CLOSURE REPORT

CIGUENA STATE #1
EPI REF: #160048
NMOCD: 1RP#806

UL-H (SE¼ OF THE NE¼) OF SECTION 33, T 23 S, R 34 E

~ 20 MILES NORTHWEST OF JAL,

LEA COUNTY, NEW MEXICO

LATITUDE: N 32° 15' 43.15" LONGITUDE: W 103° 28' 06.93"

JUNE 2007

PREPARED BY:

ENVIRONMENTAL PLUS, INC.
2100 AVENUE O
EUNICE, NEW MEXICO 88231

PREPARED FOR:

Chesapeake

Distribution List

Site Closure Report

Chesapeake Operating, Inc. – Ciguena State #1

NMOCD Ref. 1RP#806; EPI Ref. #160048

Name	Title	Company or Agency	Mailing Address	e-mail
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Bradely Blevins	Field Supervisor	Chesapeake Operating, Inc.	P. O. Box 190 Hobbs,NM 88240-0190	bblevins@chkenergy.com
Jim Keller	Land Owner	- -	2811 County Road 460 Oakley, Kansas 67748	(785) 672-3257 (Business)
File	- -	Environmental Plus, Inc..	2100 Avenue O P.O. Box 1558 Eunice, NNM 88231	ddominguez@envplus.net

STANDARD OF CARE

Site Closure Report

Chesapeake Energy – Ciguena State #1

NMOCD Ref. 1RP#806; EPI Ref. #160048

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, hydro-geologic 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.

Prepared by:

Daniel Dominguez
Environmental Consultant

6/5/07
Date

Reviewed by:

David P. Duncan
Civil Engineer

6/05/07
Date

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PROJECT SYNOPSIS

Site Specific:

- ***Company Name:*** Chesapeake Operating, Inc.
- ***Facility Name:*** Ciguena State #1
- ***Project Reference:*** NMOCD 1RP#806; EPI Ref. #160048
- ***Company Contact(s):*** Bradley Blevins
- ***Site Location:*** WGS84 N32° 15' 43.15"; W 103° 28' 06.93"
- ***Legal Description:*** Unit Letter-H (SE¼ of the NE¼), Section 33, T 23 S, R 34 E
- ***General Description:*** Approximately 20-miles northwest of Jal, New Mexico
- ***Elevation:*** ~3,484-ft amsl
- ***Land Ownership:*** Jim Keller
- ***EPI Personnel:*** Project Consultant – Iain Olness
  Site Foremen – Sebastian Romero

Release Specific:

- ***Product Released:*** Historical releases of petroleum/produced water
- ***Volume Released:*** >5 bbls
- ***Volume Recovered:*** 0 bbls
- ***Time of Occurrence:*** Historical
- ***Time of Discovery:*** 1/15/2006
- ***Release Source:*** Various sources (Tank Battery, production wellhead, flow lines, etc.)
- ***Initial Surface Area Affected:*** Surface Area ~ 2,500 ft^2

Remediation Specific:

- ***Final Vertical extent of contaminates:*** ~ 6-feet bgs
- ***Water wells within 1,000-ft:*** None
- ***Private domestic water sources within 200-ft:*** None
- ***Depth to Ground Water:*** ~ 475-ft bgs
- ***Surface water bodies within 1,000-ft:*** None
- ***NMOCD Site Ranking Index:*** Zero (0) points
- ***Remedial goals for Soil:*** TPH – 5,000 mg/Kg; BTEX – 50 mg/Kg; Benzene – 10 mg/Kg
- ***RCRA Waste Classification:*** Exempt
- ***Remediation Option Proposed:*** a) Excavated soil impacted above NMOCD Remedial Threshold Goals with disposal at Sundance Services, Inc.; b) laboratory analysis confirmed removal of most soil impacted above NMOCD Remedial Threshold goals in sidewalls and bottom of the excavations; c) backfilled excavated areas with caliche overlain with topsoil in select areas; d) release site graded for natural drainage of the area; and e) will seed remediation area with a blend suitable to the landowner.
- ***Treatment/Disposal Facility:*** Sundance Services, Inc., Eunice, Lea County, New Mexico
- ***Volume disposed:*** Approximately 7,540-yds^3
- ***Project Completion Date:*** June 12, 2006

2.0 SITE AND RELEASE INFORMATION

2.1 Describe the land use and pertinent geographic features within 1,000 feet of the site.

Surface rights for the land surrounding the release site are owned by Mr. Jim Keller. Mineral rights belong to the United States Government with management overseen by the Department of the Interior – Bureau of Land Management. The area is an established oil field with pump jacks, tank batteries, pipelines, lease roads and other petroleum related facilities. The surrounding terrain is rangeland used for livestock grazing.

2.2 Identify and describe the source or suspected source(s) of the release.

Releases are historical and attributed to Tank Battery overflow and pipeline leaks.

2.3 What was the volume of the release? (if known): Not Applicable

2.4 What was the volume recovered? (if known): Not Applicable

2.5 When did the release occur? (if known): Not Applicable

2.6 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 inter-grade 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 inter-bed of caliche and generally overlain by sandy soil." The release site is located in the High Plains physiographic subdivision, described by Nicholson & Clebsch as "a flat, gently sloping plain, treeless and marred only by slight undulations and covered with short prairie grass."

2.7 Ecological Description

The area is typical 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.

2.8 Area Groundwater

Information obtained from the New Mexico Office of the State Engineer's website and United States Geological Survey (USGS) database indicate groundwater in the unconfined aquifer at this site was projected to be ~475-ft bgs (reference *Table 1*).

2.9 Area Water Wells

No water supply wells exist within 1,000 feet of the release site (reference *Figure 2* and *Table 1*)

2.10 Area Surface Water Features

No surface water features exist within 1,000 feet 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 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);*
- *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 Zero (0) 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) = 0 + 0 + 0 = 0 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 can be substituted in lieu of laboratory analyses for benzene and BTEX.

4.0 EXCAVATED SOIL INFORMATION

4.1 ***Was soil excavated for off-site treatment or disposal?*** ☒ ***Yes*** ☐ ***No***

Date excavated: April 18 through May 31, 2006

Total volume removed: 7,540- yds^3

4.2 ***Indicated soil treatment type:***

- ☒ ***Disposal***
- ☐ ***Land Treatment***
- ☐ ***Composting/Biopiling***
- ☐ ***Other*** ( )

Name and location of treatment/disposal facility:
Sundance Services, Eunice, Lea County, New Mexico

5.0 SAMPLING INFORMATION

5.1 Briefly describe the field screening methods used to distinguish contaminated from uncontaminated soil.

Organic Vapor Concentrations – A portion of each soil sample was inserted into a self-sealing polyethylene bag to allow for volatilization of organic vapors. After allowed to equilibrate to ~70° F, the soil sample was analyzed for organic vapor concentrations utilizing a MiniRae® Photo-ionization Detector (PID) equipped with a 10.6 electron volt (eV) lamp and calibrated for benzene vapors.

Chloride Concentrations – A LaMotte Chloride Test Kit (Titration Method) was used for analyses of chloride concentrations.

5.2 Briefly describe the soil analytical sampling and handling procedures used.

Soil samples collected from the release area and soil borings (SB-1, SB-2 and SB-3) were analyzed in the field for organic vapor and chloride concentrations. Soil samples with elevated organic vapor and chloride concentrations were selected for laboratory analytical analyses. Selected soil samples collected from these sample points were immediately labeled, put into laboratory containers and placed on ice for shipment to an independent laboratory under standard Chain-of-Custody (CoC) protocol. The soil samples were analyzed for gasoline and diesel range organics (TPH); benzene, toluene, ethylbenzene and total xylenes (BTEX constituents); sulfate and chloride concentrations.

5.3 Discuss sample locations and provide rationale for their locations.

Three (3) soil borings were advanced from original ground surface on the release areas on January 30, 2006 and field analyzed for chloride concentrations. Locales for soil borings (SB-1, SB-2 and SB-3) were selected to determine the vertical extent of contamination. SB-1 was advanced to a depth of fifteen (15) feet bgs as field analysis indicated elevated chloride concentrations to five (5) feet bgs; SB-2 was advanced to a depth of thirty-five (35) feet bgs as field analysis indicated elevated chloride concentrations to twenty-five (25) feet bgs; SB-3 was advanced to a depth of forty-five (45) feet bgs as field analysis indicated elevated chloride concentrations to thirty-five (35) feet bgs. Chloride concentrations ranged from 58.4 mg/Kg (SB-3 @ 30') to 4,360 mg/Kg (SB-2 @ 5') (reference *Figure 4* and *Table 2*).

On May 15, through May 30, 2006 forty (40) soil samples were collected during excavation activities from the release area bottom and sidewalls (reference *Figure 5* for location). Soil samples were collected to determine extent of possible soil contamination remaining in situ. Soil samples were analyzed in the field for organic vapor and chloride concentrations utilizing analytical procedures as previously discussed. Selected soil samples were submitted to an independent laboratory for quantification of BTEX constituents, TPH, chloride and sulfate concentrations (reference *Table 4*).

6.0 ANALYTICAL RESULTS

6.1 Describe the vertical and horizontal extent and magnitude of soil contamination.

Laboratory analytical data for the samples collected from SB-1, SB-2 and SB-3 indicated TPH constituent concentrations ranged from ND to 5,600 mg/Kg (SB-1, SB-2 and SB-3 @ 2-ft bgs). BTEX constituent concentrations ranged from ND to 0.0485 mg/Kg (SB-1, SB-2 and SB-3 @ 2-ft bgs). Chloride concentrations ranged from 58.4 mg/Kg to 4,360 mg/Kg (SB-3 @ 30-ft bgs and SB-2 @ 5-ft) and sulfate concentrations ranged from 34.3 mg/Kg to 1,040 mg/Kg (SB-1 @ 5-ft bgs and SB-3 @ 5-ft) (reference *Table 2* and *Figure 3*).

Laboratory analytical data for the soil samples collected May 15 through May 30, 2006 indicated TPH and BTEX constituent concentrations were ND at or above laboratory analytical Method Detection Limits (MDL). Chloride concentrations ranged from ND to 25,000 mg/Kg (E1 BH-4 @ 6-ft bgs and EW SW-4 @ 3-ft) Sulfate concentrations ranged from ND to 11,000 mg/Kg (E1 BH-9 @ 6-ft bgs and E2 BH-2 @ 4-ft) (reference *Table 2* and *Figure 3*).

6.2 Is surface soil contamination present at the site (i.e., soil in the uppermost two feet that is visibly stained, contaminated at greater than 10 ppm (PID) or hydrocarbon saturated)?

☐ *yes* ☒ *no*

If yes, attach a site map identifying extent(s) of surface soil contamination

7. 0 DISCUSSION

7.1 ***Discuss the risks associated with the remaining soil contamination:***

Based on depth to groundwater (~475-ft bgs), chloride and sulfate residual concentrations remaining in-situ should not be capable of impacting groundwater above NMWQCC Groundwater Standards of 250 mg/L and 600 mg/L, respectively.

7.2 ***Discuss the risks associated with the impacted groundwater:*** Not Applicable

7.3 ***Discuss other concerns not mentioned above:*** Not Applicable

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1 ***Recommendation for the site:***

- ☒ ***Site Closure***
- ☐ ***Additional Groundwater Monitoring***
- ☐ ***Corrective Action***

8.2 ***Base the recommendation above on Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993). Describe below how you applied the policy to support your recommendation. If closure is recommended, please summarize significant site investigative events and describe how site specific risk issues have been adequately addressed or minimized to acceptable low risk levels.***

From April 18 to May 30, 2006 soil impacted above NMOCD Remedial Threshold Goals was excavated and transported for disposal at Sundance Services, Inc. Laboratory analysis confirmed removal of most soil impacted above NMOCD Remedial Threshold goals in sidewalls and bottom of the excavations. A review of Table 2, *Summary of Soil Boring Analytical Results*, indicated chloride concentrations diminish with depth. Based on this data and with knowledge of depth to groundwater (~475-ft bgs), chloride and sulfate residual concentrations remaining in situ should not be capable of impacting groundwater above NMWQCC Groundwater Standards of 250 mg/L and 600 mg/L, respectively.

From May 24 to June 12, 2006 EPI transported approximately 5,386 cubic yards of caliche plus 780 cubic yards of topsoil from local pits to the excavation site. This material was stockpiled on the job site in preparation for backfill operations. After cleaning and leveling the excavation bottom, EPI backfilled some areas with caliche to top of existing pad. Selected areas were backfilled with caliche to within two (2) feet of original ground. The remainder of the excavation was backfilled with clean top soil to original ground elevation. The entire area was contoured to allow natural drainage. Selected areas were seeded with a grass blend approved by the Bureau of Land Management.

8.3 ***If additional groundwater and monitoring is recommended, indicate the proposed monitoring schedule and frequency. Conduct quarterly monitoring until the NMOCD responds to this report.*** Not Applicable

8.4 ***If corrective action is recommended, provide a conceptual approach.***
Not Applicable

FIGURES

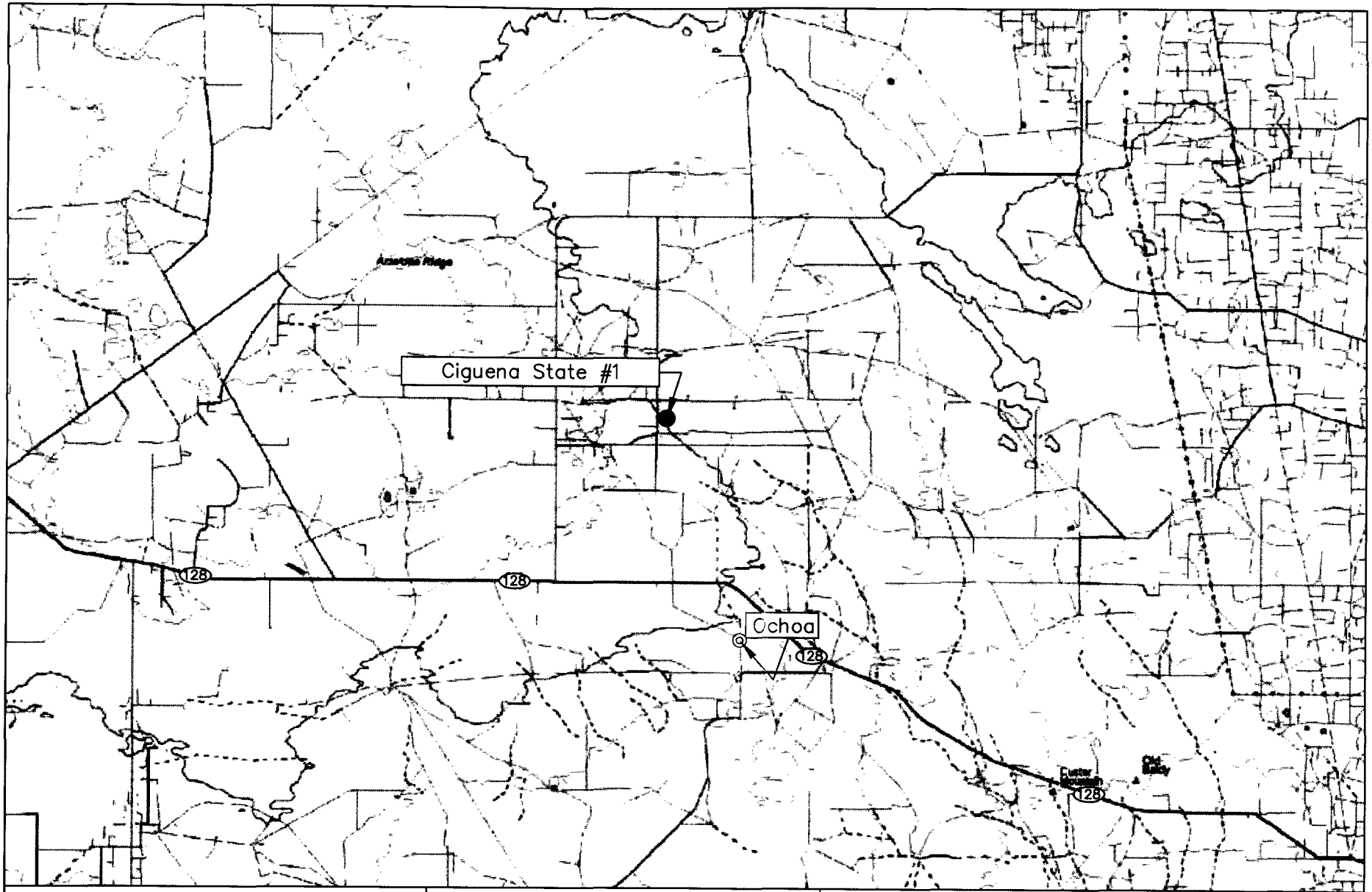

Figure 1
Area Map
Chesapeake Energy
Ciguena State #1

Lea County, New Mexico
SE 1/4 of the NE 1/4, Sec. 33, T23S, R34E
N 32° 15' 43.15" W 103° 28' 06.93"
Elevation: 3,484 feet amsl

DWG By: Daniel Dominguez
January 2006

REVISED:

