	<10.0	<10.0	<10.0	432
SB-5B	26	03-Oct-05	2.5	800	-- [A]	-- [A]	<10.0	<10.0	<10.0	976
	31	03-Oct-05	5.4	800	-- [A]	-- [A]	<10.0	<10.0	<10.0	656
NMOCD Remedial Thresholds					10	50			100	250 [2]

Bolded values are in excess of NMOCD Remediation Thresholds

[A] *A field soil vapor headspace measurement of 100 ppm was substituted for laboratory analyses of the Benzene and BTEX concentrations limits*

[1] *Estimated concentration; analyte dectected below method detection limits*

[2] *Chloride residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 mg/L.*

-- *Not Analyzed*

TABLE 3

Summary of Excavation Soil Sample Field Analyses and Laboratory Analytical Results

Chesapeake Operating, Inc.

Cooper 7 No. 1 Drill Pit (NMOCD Ref. 1RP#753; EPI Ref.# 160014)

Sample I D	Depth (feet)	Soil Status	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon Ranges C6-C12	Carbon Ranges C12-C28	Carbon Ranges C28-C35	Total Hydrocarbons nC6-nC35	Chloride (mg/Kg)	Sulfates (mg/Kg)
BH-1 (SP-5)	18	In situ	07-Jun-06	--	440	<0 0250	<0 0250	<0.0250	<0.050	<0 125	<10 0	<10 0	<10 0	<30 0	278	139
BH-2	16	In situ	07-Jun-06	--	2,000	--	--	--	--	--	--	--	--		--	--
BH-3	18	In situ	07-Jun-06	--	1,160	--	--	--	--	--	--	--	--		--	--
BH-4 (SP-6)	19	In situ	08-Jun-06	--	880	<0.0250	<0 0250	<0 0250	<0.050	<0.125	<10 0	<10 0	<10.0	<30 0	550	414
BH-5 (SP-8)	12	In situ	08-Jun-06	--	760	<0 0250	<0 0250	<0.0250	<0.050	<0 125	<10.0	<10.0	<10 0	<30 0	512	302.0
BH-6 (SP-4)	12	In situ	09-Jun-06	--	360	<0 0250	<0.0250	<0.0250	<0 050	<0 10	<10.0	<10 0	<10 0	<30 0	102	531
BH-7 (SP-9)	16	In situ	09-Jun-06	--	880	<0 0250	<0.0250	<0 0250	<0 050	<0.10	<10.0	<10 0	<10 0	<30 0	451	250
BH-8	16	Excavated	09-Jun-06	--	1,400	--	--	--	--	--	--	--	--	--	--	--
BH-9 (SP-7)	18	In Situ	12-Jun-06	--	600	<0.0250	<0 0250	<0 0250	<0 050	<0.125	<10.0	<10 0	<10 0	<30.0	451	228
BH-10	10	Excavated	13-Jun-06	--	1,160	--	--	--	--	--	--	--	--	--	--	--
BH-11 (SP-10)	12	In-situ	13-Jun-06	--	880	<0 0250	<0.0250	<0 0250	<0 050	<0 125	<10 0	<10.0	<10 0	<30 0	404	498
BH-12	12	In situ	14-Jun-06	--	1,200	--	--	--	--	--	--	--	--	--	--	--
BH-13	14	In-situ	14-Jun-06	--	880	--	--	--	--	--	--	--	--	--	--	--
BH-14 (SP-1)	14	In situ	14-Jun-06	--	760	<0 0250	<0.0250	<0 0250	<0.050	<0.125	<10 0	<10 0	<10.0	<30 0	648	1,130
BH-15	18	In situ	14-Jun-06	--	1,200	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

Summary of Excavation Soil Sample Field Analyses and Laboratory Analytical Results

Chesapeake Operating, Inc.

Cooper 7 No. 1 Drill Pit (NMOCD Ref. 1RP#753; EPI Ref.# 160014)

Sample I.D	Depth (feet)	Soil Status	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon Ranges C6-C12	Carbon Ranges C12-C28	Carbon Ranges C28-C35	Total Hydrocarbons nC6-nC35	Chloride (mg/Kg)	Sulfates (mg/Kg)
BH-16 (SP-3)	18	In-situ	15-Jun-06	--	800	<0.0250	<0 0250	<0.0250	<0.050	<0 125	<10.0	<10 0	<10 0	<30 0	488	319
SW-1	14	In situ	15-Jun-06	--	600	<0 0250	<0.0250	<0 0250	<0.050	<0 125	<10 0	<10 0	<10 0	<30.0	289	191
SW-2	14	In situ	15-Jun-06	--	600	<0.0250	<0 0250	<0 0250	<0 050	<0 125	<10.0	<10 0	<10 0	<30 0	550	338
SW-3	14	In situ	15-Jun-06	--	480	<0 0250	<0 0250	<0 0250	<0 050	<0.125	<10 0	<10 0	<10.0	<30 0	75 0	34 4
SW-4	12	In situ	15-Jun-06	--	480	<0.0250	<0 0250	<0.0250	<0 050	<0 125	<10.0	<10 0	<10 0	<30 0	171	67.8
SW-5	16	In situ	15-Jun-06	--	640	<0.0250	<0 0250	<0.0250	<0 050	<0 125	<10.0	<10 0	<10 0	<30 0	86.7	40 3
SW-6	16	In situ	15-Jun-06	--	600	<0.0250	<0 0250	<0.0250	<0.050	<0 125	<10 0	<10 0	<10 0	<30 0	140	89 0
SW-7	16	In situ	15-Jun-06	--	880	<0.0250	<0.0250	<0.0250	<0.050	<0 125	<10.0	<10 0	<10 0	<30.0	546	348
SW-8	14	In situ	15-Jun-06	--	760	<0 0250	<0.0250	<0 0250	<0.050	<0.125	<10 0	<10.0	<10 0	<30 0	709	407
SW-9	14	In situ	15-Jun-06	--	800	<0 0250	<0.0250	<0 0250	<0 050	<0.125	<10 0	<10 0	<10.0	<10 0	358	681
NMOCD Remedial Threshold Goals						10				50			100		250	600

Bolded values are in excess of NMOCD Remediation Threshold Goals
-- = Not Analyzed
ND = Not Detected
BH = Soil samples collected from the bottom of the excavation, SW = Soil samples collected from the side walls of the excavation

APPENDIX I

LABORATORY ANALYTICAL REPORTS
AND
CHAIN-OF-CUSTODY FORM

CARDINAL LABORATORIES

PHONE (325) 673-7001 · 2111 BEECHWOOD · ABILENE, TX 79603
PHONE (505) 393-2326 · 101 E. MARLAND · HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: IAIN OLNESS
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (505) 394-2601

Receiving Date: 08/03/05
Reporting Date. 08/04/05
Project Owner: CHESAPEAKE ENERGY CORP.
Project Name: COOPER 7 NO. 1
Project Location: UL-D, SECT.7.T20S, R36E

Analysis Date: 08/03/05
Sampling Date: 07/22/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H10029-1	SP-1 (10')	1280
H10029-2	SP-1 (18')	992
H10029-3	SP-1 (24')	464
H10029-4	SP-2 (10')	864
H10029-5	SP-2 (16')	992
H10029-6	SP-2 (24')	720
H10029-7	SP-3 (10')	2351
H10029-8	SP-3 (16')	3199
H10029-9	SP-3 (24')	544
H10029-10	SP-4 (10')	4319
H10029-11	SP-4 (14')	128
H10029-12	SP-4 (16')	112
H10029-13	SP-5 (10')	3039
H10029-14	SP-5 (16')	4159
H10029-15	SP-5 (24')	384
Quality Control		1000
True Value QC		1000
% Recovery		100
Relative Percent Difference		2.0

METHOD: Standard Methods	4500-ClB

Note: Analyses performed on 1:4 w:v aqueous extracts.

Amy Hill
Chemist

8/4/05
Date

H10029

Cardinal Laboratories Inc.

Chain of Custody Form

101 East Marland, Hobbs, NM 88240
505-393-2326 Fax 505-393-2476

2111 Beechwood, Abilene, TX 79603
915-673-7001 Fax 915-673-7020

Company Name	Environmental Plus, Inc.
EPI Project Manager	Iain Olness
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Chesapeake Energy Corporation
Facility Name	Cooper 7 No. 1
Location	UL-D, Sect. 7. T 20 S, R 367E
Project Reference	160014
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
PO Box 1558
Eunice, NM 88231

LAB I.D.		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CRUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO_4^{-2})	pH	TCLP	OTHER >>>	PAH			
H10029-	1	SP-1 (10')	G	1			X					X		22-Jul-05	7:30			X							
-2	2	SP-1 (18')	G	1			X					X		22-Jul-05	8:10			X							
-3	3	SP-1 (24')	G	1			X					X		22-Jul-05	8:55			X							
-4	4	SP-2 (10')	G	1			X					X		22-Jul-05	9:15			X							
-5	5	SP-2 (16')	G	1			X					X		22-Jul-05	9:55			X							
-6	6	SP-2 (24')	G	1			X					X		22-Jul-05	10:40			X							
-7	7	SP-3 (10')	G	1			X					X		22-Jul-05	11:00			X							
-8	8	SP-3 ~~(15')~~ (16')	G	1			X					X		22-Jul-05	11:40			X							
-9	9	SP-3 (24')	G	1			X					X		22-Jul-05	12:55			X							
-10	10	SP-4 (10')	G	1			X					X		22-Jul-05	13:20			X							

Sampler Relinquished:	Date	Received By:
Relinquished by:	Time	Received By: (lab staff)
Delivered by:	Date: 8/3/05 Time: 10:30	Checked By:
	Sample Cool & Intact: Yes / No	

E-mail results to: iolness@hotmail.com
REMARKS:

Cardinal Laboratories Inc.

