FINAL CLOSURE REPORT

E.W. WALDEN NO. 4 SWD UNIT K

NMOCD REF: 1RP#873 EPI REF: #1600

UL-K (NE% of the SW%) of Section 15, T22S, R37E

~3 MILES SOUTH OF EUNICE

LEA COUNTY, NEW MEXICO

LATITUDE: N 32° 23' 28.70" LONGITUDE: W 103° 09' 05.96"

JULY 2007

PREPARED BY:

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

PREPARED FOR:







Distribution List

Closure Report

E.W. Walden No. 4 SWD Unit K

NMOCD Ref: 1RP #873

EPI Ref. #160053

Name	Title	Company or Agency	Mailing Address	e-mail	
Chris Williams	District I Supervisor	NMOCD - Hobbs	1625 N. French Drive Hobbs, NM 88240	chris.williams@state.nm.us	
Bradley Blevins	Field Supervisor	Chesapeake Operating, Inc.	P.O. Box 190 Hobbs, NM 88240-0190	bblevins@chkenergy.com	
Harlan Brown	Senior Environmental Representative	Chesapeake Energy	6100 N. Western Avenue Oklahoma City, OK 73118	hbrown@chkenergy.com	
Irvin Boyd	Land Owner		P.O. Box 121 Eunice, NM 88231		
File		Environmental Plus, Inc.	P.O. Box 1558 Eunice, NM 88231-1558	dduncan@envplus.nct	



STANDARD OF CARE

Closure Report E.W. Walden No. 4 SWD Unit K NMOCD Ref: 1RP #873 EPI Ref. #160053

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

Prepared by:		
Brandon Farrar Environmental Consultant	Date	
21 Tomional Consultant		
Reviewed by:		
David P. Duncan Civil Engineer	Date	



Table of Contents

1.0 Project Synopsis	
2.0 Site and Release Information	1
3.0 NMOCD Site Ranking	2
4.0 Excavation Soil Information	3
5.0 Sampling Information	4
6.0 Analytical Results	5
7.0 Discussion	6
8.0 Conclusions and Recommendations	7

FIGURES

Figure 1: Area Map

Figure 2: Site Location Map

Figure 3: Site Map

Figure 4: Pooling Area 1 Excavation and Sample Location Map Figure 5: Pooling Area 3 Excavation 1 and Sample Location Map Figure 6: Pooling Area 3 Excavation 2 and Sample Location Map

TABLES

Table 1: Well Data

Table 2: Summary of Excavation Soil Sample Analytical Results

APPENDICES

Appendix I: Laboratory Analytical Reports and Chain-of-Custody Forms

Appendix II: Project Photographs

Appendix III: Site Information and Metrics Form

Initial NMOCD Form C-141 Final NMOCD Form C-141



1.0 PROJECT SYNOPSIS

Site Specific:

- ♦ *Company Name*: Chesapeake Operating, Inc.
- Facility Name: E.W. Walden No. 4 SWD Unit K
- ◆ *Project Reference:* NMOCD Ref. 1RP #873; EPI Ref.#160053
- ♦ Company Contacts: Bradley Blevins
- ♦ Site Location: WGS84 N32° 23' 28.70"; W103° 09' 05.96"
- ♦ Legal Description: Unit Letter-K, (NE¼ of the SW¼), Section 15, T 22S, R 37E
- ♦ General Location: Approximately 3-miles south of Eunice, New Mexico
- ♦ *Elevation:* 3,393-ft amsl
- ♦ **Depth to Ground Water:** approximately 80-ft bgs
- ♦ Land Ownership: Irvin Boyd
- ♦ *EPI Personnel:* Project Consultant Iain Olness; Site Foreman Kirt Tyree

Release Specific:

- ♦ *Product Released:* Produced water
- ♦ Volume Released: ~ 50 bbls Volume Recovered: ~ 25-30 bbls
- ♦ Time of Occurrence: 6 April 2006 Time of Discovery: 6 April 2006
- ◆ Release Source: Produced water line failure
- ♦ Initial Surface Area Affected: ~ 39,160 ft²

Remediation Specific:

- ♦ Final Vertical extent of contamination: 20-ft bgs
- ♦ Water wells within 1,000-ft: Zero (0)
- ♦ Private domestic water sources within 200-ft: Zero (0)
- ♦ Surface water bodies within 1,000-ft: Zero (0)
- ♦ NMOCD Site Ranking Index: 10 points
- ♦ Remedial goals for Soil: TPH 1,000 mg/Kg; BTEX 50 mg/Kg; Benzene 10 mg/Kg
- RCRA Waste Classification: Exempt
- Remediation Option Selected: a) Excavated soil impacted above NMOCD remedial goals with disposal at Sundance Services, Inc.; b) laboratory analyses confirmed removal of highly impacted soils above NMOCD remedial threshold goals in sidewalls and bottom of the excavation areas; c) backfilled excavation areas with clean top soil and caliche purchased from an off-site source; d) contoured disturbed area to provide natural drainage; and e) selected areas were seeded with a blend preferred by the land owner.
- ◆ *Treatment/Disposal Facility:* Sundance Services, Inc. Hobbs, New Mexico
- ♦ Volume disposed: approximately 1,162 yds³
- ♦ Project Completion Date: October 26, 2006



2.0 SITE AND RELEASE INFORMATION

- 2.1 Describe the land use and pertinent geographic features within 1,000 feet of the site Land surrounding the area is pastureland and utilized for livestock grazing.
- 2.2 Identify and describe the source or suspected source(s) of the release. A produced water line failed due to vehicular traffic.
- 2.3 What is the volume of the release? (if known): ~50 barrels of Produced water
- 2.4 What is the volume recovered? (if any:) $\sim 25-30$ barrels of Produced water
- 2.5 When did the release occur? (if known): 6 April 2006

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 intergrade of the Quaternary Alluvium (OA) sediments (i.e., fine to medium sand, with the mostly eroded Cenozoic Ogallala (CO) formation). Typically, the QA and CO formations in the area are capped by a thick interbed of caliche and generally overlain by sandy soil."

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

2.7 **Ecological Description**

Vegetation in the High Plains consists primarily of short prairie grasses interspersed with Honey Mesquite (*Prosopis glandulosa*), annual and perennial 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 area. A survey of *Listed*, *Threatened*, or *Endangered* species was not conducted.

2.8 Area Groundwater

The unconfined groundwater aquifer at this site is projected to be approximately 80-ft bgs based on water depth data obtained from the New Mexico State Engineers Office and United States Geological Survey data base (reference *Table 1*).

2.9 Area Water Wells

No public water supply wells exist within a 1,000-foot radius of the release site. However, there are twenty-three (23) water supply wells located within a 1.0-mile radius of the release site (reference Figure 2).

2.10 Area Surface Water Features

No surface water features exist within a 1,000 foot radius of the release site (reference Figure 2).



3.0 NMOCD SITE RANKING

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

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

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

- Depth to Groundwater (i.e., distance from the lower most acceptable concentration to ground-water);
- 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 ten (10) points with the soil remedial goals highlighted in the Site Ranking table presented below:

1. GR	OUNDWATER	2. WE	LLHEAD PROTECTION AREA	3. DISTANCE TO SURFACE WATER		
Depth to GW <50	feet: 20 points	If <1 000' f	rom water source, or <200' from	<200 horizontal feet: 0 points		
Depth to GW 50 to	o 99 feet: <i>10 points</i>		mestic water source: 20 points	200-1,000 horizontal feet: 10 points		
Depth to GW >100) feet: 0 points		rom water source, or >200' from mestic water source: <i>0 points</i>	>1,000 horizontal feet: 0 points		
Site Rank (1+2+3)	= 10 + 0 + 0 = 10 points	<u></u>				
	Total Site Rankir	ng Score and	Acceptable Remedial Goal Concer	ntrations		
Ranking Score	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		

A field soil vapor headspace measurement of 100 ppm can be substituted in lieu of laboratory analyses for benzene and BTEX.



4.0	<u>EXC.</u> 4.1	Was soil excavated for off-site treatment or disposal?										
		Date excavated: June 6, 2006 through June 9, 2006; July 18, 2006 through July 2006	ly 19,									
		<i>Total volume removed:</i> ~ 1,162 yds ³										
	4.2	Indicated soil treatment type: Disposal Land Treatement Composting/Biopiling Other ()										
		Name and location of treatment/disposal facility: Sundance Services. Inc. – Hobbs. 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 collected was inserted into a self-sealing polyethylene bag to allow volatilization of organic vapors. After the samples equilibrated to ~70° F, they were analyzed for organic vapors utilizing a MiniRae® Photoionization Detector (PID) equipped with a 10.6 electron volt (eV) lamp.

Chloride Concentrations – A La Motte Chloride Test Kit (titration method) was utilized for field analyses of chloride concentration.

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

Upon collection of each soil sample, a portion was immediately placed in a laboratory provided container, labeled and set on ice for transport to an independent laboratory for quantification of total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and total xylenes (BTEX), sulfates and/or chloride concentrations. The remaining portion of each sample was utilized to conduct field analyses.

5.3 Discuss sample locations and provide rationale for their locations.

Pooling Area #1: Soil samples were collected within the release area On May 31, 2006 (5 ea) and on June 6, 2006 (4 ea) to delineate horizontal/vertical extent of impacted soil. (Reference Figure 4)

Pooling Area #3 – Excavation 1: Soil samples were collected within the release area on June 7, 2006 (12 ea) and from July 18 - July 21, 2006 (10 ea) to delineate horizontal/vertical extent of impacted soil. (Reference *Figure 5*)

Pooling Area #3 – Excavation 2: Soil samples were collected within the release area on June 9, 2006 (7 ea) and on July 17, 2006 (2 ea) to delineate horizontal/vertical extent of impacted soil. (Reference Figure 6)

Soil sample locations were chosen to provide the best representative example of soil throughout the release area.



6.0 ANALYTICAL RESULTS

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

Pooling Area #1: Laboratory data for soil samples collected from the excavation floor on May 31, 2006 indicated BTEX and TPH concentrations were non-detectable (ND) at or above each analytes respective laboratory analytical method detection limits (MDL). Chloride concentrations ranged from 13 mg/Kg (PA1-NEBH @ 5-ft bgs) to 112 mg/Kg (PA1-NWBH @ 5-ft bgs). Sulfate concentrations ranged from 25.6 mg/Kg (PA1-CBH @ 5-ft bgs) to 50.6 mg/Kg (PA1-SEBH @ 5-ft bgs). Laboratory analyses of soil samples collected from the sidewalls of the excavation on June 7, 2006 indicated BTEX and TPH concentrations were ND at or above each analytes respective laboratory analytical MDL. Chloride concentrations ranged from 20.1 mg/Kg (PA1-SW-4 @ 2-ft bgs) to 1,300 mg/Kg (PA1-SW-2 @ 2-ft bgs). Sulfate concentrations ranged from 38.4 mg/Kg (PA1-SW-1 @ 2-ft bgs) to 111 mg/Kg (PA1-SW-2 @ 2-ft bgs) (Reference *Table 2*).

Pooling Area #3 – Excavation 1: Laboratory data of soil samples collected from the sidewalls and excavation floor on June 7, 2006 indicated BTEX and TPH concentrations were ND at or above each analytes respective laboratory analytical MDL. Chloride concentrations ranged from 12.2 mg/Kg (PA2-SW-1 @ 2-ft bgs) to 520 mg/Kg (PA2-BH-5 @ 2-ft bgs). Sulfate concentrations ranged from 19 mg/Kg (PA2-SW-1 @ 2-ft bgs) to 724 mg/Kg (PA2-BH-5 @ 2-ft bgs). Laboratory analyses of soil samples collected from the excavation floor on July 18, 2006 through July 21, 2006 indicated chloride concentrations ranged from <10.0 mg/Kg (PA2-BH-7A @ 4ft bgs) to 1,500 mg/Kg (PA2-BH-5B @ 15-ft bgs). BTEX, TPH, and Sulfate concentrations were not analyzed (Reference *Table 2*).

Pooling Area #3 - Excavation 2: Laboratory data of soil samples collected from the sidewalls and excavation floor on June 9, 2006 indicated BTEX and TPH concentrations were ND at or above each analytes respective laboratory analytical MDL. Chloride concentrations ranged from 13 mg/Kg (PA3-SW-2 @ 3-ft bgs) to 406 mg/Kg (PA3-BH-1 @ 3-ft bgs). Sulfate concentrations ranged from 19.6 mg/Kg (PA3-SW-2 @ 3-ft bgs) to 136 mg/Kg (PA3-BH-2 (3-ft bgs). Laboratory analyses of soil samples collected from the excavation floor on July 17, 2006 indicated chloride concentrations ranged from 141 mg/Kg (PA3-BH-2A @ 10-ft bgs) to 168 mg/Kg (PA3-BH-1A @ 10-ft bgs) (Reference *Table 2*).

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 <u>DISCUSSION</u>

7.1 Discuss the risks associated with the remaining soil contamination:

Remaining in situ chloride residuals are unlikely to impact local groundwater. With approximately 60 vertical feet of depth between known chloride residuals in the excavated area (900 mg/Kg in PH2BH-5B @ 20-ft. bgs) and groundwater (~80-ft. bgs), migration through the strata would greatly dissipate concentrations.

- 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

<i>8.1</i>	Recommendation for the site:	Site Closure
	, and the second	Additional Groundwater Monitoring
		Corrective Action

8.2 Base the recommendation above on <u>Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)</u>. 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.

Pooling Area #1: Laboratory analyses confirmed removal of impacted soil above NMOCD remedial threshold goals in the bottom of the excavation area. Chloride impacted soil in the sidewalls remain in situ (reference *Figure 4*). However, due to physical barriers, horizontal excavations of chloride impacted areas were limited (reference *Photograph #6*). As discussed in *Section 7.1* above, remaining in situ chloride residuals are unlikely to impact local groundwater.

Pooling Area #2: No excavation activities were undertaken in this area. As the release fluid traversed a caliche lease road and pooled on the production well caliche pad, the land owner (Irvin Boyd) did not want the lease road or well pad excavated as it would impair access to the location.

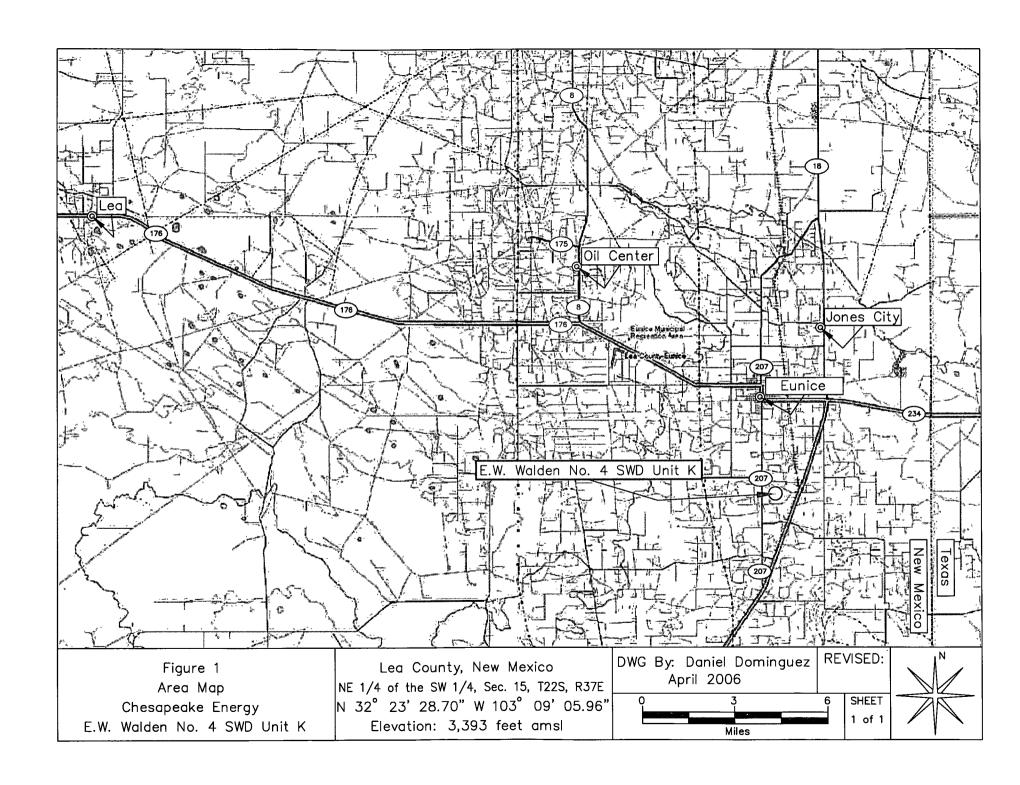
Pooling Area #3 – Excavation 1: Laboratory analyses confirmed removal of impacted soil above NMOCD remedial threshold goals in the bottom and sidewalls of the excavation area, with exception of a chloride concentration of 900 mg/Kg in PA2BH-5B @ 20-ft bgs. However, it appears to be an anomaly and not consistent with the chloride concentrations in the surrounding area. Furthermore, as discussed in *Section 7.1*, remaining in situ chloride residuals are unlikely to impact local groundwater.

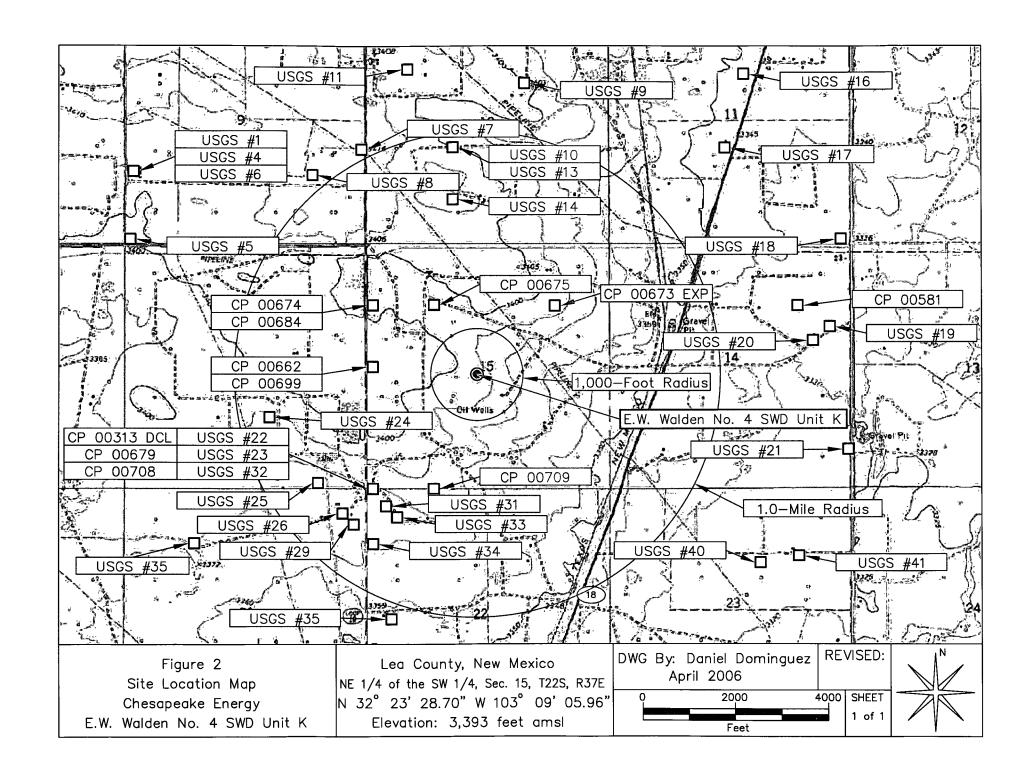
Pooling Area #3 – Excavation 2: Laboratory analyses confirmed removal of impacted soil above NMOCD remedial threshold goals in the bottom and sidewalls of the excavation area.

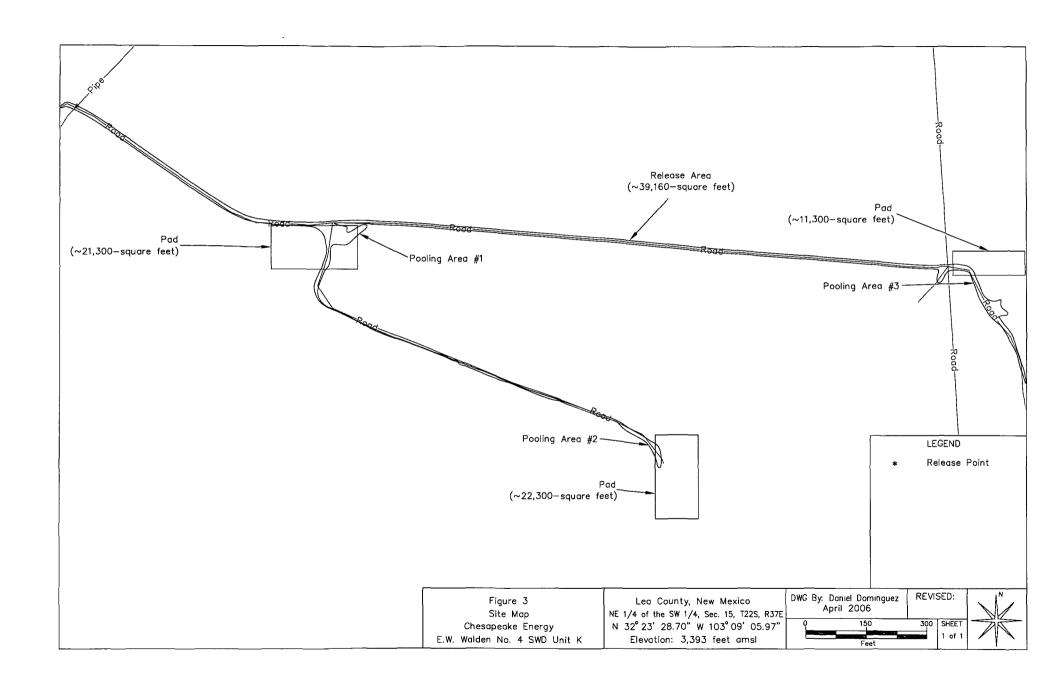
Contaminated soils excavated from the Pooling Areas were transported to Sundance Services Inc. for disposal. Excavated areas were backfilled with approximately 1,092 yds³ of clean top soil and caliche purchased from an off-site source. The entire disturbed areas were contoured to allow natural drainage. Appropriate areas were seeded with a blend preferred by the land owner.