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SHEET
1 of 1

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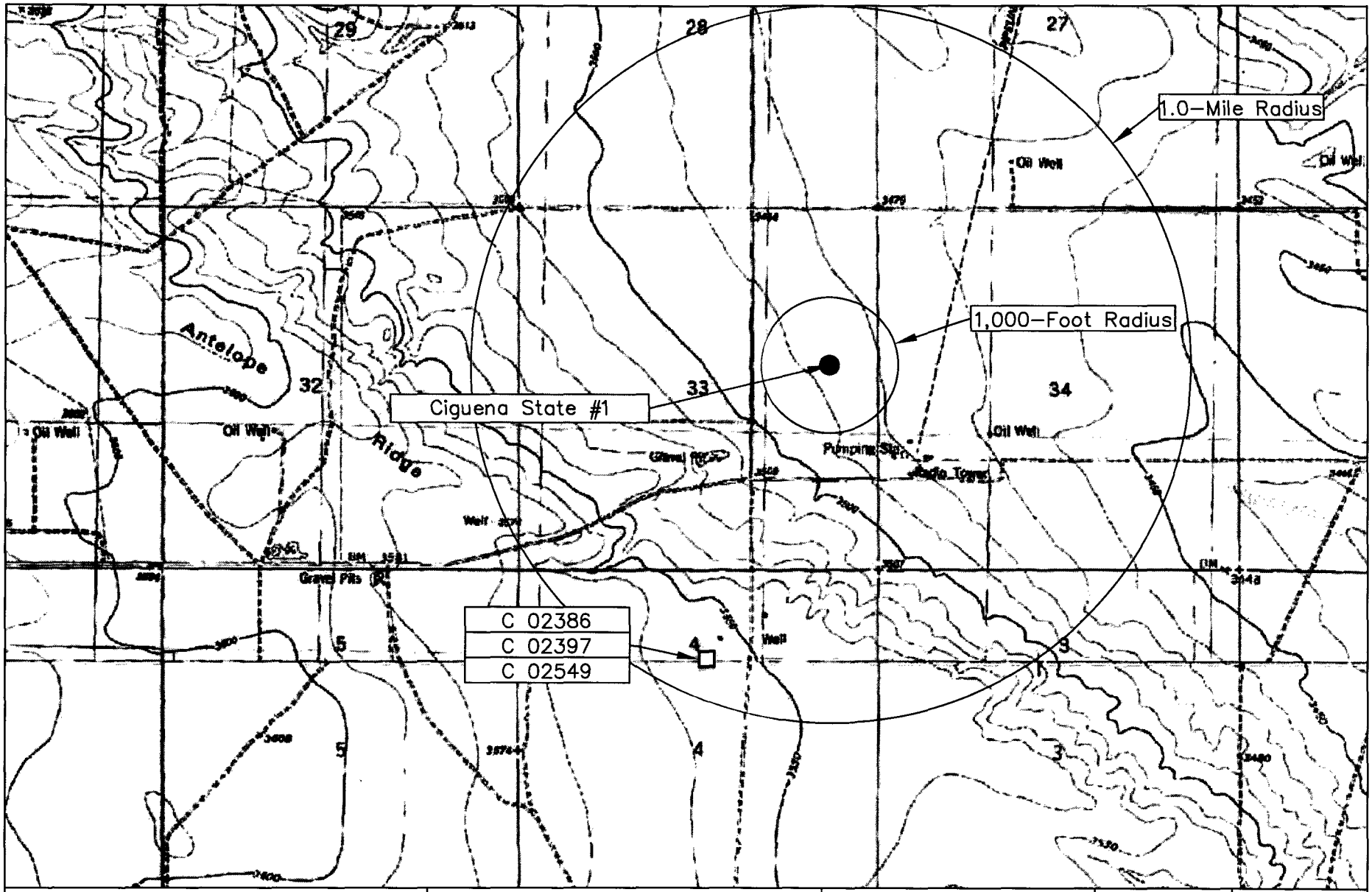

Figure 2
Site Location Map
Chesapeake Energy
Ciguena State #1

Lea County, New Mexico
SE 1/4 of the NE 1/4, Sec. 33, T23S, R34E
N 32°15' 43.15" W 103°28' 06.93"
Elevation: 3,484 feet amsl

DWG By: Daniel Dominguez
January 2006

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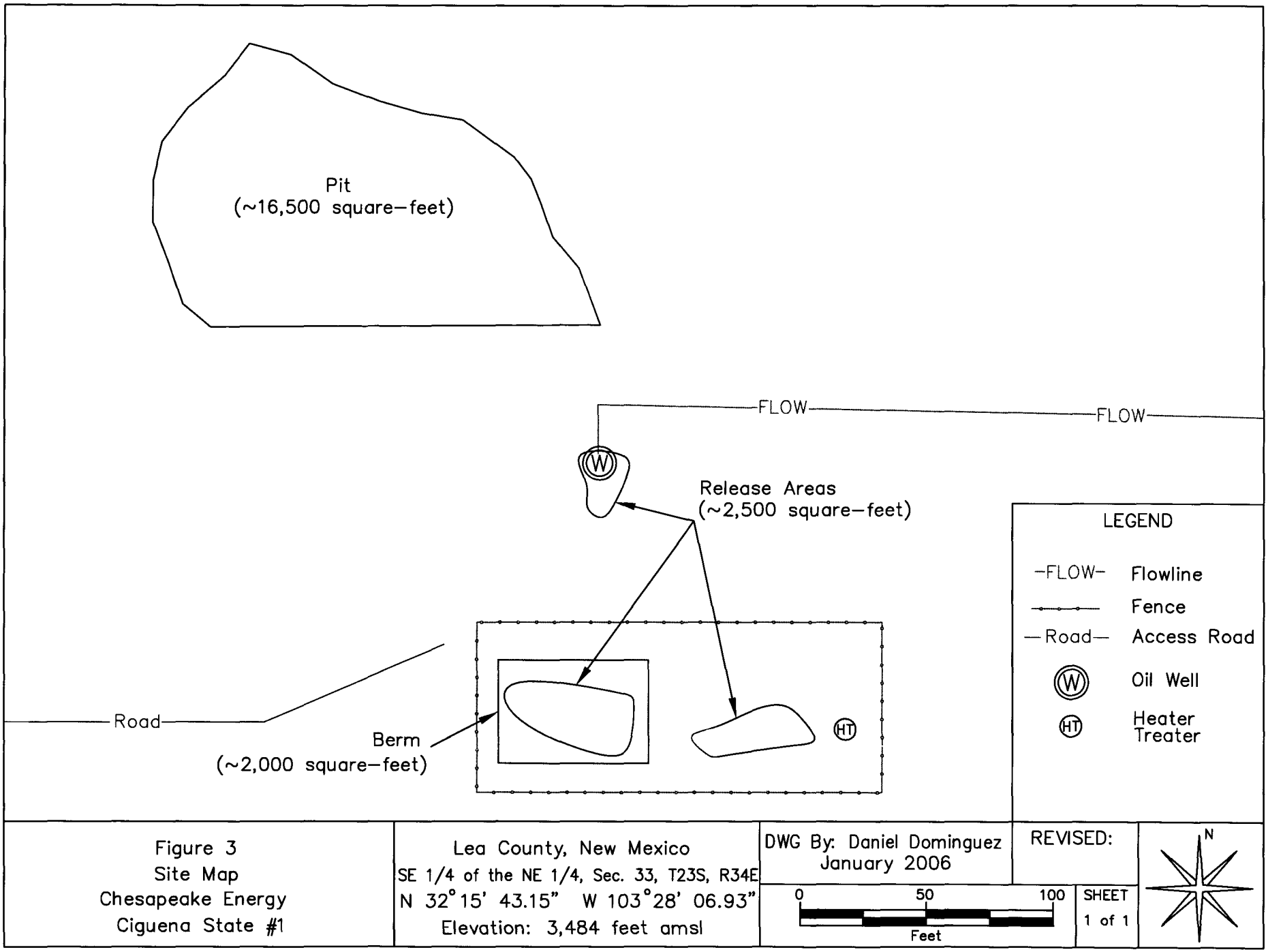


Figure 3 Site Map Chesapeake Energy Ciguena State #1	Lea County, New Mexico SE 1/4 of the NE 1/4, Sec. 33, T23S, R34E N 32°15' 43.15" W 103°28' 06.93" Elevation: 3,484 feet amsl	DWG By: Daniel Dominguez January 2006 0 50 100 Feet	REVISED: SHEET 1 of 1	N

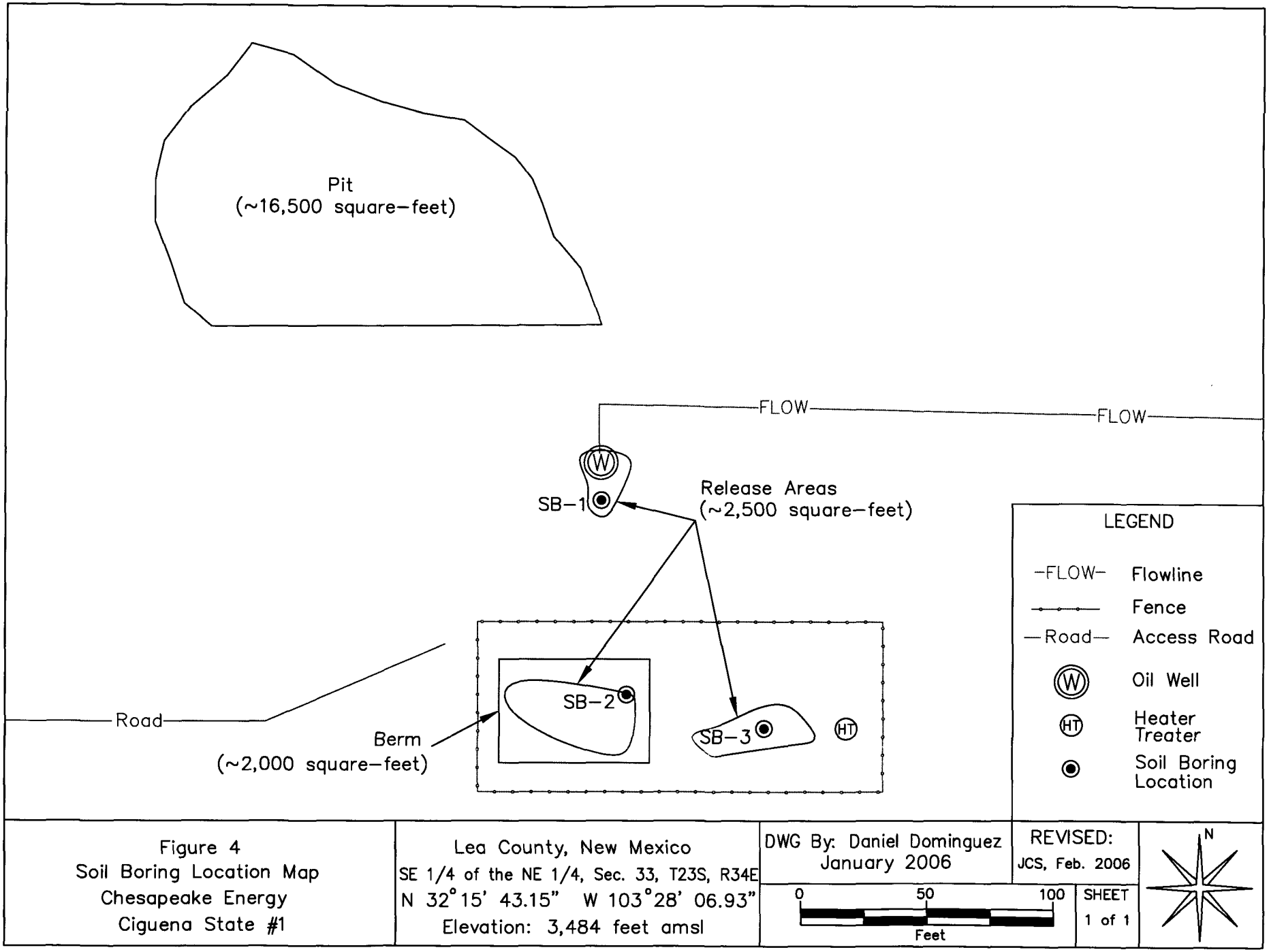
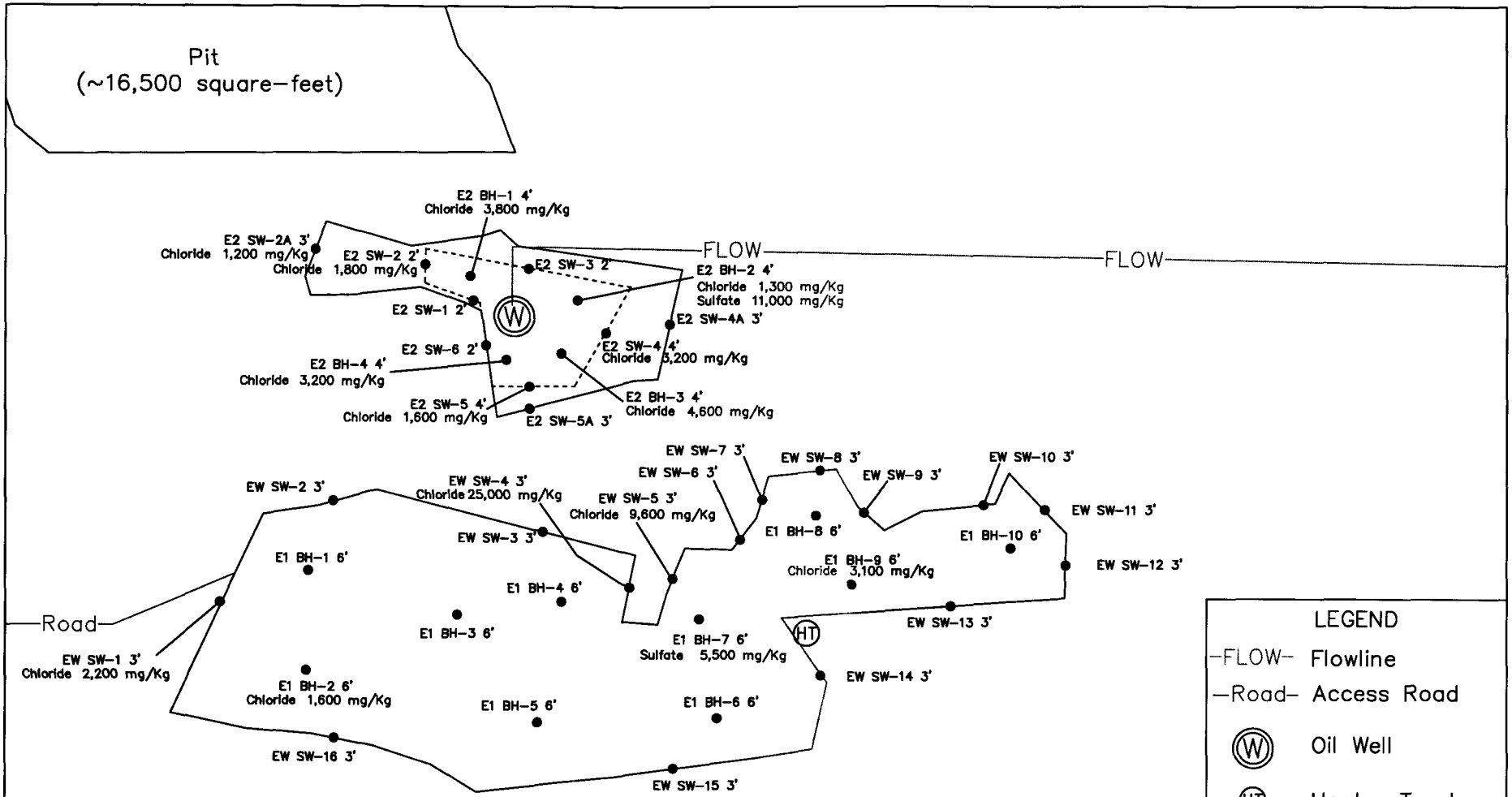


Figure 4 Soil Boring Location Map Chesapeake Energy Ciguena State #1	Lea County, New Mexico SE 1/4 of the NE 1/4, Sec. 33, T23S, R34E N 32°15' 43.15" W 103°28' 06.93" Elevation: 3,484 feet amsl	DWG By: Daniel Dominguez January 2006	REVISED: JCS, Feb. 2006	N
		0 50 100 Feet	SHEET 1 of 1	



NOTE: Unless indicated chloride and/or sulfate concentrations are <1,000 mg/Kg. TPH and BTEX constituent concentrations were ND at or above laboratory MDL.