Chain of Custody Form

101 East Marland, Hobbs, NM 88240
505-393-2326 Fax 505-393-2476

2111 Beechwood, Abilene, TX 79603
915-673-7001 Fax 915-673-7020

Company Name	Environmental Plus, Inc.
EPI Project Manager	Iain Olness
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Chesapeake Energy Corporation
Facility Name	Cooper 7 No. 1
Location	UL-D, Sect. 7. T 20 S, R 367E
Project Reference	160014
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
PO Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

LAB I.D.		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CRUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl⁻)	SULFATES (SO_4^{2-})	pH	TCLP	OTHER >>>	PAH			
H10029-11	1	SP-4 (14')	G	1			X					X		22-Jul-05	14:05			X							
-12	2	SP-4 (16')	G	1			X					X		22-Jul-05	14:35			X							
-13	3	SP-5 (8) 10'	G	1			X					X		22-Jul-05	15:00			X							
-14	4	SP-5 (16')	G	1			X					X		22-Jul-05	15:25			X							
-15	5	SP-5 (24')	G	1			X					X		22-Jul-05	15:50			X							
	6																								
	7																								
	8																								
	9																								
	10																								

Sampler Relinquished:

Relinquished by:

Date: 8/3/05
Time: 17:

Received By:

Received By: (lab staff) Amy

Delivered by:

Sample Cool & Intact: Yes / No

Checked By:

E-mail results to: iolness@hotmail.com

REMARKS:

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: IAIN OLNESS
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (505) 394-2601

Receiving Date: 10/04/05
Reporting Date: 10/07/05
Project Number: 160014
Project Name: COOPER 7 NO.1
Project Location: UL-D, SECT.7. T 20 S, R 37E

Sampling Date: 10/03/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		10/06/05	10/06/05	10/05/05
H10265-1	SB-1B (26')	<10.0	126	64
H10265-2	SB-1B (31')	<10.0	21.0	96
H10265-3	SB-2B (26')	<10.0	<10.0	144
H10265-4	SB-2B (31')	<10.0	<10.0	368
H10265-5	SB-3B (26')	<10.0	<10.0	672
H10265-6	SB-3B (31')	<10.0	<10.0	432
H10265-7	SB-5B (26')	<10.0	<10.0	976
H10265-8	SB-5B (31')	<10.0	<10.0	656
Quality Control		782	801	1030
True Value QC		800	800	1000
% Recovery		97.7	100	103
Relative Percent Difference		1.0	0.4	0.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl: Std. Methods 4500-ClB
*Analyses performed on 1:4 w:v aqueous extracts.

Chemist

10/7/05
Date

H10265.XLS

Environmental Plus, Inc.

Chain of Custody Form

2100 Avenue O, Eunice, NM 88231 *P.O. Box 1558, Eunice, NM 88231*
(505) 394-3481 FAX: (505) 394-2601

Company Name	Environmental Plus, Inc.
EPI Project Manager	Iain Olness
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Chesapeake Energy Corporation
Facility Name	Cooper 7 No. 1
Location	UL-D, Sect. 7. T 20 S, R 367E
Project Reference	160014
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
PO Box 1558
Eunice, NM 88231

LAB I.D.		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO_4^{-2})	pH	TCLP	OTHER >>>	PAH
H10265 - 1	1	SB-1B (26')	X	1			1							03-Oct-05	13:20		X	X					
-2	2	SB-1B (31')	X	1			1							03-Oct-05	14:00		X	X					
-3	3	SB-2B (26')	X	1			1							04-Oct-05	9:30		X	X					
-4	4	SB-2B (31')	X	1			1							04-Oct-05	10:30		X	X					
-5	5	SB-3B (26')	X	1			1							04-Oct-05	12:00		X	X					
-6	6	SB-3B (31')	X	1			1							04-Oct-05	13:00		X	X					
-7	7	SB-5B (26')	X	1			1							03-Oct-05	11:15		X	X					
-8	8	SB-5B (31')	X	1			1							03-Oct-05	12:00		X	X					
	9																						
	10																						

Sampler Relinquished:	Date / Time	Received By:	E-mail results to: iolness@envplus.net
Relinquished by:	Date 10/4/05 Time 4:40 PM	Received By: (lab staff)	REMARKS:
Delivered by:	Sample Cool & Intact: (Yes) No	Checked By:	

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Iain Olness

Environmental Plus, Incorporated

P.O. Box 1558

Eunice, NM 88231

Project: Chesapeake/ Cooper 7 No. 1

Project Number: 160014

Location: UL-D, Sect. 7, T 20 S, R 37 E

Lab Order Number: 6F13007

Report Date: 06/19/06

Environmental Plus, Incorporated	Project. Chesapeake/ Cooper 7 No 1	Fax 505-394-2601
P.O Box 1558	Project Number. 160014	
Eunice NM, 88231	Project Manager Iain Olness	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-4 12'	6F13007-01	Soil	06/09/06 07 00	06/13/06 10 35
SP-5 18'	6F13007-02	Soil	06/07/06 09 15	06/13/06 10 35
SP-6 19'	6F13007-03	Soil	06/08/06 09 00	06/13/06 10 35
SP-7 18'	6F13007-04	Soil	06/12/06 08 05	06/13/06 10 35
SP-8 12'	6F13007-05	Soil	06/08/06 09.15	06/13/06 10.35
SP-9 16'	6F13007-06	Soil	06/09/06 08 25	06/13/06 10.35

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

Environmental Plus, Incorporated	Project Chesapeake/ Cooper 7 No 1	Fax 505-394-2601
P O Box 1558	Project Number 160014	
Eunice NM, 88231	Project Manager Iain Olness	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-4 12' (6F13007-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61420	06/14/06	06/14/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*81.8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*90.8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61312	06/13/06	06/14/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*98.8 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*96.0 %*	*70-130*		"	"	"	"	
SP-5 18' (6F13007-02) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61420	06/14/06	06/14/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*91.0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*90 2 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61312	06/13/06	06/14/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*95 8 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*93 0 %*	*70-130*		"	"	"	"	
SP-6 19' (6F13007-03) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61420	06/14/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*80.0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*84 8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61312	06/13/06	06/14/06	EPA 8015M	

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Project Number 160014
Project Manager Iain Olness

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-6 19' (6F13007-03) Soil									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	1	EF61312	06/13/06	06/14/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*97 2 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*94.2 %*	*70-130*		"	"	"	"	
SP-7 18' (6F13007-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61420	06/14/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*81 8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*81.0 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61314	06/13/06	06/15/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*105 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*105 %*	*70-130*		"	"	"	"	
SP-8 12' (6F13007-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61420	06/14/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate· a,a,a-Trifluorotoluene		*87.5 %*	*80-120*		"	"	"	"	
Surrogate. 4-Bromofluorobenzene		*82 5 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61314	06/13/06	06/15/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*89.8 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*92.0 %*	*70-130*		"	"	"	"	

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-9 16' (6F13007-06) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61420	06/14/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*87.5 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*80 8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61428	06/14/06	06/15/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*117 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*114 %*	*70-130*		"	"	"	"	

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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	Notes
SP-4 12' (6F13007-01) Soil									
Chloride	**102**	10.0	mg/kg	20	EF61406	06/14/06	06/14/06	EPA 300 0	
% Moisture	**12.1**	0 1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	**531**	10 0	mg/kg	20	EF61406	06/14/06	06/14/06	EPA 300 0	
SP-5 18' (6F13007-02) Soil									
Chloride	**278**	10.0	mg/kg	20	EF61406	06/14/06	06/14/06	EPA 300 0	
% Moisture	**15.3**	0 1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	**139**	10 0	mg/kg	20	EF61406	06/14/06	06/14/06	EPA 300 0	
SP-6 19' (6F13007-03) Soil									
Chloride	**550**	20.0	mg/kg	40	EF61406	06/14/06	06/14/06	EPA 300 0	
% Moisture	**12.4**	0.1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	**414**	20.0	mg/kg	40	EF61406	06/14/06	06/14/06	EPA 300 0	
SP-7 18' (6F13007-04) Soil									
Chloride	**451**	10.0	mg/kg	20	EF61406	06/14/06	06/14/06	EPA 300 0	
% Moisture	**10.6**	0 1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	**228**	10.0	mg/kg	20	EF61406	06/14/06	06/14/06	EPA 300 0	
SP-8 12' (6F13007-05) Soil									
Chloride	**512**	10.0	mg/kg	20	EF61406	06/14/06	06/14/06	EPA 300 0	
% Moisture	**15.0**	0 1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	**302**	10 0	mg/kg	20	EF61406	06/14/06	06/14/06	EPA 300 0	
SP-9 16' (6F13007-06) Soil									
Chloride	**451**	20 0	mg/kg	40	EF61406	06/14/06	06/14/06	EPA 300 0	
% Moisture	**9.5**	0.1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	**250**	20.0	mg/kg	40	EF61406	06/14/06	06/14/06	EPA 300 0	

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Organics by GC - Quality Control

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF61312 - Solvent Extraction (GC)										
Blank (EF61312-BLK1)				Prepared 06/13/06 Analyzed 06/14/06						
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	"							
Carbon Ranges C28-C35	ND	10 0	"							
Total Hydrocarbon nC6-nC35	ND	10 0	"							
Surrogate 1-Chlorooctane	*58 4*		*mg/kg*	*50 0*		*117*	*70-130*			
Surrogate 1-Chlorooctadecane	*58 6*		*"*	*50 0*		*117*	*70-130*			
LCS (EF61312-BS1)				Prepared. 06/13/06 Analyzed 06/14/06						
Carbon Ranges C6-C12	447	10 0	mg/kg wet	500		89 4	75-125			
Carbon Ranges C12-C28	508	10 0	"	500		102	75-125			
Total Hydrocarbon nC6-nC35	955	10 0	"	1000		95 5	75-125			
Surrogate 1-Chlorooctane	*57 2*		*mg/kg*	*50 0*		*114*	*70-130*			
Surrogate 1-Chlorooctadecane	*61 6*		*"*	*50 0*		*123*	*70-130*			
Calibration Check (EF61312-CCV1)				Prepared. 06/13/06 Analyzed 06/15/06						
Carbon Ranges C6-C12	205		mg/kg	250		82 0	80-120			
Carbon Ranges C12-C28	294		"	250		118	80-120			
Total Hydrocarbon nC6-nC35	499		"	500		99 8	80-120			
Surrogate 1-Chlorooctane	*63 7*		*"*	*50 0*		*127*	*70-130*			
Surrogate 1-Chlorooctadecane	*62 1*		*"*	*50 0*		*124*	*70-130*			
Matrix Spike (EF61312-MS1)	**Source: 6F13007-01**			Prepared. 06/13/06 Analyzed 06/14/06						
Carbon Ranges C6-C12	518	10 0	mg/kg dry	569	ND	91 0	75-125			
Carbon Ranges C12-C28	533	10 0	"	569	ND	93 7	75-125			
Total Hydrocarbon nC6-nC35	1050	10 0	"	1140	ND	92 1	75-125			
Surrogate 1-Chlorooctane	*60 3*		*mg/kg*	*50 0*		*121*	*70-130*			
Surrogate 1-Chlorooctadecane	*52 0*		*"*	*50 0*		*104*	*70-130*			