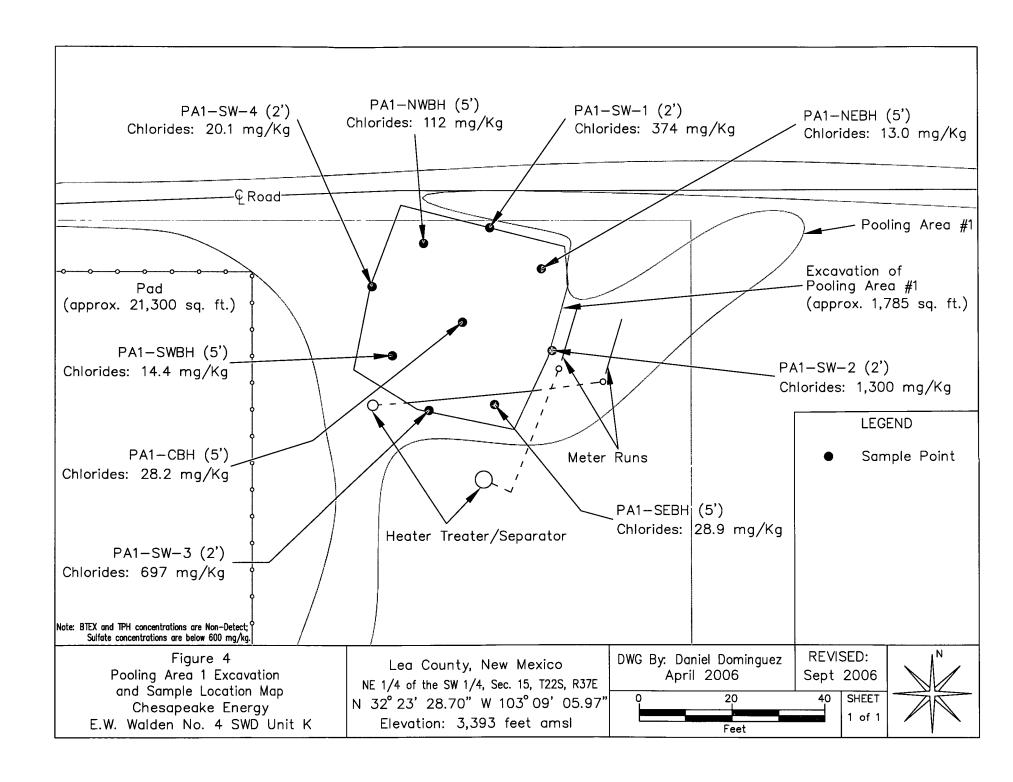
- 8.3 If additional groundwater monitoring is recommended, indicate the proposed monitoring schedule and frequency. Conduct quarterly monitoring until the NMOCD responds to this report. Not applicable
- 8.4 If corrective action is recommended, provide a conceptual approach. Not Applicable

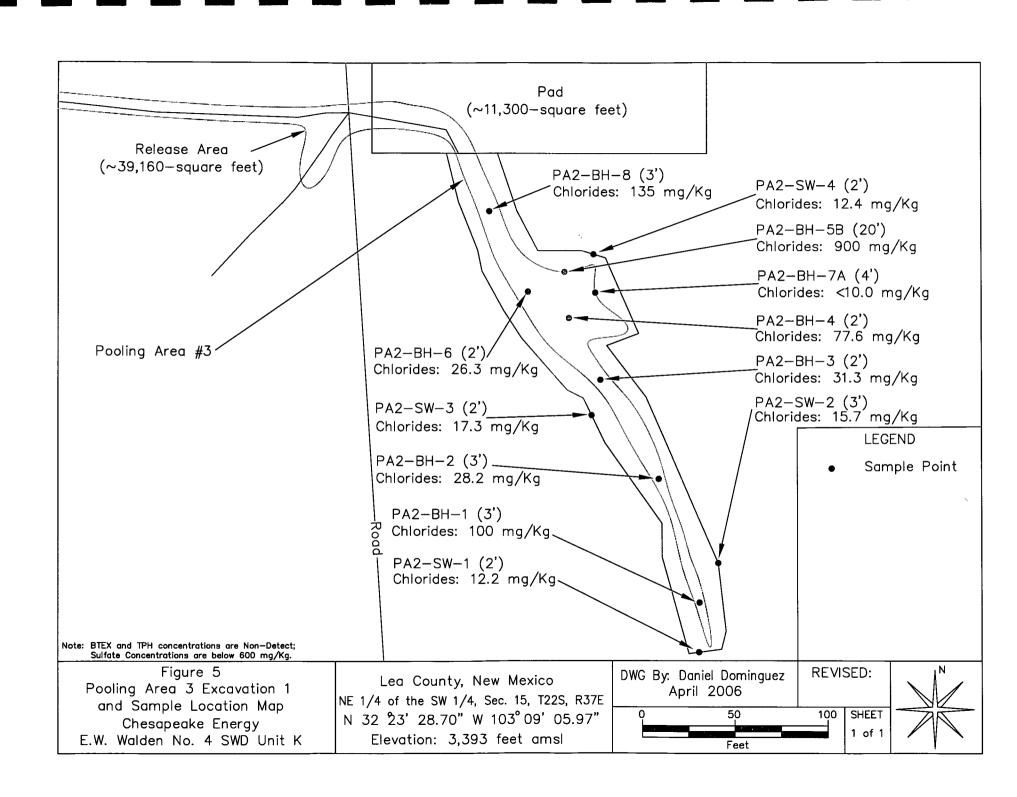
FIGURES

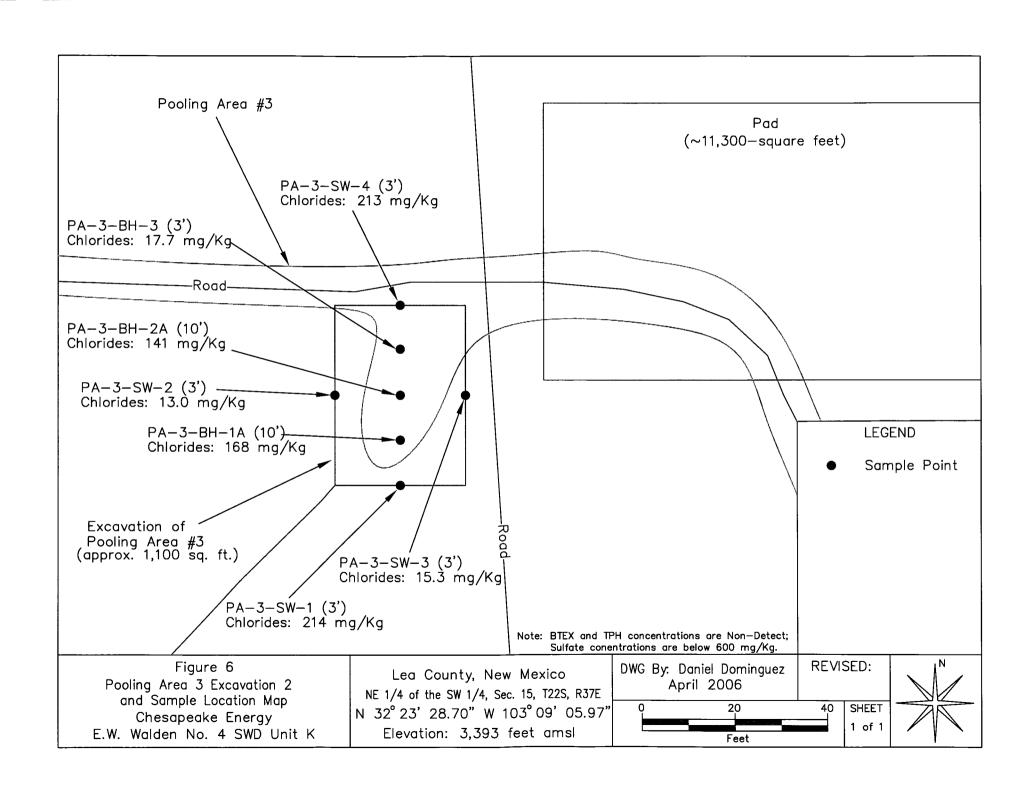












TABLES

TABLE 1

Well Data

Chesapeake Energy E.W. Walden No. 4 SWD Unit K (Ref. #160053)

Well Number	Diversion ^A	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation ^B	Depth to Water (ft bgs)
CP 00313 DCL	0	WILLIE P. SIMS	STK	22S	37E	15 333	N32° 23' 4.17"	W103° 09' 32.14"		3,385	
CP 00662	3	GEORGE SCHELLER	DOM	22S	37E	15 133	N32° 23' 30.26"	W103° 09' 32 15"	20-Jul-83	3,406	150
CP 00673 EXP	0	PAUL E. & MARY HUGHES	DOM	22S	37E	15 22	N32° 23' 43 32"	W103° 08' 46 04"		3,397	
CP 00674	3	WARREN & VERNA HUGHES	DOM	22S	37E	15 11	N32° 23' 43 31"	W103° 09' 32 15"	27-Mar-85	3,406	75
CP 00675	3	FRED FERBRACHE	DOM	22S	37E	15 122	N32° 23' 43.31"	W103° 09' 16 78"	12-Apr-85	3,402	
CP 00679	3	FRED FERBRACHE	DOM	22S	37E	15 33	N32° 23' 4 17"	W103° 09' 32 14"	20-May-85	3,385	98
CP 00684	3	WARREN & VUNA HUGHES	MUL	22S	37E	15 11	N32° 23' 43.31"	W103° 09' 32.15"	01-Aug-85	3,406	180
CP 00699	3	MARTIN CARRASCO	DOM	22S	37E	15 1	N32° 23' 30 26"	W103° 09' 32.15"	02-Jun-86	3,406	100
CP 00708	3	ROBERT A. CUETO	DOM	22S	37E	15	N32° 23' 4 17"	W103° 09' 32.14"	15-Apr-87	3,385	185
CP 00709	3	JAMES D. SMITH	DOM	22S	37E	15 342	N32° 23' 4 17"	W103° 09' 16 78"	29-Apr-87	3,389	87
CP 00756	3	CHARLIE BETTIS	DOM	22S	37E	9 442	N32° 23' 56.34"	W103° 09' 47 53"	30-Oct-90	3,411	85
CP 00871	3	BILL OR BARBARA TRULL	DOM	22S	37E	9 3	N32° 23' 56 30"	W103° 10' 33.67"	29-Sep-97	3,405	94
CP 00581	3	NORTHERN NATURAL GAS CO.	SAN	22S	37E	14 222	N32° 23' 43.32"	W103° 07' 44.48"	4/18/1979	3,337	65
CP 00503	3	TOMMY HENDERSON	DOM	22S	37E	21 44	N32° 22' 11.98"	W103° 09' 47 49"	15-Sep-72	3,356	65
USGS #1				22S	37E	9 3 1 3			07-Mar-68	3,405	81.69
USGS #4				22S	37E	9 3 1 3			29-Sep-53	3,405	72.74
USGS #5				22S	37E	9 3 3 3			08-Mar-96	3,400	74 66
USGS #6				22S	37E	9 3 1 3			07-Mar-68	3,406	71 68
USGS #7			1	22S	37E	9 422			02-May-91	3,416	81.1
USGS #8				22S	37E	9 423			29-Sep-53	3,415	85.51
USGS #9				22S	37E	10 232			27-Jan-76	3,403	54.44
USGS #10				22S	37E	10 321			27-Jan-76	3,400	69.54
USGS #11				22S	37E	10 132			27-Jan-76	3,405	65 59
USGS #13				22S	37E	10 321			3/817/1981	3,400	66.05
USGS #14				22S	37E	10 341			15-Feb-96	3,411	91.64
USGS #16			1	22S	37E	11 231			30-Jun-76	3,348	20 51
USGS #17			1	22S	37E	11 322			08-Mar-96	3,348	38 97
USGS #18				22S	37E	11 444			25-Apr-91	3,336	57 98
USGS #19			1	22S	37E	14 242			16-Mar-81	3,335	60.76
USGS #20			1	22S	37E	14 243			26-Oct-65	3,335	68
USGS #21				22S	37E	14 442			14-Feb-96	3,325	54 06
USGS #22				22S	37E	15 333			27-Feb-86	3,378	81.53
USGS #23				22S	37E	15 333			27-Feb-86	3,378	80.84
USGS #24		· · · · · · · · · · · · · · · · · · ·		22S	37E	16 413			27-Feb-96	3,389	82 23

TABLE 1

Well Data

Chesapeake Energy E.W. Walden No. 4 SWD Unit K (Ref. #160053)

Well Number	Diversion ^A	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation ^B	Depth to Water (ft bgs)
USGS #25	[]			22S	37E	16 443			28-Sep-53	3,375	79 93
USGS #26				22S	37E	21 222			02-Dec-70	3,373	79 97
USGS #28				22S	37E	21 123			01-May-91	3,369	68.31
USGS #29				22S	37E	21 224			28-Feb-86	3,372	76.59
USGS #31				22S	37E	22 111			21-Apr-66	3,375	59 25
USGS #32				22S	37E	22 111			21-Apr-66	3,378	59 95
USGS #33				22S	37E	22 111			02-May-91	3,373	75 33
USGS #34				22S	37E	22 113			26-Apr-66	3,369	89.86
USGS #35				22S	37E	22 3 1 1			29-Jan-76	3,359	74 03
USGS #40				22S	37E	23 2 3 1			14-Oct-53	3,325	54 95
USGS #41				22S	37E	23 242			16-Jan-76	3,325	54 64
USGS #2				22S□	₩ 37E	9並2川2川川	"国家" "秦初	型。1. 10 Parking	17-Mar-81	WINN 128	276.2 · ·
USGS:#3%/mil/seeffil		がいいい かんだい はんない はいいい かんりょう かんしゅう		/ 総22S	37E	9/12/2/3			22-Jan-76	A Section 1	78.57
USGS#12				€ 22S 👼	37E	10 2 1 4			27 Jan-76	足能 驚	41.88
USGS#15	, e		Mary	22S m	福納37E等	11.2.24		STATE OF STA	. 26-Apr-91	金斯斯克	54.87
USGS #27	3, 3,43		والرواج والماسا	₩22S	#//37E畫/	21 4 4 12 4 4 14	小, 一, 多, 那, 如,	White San Andrews	02 Dec-70		69.6
USGS #30				122S ±	≥37E 毫	21編4/2 1中華	医医室内 加热性	Manager 1 できまり 1970年 1980年	02-Dec-70	#Wei - 4.2	≈ 166.14ª
USGS#36				炒索22S/毫	37E	22 3 1 3			29-Jan-76		72.54
USGS #37	24.2		7	± 122S : -	37E	22:313	全部以为精神	三三 、玉山州 至	28-Feb 86	第一章	m 70117.
USGS:#38			整著 仙	22S	37E	22個3川。3二、	- "卷:州州州		27-Feb 96		67.06
USGS#39		場の「別なる」では、「私を、人と、名と、「「「「」」と		14 22S	37E	22 3 3 3 2			02 Dec-70	NR 第三二届	-66.81
USGS #42			L THINKS	##22S型	37E	23点423 臺		1、美國國際 2	15-Jan-76		55.55
USGS #43	5 B.		· SAMEN	22S	基37E氢	23劇4.2 3 🌉	基本数制性 加强。	定套真體體歷	25-Apr-91		- 53:45
USGS #44 . 3 . · ·	調學學		Same.	22S	37E/A	23 4 2 3	Ser mining mining	基金、燃燃料 企业基	_12-Oct 53		55:17 🚰
USGS#45 - 4	新型型	WWW 在 500 000 100 100 100 100 100 100 100 100		22S	37E	23 4 2 3	ta padamerata aktoris z	建設、W 、	15-Jan-76		53.95
USGS#46 ·	多于公司的 加		是正列曲	22S	高37E///	23 4 2 3		至全型本家45000000000000000000000000000000000000	15-Jan-76	n 季門 門牌	56:23

^{* =} Data obtained from the New Mexico Office of the State Engineer Website (http://waters ose state nm us 7001/iWATFRS/wt_RegisServlet) and the USGS website (http://waterdata.usgs.gov/nwis/)

Shaded areas indicate well locations not shown on Figure 2

STK = Livestock Watering

MUL = 72-12-1 Multiple Domestic Households

DOM = 72-12-1 Domestic One Household

SAN = 72-12-1 Sanitary in Conjunction with a Commercial Use

quarters are 1=NW, 2=NE, 3=SW, 4=SE, quarters are biggest to smallest

A = in acre feet per annum

^B= Elevation interpolated from USGS topographical map based on referenced location

TABLE 2
Summary of Excavation Soil Sample Analytical Results

Chesapeake - E. W. Walden No. 4 SWD (Ref. #160053)

Soil Sample I.D.	Depth (feet)	Sample Date	Soil Status	PID Reading (ppm)	Field Chloride Analysis (ppm)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl- benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon Ranges (C6-C12) (mg/Kg)	Carbon Ranges (C12-C28) (mg/Kg)	Carbon Ranges (C28-C35) (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
PA1-SEBH (5')	5	31-May-06	In Situ	0 3	320	< 0.0250	< 0.0250	<0 0250	< 0.050	< 0.125	<10 0	<10.0	<10.0	<10 0	28 9	50 6
PA1-CBH (5')	5	31-May-06	In Situ	0 0	260	<0 0250	< 0.0250	< 0.0250	< 0.050	<0.125	<10.0	<10.0	<10.0	<10.0	28.2	25 6
PA1-SWBH (5')	5	31-May-06	In Situ	0.1	280	< 0.0250	< 0.0250	<0 0250	<0 050	<0.125	<10.0	<10 0	<100	<10.0	14.4	27 6
PA1-NWBH (5')	5	31-May-06	In Situ	0.0	380	<0.0250	< 0.0250	< 0.0250	<0.050	<0 125	<10.0	<10.0	<100	<100	112	27 6
PA1-NEBH (5')	5	31-May-06	In Situ	0.6	240	< 0.0250	<0 0250	< 0.0250	<0.050	<0 125	<10 0	<10.0	<10.0	<10 0	13	26.3
PA1-SW-1 (2')	2	07-Jun-06	In Situ	19.3	880	<0 0250	<0.0250	<0.0250	<0.050	<0.125	<10 0	<10.0	<10.0	<10 0	374	38.4
PA1-SW-2 (2')	2	07-Jun-06	In Situ	11.8	820	<0 0250	<0.0250	<0 0250	<0.050	<0.125	<10 0	<10.0	<10.0	<10.0	1,300	111
PA1-SW-3 (2')	2	07-Jun-06	In Situ	10 7	1,200	< 0.0250	< 0.0250	< 0.0250	<0 050	<0.125	<10.0	<10 0	<10 0	<10.0	697	74.1
PA1-SW-4 (2')	2	07-Jun-06	In Situ	113	160	< 0.0250	< 0.0250	<0 0250	< 0.050	<0.125	<10.0	<10 0	<10.0	<10.0	20 1	38.5
PA2-BH-1 (3')	3	07-Jun-06	In Situ	0 8	400	< 0.0250	< 0.0250	<0 0250	< 0 050	<0 125	<10.0	<10.0	<10 0	<10 0	100	34.5
PA2-BH-2 (3')	3	07-Jun-06	In Situ	0.4	320	< 0.0250	<0 0250	< 0.0250	< 0.050	<0.125	<10 0	<100	<10.0	<10.0	28 2	28
PA2-BH-3 (2')	2	07-Jun-06	In Situ	0 2	240	<0.0250	< 0.0250	<0.0250	<0 050	<0.125	<10 0	<10.0	<10.0	<10.0	31 3	234
PA2-BH-4 (2')	2	07-Jun-06	In Situ	0 6	320	< 0.0250	< 0.0250	<0.0250	<0 050	<0.125	<10 0	<10.0	<10.0	<100	77 6	543
PA2-BH-5 (2')	2	07-Jun-06	Excavated	19.4	400	<0 0250	<0 0250	<0.0250	<0.050	<0.125	<10.0	<10.0	<10 0	<100	520	724
PA2-BH-6 (2')	2	07-Jun-06	In Situ	21 2	360	< 0.0250	< 0.0250	< 0.0250	< 0.050	<0 125	<10.0	<10.0	<10.0	<100	26.3	559
PA2-BH-7 (2')	2	07-Jun-06	Excavated	20 1	560	< 0.0250	<0.0250	<0 0250	< 0.050	<0 125	<10.0	<10 0	<10 0	<10.0	332	74.3
PA2-BH-8 (3')	3	07-Jun-06	In Situ	19.7	280	<0 0250	< 0.0250	<0.0250	<0.050	<0 125	<10 0	<10.0	<10.0	<10.0	135	158
PA2-SW-1 (2')	2	07-Jun-06	In Situ	15 8	260	< 0.0250	< 0.0250	< 0.0250	<0 050	<0.125	<10 0	<10.0	<10.0	<100	12.2	19
PA2-SW-2 (3')	3	07-Jun-06	In Situ	22 2	400	< 0.0250	<0.0250	< 0.0250	<0 050	<0.125	<10 0	<10 0	<10 0	<100	15.7	24 4
PA-2-SW-3 (2')	2	07-Jun-06	In Situ	22.6	320	<0.0250	<0.0250	<0.0250	<0.050	<0 125	<10.0	<10 0	<10 0	<10 0	178	471
PA2-SW-4 (2')	2	07-Jun-06	In Situ	0 1	400	<0.0250	< 0.0250	<0.0250	<0.050	<0.125	<10.0	<10.0	<10.0	<10.0	12 4	232

TABLE 2

<u>Summary of Excavation Soil Sample Analytical Results</u>

Chesapeake - E. W. Walden No. 4 SWD (Ref. #160053)

Soil Sample I.D.	Depth (feet)	Sample Date	Soil Status	PID Reading (ppm)	Field Chloride Analysis (ppm)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl- benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon Ranges (C6-C12) (mg/Kg)	Carbon Ranges (C12-C28) (mg/Kg)	Carbon Ranges (C28-C35) (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
PA2-BH-5A (5')	5	18-Jul-06	Excavated		240										410	
PA2-BH-7A (4')	4	18-Jul-06	In Situ		200										<10.0	
PA2-BH-5B (6')	6	20-Jul-06	Excavated		480										670	
PA2-BH-5B (7')	7	20-Jul-06	Excavated		560										740	
PA2-BH-5B (8')	8	20-Jul-06	Excavated		1,000										1,000	
PA2-BH-5B (9')	9	20-Jul-06	Excavated		1,080										1,100	
PA2-BH-5B (10')	10	20-Jul-06	Excavated		1,360										1,000	
PA2-BH-5B (15')	15	21-Jul-06	Excavated		1,600										1,500	
PA2-BH-5B (18')	18	21-Jul-06	Excavated		1,520										1,400	
PA2-BH-5B (20')	20	21-Jul-06	In Situ		1,280										900	
PA3-BH-1 (3')	3	09-Jun-06	Excavated	0.7	560	< 0.0250	< 0.0250	<0 0250	< 0.050	<0 125	<10.0	<10.0	<100	<10.0	406	127
PA3-BH-2 (3')	3	09-Jun-06	Excavated	0 1	480	< 0.0250	<0 0250	< 0.0250	<0 050	<0.125	<10.0	<10.0	<10.0	<10 0	412	136
PA3-BH-3 (3')	3	09-Jun-06	Excavated	0 0	320	<0 0250	< 0.0250	< 0.0250	<0 050	<0.125	<10 0	<10.0	<100	<10 0	17.7	28.1
PA3-SW-1 (3')	3	09-Jun-06	In Situ	0.1	480	< 0 0250	< 0.0250	< 0.0250	<0.050	<0 125	<10.0	<10.0	<100	<10 0	214	84
PA3-SW-2 (3')	3	09-Jun-06	In Situ	0 3	320	<0.0250	< 0.0250	<0.0250	<0.050	<0 125	<10.0	<10.0	<10.0	<10.0	13	19.6
PA3-SW-3 (3')	3	09-Jun-06	In Situ	0.2	480	<0 0250	<0.0250	<0.0250	<0.050	<0 125	<10.0	<100	<10.0	<10.0	15 3	24
PA3-SW-4 (3')	3	09-Jun-06	In Situ	0.1	400	< 0.0250	< 0.0250	<0 0250	<0.050	<0 125	<100	<10.0	<100	<10 0	213	101
PA3-BH-1A (10')	10	17-Jul-06	In Situ		320										168	
PA3-BH-2A (10')	10	17-Jul-06	In Situ		240										141	
NMO	CD Reme	dial Thresholds	•	100		10				50			100.00	1,000	250 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

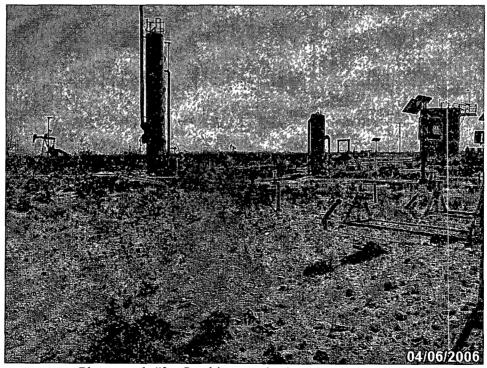
^B Chloride and sulfate residuals may not be capable of impacting groundwater above NMWQCC groundwater standards of 250 ppm and 600 ppm, respectively