Figure 5 May 15-30, 2006 Sample Location Map Chesapeake Energy Ciguena State #1	Lea County, New Mexico SE 1/4 of the NE 1/4, Sec. 33, T23S, R34E N 32° 15' 43.15" W 103° 28' 06.93" Elevation: 3,484 feet amsl	DWG By: Daniel Dominguez January 2006	REVISED: June 2006	N
		0 50 100 Feet	SHEET 1 of 1	

TABLES

TABLE 1

Well Data

Chesapeake Energy - Ciguena State #1 (Ref. # 160046)

Well Number	Diversion[A]	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation[B]	Depth to Water (ft bgs)
C 02386	3	RUBERT MADERA	DOM	24S	34E	04 2 1 4	N32° 15' 0.43"	W103° 28' 28.06"	31-Jan-60	3,555	475
C 02397	30	BERT MADERA	COM	24S	34E	04 2 1 4	N32° 15' 0.43"	W103° 28' 28.06"	31-Jan-60	3,555	475
C 02397	3	BERT MADERA	MUL	24S	34E	04 2 1 4	N32° 15' 0.43"	W103° 28' 28.06"	31-Jan-60	3,555	475

[B] = Elevation interpolated from USGS topographical map based on referenced location.
COM = Commercial
MUL = 72-12-1 Multiple domestic households
DOM = 72-12-1 Domestic
quarters are 1=NW, 2=NE, 3=SW, 4=SE; quarters are biggest to smallest
Shaded area indicates wells not shown in Figure 2

TABLE 2

Summary of Soil Boring Analytical Results

Chesapeake - Ciguena State #1 (Ref. #160048)

Soil Boring	Soil Sample I.D.	Depth (feet)	Sample Date	Soil Status	PID Reading (ppm)	Field Chloride Analyses (ppm)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
SB-1	SB-1 2'-3'	2-3	30-Jan-06	In Situ	131	1,680	<0.0250	0.0179 [A]	0.0223 [A]	0.0485	0.0485	122	5,480	**5,600**	**2,580**	161
	SB-1 5'-6'	5-6	30-Jan-06	In Situ	4.3	400	<0.0250	<0.0250	<0.0250	<0.050	<0.125	<10.0	74.1	74.1	165	34.3
	SB-1 10'-11'	10-11	30-Jan-06	In Situ	0.8	160	<0.0250	<0.0250	<0.0250	<0.050	<0.125	<10.0	26.0	26.0	79.6	--
	SB-1 15-15'	15-15	30-Jan-06	In Situ	0.7	160	--	--	--	--	--	<10.0	30.3	30.3	--	--
SB-2	SB-2 2'-3'	2-3	30-Jan-06	In Situ	1.0	1,680	<0.0250	<0.0250	<0.0250	<0.050	<0.125	<10.0	<10.0	<10.0	**1,750**	63.5
	SB-2 5'-6'	5-6	30-Jan-06	In Situ	0.7	4,000 +	<0.0250	<0.0250	<0.0250	<0.050	<0.125	<10.0	<10.0	<10.0	**4,360**	194
	SB-2 10'-11'	10-11	30-Jan-06	In Situ	0.7	1,600	--	--	--	--	--	--	--	--	**1,650**	--
	SB-2 15'-16'	15-16	30-Jan-06	In Situ	0.2	3,360	--	--	--	--	--	--	--	--	**3,110**	--
	SB-2 20'-21'	20-21	30-Jan-06	In Situ	0.1	720	--	--	--	--	--	--	--	--	**619**	--
	SB-2 25'-26'	25-26	30-Jan-06	In Situ	0.1	720	--	--	--	--	--	--	--	--	**779**	--
	SB-2 30'-31'	30-31	30-Jan-06	In Situ	1.3	240	--	--	--	--	--	--	--	--	74.2	--
	SB-2 35'-36	35-36	30-Jan-06	In Situ	1.0	240	--	--	--	--	--	--	--	--	80.7	--
SB-3	SB-3 2'-3'	2-3	30-Jan-06	In Situ	1.1	1,360	<0.0250	<0.0250	<0.0250	<0.050	<0.125	<10.0	18.9	18.9	**1,380**	140
	SB-3 5'-6'	5-6	30-Jan-06	In Situ	1.0	2,080	<0.0250	<0.0250	<0.0250	<0.050	<0.125	<10.0	<10.0	<10.0	**1,910**	**1,040**
	SB-3 10'-11'	10-11	30-Jan-06	In Situ	1.0	2,400	<0.0250	<0.0250	<0.0250	<0.050	<0.125	<10.0	<10.0	<10.0	**2,490**	167
	SB-3 15'-16'	15-16	30-Jan-06	In Situ	1.0	2,320	--	--	--	--	--	--	--	--	**2,270**	143
	SB-3 20'-21'	20-21	30-Jan-06	In Situ	1.1	2,720	--	--	--	--	--	--	--	--	**2,780**	--
	SB-3 25'-26'	25-26	30-Jan-06	In Situ	1.2	2,800	--	--	--	--	--	--	--	--	248	--
	SB-3 30'-31'	30-31	30-Jan-06	In Situ	1.0	400	--	--	--	--	--	--	--	--	58.4	--
	SB-3 40'-41'	40-41	30-Jan-06	In Situ	1.1	240	--	--	--	--	--	--	--	--	--	--
	SB-3 45'-46'	45-46	30-Jan-06	In Situ	--	240	--	--	--	--	--	--	--	--	--	--
NMOCD Remedial Thresholds					**100**		**10**				**50**			**5,000**	**250** [B]	**600** [B]

Bolded *values are in excess of the NMOCD Remediation Thresholds Goals*

-- = Not Analyzed

[A] *Detected below laboratory method detection limits, therefore an estimate.*

[B] *Chloride and sulfate residuals may not be capable of impacting groundwater above NMWQCC groundwater standards of 250 ppm and 600 ppm, respectively.*

Table 3

Summary of Excavation Soil Sample Analytical Results

Chesapeake - Ciguena State #1 (Ref. #160048)

Soil Sample I.D.	Depth (feet)	Sample Date	Soil Status	PID Reading (ppm)	Field Chloride Analyses (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
E1 BH-1 6'	6	15-May-06	In Situ	--	320	<0.025	<10	<30	<40	110	210
E1 BH-2 6'	6	15-May-06	In Situ	--	1,280	--	--	--	--	**1,600**	--
E1 BH-3 6'	6	15-May-06	In Situ	--	1,120	<0.025	<10	<30	<40	880	94
E1 BH-4 6'	6	15-May-06	In Situ	--	160	--	--	--	--	14	--
E1 BH-5 6'	6	15-May-06	In Situ	--	160	<0.025	<10	<30	<40	<10	34
E1 BH-6 6'	6	15-May-06	In Situ	--	400	<0.025	--	--	--	420	--
E1 BH-7 6'	6	15-May-06	In Situ	--	320	<0.025	<10	<30	<40	360	**5,500**
E1 BH-8 6'	6	15-May-06	In Situ	--	400	<0.025	--	--	--	290	--
E1 BH-9 6'	6	15-May-06	In Situ	--	3,760	<0.025	<10	<30	<40	**3,100**	<50
E1 BH-10 6'	6	15-May-06	In Situ	--	200	<0.025	--	--	--	19	--
EW SW-1 3'	3	15-May-06	In Situ	--	1,600	<0.025	<10	<30	<40	**2,200**	52
EW SW-2 3'	3	15-May-06	In Situ	--	160	<0.025	--	--	--	41	--
EW SW-3 3'	3	15-May-06	In Situ	--	160	<0.025	<10	<30	<40	<10	42
EW SW-4 3'	3	15-May-06	In Situ	--	4,000 +	<0.025	--	--	--	**25,000**	--
EW SW-5 3'	3	15-May-06	In Situ	--	4,000 +	<0.025	--	--	--	**9,600**	--
EW SW-6 3'	3	15-May-06	In Situ	--	160	<0.025	<10	<30	<40	87	170
EW SW-7 3'	3	15-May-06	In Situ	--	160	<0.025	--	--	--	17	--
EW SW-8 3'	3	15-May-06	In Situ	--	240	<0.025	<10	<30	<40	54	160
EW SW-9 3'	3	15-May-06	In Situ	--	240	<0.025	--	<30	<40	100	--
EW SW-10 3'	3	15-May-06	In Situ	--	160	<0.025	<10	<30	<40	<10	45
EW SW-11 3'	3	15-May-06	In Situ	--	160	<0.025	--	--	--	<10	--
EW SW-12 3'	3	15-May-06	In Situ	--	640	<0.025	<10	<30	<40	560	160
EW SW-13 3'	3	15-May-06	In Situ	--	160	<0.025	<10	<30	<40	16	120
EW SW-14 3'	3	15-May-06	In Situ	--	160	<0.025	<10	<30	<40	94	42
EW SW-15 3'	3	15-May-06	In Situ	--	160	<0.025	--	--	--	<10	--
EW SW-16 3'	3	15-May-06	Excavated	--	160	<0.025	<10	<30	<40	<10	6.0
EW SW-16 3'	3	25-May-06	In Situ	--	--	--	--	--	--	450	31.0
EW SW-17 3'	3	25-May-06	In Situ	--	--	--	--	--	--	870	42.0

Table 3

Summary of Excavation Soil Sample Analytical Results

Chesapeake - Ciguena State #1 (Ref. #160048)

Soil Sample I.D.	Depth (feet)	Sample Date	Soil Status	PID Reading (ppm)	Field Chloride Analyses (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
E2 BH-1 4'	4	15-May-06	In Situ	--	2,160	<0.025	<10	<30	<40	**3,800**	170
E2 BH-2 4'	4	15-May-06	In Situ	--	1,280	<0.025	<10	<30	<40	**1,300**	**11,000**
E2 BH-3 4'	4	15-May-06	In Situ	--	3,760	<0.025	<10	<30	<40	**4,600**	320
E2 BH-4 4'	4	15-May-06	In Situ	--	2,240	<0.025	<10	<30	<40	**3,200**	190
E2 SW-1 2'	2	15-May-06	Excavated	--	800	<0.025	<10	<30	<40	780	30
E2 SW-2 2'	2	15-May-06	Excavated	--	1,520	<0.025	<10	<30	<40	**1,800**	<20
E2 SW-2A 3'	3	30-May-06	In Situ	--	1,200	--	--	--	--	**1,200**	67
E2 SW-3 2'	2	15-May-06	Excavated	--	720	<0.025	<10	<30	<40	680	75
E2 SW-4 2'	2	15-May-06	Excavated	--	2,320	<0.025	<10	<30	<40	**3,200**	160
E2 SW-4A 3'	3	30-May-06	In Situ	--	320	--	--	--	--	13	84
E2 SW-5 2'	2	15-May-06	Excavated	--	1,360	<0.025	<10	<30	<40	**1,600**	78
E2 SW-5A 3'	3	30-May-06	In Situ	--	480	--	--	--	--	250	37
E2 SW-6 2'	2	15-May-06	In Situ	--	400	<0.025	<10	<30	<40	140	410
NMOCD Remedial Thresholds				**100**		**50**			**5,000**	**1,000** [B]	**600** [B]

Bolded *values are in excess of the NMOCD Remediation Thresholds and/or NMWQCC groundwater standards.*

-- = Not Analyzed

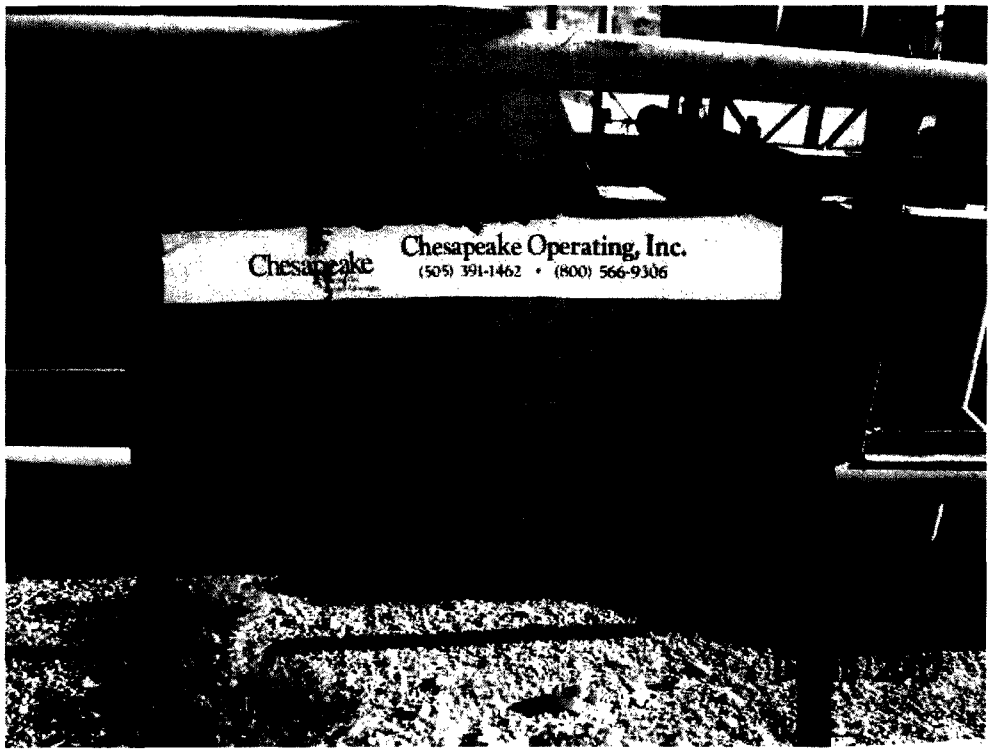
[A] *Detected below laboratory method detection limits, therefore an estimate.*

[B] *Chloride and sulfate residuals may not be capable of impacting groundwater above NMWQCC Groundwater Standards of 1,000 mg/L and 600 mg/L, respectively.*

APPENDICES

APPENDIX I

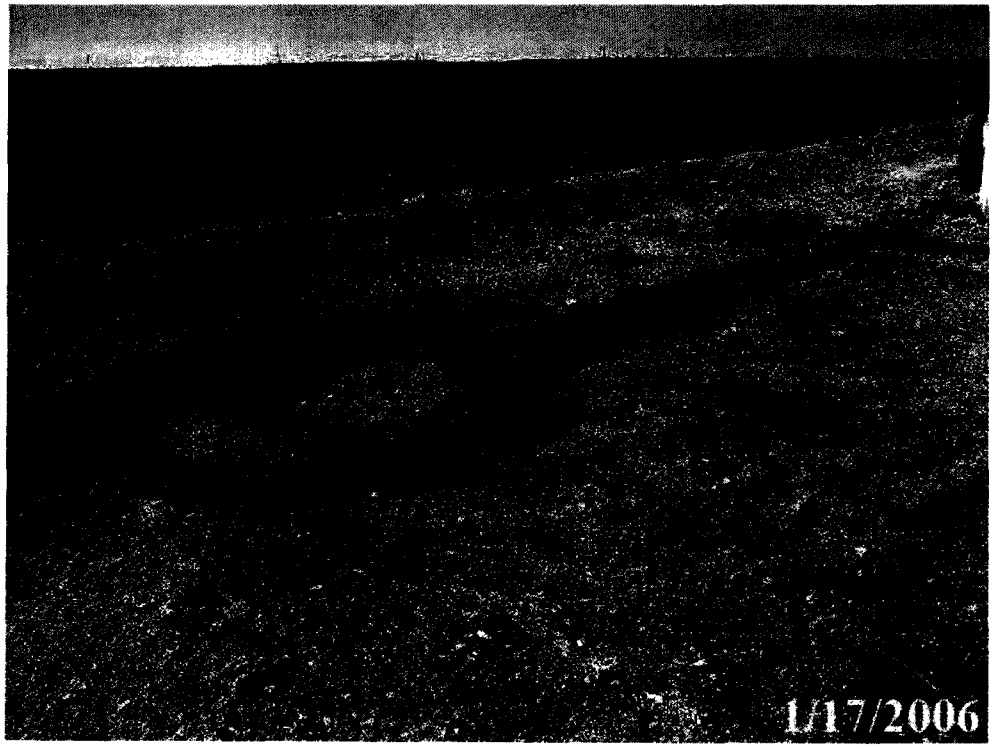
PROJECT PHOTOGRAPHS



Photograph #1 – Lease sign.

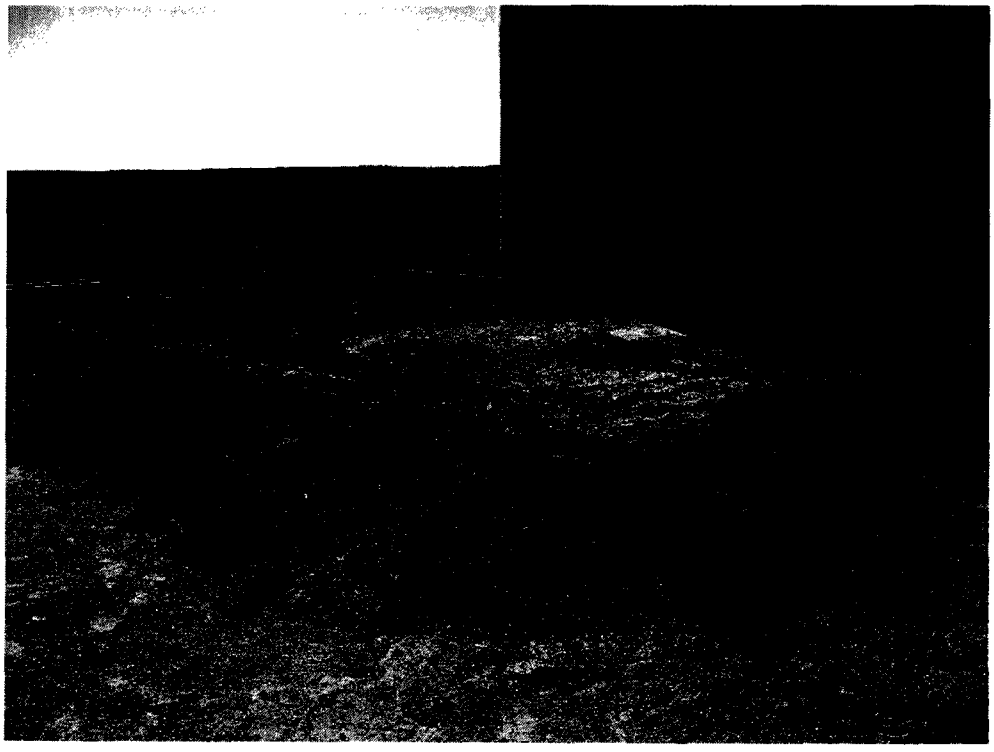
Photograph #2 - Looking southwesterly at the release area and tank battery with berm.

Photograph #3-Looking northwesterly at release area.