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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 EF61312 - Solvent Extraction (GC)										
Matrix Spike Dup (EF61312-MSD1)	**Source: 6F13007-01**			Prepared: 06/13/06 Analyzed. 06/14/06						
Carbon Ranges C6-C12	511	10 0	mg/kg dry	569	ND	89 8	75-125	1 36	20	
Carbon Ranges C12-C28	527	10 0	"	569	ND	92 6	75-125	1.13	20	
Total Hydrocarbon nC6-nC35	1040	10 0	"	1140	ND	91 2	75-125	0 957	20	
Surrogate 1-Chlorooctane	*59 8*		*mg/kg*	*50 0*		*120*	*70-130*			
Surrogate 1-Chlorooctadecane	*51 6*		*"*	*50 0*		*103*	*70-130*			
Batch EF61314 - Solvent Extraction (GC)										
Blank (EF61314-BLK1)				Prepared. 06/13/06 Analyzed: 06/14/06						
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	"							
Carbon Ranges C28-C35	ND	10 0	"							
Total Hydrocarbon nC6-nC35	ND	10 0	"							
Surrogate 1-Chlorooctane	*41 6*		*mg/kg*	*50 0*		*83 2*	*70-130*			
Surrogate 1-Chlorooctadecane	*43 0*		*"*	*50 0*		*86 0*	*70-130*			
LCS (EF61314-BS1)				Prepared. 06/13/06 Analyzed 06/14/06						
Carbon Ranges C6-C12	519	10.0	mg/kg wet	500		104	75-125			
Carbon Ranges C12-C28	535	10 0	"	500		107	75-125			
Total Hydrocarbon nC6-nC35	1050	10 0	"	1000		105	75-125			
Surrogate 1-Chlorooctane	*61 0*		*mg/kg*	*50 0*		*122*	*70-130*			
Surrogate 1-Chlorooctadecane	*61 0*		*"*	*50 0*		*122*	*70-130*			
Calibration Check (EF61314-CCV1)				Prepared. 06/13/06 Analyzed. 06/14/06						
Carbon Ranges C6-C12	253		mg/kg	250		101	80-120			
Carbon Ranges C12-C28	256		"	250		102	80-120			
Total Hydrocarbon nC6-nC35	509		"	500		102	80-120			
Surrogate 1-Chlorooctane	*48 5*		*"*	*50 0*		*97 0*	*70-130*			
Surrogate 1-Chlorooctadecane	*50 3*		*"*	*50 0*		*101*	*70-130*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF61314 - Solvent Extraction (GC)										
Matrix Spike (EF61314-MS1)	**Source: 6F13008-01**			Prepared 06/13/06 Analyzed 06/14/06						
Carbon Ranges C6-C12	578	10 0	mg/kg dry	550	ND	105	75-125			
Carbon Ranges C12-C28	608	10 0	"	550	ND	111	75-125			
Total Hydrocarbon nC6-nC35	1190	10 0	"	1100	ND	108	75-125			
Surrogate 1-Chlorooctane	*59 0*		*mg/kg*	*50 0*		*118*	*70-130*			
Surrogate 1-Chlorooctadecane	*52 3*		*"*	*50 0*		*105*	*70-130*			
Matrix Spike Dup (EF61314-MSD1)	**Source: 6F13008-01**			Prepared 06/13/06 Analyzed. 06/14/06						
Carbon Ranges C6-C12	584	10.0	mg/kg dry	550	ND	106	75-125	1 03	20	
Carbon Ranges C12-C28	611	10 0	"	550	ND	111	75-125	0 492	20	
Total Hydrocarbon nC6-nC35	1200	10 0	"	1100	ND	109	75-125	0 837	20	
Surrogate 1-Chlorooctane	*59 7*		*mg/kg*	*50 0*		*119*	*70-130*			
Surrogate 1-Chlorooctadecane	*52 4*		*"*	*50 0*		*105*	*70-130*			
Batch EF61420 - EPA 5030C (GC)										
Blank (EF61420-BLK1)				Prepared 06/14/06 Analyzed. 06/15/06						
Benzene	ND	0 0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0 0250	"							
Xylene (p/m)	ND	0 0250	"							
Xylene (o)	ND	0 0250	"							
Surrogate a,a,a-Trifluorotoluene	*37 4*		*ug/kg*	*40 0*		*93 5*	*80-120*			
Surrogate 4-Bromofluorobenzene	*32 5*		*"*	*40 0*		*81 2*	*80-120*			
LCS (EF61420-BS1)				Prepared & Analyzed. 06/14/06						
Benzene	1 13	0 0250	mg/kg wet	1 25		90 4	80-120			
Toluene	1 11	0 0250	"	1 25		88 8	80-120			
Ethylbenzene	1 05	0 0250	"	1 25		84 0	80-120			
Xylene (p/m)	2 41	0 0250	"	2 50		96 4	80-120			
Xylene (o)	1 29	0 0250	"	1 25		103	80-120			
Surrogate a,a,a-Trifluorotoluene	*34 6*		*ug/kg*	*40 0*		*86 5*	*80-120*			
Surrogate 4-Bromofluorobenzene	*43 0*		*"*	*40 0*		*108*	*80-120*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF61420 - EPA 5030C (GC)										
Calibration Check (EF61420-CCV1)				Prepared 06/14/06 Analyzed 06/15/06						
Benzene	46 8		ug/kg	50 0		93 6	80-120			
Toluene	45 0		"	50 0		90 0	80-120			
Ethylbenzene	48.7		"	50 0		97 4	80-120			
Xylene (p/m)	86 9		"	100		86 9	80-120			
Xylene (o)	47 5		"	50.0		95 0	80-120			
Surrogate a,a,a-Trifluorotoluene	*36 1*		*"*	*40 0*		*90 2*	*80-120*			
Surrogate 4-Bromofluorobenzene	*34 8*		*"*	*40 0*		*87 0*	*80-120*			
Matrix Spike (EF61420-MS1)	**Source: 6F13007-01**			Prepared 06/14/06 Analyzed. 06/15/06						
Benzene	1 39	0 0250	mg/kg dry	1 42	ND	97 9	80-120			
Toluene	1 34	0 0250	"	1 42	ND	94 4	80-120			
Ethylbenzene	1 20	0 0250	"	1 42	ND	84 5	80-120			
Xylene (p/m)	2 66	0 0250	"	2 84	ND	93.7	80-120			
Xylene (o)	1 42	0 0250	"	1 42	ND	100	80-120			
Surrogate a,a,a-Trifluorotoluene	*39 7*		*ug/kg*	*40 0*		*99 2*	*80-120*			
Surrogate 4-Bromofluorobenzene	*38 4*		*"*	*40 0*		*96 0*	*80-120*			
Matrix Spike Dup (EF61420-MSD1)	**Source: 6F13007-01**			Prepared. 06/14/06 Analyzed 06/15/06						
Benzene	1 31	0 0250	mg/kg dry	1 42	ND	92 3	80-120	5 89	20	
Toluene	1 28	0.0250	"	1 42	ND	90 1	80-120	4 66	20	
Ethylbenzene	1 15	0 0250	"	1.42	ND	81 0	80-120	4 23	20	
Xylene (p/m)	2 55	0 0250	"	2 84	ND	89 8	80-120	4 25	20	
Xylene (o)	1 37	0 0250	"	1 42	ND	96 5	80-120	3 56	20	
Surrogate a,a,a-Trifluorotoluene	*33 1*		*ug/kg*	*40 0*		*82 8*	*80-120*			
Surrogate 4-Bromofluorobenzene	*37 5*		*"*	*40 0*		*93 8*	*80-120*			
Batch EF61428 - Solvent Extraction (GC)										
Blank (EF61428-BLK1)				Prepared. 06/14/06 Analyzed 06/15/06						
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	"							
Carbon Ranges C28-C35	ND	10 0	"							
Total Hydrocarbon nC6-nC35	ND	10 0	"							
Surrogate 1-Chlorooctane	*42.2*		*mg/kg*	*50 0*		*84 4*	*70-130*			
Surrogate 1-Chlorooctadecane	*45 7*		*"*	*50 0*		*91 4*	*70-130*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF61428 - Solvent Extraction (GC)										
LCS (EF61428-BS1)				Prepared 06/14/06 Analyzed. 06/15/06						
Carbon Ranges C6-C12	506	10 0	mg/kg wet	500		101	75-125			
Carbon Ranges C12-C28	516	10 0	"	500		103	75-125			
Total Hydrocarbon nC6-nC35	1020	10 0	"	1000		102	75-125			
Surrogate 1-Chlorooctane	*49 0*		*mg/kg*	*50 0*		*98 0*	*70-130*			
Surrogate 1-Chlorooctadecane	*48 3*		"	*50 0*		*96 6*	*70-130*			
Calibration Check (EF61428-CCV1)				Prepared 06/14/06 Analyzed. 06/15/06						
Carbon Ranges C6-C12	208		mg/kg	250		83 2	80-120			
Carbon Ranges C12-C28	289		"	250		116	80-120			
Total Hydrocarbon nC6-nC35	497		"	500		99 4	80-120			
Surrogate 1-Chlorooctane	*62 2*		"	*50 0*		*124*	*70-130*			
Surrogate 1-Chlorooctadecane	*60 1*		"	*50 0*		*120*	*70-130*			
Matrix Spike (EF61428-MS1)	**Source: 6F13009-15**			Prepared 06/14/06 Analyzed. 06/15/06						
Carbon Ranges C6-C12	455	10 0	mg/kg dry	504	ND	90 3	75-125			
Carbon Ranges C12-C28	476	10 0	"	504	ND	94 4	75-125			
Total Hydrocarbon nC6-nC35	931	10 0	"	1010	ND	92 2	75-125			
Surrogate 1-Chlorooctane	*60 9*		*mg/kg*	*50 0*		*122*	*70-130*			
Surrogate 1-Chlorooctadecane	*55 3*		"	*50 0*		*111*	*70-130*			
Matrix Spike Dup (EF61428-MSD1)	**Source: 6F13009-15**			Prepared 06/14/06 Analyzed. 06/16/06						
Carbon Ranges C6-C12	479	10 0	mg/kg dry	504	ND	95 0	75-125	5 14	20	
Carbon Ranges C12-C28	494	10 0	"	504	ND	98 0	75-125	3 71	20	
Total Hydrocarbon nC6-nC35	973	10 0	"	1010	ND	96 3	75-125	4 41	20	
Surrogate 1-Chlorooctane	*60 9*		*mg/kg*	*50 0*		*122*	*70-130*			
Surrogate 1-Chlorooctadecane	*59 1*		"	*50 0*		*118*	*70-130*			

Environmental Plus, Incorporated
P O. Box 1558
Eunice NM, 88231

Project. Chesapeake/ Cooper 7 No. 1
Project Number. 160014
Project Manager: Iain Olness