APPENDICES

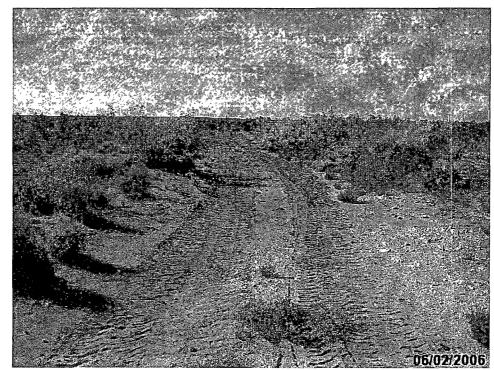
APPENDIX I PROJECT PHOTOGRAPHS



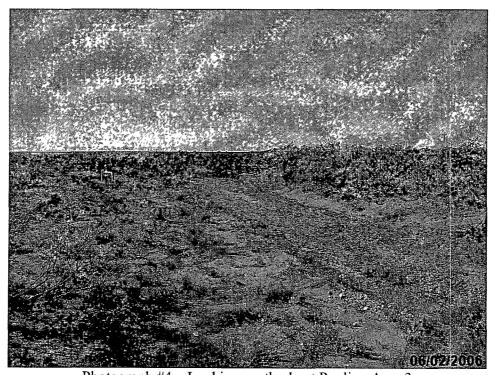
Photograph #1 – Lease sign



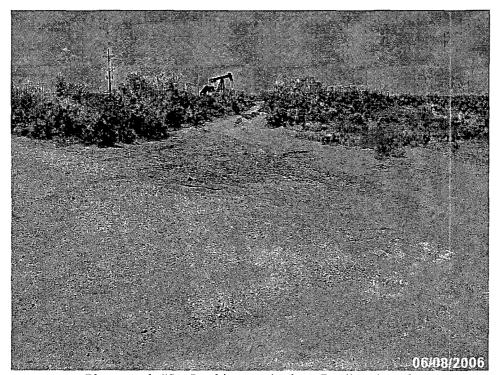
Photograph #2 – Looking southerly at Pooling Area 1



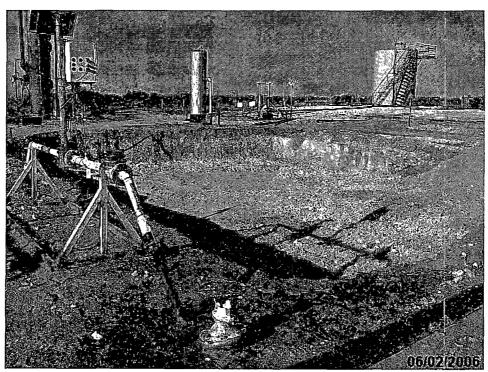
Photograph #3 – Looking northerly at Pooling Area 3



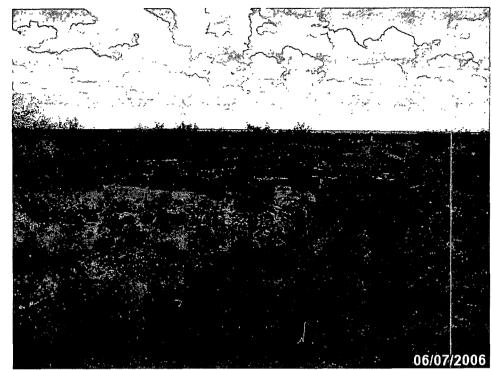
Photograph #4 – Looking southerly at Pooling Area 3



Photograph #5 – Looking northerly at Pooling Area 3



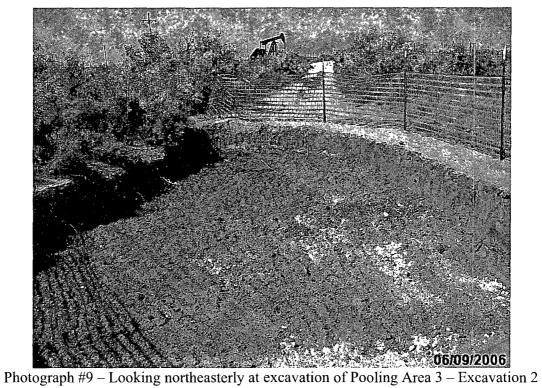
Photograph #6 – Looking southerly at excavation of Pooling Area 1 (Note-meter loop, heater treater/separator adjacent to excavation)

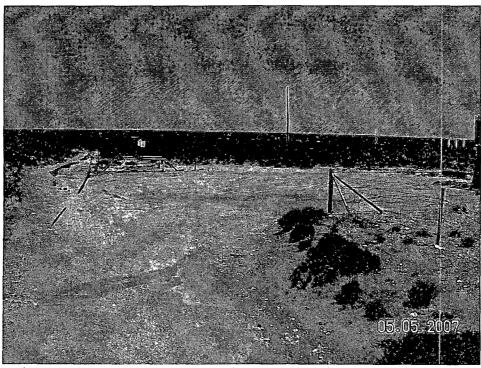


Photograph #7 - Looking southerly at excavation of Pooling Area 3 – Excavation 1

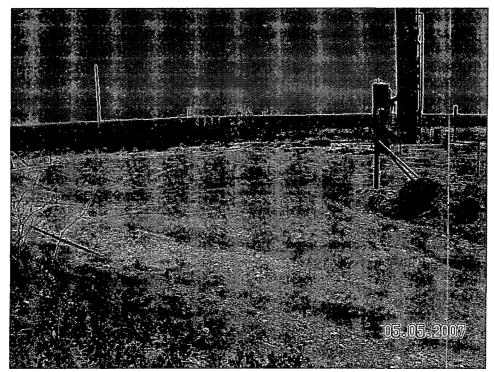


Photograph #8 - Looking southerly at excavation of Pooling Area 3 - Excavation 1

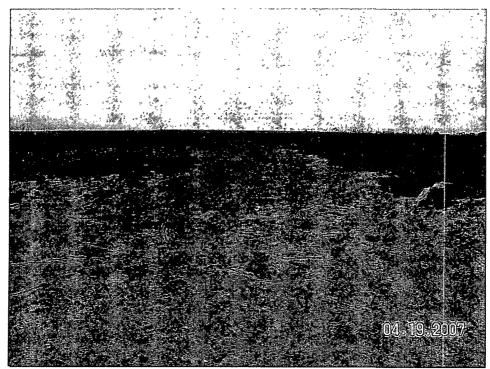




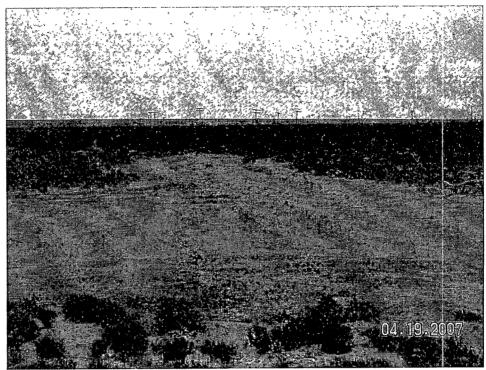
Photograph # 10 – Looking northerly at remediated site of Pooling Area 1



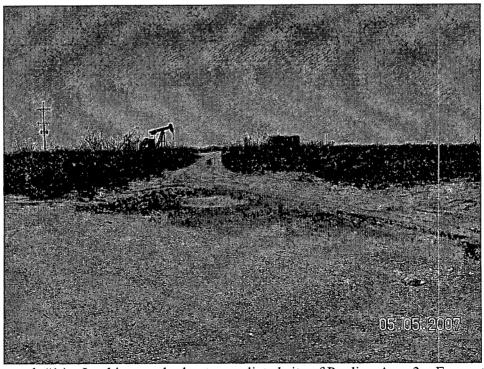
Photograph #11 – Looking northerly at remediated site of Pooling Area 1



Photograph #12 – Looking southerly at remediated site of Pooling Area 3 – Excavation 1

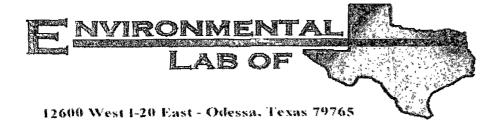


Photograph #13 – Looking southerly at remediated site of Pooling Area 3 – Excavation 1



Photograph #14 – Looking northerly at remediated site of Pooling Area 3 – Excavation 2

APPENDIX II LABORATORY ANALYTICAL REPORTS CHAIN-OF-CUSTODY FORMS



Analytical Report

Prepared for:

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

Project: Chesapeake/ E.W. Walden No. 4 SWD

Project Number: 160053

Location: UL-K, Sec. 15, T 22 S, R 37 E

Lab Order Number: 6F01008

Report Date: 06/08/06

Environmental Plus. Incorporated

Project Chesapeake/ E.W. Walden No. 4 SWD

· .

Fax 505-394-2601

Reported: 06/08/06 16 55

P.O. Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager Iain Olness

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PA1-SEBH 5'	6F01008-01	Soil	05/31/06 07 30	06/01/06 09 10
PA1-CBH 5'	6F01008-02	Soil	05/31/06 08.00	06/01/06 09 10
PA1-SWBH 5'	6F01008-03	Soil	05/31/06 08.15	06/01/06 09.10
PA1-NWBH 5'	6F01008-04	Soil	05/31/06 08 30	06/01/06 09 10
PAI-NEBH 5'	6F01008-05	Soil	05/31/06 08.51	06/01/06 09 10

Environmental Plus, Incorporated P.O Box 1558

Eunice NM, 88231

Project Chesapeake/ E W. Walden No 4 SWD

Project Number 160053
Project Manager Iain Olness

Fax 505-394-2601

Reported:
06/08/06 16 55

Organics by GC Environmental Lab of Texas

		Eliviion	michiai L						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PA1- SEBH 5' (6F01008-01) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF60507	06/05/06	06/06/06	EPA 8021B	
Toluene	ND	0 0250	н	•	н	11	11	н	
Ethylbenzene	ND	0.0250	n	"	11	п	"	n	
Xylene (p/m)	ND	0.0250	"	*1	н	11	**	H	
Xylene (o)	ND	0.0250	**	11	"	11	п	rr .	
Surrogate a,a,a-Trifluorotoluene		94.5 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		103 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60223	06/02/06	06/03/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	**		п	
Carbon Ranges C28-C35	ND	10.0	**	**	н	n	"	н	
Total Hydrocarbon nC6-nC35	ND	10 0	11		"	н	11	Ħ	
Surrogate 1-Chlorooctane		97.8 %	70-1.	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-1.	30	"	"	"	"	
							***	4	
PA1- CBH 5' (6F01008-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF60507	06/05/06	06/06/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"		**	31	
Ethylbenzene	ND	0 0250	"	*1	"	**	11	"	
Xylene (p/m)	ND	0.0250	11	ti .	ti.	Ħ	п	"	
Xylene (o)	ND	0.0250	"	"	H	n § ,	н		
Surrogate a,a,a-Trifluorotoluene		89 5 %	80-12	20	"	"	"	,,	
Surrogate [.] 4-Bromofluorobenzene		100 %	80-12	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF60223	· 06/02/06	06/03/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	**	n	n	"	"	
Carbon Ranges C28-C35	ND	10.0	н	hr	"	n	п	*	
Total Hydrocarbon nC6-nC35	ND	10.0	н	11	H	n	n	**	
Surrogate 1-Chlorooctane		970%	70-1.	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		99.4 %	70-1.	30	"	rr .	"	"	
PA1- SWBH 5' (6F01008-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF60507	06/05/06	06/06/06	EPA 8021B	
Toluene	ND	0.0250	"	11	"	и	n	11	
Ethylbenzene	ND	0.0250	п	n	11	"	u		
Xylene (p/m)	ND	0 0250	"	**	н	"	"	u	
Xylene (o)	ND	0 0250	11	11	u	11	и	u	
Surrogate: a,a,a-Trıfluorotoluene		88.5 %	80-12	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		96.0 %	80-12		"	"	"	"	
Carbon Ranges C6-C12	ND		mg/kg dry	1	EF60223	06/02/06	06/03/06	EPA 8015M	

Environmental Lab of Texas

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

P O. Box 1558

Eunice NM, 88231

Project Chesapeake/ E.W. Walden No 4 SWD

Project Number 160053
Project Manager Iain Olness

Fax 505-394-2601

Reported: 06/08/06 16:55

Organics by GC Environmental Lab of Texas

Analyte	Docult	Reporting	Harto	n 1.					
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PA1- SWBH 5' (6F01008-03) Soil									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	1	EF60223	06/02/06	06/03/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10.0	**	**	п	"	"	31	
Total Hydrocarbon nC6-nC35	ND	10.0	u	**	**	п	н	ri .	
Surrogate 1-Chlorooctane		95.8 %	70-1	130	"	"	"	"	
Surrogate 1-Chlorooctadecane		98.2 %	70-	130	n	"	"	н	
PA1- NWBH 5' (6F01008-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF60507	06/05/06	06/06/06	EPA 8021B	
Toluene	ND	0.0250	n	11	n	n	"	**	
Ethylbenzene	ND	0 0250	н	11	"	H	n .	н	
Xylene (p/m)	ND	0.0250	11	п	11	11	"	n	
Xylene (o)	ND	0 0250	н	11	"	"	n n	"	
Surrogate a,a,a-Trıfluorotoluene		89.2 %	80-1	120	"	"	"	"	
Surrogate [.] 4-Bromofluorobenzene		990%	80-1	120	"	"	<i>≥</i> n	4 "	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60223	06/02/06	06/03/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	н		"	11	"	11	
Carbon Ranges C28-C35	ND	10 0	11	11	u	"	n .	11	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	11	н	"	п	
Surrogate 1-Chlorooctane		94 2 %	70-1	130	"	n	"	"	
Surrogate 1-Chlorooctadecane		96.8 %	70-1	130	"	" .	n	"	
PA1- NEBH 5' (6F01008-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF60507	06/05/06	06/06/06	EPA 8021B	
Toluene	ND	0.0250	n	**	"	*	u	п	
Ethylbenzene	ND	0.0250	**	u	"	"	**	н	
Xylene (p/m)	ND	0 0250	п	11	"	"	"	н	
Xylene (o)	ND	0.0250	11	н	**	н	"	"	
Surrogate a,a,a-Trifluorotoluene	<u> </u>	88.8 %	80-1	120	"	"	"	n	
Surrogate 4-Bromofluorobenzene		97.5 %	80-1	120	"	"	"	n	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60223	06/02/06	06/03/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	II	"	11	"	"	11	
Carbon Ranges C28-C35	ND	10 0	н	"	"	"	"	11	
Total Hydrocarbon nC6-nC35	ND	10.0	н	"	"	н	и	н	
Surrogate 1-Chlorooctane		970%	70-	130	"	"	"	"	
Surrogate 1-Chlorooctadecane		99.2 %	70-		"	"	"	,,	

Environmental Lab of Texas

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

P.O Box 1558 Eunice NM, 88231 Project Chesapeake/ E.W Walden No 4 SWD

Project Number. 160053 Project Manager lain Olness Fax. 505-394-2601

Reported: 06/08/06 16.55

General Chemistry Parameters by EPA / Standard Methods Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PA1- SEBH 5' (6F01008-01) Soil									
Chloride	28.9	5 00	mg/kg	10	EF60305	06/01/06	06/01/06	EPA 300 0	
% Moisture	11.9	0 1	%	1	EF60213	06/02/06	06/02/06	% calculation	
Sulfate	50.6	5 00	mg/kg	10	EF60305	06/01/06	06/01/06	EPA 300.0	
PA1- CBH 5' (6F01008-02) Soil									
Chloride	28.2	5.00	mg/kg	10	EF60305	06/01/06	06/01/06	EPA 300 0	
% Moisture	14.1	0.1	%	1	EF60213	06/02/06	06/02/06	% calculation	
Sulfate	25.6	5 00	mg/kg	10	EF60305	06/01/06	06/01/06	EPA 300 0	
PA1- SWBH 5' (6F01008-03) Soil									
Chloride	14.4	5.00	mg/kg	10	EF60305	06/01/06	06/01/06	EPA 300 0	
% Moisture	11.2	0.1	%	1	EF60213	06/02/06	06/02/06	% calculation	
Sulfate	27.6	5.00	mg/kg	10	EF60305	06/01/06	06/01/06	EPA 300 0	
PA1- NWBH 5' (6F01008-04) Soil								4	
Chloride	112	5 00	mg/kg	10	EF60305	06/01/06	06/01/06	EPA 300.0	
% Moisture	12.1	0 1	%	1	EF60213	06/02/06	06/02/06	% calculation	
Sulfate	27.6	5.00	mg/kg	10	EF60305	06/01/06	06/01/06	EPA 300 0	
PA1- NEBH 5' (6F01008-05) Soil						* /			
Chloride	13.0	5 00	mg/kg	10	EF60305	06/01/06	06/01/06	EPA 300 0	
% Moisture	13.3	0.1	%	1	EF60213	06/02/06	06/02/06	% calculation	
Sulfate	26.3	5.00	mg/kg	10	EF60305	06/01/06	06/01/06	EPA 300 0	

Project Chesapeake/ E.W Walden No 4 SWD

Fax. 505-394-2601

PO Box 1558 Eunice NM, 88231

Project Number. 160053 Project Manager lain Olness

Reported: 06/08/06 16.55

Organics by GC - Quality Control Environmental Lab of Texas

Anglia	Donale	Reporting	T.L.	Spike	Source	N/DEC	%REC	DDD	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF60223 - Solvent Extraction (GC)										
Blank (EF60223-BLK1)				Prepared. (06/02/06 At	nalyzed 06	/03/06			
Carbon Ranges C6-C12	ND	100	mg/kg wet							
Carbon Ranges C12-C28	ND	100	H							
Carbon Ranges C28-C35	ND	10 0	"							
Total Hydrocarbon nC6-nC35	ND	10 0	"							
Surrogate 1-Chlorooctane	53 4		mg/kg	50 0		107	70-130			
Surrogate 1-Chlorooctadecane	57 4		"	50 0		115	70-130			
LCS (EF60223-BS1)				Prepared (06/02/06 Ar	nalyzed 06	/03/06			
Carbon Ranges C6-C12	580	100	mg/kg wet	500		116	75-125			
Carbon Ranges C12-C28	593	100	*1	500		119	75-125			
Carbon Ranges C28-C35	ND	10.0	11	0 00			75-125			
Total Hydrocarbon nC6-nC35	1170	10 0	*1	1000		117	75-125			
Surrogate 1-Chlorooctane	61 9		mg/kg	50 0		124	70-130		-	
Surrogate 1-Chlorooctadecane	63 9		"	50 0		128	70-130			
Calibration Check (EF60223-CCV1)				Prepared (06/02/06 Ar	nalyzed. 06	/03/06	4		
Carbon Ranges C6-C12	286		mg/kg	250		114	80-120			
Carbon Ranges C12-C28	286		"	250		114	80-120			
Total Hydrocarbon nC6-nC35	572		"	500		114	80-120			
Surrogate 1-Chlorooctane	54 5		"	50 0		109	70-130			
Surrogate 1-Chlorooctadecane	64 0		"	50 0		128	70-130			
Matrix Spike (EF60223-MS1)	Sou	rce: 6F01008	-01	Prepared (06/02/06 Ar	nalyzed. 06.	/03/06			
Carbon Ranges C6-C12	585	10 0	mg/kg dry	568	ND	103	75-125			
Carbon Ranges C12-C28	600	10 0	"	568	ND	106	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125			
Total Hydrocarbon nC6-nC35	1190	10 0	"	1140	ND	104	75-125			
Surrogate 1-Chlorooctane	52 2		mg/kg	50 0	,	104	70-130			
Surrogate 1-Chlorooctadecane	49 4		"	50 0		98 8	70-130			

Eunice NM, 88231

P.O Box 1558

Project Chesapeake/ E W Walden No 4 SWD

Project Number. 160053

Project Manager Iain Olness

Fax 505-394-2601

Reported: 06/08/06 16:55

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 EF60223 - Solvent Extraction (GC)				_						
Matrix Spike Dup (EF60223-MSD1)	Sour	rce: 6F01008	-01	Prepared. (06/02/06 Ar	nalyzed 06	5/03/06			
Carbon Ranges C6-C12	579	100	mg/kg dry	568	ND	102	75-125	1 03	20	
Carbon Ranges C12-C28	596	0 01	11	568	ND	105	75-125	0 669	20	
Carbon Ranges C28-C35	ND	10 0	**	0 00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1180	100	**	1140	ND	104	75-125	0 844	20	
Surrogate 1-Chlorooctane	517		mg/kg	50 0		103	70-130			
Surrogate 1-Chlorooctadecane	49 0		"	50 0		98 0	70-130			
Batch EF60507 - EPA 5030C (GC)										
Blank (EF60507-BLK1)				Prepared 0	06/05/06 An	nalyzed 06	/06/06			
Benzene	ND	0 0250	mg/kg wet							
Toluene	ND	0 0250	"							
Ethylbenzene	ND	0 0250	11							
Xylene (p/m)	ND	0 0250	11							
Xylene (o)	ND	0 0250	и							
Surrogate a.a.a-Trifluorotoluene	39 3		ug/kg	, 400		98.2	80-120	4.		
Surrogate 4-Bromofluorobenzene	44 8		,,	40 0		112	80-120			
LCS (EF60507-BS1)			_	Prepared. 0	06/05/06 An	alyzed. 06/	/06/06			
Benzene	1 23	0 0250	mg/kg wet	1 25		98 4	80-120			
Toluene	1 26	0 0250	"	1 25		101	80-120			
Ethylbenzene	1 18	0 0250	н	1 25		94 4	80-120			
Xylene (p/m)	2 63	0.0250	"	2 50		105 🖔	80-120			
Xylene (o)	1 43	0 0250	n	1 25		114	80-120			

ug/kg

40 0

40 0

40 2

478

Surrogate a,a,a-Trifluorotoluene

Surrogate 4-Bromofluorobenzene

100

120

80-120

80-120

Project Chesapeake/ E.W. Walden No 4 SWD

Fax 505-394-2601

Reported: 06/08/06 16 55

PO Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager Iain Olness

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 EF60507 - EPA 5030C (GC)										
Calibration Check (EF60507-CCV1)				Prepared (06/05/06 A	nalyzed 06	/06/06			
Benzene	50 9		ug/kg	50 0		102	80-120			
Toluene	48 9			50 0		97 8	80-120			
Ethylbenzene	53 0		11	50 0		106	80-120			
Xylene (p/m)	99 5		11	100		99 5	80-120			
Xylene (o)	54 3		**	50 0		109	80-120			
Surrogate a,a,a-Trıfluorotoluene	37 1		"	40 0		92 8	80-120			
Surrogate 4-Bromofluorobenzene	45 3		"	40 0		113	80-120			
Matrix Spike (EF60507-MS1)	Sour	ce: 6E31006	5-06	Prepared (06/05/06 A	nalyzed 06	/07/06			
Benzene	1 25	0 0250	mg/kg dry	1 35	ND	92 6	80-120			
Tolucne	1 21	0 0250	**	1 35	ND	89 6	80-120			
Ethylbenzene	1 15	0 0250	11	1.35	ND	85 2	80-120			
Xylene (p/m)	2.56	0 0250	п	2 70	ND	94.8	80-120			
Xylene (o)	1 39	0 0250	"	1.35	ND	103	80-120			
Surrogate a,a,a-Trifluorotoluene	35 9		ug/kg	40 0		898	80-120	4	,,	
Surrogate 4-Bromofluorobenzene	41 9		"	40 0		105	80-120			
Matrix Spike Dup (EF60507-MSD1)	Sour	ce: 6E31006	5-06	Prepared 0	06/05/06 A	nalyzed 06	/07/06			
Benzene	1 28	0 0250	mg/kg dry	1 35	ND	94 8	80-120	2 35	20	
Tolucne	1 34	0 0250	н	1 35	ND	99 3	80-120	10.3	20	
Ethylbenzene	1 31	0 0250	n	1 35	ND	97 0	80-120	13 0	20	
Xylene (p/m)	2 80	0 0250	11	2 70	ND	104	80-120	9 26	20	
Xylene (o)	1 52	0 0250	11	1.35	ND	113 🔭	80-120	9 26	20	
Surrogate a,a,a-Trifluorotoluene	36 4		ug/kg	40 0		91 0	80-120			
Surrogate 4-Bromofluorobenzene	44 1		"	40 0		110	80-120			