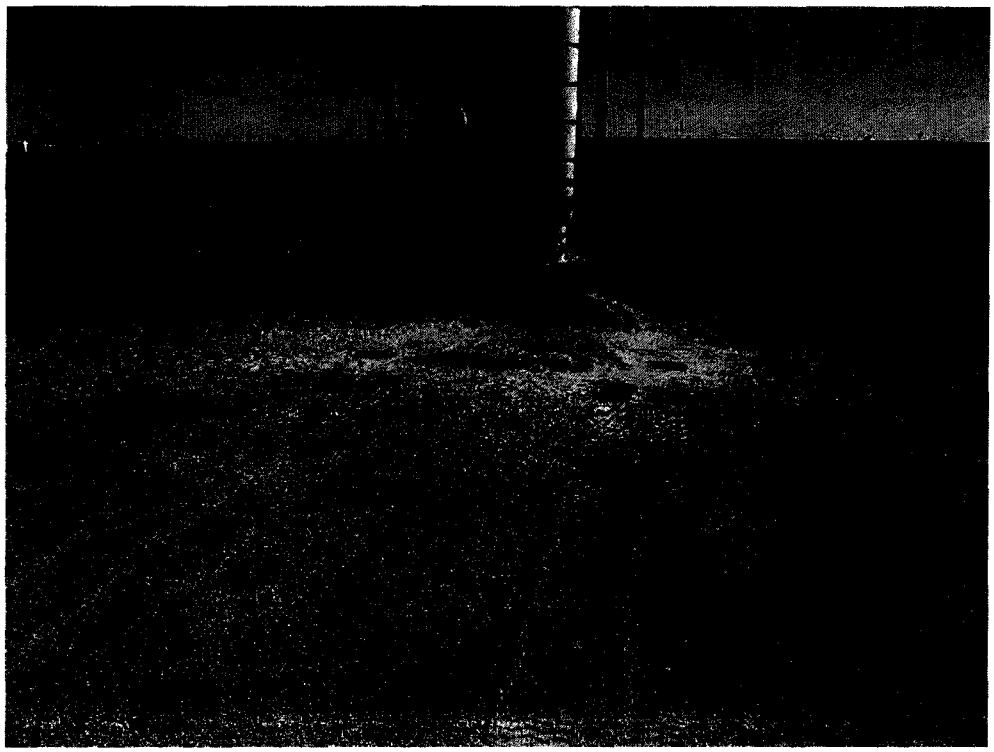


Photograph #4- Looking southwesterly at the release area and berm.

Photograph #5 – Soil boring #1

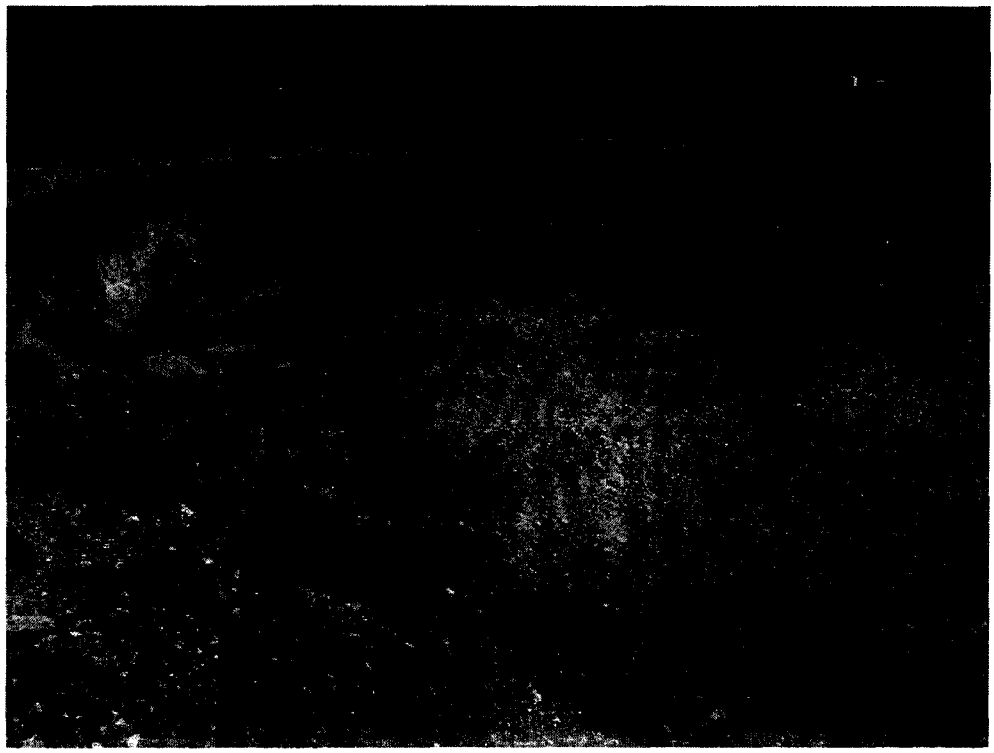


Photograph #6 – Soil boring #2

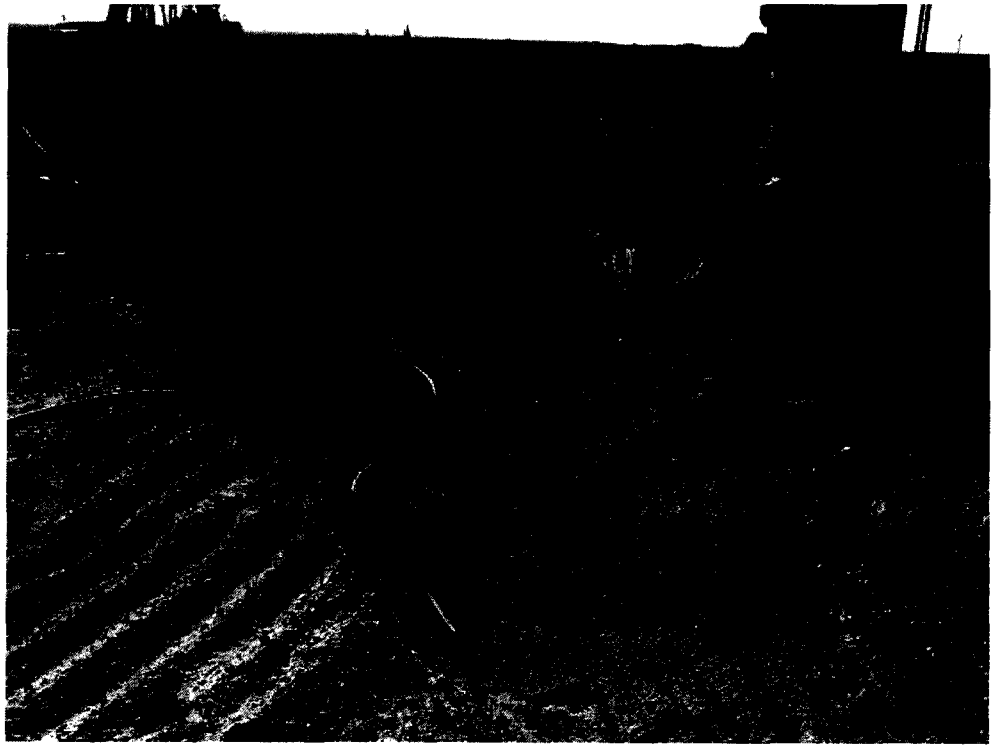


Photograph #7 – Soil boring #3

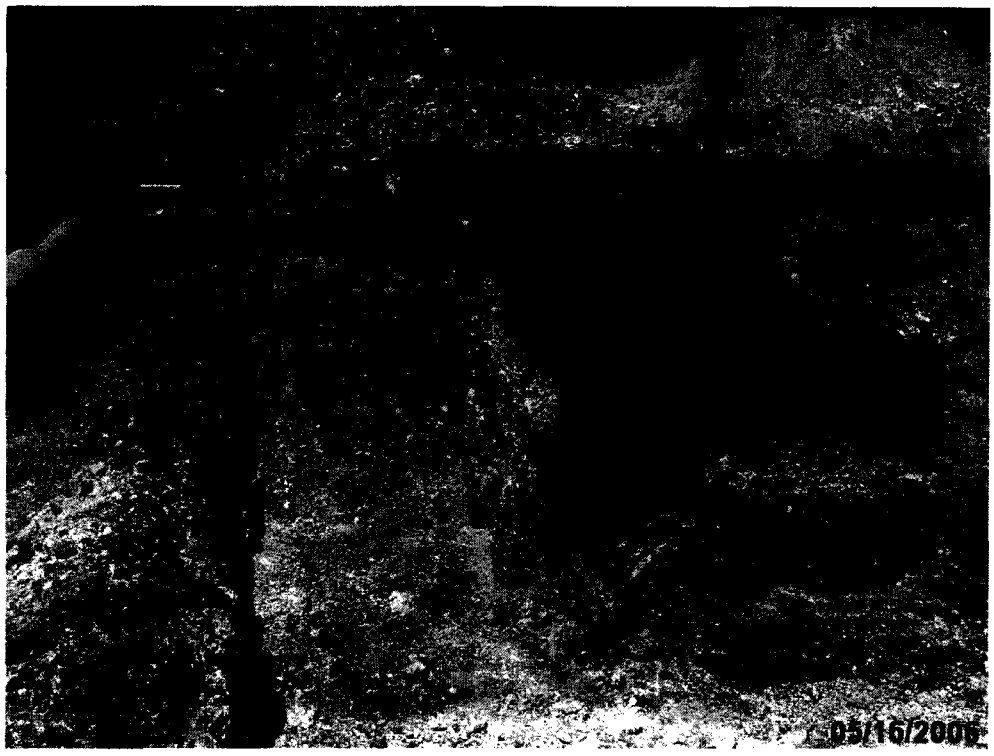
Photograph #8 – South excavation looking south.



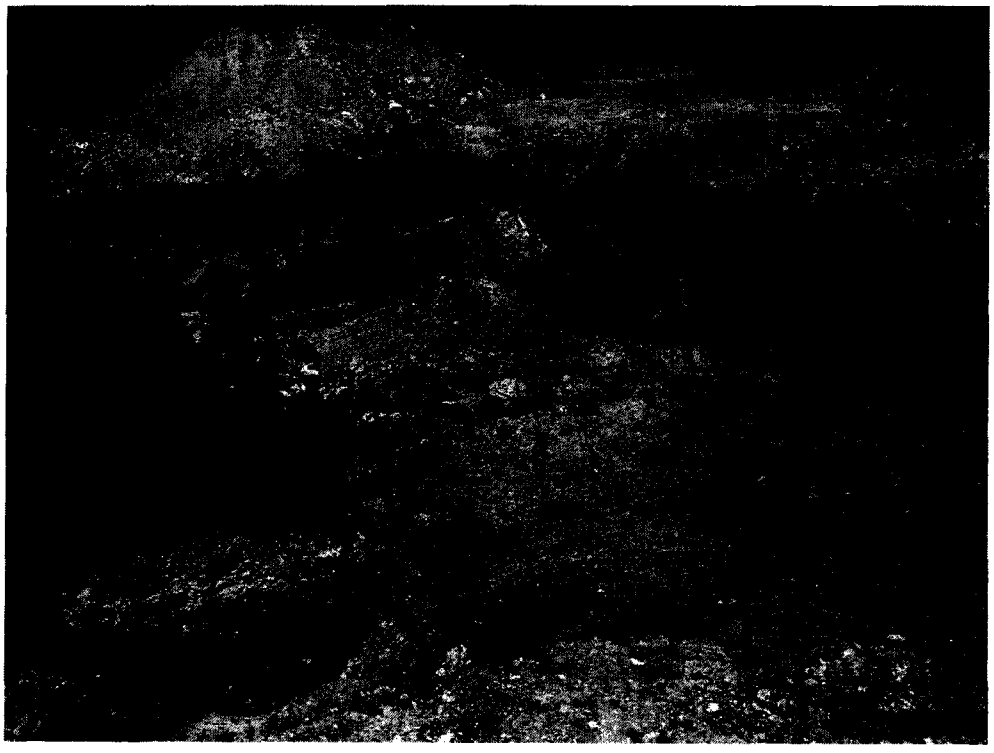
Photograph #9 – South excavation looking southeasterly.



Photograph #10 – South excavation looking southeasterly.

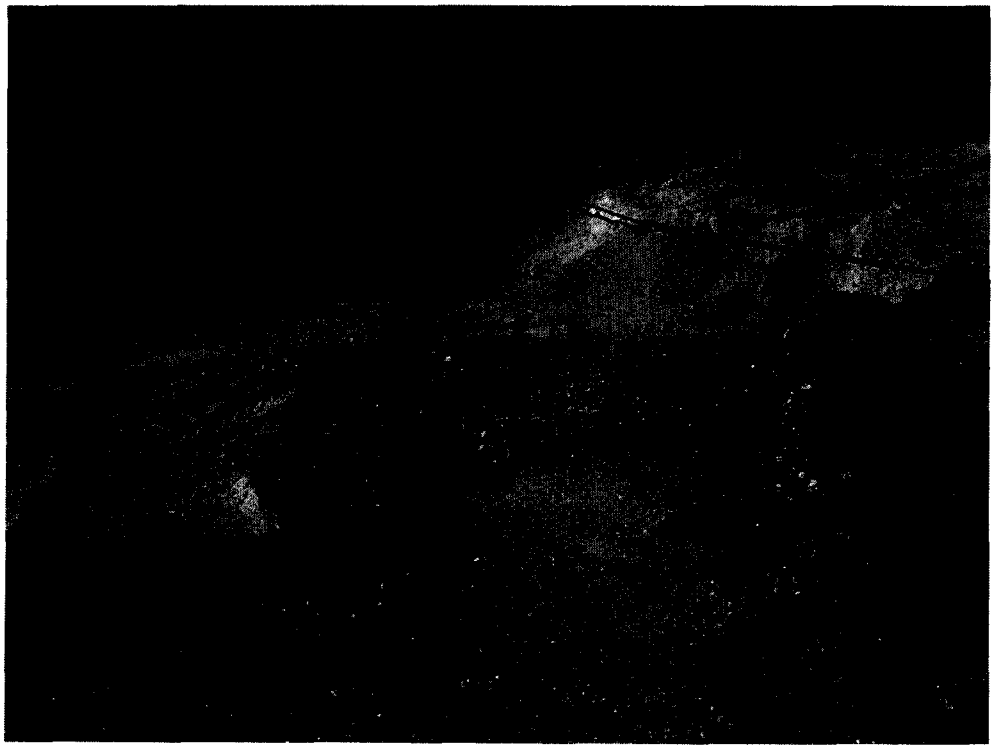


Photograph #11 – North excavation looking northerly at production well head.

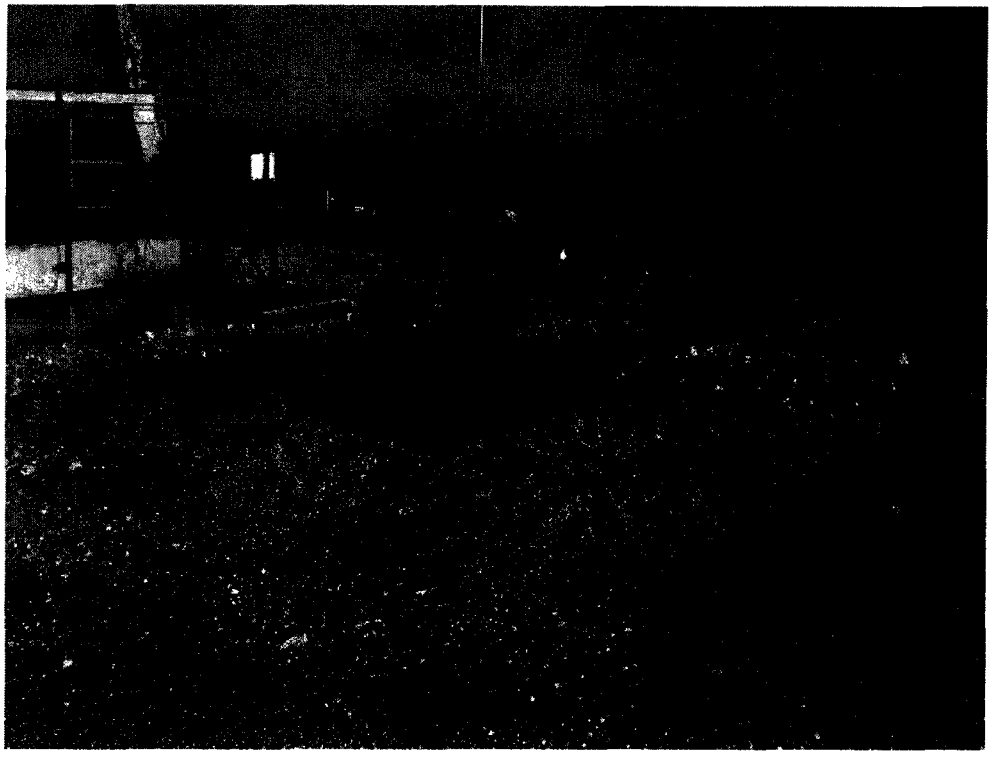


Photograph #12 – North excavation looking northerly.

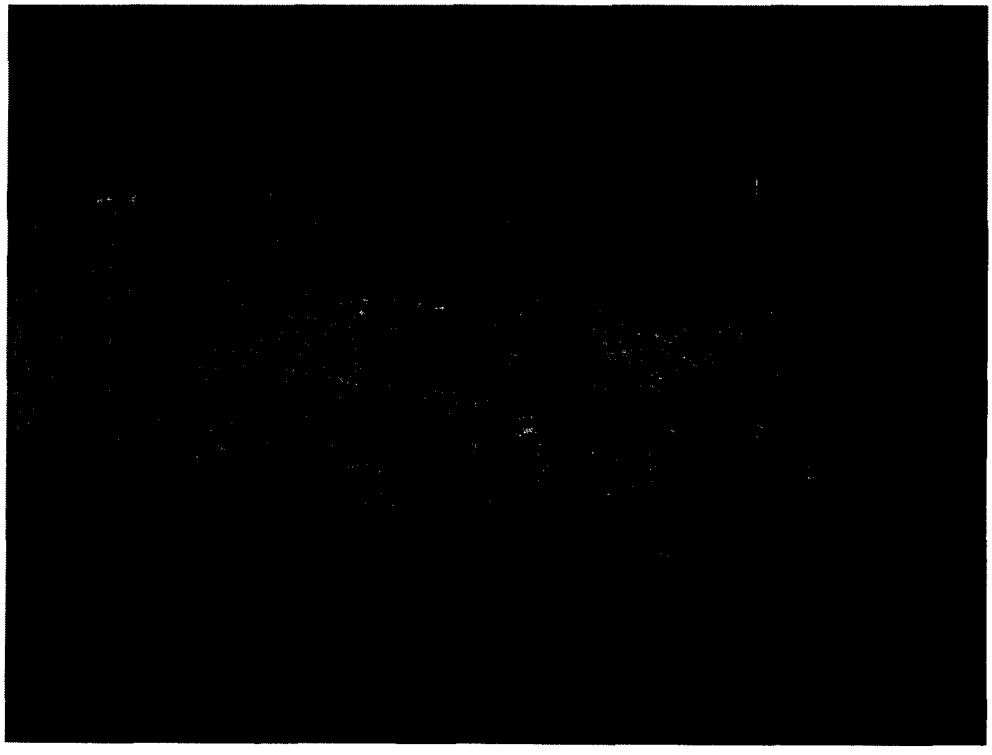
Photograph #13 – Backfilling excavation with caliche.