Fax 505-394-2601

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF61406 - Water Extraction										
Blank (EF61406-BLK1)				Prepared & Analyzed. 06/14/06						
Sulfate	ND	0 500	mg/kg							
Chloride	ND	0 500	"							
LCS (EF61406-BS1)				Prepared & Analyzed 06/14/06						
Sulfate	9 27	0 500	mg/kg	10 0		92 7	80-120			
Chloride	10 2	0 500	"	10 0		102	80-120			
Calibration Check (EF61406-CCV1)				Prepared & Analyzed 06/14/06						
Chloride	10 1		mg/L	10 0		101	80-120			
Sulfate	8 21		"	10 0		82 1	80-120			
Duplicate (EF61406-DUP1)	**Source: 6F12012-04**			Prepared & Analyzed. 06/14/06						
Chloride	804	25 0	mg/kg		791			1 63	20	
Sulfate	277	25 0	"		271			2 19	20	
Duplicate (EF61406-DUP2)	**Source: 6F13007-02**			Prepared & Analyzed 06/14/06						
Chloride	288	10 0	mg/kg		278			3 53	20	
Sulfate	144	10 0	"		139			3 53	20	
Matrix Spike (EF61406-MS1)	**Source: 6F12012-04**			Prepared & Analyzed. 06/14/06						
Chloride	1430	25 0	mg/kg	500	791	128	80-120			S-07
Sulfate	684	25 0	"	500	271	82 6	80-120			
Matrix Spike (EF61406-MS2)	**Source: 6F13007-02**			Prepared & Analyzed 06/14/06						
Sulfate	273	10 0	mg/kg	200	139	67 0	80-120			S-07
Chloride	494	10 0	"	200	278	108	80-120			

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF61407 - General Preparation (Prep)										
Blank (EF61407-BLK1)				Prepared 06/13/06 Analyzed 06/14/06						
% Solids	100		%							
Duplicate (EF61407-DUP1)	**Source: 6F12025-01**			Prepared 06/13/06 Analyzed. 06/14/06						
% Solids	95 0		%		95 1			0 105	20	
Duplicate (EF61407-DUP2)	**Source: 6F13004-02**			Prepared 06/13/06 Analyzed. 06/14/06						
% Solids	92.3		%		92 5			0 216	20	
Duplicate (EF61407-DUP3)	**Source: 6F13009-02**			Prepared 06/13/06 Analyzed 06/14/06						
% Solids	94 4		%		94 4			0 00	20	
Duplicate (EF61407-DUP4)	**Source: 6F13009-22**			Prepared 06/13/06 Analyzed 06/14/06						
% Solids	94 8		%		94 0			0 847	20	
Duplicate (EF61407-DUP5)	**Source: 6F13013-04**			Prepared 06/13/06 Analyzed 06/14/06						
% Solids	89 4		%		89 4			0 00	20	

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Notes and Definitions

S-07	Recovery outside Laboratory historical or method prescribed limits
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
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 6/19/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

Environmental Plus, Inc.

Chain of Custody Form

2100 Avenue O, Eunice, NM 88231 P.O. Box 1558, Eunice, NM 88231
(505) 394-3481 FAX: (505) 394-2601

LAB: ELT

Company Name	Environmental Plus, Inc.
EPI Project Manager	Iain Olness
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Chesapeake Energy Corporation
Facility Name	Cooper 7 No. 1
Location	UL-D, Sect. 7. T 20 S, R 37E
Project Reference	160014
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
PO Box 1558
Eunice, NM 88231

LAB I.D. (EF/3007)	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO_4^{-2})	pH	TCLP	OTHER >>>	PAH
-01	1 SP-4 (12')	G	1			1							09-Jun-06	7:00	X	X	X	X				
-02	2 SP-5 (18')	G	1			1							07-Jun-06	9:15	X	X	X	X				
-03	3 SP-6 (19')	G	1			1							08-Jun-06	9:00	X	X	X	X				
-04	4 SP-7 (18')	G	1			1							12-Jun-06	8:05	X	X	X	X				
-05	5 SP-8 (12')	G	1			1							08-Jun-06	9:15	X	X	X	X				
-06	6 SP-9 (16')	G	1			1							09-Jun-06	8:25	X	X	X	X				
	7																					
	8																					
	9																					
	10																					

ANALYSIS REQUEST

Sampler Relinquished: Iain Olness	Date: 13 June 06 Time: 0726	Received By:	E-mail results to: iolness@envplus.net
Relinquished by:	Date: 6/13/06 Time: 10:35	Received By: (lab staff) Carri Wells	REMARKS: 4oz glass w/ label 0.5
Delivered by:	Sample Cool & Intact: Yes / No	Checked By:	

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

Client: EPI

Date/Time: 6/13/06

Order #: 6F13007

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	0.5 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?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Apolicable

Other observations:

Variance Documentation:

Contact Person: _____ Date/Time: _____ Contacted by: _____

Regarding:

Corrective Action Taken:

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Iain Olness

Environmental Plus, Incorporated

P.O. Box 1558

Eunice, NM 88231

Project: Chesapeake/ Cooper 7 No. 1

Project Number: 160014

Location: UL-D, Sect. 7, T 20 S, R 37 E

Lab Order Number: 6F16007

Report Date: 06/20/06

Environmental Plus, Incorporated
P.O Box 1558
Eunice NM, 88231

Project Chesapeake/ Cooper 7 No 1
Project Number. 160014
Project Manager Iain Olness

Fax 505-394-2601

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-10 12'	6F16007-01	Soil	06/13/06 09.30	06/16/06 11.35
SP-1 14'	6F16007-02	Soil	06/14/06 09 30	06/16/06 11 35
SP-3 18'	6F16007-03	Soil	06/15/06 07.50	06/16/06 11 35
SW-1 14'	6F16007-04	Soil	06/15/06 14.00	06/16/06 11 35
SW-2 14'	6F16007-05	Soil	06/15/06 14.05	06/16/06 11.35
SW-3 14'	6F16007-06	Soil	06/15/06 14 10	06/16/06 11 35
SW-4 12'	6F16007-07	Soil	06/15/06 14.15	06/16/06 11 35
SW-5 16'	6F16007-08	Soil	06/15/06 14·20	06/16/06 11.35
SW-6 16'	6F16007-09	Soil	06/15/06 14.25	06/16/06 11.35
SW-7 16'	6F16007-10	Soil	06/15/06 14 30	06/16/06 11.35
SW-8 14'	6F16007-11	Soil	06/15/06 14 35	06/16/06 11.35
SW-9 14'	6F16007-12	Soil	06/15/06 14 40	06/16/06 11.35

Environmental Plus, Incorporated	Project Chesapeake/ Cooper 7 No. 1	Fax. 505-394-2601
P O Box 1558	Project Number 160014	
Eunice NM, 88231	Project Manager Iain Olness	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-10 12' (6F16007-01) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*100 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*104 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*115 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*117 %*	*70-130*		"	"	"	"	
SP-1 14' (6F16007-02) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*106 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*100 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*118 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*121 %*	*70-130*		"	"	"	"	
SP-3 18' (6F16007-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*95.8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*81.2 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	

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Environmental Plus, Incorporated	Project Chesapeake/ Cooper 7 No. 1	Fax. 505-394-2601
P O Box 1558	Project Number 160014	
Eunice NM, 88231	Project Manager Iain Olness	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-3 18' (6F16007-03) Soil									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*125 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*127 %*	*70-130*		"	"	"	"	
SW-1 14' (6F16007-04) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*93.2 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*90.8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*122 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*127 %*	*70-130*		"	"	"	"	
SW-2 14' (6F16007-05) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*95.2 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*95.2 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*127 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*129 %*	*70-130*		"	"	"	"	

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Environmental Plus, Incorporated	Project. Chesapeake/ Cooper 7 No 1	Fax. 505-394-2601
P O Box 1558	Project Number: 160014	
Eunice NM, 88231	Project Manager Iain Olness	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SW-3 14' (6F16007-06) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*93.8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*84.8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*118 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*129 %*	*70-130*		"	"	"	"	
SW-4 12' (6F16007-07) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*100 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*105 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*128 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*127 %*	*70-130*		"	"	"	"	
SW-5 16' (6F16007-08) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*104 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*102 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SW-5 16' (6F16007-08) Soil									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*121 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*125 %*	*70-130*		"	"	"	"	
SW-6 16' (6F16007-09) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*108 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*101 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*128 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*128 %*	*70-130*		"	"	"	"	
SW-7 16' (6F16007-10) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*102 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*92.0 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*116 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*118 %*	*70-130*		"	"	"	"	

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Project: Chesapeake/ Cooper 7 No. 1
Project Number: 160014
Project Manager: Iain Olness

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SW-8 14' (6F16007-11) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*108 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*91.8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*128 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*126 %*	*70-130*		"	"	"	"	
SW-9 14' (6F16007-12) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61704	06/17/06	06/19/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*110 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*100 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61612	06/16/06	06/17/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*114 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*117 %*	*70-130*		"	"	"	"	

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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	Notes
SP-10 12' (6F16007-01) Soil									
Chloride	**404**	10.0	mg/kg	20	EF61709	06/17/06	06/17/06	EPA 300 0	
% Moisture	**16.3**	0 1	%	1	EF61710	06/16/06	"	% calculation	
Sulfate	**498**	10 0	mg/kg	20	EF61709	06/17/06	"	EPA 300 0	
SP-1 14' (6F16007-02) Soil									
Chloride	**648**	20.0	mg/kg	40	EF61709	06/17/06	06/17/06	EPA 300.0	
% Moisture	**16.3**	0.1	%	1	EF61710	06/16/06	"	% calculation	
Sulfate	**1130**	20 0	mg/kg	40	EF61709	06/17/06	"	EPA 300 0	
SP-3 18' (6F16007-03) Soil									
Chloride	**488**	10.0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
% Moisture	**27.4**	0 1	%	1	EF61710	06/16/06	06/17/06	% calculation	
Sulfate	**319**	10 0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
SW-1 14' (6F16007-04) Soil									
Chloride	**289**	10 0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
% Moisture	**5.2**	0.1	%	1	EF61710	06/16/06	06/17/06	% calculation	
Sulfate	**191**	10.0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
SW-2 14' (6F16007-05) Soil									
Chloride	**550**	10 0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
% Moisture	**7.8**	0.1	%	1	EF61710	06/16/06	06/17/06	% calculation	
Sulfate	**338**	10.0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
SW-3 14' (6F16007-06) Soil									
Chloride	**75.0**	5.00	mg/kg	10	EF61711	06/17/06	06/17/06	EPA 300 0	
% Moisture	**1.3**	0 1	%	1	EF61710	06/16/06	06/17/06	% calculation	
Sulfate	**34.4**	5 00	mg/kg	10	EF61711	06/17/06	06/17/06	EPA 300 0	
SW-4 12' (6F16007-07) Soil									
Chloride	**171**	10 0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
% Moisture	**3.4**	0.1	%	1	EF61710	06/16/06	06/17/06	% calculation	
Sulfate	**67.8**	10 0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	