PO Box 1558 Eunice NM, 88231 Project Chesapeake/ E.W Walden No 4 SWD

Project Number 160053 Project Manager Iain Olness Fax 505-394-2601

Reported: 06/08/06 16 55

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 EF60213 - General Preparation (Prep)			,							
Blank (EF60213-BLK1)				Prepared &	Analyzed	. 06/02/06				
% Solids	100		%							
Duplicate (EF60213-DUP1)	Sou	rce: 6F01001-	·01	Prepared &	Analyzed	06/02/06				
% Solids	89 7		%		90 1			0 445	20	
Duplicate (EF60213-DUP2)	Sou	rce: 6F01006-	02	Prepared &	Analyzed.	06/02/06				
% Solids	93 9		%		94 4			0 531	20	
Duplicate (EF60213-DUP3)	Sou	rce: 6F01009-	10	Prepared &	z Analyzed.	06/02/06				
% Solids	95 3		%		95 4			0 105	20	
Batch EF60305 - Water Extraction										
Blank (EF60305-BLK1)				Prepared &	Analyzed	06/01/06				
Chloride	ND	0.500	mg/kg					.,	-	
Sulfate	ND	0 500	"							
LCS (EF60305-BS1)				Prepared &	Analyzed	06/01/06	+	4		
Sulfate	8 56		mg/L	10 0		85.6	80-120			
Chloride	10 2		"	10.0		102	80-120			
Calibration Check (EF60305-CCV1)				Prepared &	Analyzed.	06/01/06				
Chloride	10 9		mg/L	10 0		109	80-120		_	
Sulfate	9 13		n	10 0		913	80-120			
Duplicate (EF60305-DUP1)	Sou	rce: 6F01002-	01	Prepared &	Analyzed.	06/01/06				
Chloride	829	10 0	mg/kg	-	837			0 960	20	
Sulfate	111	10 0	"		111			0 00	20	

Project Chesapeake/ E.W. Walden No. 4 SWD

Fax 505-394-2601

PO Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager Iain Olness

Reported: 06/08/06 16 55

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF60305 - Water Extraction				<u>_</u>						
Duplicate (EF60305-DUP2)	Sour	ce: 6F01009-	01	Prepared &	Analyzed.	. 06/01/06				
Chloride	1090	25 0	mg/kg		1010			7 62	20	
Sulfate	107	25 0	и		105			1 89	20	
Matrix Spike (EF60305-MS1)	Sour	ce: 6F01002-	01	Prepared &	Analyzed	06/01/06				
Chloride	1130	10 0	mg/kg	200	837	146	80-120			S-01
Sulfate	257	100	"	200	111	73 0	80-120			S-01
Matrix Spike (EF60305-MS2)	Sour	ce: 6F01009-	01	Prepared &	Analyzed.	. 06/01/06				
Chloride	1860	25 0	mg/kg	500	1010	170	80-120			S-0
Sulfate	423	25 0	"	500	105	63 6	80-120			S-07

Project Chesapeake/ E W Walden No 4 SWD

Fax 505-394-2601

P.O Box 1558 Eunice NM, 88231

Project Number. 160053 Project Manager Iam Olness

Reported: 06/08/06 16 55

Notes and Definitions

Recovery outside Laboratory historical or method prescribed limits S-07

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

Sample results reported on a dry weight basis dry

Relative Percent Difference RPD

LCS Laboratory Control Spike

MS Matrix Spike

Duplicate Dup

Report Approved By:

Raland Kotuls

Date:

6/8/2006

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.

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

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

Environmental Plus, Inc.

Chain of Custody Form

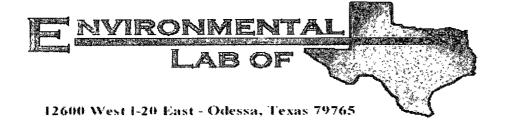
2100 Avenue O, Eunice, NM 88231 (505) 394-3481 FAX: (505) 394-2601 P.O. Box 1558, Eunice, NM 88231

Lab: ELT

Company Name	Environn	nental Plus	, lnc	;.			33		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			χĘΕ	ill <u>ş</u> ı	0		1978		×Α	NΑΙ	YS	IS F	EQ	UES	ST⊗	
EPI Project Mar	ager lain Olne	SS		-														Π							
Mailing Address	P.O. BO	(1558											ACCOUNT.			1			1		1				
City, State, Zip	Eunice N	ew Mexico	882	31									Æ_							ĺ					
EPI Phone#/Fax	# 505-394-	3481 / 505-3	94-	260	1								F			ļ									
Client Company	/ Chesapea	ke Energy											I				l								
Facility Name	E. W. Wa	lden No. 4	SW	D																					
Location	UL-K, Se	c. 15, T 22 S	S, R	37	E						Att	n: [ain	Olness											
Project Referen	ce 160053										P	O E	Зох	1558,											
EPI Sampler Na	me Sebastia	n Romero								Εu	ınic	e, N	IM 8	8231-1558						ĺ		l			
			Ţ.				MA	rix			PR	ESE	RV.	SAMPLI	NG]						ŀ			
LAB 1.D./ UK 6/00 8	SAMPLE I	.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOF	OTHER	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (CI')	SULFATES (SO4")	Hd	TCLP	OTHER >>>	РАН		
-0	1 PA1-SEBH (5')		Х	1			Х					X		31-May-06	7:30	X	X	X	Х						
	PA1-CBH (5')		Х	1			X					Χ		31-May-06	8:00	Х	Х	Х	Х						
	PA1-\$WBH (5')		X	1			Х				Щ	Х		31-May-06	8:15	X	Х	X							
	4 PA1-NWBH (5')		X	1			Х				Ш	X		31-May-06	8:30	Х	X	X		<u>L</u>	<u> </u>		Ĺ		
<u> </u>	PA1-NEBH (5')		Х	1			Х	ļ.,	<u> </u>		igsqcup	X		31-May-06	8:51	X	Х	X	Х	_	<u> </u>				
	7		_	_							Н	_				H	\vdash	 							
	8					`																			
10	9		├			<u> </u>				-	.					_	_	<u> </u>	-	_					
Sampler, Relinquished.		Date Dune Of	Rece	ived I	Ву							E-m	nail r	esults to: iolnes	ss@envpl	us.n	L et								
1an Ju	res	18623		~/		m	-						ARKS		- ·										
Reimquished by.	•	Date GOU 106	nxece								-	į													
gers & MAR	<u>^</u>	Time 1,10	ب		<u>~~</u>	γ_{γ}	74		cked	Die															
Delivered by:	labels -0,5c	Sample (Yes	Cobi	'& Inta N	act Io		;		эскеа \ ~~	-															

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

ent.			
tollthe air	•		
e/Time: U///UU 9/1/U			
10 FOLOOF	~		
er# UPOLOGN			
als			
Sample Receipt	Checkli	ist	
operature of container/cooler?	Yes	No	-0,5 CI
ping container/cooler in good condition?	₹E3	No	
stody Seals intact on shipping container/cooler?	Yes	No	Het present
tody Seals intact on sample bottles?	Yes	No	CAlet-present >
in of custody present?	Yes	No	1
nple Instructions complete on Chain of Custody?	¥€50 \	No	
ain of Custody signed when relinquished and received?	X25	No	
ain of custody agrees with sample label(s)	色	No	
ntainer labels legible and intact?	₹ 5	No	
mple Matrix and properties same as on chain of custody?	Yes	No	
males in proper container/bottle?	X	No	
mples properly preserved?	YED	No	
mple bottles intact?	A ES	l No	
eservations documented on Chain of Custody?		1 No	!
ontainers documented on Chain of Custody?	<u>Xaş</u>	No_	
ufficient sample amount for indicated test? I samples received within sufficient hold time?	Yas	l No	
OC samples have zero headspace?	- Tes		Nah Application
C samples have zero headspace :		No	Not Applicable
her observations:			
Her observations.			
			1
Variance Docu	mentatio	on:	
entact Person: Date/Time:		•	Contacted by:
egarding:			
rrective Action Taken:	·—·—-	· · ·-	
·			



Analytical Report

Prepared for:

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

Project: Chesapeake/ E.W. Walden No. 4 SWD

Project Number: 160053

Location: UL-K, Sec. 15, T 22 S, R 37 E

Lab Order Number: 6F09011

Report Date: 06/14/06

Project. Chesapeake/ E W Walden No 4 SWD

Fax 505-394-2601

P.O Box 1558 Eunice NM, 88231

Project Number. 160053 Project Manager Iain Olness

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	. Date Sampled	Date Received
PA2-BH-1 3'	6F09011-01	Soil	06/07/06 09.05	06/09/06 11:00
PA2-BH-2 3'	6F09011-02	Soil	06/07/06 09·20	06/09/06 11.00
PA2-BH-3 2'	6F09011-03	Soil	06/07/06 09 35	06/09/06 11.00
PA2-BH-4 2'	6F09011-04	Soil	06/07/06 09 50	06/09/06 11 00
PA2-BH-5 2'	6F09011-05	Soil	06/07/06 10 20	06/09/06 11 00
PA2-BH-6 2'	6F09011-06	Soil	06/07/06 10 35	06/09/06 11 00
PA2-BH-7 2'	6F09011-07	Soil	06/07/06 10.50	06/09/06 11.00
PA2-BH-8 3'	6F09011-08	Soil	06/07/06 14 50	06/09/06 11.00
PA2-SW-1 2'	6F09011-09	Soil	06/07/06 13 30	06/09/06 11.00
PA2-SW-2 3'	6F09011-10	Soil	06/07/06 13.45	06/09/06 11:00
PA2-SW-3 2'	6F09011-11	Soil	06/07/06 14.10	06/09/06 11 00
PA2-SW-4 2'	6F09011-12	Soil	06/07/06 14 25	06/09/06 11:00

P.O. Box 1558 Eunice NM, 88231 Project Chesapeake/ E.W Walden No 4 SWD

Project Number. 160053 Project Manager. lain Olness Fax 505-394-2601

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA2-BH-1 3' (6F09011-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	**	n	n	**	**	**	
Ethylbenzene	ND	0.0250	"	"	"	11	"	**	
Xylene (p/m)	ND	0 0250	11		"	п	"	W.	
Xylene (o)	ND	0 0250	**	n	"	п	"	•	
Surrogate a,a,a-Trifluorotoluene		80.0 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		81.2 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	D		"		91	u	
Carbon Ranges C28-C35	ND	10.0	n	11	н	и	11	11	
Total Hydrocarbon nC6-nC35	ND	10 0	н	11	**	"	11	11	
Surrogate 1-Chlorooctane		840%	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		84.4 %	70-1.	30	"	"	n	"	
PA2-BH-2 3' (6F09011-02) Soil								4	
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"	11		**	11	11	
Ethylbenzene	ND	0.0250	"	"	и	**	**		
Xylene (p/m)	ND	0.0250	**	**	11	н	"	n n	
Xylene (o)	ND	0 0250	**	ıı	n	" 👸	"	11	
Surrogate a,a,a-Trifluorotoluene		83 8 %	80-12	20	"	n	"	"	
Surrogate 4-Bromofluorobenzene		83.5 %	80-12	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	11	"	**	n	n	**	
Carbon Ranges C28-C35	ND	10.0	н	11	**	u	"	n	
Total Hydrocarbon nC6-nC35	ND	10.0	**	"	"	"	u	"	
Surrogate 1-Chlorooctane		73 0 %	70-1.	30	"	n	11	"	
Surrogate 1-Chlorooctadecane		74.8 %	70-1.	30	"	n	"	11	
PA2-BH-3 2' (6F09011-03) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"	11	11	н	н	и	
Ethylbenzene	ND	0.0250	**	"		**	H	,,	
Xylene (p/m)	ND	0 0250	и	**	TI TI	11	н	"	
Xylene (o)	ND	0.0250	**	11	n	**	n	н	
Surrogate a,a,a-Trifluorotoluene		85.0 %	80-12	20	**	"	н	"	
Surrogate 4-Bromofluorobenzene		83.0 %	80-12	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	

Environmental Lab of Texas

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

P O Box 1558 Eunice NM, 88231 Project: Chesapeake/ E W Walden No 4 SWD

Project Number 160053
Project Manager lain Olness

Fax 505-394-2601

Organics by GC

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
PA2-BH-3 2' (6F09011-03) Soil									
Carbon Ranges C12-C28	ND	100	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	11	11	11	n	н	"	
Total Hydrocarbon nC6-nC35	ND	10.0	n	"	n	n	11	tt	
Surrogate 1-Chlorooctane		798%	70-	130	"	"	"	"	
Surrogate 1-Chlorooctadecane		80 2 %	70-1	130	"	"	"	"	
PA2-BH-4 2' (6F09011-04) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0 0250	11	и	u	н	n	н	
Ethylbenzene	ND	0.0250		*1	**	и	**	и	
Xylene (p/m)	ND	0.0250	*	"	11	"	**	n	
Xylene (o)	ND	0 0250	Ħ	II	"	"	ti .		
Surrogate a,a,a-Trıfluorotoluene		100 %	80-1	20	**	ıı	11	"	
Surrogate: 4-Bromofluorobenzene		815%	80-1	20	"	"	÷ "	4 "	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	**	"	"	н	u	11	
Carbon Ranges C28-C35	ND	10 0	*	н	н	11	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	n	n	11	n	"	
Surrogate 1-Chlorooctane		79 4 %	70-	30	n	"	n	"	
Surrogate 1-Chlorooctadecane		80 2 %	70-1	130	"	" k	"	"	
PA2-BH-5 2' (6F09011-05) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	11	**	"	n	"	u	
Ethylbenzene	ND	0 0250	"	**	н -	п	"	n	
Xylene (p/m)	ND	0.0250	11	**	**	"	н	11	
Xylene (o)	ND	0.0250	**	**	**	II	,,	11	
Surrogate a,a,a-Trifluorotoluene		840%	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		848%	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	11	**	н	n	н	"	
Carbon Ranges C28-C35	ND	10.0	11	**	и	**	н	н	
Total Hydrocarbon nC6-nC35	ND	10.0	11	11	**	"	"	•	
Surrogate. 1-Chlorooctane		72 0 %	70-2	130	"	"	"	"	
Surrogate 1-Chlorooctadecane		72.2 %	70			,,	,,	"	

Environmental Lab of Texas

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

P.O. Box 1558 Eunice NM, 88231 Project Chesapeake/ E W. Walden No 4 SWD

Project Number: 160053 Project Manager Iain Olness

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PA2-BH-6 2' (6F09011-06) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	11	n	**		n	n.	
Ethylbenzene	ND	0.0250	n	н	n n	"	п		
Xylene (p/m)	ND	0.0250	"	n	11	"	**	н	
Xylene (o)	ND	0 0250	"	11	и	н	н	n	
Surrogate a,a,a-Trifluorotoluene		88.0 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		84.5 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	N	H	11	11	н	**	
Carbon Ranges C28-C35	ND	100	"	"	n	н	н	"	
Total Hydrocarbon nC6-nC35	ND	10.0	**	**	"	н	**	**	
Surrogate 1-Chlorooctane		746%	70-1	30	n	n	"	″ - .	
Surrogate. 1-Chlorooctadecane		75.8 %	70-1	30	"	"	"	"	
PA2-BH-7 2' (6F09011-07) Soil							94. 4-	4	
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	n	"	**	**	u	н	
Ethylbenzene	ND	0.0250	**	,,	u	"	"	и	
Xylene (p/m)	ND	0.0250	**	"	н	**	11	n n	
Xylene (o)	ND	0 0250	**	и	п	" "	n	**	
Surrogate a,a,a-Trtfluorotoluene		85.5 %	80-12	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		90.2 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	н		"	н	"	11	
Carbon Ranges C28-C35	ND	100	"	11	" '	**	н	***	
Total Hydrocarbon nC6-nC35	ND	10.0		"	"	11	"	н	
Surrogate: 1-Chlorooctane		71.6 %	70-1.	30	"	"	"	n	
Surrogate: 1-Chlorooctadecane		71.2 %	70-1.	30	"	"	"	**	
PA2-BH-8 3' (6F09011-08) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"	"	u	w	**	u	
Ethylbenzene	ND	0 0250	"		"	"	n	51	
Xylene (p/m)	ND	0 0250		**	u	**	"	и	
Xylene (o)	ND	0 0250	**	15	н	n	н	II	
Surrogate a,a,a-Trifluorotoluene		92.8 %	80-12	20	"	"	"	n	
Surrogate 4-Bromofluorobenzene		90 5 %	80-12		"	n	,,	n	
Carbon Ranges C6-C12	ND		mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	

Environmental Lab of Texas

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

Fax: 505-394-2601

P O Box 1558 Eunice NM, 88231 Project Chesapeake/ E W Walden No 4 SWD

Project Number 160053
Project Manager lain Olness

Fax 505-394-2601

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
PA2-BH-8 3' (6F09011-08) Soil									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	**	ш	н	#	11	"	
Total Hydrocarbon nC6-nC35	ND	10 0	**	11	"	*	"	II.	
Surrogate 1-Chlorooctane		816%	70-1	30	,,	"	"	"	
Surrogate 1-Chlorooctadecane		82 0 %	70-1	30	"	"	n	"	
PA2-SW-1 2' (6F09011-09) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"	n	н	tt	11	**	
Ethylbenzene	ND	0 0250	n	п	"	11	*1	н	
Xylene (p/m)	ND	0 0250	п	н	u	"	**	**	
Xylene (o)	ND	0 0250	n	n	Ħ	u	,	н	
Surrogate a,a,a-Trifluorotoluene		85.2 %	80-1	20	"	H	n	"	
Surrogate 4-Bromofluorobenzene		81.0 %	80-1	20	n	"		• "	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	n	11	**	11	11	
Carbon Ranges C28-C35	ND	10.0	**	"	н	11	"	"	
Total Hydrocarbon nC6-nC35	ND	10 0	11	**	**	н	н	11	
Surrogate 1-Chlorooctane		85.0 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		84.4 %	70-1	30	n	" ()	"	"	
PA2-SW-2 3' (6F09011-10) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"	n	n	11	н	IF	
Ethylbenzene	ND	0.0250	n	н	н	11	ii .	н	
Xylene (p/m)	ND	0.0250	**	"	"	n		•	
Xylene (o)	ND	0 0250	"	"	"	11	**	**	
Surrogate a,a,a-Trifluorotoluene		84.8 %	80-1	20	"	"	"	"	
Surrogate. 4-Bromofluorobenzene		82 2 %	80-1	20	"	n	"	n	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	100	"	n	n	**	0	н	
Carbon Ranges C28-C35	ND	10 0	**	•	"	п	11	*	
Total Hydrocarbon nC6-nC35	ND	10.0	"			н	n	п	
Surrogate 1-Chlorooctane		82 4 %	70-1	130	"	"	"	<i>n</i>	
Surrogate 1-Chlorooctadecane		81.2 %	70-1		"	"	"	<i>n</i>	

P O Box 1558 Eunice NM, 88231 Project Chesapeake/ E W Walden No 4 SWD

Project Number 160053
Project Manager lain Olness

Fax 505-394-2601

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA2-SW-3 2' (6F09011-11) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	н	"	"	п	n	,	
Ethylbenzene	ND	0 0250	11	n	ıı .	11	•	ш	
Xylene (p/m)	ND	0 0250	"	11	"	"	u	"	
Xylene (o)	ND	0 0250	п	n	11	н	н	11	
Surrogate a,a,a-Trıfluorotoluene		94.8 %	80-12	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		860%	80-12	20	"	"	"	n	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60932	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	11	"	**	н	11-	ч	
Carbon Ranges C28-C35	ND	10 0	"	**	n	11	11	н	
Total Hydrocarbon nC6-nC35	ND	10 0	rr	"	н	**	11	11	
Surrogate. 1-Chlorooctane		81 4 %	70-12	30	"	"	"	" ~	
Surrogate 1-Chlorooctadecane		81.8 %	70-13	30	"	"	n	"	
PA2-SW-4 2' (6F09011-12) Soil							er Li	4.	
Benzene	ND	0 0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"	*1	н	**	ш	11	
Ethylbenzene	ND	0.0250	"	*	11	"	11	tt	
Xylene (p/m)	ND	0.0250	"	*	11	"	n .	n	
Xylene (o)	ND	0 0250	11	11	"	n \$7	**	H	
Surrogate a,a,a-Trifluorotoluene		97 5 %	80-12	20	'n	"	"	,,	
Surrogate 4-Bromofluorobenzene		92.5 %	80-12	20	"	"	n	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	İ	EF60932	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	n	"	"	**	11	u .	
Carbon Ranges C28-C35	ND	10 0	11	"	"	11	11	11	
Total Hydrocarbon nC6-nC35	ND	10 0	11	11	"	11	"	n	
Surrogate 1-Chlorooctane		83 6 %	70-13	30	n	"	"	"	
Surrogate 1-Chlorooctadecane		87.4 %	70-13	30	"	"	"	"	

Project. Chesapeake/ E W. Walden No 4 SWD

Fax 505-394-2601

PO. Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager. Iam Olness

General Chemistry Parameters by EPA / Standard Methods **Environmental Lab of Texas**

		Donortin -							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PA2-BH-1 3' (6F09011-01) Soil									
Chloride	100	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	-
% Moisture	4.3	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	34.5	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-BH-2 3' (6F09011-02) Soil									
Chloride	28.2	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	1.6	0.1	%	ì	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	28.0	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-BH-3 2' (6F09011-03) Soil									
Chloride	31.3	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	3.3	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	234	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-BH-4 2' (6F09011-04) Soil							- -	-	
Chloride	77.6	100	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	6.5	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	543	10.0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-BH-5 2' (6F09011-05) Soil							a .		
Chloride	520	10.0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300.0	
% Moisture	8.5	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	724	10.0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-BH-6 2' (6F09011-06) Soil									
Chloride	26.3	100	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	4.5	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	559	10.0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300.0	
PA2-BH-7 2' (6F09011-07) Soil									
Chloride	332	10 0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	4.1	0 1	%	l	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	74.3	10 0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	

P O Box 1558 Eunice NM, 88231 Project Chesapeake/ E.W Walden No. 4 SWD

Project Number 160053
Project Manager Iain Olness

Fax. 505-394-2601

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA2-BH-8 3' (6F09011-08) Soil				-					
Chloride	135	10.0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	5.2	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	158	10 0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-SW-1 2' (6F09011-09) Soil									
Chloride	12.2	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	4.2	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	19.0	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-SW-2 3' (6F09011-10) Soil									
Chloride	15.7	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	3.9	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	24.4	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300.0	
PA2-SW-3 2' (6F09011-11) Soil							- p-	4	
Chloride	17.8	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	6.0	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	471	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-SW-4 2' (6F09011-12) Soil									
Chloride	12.4	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	1.8	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	232	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	