Photograph #14 – Backfilling excavation with caliche.



Photograph #15 – Remediated site.



Photograph #16 – Remediated site.

APPENDIX II
LABORATORY ANALYTICAL REPORTS
AND
CHAIN-OF-CUSTODY

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/ Ciguena State #1

Project Number: 160048

Location: UL-H, Sect. 33, T 23 S, R 34 E

Lab Order Number: 6A31004

Report Date: 02/08/06

Environmental Plus, Incorporated	Project: Chesapeake/ Ciguena State #1	Fax: 505-394-2601
P.O. Box 1558	Project Number: 160048	**Reported:**
Eunice NM, 88231	Project Manager: Iain Olness	02/08/06 11:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-1 2'-3'	6A31004-01	Soil	01/30/06 10:00	01/31/06 12:05
SB-1 5'-6'	6A31004-02	Soil	01/30/06 10:10	01/31/06 12:05
SB-1 10'-11'	6A31004-03	Soil	01/30/06 10:20	01/31/06 12:05
SB-1 15'-15'	6A31004-04	Soil	01/30/06 10:30	01/31/06 12:05
SB-2 2'-3'	6A31004-05	Soil	01/30/06 11:00	01/31/06 12:05
SB-2 5'-6'	6A31004-06	Soil	01/30/06 11:10	01/31/06 12:05
SB-2 10'-11'	6A31004-07	Soil	01/30/06 11:20	01/31/06 12:05
SB-2 15'-16'	6A31004-08	Soil	01/30/06 11:30	01/31/06 12:05
SB-2 20'-21'	6A31004-09	Soil	01/30/06 11:40	01/31/06 12:05
SB-2 25'-26'	6A31004-10	Soil	01/30/06 11:50	01/31/06 12:05
SB-2 30'-31'	6A31004-11	Soil	01/30/06 12:00	01/31/06 12:05
SB-2 35'-36'	6A31004-12	Soil	01/30/06 12:15	01/31/06 12:05
SB-3 2'-3'	6A31004-13	Soil	01/30/06 12:40	01/31/06 12:05
SB-3 5'-6'	6A31004-14	Soil	01/30/06 12:45	01/31/06 12:05
SB-3 10'-11'	6A31004-15	Soil	01/30/06 12:55	01/31/06 12:05
SB-3 15'-16'	6A31004-16	Soil	01/30/06 13:06	01/31/06 12:05
SB-3 20'-21'	6A31004-17	Soil	01/30/06 13:15	01/31/06 12:05
SB-3 25'-26'	6A31004-18	Soil	01/30/06 13:25	01/31/06 12:05
SB-3 30'-31'	6A31004-19	Soil	01/30/06 13:35	01/31/06 12:05

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Environmental Plus, Incorporated	Project: Chesapeake/ Ciguena State #1	Fax: 505-394-2601
P.O. Box 1558	Project Number: 160048	**Reported:**
Eunice NM, 88231	Project Manager: Iain Olness	02/08/06 11:53

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-1 2'-3' (6A31004-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EB60303	02/03/06	02/03/06	EPA 8021B	
Toluene	**J [0.0179]**	0.0250	"	"	"	"	"	"	J
Ethylbenzene	**J [0.0223]**	0.0250	"	"	"	"	"	"	J
Xylene (p/m)	**0.0485**	0.0250	"	"	"	"	"	"	
Xylene (o)	**J [0.0193]**	0.0250	"	"	"	"	"	"	J
Surrogate: a,a,a-Trifluorotoluene		*92.2 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	**122**	20.0	mg/kg dry	2	EB60116	02/01/06	02/02/06	EPA 8015M	
Diesel Range Organics >C12-C35	**5480**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**5600**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*48.0 %*	*70-130*		"	"	"	"	*S-06*
Surrogate: 1-Chlorooctadecane		*83.0 %*	*70-130*		"	"	"	"	
SB-1 5'-6' (6A31004-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EB60303	02/03/06	02/03/06	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		*97.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB60116	02/01/06	02/02/06	EPA 8015M	
Diesel Range Organics >C12-C35	**74.1**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**74.1**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*89.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*93.4 %*	*70-130*		"	"	"	"	
SB-1 10'-11' (6A31004-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EB60317	02/03/06	02/04/06	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*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB60117	02/02/06	02/02/06	EPA 8015M	
Diesel Range Organics >C12-C35	**26.0**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**26.0**	10.0	"	"	"	"	"	"	

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-1 10'-11' (6A31004-03) Soil									
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		*EB60117*	*02/02/06*	*02/02/06*	*EPA 8015M*	
Surrogate: 1-Chlorooctadecane		*96.0 %*	*70-130*		"	"	"	"	
SB-1 15'-15' (6A31004-04) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB60117	02/02/06	02/02/06	EPA 8015M	
Diesel Range Organics >C12-C35	**30.3**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**30.3**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*111 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*99.0 %*	*70-130*		"	"	"	"	
SB-2 2'-3' (6A31004-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EB60303	02/03/06	02/03/06	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		*93.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB60116	02/01/06	02/02/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*107 %*	*70-130*		"	"	"	"	
SB-2 5'-6' (6A31004-06) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EB60303	02/03/06	02/03/06	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		*87.8 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB60116	02/01/06	02/02/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*93.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*95.6 %*	*70-130*		"	"	"	"	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-3 2'-3' (6A31004-13) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EB60303	02/03/06	02/03/06	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		*120 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB60116	02/01/06	02/02/06	EPA 8015M	
Diesel Range Organics >C12-C35	**18.9**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**18.9**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*97.2 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*102 %*	*70-130*		"	"	"	"	
SB-3 5'-6' (6A31004-14) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EB60303	02/03/06	02/03/06	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		*104 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB60116	02/01/06	02/02/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*104 %*	*70-130*		"	"	"	"	
SB-3 10'-11' (6A31004-15) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB60117	02/02/06	02/02/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*90.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*99.0 %*	*70-130*		"	"	"	"	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-1 2'-3' (6A31004-01) Soil									
Chloride	**2580**	50.0	mg/kg	100	EB60107	02/01/06	02/01/06	EPA 300.0	
% Moisture	**5.8**	0.1	%	1	EB60102	01/31/06	02/01/06	% calculation	
Sulfate	**161**	50.0	mg/kg	100	EB60107	02/01/06	02/01/06	EPA 300.0	
SB-1 5'-6' (6A31004-02) Soil									
Chloride	**165**	5.00	mg/kg	10	EB60107	02/01/06	02/01/06	EPA 300.0	
% Moisture	**4.3**	0.1	%	1	EB60102	01/31/06	02/01/06	% calculation	
Sulfate	**34.3**	5.00	mg/kg	10	EB60107	02/01/06	02/01/06	EPA 300.0	
SB-1 10'-11' (6A31004-03) Soil									
Chloride	**79.6**	5.00	mg/kg	10	EB60107	02/01/06	02/01/06	EPA 300.0	
% Moisture	**6.2**	0.1	%	1	EB60208	02/02/06	02/02/06	% calculation	
SB-1 15'-15' (6A31004-04) Soil									
% Moisture	**2.9**	0.1	%	1	EB60208	02/02/06	02/02/06	% calculation	
SB-2 2'-3' (6A31004-05) Soil									
Chloride	**1750**	25.0	mg/kg	50	EB60107	02/01/06	02/01/06	EPA 300.0	
% Moisture	**5.3**	0.1	%	1	EB60102	01/31/06	02/01/06	% calculation	
Sulfate	**63.5**	25.0	mg/kg	50	EB60107	02/01/06	02/01/06	EPA 300.0	
SB-2 5'-6' (6A31004-06) Soil									
Chloride	**4360**	50.0	mg/kg	100	EB60207	02/02/06	02/02/06	EPA 300.0	
% Moisture	**9.7**	0.1	%	1	EB60102	01/31/06	02/01/06	% calculation	
Sulfate	**194**	5.00	mg/kg	10	EB60207	02/02/06	02/02/06	EPA 300.0	
SB-2 10'-11' (6A31004-07) Soil									
Chloride	**1650**	25.0	mg/kg	50	EB60207	02/02/06	02/02/06	EPA 300.0	
SB-2 15'-16' (6A31004-08) Soil									
Chloride	**3110**	50.0	mg/kg	100	EB60207	02/02/06	02/02/06	EPA 300.0	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-2 20'-21' (6A31004-09) Soil									
Chloride	**619**	10.0	mg/kg	20	EB60207	02/02/06	02/02/06	EPA 300.0	
SB-2 25'-26' (6A31004-10) Soil									
Chloride	**779**	10.0	mg/kg	20	EB60207	02/02/06	02/02/06	EPA 300.0	
SB-2 30'-31' (6A31004-11) Soil									
Chloride	**74.2**	10.0	mg/kg	20	EB60207	02/02/06	02/02/06	EPA 300.0	
SB-2 35'-36' (6A31004-12) Soil									
Chloride	**80.7**	5.00	mg/kg	10	EB60207	02/02/06	02/02/06	EPA 300.0	
SB-3 2'-3' (6A31004-13) Soil									
Chloride	**1380**	25.0	mg/kg	50	EB60207	02/02/06	02/02/06	EPA 300.0	
% Moisture	**6.2**	0.1	%	1	EB60102	01/31/06	02/01/06	% calculation	
Sulfate	**140**	25.0	mg/kg	50	EB60207	02/02/06	02/02/06	EPA 300.0	
SB-3 5'-6' (6A31004-14) Soil									
Chloride	**1910**	25.0	mg/kg	50	EB60207	02/02/06	02/02/06	EPA 300.0	
% Moisture	**9.1**	0.1	%	1	EB60102	01/31/06	02/01/06	% calculation	
Sulfate	**1040**	25.0	mg/kg	50	EB60207	02/02/06	02/02/06	EPA 300.0	
SB-3 10'-11' (6A31004-15) Soil									
Chloride	**2490**	25.0	mg/kg	50	EB60207	02/02/06	02/02/06	EPA 300.0	
% Moisture	**4.7**	0.1	%	1	EB60208	02/02/06	02/02/06	% calculation	
Sulfate	**167**	25.0	mg/kg	50	EB60803	02/02/06	02/08/06	EPA 300.0	
SB-3 15'-16' (6A31004-16) Soil									
Chloride	**2270**	25.0	mg/kg	50	EB60207	02/02/06	02/02/06	EPA 300.0	
Sulfate	**143**	25.0	"	"	EB60803	02/02/06	02/08/06	"	

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P.O. Box 1558	Project Number: 160048	**Reported:**
Eunice NM, 88231	Project Manager: Iain Olness	02/08/06 11:53

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-3 20'-21' (6A31004-17) Soil									
Chloride	**2780**	50.0	mg/kg	100	EB60207	02/02/06	02/02/06	EPA 300.0	
SB-3 25'-26' (6A31004-18) Soil									
Chloride	**248**	10.0	mg/kg	20	EB60207	02/02/06	02/02/06	EPA 300.0	
SB-3 30'-31' (6A31004-19) Soil									
Chloride	**58.4**	5.00	mg/kg	10	EB60207	02/02/06	02/02/06	EPA 300.0	

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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 EB60116 - Solvent Extraction (GC)										
Blank (EB60116-BLK1)				Prepared: 02/01/06 Analyzed: 02/02/06						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*53.8*		*mg/kg*	*50.0*		*108*	*70-130*			
Surrogate: 1-Chlorooctadecane	*56.2*		*"*	*50.0*		*112*	*70-130*			
LCS (EB60116-BS1)				Prepared: 02/01/06 Analyzed: 02/02/06						
Gasoline Range Organics C6-C12	521	10.0	mg/kg wet	500		104	75-125			
Diesel Range Organics >C12-C35	552	10.0	"	500		110	75-125			
Total Hydrocarbon C6-C35	1070	10.0	"	1000		107	75-125			
Surrogate: 1-Chlorooctane	*62.7*		*mg/kg*	*50.0*		*125*	*70-130*			
Surrogate: 1-Chlorooctadecane	*64.3*		*"*	*50.0*		*129*	*70-130*			
Calibration Check (EB60116-CCV1)				Prepared: 02/01/06 Analyzed: 02/02/06						
Gasoline Range Organics C6-C12	495		mg/kg	500		99.0	80-120			
Diesel Range Organics >C12-C35	547		"	500		109	80-120			
Total Hydrocarbon C6-C35	1040		"	1000		104	80-120			
Surrogate: 1-Chlorooctane	*58.9*		*"*	*50.0*		*118*	*70-130*			
Surrogate: 1-Chlorooctadecane	*61.5*		*"*	*50.0*		*123*	*70-130*			
Matrix Spike (EB60116-MS1)	**Source: 6A31001-01**			Prepared: 02/01/06 Analyzed: 02/02/06						
Gasoline Range Organics C6-C12	466	10.0	mg/kg dry	508	ND	91.7	75-125			
Diesel Range Organics >C12-C35	578	10.0	"	508	ND	114	75-125			
Total Hydrocarbon C6-C35	1040	10.0	"	1020	ND	102	75-125			
Surrogate: 1-Chlorooctane	*58.3*		*mg/kg*	*50.0*		*117*	*70-130*			
Surrogate: 1-Chlorooctadecane	*49.1*		*"*	*50.0*		*98.2*	*70-130*			
Matrix Spike Dup (EB60116-MSD1)	**Source: 6A31001-01**			Prepared: 02/01/06 Analyzed: 02/02/06						
Gasoline Range Organics C6-C12	467	10.0	mg/kg dry	508	ND	91.9	75-125	0.214	20	
Diesel Range Organics >C12-C35	571	10.0	"	508	ND	112	75-125	1.22	20	
Total Hydrocarbon C6-C35	1040	10.0	"	1020	ND	102	75-125	0.00	20	
Surrogate: 1-Chlorooctane	*53.6*		*mg/kg*	*50.0*		*107*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.4*		*"*	*50.0*		*96.8*	*70-130*			

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 EB60117 - Solvent Extraction (GC)										
Blank (EB60117-BLK1)				Prepared: 02/01/06 Analyzed: 02/02/06						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*62.8*		*mg/kg*	*50.0*		*126*	*70-130*			
Surrogate: 1-Chlorooctadecane	*57.3*		*"*	*50.0*		*115*	*70-130*			
LCS (EB60117-BS1)				Prepared: 02/01/06 Analyzed: 02/02/06						
Gasoline Range Organics C6-C12	502	10.0	mg/kg wet	500		100	75-125			
Diesel Range Organics >C12-C35	568	10.0	"	500		114	75-125			
Total Hydrocarbon C6-C35	1070	10.0	"	1000		107	75-125			
Surrogate: 1-Chlorooctane	*57.7*		*mg/kg*	*50.0*		*115*	*70-130*			
Surrogate: 1-Chlorooctadecane	*60.3*		*"*	*50.0*		*121*	*70-130*			
Calibration Check (EB60117-CCV1)				Prepared: 02/01/06 Analyzed: 02/02/06						
Gasoline Range Organics C6-C12	474		mg/kg	500		94.8	80-120			
Diesel Range Organics >C12-C35	539		"	500		108	80-120			
Total Hydrocarbon C6-C35	1010		"	1000		101	80-120			
Surrogate: 1-Chlorooctane	*54.7*		*"*	*50.0*		*109*	*70-130*			
Surrogate: 1-Chlorooctadecane	*56.6*		*"*	*50.0*		*113*	*70-130*			
Matrix Spike (EB60117-MS1)	**Source: 6A31006-06**			Prepared: 02/01/06 Analyzed: 02/02/06						
Gasoline Range Organics C6-C12	572	10.0	mg/kg dry	533	ND	107	75-125			
Diesel Range Organics >C12-C35	823	10.0	"	533	268	104	75-125			
Total Hydrocarbon C6-C35	1400	10.0	"	1070	268	106	75-125			
Surrogate: 1-Chlorooctane	*60.4*		*mg/kg*	*50.0*		*121*	*70-130*			
Surrogate: 1-Chlorooctadecane	*54.3*		*"*	*50.0*		*109*	*70-130*			
Matrix Spike Dup (EB60117-MSD1)	**Source: 6A31006-06**			Prepared: 02/01/06 Analyzed: 02/02/06						
Gasoline Range Organics C6-C12	575	10.0	mg/kg dry	533	ND	108	75-125	0.523	20	
Diesel Range Organics >C12-C35	819	10.0	"	533	268	103	75-125	0.487	20	
Total Hydrocarbon C6-C35	1390	10.0	"	1070	268	105	75-125	0.717	20	
Surrogate: 1-Chlorooctane	*60.9*		*mg/kg*	*50.0*		*122*	*70-130*			
Surrogate: 1-Chlorooctadecane	*55.2*		*"*	*50.0*		*110*	*70-130*			