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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	Notes
SW-5 16' (6F16007-08) Soil									
Chloride	**86.7**	5 00	mg/kg	10	EF61711	06/17/06	06/17/06	EPA 300 0	
% Moisture	**1.7**	0.1	%	1	EF61710	06/16/06	06/17/06	% calculation	
Sulfate	**40.3**	5.00	mg/kg	10	EF61711	06/17/06	06/17/06	EPA 300 0	
SW-6 16' (6F16007-09) Soil									
Chloride	**140**	10 0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
% Moisture	**3.7**	0.1	%	1	EF61710	06/16/06	06/17/06	% calculation	
Sulfate	**89.0**	10.0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
SW-7 16' (6F16007-10) Soil									
Chloride	**546**	10.0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
% Moisture	**6.6**	0 1	%	1	EF61710	06/16/06	06/17/06	% calculation	
Sulfate	**348**	10 0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
SW-8 14' (6F16007-11) Soil									
Chloride	**709**	10.0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
% Moisture	**6.7**	0.1	%	1	EF61710	06/16/06	06/17/06	% calculation	
Sulfate	**407**	10 0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
SW-9 14' (6F16007-12) Soil									
Chloride	**358**	10 0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	
% Moisture	**11.6**	0 1	%	1	EF61710	06/16/06	06/17/06	% calculation	
Sulfate	**681**	10.0	mg/kg	20	EF61711	06/17/06	06/17/06	EPA 300 0	

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 EF61612 - Solvent Extraction (GC)										
Blank (EF61612-BLK1)				Prepared & Analyzed: 06/16/06						
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	"							
Carbon Ranges C28-C35	ND	10 0	"							
Total Hydrocarbon nC6-nC35	ND	10 0	"							
Surrogate 1-Chlorooctane	*60 2*		*mg/kg*	*50 0*		*120*	*70-130*			
Surrogate 1-Chlorooctadecane	*62 9*		*"*	*50 0*		*126*	*70-130*			
LCS (EF61612-BS1)				Prepared & Analyzed 06/16/06						
Carbon Ranges C6-C12	518	10 0	mg/kg wet	500		104	75-125			
Carbon Ranges C12-C28	507	10 0	"	500		101	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00			75-125			
Total Hydrocarbon nC6-nC35	1030	10 0	"	1000		103	75-125			
Surrogate 1-Chlorooctane	*62 3*		*mg/kg*	*50 0*		*125*	*70-130*			
Surrogate 1-Chlorooctadecane	*58 7*		*"*	*50 0*		*117*	*70-130*			
Calibration Check (EF61612-CCV1)				Prepared 06/16/06 Analyzed 06/17/06						
Carbon Ranges C6-C12	206		mg/kg	250		82 4	80-120			
Carbon Ranges C12-C28	265		"	250		106	80-120			
Total Hydrocarbon nC6-nC35	471		"	500		94 2	80-120			
Surrogate 1-Chlorooctane	*62 1*		*"*	*50 0*		*124*	*70-130*			
Surrogate 1-Chlorooctadecane	*59 4*		*"*	*50 0*		*119*	*70-130*			
Matrix Spike (EF61612-MS1)	**Source: 6F15021-06**			Prepared & Analyzed. 06/16/06						
Carbon Ranges C6-C12	538	10 0	mg/kg dry	520	ND	103	75-125			
Carbon Ranges C12-C28	532	10 0	"	520	18.0	98 8	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125			
Total Hydrocarbon nC6-nC35	1070	10 0	"	1040	18 0	101	75-125			
Surrogate 1-Chlorooctane	*79 7*		*mg/kg*	*100*		*79 7*	*70-130*			
Surrogate 1-Chlorooctadecane	*74 1*		*"*	*100*		*74 1*	*70-130*			

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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 EF61612 - Solvent Extraction (GC)										
Matrix Spike Dup (EF61612-MSD1)	**Source: 6F15021-06**			Prepared. 06/16/06 Analyzed 06/17/06						
Carbon Ranges C6-C12	541	10 0	mg/kg dry	520	ND	104	75-125	0 556	20	
Carbon Ranges C12-C28	538	10 0	"	520	18 0	100	75-125	1 12	20	
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1080	10 0	"	1040	18 0	102	75-125	0 930	20	
Surrogate 1-Chlorooctane	*80 2*		*mg/kg*	*100*		*80 2*	*70-130*			
Surrogate 1-Chlorooctadecane	*73 9*		*"*	*100*		*73 9*	*70-130*			
Batch EF61704 - EPA 5030C (GC)										
Blank (EF61704-BLK1)				Prepared 06/17/06 Analyzed 06/19/06						
Benzene	ND	0 0250	mg/kg wet							
Toluene	ND	0 0250	"							
Ethylbenzene	ND	0 0250	"							
Xylene (p/m)	ND	0 0250	"							
Xylene (o)	ND	0 0250	"							
Surrogate a,a,a-Trifluorotoluene	*46 7*		*ug/kg*	*40 0*		*117*	*80-120*			
Surrogate 4-Bromofluorobenzene	*39 7*		*"*	*40 0*		*99 2*	*80-120*			
LCS (EF61704-BS1)				Prepared 06/17/06 Analyzed 06/19/06						
Benzene	1 45	0 0250	mg/kg wet	1 25		116	80-120			
Toluene	1 48	0 0250	"	1 25		118	80-120			
Ethylbenzene	1 41	0 0250	"	1 25		113	80-120			
Xylene (p/m)	2 97	0.0250	"	2 50		119	80-120			
Xylene (o)	1.48	0.0250	"	1 25		118	80-120			
Surrogate a,a,a-Trifluorotoluene	*44 7*		*ug/kg*	*40 0*		*112*	*80-120*			
Surrogate 4-Bromofluorobenzene	*41 5*		*"*	*40 0*		*104*	*80-120*			

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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 EF61704 - EPA 5030C (GC)										
Calibration Check (EF61704-CCV1)				Prepared 06/17/06 Analyzed. 06/19/06						
Benzene	58 2		ug/kg	50 0		116	80-120			
Toluene	59 8		"	50 0		120	80-120			
Ethylbenzene	56 6		"	50 0		113	80-120			
Xylene (p/m)	120		"	100		120	80-120			)
Xylene (o)	59 3		"	50 0		119	80-120			
Surrogate a,a,a-Trifluorotoluene	*44 1*		*"*	*40 0*		*110*	*80-120*			
Surrogate 4-Bromofluorobenzene	*38 9*		*"*	*40 0*		*97 2*	*80-120*			
Matrix Spike (EF61704-MS1)	**Source: 6F16007-12**			Prepared 06/17/06 Analyzed. 06/19/06						
Benzene	1 59	0 0250	mg/kg dry	1 41	ND	113	80-120			
Toluene	1 63	0 0250	"	1 41	ND	116	80-120			
Ethylbenzene	1 56	0 0250	"	1 41	ND	111	80-120			
Xylene (p/m)	3 35	0 0250	"	2 83	ND	118	80-120			
Xylene (o)	1 69	0 0250	"	1 41	ND	120	80-120			
Surrogate a,a,a-Trifluorotoluene	*41 5*		*ug/kg*	*40 0*		*104*	*80-120*			
Surrogate 4-Bromofluorobenzene	*40 1*		*"*	*40 0*		*100*	*80-120*			
Matrix Spike Dup (EF61704-MSD1)	**Source: 6F16007-12**			Prepared 06/17/06 Analyzed 06/19/06						
Benzene	1 65	0 0250	mg/kg dry	1.41	ND	117	80-120	3 48	20	
Toluene	1 69	0 0250	"	1 41	ND	120	80-120	3 39	20	
Ethylbenzene	1 57	0 0250	"	1 41	ND	111	80-120	0 00	20	
Xylene (p/m)	3 36	0.0250	"	2 83	ND	119	80-120	0 844	20	
Xylene (o)	1 57	0 0250	"	1.41	ND	111	80-120	7 79	20	
Surrogate a,a,a-Trifluorotoluene	*46 6*		*ug/kg*	*40 0*		*116*	*80-120*			
Surrogate 4-Bromofluorobenzene	*40 8*		*"*	*40 0*		*102*	*80-120*			

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF61709 - General Preparation (WetChem)										
Blank (EF61709-BLK1)				Prepared & Analyzed 06/17/06						
Sulfate	ND	0 500	mg/kg							
Chloride	ND	0 500	"							
LCS (EF61709-BS1)				Prepared & Analyzed. 06/17/06						
Sulfate	9 22		mg/L	10 0		92 2	80-120			
Chloride	10.5		"	10.0		105	80-120			
Calibration Check (EF61709-CCV1)				Prepared & Analyzed 06/17/06						
Chloride	10 8		mg/L	10 0		108	80-120			
Sulfate	10 2		"	10 0		102	80-120			
Duplicate (EF61709-DUP1)	**Source: 6F16008-01**			Prepared & Analyzed 06/17/06						
Chloride	31 4	10 0	mg/kg		32 0			1 89	20	
Sulfate	886	10 0	"		887			0 113	20	
Duplicate (EF61709-DUP2)	**Source: 6F16008-15**			Prepared & Analyzed. 06/17/06						
Sulfate	63 2	5 00	mg/kg		85 0			29 4	20	S-08
Chloride	24 6	5 00	"		26 2			6 30	20	
Matrix Spike (EF61709-MS1)	**Source: 6F16008-01**			Prepared & Analyzed 06/17/06						
Chloride	220	10 0	mg/kg	200	32 0	94 0	80-120			
Sulfate	1120	10 0	"	200	887	116	80-120			
Matrix Spike (EF61709-MS2)	**Source: 6F16008-15**			Prepared & Analyzed: 06/17/06						
Chloride	110	5 00	mg/kg	100	26 2	83 8	80-120			
Sulfate	118	5 00	"	100	85 0	33 0	80-120			S-07

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF61710 - General Preparation (Prep)										
Blank (EF61710-BLK1)				Prepared. 06/16/06 Analyzed 06/17/06						
% Moisture	ND	0 1	%							
Duplicate (EF61710-DUP1)		**Source: 6F15019-01**		Prepared 06/16/06 Analyzed. 06/19/06						
% Moisture	0 2	0 1	%		0 3			40 0	20	S-08
Duplicate (EF61710-DUP2)		**Source: 6F15019-21**		Prepared 06/16/06 Analyzed 06/19/06						
% Moisture	0 9	0 1	%		1 2			28 6	20	S-08
Duplicate (EF61710-DUP3)		**Source: 6F15019-41**		Prepared. 06/16/06 Analyzed 06/19/06						
% Moisture	0 8	0 1	%		0 9			11 8	20	
Duplicate (EF61710-DUP4)		**Source: 6F15019-61**		Prepared 06/16/06 Analyzed 06/19/06						
% Moisture	8 8	0 1	%		9 4			6 59	20	
Duplicate (EF61710-DUP5)		**Source: 6F15021-05**		Prepared 06/16/06 Analyzed. 06/17/06						
% Moisture	6 1	0 1	%		8 1			28 2	20	S-08
Duplicate (EF61710-DUP6)		**Source: 6F16008-01**		Prepared. 06/16/06 Analyzed 06/19/06						
% Moisture	2 0	0 1	%		2 9			36 7	20	S-08
Duplicate (EF61710-DUP7)		**Source: 6F16010-01**		Prepared. 06/16/06 Analyzed 06/19/06						
% Moisture	1 1	0 1	%		1 1			0 00	20	
Batch EF61711 - General Preparation (WetChem)										
Blank (EF61711-BLK1)				Prepared & Analyzed. 06/17/06						
Chloride	ND	0 500	mg/kg							
Sulfate	ND	0 500	"							

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF61711 - General Preparation (WetChem)										
LCS (EF61711-BS1)				Prepared & Analyzed. 06/17/06						
Chloride	10 0		mg/L	10 0		100	80-120			
Sulfate	8 16		"	10 0		81 6	80-120			
Calibration Check (EF61711-CCV1)				Prepared & Analyzed 06/17/06						
Sulfate	10 2		mg/L	10 0		102	80-120			
Chloride	10 8		"	10 0		108	80-120			
Duplicate (EF61711-DUP1)	**Source: 6F16007-04**			Prepared & Analyzed 06/17/06						
Chloride	294	10 0	mg/kg		289			1 72	20	
Sulfate	191	10 0	"		191			0 00	20	
Matrix Spike (EF61711-MS1)	**Source: 6F16007-04**			Prepared & Analyzed 06/17/06						
Chloride	545	10 0	mg/kg	200	289	128	80-120			S-07
Sulfate	374	10 0	"	200	191	91 5	80-120			

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Notes and Definitions

S-08	Value outside Laboratory historical or method prescribed QC limits
S-07	Recovery outside Laboratory historical or method prescribed limits.
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
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 6/20/2006

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Environmental Plus, Inc.