P.O Box 1558 Eunice NM, 88231 Project Chesapeake/ E.W. Walden No. 4 SWD

Project Number 160053 Project Manager. Iain Olness Fax 505-394-2601

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 EF60931 - Solvent Extraction (GC)			<u></u>							
Blank (EF60931-BLK1)				Prepared (06/09/06 A	nalyzed 06	/10/06			
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	п							
Carbon Ranges C28-C35	ND	10 0	"							
Total Hydrocarbon nC6-nC35	ND	100	**							
Surrogate 1-Chlorooctane	37 7		mg/kg	50 0		75 4	70-130			
Surrogate 1-Chlorooctadecane	39 5		"	50 0		79 0	70-130			
LCS (EF60931-BS1)				Prepared (06/09/06 A	nalyzed 06	/10/06			
Carbon Ranges C6-C12	502	10 0	mg/kg wet	500		100	75-125			
Carbon Ranges C12-C28	538	10 0	n	500		108	75-125			
Total Hydrocarbon nC6-nC35	1040	10 0	**	1000		104	75-125			
Surrogate 1-Chlorooctane	58 2		mg/kg	50 0		116	70-130			
Surrogate 1-Chlorooctadecane	58 2		"	50 0		116	70-130			
Calibration Check (EF60931-CCV1)				Prepared.	06/09/06 A	nalyzed 06	/11/06 _	4		
Carbon Ranges C6-C12	269		mg/kg	250		108	80-120			
Carbon Ranges C12-C28	290		"	250		116	80-120			
Total Hydrocarbon nC6-nC35	559		н	500		112	80-120			
Surrogate 1-Chlorooctane	51 4		n	50 0		103	70-130			
Surrogate 1-Chlorooctadecane	54 3		"	50 0		109	70-130	•		
Matrix Spike (EF60931-MS1)	Sou	rce: 6F09002	2-40	Prepared.	06/09/06 A	nalyzed 06	/11/06			
Carbon Ranges C6-C12	670	100	mg/kg dry	639	ND	105	75-125			
Carbon Ranges C12-C28	691	10 0	"	639	ND	108	75-125			
Total Hydrocarbon nC6-nC35	1360	100	II .	1280	ND	106	75-125			
Surrogate 1-Chlorooctane	46 7		mg/kg	50 0		93 4	70-130			
Surrogate 1-Chlorooctadecane	428		"	50 0		85 6	70-130			

P.O Box 1558 Eunice NM, 88231 Project. Chesapeake/ E.W Walden No. 4 SWD

Project Number. 160053 Project Manager Iam Olness Fax: 505-394-2601

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
	Result	Limit	Oillia	20101	resun	/SIGLE	Zimio	Ne	Limit	
Batch EF60931 - Solvent Extraction (GC)										
Matrix Spike Dup (EF60931-MSD1)	Sour	rce: 6F09002	-40	Prepared. (06/09/06 A:	nalyzed 06	5/11/06			
Carbon Ranges C6-C12	668	10 0	mg/kg dry	639	ND	105	75-125	0 299	20	
Carbon Ranges C12-C28	697	10 0	11	639	ND	109	75-125	0 865	20	
Total Hydrocarbon nC6-nC35	1360	100	"	1280	ND	106	75-125	0 00	20	
Surrogate 1-Chlorooctane	46 4		mg/kg	50 0	=	92 8	70-130			
Surrogate 1-Chlorooctadecane	43 6		"	50 0		87 2	70-130			
Batch EF60932 - Solvent Extraction (GC)										
Blank (EF60932-BLK1)				Prepared. 0	06/09/06 At	nalyzed 06	/11/06			
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	11							
Carbon Ranges C28-C35	ND	10.0	11							
Total Hydrocarbon nC6-nC35	ND	100	**							
Surrogate 1-Chlorooctane	38 4		mg/kg	50 0		76 8	70-130		- ,_,	
Surrogate 1-Chlorooctadecane	40 2		"	50 0		80 4	70-130	4		
LCS (EF60932-BS1)				Prepared. 0	06/09/06 Ar	alyzed: 06	/11/06 ~			
Carbon Ranges C6-C12	518	100	mg/kg wet	500		104	75-125			
Carbon Ranges C12-C28	552	10 0	11	500		110	75-125			
Total Hydrocarbon nC6-nC35	1070	10 0	11	1000		107	75-125			
Surrogate I-Chlorooctane	59 5		mg/kg	50 0		119	70-130			
Surrogate 1-Chlorooctadecane	58 7		"	50 0		117	70-130			
Calibration Check (EF60932-CCV1)				Prepared. 0	6/09/06 Ar	ialyzed 06	/12/06			
Carbon Ranges C6-C12	267		mg/kg	250		107	80-120			
Carbon Ranges C12-C28	297		**	250		119	80-120			
Total Hydrocarbon nC6-nC35	564		"	500		113	80-120			
Surrogate 1-Chlorooctane	51 5		,,	50 0		103	70-130			
Surrogate I-Chlorooctadecane	54 7		"	50 0		109	70-130			

Project Chesapeake/ E W Walden No 4 SWD

Fax 505-394-2601

P.O. Box 1558 Eunice NM, 88231 Project Number 160053
Project Manager Iain Olness

Organics by GC - Quality Control Environmental Lab of Texas

Analyse	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	DDD	RPD	Not
Analyte	Result	Limit	Units	Levei	Result	70KEC	Limits	RPD	Limit	Notes
Batch EF60932 - Solvent Extraction (GC)										
Matrix Spike (EF60932-MS1)	Sour	ce: 6F09011	-11	Prepared (06/09/06 Aı	nalyzed 06	/12/06			
Carbon Ranges C6-C12	551	100	mg/kg dry	532	ND	104	75-125			
Carbon Ranges C12-C28	588	100	**	532	ND	111	75-125			
Total Hydrocarbon nC6-nC35	1140	10 0	п	1060	ND	108	75-125			
Surrogate 1-Chlorooctane	51 3		mg/kg	50 0		103	70-130			
Surrogate 1-Chlorooctadecane	49 4		"	50 0		98 8	70-130			
Matrix Spike Dup (EF60932-MSD1)	Sour	ce: 6F09011	-11	Prepared. (06/09/06 Aı	nalyzed 06	/12/06			
Carbon Ranges C6-C12	558	10 0	mg/kg dry	532	ND	105	75-125	1 26	20	
Carbon Ranges C12-C28	591	100	"	532	ND	111	75-125	0 509	20	
Total Hydrocarbon nC6-nC35	1150	100	**	1060	ND	108	75-125	0 873	20	
Surrogate 1-Chlorooctane	52 0		mg/kg	50 0		104	70-130			
Surrogate 1-Chlorooctadecane	49 9		"	50 0		998	70-130			
Batch EF61305 - EPA 5030C (GC) Blank (EF61305-BLK1)				Prepared &	Analyzed	06/13/06	<i></i>	4		
Benzene	ND	0 0250	mg/kg wet				-			
Toluene	ND	0 0250	п							
Ethylbenzene	ND	0 0250	***							
Xylene (p/m)	ND	0 0250	"							
Xylene (o)	ND	0 0250	H					•		
Surrogate a,a,a-Trifluorotoluene	32 1		ug/kg	40 0		80 2	80-120			
Surrogate 4-Bromofluorobenzene	32 7		"	40 0		818	80-120			
LCS (EF61305-BS1)				Prepared &	z Analyzed	06/13/06				
Benzene	1 13	0 0250	mg/kg wet	1 25		90 4	80-120			
Toluene	1 21	0 0250	"	1 25		96 8	80-120			
Ethylbenzene	1 08	0 0250	н	1 25		86 4	80-120			
Xylene (p/m)	2 47	0 0250	"	2 50		98 8	80-120			
Xylene (o)	1 30	0 0250	"	1 25		104	80-120			
Surrogate a,a,a-Trifluorotoluene	38 9		ug/kg	40 0		97 2	80-120			
Surrogate: 4-Bromofluorobenzene	39 9		n	40 0		998	80-120			

Project Chesapeake/ E W. Walden No 4 SWD

Fax 505-394-2601

P.O Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager Iain Olness

Organics by GC - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF61305 - EPA 5030C (GC)					,			<u> </u>		
Calibration Check (EF61305-CCV1)				Prepared	06/13/06 A	nalyzed 06	5/14/06			
Benzene	0.0469		mg/kg wet	0 0500		93 8	80-120			
Toluene	0 0490		"	0 0500		98.0	80-120			
Ethylbenzene	0.0521		*1	0 0500		104	80-120			
Xylene (p/m)	0 0979		n	0 100		97 9	80-120			
Xylene (o)	0 0528		"	0 0500		106	80-120			
Surrogate a,a,a-Trıfluorotoluene	35 9		ug/kg	40 0		898	80-120			
Surrogate 4-Bromofluorobenzene	419		"	40 0		105	80-120			
Matrix Spike (EF61305-MS1)	Sou	rce: 6F09002	2-40	Prepared	06/13/06 A	nalyzed, 06	/14/06			
Benzene	1 53	0 0250	mg/kg dry	1 60	ND	95.6	80-120			
Toluene	1 47	0 0250	"	1 60	ND	91 9	80-120			
Ethylbenzene	1 35	0 0250	н	1 60	ND	84 4	80-120			
Xylene (p/m)	2.98	0 0250	"	3 19	ND	93.4	80-120		-	
Xylene (o)	1 57	0 0250	**	1 60	ND	98 1	80-120			
Surrogate a,a,a-Trıfluorotoluene	37 7		ug/kg	40 0		94 2	80-120	4 ·		
Surrogate 4-Bromofluorobenzene	37 9		"	40 0		94 8	80-120			
Matrix Spike Dup (EF61305-MSD1)	Sou	rce: 6F09002	-40	Prepared	06/13/06 A	nalyzed 06	/14/06			
Benzene	1 56	0 0250	mg/kg dry	1 60	ND	97 5	80-120	1 97	20	
Toluene	1 65	0 0250	"	1 60	ND	103	80-120	11.4	20	
Ethylbenzene	1 51	0.0250	11	1 60	ND	94 4	80-120	11.2	20	
Xylene (p/m)	3.33	0 0250	11	3 19	ND	104	80-120	10 7	20	
Xylene (o)	1 75	0 0250	"	1 60	ND	109	80-120	10 5	20	
Surrogate a,a,a-Trifluorotoluene	39 1		ug/kg	40.0		978	80-120			······
Surrogate 4-Bromofluorobenzene	38 4		"	40 0		96 0	80-120			

Project Chesapeake/ E W. Walden No 4 SWD

Fax 505-394-2601

PO Box 1558 Eunice NM, 88231 Project Number 160053

Project Manager. Jain Olness

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 EF61006 - Water Extraction						, viteze				
Blank (EF61006-BLK1)				Prepared &	Analyzed	06/10/06				
Sulfate	ND	0 500	mg/kg							
Chloride	ND	0 500	"							
LCS (EF61006-BS1)				Prepared &	z Analyzed.	06/10/06				
Chloride	10 2	0 500	mg/kg	10.0		102	80-120			
Sulfate	8 94	0 500	**	10 0		89 4	80-120			
Calibration Check (EF61006-CCV1)				Prepared &	Analyzed.	06/10/06				
Chloride	9 81		mg/L	10 0		98 1	80-120			
Sulfate	8 74		11	10 0		87 4	80-120			
Duplicate (EF61006-DUP1)	Sourc	e: 6F09006-	01	Prepared &	Analyzed.	06/10/06				
Sulfate	66 3	5 00	mg/kg	64 8				2 29	20	
Chloride	375	5 00	H		363			3 25	20.	
Duplicate (EF61006-DUP2)	Source	e: 6F09011-	-06	Prepared &	Analyzed.	06/10/06				
Sulfate	584	100	mg/kg		559			4 37	20	
Chloride	22 7	10 0	"		26 3			14 7	20	
Matrix Spike (EF61006-MS1)	Sourc	e: 6F09006-	01	Prepared &	Analyzed	06/10/06				
Chloride	472	5 00	mg/kg	100	363	109	80-120			
Sulfate	125	5 00	**	100	64 8	60.2	75-125			QS-
Matrix Spike (EF61006-MS2)	Source	e: 6F09011-	06	Prepared &	Analyzed	06/10/06				
Sulfate	694	10.0	mg/kg	200	559	67.5	75-125			QS-
Chloride	203	10 0	*	200	26 3	88 4	80-120			

Project. Chesapeake/ E W Walden No 4 SWD

Fax 505-394-2601

P O Box 1558 Eunice NM, 88231 Project Number. 160053 Project Manager Iain Olness

General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
)									
			Prepared. 0	6/10/06	Analyzed 06	V11/06			
100		%							
Sour	-ce: 6F08014-0	1	Prepared 0	6/10/06	Analyzed. 06	√11/06			
88 3		%		88 8			0 565	20	
Sour	·ce: 6F09002-0	2	Prepared, 0	6/10/06 A	Analyzed 06	/11/06			
99 2		%		99.0			0.202	20	
Sour	·ce: 6F09002-2	2	Prepared 0	6/10/06 A	Analyzed, 06/	/11/06			
95.8		%		95 1			0.733	20	
Sour	·ce: 6F09007-0	2	Prepared: 0	6/10/06 A	Analyzed 06/	/11/06			
910		%		90 4			0 662	20	
Sour	ce: 6F09012-0	1	Prepared 0	5/10/06 A	Analyzed 06/	/11/06		~	
90 6		%		90 9			0 331	20	
	9) 100 Sour 88 3 Sour 99 2 Sour 95.8 Sour 91 0 Sour	Result Limit 100 Source: 6F08014-0: 88 3 Source: 6F09002-0: 99 2 Source: 6F09002-2: 95.8 Source: 6F09007-0: 91 0 Source: 6F09012-0:	Result Limit Units	Result Limit Units Level	Result Limit Units Level Result	Prepared O6/10/06 Analyzed O6/10/06 O6/10/06	Prepared No Prepared No No No No No No No N	Prepared O6/10/06 Analyzed O6/11/06	Result Limit Units Level Result %REC Limits RPD Limit

Environmental Plus, Incorporated Project Chesapeake/ E.W. Walden No. 4 SWD Fax. 505-394-2601
P.O. Box 1558 Project Number 160053

P.O. Box 1558 Project Number 160053
Eunice NM, 88231 Project Manager Iain Olness

Notes and Definitions

QS-1 The spike recovery value is outside Laboratory historical or method prescribed QC limits

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

Raland K July

Date:

6/14/2006

8

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.

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

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

Environmental Plus, Inc.

Chain of Custody Form

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

P.O. Box 1558, Eunice, NM 88231

Lab: ELT

Company Name	Environmental Plus,	, Inc	 ;.		\neg						B	iii Si	O				Α	NAL	YS	IS F	EQ	UES	i 💮	
EPI Project Mana					\neg		S. 110,000	*******	3200 X 2000	Control of the Contro	~~~	No. of Street, or other			70m2C.	Sec. 750 T			Ī					
Mailing Address	P.O. BOX 1558					İ							F											
City, State, Zip	Eunice New Mexico	882	:31			İ						E_												I
EPI Phone#/Fax#	# 505-394-3481 / 505-3	J <mark>94-</mark>	260	1		l				į		P	i <i>j</i> e											
Client Company	/ Chesapeake Energy		_									M												l
Facility Name	E. W. Walden No. 4 S	SWI	5_																		1			
Location	UL-K, Sec. 15, T 22 S	3, R	. 37	E						Att	n: k	ain (Olness											
Project Reference				_									1558,				1							
EPI Sampler Nan	me Sebastian Romero								Ευ				8231-1558											
'			['		-	MAT	TRIX		/	PR	ESE	RV.	SAMPLI	NG										
LAB 1.D.	SAMPLE I.D.	(G)ВАВ ОВ (С)ОМР.		GROUND WATER	WASTEWATER	-		SLUDGE	OTHER:	ACID/BASE		отнея	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (CI)	SULFATES (SO₄¯)	Hd	TCLP	OTHER >>>	РАН		
-0] 1	1 PA2-BH-1 (3')	Х	-	'		Х			igstyle L'		Х		07-Jun-06	9:05	Х	Х		Х			<u> </u>			
	2 PA2-BH-2 (3')	X		∟'	_'	Х		—′	<u> </u> '	$oldsymbol{ol}}}}}}}}}}}}}}}}}}}}$	Х		07-Jun-06	9:20	Х	Х		Х						
-05 3	3 PA2-BH-3 (2')	Х	1	 '	_ _'	Х		<u> </u>	⊥_′	igsqcup	Х		07 - Jun-06	9:35	Х	Х		Х						
- OU 4	4 PA2-BH-4 (2')	X	_	igspace	'	Х		—′	_′		Х		07-Jun-06	9:50	Х	X		Х						
5	5 PA2-BH-5 (2')	X		_		X		_ '	_′	┷	Х		07-Jun-06	10:20	X	Х		X	-					
	6 PA2-BH-6 (2¹)	X	_	-		Х	_′	—'	—	↓ /	X		07-Jun-06	10:35	Х	Х	_	Х						
	7 PA2-BH-7 (2')	X		₩'	igspace	X	—′	—	—′	↓	X		07-Jun-06	10:50	X		Х			<u> </u>	<u> </u>			
	8 PA2-BH-8 (3')	X		إنسل	لـــؤ	X		₩'	—′	$\downarrow \downarrow \downarrow$	X		07-Jun-06	14:50	X	Х		Х		<u> </u>				
	9 PA2-SW-1 (2')	X		<u> </u>		Х		_ '	—'	igspace	X	┞╌┦	07-Jun-06	13:30	_		X			ļ	<u> </u>			
$\int D 10$	0 PA2-SW-2 (3')	X	1			X		<u></u> '	<u> </u>		X		07-Jun-06	13:45	X	X	<u> </u>	Х			-			
Sampler Relinquished: Relinquished by: Delivered by:	200 Property of Triple 11:00	Rece	gived i	By (le	n l	300 CO	207 U	<u></u>		•	REM	IARKS	esults to: iolnes 3,0 40 (ahel3	-		eţ.								
Delivered by:	Sample (e)	le Cool	l & Inta	tact No			S/ne	lecked	Ву:			<i>1</i> /	lahels			·		-						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

Environmental Plus, Inc.

Chain of Custody Form

2100 Avenue O, Eunice, NM 88231

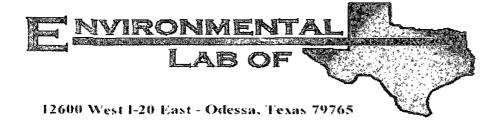
P.O. Box 1558, Eunice, NM 88231

Lab: ELT

Company Name	Environmental Plus,	Inc).								€ E	川刻	0				Α	VAL	YS	SF	EQ	UES)T@	
PI Project Manager																								
Nailing Address	P.O. BOX 1558												1											- {
ity, State, Zip	Eunice New Mexico	882	31								emani.	E												l
Pl Phone#/Fax#	505-394-3481 / 505-3	94-	260	1						1		5												
Client Company	Chesapeake Energy												1	1										
acility Name	E. W. Walden No. 4 S	3WE)			•																		
ocation	UL-K, Sec. 15, T 22 S	3, R	37	E		Attn: lain Olness																		
Project Reference	160053					PO Box 1558,																		
Pl Sampler Name	Sebastian Romero					Eunice, NM 88231-1558																. 1		
		<u>,</u>				MA	RIX			PR	ESE	RV.	SAMPLI	NG										
LAB I.D.	SAMPLE I.D.	(G) В АВ ОВ (С)ОМР.	# CONTAINERS	GROUND WATER	WASTEWATER		CRUDE OIL	SLUDGE	отнек:	ACID/BASE	ICE/COOL	отнея	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (CI')	SULFATES (SO4")	þН	TCLP	OTHER >>>	РАН		
	-SW-3 (2')	Х				Х				Щ	X		07-Jun-06	14:10	X	Х	X			Щ				
2 PA2-	-SW-4 (2')	Х	1			Х					X		07-Jun-06	14:25	Х	Х	X	Х						
3				<u> </u>																				
4			<u> </u>							L.,		Щ			<u> </u>					L				_
5			<u> </u>	_		Ш				Щ					<u> </u>								Щ	
6									<u> </u>			Щ		-	<u> </u>	ļ								
7			<u> </u>									_			<u> </u>									
8		Ш	<u> </u>	ļ.	-	_	Щ								<u> </u>									
9						_			<u> </u>						<u>Ļ</u>	<u> </u>			<u> </u>					
10											********								Щ					
emple Relinquished Aun Yline Tellinquished by: Relivered by.		Pece		By: (II	30 ab sta	01 11) 1(l		ecked	Ry			nail ri IARKS	esults to: iolnes	s@envplu	n.eL	et								
епұегео ру.	Sample Yes			act Io			91. ,	76406	шy.		,	1	art lake 1											

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

PP				
1/1/810 11 00				
= Time (0/9/00 11:00				
ier # UF0901				
ais <u>ClC</u>			•	
Sample Receipt	Checkli	st		
nderature of container/cooler?	Yes	Νo	30 CI	
poing container/cooler in good condition?	1000	No		
stody Seals intaction shipping container/cooler?	Yes	No	clot present	
stody Seals intact on sample bottles?	Yes	No	Not present	
ain of custody present?	Yes	No	!	
mple Instructions complete on Chain of Custody?		No		
ain of Custody signed when relinquished and received?	¥23	No	,	
ain of custody agrees with sample label(s)	25	No		
ntainer labe's legible and intact?	1 1 Per 1	No		
mple Matrix and properties same as on chain of custody?		No		
moles in proper container/bottle?	1 850	No		
moles properly preserved?		No		
more botties intact?) JES	No		
eservations documented on Chain of Custody?	(VES)	No		
ntainers occumented on Chain of Custody?	₹ êş	No		•
fficient sample amount for indicated test?	<u> </u>	l No		
samples received within sufficient hold time?	1 263	No		
C samples have zero headspace?	1 725	No	Not Applicable	
ther observations:				
			1 ×	
		·····		
			,	
Variance Docur				
entact Person: Date/Time:			Contacted by:	
agarding.	· · · · · · · · · · · · · · · · · · ·			
ž Ž				
		···		
	·			
Ostronius Astion Talian				
orrective Action Taken.				