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 EB60303 - EPA 5030C (GC)										
Blank (EB60303-BLK1)				Prepared & Analyzed: 02/03/06						
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	*38.6*		*ug/kg*	*40.0*		*96.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*38.8*		*"*	*40.0*		*97.0*	*80-120*			
LCS (EB60303-BS1)				Prepared & Analyzed: 02/03/06						
Benzene	1.14	0.0250	mg/kg wet	1.25		91.2	80-120			
Toluene	1.22	0.0250	"	1.25		97.6	80-120			
Ethylbenzene	1.27	0.0250	"	1.25		102	80-120			
Xylene (p/m)	2.41	0.0250	"	2.50		96.4	80-120			
Xylene (o)	1.20	0.0250	"	1.25		96.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	*43.0*		*ug/kg*	*40.0*		*108*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*45.4*		*"*	*40.0*		*114*	*80-120*			
Calibration Check (EB60303-CCV1)				Prepared: 02/03/06 Analyzed: 02/04/06						
Benzene	43.9		ug/kg	50.0		87.8	80-120			
Toluene	44.8		"	50.0		89.6	80-120			
Ethylbenzene	42.2		"	50.0		84.4	80-120			
Xylene (p/m)	81.9		"	100		81.9	80-120			
Xylene (o)	40.8		"	50.0		81.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	*35.1*		*"*	*40.0*		*87.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*32.1*		*"*	*40.0*		*80.2*	*80-120*			
Matrix Spike (EB60303-MS1)	**Source: 6A31001-01**			Prepared & Analyzed: 02/03/06						
Benzene	1.20	0.0250	mg/kg dry	1.27	ND	94.5	80-120			
Toluene	1.28	0.0250	"	1.27	ND	101	80-120			
Ethylbenzene	1.33	0.0250	"	1.27	ND	105	80-120			
Xylene (p/m)	2.51	0.0250	"	2.54	ND	98.8	80-120			
Xylene (o)	1.27	0.0250	"	1.27	ND	100	80-120			
Surrogate: a,a,a-Trifluorotoluene	*38.6*		*ug/kg*	*40.0*		*96.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.9*		*"*	*40.0*		*112*	*80-120*			

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 EB60303 - EPA 5030C (GC)										
Matrix Spike Dup (EB60303-MSD1)	**Source: 6A31001-01**			Prepared & Analyzed: 02/03/06						
Benzene	1.19	0.0250	mg/kg dry	1.27	ND	93.7	80-120	0.850	20	
Toluene	1.25	0.0250	"	1.27	ND	98.4	80-120	2.61	20	
Ethylbenzene	1.26	0.0250	"	1.27	ND	99.2	80-120	5.68	20	
Xylene (p/m)	2.38	0.0250	"	2.54	ND	93.7	80-120	5.30	20	
Xylene (o)	1.21	0.0250	"	1.27	ND	95.3	80-120	4.81	20	
Surrogate: a,a,a-Trifluorotoluene	*36.1*		*ug/kg*	*40.0*		*90.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.0*		*"*	*40.0*		*110*	*80-120*			
Batch EB60317 - EPA 5030C (GC)										
Blank (EB60317-BLK1)				Prepared: 02/03/06 Analyzed: 02/04/06						
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	*32.1*		*ug/kg*	*40.0*		*80.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*34.1*		*"*	*40.0*		*85.2*	*80-120*			
LCS (EB60317-BS1)				Prepared: 02/03/06 Analyzed: 02/04/06						
Benzene	0.0468	0.00100	mg/kg wet	0.0500		93.6	80-120			
Toluene	0.0481	0.00100	"	0.0500		96.2	80-120			
Ethylbenzene	0.0493	0.00100	"	0.0500		98.6	80-120			
Xylene (p/m)	0.0929	0.00100	"	0.100		92.9	80-120			
Xylene (o)	0.0478	0.00100	"	0.0500		95.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	*33.4*		*ug/kg*	*40.0*		*83.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.6*		*"*	*40.0*		*112*	*80-120*			

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 EB60317 - EPA 5030C (GC)										
Calibration Check (EB60317-CCV1)				Prepared: 02/03/06 Analyzed: 02/06/06						
Benzene	46.1		ug/kg	50.0		92.2	80-120			
Toluene	49.8		"	50.0		99.6	80-120			
Ethylbenzene	50.4		"	50.0		101	80-120			
Xylene (p/m)	94.1		"	100		94.1	80-120			
Xylene (o)	47.1		"	50.0		94.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	*43.0*		"	*40.0*		*108*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*34.3*		"	*40.0*		*85.8*	*80-120*			
Matrix Spike (EB60317-MS1)		**Source: 6B01013-01**		Prepared: 02/03/06 Analyzed: 02/04/06						
Benzene	1.27	0.0250	mg/kg dry	1.32	ND	96.2	80-120			
Toluene	1.35	0.0250	"	1.32	ND	102	80-120			
Ethylbenzene	1.37	0.0250	"	1.32	ND	104	80-120			
Xylene (p/m)	2.57	0.0250	"	2.63	ND	97.7	80-120			
Xylene (o)	1.24	0.0250	"	1.32	ND	93.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	*41.0*		*ug/kg*	*40.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*41.8*		"	*40.0*		*104*	*80-120*			
Matrix Spike Dup (EB60317-MSD1)		**Source: 6B01013-01**		Prepared: 02/03/06 Analyzed: 02/04/06						
Benzene	1.27	0.0250	mg/kg dry	1.32	ND	96.2	80-120	0.00	20	
Toluene	1.35	0.0250	"	1.32	ND	102	80-120	0.00	20	
Ethylbenzene	1.38	0.0250	"	1.32	ND	105	80-120	0.957	20	
Xylene (p/m)	2.59	0.0250	"	2.63	ND	98.5	80-120	0.815	20	
Xylene (o)	1.30	0.0250	"	1.32	ND	98.5	80-120	4.78	20	
Surrogate: a,a,a-Trifluorotoluene	*39.9*		*ug/kg*	*40.0*		*99.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*43.1*		"	*40.0*		*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 EB60102 - General Preparation (Prep)										
Blank (EB60102-BLK1)				Prepared: 01/31/06 Analyzed: 02/01/06						
% Solids	100		%							
Duplicate (EB60102-DUP1)		**Source: 6A30017-01**		Prepared: 01/31/06 Analyzed: 02/01/06						
% Solids	92.8		%		92.7			0.108	20	
Duplicate (EB60102-DUP2)		**Source: 6A31004-01**		Prepared: 01/31/06 Analyzed: 02/01/06						
% Solids	93.8		%		94.2			0.426	20	
Batch EB60107 - Water Extraction										
Blank (EB60107-BLK1)				Prepared & Analyzed: 02/01/06						
Chloride	ND	0.500	mg/kg							
Sulfate	ND	0.500	"							
LCS (EB60107-BS1)				Prepared & Analyzed: 02/01/06						
Sulfate	9.99	0.500	mg/kg	10.0		99.9	80-120			
Chloride	9.07	0.500	"	10.0		90.7	80-120			
Calibration Check (EB60107-CCV1)				Prepared & Analyzed: 02/01/06						
Sulfate	9.70		mg/L	10.0		97.0	80-120			
Chloride	9.04		"	10.0		90.4	80-120			
Duplicate (EB60107-DUP1)		**Source: 6A27019-01**		Prepared & Analyzed: 02/01/06						
Sulfate	309	50.0	mg/kg		306			0.976	20	
Chloride	2370	50.0	"		2360			0.423	20	

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 EB60207 - Water Extraction										
Blank (EB60207-BLK1)				Prepared & Analyzed: 02/02/06						
Sulfate	ND	0.500	mg/kg							
Chloride	ND	0.500	"							
LCS (EB60207-BS1)				Prepared & Analyzed: 02/02/06						
Sulfate	9.14	0.500	mg/kg	10.0		91.4	80-120			
Chloride	8.92	0.500	"	10.0		89.2	80-120			
Calibration Check (EB60207-CCV1)				Prepared & Analyzed: 02/02/06						
Chloride	9.12		mg/L	10.0		91.2	80-120			
Sulfate	9.94		"	10.0		99.4	80-120			
Duplicate (EB60207-DUP1)		**Source: 6A31004-06**		Prepared & Analyzed: 02/02/06						
Sulfate	196	50.0	mg/kg		194			1.03	20	
Chloride	4370	50.0	"		4360			0.229	20	
Matrix Spike Dup (EB60207-MSD1)				Prepared: 02/02/06 Analyzed: 02/08/06						
Sulfate	ND	0.500	mg/kg				75-125		20	
Chloride	ND	0.500	"				80-120		20	
Batch EB60208 - General Preparation (Prep)										
Blank (EB60208-BLK1)				Prepared: 02/01/06 Analyzed: 02/02/06						
% Solids	100		%							
Duplicate (EB60208-DUP1)		**Source: 6A25026-01**		Prepared: 02/01/06 Analyzed: 02/02/06						
% Solids	98.9		%		98.9			0.00	20	

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 EB60208 - General Preparation (Prep)										
Duplicate (EB60208-DUP2)		**Source: 6B01007-05**		Prepared: 02/01/06 Analyzed: 02/02/06						
% Solids	86.4		%		86.5			0.116	20	
Duplicate (EB60208-DUP3)		**Source: 6B01012-01**		Prepared: 02/01/06 Analyzed: 02/02/06						
% Solids	85.8		%		85.7			0.117	20	
Batch EB60803 - Water Extraction										
Blank (EB60803-BLK1)				Prepared: 02/06/06 Analyzed: 02/08/06						
Sulfate	ND	0.500	mg/kg							
LCS (EB60803-BS1)				Prepared: 02/06/06 Analyzed: 02/08/06						
Sulfate	9.80		mg/L	10.0		98.0	80-120			
Calibration Check (EB60803-CCV1)				Prepared: 02/06/06 Analyzed: 02/08/06						
Sulfate	10.0		mg/L	10.0		100	80-120			
Duplicate (EB60803-DUP1)		**Source: 6B03015-01**		Prepared: 02/06/06 Analyzed: 02/08/06						
Sulfate	1390	20.0	mg/kg		1380			0.722	20	

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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: 2/8/2006

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
Facility Name	Cliguena State #1
Location	UL-H, Sect. 33, T 23 S, R 34 E
Project Reference	160048
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
P.O. Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

LAB I.D. (6A3004)		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 ($SO_4^=$)	pH	TCLP	OTHER >>>	PAH			
-01	1	SB-1 (2'-3')	G	1			X					X		30-Jan-06	10:00	X	X	X	X							
-02	2	SB-1 (5'-6')	G	1			X					X		30-Jan-06	10:10	X	X	X	X							
-03	3	SB-1 (10'-11')	G	1			X					X		30-Jan-06	10:20	X	X	X	X							
-04	4	SB-1 (15'-15')	G	1			X					X		30-Jan-06	10:30	X	X	X	X							
-05	5	SB-2 (2'-3')	G	1			X					X		30-Jan-06	11:00	X	X	X	X							
-06	6	SB-2 (5'-6')	G	1			X					X		30-Jan-06	11:10	X	X	X	X							
-07	7	SB-2 (10'-11')	G	1			X					X		30-Jan-06	11:20	X	X	X	X							
-08	8	SB-2 (15'-16')	G	1			X					X		30-Jan-06	11:30	X	X	X	X							
-09	9	SB-2 (20'-21')	G	1			X					X		30-Jan-06	11:40	X	X	X	X							
-10	10	SB-2 (25'-26')	G	1			X					X		30-Jan-06	11:50	X	X	X	X							

Sampler Relinquished: Iain Olness	Date 1/31/06 Time 0921	Received By: Jason Boone	e-mail results to iolness@envplus.net
Relinquished by: Jason Boone	Date 1-31-06 Time 12:05	Received By: (lab staff) Carrie Hall	NOTES: Analyze subsequent samples in each soil boring for each analyte until two successive samples are ND for organics and <250 mg/Kg for chlorides and <600 mg/Kg for sulfates. ANY QUESTIONS, PLEASE CALL IAIN OLNESS AT (505) 394-3481. **PLEASE READ!!!**
Delivered by:	Sample Cool & Intact Yes / No	Checked By: JK	0.5 4oz glass seal/label

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
Facility Name	Ciguena State #1
Location	UL-H, Sect. 33, T 23 S, R 34 E
Project Reference	160048
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
P.O. Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

LAB I.D. (6A81004)		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 ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
-11	1	SB-2 (30'-31')	G	1			X					X		30-Jan-06	12:00	X	X	X	X							
-12	2	SB-2 (35'-36')	G	1			X					X		30-Jan-06	12:15	X	X	X	X							
-13	3	SB-3 (2'-3')	G	1			X					X		30-Jan-06	12:40	X	X	X	X							
-14	4	SB-3 (5'-6')	G	1			X					X		30-Jan-06	12:45	X	X	X	X							
-15	5	SB-3 (10'-11')	G	1			X					X		30-Jan-06	12:55	X	X	X	X							
-16	6	SB-3 (15'-16')	G	1			X					X		30-Jan-06	13:06	X	X	X	X							
-17	7	SB-3 (20'-21')	G	1			X					X		30-Jan-06	13:15	X	X	X	X							
-18	8	SB-3 (25'-26')	G	1			X					X		30-Jan-06	13:25	X	X	X	X							
-19	9	SB-3 (30'-31')	G	1			X					X		30-Jan-06	13:35	X	X	X	X							
-20	10	SB-3 (35'-36')	G	1			X					X		30-Jan-06	13:50	X	X	X	X							

Sampler Relinquished: Iain Olness	Date: 1/31/06 Time: 0921	Received By: Jason Boone	e-mail results to iolness@envplus.net
Relinquished by: Jason Boone	Date: 1-31-06 Time: 12:05	Received By: (lab staff) Carin Kelly	NOTES: Analyze subsequent samples in each soil boring for each analyte until two successive samples are ND for organics and <250 mg/Kg for chlorides and <600 mg/Kg for sulfates. ANY QUESTIONS, PLEASE CALL IAIN OLNESS AT (505) 394-3481. **PLEASE READ!!!**
Delivered by:	Sample Cool & Intact (Yes) No	Checked By:	0.5 4oz glass seal/label

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
Facility Name	Ciguena State #1
Location	UL-H, Sect. 33, T 23 S, R 34 E
Project Reference	160048
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
P.O. 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 ($SO_4^{=}$)	pH	TCLP	OTHER >>	PAH			
6A31004																									
-21	1	SB-3 (40'-41')	G	1			X					X		30-Jan-06	14:15	X	X	X	X							
-22	2	SB-3(45'-46')	G	1			X					X		30-Jan-06		X	X	X	X							
	3																									
	4																									
	5																									
	6																									
	7																									
	8																									
	9																									
	10																									

Sampler Relinquished: Iain Olness	Date 1/31/06 Time 0921	Received By: Aaron Boone	e-mail results to iolness@envplus.net
Relinquished by: Aaron Boone	Date 1-31-06 Time 12:05	Received By: (lab staff) Laura Wells	NOTES: Analyze subsequent samples in each soil boring for each analyte until two successive samples are ND for organics and <250 mg/Kg for chlorides and <600 mg/Kg for sulfates. ANY QUESTIONS. PLEASE CALL IAIN OLNESS AT (505) 394-3481. **PLEASE READ!!!**
Delivered by:	Sample Cool & Intact (Yes) No	Checked By: CK	0.5 4oz glass seal / label

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

Client: EPI

Date/Time: 1/31/06 12:05

Order #: 601001

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 Applicable

Other observations:

_____

_____

_____

Variance Documentation:

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

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

_____

_____

_____

_____

_____

argon laboratories

ENVIRONMENTAL PLUS, INC.
2100 AVENUE O
EUNICE, NM 88231

REPORT DATE: 05/22/06
SAMPLE DATE: 05/15/06

ATTN: IAIN OLNESS
CLIENT PROJ. ID: 160048
CIGUENA STATE #1

AL JOB #: A05141

Project Summary:

On May 16, 2006, this laboratory received 36 soil samples.

Samples were analyzed according to instructions in accompanying chain-of-custody. Results of analysis are summarized on the following pages. Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Sample Control at (505) 397-0295

Hiram Cueto
Lab Manager

2126 W. Marland Ave., Hobbs, NM 88240 • Phone (505) 397-0295 • Fax (505) 397-0296
email: info@argonlabs.com

argon laboratories

Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

Anions by Ion Chromatography - EPA Method 300.0

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E1-BH-1 (6') (A05141) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	110	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	210	5.0	"	"		
E1-BH-2 (6') (A05142) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	1,600	10	mg/Kg	05/17/06	EPA 300.0	
E1-BH-3 (6') (A05143) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	880	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	94	5.0	"	"		
E1-BH-4 (6') (A05144) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	14	10	mg/Kg	05/17/06	EPA 300.0	
E1-BH-5 (6') (A05145) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	<10	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	34	5.0	"	"		
E1-BH-6 (6') (A05146) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	420	10	mg/Kg	05/17/06	EPA 300.0	
E1-BH-7 (6') (A05147) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	360	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	5,500	5.0	"	"		
E1-BH-8 (6') (A05148) Soil	**Sampled: Sample ID**	**Received: E1-BH-1 (6')**				
Chloride	290	10	mg/Kg	05/17/06	EPA 300.0	

Approved By
Argon Laboratories

QC Officer

2126 W. Marland Ave., Hobbs, NM 88240 • Phone (505) 397-0295 • Fax (505) 397-0296
email: info@argonlabs.com

argon laboratories

Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

Anions by Ion Chromatography - EPA Method 300.0

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E1-BH-9 (6') (A05149) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	3,100	<100	mg/Kg	05/17/06	EPA 300.0	
Sulfate	<50	<50	"	"		
E1-BH-10 (6') (A05150) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	19	10	mg/Kg	05/17/06	EPA 300.0	
E1-SW-1 (3') (A05151) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	2,200	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	52	5.0	"	"		
E1-SW-2 (3') (A05152) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	41	10	mg/Kg	05/17/06	EPA 300.0	
E1-SW-3 (3') (A05153) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	<10	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	42	5.0	"	"		
E1-SW-4 (3') (A05154) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	25,000	10	mg/Kg	05/17/06	EPA 300.0	
E1-SW-5 (3') (A05155) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	9,600	10	mg/Kg	05/17/06	EPA 300.0	
E1-SW-6 (3') (A05156) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	87	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	170	5.0	"	"		