Chain of Custody Form

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Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Chesapeake Energy Corporation
Facility Name	Cooper 7 No. 1
Location	UL-D, Sect. 7. T 20 S, R 37E
Project Reference	160014
EPI Sampler Name	Felix Hernandez

Bill To

Attn: Iain Olness
PO Box 1558
Eunice, NM 88231

LAB I.D. 6071602007	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl⁻) → RUSH 24HR as per 16-7	SULFATES ($SO_4^=$)	pH	TCLP	OTHER >>>	PAH			
01	1 SP-10 (12')	G	1			X							13-Jun-06	9:30	X	X	X	X							
02	2 SP-1 (14')	G	1			X							14-Jun-06	9:30	X	X	X	X							
03	3 SP-3 (18')	G	1			X							15-Jun-06	7:50	X	X	X	X							
04	4 SW-1 (14')	G	1			X							15-Jun-06	14:00	X	X	X	X							
05	5 SW-2 (14')	G	1			X							15-Jun-06	14:05	X	X	X	X							
06	6 SW-3 (14')	G	1			X							15-Jun-06	14:10	X	X	X	X							
07	7 SW-4 (12')	G	1			X							15-Jun-06	14:15	X	X	X	X							
08	8 SW-5 (16')	G	1			X							15-Jun-06	14:20	X	X	X	X							
09	9 SW-6 (16')	G	1			X							15-Jun-06	14:25	X	X	X	X							
10	10 SW-7 (16')	G	1			X							15-Jun-06	14:30	X	X	X	X							

Samples Relinquished: Iain Olness — Date: 16 June 06 — Time: 0824 — Received By:

Relinquished by: — Date: 16/6/06 — Time: 11:25 — Received By. (lab staff): Caren Kelly

Delivered by:

Sample Cool & Intact: Yes / No

Checked By

E-mail results to: iolness@envplus.net

REMARKS 4.6

4oz glass

w/ labels

Environmental Plus, Inc.

Chain of Custody Form

2100 Avenue O, Eunice, NM 88231 *P.O. Box 1558, Eunice, NM 88231*
(505) 394-3481 FAX: (505) 394-2601

LAB: ELT

Company Name	Environmental Plus, Inc.
EPI Project Manager	Iain Olness
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Chesapeake Energy Corporation
Facility Name	Cooper 7 No. 1
Location	UL-D, Sect. 7. T 20 S, R 37E
Project Reference	160014
EPI Sampler Name	Felix Hernandez

Bill To

Attn: Iain Olness
PO Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

LAB I.D. (for lab use only)	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CRUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl) RUSH 24HR	SULFATES ($SO_4^=$)	pH	TCLP	OTHER >>>	PAH			
1	SW-8 (14')	G	1			X							15-Jun-06	14:35	X	X	X	X							
2	SW-9 (14')	G	1			X							15-Jun-06	14:40	X	X	X	X							
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Sampler Relinquished: Iain Olness	Date: 16 June 06 Time: 0824	Received By: Iain Olness	E-mail results to: iolness@envplus.net
Relinquished by: Iain Olness	Date: 16/06/06 Time: 11:25	Received By: (lab staff) Carri Kelly	REMARKS:
Delivered by:	Sample Cool & Intact: Yes / No	Checked By:	

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

Client: EPI

Date/Time: 10/16/06 11:35

Order #: 610007

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	4.0 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?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Apolicable

Other observations:

Variance Documentation:

Contact Person: - Date/Time: Contacted by:

Regarding:

Corrective Action Taken:

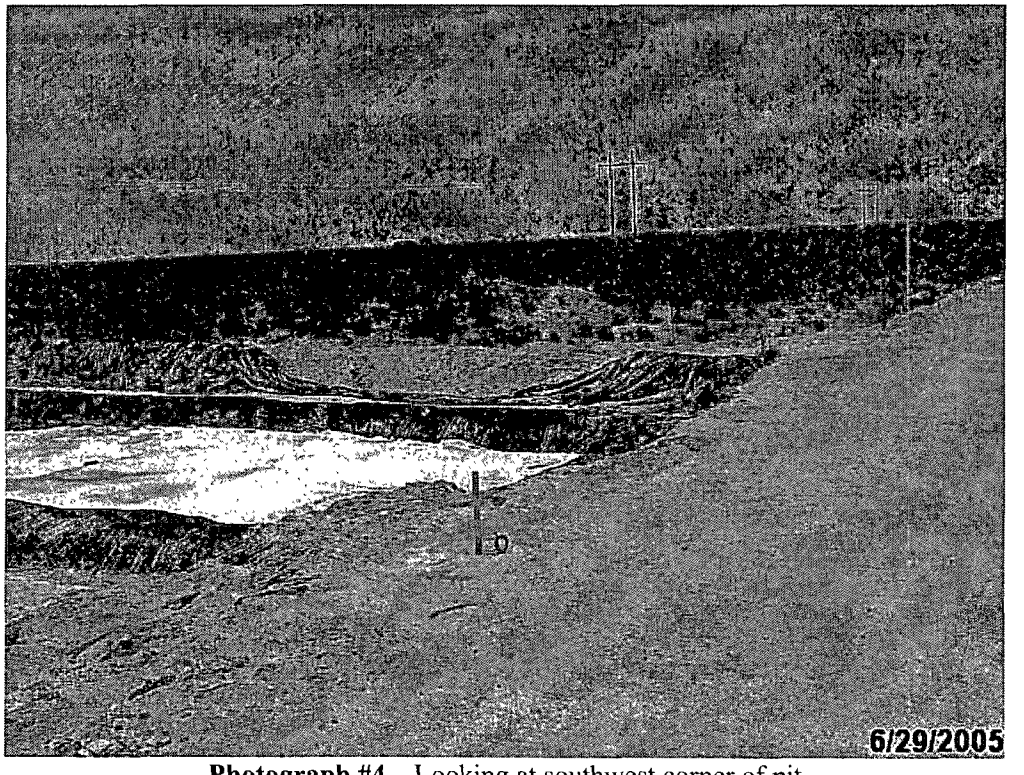
APPENDIX II

PROJECT PHOTOGRAPHS

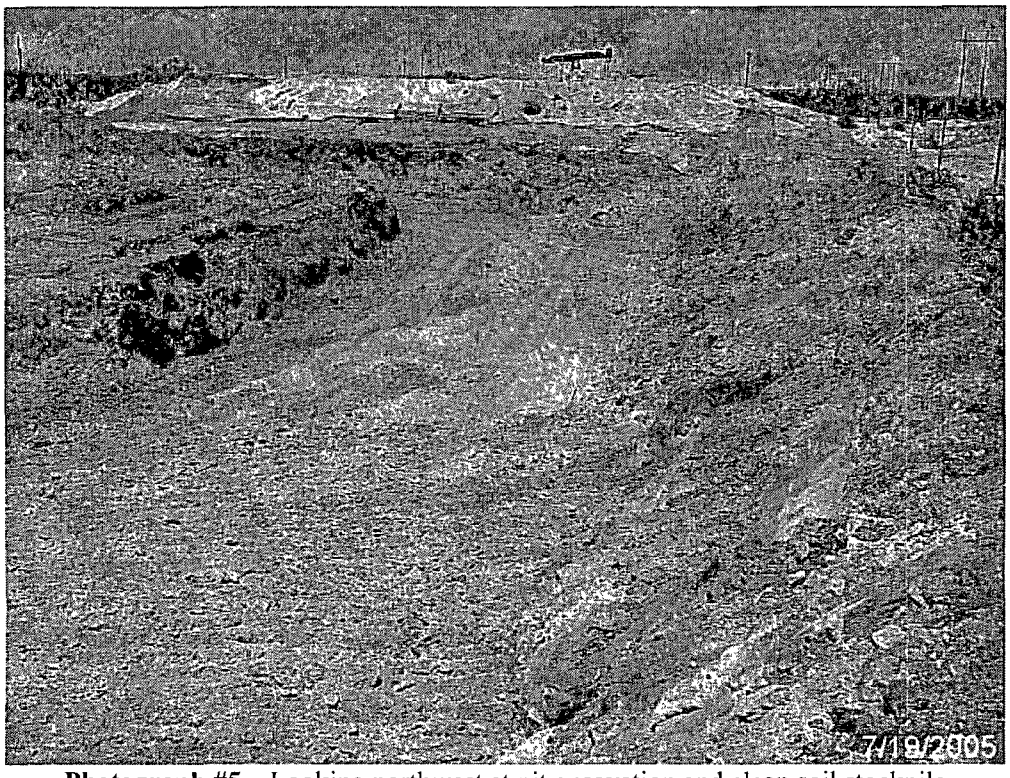
Photograph #1 – Lease Sign

Photograph #2 – Looking east at drill pit, dividers and liner

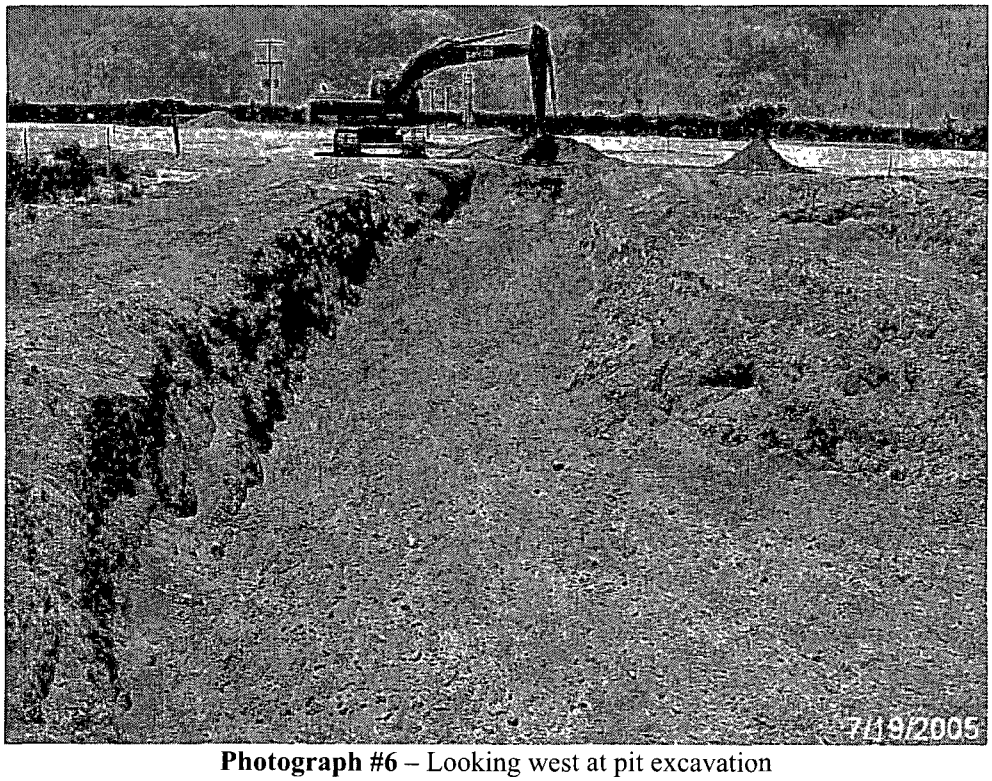
Photograph #3 – Looking at northwest corner of pit and clean dirt stockpile



Photograph #4 – Looking at southwest corner of pit

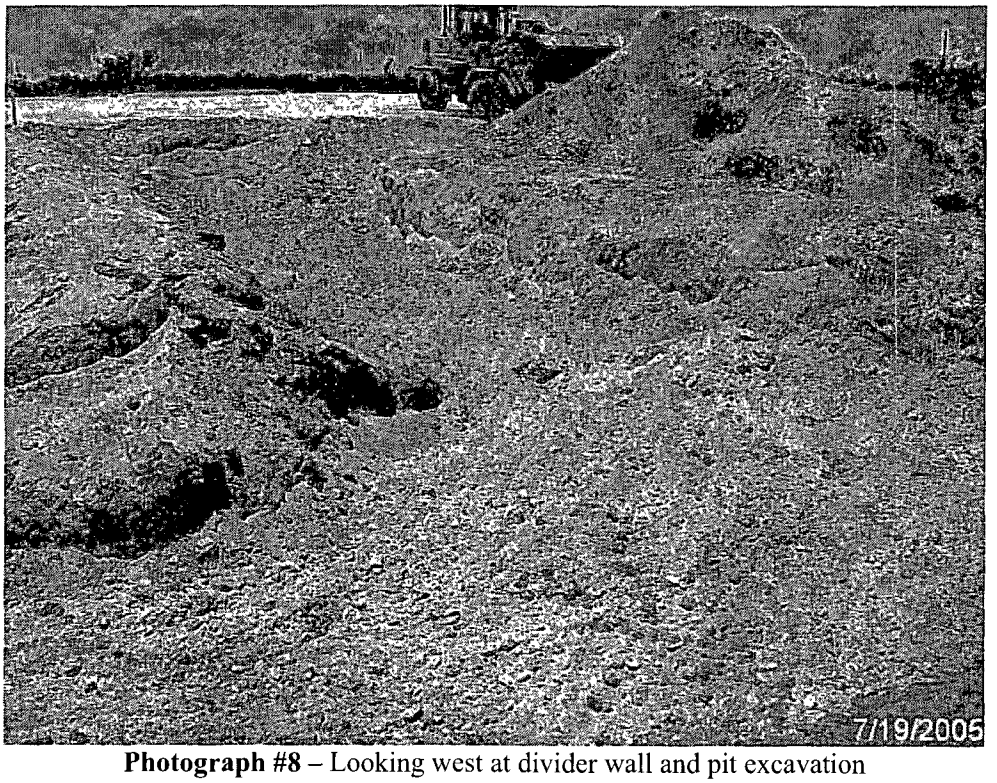


Photograph #5 – Looking northwest at pit excavation and clean soil stockpile



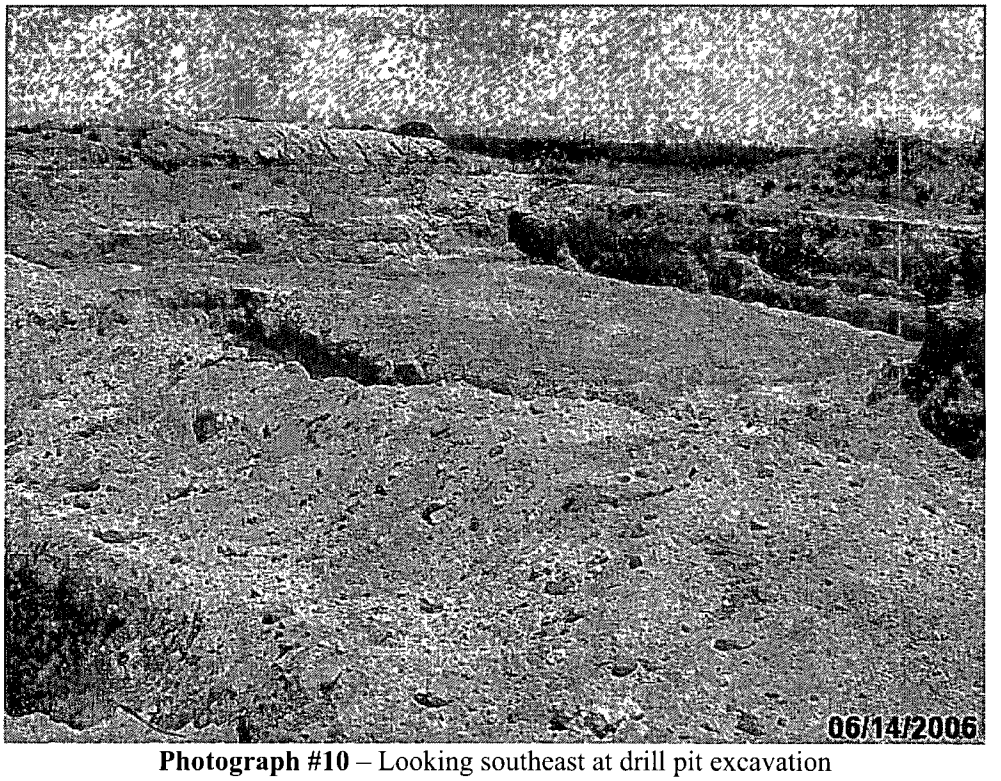
Photograph #6 – Looking west at pit excavation

Photograph # 7- Looking west at divider wall and pit excavation

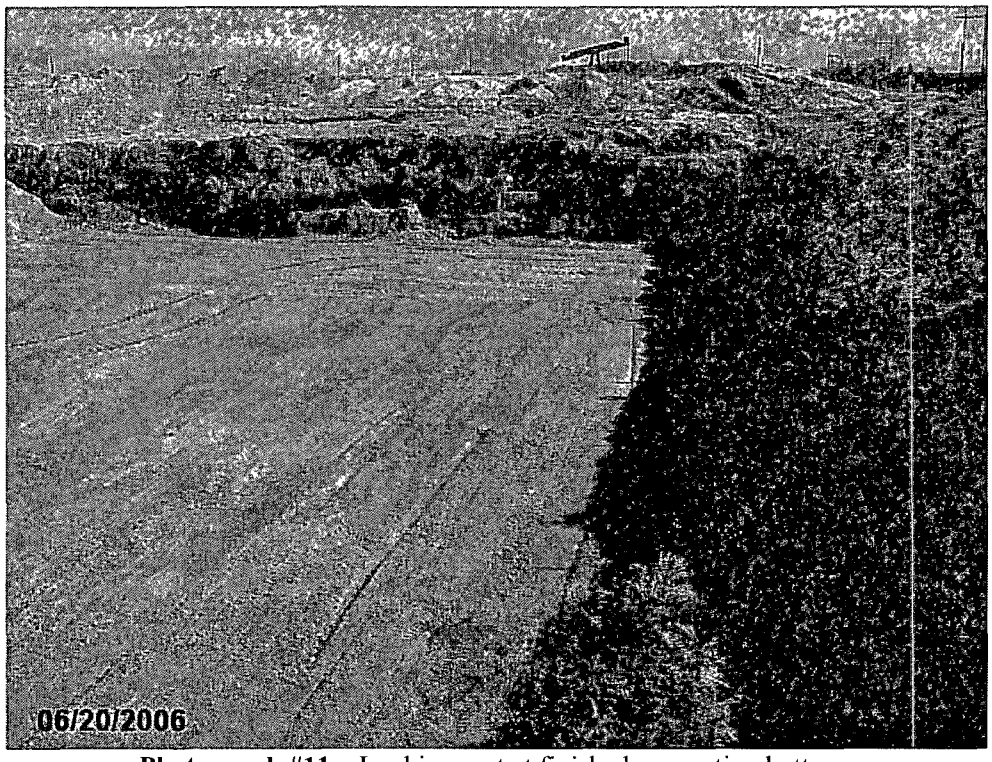


Photograph #8 – Looking west at divider wall and pit excavation

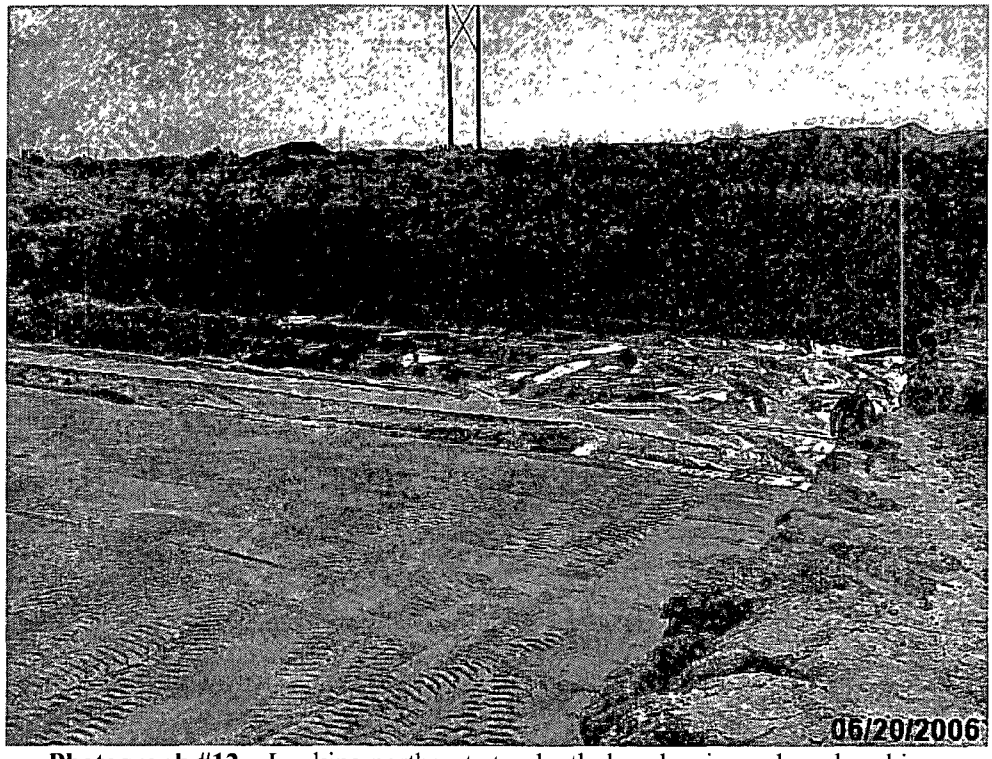
Photograph #9 – Looking east at Test Trench SB-1