Analytical Report

Prepared for:

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

Project: Chesapeake/ E.W. Walden No. 4 SWD

Project Number: 160053

Location: UL-K, Sec. 15, T 22 S, R 37 E

Lab Order Number: 6F09012

Report Date: 06/13/06

PO Box 1558

Eunice NM, 88231

Project Chesapeake/ E W Walden No 4 SWD

Project Number 160053 Project Manager lain Olness Fax 505-394-2601

Reported: 06/13/06 10 39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PA1-SW-1 2'	6F09012-01	Soil	06/07/06 14 15	06/09/06 11.00
PA1-SW-2 2'	6F09012-02	Soil	06/07/06 14:17	06/09/06 11 00
PA1-SW-3 2'	6F09012-03	Soil	06/07/06 14.21	06/09/06 11.00
PA1-SW-4 2'	6F09012-04	Soil	06/07/06 14 25	06/09/06 11.00

Eunice NM, 88231

Project Chesapeake/ E.W Walden No 4 SWD

Project Number 160053
Project Manager Iain Olness

Fax. 505-394-2601

Reported:
06/13/06 10 39

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA1-SW-1 2' (6F09012-01) Soil				<u> </u>					
Benzene	ND	0.0250	mg/kg dry	25	EF61210	06/12/06	06/12/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	н	"	н	
Ethylbenzene	ND	0 0250	u	11	н	u.	"	11	
Xylene (p/m)	ND	0 0250	11	н	11	п	"	и	
Xylene (o)	ND	0 0250	u	"	н	н	**	*	
Surrogate a,a,a-Trifluorotoluene		89.2 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		95.5 %	80-1	20	"	"	"	n	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60932	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	**	~ ."	11	11	Ħ	11	
Carbon Ranges C28-C35	ND	10 0	"	"	ч	u	ч	**	
Total Hydrocarbon nC6-nC35	ND	10.0	11	и	"	"	"	н	
Surrogate 1-Chlorooctane		76.8 %	70-1	30	"	n n	"	"	
Surrogate 1-Chlorooctadecane		79.0 %	70-1	30	"	"	n	"	
PA1-SW-2 2' (6F09012-02) Soil							#	•	
Benzene	ND	0 0250	mg/kg dry	25	EF61210	06/12/06	06/12/06	EPA 8021B	
Toluene	ND	0.0250	W	n	n	n	**	w	
Ethylbenzene	ND	0 0250		и	**	"	н	•	
Xylene (p/m)	ND	0.0250	*1		11	и	н	"	
Xylene (o)	ND	0.0250	n		**	H \$ 3	11	n	
Surrogate a,a,a-Trifluorotoluene		810%	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		94.2 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60932	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	tt	n	n	n	n	n	
Carbon Ranges C28-C35	ND	10 0	**	"	n /	"	н	11	
Total Hydrocarbon nC6-nC35	ND	10.0	11	11	н	n	п	"	
Surrogate 1-Chlorooctane		78.0 %	70-1	30	"	"	"	"	
Surrogate. 1-Chlorooctadecane		78 2 %	70-1.	30	"	"	n	"	
PA1-SW-3 2' (6F09012-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61210	06/12/06	06/12/06	EPA 8021B	
Toluene	ND	0.0250	11	"	"	н	11	,,	
Ethylbenzene	ND	0.0250	"	n	**	**	"	п	
Xylene (p/m)	ND	0 0250	"	11	11	"	п		
Xylene (o)	ND	0.0250	n .	ıı	"	п		н	
Surrogate a,a,a-Trifluorotoluene		88.8 %	80-1.	20	"	"	"	n .	
Surrogate 4-Bromofluorobenzene		958%	80-1.		"	"	"	"	
Carbon Ranges C6-C12	ND		mg/kg dry	1	EF60932	06/09/06	06/11/06	EPA 8015M	

Environmental Lab of Texas

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

PO Box 1558

Eunice NM, 88231

Project Chesapeake/ E.W Walden No 4 SWD

Project Number: 160053 Project Manager lain Olness Fax 505-394-2601

Reported: 06/13/06 10.39

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA1-SW-3 2' (6F09012-03) Soil									
Carbon Ranges C12-C28	ND	10 0	mg/kg dry	1	EF60932	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	"	**	11	н	н	н	
Total Hydrocarbon nC6-nC35	ND	10 0	н	п	п	n	11	11	
Surrogate 1-Chlorooctane	,	83 6 %	70-13	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		83 2 %	70-1.	30	n	"	"	n	
PA1-SW-4 2' (6F09012-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61210	06/12/06	06/12/06	EPA 8021B	
Toluene	ND	0 0250	H	**	**	"	"	и	
Ethylbenzene	ND	0 0250	н	11	**	U	н	**	
Xylene (p/m)	ND	0.0250	31	"	"	n	"	If	
Xylene (o)	ND	0 0250	"	"	II.	н	n	"	
Surrogate a,a,a-Trifluorotoluene		82 2 %	80-12	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		91.2 %	80-12	20	"	"	÷ #	* "	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60932	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	n	11	n	n	
Carbon Ranges C28-C35	ND	10.0	"	п	11	н	**	11	
Total Hydrocarbon nC6-nC35	ND	10 0)II	11	"	"	"	"	
Surrogate: 1-Chlorooctane		78.2 %	70-13	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		79.2 %	70-13	30	n	" (n	"	

Environmental Plus, Incorporated P O. Box 1558

Eunice NM, 88231

Project. Chesapeake/ E.W. Walden No 4 SWD

Project. Chesapeake/ E. W. Waldeli No 4 SV

Project Number. 160053 Project Manager Iain Olness Fax 505-394-2601

Reported:
06/13/06 10 39

General Chemistry Parameters by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA1-SW-1 2' (6F09012-01) Soil									
Chloride	374	10 0	mg/kg	20	EF61007	06/10/06	06/10/06	EPA 300 0	
% Moisture	9.1	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	38.4	10 0	mg/kg	20	EF61007	06/10/06	06/10/06	EPA 300 0	
PA1-SW-2 2' (6F09012-02) Soil									
Chloride	1300	25 0	mg/kg	50	EF61007	06/10/06	06/10/06	EPA 300 0	
% Moisture	14.5	0.1	%	I	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	111	25.0	mg/kg	50	EF61007	06/10/06	06/10/06	EPA 300.0	
PA1-SW-3 2' (6F09012-03) Soil									
Chloride	697	10 0	mg/kg	20	EF61007	06/10/06	06/10/06	EPA 300 0	
% Moisture	10.5	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	74.1	10 0	mg/kg	20	EF61007	06/10/06	06/10/06	EPA 300 0	
PA1-SW-4 2' (6F09012-04) Soil							بر -	+ 	
Chloride	20.1	5.00	mg/kg	10	EF61007	06/10/06	06/10/06	EPA 300.0	
% Moisture	4.1	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	38.5	5 00	mg/kg	10	EF61007	06/10/06	06/10/06	EPA 300.0	

P O Box 1558 Eunice NM, 88231 Project Chesapeake/ E W. Walden No 4 SWD

Project Number 160053 Project Manager Iain Olness Fax 505-394-2601

Reported: 06/13/06 10:39

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 EF60932 - Solvent Extraction (GC)										
Blank (EF60932-BLK1)				Prepared. 0	06/09/06 A	nalyzed 06	5/11/06			
Carbon Ranges C6-C12	ND	100	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	*1							
Carbon Ranges C28-C35	ND	10 0	n .							
Total Hydrocarbon nC6-nC35	ND	10.0	и							
Surrogate 1-Chlorooctane	38 4		mg/kg	50 0		76 8	70-130			
Surrogate 1-Chlorooctadecane	40 2		"	50 0		80 4	70-130			
LCS (EF60932-BS1)				Prepared. 0	06/09/06 Aı	nalyzed· 06	/11/06			
Carbon Ranges C6-C12	518	10 0	mg/kg wet	500		104	75-125			
Carbon Ranges C12-C28	552	100	ti ti	500		110	75-125			
Total Hydrocarbon nC6-nC35	1070	10 0	**	1000		107	75-125			
Surrogate 1-Chlorooctane	59 5		mg/kg	50 0		119	70-130			
Surrogate 1-Chlorooctadecane	58 7		"	50 0		117	70-130		- .	
Calibration Check (EF60932-CCV1)				Prepared. 0	06/09/06 Aı	nalyzed 06	/12/06	ą,		
Carbon Ranges C6-C12	267		mg/kg	250		107	80-120			
Carbon Ranges C12-C28	297		"	250		119	80-120			
Total Hydrocarbon nC6-nC35	564		"	500		113	80-120			
Surrogate 1-Chlorooctane	51.5		"	50 0		103	70-130			
Surrogate 1-Chlorooctadecane	54 7		n	50 0		109	70-130			
Matrix Spike (EF60932-MS1)	Sou	rce: 6F09011	-11	Prepared 0	06/09/06 A1	nalyzed. 06	/12/06			
Carbon Ranges C6-C12	551	10 0	mg/kg dry	532	ND	104	75-125			
Carbon Ranges C12-C28	588	100	Ħ	532	ND	111	75-125			
Total Hydrocarbon nC6-nC35	1140	10.0	11	1060	ND	108	75-125			
Surrogate 1-Chlorooctane	51 3		mg/kg	50 0		103	70-130			
Surrogate 1-Chlorooctadecane	49 4		"	50 0		988	70-130			

Project Chesapeake/ E W Walden No. 4 SWD

Fax 505-394-2601

P O Box 1558 Eunice NM, 88231 Project Number 160053 Project Manager. Iain Olness **Reported:** 06/13/06 10.39

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	KCSUII	Limit	Omts	Level	Result	/OREC	Lunits	KFU	Lunii	inotes
Batch EF60932 - Solvent Extraction (GC)						·				
Matrix Spike Dup (EF60932-MSD1)	Sou	rce: 6F09011	-11	Prepared (06/09/06 A	nalyzed: 06	/12/06			
Carbon Ranges C6-C12	558	10 0	mg/kg dry	532	ND	105	75-125	1.26	20	
Carbon Ranges C12-C28	591	10 0	"	532	ND	111	75-125	0.509	20	
Total Hydrocarbon nC6-nC35	1150	10 0	**	1060	ND	108	75-125	0 873	20	
Surrogate 1-Chlorooctane	52 0		mg/kg	50 0		104	70-130			
Surrogate 1-Chlorooctadecane	49.9		"	50 0		99 8	70-130			
Batch EF61210 - EPA 5030C (GC)										
Blank (EF61210-BLK1)				Prepared &	Analyzed.	06/12/06				
Benzenc	ND	0 0250	mg/kg wet							
Toluene	ND	0 0250	11							
Ethylbenzene	ND	0 0250	"							
Xylene (p/m)	ND	0 0250								
Xylene (o)	ND	0 0250	n						-	
Surrogate a,a,a-Trifluorotoluene	36 3		ug/kg	40 0		90 8	80-120	*		
Surrogate 4-Bromofluorobenzene	39 6		"	40 0		99 0	80-120	•		
LCS (EF61210-BS1)				Prepared &	Analyzed	06/12/06				
Benzene	1 14	0 0250	mg/kg wet	1.25		91 2	80-120			
Toluene	1 13	0 0250	**	1 25		90 4	80-120			
Ethylbenzene	1 08	0 0250	н	1.25		86 4	80-120			
Xylene (p/m)	2 41	0 0250	**	2 50		96 4	80-120			
Xylene (o)	1 29	0.0250	11	1 25		103 ^k	80-120			
Surrogate a,a,a-Trifluorotoluene	33 1		ug/kg	40 0		82 8	80-120			
Surrogate 4-Bromofluorobenzene	42 6		"	40 0		106	80-120			
Calibration Check (EF61210-CCV1)				Prepared. 0	6/12/06 An	alyzed. 06	/13/06			
Benzene	46 7		ug/kg	50 0		93 4	80-120			
Toluene	45.9		н	50 0		91 8	80-120			
Ethylbenzene	47.1		11	50 0		94 2	80-120			
Xylene (p/m)	83.2		"	100		83 2	80-120			
Xylene (o)	45 9		**	50 0		91 8	80-120			
Surrogate a,a,a-Trifluorotoluene	32 2		"	40 0		80 5	80-120			
Surrogate 4-Bromofluorobenzene	33 2		"	40 0		83 0	80-120			

Project Chesapeake/ E.W Walden No 4 SWD

Fax 505-394-2601

P.O Box 1558 Eunice NM, 88231 Project Number 160053
Project Manager lain Olness

Reported: 06/13/06 10.39

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF61210 - EPA 5030C (GC)										
Matrix Spike (EF61210-MS1)	Sour	ce: 6F09002	-38	Prepared 0	06/12/06 A	nalyzed: 06	/13/06			
Benzene	1 27	0 0250	mg/kg dry	1 34	ND	94 8	80-120			
Toluenc	1 32	0 0250	п	1 34	ND	98.5	80-120			
Ethylbenzene	1 20	0 0250	11	1 34	ND	89 6	80-120			
Xylene (p/m)	2 71	0 0250	n	2 69	ND	101	80-120			
Xylene (0)	1 42	0 0250	"	1 34	ND	106	80-120			
Surrogate a,a,a-Trifluorotoluene	37 6		ug/kg	40 0		94 0	80-120			
Surrogate 4-Bromofluorobenzene	32 9		"	40 0		82 2	80-120			
Matrix Spike Dup (EF61210-MSD1)	Sour	ce: 6F09002	-38	Prepared 0	06/12/06 At	nalyzed: 06	/13/06			
Benzene	1.33	0 0250	mg/kg dry	1 34	ND	99 3	80-120	4 64	20	
Toluene	1.27	0 0250	n	1 34	ND	94 8	80-120	3 83	20	
Ethylbonzene	1 12	0 0250	11	1 34	ND	83 6	80-120	6 93	20	
Xylene (p/m)	2 52	0 0250	"	2 69	ND	93 7	80-120	7 50	<u>20</u> .	
Xylene (0)	1 35	0 0250	11	1 34	ND	101	80-120	4 83	20	
Surrogate a,a,a-Trifluorotoluene	38 7	=	ug/kg	40 0		96.8	80-120	4		
Surrogate. 4-Bromofluorobenzene	38 3		"	40 0		95 8	80-120			

Project. Chesapeake/ E.W Walden No 4 SWD

Fax 505-394-2601

PO Box 1558 Eunice NM, 88231 Project Number 160053

Reported: 06/13/06 10:39

Project Manager Iain Olness

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 EF61007 - Water Extraction				30101						. 10005
Blank (EF61007-BLK1)				Prepared &	Analyzed	L 06/10/06				· · · · · · · · · · · · · · · · · · ·
Sulfate	ND	0 500	mg/kg	_ Tropured o		00/10/00				
Chloride	ND	0 500	"							
LCS (EF61007-BS1)				Prepared &	analyzed	. 06/10/06				
Sulfate	8 18	0 500	mg/kg	10 0		81 8	80-120			
Chloride	9 62	0 500	11	10 0		96 2	80-120			
Calibration Check (EF61007-CCV1)				Prepared &	z Analyzed	06/10/06				
Chloride	9.80		mg/L	10 0		98 0	80-120			
Sulfate	8 38		"	10 0		83 8	80-120			
Duplicate (EF61007-DUP1)	Sour	ce: 6F09012-	01	Prepared &	. Analyzed	. 06/10/06				
Sulfate	38 4	10 0	mg/kg		38 4			0 00	20	
Chloride	380	10.0	"		374			1 59	20 .	
Matrix Spike (EF61007-MS1)	Sour	ce: 6F09012-	01	Prepared &	Analyzed	. 06/10/06				
Chloride	601	10 0	mg/kg	200	374	114	80-120			
Batch EF61101 - General Preparation (Prep)										
Blank (EF61101-BLK1)				Prepared 0	6/10/06 A	nalyzed: 06	/11/06			
% Solids	100		%	-		<u>-</u>		-		
Duplicate (EF61101-DUP1)	Sour	ce: 6F08014-	01	Prepared 0	6/10/06 A	nalyzed, 06	11/06			
% Solids	88 3		%		88 8	\$7		0 565	20	
Duplicate (EF61101-DUP2)	Sour	ce: 6F09002-	02	Prepared 0	6/10/06 A	nalyzed 06/	11/06			
% Solids	99 2		%		99.0	·		0 202	20	

 Environmental Plus, Incorporated
 Project
 Chesapeake/ E.W Walden No 4 SWD
 Fax 505-394-2601

 P O Box 1558
 Project Number
 160053
 Reported:

 Eunice NM, 88231
 Project Manager
 Iain Olness
 06/13/06 10 39

General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

1										
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF61101 - General Preparation (Prep)										-
Duplicate (EF61101-DUP3)	Sour	ce: 6F09002-2	22	Prepared. 0	6/10/06 A	nalyzed 06	/11/06			
% Solids	95 8		%		95 1			0 733	20	
Duplicate (EF61101-DUP4)	Sour	ce: 6F09007-0)2	Prepared. 0	6/10/06 A	nalyzed. 06	/11/06			
% Solids	91 0		%		90 4			0 662	20	
Duplicate (EF61101-DUP5)	Sour	ce: 6F09012-0)1	Prepared. 0	6/10/06 A	nalyzed 06	/11/06			
% Solids	90 6		%		90 9			0 331	20	

Environmental Plus, Incorporated Project Chesapeake/ E.W. Walden No. 4 SWD Fax. 505-394-2601

P O Box 1558 Eunice NM, 88231 Project Number 160053
Project Manager: Iain Olness

Reported:

06/13/06 10 39

Notes and Definitions

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

Raland Kotuls

Date:

6/13/2006

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.

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

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

Environmental Plus, Inc.

Chain of Custody Form

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

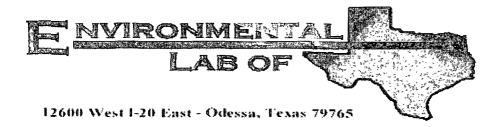
P.O. Box 1558, Eunice, NM 88231

Lab: ELT

	FAX: (505) 394-2601																	Name of the	1050 800	*****					
Company Name		nental Plus,	, Inc	<u>. </u>		_						E		0				A	NAL	YS	ISF	EQ	UES		
EPI Project Mar													##			ļ]								
Mailing Address													Ш	T		1					•				- 1
City, State, Zip		ew Mexico	_									-	E	, <u>j</u>											
EPI Phone#/Fax		3481 / 505-3	94-	260	1							Consti													
Client Company	<u></u>	ke Energy											1000											į	
Facility Name		Iden No. 4 S																							-
Location		c. 15, T 22 9	3, R	37	<u>E</u>									Olness			•								- }
Project Referen														1558,		Ì								١	
EPI Sampler Na	me Jacob Me	elancon								Eu				8231-1558										- 1	
			ا ،		L,		MAT	RIX			PR	ESE	RV.	SAMPLI	NG						l				
LAB I.D.	SAMPLE I.	.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUND WATER	WASTEWATER		CRUDE OIL	SLUDGE	отнев:	ACID/BASE	ICE/COOL	отнев	DATE	TIME		TPH 8015M		SULFATES (SO4")	Hd	TCLP	OTHER >>>	РАН		
<u>0 </u>	1 PA1-SW-1 (2')		X	1	<u> </u>		X					X		07-Jun-06	14:15	Х	Х		Х	<u> </u>		<u> </u>			
	2 PA1-SW-2 (2')		X				Х					Х		07-Jun-06	14:17	Х	Х		X	<u> </u>					
	3 PA1-SW-3 (2')		X				Х			<u></u>		Χ		07-Jun-06	14:21	ļχ.	-	X	X	L	_				
-04	4 PA1-SW-4 (2')		Х	1			Х			<u> </u>		X		07-Jun-06	14:25	X	X	X	Х		<u> </u>				
	5		<u> </u>	<u> </u>	ļ		Щ			\vdash	<u> </u>	<u> </u>				<u> </u>		<u></u>							
	6				<u> </u>					_		<u> </u>	_			<u> </u>	<u> </u>			<u> </u>	ļ	_			
	7		 	<u> </u>	_						<u> </u>	<u> </u>				<u> </u>	<u> </u>	<u> </u>	!	<u> </u>	<u> </u>	<u> </u>			_
	8			-	-	27				<u> </u>						_	<u> </u>		<u> </u>	<u> </u>	<u> </u>				4
	9		<u> </u>	-	Щ,					<u> </u>	 		_			<u>Ļ</u> _	<u> </u>		<u> </u>		<u> </u>	<u> </u>		_	4
1	0						%=>>%=				2000											*********			
Sample: Relinquished: Am Rélinquished by Course 13	oren	Date June U6 Timo 7, 9 Date 10, CC	Rec	ر ived!	By: By: (li	E IS		24 Cf	<u>د</u>		4	REM	IARKS			us.ne	et	R	lu:	SH	as	Pe	, I	ain (01 <i>-</i>
Delivered by:		Sample			_				ecked	Ву:		·	w/	3.0 401 'Iahel	~							-:			

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

Sample Receipt Chacklist Parature of contamericooler? Serial MADOUNT Serial					
Sample Receipt Checklist rerature of container/cooler? yes No					
Sample Receipt Checklist rerature of container/cooler? yes No	1/9/010 11:00	•			
Sample Receipt Checklist cerature of container/cooler? Yes No Common container/cooler in good condition? Sample Seals intact on shipping container/cooler? Yes No Container/cooler? Ord Seals intact on sample bottles? Yes No Container/cooler? In of custody present? Sample Structions complete on Chain of Custody? In of Custody signed when reiniquished and received? Sample Stepton and Intact? Sample Stepton and Intact? Sample Stepton and Intact? Sample Stepton and Intact? Sample Matrix and properties same as on chain of custody? Sample Strose By oreserved? thin sufficient hold time? Samples reserved Within sufficient hold	The transfer of the transfer o				
Sample Receipt Checklist perature of container/cooler? yes No Coordinate of container/cooler? purp container/cooler in good condition? purp seals intact on shipping container/cooler? yes No Motoresant of custody present? yes No Motoresant of custody present? yes No No Coordinate on Chain of Custody? yes No No No No No No No No No No No No No	10th 9012				
Sample Receipt Checklist perature of container/cooler? yes No Coordinate of container/cooler? purp container/cooler in good condition? purp seals intact on shipping container/cooler? yes No Motoresant of custody present? yes No Motoresant of custody present? yes No No Coordinate on Chain of Custody? yes No No No No No No No No No No No No No	er# 0/0/2				
Sample Receipt Checklist perature of container/cooler? yes No Coordinate of container/cooler? purp container/cooler in good condition? purp seals intact on shipping container/cooler? yes No Motoresant of custody present? yes No Motoresant of custody present? yes No No Coordinate on Chain of Custody? yes No No No No No No No No No No No No No	ΛU_{\perp}				
perature of contained cooler? In good contained cooler? In good contained cooler in good condition? In good Seals intact on shipping contained cooler? In good Seals intact on sample bottles? Chain of Custody? In good Seals intact on sample bottles on Chain of Custody? In good Seals on Se	eis				
perature of contained cooler? In good contained cooler? In good contained cooler in good condition? In good Seals intact on shipping contained cooler? In good Seals intact on sample bottles? Chain of Custody? In good Seals intact on sample bottles on Chain of Custody? In good Seals on Se					
cong consumericooler in good condition? Seal's infact on shipping container/cooler? Seal's infact on sample bottles? In of custody present? Seal's infact on sample bottles? In of custody present? Seal's infact on sample bottles? In of Custody signed when relinquished and received? In of Custody signed when relinquished and received? In of Custody signed when relinquished and received? In of custody agrees with semale label(s) In of custody					
and Seals intact on shipping container/cooler? The seals intact on sample bottles? Yes No Tot present on of custody resent? The individual resent? The individual resent of the individual received? served within sufficient hold time? The individual reserved received within sufficient hold time? The individual reserved received within sufficient hold time? The individual reserved received within sufficient hold time? The individual reserved reserved within sufficient hold time? The individual reserved reserved reserved received reserved r	perature of container/cooler?		_	30 CI	
ody Seals mtact on sample bottles? In of custody present? In of Custody present? In of Custody present? In of Custody signed when relinquished and received? In of Sustody signed when relinquished and received? In of Sustody signed when relinquished In of Sustody signed when relinquished when relinquished? In of Sustody signed when relin	ping container/cooler in good condition?			\$	
n of custody present? gle instructions complete on Chain of Custody? gle instructions complete on Chain of Custody? gle of Custody signed when relinquished and received? gle of Custody? gle of C	pay Seals intaction shipping container/cooler?		·- ·- · · · · · · · · · · · · · · · · ·		
pie Instructions complete on Chain of Custody? In of Custody signed when relinquished and received? In of custody agrees with semale label(s) In of custody agrees with semale label(s) In of custody agrees with semale label(s) In of custody agrees with semale label(s) In of custody agrees with semale label(s) In of custody agrees with semale and intact? In of custody agrees with semale and intact? In of custody agrees with semale and intact? In of custody agrees with semale and intact? In of custody agrees with semale and intact and intact agrees are agreed and intact agrees and intact? In of custody agrees within sufficient of Custody? In of custody agrees within sufficient hold time? In of custody? In of custody agrees within sufficient hold time? In of custody? In of custody agrees within sufficient hold time? In of custody? In of cus	cdy Seals intaction sample bottles?			Crici present	
in of Custody signed when relinquished and received? In of custody agrees with sample label(s) In of custody agrees with sample label(s) In of custody agrees with sample label(s) In of custody agrees with sample label(s) In of sustody agrees with sample label(s) In of sustody agrees with sample and intact? In of sustody agrees with sample and intact? In of sustody agrees with sample and intact? In of sustody agrees with sample and intact with a sustody agree with a sustody and agrees agree with a sustody? In of sustody agrees with a sustody agree with a sustod	n of custody present?				
In of custody agrees with sample label(s) In an er label's legible and intact? In an er label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's legible and intact? In a label's	pie Instructions complete on Unain of Custody/				
Parliance Documentation: Variance Documentation: Variance Documentation: Variance Documentation: Variance Documentation: Variance Documentation: Contacted by: Parading	in of Custody signed when reiniquished and received?				
No location of custody? Solid No	In Ct Custody agrees with semble tabalts)				
rotes in proper container/bottle? Contacted by: No	rainet labe's tegrole and intract:				
role bottles intact? Servations documented on Chain of Custody? Servations documented on Chain of Custody. Servations documented on Chain of Custody.	notes in proces contained bottle?			<u> </u>	
variance Documentation: Variance Documentation: Variance Person Date/Time: Contacted by:	notes croperly preserved?				
Servations documented on Chain of Custody? Italianers documented on Chain of Custody. Italianers documented on Chain of Custody. Italianers documented on Chain of Custody. Italianers documented				:	
Variance Documentation: Person Date/Time: Contacted by:	sarvations documented on Chain of Custody?				
Variance Documentation: Variance Documentation: Contacted by: Contacted	itainers accumented on Chain of Custody?			4	4
Variance Documentation: Date/Time: Contacted by:	figurest sample amount for indicated test?				
Variance Documentation: Date/Time: C samcles have zero headspace? Variance Documentation: Contacted by: Sparding	samples received within sufficient hold time?		No		
Variance Documentation: Date/Time:Contacted by:			No	Not Applicable	
egarding Date/Time:Contacted by:	, c. 6556. Valiono.				
egarding Date/Time:Contacted by:					
egarding Date/Time:Contacted by:			-		
egarding Date/Time:Contacted by:					
egarding Date/Time:Contacted by:					
egarding Date/Time:Contacted by:					
egarding	Variance Docu	imentatio	on:		
egarding	entact Person Date/Time:			Contacted by:	
	egarding				
erractive Action Taken:	<u> </u>				
orractive Action Taken:			·		
orrective Action Taken:					
STOCK VE FIGHT.	orractive Action Taken:				
	MOSE VE MOROH LEINETT,				