Approved By
Argon Laboratories

QC Officer

2126 W. Marland Ave., Hobbs, NM 88240 • Phone (505) 397-0295 • Fax (505) 397-0296
email: info@argonlabs.com

argon laboratories

Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

Anions by Ion Chromatography - EPA Method 300.0

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E1-SW-7 (3') (A05157) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	17	10	mg/Kg	05/17/06	EPA 300.0	
E1-SW-8 (3') (A05158) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	54	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	160	5.0	"	"		
E1-SW-9 (3') (A05159) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	100	10	mg/Kg	05/17/06	EPA 300.0	
E1-SW-10 (3') (A05160) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	<10	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	45	5.0	"	"		
E1-SW-11 (3') (A05161) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	<10	10	mg/Kg	05/17/06	EPA 300.0	
E1-SW-12 (3') (A05162) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	560	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	160	5.0	"	"		
E1-SW-13 (3') (A05163) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	16	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	120	5.0	"	"		
E1-SW-14 (3') (A05164) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	94	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	42	5.0	"	"		

Approved By
Argon Laboratories

QC Officer

2126 W. Marland Ave., Hobbs, NM 88240 • Phone (505) 397-0295 • Fax (505) 397-0296
email: info@argonlabs.com

argon laboratories

Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

Anions by Ion Chromatography - EPA Method 300.0

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E1-SW-15 (3') (A05165) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	<10	10	mg/Kg	05/17/06	EPA 300.0	
E1-SW-16 (3') (A05166) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	<10	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	6.0	5.0	"	"		
E2-BH-1 (4') (A05167) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	3,800	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	170	5.0	"	"		
E2-BH-2 (4') (A05168) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	1,300	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	11,000	5.0	"	"		
E2-BH-3 (4') (A05169) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	4,600	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	320	5.0	"	"		
E2-BH-4 (4') (A05170) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	3,200	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	190	5.0	"	"		
E2-SW-1 (2') (A05171) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	780	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	30	5.0	"	"		
E2-SW-2 (2') (A05172) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	1,800	<40	mg/Kg	05/17/06	EPA 300.0	
Sulfate	<20	<20	"	"		

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Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

Anions by Ion Chromatography - EPA Method 300.0

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E2-SW-3 (2') (A05173) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	680	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	75	5.0	"	"		
E2-SW-4 (2') (A05174) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	3,200	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	160	5.0	"	"		
E2-SW-5 (2') (A05175) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	1,600	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	78	5.0	"	"		
E2-SW-6 (2') (A05176) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Chloride	140	10	mg/Kg	05/17/06	EPA 300.0	
Sulfate	410	5.0	"	"		

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Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

TPH / BTEX
EPA Methods: 8015M / 8021B

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E1-BH-1 (6') (A05141) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 73%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 96%						
E1-BH-3 (6') (A05143) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 68%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 97%						
E1-BH-5 (6') (A05145) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 78%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 99%						

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Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

TPH / BTEX

EPA Methods: 8015M / 8021B

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E1-BH-7 (6') (A05147) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 72%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 100%						
E1-BH-9 (6') (A05149) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 77%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 101%						
E1-SW-1 (3') (A05151) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 81%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 103%						

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PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

TPH / BTEX
EPA Methods: 8015M / 8021B

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E1-SW-3 (3') (A05153) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: *79%*						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: *88%*						
E1-SW-6 (3') (A05156) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: *75%*						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: *99%*						
E1-SW-8 (3') (A05158) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: *89%*						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: *102%*						

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Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

TPH / BTEX
EPA Methods: 8015M / 8021B

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E1-SW-10 (3') (A05160) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: *97%*						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: *101%*						
E1-SW-12 (3') (A05162) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: *81%*						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: *98%*						
E1-SW-13 (3') (A05163) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: *81%*						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: *97%*						

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Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

TPH / BTEX
EPA Methods: 8015M / 8021B

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E1-SW-14 (3') (A05164) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 92%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 97%						
E1-SW-16 (3') (A05166) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 84%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 96%						
E2-BH-1 (4') (A05167) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 85%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 95%						

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Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

TPH / BTEX
EPA Methods: 8015M / 8021B

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E2-BH-2 (4') (A05168) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: *84%*						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: *95%*						
E2-BH-3 (4') (A05169) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: *87%*						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: *96%*						
E2-BH-4 (4') (A05170) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<01	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: *87%*						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: *94%*						

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Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

TPH / BTEX
EPA Methods: 8015M / 8021B

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E2-SW-1 (2') (A05171) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 106%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 92%						
E2-SW-2 (2') (A05172) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 99%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 90%						
E2-SW-3 (2') (A05173) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 85%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 85%						

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PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

TPH / BTEX
EPA Methods: 8015M / 8021B

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E2-SW-4 (2') (A05174) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 85%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 91%						
E2-SW-5 (2') (A05175) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 88%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 91%						
E2-SW-6 (2') (A05176) Soil	**Sampled: 05/15/06**	**Received: 05/16/06**				
Gas Range Organics	<10	10	mg/Kg	05/17/06	EPA 8015M	
Diesel Range Organics	<10	"	"	"	"	
C29-C35 Range Organics	<20	20	"	"	"	
Total Petroleum Hydrocarbons	<40	40	"	"	"	
Surr. Rec.: 107%						
Benzene	<0.005	0.005	mg/Kg	05/17/06	EPA 8021B	
Toluene	<0.005	"	"	"	"	
Ethyl Benzene	<0.005	"	"	"	"	
Xylenes	<0.010	0.010	"	"	"	
Surr. Rec.: 96%						

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Environmental Plus, Inc.	Project Number: 160048	
P.O. Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

TPH 8015M - Quality Control

Analyte	MS Rec	MSD Rec	RPD	Reporting Limit	Units	Notes
Matrix Spike / Matrix Spike Duplicate						*Spiked Sample ID: A05141*
TPH	91%	96%	5%	40	mg/Kg	

Analyte	LCS Rec	LCSD Rec	RPD	Reporting Limit	Units	Notes
Laboratory Control Spike / Laboratory Control Spike Duplicate						*LCS ID: LCS0517A*
TPH	113%	101%	13%	40	mg/Kg	

Note: Daily method blank showed no contamination at or above the reporting limits.

BTEX 8021B - Quality Control

Analyte	MS Rec	MSD Rec	RPD	Reporting Limit	Units	Notes
Matrix Spike / Matrix Spike Duplicate						*Spiked Sample ID: A05176*
Toluene	85%	81%	4%	0.005	mg/Kg	

Analyte	LCS Rec	LCSD Rec	RPD	Reporting Limit	Units	Notes
Laboratory Control Spike / Laboratory Control Spike Duplicate						*LCS ID: LCS0517A*
o-Xylene	89%	88%	1%	0.005	mg/Kg	

Note: Daily method blank showed no contamination at or above the reporting limits.

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argon laboratories

Environmental Plus, Inc.	Project Number: 160048	
P.O. Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05141

EPA 300.0 - Quality Control

Analyte	MS Rec	MSD Rec	RPD	Reporting Limit	Units	Notes
Matrix Spike / Matrix Spike Duplicate						*Spiked Sample ID: A05153*
Chloride	110%	105%	5%	10	mg/Kg	

Analyte	LCS Rec	LCSD Rec	RPD	Reporting Limit	Units	Notes
Laboratory Control Spike / Laboratory Control Spike Duplicate						*LCS ID: LCS0517A*
Chloride	96%	93%	3%	10	mg/Kg	
Sulfate	91%	92%	2%	5.0	"	

Note: Daily method blank showed no contamination at or above the reporting limits.

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email: info@argonlabs.com

Environmental Plus, Inc.

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

Chain of Custody Form

LAB: Argon

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
Facility Name	Ciguena State #1
Location	UL-H, Sect. 33, T 23 S, R 34 E
Project Reference	160048
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
P.O. 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 ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
1	E1-BH-1 (6')	G	1			X					X		15-May-06	12:21	X	X	X	X							
2	E1-BH-2 (6')	G	1			X					X		15-May-06	12:23			X								
3	E1-BH-3 (6')	G	1			X					X		15-May-06	12:26	X	X	X	X							
4	E1-BH-4 (6')	G	1			X					X		15-May-06	12:29			X								
5	E1-BH-5 (6')	G	1			X					X		15-May-06	12:34	X	X	X	X							
6	E1-BH-6 (6')	G	1			X					X		15-May-06	12:38			X								
7	E1-BH-7 (6')	G	1			X					X		15-May-06	12:41	X	X	X	X							
8	E1-BH-8 (6')	G	1			X					X		15-May-06	12:45			X								
9	E1-BH-9 (6')	G	1			X					X		15-May-06	12:47	X	X	X	X							
10	E1-BH-10 (6')	G	1			X					X		15-May-06	12:50			X								

Sampler Relinquished: Iain Olness	Date: 16 May 06 Time: 0855	Received By: Aaron Boone	e-mail results to iolness@envplus.net
Relinquished by: Aaron Boone	Date: 5-16-06 Time: 10:05	Received By: (lab staff)	NOTES: **24-HR RUSH**
Delivered by:	Sample Cool & Intact Yes No	Checked By:	

Environmental Plus, Inc.

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

Chain of Custody Form

LAB: Argon

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
Facility Name	Ciguena State #1
Location	UL-H, Sect. 33, T 23 S, R 34 E
Project Reference	160048
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
P.O. Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

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	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
1	E1-SW-1 (3')	G	1			X					X		15-May-06	14:20	X	X	X	X							
2	E1-SW-2 (3')	G	1			X					X		15-May-06	14:26			X								
3	E1-SW-3 (3')	G	1			X					X		15-May-06	14:29	X	X	X	X							
4	E1-SW-4 (3')	G	1			X					X		15-May-06	14:33			X								
5	E1-SW-5 (3')	G	1			X					X		15-May-06	14:36			X								
6	E1-SW-6 (3')	G	1			X					X		15-May-06	14:40	X	X	X	X							
7	E1-SW-7 (3')	G	1			X					X		15-May-06	14:43			X								
8	E1-SW-8 (3')	G	1			X					X		15-May-06	14:47	X	X	X	X							
9	E1-SW-9 (3')	G	1			X					X		15-May-06	14:50			X								
10	E1-SW-10 (3')	G	1			X					X		15-May-06	14:53	X	X	X	X							

Sampler Relinquished: Iain Olness	Date: 16 May 06 Time: 0854	Received By: Jason Boone	e-mail results to iolness@envplus.net
Relinquished by: Jason Boone	Date: 5-16-06 Time: 10:15	Received By: (lab staff) Pat Sipe	NOTES: **24-HR RUSH**
Delivered by:	Sample Cool & Intact Yes No	Checked By:	

Environmental Plus, Inc.

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

Chain of Custody Form

LAB: Argon

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
Facility Name	Ciguena State #1
Location	UL-H, Sect. 33, T 23 S, R 34 E
Project Reference	160048
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
P.O. 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 ($SO_4^=$)	pH	TCLP	OTHER >>>	PAH			
1	E1-SW-11 (3')	G	1			X					X		15-May-06	14:55			X								
2	E1-SW-12 (3')	G	1			X					X		15-May-06	14:58	X	X	X	X							
3	E1-SW-13 (3')	G	1			X					X		15-May-06	15:02	X	X	X	X							
4	E1-SW-14 (3')	G	1			X					X		15-May-06	15:06	X	X	X	X							
5	E1-SW-15 (3')	G	1			X					X		15-May-06	15:09			X								
6	E1-SW-16 (3')	G	1			X					X		15-May-06	15:12	X	X	X	X							
7	E2-BH-1 (4')	G	1			X					X		15-May-06	16:51	X	X	X	X							
8	E2-BH-2 (4')	G	1			X					X		15-May-06	16:55	X	X	X	X							
9	E2-BH-3 (4')	G	1			X					X		15-May-06	16:58	X	X	X	X							
10	E2-BH-4 (4')	G	1			X					X		15-May-06	17:01	X	X	X	X							

Sampler Relinquished: Iain Olness — Date: 16 May 06 — Time: 0854 — Received By: Jason Boone

Relinquished by: Jason Boone — Date: 5-16-06 — Time: 10:05 — Received By: (lab staff)

Delivered by:

Sample Cool & Intact: Yes No

Checked By:

e-mail results to iolness@envplus.net

NOTES: **24-HR RUSH**

Environmental Plus, Inc.

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

Chain of Custody Form

LAB: Argon

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
Facility Name	Ciguena State #1
Location	UL-H, Sect. 33, T 23 S, R 34 E
Project Reference	160048
EPI Sampler Name	George Blackburn

Bill To

Attn: Iain Olness
P.O. Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

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	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
1	E2-SW-1 (2')	G	1			X					X		15-May-06	17:04	X	X	X	X							
2	E2-SW-2 (2')	G	1			X					X		15-May-06	17:07	X	X	X	X							
3	E2-SW-3 (2')	G	1			X					X		15-May-06	17:10	X	X	X	X							
4	E2-SW-4 (2')	G	1			X					X		15-May-06	17:13	X	X	X	X							
5	E2-SW-5 (2')	G	1			X					X		15-May-06	17:16	X	X	X	X							
6	E2-SW-6 (2')	G	1			X					X		15-May-06	17:20	X	X	X	X							
7																									
8																									
9																									
10																									

Sampler Relinquished: Iain Olness
Date: 16 May 06 Time: 8:54
Received By: Aaron Boone

Relinquished by: Aaron Boone
Date: 5-16-06 Time: 10:05
Received By (lab staff): Kat Lyon

Delivered by:

Sample Cool & Intact: Yes No

Checked By:

e-mail results to iolness@envplus.net

NOTES: **24-HR RUSH**

Argon Laboratories Sample Receipt Checklist

Client Name: Environmental Plus, Inc. Date & Time Received: 05/16/06 10:05

Project Name: Ciguena State #1 Client Project Number: 160048

Received By: Pat Matrix: Water ☐ Soil ☑

Sample Carrier: Client ☑ Laboratory ☐ Fed Ex ☐ UPS ☐ Other ☐

Argon Labs Project Number: A05141

Shipper Container in good condition? N/A____ Yes ☑ No ☐

Samples received under refrigeration? Yes ☑ No ☐

Chain of custody present? Yes ☑ No ☐

Chain of Custody signed by all parties? Yes ☑ No ☐

Chain of Custody matches all sample labels? Yes ☑ No ☐

Samples received in proper containers? Yes ☑ No ☐

Samples received intact? Yes ☑ No ☐

Sufficient sample volume for requested tests? Yes ☑ No ☐

Samples received within holding time? Yes ☑ No ☐

Do samples contain proper preservative? N/A ☑ Yes ☐ No ☐

Do VOA vials contain zero headspace? (None submitted ☑) Yes ☐ No ☐

ANY "No" RESPONSE MUST BE DETAILED IN THE COMMENTS SECTION BELOW

Date Client Contacted: _____ Person Contacted: _____

Contacted By: _____ Subject: _____

Comments: _____

Action Taken: _____

ADDITIONAL TEST(S) REQUEST / OTHER

Contacted By: _____ Date: _____ Time: _____

Call Received By: _____

Comments: _____

argon laboratories

ENVIRONMENTAL PLUS, INC.
2100 AVENUE O
EUNICE, NM 88231

REPORT DATE: 06/01/06
SAMPLE DATE: 05/25/06

ATTN: IAIN OLNESS
CLIENT PROJ. ID: 160048
CIGUENA STATE #1

AL JOB #: A05251

Project Summary:

On May 25, 2006, this laboratory received 2 soil samples.

Samples were analyzed according to instructions in accompanying chain-of-custody. Results of analysis are summarized on the following pages. Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Sample Control at (505) 397-0295

Hiram Cuelo
Lab Manager

2126 W. Marland Ave., Hobbs, NM 88240 • Phone (505) 397-0295 • Fax (505) 397-0296
email: info@argonlabs.com

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Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05251

Anions by Ion Chromatography - EPA Method 300.0

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E1-SW-16 (3') (A05251) Soil	**Sampled: 05/25/06**	**Received: 05/26/06**				
Chloride	450	10	mg/Kg	05/29/06	EPA 300.0	
Sulfate	31	5.0	"	"		
E1-SW-17 (3') (A05252) Soil	**Sampled: 05/25/06**	**Received: 05/26/06**				
Chloride	870	10	mg/Kg	05/29/06	EPA 300.0	
Sulfate	42	5.0	"	"		

Approved By
Argon Laboratories

QC Officer

2126 W. Marland Ave., Hobbs, NM 88240 • Phone (505) 397-0295 • Fax (505) 397-0296
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argon laboratories

Environmental Plus, Inc.	Project Number: 160048	
P.O. Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05251

EPA Method 300.0 - Quality Control

Analyte	LCS Rec	LCSD Rec	RPD	Reporting Limit	Units	Notes
Laboratory Control Spike / Laboratory Control Spike Duplicate						*LCS ID: LCS0529A*
Chloride	95%	91%	4%	10	mg/Kg	

Note: Daily method blank showed no contamination at or above the reporting limits.

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email: info@argonlabs.com

Environmental Plus, Inc.