Photograph #10 – Looking southeast at drill pit excavation

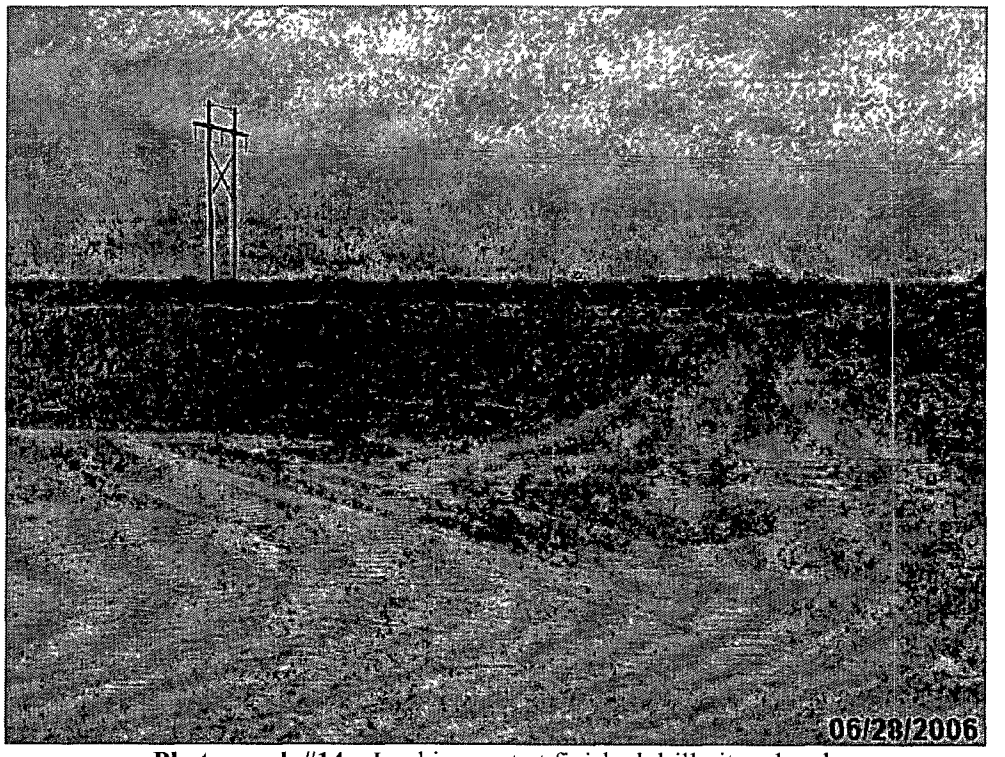


Photograph #11 – Looking east at finished excavation bottom



Photograph #12 – Looking northeast at polyethylene barrier and sand cushion

Photograph #13 – Looking northwest at finished drill pit and pad



Photograph #14 – Looking east at finished drill pit and pad

APPENDIX III

Soil Boring Logs

Log Of Test Borings

(NOTE - Page 1 of 1)

ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES
EUNICE
505-394-3481

Project Number: 160014
Project Name: Chesapeake Cooper 7 #1
Location: UL-D, Sec. 07, T20S, R37E-Lea County, New Mexico.
Boring Number: SB-1B
Surface Elevation: 3,557

Start Date: 10-3-05 Time: 1240
Completion Date: 10-3-05 Time: 1430

Time	Sample Type	Recovery (Inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (Feet)	Description
							5	Drilling Pit
							10	CALICHE, White, Soft
							15	
							20	
1320	SS	6	Moist	4.2	--	SP	25	Red to White, Soft, SAND with some Trace Silt and Clay
1400	SS	6	Wet	2.2	--	SP	30	
								End of soil boring at 31'

Water Level Measurements (Feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
10/3/05	1415	31	30	30	31
-	-	-	-	-	-

Drilling Method: HSA 3.5' ID
Backfill Method: Bentonite
Field Representative: GB

Log Of Test Borings

(NOTE - Page 1 of 1)

ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES
EUNICE
505-394-3481

Project Number: 160014
Project Name: Chesapeake Cooper 7 #1
Location: UL-D, Sec. 07, T20S, R37E-Lea County, New Mexico
Boring Number: SB-2B
Surface Elevation: 3,557

Start Date: 10-4-05 Time: 0730
Completion Date: 10-4-05 Time: 1055

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (Feet)	Description
							5	Drilling Pit
							10	CALICHE, White, Soft
							15	
							20	
0930	SS	10	Moist	0.5	--	SP	25	Red to White, Soft, SAND with some Trace Silt and Clay
1030	SS	10	Wet	0.2	--	SP	30	
								End of soil boring at 31'

Water Level Measurements (Feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
10/4/05	1035	31	30	30	31
-	-	-	-	-	-

Drilling Method: HSA 3.5" ID
Backfill Method: Bentonite
Field Representative: GB

Log Of Test Borings

(NOTE - Page 1 of 1)

ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES
EUNICE
505-394-3481

Project Number: 160014
Project Name: Chesapeake Cooper 7 #1
Location: UL-D, Sec. 07, T20S, R37E-Lea County, New Mexico
Boring Number: SB-3B
Surface Elevation: 3,557
Start Date: 10-4-05 Time: 1100
Completion Date: 10-4-05 Time: 1330

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
							5	Drilling Pit
							10	CALICHE, White, Soft
							15	
							20	
1200	SS	6	Moist	3.5	--	SP	25	Red to White, Soft, SAND with some Trace Silt and Clay
1300	SS	8	Wet	6.3	--	SP	30	
								End of soil boring at 31'

Water Level Measurements (Feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
10/4/05	1310	31	30	30	31
-	-	-	-	-	-

Drilling Method: HSA 3.5' ID
Backfill Method: Bentonite
Field Representative: GB

Log Of Test Borings

(NOTE - Page 1 of 1)

ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES
EUNICE
505-394-3481

Project Number: 160014
Project Name: Chesapeake Cooper 7 #1
Location: UL-D, Sec. 07, T20S, R37E-Lea County, New Mexico
Boring Number: SB-5B
Surface Elevation: 3,557

Start Date: 10-3-05 Time: 0900
Completion Date: 10-3-05 Time: 1230

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
							5	Drilling Pit
							10	CALICHE, White, Soft
							15	
							20	
1115	SS	8	Moist	2.5	--	SP	25	Red to White, Soft, SAND with some Trace Silt and Clay
1200	SS	12	Water	5.4	--	SP	30	
								End of soil boring at 31'

Water Level Measurements (Feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
10/3/05	1205	31	30	30	31
-	-	-	-	-	-

Drilling Method: HSA 3.5" ID
Backfill Method: Bentonite
Field Representative: GB

APPENDIX IV

NMOCD FORM C-103

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
May 27, 2004

WELL API NO.: 30-025-36860

5. Indicate Type of Lease STATE ☐ FEE ☒

6. State Oil & Gas Lease No.:

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: Cooper 7

8. Well Number: No. 1

1. Type of Well: Oil Well ☐ **Gas Well** ☒ **Other** ____

2. Name of Operator: Chesapeake Operating, Inc.

9. OGRID Number:

3. Address of Operator: 5014 Carlsbad Highway
Hobbs, NM 88240

10. Pool name or Wildcat

4. Well Location

Unit Letter: D : 660 **feet from the** North **line and** 900 **feet from the** West **line**

Section: 7 **Township:** 20 South **Range** 37 East **NMPM** ____ **County** Lea

FINAL

[redacted] **11. Elevation** *(Show whether DR, RKB, RT, GR, etc.)* 3,557 feet above mean sea level [redacted]

Pit or Below-grade Tank Application ☐ **or Closure** ☒

Pit type: Drilling **Depth to Groundwater:** <50 feet **Distance from nearest fresh water well:** > 1,000 feet **Distance from nearest surface water:** > 1,000 feet

Pit Liner Thickness: 20 - mil **Below-Grade Tank: Volume:** ____ bbls; **Construction Material:** ____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
OTHER: ____ ☐		OTHER: Pit Closure ☒	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Chesapeake Operating, Inc. (Chesapeake) conducted closure operations on the above referenced drilling pit in accordance with NMOCD Pit and Below-Grade Tank Guidelines (November, 2004). Upon removal of pit materials (+- 1,666 c.y.) and liner, approximately 2,520 cubic yards of impacted soil were removed with disposal of all material/soil at Sundance Services, Inc. A twenty (20) mil thick polyethylene liner sandwiched between two (2) protective layers of sand six (6) inches or more in depth was installed over the bottom of the excavation. The excavation was backfilled with clean soil from both the landowner's pit and "on-site" stockpiled material with contaminant concentrations below NMOCD Remedial Threshold Goals. After completion of backfill operations, the drill pit and surrounding area were contoured to allow natural drainage. Remaining remedial activity is seeding of the disturbed area with a mixture approved by the landowner.

Petinent details, dates and data are presented in the Site Closure Report for the Cooper 7 No. 1 Drilling Pit (NMOCD Ref. 1RP#753; EPI Ref. #160014) dated December, 2006.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Bradley Blevins **TITLE** Field Technician **DATE** 6-21-07

Type or print name: Bradley Blevins **E-mail address:** bblevins@chkenergy.com **Telephone No.:** (505) 391-1462 ext. 24

For State Use Only

APPROVED BY: [signature] **TITLE** ENVIRO ENGR **DATE** 6-27-07

Conditions of Approval (if any):