Analytical Report

Prepared for:

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

Project: Chesapeake/ E.W. Walden No. 4'SWD

Project Number: 160053

Location: UL-K, Sec. 15, T 22 S, R 37 E

Lab Order Number: 6F09011

Report Date: 06/14/06

Project Chesapeake/ E.W Walden No 4 SWD

PO Box 1558 Eunice NM, 88231 Project Manager Iam Olness

Project Number 160053

Fax 505-394-2601

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PA2-BH-1 3'	6F09011-01	Soil	06/07/06 09.05	06/09/06 11 00
PA2-BH-2 3'	6F09011-02	Soil	06/07/06 09 20	06/09/06 11 00
PA2-BH-3 2'	6F09011-03	Soil	06/07/06 09.35	06/09/06 11 00
PA2-BH-4 2'	6F09011-04	Soil	06/07/06 09 50	06/09/06 11:00
PA2-BH-5 2'	6F09011-05	Soil	06/07/06 10 20	06/09/06 11:00
PA2-BH-6 2'	6F09011-06	Soil	06/07/06 10 35	06/09/06 11 00
PA2-BH-7 2'	6F09011-07	Soil	06/07/06 10 50	06/09/06 11.00
PA2-BH-8 3'	6F09011-08	Soil	06/07/06 14 50	06/09/06 11 00
PA2-SW-1 2'	6F09011-09	Soil	06/07/06 13.30	06/09/06 11:00
PA2-SW-2 3'	6F09011-10	Soil	06/07/06 13.45	06/09/06 11.00
PA2-SW-3 2'	6F09011-11	Soil	06/07/06 14 10	06/09/06 11 00
PA2-SW-4 2'	6F09011-12	Soil	06/07/06 14.25	06/09/06 11.00

Project Chesapeake/ E W Walden No 4 SWD

Fax. 505-394-2601

PO Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager Iain Olness

Organics by GC **Environmental Lab of Texas**

	Dt-	Reporting	I for the						
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PA2-BH-1 3' (6F09011-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	11	н	46	tt	u	n	
Ethylbenzene	ND	0.0250	**	**	11	п	**	"	
Xylene (p/m)	ND	0 0250	**	п	"	"	n	n	
Xylene (o)	ND	0 0250	"		н		**	"	
Surrogate a,a,a-Trifluorotoluene		800%	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		81.2 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	11	**	н	11	II	"	
Carbon Ranges C28-C35	ND	10.0	4	u	н	n	"	н	
Total Hydrocarbon nC6-nC35	ND	10 0	u	11	**	11	n	н	
Surrogate 1-Chlorooctane		84.0 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		84.4 %	70-1	30	"	"	"	"	
PA2-BH-2 3' (6F09011-02) Soil								4	
Benzene	ND	0 0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	11	"	"	**	"	ti.	
Ethylbenzene	ND	0 0250	11	"	"	**	**		
Xylene (p/m)	ND	0.0250	"	"	tı	"	н	и	
Xylene (o)	ND	0.0250	н	"	"	n 3 /	"	14	
Surrogate a,a,a-Trifluorotoluene		83 8 %	80-1	20	"	n	"	"	
Surrogate 4-Bromofluorobenzene		83.5 %	80-1.	20	,,	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	n	11	**	n	"	"	
Carbon Ranges C28-C35	ND	100	41	**	"	11	11	,,	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	**	"	"	0	
Surrogate 1-Chlorooctane		73.0 %	70-1.	30	"	n	"	"	
Surrogate 1-Chlorooctadecane		748%	70-1.	30	"	"	n	n,	
PA2-BH-3 2' (6F09011-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Foluene	ND	0.0250	"	H	11	**	п	11	
Ethylbenzene	ND	0 0250	п	**		II.	11	"	
Xylene (p/m)	ND	0.0250	и		n	11	**	и	
Xylene (o)	ND	0.0250	, "	н	н	#	**	11	
Surrogate a,a,a-Trifluorotoluene		85.0 %	80-1.	20	u	"	"	11	
Surrogate 4-Bromofluorobenzene		83.0 %	80-1.	20	"	"	"	"	

Environmental Lab of Texas

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

P.O. Box 1558 Eunice NM, 88231 Project Chesapeake/ E.W. Walden No. 4 SWD

Project Number 160053 Project Manager. Iain Olness

Fax 505-394-2601

Organics by GC Environmental Lab of Texas

Analysis	D 1	Reporting	**						
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PA2-BH-3 2' (6F09011-03) Soil									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	"	"	II	n	11	•	
Total Hydrocarbon nC6-nC35	ND	10.0	11	11	W	u	и	11	
Surrogate 1-Chlorooctane		798%	70-1	30	"	n	"	"	
Surrogate 1-Chlorooctadecane		80.2 %	70-1	30	"	"	"	"	
PA2-BH-4 2' (6F09011-04) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0 0250	"	"	11	11	п	**	
Ethylbenzene	ND	0.0250	п	11	10	"	"	**	
Xylene (p/m)	ND	0.0250	"	n	"	ш	"	11	
Xylene (o)	ND	0 0250	н	"	n	**	н	" - .	
Surrogate a,a,a-Trifluorotoluene		100 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		81.5 %	80-1	20	"	"	~ "	4 · "	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	**	п		"	"	"	
Carbon Ranges C28-C35	ND	10 0	n .	"	11	**	**	II .	
Total Hydrocarbon nC6-nC35	ND	10.0	"	н	n	н	**	п	
Surrogate 1-Chlorooctane		79 4 %	70-1	30	"	,,	"	"	
Surrogate 1-Chlorooctadecane		80.2 %	70-1	30	"	" "	"	"	
PA2-BH-5 2' (6F09011-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	11	n	"	"	u	и	
Ethylbenzene	ND	0 0250		11	**	ıı	11	n	
Xylene (p/m)	ND	0.0250	"	"	11	н	"	"	
Xylene (o)	ND	0 0250	n	н		"	"	n	
Surrogate. a,a,a-Trıfluorotoluene		84 0 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		84.8 %	80-1.	20	"	n	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	11	"	и	"	**	
Carbon Ranges C28-C35	ND	10.0	"	"	н	II.	11	11	
Total Hydrocarbon nC6-nC35	ND	10 0	н	н	"	**	"	"	
Surrogate 1-Chlorooctane		72.0 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		72 2 %	70-1	30	n	n	n	"	

Environmental Lab of Texas

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

PO Box 1558 Eunice NM, 88231 Project Chesapeake/ E W Walden No. 4 SWD

Project Number 160053 Project Manager lain Olness

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA2-BH-6 2' (6F09011-06) Soil				Direction	Daten	rrepared	Analyzed	Method	ivotes
Benzene	ND	0 0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	н	п	
Ethylbenzene	ND	0.0250	"	If	н	n		H	
Xylene (p/m)	ND	0.0250	"	п	н	п	"	H	
Xylene (o)	ND	0.0250	"	"		"	n	H	
Surrogate a,a,a-Trifluorotoluene		88.0 %	80-12	20	"	"	"	n .	
Surrogate 4-Bromofluorobenzene		84.5 %	80-12	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	ш	**	11	н	11	и	
Carbon Ranges C28-C35	ND	10.0	"	11	п	**	"	**	
Total Hydrocarbon nC6-nC35	ND	10.0	н	11	"	"	"	и	
Surrogate 1-Chlorooctane		746%	70-13	30	"	"	"	" -	
Surrogate 1-Chlorooctadecane		75.8 %	70-13		"	"	"	"	
							-	4	
PA2-BH-7 2' (6F09011-07) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0 0250		"	н	"	n	n	
Ethylbenzene	ND	0.0250	11	n	**	**	"	,	
Xylene (p/m)	ND	0.0250	н	41	"	" 6.5	"	ч	
Xylene (o)	ND	0.0250	"	"	"	" %,	н	11	
Surrogate. a,a,a-Trıfluorotoluene		85.5 %	80-12	0	"	"	"	"	
Surrogate 4-Bromofluorobenzene		90.2 %	80-12	0	"	"	n	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	11	"	n	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	11	"	**	u	и	
Total Hydrocarbon nC6-nC35	ND	10.0	11	,ı	"	"	"	#	
Surrogate 1-Chlorooctane		71.6 %	70-13	0	"	"	"	"	
Surrogate 1-Chlorooctadecane		71.2 %	70-13	0	"	"	n	и	
PA2-BH-8 3' (6F09011-08) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	<u> </u>
Toluene	ND	0 0250	11	"	"	"	"	и	
Ethylbenzene	ND	0.0250	11	•	11	"	н	11	
Xylene (p/m)	ND	0.0250		u	"	ч	**	u	
Xylene (o)	ND	0 0250	**	"	11	H	н	11	
Surrogate a,a,a-Trifluorotoluene		92.8 %	80-12	0	,,	"	"	,,	
Surrogate 4-Bromofluorobenzene		90.5 %	80-12		"	"	"	"	
Carbon Ranges C6-C12	ND		mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
			-						

Environmental Lab of Texas

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

Page 4 of 15

Fax 505-394-2601

Project Chesapeake/ E W Walden No. 4 SWD

Fax. 505-394-2601

PO Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager lain Olness

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting	Linuta	D 1	ъ.				
	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PA2-BH-8 3' (6F09011-08) Soil									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	l	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10.0	1)	"	"	"	**	ш	
Total Hydrocarbon nC6-nC35	ND	10.0	,,	"	11	11	**	п	
Surrogate 1-Chlorooctane		816%	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		82 0 %	70-1	30	n	"	"	"	
PA2-SW-1 2' (6F09011-09) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	tt	н	*	"	n .	н	
Ethylbenzene	ND	0.0250	п	**	n	n	11	н	
Xylene (p/m)	ND	0.0250	11	**	11	п	**	11	
Xylene (o)	ND	0.0250	"	•	"	"	•	"	
Surrogate a,a,a-Trifluorotoluene		85.2 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		810%	80-1	20	"	"	·- "	4 . "	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	ı	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	п	"	n	"	**	
Carbon Ranges C28-C35	ND	10 0	"	H	"	n	11	H	
Total Hydrocarbon nC6-nC35	ND	10 0	*	μ	n	н	ii .	"	
Surrogate: 1-Chlorooctane		85 0 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		84.4 %	70-1	30	"	" .	"	"	
PA2-SW-2 3' (6F09011-10) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	11	**	•	·	н	и	
Ethylbenzene	ND	0.0250	"	**	**	"	11	n .	
Xylene (p/m)	ND	0.0250		**	11	"	n	н	
Xylene (o)	ND	0.0250	п	**	11	"	n	10	
Surrogate: a,a,a-Trifluorotoluene		84 8 %	80-1	20	"	"	,,	"	
Surrogate 4-Bromofluorobenzene		82.2 %	80-1	20	n	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60931	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	и	**	"	"	11	
Carbon Ranges C28-C35	ND	10 0	11	**	**	"	"	11	
Total Hydrocarbon nC6-nC35	ND	10.0	н	11	п	11	11	н	
Surrogate 1-Chlorooctane		82 4 %	70-1	30	"	"	n	"	
Surrogate 1-Chlorooctadecane		81 2 %	70-1		"	"	,,	"	

Environmental Lab of Texas

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

P.O. Box 1558 Eunice NM, 88231 Project Chesapeake/ E W Walden No 4 SWD

Project Number 160053
Project Manager lain Olness

Fax: 505-394-2601

Organics by GC

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA2-SW-3 2' (6F09011-11) Soil			- •			-			
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	n	"	*	11	n .	**	
Ethylbenzene	ND	0 0250	H	11	"	"	"	**	
Xylene (p/m)	ND	0 0250	и	11		и	n	"	
Xylene (o)	ND	0.0250	n	"	11	**	Ħ	n	
Surrogate -a,a,a-Trifluorotoluene		94.8 %	80-1	20	"	"	,,	"	
Surrogate · 4-Bromofluorobenzene		86.0 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	I	EF60932	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	100	н	н	н	n	**	"	
Carbon Ranges C28-C35	ND	10.0	**	11		**	**	11	
Total Hydrocarbon nC6-nC35	ND	10.0	11	n	**	"	"	и	
Surrogate 1-Chlorooctane		81.4 %	70-1	30	"	"	"	" - , .	
Surrogate 1-Chlorooctadecane		81.8 %	70-1	30	"	"	"	"	
PA2-SW-4 2' (6F09011-12) Soil								4	
Benzene	ND	0.0250	mg/kg dry	25	EF61305	06/13/06	06/14/06	EPA 8021B	_
Toluene	ND	0.0250	"	"	н	**	**	"	
Ethylbenzene	ND	0.0250	11	11	**	и	11	**	
Xylene (p/m)	ND	0.0250	"	н	"	"	"	11	
Xylene (o)	ND	0.0250	н	ıı	11	" 🖔	"	D	
Surrogate. a,a,a-Trifluorotoluene		97.5 %	80-1	20	n	"	"	"	
Surrogate 4-Bromofluorobenzene		92.5 %	80-1.	20	"	n	"	n	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	i	EF60932	06/09/06	06/11/06	EPA 8015M	
Carbon Ranges C12-C28	ND	100	**	"	**	н	n	**	
Carbon Ranges C28-C35	ND	10.0	"	"	"	**	11	п	
Total Hydrocarbon nC6-nC35	ND	10.0	11	**	**	11	**	n.	
Surrogate 1-Chlorooctane		83.6 %	70-1.	30	"	"	"	"	
Surrogate. 1-Chlorooctadecane		87.4 %	70-1.	30	"	"	"	"	

P.O Box 1558 Eunice NM, 88231 Project Chesapeake/ E W Walden No. 4 SWD

Project Number 160053
Project Manager. Iain Olness

Fax 505-394-2601

General Chemistry Parameters by EPA / Standard Methods Environmental Lab of Texas

		Reporting					-		
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA2-BH-1 3' (6F09011-01) Soil									
Chloride	100	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	4.3	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	34.5	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-BH-2 3' (6F09011-02) Soil									
Chloride	28.2	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	1.6	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	28.0	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-BH-3 2' (6F09011-03) Soil									
Chloride	31.3	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	3.3	0.1	%	1	EF61101	06/10/06	06/11/06	% calculațion	
Sulfate	234	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-BH-4 2' (6F09011-04) Soil								4	<u>.</u>
Chloride	77.6	10.0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	6.5	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	543	10.0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-BH-5 2' (6F09011-05) Soil						6			
Chloride	520	10 0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	8.5	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	724	10 0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300.0	
PA2-BH-6 2' (6F09011-06) Soil									
Chloride	26.3	10 0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	4.5	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	559	10.0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-BH-7 2' (6F09011-07) Soil							·		
Chloride	332	10 0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	4.1	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	74.3	10.0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	

PO Box 1558

Eunice NM, 88231

Project Chesapeake/ E.W. Walden No 4 SWD

Project Number 160053

Project Manager Iain Olness

Fax. 505-394-2601

General Chemistry Parameters by EPA / Standard Methods Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA2-BH-8 3' (6F09011-08) Soil									
Chloride	135	10.0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300.0	
% Moisture	5.2	0.1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	158	10 0	mg/kg	20	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-SW-1 2' (6F09011-09) Soil									
Chloride	12.2	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	4.2	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	19.0	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-SW-2 3' (6F09011-10) Soil									
Chloride	15.7	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	3.9	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	24.4	5 00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-SW-3 2' (6F09011-11) Soil								ત ·	
Chloride	17.8	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	6.0	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	471	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
PA2-SW-4 2' (6F09011-12) Soil						* '			
Chloride	12.4	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300 0	
% Moisture	1.8	0 1	%	1	EF61101	06/10/06	06/11/06	% calculation	
Sulfate	232	5.00	mg/kg	10	EF61006	06/10/06	06/10/06	EPA 300.0	

Project Chesapeake/ E W. Walden No 4 SWD

Deceat Number

Project Number, 160053

Fax 505-394-2601

P O Box 1558 Eunice NM, 88231

Project Manager: Iain Olness

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF60931 - Solvent Extraction (GC)										
Blank (EF60931-BLK1)				Prepared (06/09/06 A	nalyzed 06	5/10/06			
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	n .							
Carbon Ranges C28-C35	ND	10 0								
Total Hydrocarbon nC6-nC35	ND	10 0	11							
Surrogate 1-Chlorooctane	37 7		mg/kg	50 0		75 4	70-130			
Surrogate 1-Chlorooctadecane	39 5		"	50 0		79 0	70-130			
LCS (EF60931-BS1)				Prepared (06/09/06 A	nalyzed 06	5/10/06			
Carbon Ranges C6-C12	502	10 0	mg/kg wet	500		100	75-125			
Carbon Ranges C12-C28	538	100	"	500		108	75-125			
Total Hydrocarbon nC6-nC35	1040	10.0	n	1000		104	75-125			
Surrogate 1-Chlorooctane	58 2		mg/kg	50 0		116	70-130			
Surrogate 1-Chlorooctadecane	58 2		"	50 0		116	70-130		٠.	
Calibration Check (EF60931-CCV1)				Prepared. (06/09/06 A	nalyzed. 06	/11/06 -	4		
Carbon Ranges C6-C12	269		mg/kg	250		108	80-1-20			
Carbon Ranges C12-C28	290		11	250		116	80-120			
Total Hydrocarbon nC6-nC35	559		**	500		112	80-120			
Surrogate 1-Chlorooctane	51 4		"	50 0		103	70-130			
Surrogate. 1-Chlorooctadecane	54 3		"	50 0		109	70-130	•		
Matrix Spike (EF60931-MS1)	Sou	rce: 6F09002	-40	Prepared (06/09/06 A	nalyzed 06	/11/06			
Carbon Ranges C6-C12	670	10 0	mg/kg dry	639	ND	105	75-125			
Carbon Ranges C12-C28	691	10 0	н	639	ND	108	75-125			
Total Hydrocarbon nC6-nC35	1360	10.0	11	1280	ND	106	75-125			
Surrogate 1-Chlorooctane	46 7		mg/kg	50 0		93 4	70-130			
Surrogate 1-Chlorooctadecane	42 8		"	50 0		85.6	70-130			

Project Chesapeake/ E W Walden No 4 SWD

Fax 505-394-2601

PO. Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager Iain Olness

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF60931 - Solvent Extraction (GC)	- Court	211111	21113	2,0,00	- Court	701000	2111110		2111111	110103
Matrix Spike Dup (EF60931-MSD1)	Sou	rce: 6F09002	-40	Prepared ()6/09/06 Aı	nalyzed 06	5/11/06	······		,
Carbon Ranges C6-C12	668	100	mg/kg dry	639	ND	105	75-125	0 299	20	
Carbon Ranges C12-C28	697	10 0	"	639	ND	109	75-125	0 865	20	
Total Hydrocarbon nC6-nC35	1360	10 0	и	1280	ND	106	75-125	0 00	20	
Surrogate 1-Chlorooctane	46 4		mg/kg	50 0		92.8	70-130			
Surrogate 1-Chlorooctadecane	43 6		"	50 0		87.2	70-130			
Batch EF60932 - Solvent Extraction (GC)										
Blank (EF60932-BLK1)				Prepared: 0	6/09/06 Aı	nalyzed. 06	/11/06			-
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	100	11							
Carbon Ranges C28-C35	ND	10 0	н							
Total Hydrocarbon nC6-nC35	ND	10.0	н						-	
Surrogate 1-Chlorooctane	38 4		mg/kg	50 0		76 8	70-130		<u></u>	
Surrogate 1-Chlorooctadecane	40 2		"	50 0		80 4	70-130	વ		
LCS (EF60932-BS1)				Prepared. 0	6/09/06 Ar	nalyzed 06	/11/06			
Carbon Ranges C6-C12	518	10.0	mg/kg wet	500		104	75-125			
Carbon Ranges C12-C28	552	10 0	11	500		110	75-125			
Total Hydrocarbon nC6-nC35	1070	100		1000		107	75-125			
Surrogate 1-Chlorooctane	59 5		mg/kg	50 0		119	70-130	-		
Surrogate 1-Chlorooctadecane	58 7		#	50 0		117	70-130			
Calibration Check (EF60932-CCV1)				Prepared: 0	6/09/06 An	,	/12/06			
Carbon Ranges C6-C12	267		mg/kg	250		107	80-120			
Carbon Ranges C12-C28	297		n	250		119	80-120			
Total Hydrocarbon nC6-nC35	564		"	500		113	80-120			
Surrogate 1-Chlorooctane	51 5		"	50 0		103	70-130		~	
Surrogate 1-Chlorooctadecane	54 7		"	50.0		109	70-130			