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

Chain of Custody Form

LAB: Argon

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
Facility Name	Ciguena State #1
Location	UL-H, Sect. 33, T 23 S, R 34 E
Project Reference	160048
EPI Sampler Name	Kirt Tyree

Bill To

Attn: Iain Olness
P.O. Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

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	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
1	E1-SW-16 (3')	G	1			X					X		25-May-06	11:00			X	X							
2	E1-SW-17 (3')	G	1			X					X		25-May-06	11:05			X	X							
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Sampler Relinquished: Iain Olness	Date 26 May 06 Time 0806	Received By:	e-mail results to iolness@envplus.net
Relinquished by:	Date 5-26-06 Time 0806	Received By: (lab staff)	NOTES: **RUSH (Results requested for Tuesday morning)**
Delivered by:	Sample Cool & Intact Yes No	Checked By:	

Argon Laboratories Sample Receipt Checklist

Client Name: EPI Date & Time Received: 05/26/06 08:06 AM

Project Name: Ciguena State #1 Client Project Number: 160048

Received By: Pat Matrix: Water ☐ Soil ☑

Sample Carrier: Client ☑ Laboratory ☐ Fed Ex ☐ UPS ☐ Other ☐

Argon Labs Project Number: A05251

Shipper Container in good condition?			Samples received in proper containers?	Yes ☑	No ☐
N/A____	Yes ☑	No ☐	Samples received intact?	Yes ☑	No ☐
Samples received under refrigeration?	Yes ☑	No ☐	Sufficient sample volume for requested tests?	Yes ☑	No ☐
Chain of custody present?	Yes ☑	No ☐	Samples received within holding time?	Yes ☑	No ☐
Chain of Custody signed by all parties?	Yes ☑	No ☐	Do samples contain proper preservative? N/A ☑	Yes ☐	No ☐
Chain of Custody matches all sample labels?	Yes ☑	No ☐	Do VOA vials contain zero headspace? (None submitted ☑)	Yes ☐	No ☐

ANY "No" RESPONSE MUST BE DETAILED IN THE COMMENTS SECTION BELOW

Date Client Contacted: _____ Person Contacted: _____

Contacted By: _____ Subject: _____

Comments: _____

Action Taken: _____

ADDITIONAL TEST(S) REQUEST / OTHER

Contacted By: _____ Date: _____ Time: _____

Call Received By: _____

Comments: _____

argon laboratories

ENVIRONMENTAL PLUS, INC.
2100 AVENUE O
EUNICE, NM 88231

REPORT DATE: 06/01/06
SAMPLE DATE: 05/30/06

ATTN: IAIN OLNESS
CLIENT PROJ. ID: 160048
CIGUENA STATE #1

AL JOB #: A05271

Project Summary:

On May 30, 2006, this laboratory received 3 soil samples.

Samples were analyzed according to instructions in accompanying chain-of-custody. Results of analysis are summarized on the following pages. Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Sample Control at (505) 397-0295

Hiram Cueto
Lab Manager

2126 W. Marland Ave., Hobbs, NM 88240 • Phone (505) 397-0295 • Fax (505) 397-0296
email: info@argonlabs.com

argon laboratories

Environmental Plus, Inc.	Project Number: 160048	
PO Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05271

Anions by Ion Chromatography - EPA Method 300.0

Analyte	Result	Rep. Lim. @ D.F.=1	Units	Analyzed	Method	Notes
E2-SW-2A (3') (A05271) Soil	**Sampled: 05/30/06**	**Received: 05/31/06**				
Chloride	1,200	10	mg/Kg	05/31/06	EPA 300.0	
Sulfate	67	5.0	"	"		
E2-SW-5A (3') (A05272) Soil	**Sampled: 05/30/06**	**Received: 05/31/06**				
Chloride	250	10	mg/Kg	05/31/06	EPA 300.0	
Sulfate	37	5.0	"	"		
E2-SW-4A (3') (A05273) Soil	**Sampled: 05/30/06**	**Received: 05/31/06**				
Chloride	13	10	mg/Kg	05/31/06	EPA 300.0	
Sulfate	84	5.0	"	"		

Approved By
Argon Laboratories

QC Officer

2126 W. Marland Ave., Hobbs, NM 88240 • Phone (505) 397-0295 • Fax (505) 397-0296
email: info@argonlabs.com

argon laboratories

Environmental Plus, Inc.	Project Number: 160048	
P.O. Box 1558	Project Name: Ciguena State #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05271

EPA Method 300.0 - Quality Control

Analyte	MS Rec	MSD Rec	RPD	Reporting Limit	Units	Notes
Matrix Spike / Matrix Spike Duplicate						*Spiked Sample ID: A05273*
Chloride	95%	90%	5%	10	mg/Kg	

Analyte	LCS Rec	LCSD Rec	RPD	Reporting Limit	Units	Notes
Laboratory Control Spike / Laboratory Control Spike Duplicate						*LCS ID: LCS0531A*
Chloride	97%	95%	2%	10	mg/Kg	

Note: Daily method blank showed no contamination at or above the reporting limits.

2126 W. Marland Ave., Hobbs, NM 88240 • Phone (505) 397-0295 • Fax (505) 397-0296
email: info@argonlabs.com

Environmental Plus, Inc.

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

Chain of Custody Form

LAB: Argon

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
Facility Name	Ciguena State #1
Location	UL-H, Sect. 33, T 23 S, R 34 E
Project Reference	160048
EPI Sampler Name	Kirt Tyree

Bill To

Attn: Iain Olness
P.O. 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 ($SO_4^=$)	pH	TCLP	OTHER >>>	PAH			
1	E2-SW-2A (3')	G	1			X					X		30-May-06	9:40			X	X		A	0	5	2	7	1
2	E2-SW-5A (3')	G	1			X					X		30-May-06	9:35			X	X					2	7	2
3	E2-SW-4A (3')	G	1			X					X		30-May-06	9:30			X	X					2	7	3
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Sampler Relinquished: Iain Olness	Date 31 May 06 Time 1630	Received By:	e-mail results to iolness@envplus.net
Relinquished by:	Date 06/31/06 Time 07:30	Received By: (lab staff)	NOTES: RUSH ~~(Results requested for Tuesday morning)~~ 24-HR
Delivered by:	Sample Cool & Intact Yes No	Checked By:	

Argon Laboratories Sample Receipt Checklist

Client Name: Environmental Plus, Inc. Date & Time Received: 05/31/06/07:30

Project Name: Ciguena State #1 Client Project Number: 160048

Received By: Hiram Matrix: Water ☐ Soil ☑

Sample Carrier: Client ☑ Laboratory ☐ Fed Ex ☐ UPS ☐ Other ☐

Argon Labs Project Number: A05271

Shipper Container in good condition? N/A____ Yes ☑ No ☐

Samples received under refrigeration? Yes ☑ No ☐

Chain of custody present? Yes ☑ No ☐

Chain of Custody signed by all parties? Yes ☑ No ☐

Chain of Custody matches all sample labels? Yes ☑ No ☐

Samples received in proper containers? Yes ☑ No ☐

Samples received intact? Yes ☑ No ☐

Sufficient sample volume for requested tests? Yes ☑ No ☐

Samples received within holding time? Yes ☑ No ☐

Do samples contain proper preservative? N/A ☑ Yes ☐ No ☐

Do VOA vials contain zero headspace? (None submitted ☑) Yes ☐ No ☐

ANY "No" RESPONSE MUST BE DETAILED IN THE COMMENTS SECTION BELOW

Date Client Contacted: _____ Person Contacted: _____

Contacted By: _____ Subject: _____

Comments: _____

Action Taken: _____

ADDITIONAL TEST(S) REQUEST / OTHER

Contacted By: _____ Date: _____ Time: _____

Call Received By: _____

Comments: _____

SOIL BORING LOGS

Log Of Test Borings

(NOTE - Page 1 of 1)

ENVIRONMENTAL PLUS, INC.
CONSULTING AND
REMEDIAL CONSTRUCTION
EUNICE, NEW MEXICO
505-394-3481

Project Number: 160048

Project Name: Chesapeake Energy - Ciguena State #1

Location: UL-H, Section 33, Township 23 South, Range 34 East

Boring Number: SB-1 | Surface Elevation: 3,484-feet amsl

Start Date: 1-30-06 Time: 1000 hrs

Completion Date: 1-30-06 Time: 1030 hrs

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
1000				131	1,680		0	2' Soil, Dark brown
1010				4.3	400		5	5' SAND/Clay, red
1020				.8	160		10	10' CALICHE, pinkish
1030				.7	160		15	15' CALICHE, pinkish
								End of Soil Boring at 16' bgs
							20	
							25	
							30	

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: Straub

Backfill Method: Bentonite

Field Representative: GB

Log Of Test Borings

ENVIRONMENTAL PLUS, INC.
CONSULTING AND
REMEDIAL CONSTRUCTION
EUNICE, NEW MEXICO
505-394-3481

Project Number: 160048

Project Name: Chesapeake Energy - Ciguena State #1

Location: UL-H, Section 33, Township 23 South, Range 34 East

Boring Number: SB-2 | Surface Elevation: 3,484-feet amsl

Start Date: 1-30-06 Time: 1100 hrs

Completion Date: 1-30-06 Time: 1130 hrs

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
1110				1.0	1,680			2' Soil, Dark brown
1120				.7	4,000+		5	5' CALICHE/Sand, pinkish
1130				.7	1,600		10	10' CALICHE/Sand, pinkish
1140				.2	3,360		15	15' CALICHE/Sand, pinkish
1150				.1	720		20	20' CALICHE/Sand, pinkish
1200				.1	720		25	25' CALICHE/Sand, pinkish
1210				1.3	240		30	30' CALICHE/Sand, pinkish
1225				1.0	240		35	35' CALICHE/Sand, pinkish

Log Of Test Borings

ENVIRONMENTAL PLUS, INC.
CONSULTING AND
REMEDIAL CONSTRUCTION
EUNICE, NEW MEXICO
505-394-3481

Project Number: 160048

Project Name: Chesapeake Energy - Ciguena State #1

Location: UL-H, Section 33, Township 23 South, Range 34 East

Boring Number: SB-2 | Surface Elevation: 3,484-feet amsl

Start Date: 1-30-06 Time: 1100 hrs

Completion Date: 1-30-06 Time: 1130 hrs

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
								End of Soil Boring at 36' bgs
							40	
							45	
							50	
							55	
							60	
							65	

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: Straub

Backfill Method: Bentonite

Field Representative: GB

Log Of Test Borings

(NOTE - Page 1 of 2)

ENVIRONMENTAL PLUS, INC.
CONSULTING AND
REMEDIAL CONSTRUCTION
EUNICE, NEW MEXICO
505-394-3481

Project Number: 160048

Project Name: Chesapeake Energy - Ciguena State #1

Location: UL-H, Section 33, Township 23 South, Range 34 East

Boring Number: SB-3 | Surface Elevation: 3,484-feet amsl

Start Date: 1-30-06 Time: 1240 hrs

Completion Date: 1-30-06 Time: 1430 hrs

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
1250				1.1	1,360			2' Soil, Dark brown
1255				1.0	2,080		5	5' SAND/Clay, red
1305				1.0	2,400		10	10' CALICHE/Sand, pinkish
1316				1.0	2,320		15	15' CALICHE/Sand, pinkish
1325				1.1	2,720		20	20' CALICHE/Sand, pinkish
1335				1.2	2,800		25	25' CALICHE/Sand, pinkish
1345				1.0	400		30	30' CALICHE/Sand, pinkish
1400				1.0	320		35	35' CALICHE/Rock

Log Of Test Borings

ENVIRONMENTAL PLUS, INC.
CONSULTING AND
REMEDIAL CONSTRUCTION
EUNICE, NEW MEXICO
505-394-3481

Project Number: 160048

Project Name: Chesapeake Energy - Ciguena State #1

Location: UL-H, Section 33, Township 23 South, Range 34 East

Boring Number: SB-3 | Surface Elevation: 3,484-feet amsl

Start Date: 1-30-06 Time: 1240 hrs

Completion Date: 1-30-06 Time: 1430 hrs

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
1415				1.1	240		40	40' CALICHE/Rock
1425				1.1	240		45	45' CALICHE/Rock
								End of Soil Boring at 46' bgs
							50	
							55	
							60	
							65	

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: Straub

Backfill Method: Bentonite

Field Representative: GB

APPENDIX III
INFORMATION AND METRICS FORM,
INITIAL NMOCD FORM C-141
AND
FINAL NMOCD FORM C-141

Chesapeake

Information and Metrics

Incident Date: Historical	**NMOCD Notified:** 17 January 2006

Site: Ciguena State #1	**Assigned Site Reference :** #160048
Company: Chesapeake Energy	
Street Address: 1616 West Bender	
Mailing Address: P.O. Box 190	
City, State, Zip: Hobbs, New Mexico 88240	
Representative: Bradley Blevins	
Representative Telephone: (505) 391-1462 ext. 6224	
Telephone:	
Fluid volume released (bbls): >5	**Recovered (bbls):** Zero (0)
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)	
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)	
Leak, Spill, or Pit (LSP) Name: Ciguena State #1	
Source of contamination:	
Land Owner, i.e., BLM, ST, Fee, Other: Jim Keller	
LSP Dimensions: 100 feet by 13 feet, 10 feet by 80 feet, 10 feet by 40 feet	
LSP Area: ~1,300 ft^2, ~800 ft^2, ~400 ft^2	
Location of Reference Point (RP):	
Location distance and direction from RP:	
Latitude: N 32° 15' 43.15"	
Longitude: W 103° 28' 06.93"	
Elevation above mean sea level: 3,484 feet	
Feet from North Section Line: 2,310	
Feet from East Section Line: 660	
Location- Unit or ¼¼: SE¼ of the NE¼	**Unit Letter:** H
Location- Section: 33	
Location- Township: T23S	
Location- Range: R34E	
Surface water body within 1000 ' radius of site: none	
Domestic water wells within 1000' radius of site: none	
Agricultural water wells within 1000' radius of site: none	
Public water supply wells within 1000' radius of site: none	
Depth from land surface to groundwater (DG): ~475 feet	
Depth of contamination (DC): unknown	
Depth to groundwater (DG – DC = DtGW): ~475 feet	

1. Groundwater	2. Wellhead Protection Area	3. Distance to Surface Water Body
If Depth to GW <50 feet: *20 points*	If <1000' from water source, or;<200' from private domestic water source: *20 points*	<200 horizontal feet: *20 points*
If Depth to GW 50 to 99 feet: *10 points*		200-1000 horizontal feet: *10 points*
If Depth to GW >100 feet: *0 points*	If >1000' from water source, or; >200' from private domestic water source: *0 points*	>1000 horizontal feet: *0 points*

Site Rank (1+2+3) = 0

Total Site Ranking Score and Acceptable Concentrations

Parameter	>19	10-19	0-9
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]100 ppm field VOC headspace measurement may be substituted for lab analysis

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, 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-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR ☒ Initial Report ☐ Final Report

Name of Company: Chesapeake Operating, Inc.	**Contact:** Bradley Blevins
Address: P.O. Box 190, Hobbs, NM 88240-0190	**Telephone No.:** (505) 391-1462 ext. 6224
Facility Name: Ciguena State #1	**Facility Type:** Tank Battery

Surface Owner: Jim Keller	**Mineral Owner:**	**Lease No.:** NM K280

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	33	23S	34E	2,310	N	660	E	Lea

Latitude: N 32° 15' 42.15" **Longitude:** W 103° 28' 06.93"

NATURE OF RELEASE

Type of Release: Petroleum and/or production fluids	**Volume of Release:** >5 bbls.	**Volume Recovered:** Zero bbls.
Source of Release: Various sources within the tank battery	**Date and Hour of Occurrence:** Historical	**Date and Hour of Discovery:** 1/15/06 @ 8:00 AM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	**If YES, To Whom?**	
By Whom?	**Date and Hour:**	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse:** Not Applicable	

If a Watercourse was Impacted, Describe Fully.* Not Applicable

Describe Cause of Problem and Remedial Action Taken.* The release is historical from various sources.

Describe Area Affected and Cleanup Action Taken.* Approximately 2,500 square-feet of surface area was impacted by the release. Soil borings were advanced to collect soil samples to delineate extent of impacted soil. A remediation proposal will be developed based on soil sample analyses.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Bradley Blevins	OIL CONSERVATION DIVISION **Approved by District Supervisor:**	
Printed Name: Bradley Blevins		
Title: Field Supervisor	**Approval Date:**	**Expiration Date:**
E-mail Address: bblevins@chkenergy.com	**Conditions of Approval:**	**Attached** ☐
Date: 1-15-06 **Phone:** (505) 391-1462 ext. 6224		

*** Attach Additional Sheets If Necessary**

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, 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-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Chesapeake Energy	**Contact:** Bradley Blevins
Address: P.O. Box 190, Hobbs, NM 88240-1090	**Telephone No.:** (505) 391-1462 ext. 6224
Facility Name: Ciguena State #1	**Facility Type:** Tank Battery

Surface Owner: Jim Keller	**Mineral Owner:**	**Lease No.:** NM K280

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	33	23S	34E	2,310	N	660	E	Lea

Latitude: N 32° 15' 42.15" **Longitude:** W 103° 28' 06.93"

RP# 806

NATURE OF RELEASE

Type of Release: Petroleum and/or production fluids	**Volume of Release:** >5 bbls.	**Volume Recovered:** Zero bbls
Source of Release: Various sources within the tank battery	**Date and Hour of Occurrence:** Historical	**Date and Hour of Discovery:** 1/15/06 @ 8:00 AM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	**If YES, To Whom?**	
By Whom?	**Date and Hour:**	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse:** Not Applicable	

Depth to water: ~475 ft-bgs

If a Watercourse was Impacted, Describe Fully.* Not Applicable

Describe Cause of Problem and Remedial Action Taken.* The release is historical from various sources.

Describe Area Affected and Cleanup Action Taken.* Approximately 2,500 square-feet of surface area was impacted by the release. Soil borings were advanced to collect soil samples to delineate extent of impacted soil on January 30, 2006. From April 18 to May 30, 2006 soil impacted above NMOCD Remedial Threshold Goals was excavated and hauled for disposal at Sundance Services, Inc. Laboratory analysis confirmed removal of most soil impacted above NMOCD Remedial Threshold goals in sidewalls and bottom of the excavations. Based on depth to groundwater (~475-ft bgs), chloride residual concentrations remaining in the soil should not be capable of impacting groundwater above NMWQCC Groundwater Standards of 250 mg/L. The excavation was then backfilled with caliche and overlain with topsoil in select areas. The site was graded and contoured for natural drainage of the area. Areas backfilled with topsoil were seeded with a blend approved by the BLM.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Bradley Blevins	OIL CONSERVATION DIVISION	
Printed Name: Bradley Blevins	**Approved by District Supervisor:** ENVIRONMENTAL ENGINEER	
Title: Field Supervisor	**Approval Date:** 6-11-07	**Expiration Date:** —
E-mail Address: bblevins@chkenergy.com	**Conditions of Approval:** RTC LISTED	**Attached** ☐
Date: 6-6-07 **Phone:** (505) 391-1462 ext. 6224		

*** Attach Additional Sheets If Necessary**