Eunice NM, 88231

P.O Box 1558

Project Chesapeake/ E W Walden No 4 SWD

Project Number 160053

Project Manager Iain Olness

Fax. 505-394-2601

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF60932 - Solvent Extraction (GC)										
Matrix Spike (EF60932-MS1)	Sour	ce: 6F09011	-11	Prepared (06/09/06 Ai	nalyzed 06	/12/06			
Carbon Ranges C6-C12	551	100	mg/kg dry	532	ND	104	75-125			
Carbon Ranges C12-C28	588	100	**	532	ND	111	75-125			
Total Hydrocarbon nC6-nC35	1140	10 0	u	1060	ND	108	75-125			
Surrogate 1-Chlorooctane	51 3		mg/kg	50 0		103	70-130			
Surrogate 1-Chlorooctadecane	49 4		"	500		98 8	70-130			
Matrix Spike Dup (EF60932-MSD1)	Sour	ce: 6F09011	-11	Prepared. (06/09/06 Aı	nalyzed 06	/12/06			
Carbon Ranges C6-C12	558	10 0	mg/kg dry	532	ND	105	75-125	1 26	20	
Carbon Ranges C12-C28	591	100	"	532	ND	111	75-125	0 509	20	
Total Hydrocarbon nC6-nC35	1150	10 0	tr.	1060	ND	108	75-125	0.873	20	
Surrogate 1-Chlorooctane	52 0		mg/kg	500		104	70-130			
Surrogate 1-Chlorooctadecane	49 9		"	50.0		998	70-130			
Batch EF61305 - EPA 5030C (GC) Blank (EF61305-BLK1)				Prepared &	Analyzed	06/13/06	4	4		-
Benzene	ND	0 0250	mg/kg wet				-			
Toluene	ND	0 0250	11							
Ethylbenzene	ND	0 0250	"							
Xylene (p/m)	ND	0 0250	**							
Xylene (o)	ND	0 0250	н					~		
Surrogate a,a,a-Trifluorotoluene	32.1		ug/kg	40 0		80.2	80-120			
Surrogate 4-Bromofluorobenzene	32 7		"	40 0		818	80-120			
LCS (EF61305-BS1)				Prepared &	Analyzed	06/13/06				
Benzene	1 13	0 0250	mg/kg wet	1 25		90 4	80-120			
Toluene	1 21	0 0250	*	1 25		96.8	80-120			
Ethylbenzene	1 08	0 0250	11	1 25		86 4	80-120			
Xylene (p/m)	2.47	0 0250	п	2 50		98 8	80-120			
Xylene (o)	1.30	0 0250	"	1 25		104	80-120			
Surrogate a,a,a-Trıfluorotoluene	38 9		ug/kg	40 0		97 2	80-120			
Surrogate 4-Bromofluorobenzene	39 9		"	40 0		998	80-120			

P O. Box 1558 Eunice NM, 88231 Project Chesapeake/ E W Walden No 4 SWD

Project Number. 160053
Project Manager lain Olness

Fax. 505-394-2601

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF61305 - EPA 5030C (GC)										
Calibration Check (EF61305-CCV1)				Prepared. (06/13/06 A	nalyzed 06	5/14/06			
Benzene	0 0469		mg/kg wet	0 0500		93 8	80-120			
Toluenc	0 0490		**	0 0500		98 0	80-120			
Ethylbenzene	0 0521		п	0 0500		104	80-120			
Xylene (p/m)	0 0979		"	0 100		97 9	80-120			
Xylene (o)	0.0528		н	0 0500		106	80-120			
Surrogate a,a,a-Trifluorotoluene	35 9		ug/kg	40 0		89 8	80-120			
Surrogate 4-Bromofluorobenzene	41 9		"	40 0		105	80-120			
Matrix Spike (EF61305-MS1)	Sou	rce: 6F09002	-40	Prepared. 0	06/13/06 Aı	nalyzed 06	/14/06			
Benzenc	1 53	0 0250	mg/kg dry	1 60	ND	95 6	80-120			
Toluene	1 47	0 0250	"	1.60	ND	919	80-120			
Ethylbenzenc	1 35	0.0250	"	1 60	ND	84 4	80-120			
Xylene (p/m)	2 98	0 0250	**	3 19	ND	93 4	80-120		. .	
Xylene (o)	1 57	0 0250	*	1 60	ND	98 1	80-120			
Surrogate a,a,a-Trifluorotoluene	37 7		ug/kg	40 0		94 2	80-120	4 .		
Surrogate 4-Bromofluorobenzene	37 9		"	40 0		94 8	80-120			
Matrix Spike Dup (EF61305-MSD1)	Sou	rce: 6F09002	-40	Prepared. 0	6/13/06 At	nalyzed 06	/14/06			
Benzene	1 56	0 0250	mg/kg dry	1 60	ND	97 5	80-120	1 97	20	
Tolucne	1 65	0 0250	*1	1 60	ND	103	80-120	11 4	20	
Ethylbenzene	1 51	0 0250	u	1 60	ND	94 4	80-120	112	20	
Kylene (p/m)	3 33	0 0250	ti	3 19	ND	104 🖔 🥆	80-120	10.7	20	
Kylene (o)	1 75	0 0250	**	1 60	ND	109 🖰	80-120	10 5	20	
Surrogate a,a,a-Trıfluorotoluene	39 I		ug/kg	40 0		97.8	80-120			
Surrogate 4-Bromofluorobenzene	38 4		"	40 0		96 0	80-120			

Project Chesapeake/ E W Walden No 4 SWD

P O. Box 1558 Project Number. 160053
Eunice NM, 88231 Project Manager I ain Olness

Fax 505-394-2601

General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF61006 - Water Extraction		· · · · · · · · · · · · · · · · · · ·								
Blank (EF61006-BLK1)				Prepared &	Analyzed	06/10/06				
Sulfate	ND	0 500	mg/kg							
Chloride	ND	0 500	11							
LCS (EF61006-BS1)				Prepared &	Analyzed	06/10/06				
Chloride	10 2	0 500	mg/kg	10 0		102	80-120			
Sulfate	8 94	0 500	II	10 0		89 4	80-120			
Calibration Check (EF61006-CCV1)				Prepared &	Analyzed	06/10/06				
Chloride	9 81		mg/L	10 0		98 1	80-120			
Sulfate	8 74		"	10 0		87 4	80-120			
Duplicate (EF61006-DUP1)	Source	e: 6F09006-	01	Prepared &	Analyzed	06/10/06				
Sulfate	66.3	5 00	mg/kg		64 8			2 29	20	
Chloride	375	5 00	н		363			3 25	<u>20</u> .	
Duplicate (EF61006-DUP2)	Sourc	e: 6F09011-	06	Prepared &	Analyzed.	06/10/06				
Sulfate	584	10.0	mg/kg		559		4	4 37	20	
Chloride	22 7	10 0	11		26 3		~	14 7	20	
Matrix Spike (EF61006-MS1)	Source	e: 6F09006-	01	Prepared &	Analyzed:	06/10/06				
Chloride	472	5 00	mg/kg	100	363	109	80-120			
Sulfate	125	5 00	11	100	64 8	60 2	75-125	•		QS-
Matrix Spike (EF61006-MS2)	Source	Prepared &	Analyzed	06/10/06						
Sulfate	694	10.0	mg/kg	200	559	67 5	75-125			QS-
Chloride	203	10 0	11	200	26 3	88 4	80-120			

Environmental Plus, Incorporated Project Chesapeake/ E.W. Walden No 4 SWD Fax 505-394-2601

P O Box 1558 Project Number 160053
Eunice NM, 88231 Project Manager Iain Olness

General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF61101 - General Preparation	(Prep)							·		
Blank (EF61101-BLK1)				Prepared. (06/10/06 A	nalyzed. 06	/11/06			
% Solids	100		%							
Duplicate (EF61101-DUP1)	Sour	ce: 6F08014-	01	Prepared ()6/10/06 A	nalyzed 06	/11/06			
% Solids	88 3		%		88 8			0 565	20	
Duplicate (EF61101-DUP2)	Sour	ce: 6F09002-	02	Prepared: (06/10/06 A	nalyzed 06	/11/06			
% Solids	99 2		%		99.0			0 202	20	
Duplicate (EF61101-DUP3)	Sour	ce: 6F09002-	22	Prepared. (06/10/06 A	nalyzed 06	11/06			
% Solids	95 8		%		95 1			0 733	20	
Duplicate (EF61101-DUP4)	Sour	ce: 6F09007-0	02	Prepared 0	6/10/06 A	nalyzed. 06	11/06			
% Solids	91 0		%		90.4			0 662	20	
Duplicate (EF61101-DUP5)	Sour	ce: 6F09012-0)1	Prepared. 0	6/10/06 A	nalyzed. 06/	11/06		-	
% Solids	90 6		%		90 9			0 331	20	

Environmental Plus, Incorporated Project Chesapeake/ E.W. Walden No. 4 SWD Fax 505-394-2601

P O Box 1558 Eunice NM, 88231 Project Number 160053 Project Manager lain Olness

Notes and Definitions

QS-1 The spike recovery value is outside Laboratory historical or method prescribed QC limits

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:	Kaland	K. June

Date.

6/14/2006

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.

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

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

Environmental Plus, Inc.

Chain of Custody Form

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

P.O. Box 1558, Eunice, NM 88231

Lab: ELT

Environmental Plus ger lain Olness P.O. BOX 1558 Eunice New Mexico 505-394-3481 / 505-3 Chesapeake Energy E. W. Walden No. 4 UL-K, Sec. 15, T 22 3 e 160053 Sebastian Romero SAMPLE I.D.	882 394- SWI S, R	231 260 D														A	VAL	YS		EQ	∃E S	i e	
P.O. BOX 1558 Eunice New Mexico 505-394-3481 / 505-3 Chesapeake Energy E. W. Walden No. 4 UL-K, Sec. 15, T 22 3 160053 Sebastian Romero	394- SWI S, R	260 D																					
Eunice New Mexico 505-394-3481 / 505-3 Chesapeake Energy E. W. Walden No. 4 UL-K, Sec. 15, T 22 160053 Sebastian Romero	394- SWI S, R	260 D							•	=													
505-394-3481 / 505-3 Chesapeake Energy E. W. Walden No. 4 UL-K, Sec. 15, T 22 Sec. 160053 Sebastian Romero	394- SWI S, R	260 D								=	E P												
Chesapeake Energy E. W. Walden No. 4 UL-K, Sec. 15, T 22 160053 Sebastian Romero	SWI S, R	D									The state of the s												
E. W. Walden No. 4: UL-K, Sec. 15, T 22: 160053 Sebastian Romero	S, R		E								THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAM									 			
UL-K, Sec. 15, T 22 see 160053 se Sebastian Romero	S, R		E																				
e 160053 e Sebastian Romero	1	37	E																				
e Sebastian Romero	OMP.								Att	n: la	ain (Olness											
	OMP.		_						F	ОВ	ox	1558,			1								Ì
SAMPLE I.D.	OMP.							Eu	ınic	e, Ni	M 8	8231-1558				ו					Ì		Ì
SAMPLE I.D.	S S		<u> </u>		MAT	RIX			PR	ESE	RV.	SAMPLI	NG										Î
	(G) RAB OR (C) OMP.	# CONTAINERS	GROUND WATER	WASTEWATER	_	CRUDE OIL	SLUDGE	отнев:	ACID/BASE	ICE/COOL	отнея	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (CI)	SULFATES (SO4")	Hď	TCLP	OTHER >>>	РАН		
		-	ļ		_				_										<u> </u>	<u> </u>	<u> </u>		
ستند الأساس فأت السار المساوات المساوات المساوات		٠	├	<u> </u>	_		L_	<u> </u>											_	<u> </u>			
			<u> </u>	ļ				 	_	_					_	_			_	Ļ	L		
		- -	<u> </u>				<u> </u>		<u> </u>	_				_					<u> </u>	<u> </u>			
		-	<u> </u>	<u> </u>			<u> </u>	<u> </u>	Ļ	_								<u> </u>	<u> </u>	<u> </u>	Ļ		
	_	-	<u> </u>		_			<u>L</u> .	<u> </u>									L.,	<u> </u>	L			
			<u> </u>		نصحوا			_	_					_				<u> </u>	<u> </u>				[
		-	<u> </u>					_	<u> </u>	_					_			<u> </u>	<u> </u>	<u> </u>			
		1	<u> </u>	<u> </u>	_			 	_	_						_		<u> </u>	<u> </u>	<u> </u>	<u> </u>		
PA2-SW-2 (3')	X	1	<u> </u>		X	: XX				Ľ		07-Jun-06	13:45	X	<u>X</u>	X	X			<u> </u>]		
7 Tang 7 1 9 Date 19100 Ting 1, 00 Sample	Rece e Cool	ived U	By ()	ad sta	un :	28		By:		REM	ARKS	S:			et								
	A2-BH-1 (3') A2-BH-2 (3') A2-BH-3 (2') A2-BH-4 (2') A2-BH-5 (2') A2-BH-6 (2') A2-BH-7 (2') A2-BH-8 (3') A2-SW-1 (2') A2-SW-2 (3') Date 9 00 Time 7 / 9 Date 9 00 Time 7 / 9 Date 9 00 Time 7 / 9 Date 9 00 Sample	A2-BH-1 (3') A2-BH-2 (3') A2-BH-3 (2') A2-BH-4 (2') A2-BH-5 (2') A2-BH-6 (2') A2-BH-8 (3') A2-BH-8 (3') A2-SW-1 (2') A2-SW-2 (3') A2-BH-1 (3') A2-BH-2 (3') A2-BH-3 (2') A2-BH-4 (2') A2-BH-5 (2') A2-BH-6 (2') A2-BH-7 (2') A2-BH-8 (3') A2-SW-1 (2') A2-SW-2 (3)	A2-BH-1 (3') A2-BH-2 (3') A2-BH-3 (2') A2-BH-4 (2') A2-BH-5 (2') A2-BH-6 (2') A2-BH-7 (2') A2-BH-8 (3') A2-SW-1 (2') A2-SW-2 (3') A2-SW-2 (3') A2-SW-2 (3') A3-SW-2 (3') A3-SW-2 (3') A3-SW-3 (3') A3	A2-BH-1 (3') A2-BH-2 (3') A2-BH-3 (2') A2-BH-4 (2') A2-BH-5 (2') A2-BH-6 (2') A2-BH-7 (2') A2-BH-8 (3') A2-BH-8 (3') A2-SW-1 (2') A2-SW-2 (3)	A2-BH-1 (3') A2-BH-2 (3') A2-BH-3 (2') A2-BH-4 (2') A2-BH-5 (2') A2-BH-6 (2') A2-BH-7 (2') A2-BH-8 (3') A2-BH-8 (3') A2-SW-1 (2') A2-SW-2 (3') Received By: Sample Cool & Intact	A2-BH-1 (3') A2-BH-2 (3') A2-BH-3 (2') A2-BH-4 (2') A2-BH-5 (2') A2-BH-6 (2') A2-BH-7 (2') A2-BH-8 (3') A2-BH-9 (3') A3-BH-9 (3') A3	A2-BH-1 (3')	A2-BH-1 (3')	A2-BH-1 (3')	A2-BH-1 (3') A2-BH-2 (3') A2-BH-3 (2') A2-BH-4 (2') A2-BH-5 (2') X 1	A2-BH-1 (3') A2-BH-2 (3') A2-BH-3 (2') A2-BH-4 (2') A2-BH-5 (2') A2-BH-6 (2') A2-BH-7 (2') A2-BH-8 (3') A2-BH-8 (3') A2-BH-8 (3') A2-BH-8 (3') A2-SW-1 (2') A2-SW-2 (3') Received By: Received By: Received By: REMARKS	A2-BH-1 (3')	A2-BH-1 (3')	A2-BH-1 (3')	A2-BH-1 (3')	A2-BH-1 (3')	A2-BH-1 (3')	A2-BH-1 (3') X 1	A2-BH-1 (3')	A2-BH-1 (3')	A2-BH-1 (3')	A2-BH-2 (3')	

Environmental Plus, Inc.

Chain of Custody Form

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

P.O. Box 1558, Eunice, NM 88231

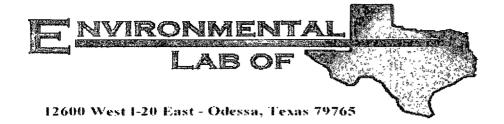
Lab: ELT

	FAX: (505) 394-2601	·										_														
Company Name		nental Plus	, Inc	<u>. </u>								E	3川夏	Γo				Α	NAI	YS	IS F	EQ	UES	J.		
EPI Project Mana	ager lain Olne	SS															Γ									
Mailing Address	P.O. BOX	(1558																l								
City, State, Zip		ew Mexico	882	231								*******	Æ,													
EPI Phone#/Fax#	505-394-3	3481 / 505-3	94-	260	1							1000													ı	
Client Company		ke Energy											I													
Facility Name	E. W. Wa	lden No. 4	SWI)										•												
Location	UL-K, Se	c. 15, T 22 S	3, R	37	E		ŀ				Att	n: I	ain	Olness						1						
Project Reference											P	O E	Зох	1558,												
EPI Sampler Nan	ne Sebastia	n Romero								Eu			_	8231-1558			Ī									
			<u>.</u>				MA	TRIX			PR	ESE	RV.	SAMPLI	NG											
LABI.D.		W-3 (2') X 1				WASTEWATER	SOIL	CRUDE OIL	SLUDGE	отнев:	ACID/BASE	ICE/COOL	отнея	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (CI')	SULFATES (SO4")	Нd	TCLP	OTHER >>>	РАН			
1	PA2-SW-3 (2') X 1						Х					Х		07 - Jun-06	14:10	X	Х	Х	Х							
$\frac{1}{2}$ 2	PA2-SW-4 (2')		X	1			Х					X		07-Jun-06	14:25	Х	X	Х	Χ							
3			_						Ш								<u> </u>									
4			<u> </u>	<u> </u>		L.,										↓_	<u> </u>		<u> </u>							
5			<u> </u>		_											ļ.,	ļ									
6		<u>-</u>	<u> </u>														<u> </u>		-							
7		<u> </u>	-		-	-	\square									<u> </u>	<u> </u>								_	Carlor Carlo
8			_	_		27							_			 	ļ					_				
10																<u> </u>	<u> </u>			_	-			_	_	
10																										
Sampler Relinquished Acun Ul Relinquished by: Delivered by:	ven	Date June 0 is Ting 7 i 9 / Date 9 100 Ting 1 00 Ting 1 00 Sarpple	Pece	10	By: (IE		25h	L)	ecked	By:			ail ro ARKS	esults to: iolnes	s@envplu	ıs.ne	et									
		Yes)		lo							,	V	v/ label											west disease.	

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

1= Time 6/9/06 11:00				
1=1 = UF0901				
als <u>ClC</u>			·	
Sample Receipt	Checkli	st		
sperature of container/cooler?	Yes	No	30 CI	
paing container/cooler in good condition?	YEST	No		
stody Seals intaction shipping container/cooler?	Yes	No	ctor present	
stody Seals intaction sample bottles?	Yes	No	Nict present	
ain of custody present?	X=30 1	No		
pole Instructions complete on Chain of Custody?	823	No		
ain of Custody signed when relinquished and received?	(E3) I	No		
ain of custody agrees with sample label(s)	25	No		
ntainer labels legible and intact?	Tes.	No		
mple Matrix and properties same as on chain of custody?	1	No		
moles in proper container/bottle?	183	No		
moles properly preserved?	183	No		
more botries intact?	A CES	No		- , .
asemations documented on Chain of Custody?) Yes	No	,	
mainers accumented on Chain of Custody?	₹ê§	No		4
ficient sample amount for indicated test?	Yes	No		
samples received within sufficient hold time?) Xes,	ОЙ		
)C samples have zero headspaca?	1 725	No	Not Applicable	
ther observations:				
mer observations.				•
			V.	
Variance Docur	mentatio	on:		
cntact Person: Date/Time:			Contagrad by	
agarding.			_ confected by	
0337111 9				
797				
orrective Action Taken				
		· · · · · · · · · · · · · · · · · · ·		
		.,	7,0	
				~

•
_
1
3
1
•
1
•
-
1
1
i
1
•
1



Analytical Report

Prepared for:

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

Project: Chesapeake/ E.W. Walden No. 4 SWD

Project Number: 160053

Location: UL-K, Sect. 15, T 22 S, R 37 E

Lab Order Number: 6F13008

Report Date: 06/19/06

Project Chesapeake/ E W Walden No 4 SWD

6 ×

Project Number 160053

PO Box 1558 Eunice NM, 88231

Project Manager, Iain Olness

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PA3-BH-1 3'	6F13008-01	Soil	06/09/06 07 35	06/13/06 10.35
PA3-BH-2 3'	6F13008-02	Soil	06/09/06 07 50	06/13/06 10 35
PA3-BH-3 3'	6F13008-03	Soil	06/09/06 08 05	06/13/06 10.35
PA3-SW-1 3'	6F13008-04	Soil	06/09/06 08 20	06/13/06 10 35
PA3-SW-2 3'	6F13008-05	Soil	06/09/06 08 45	06/13/06 10 35
PA3-SW-3 3'	6F13008-06	Soil	06/09/06 09.00	06/13/06 10.35
PA3-SW-4 3'	6F13008-07	Soil	06/09/06 09 15	06/13/06 10:35

Fax 505-394-2601

P.O Box 1558 Eunice NM, 88231 Project Chesapeake/ E.W Walden No. 4 SWD

Project Number. 160053 Project Manager. Iain Olness Fax 505-394-2601

Organics by GC **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA3-BH-1 3' (6F13008-01) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61420	06/14/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	"		n	н	n	11	
Ethylbenzene	ND	0.0250	н	"	**	u	"	н	
Xylene (p/m)	ND	0.0250	**	tr	"	11	R	н	
Xylene (o)	ND	0.0250	"	11	"	**	tr	n .	
Surrogate: a,a,a-Trifluorotoluene	_	85.5 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		83.2 %	80-1.	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61314	06/13/06	06/14/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	11	11	41	н	н	**	
Carbon Ranges C28-C35	ND	10.0	**	11	"	**	"	п	
Total Hydrocarbon nC6-nC35	ND	10 0	11	"	n	н	"	11	
Surrogate 1-Chlorooctane		108 %	70-1.	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		113 %	70-1.	30	"	"	"	n	
-							#	4	
PA3-BH-2 3' (6F13008-02) Soil							<i>,-</i>	50.10	
Benzene	ND	0.0250	mg/kg dry	25	EF61420	06/14/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	n	"	**	н	11	"	
Ethylbenzene	ND	0.0250	"	11	**	"	"	**	
Xylene (p/m)	ND	0.0250	"	"	11	H	n	**	
Xylene (o)	ND	0.0250	II .	н	11	" %	н	и	
Surrogate a,a,a-Trifluorotoluene		80.5 %	80-12	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		80.8 %	80-12	20	"	"	"	n	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61428	06/14/06	06/15/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	и	"	ti .	и	e e	
Carbon Ranges C28-C35	ND	10.0	**	11	n	"	11	п	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	11	"	**	н	
Surrogate 1-Chlorooctane		118 %	70-1.	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		116 %	70-13	30	"	"	"	"	
PA3-BH-3 3' (6F13008-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61420	06/14/06	06/14/06	EPA 8021B	
Toluene	ND	0.0250	u	"	"	11	и	n	
Ethylbenzene	ND	0.0250	**	11	**	11	и	н	
Xylene (p/m)	ND	0.0250	11	11	11	**	н	ıı .	
Xylene (o)	ND	0.0250	"	**	"		14	"	
Surrogate a,a,a-Trifluorotoluene		83 2 %	80-12	20	"	,,	"	"	
Surrogate. 4-Bromofluorobenzene		81.0 %	80-12		"	"	"	,,	
Carbon Ranges C6-C12	ND		mg/kg dry	1	EF61314	06/13/06	06/14/06	EPA 8015M	
	ND	10.0	887	•	El 0151+	00,15,00	00/14/00	2111 0012111	

Environmental Lab of Texas

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

Page 2 of 14

PO Box 1558

Eunice NM, 88231

Project Chesapeake/ E W Walden No 4 SWD

Project Number 160053 Project Manager Iain Olness

Organics by GC

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PA3-BH-3 3' (6F13008-03) Soil									
Carbon Ranges C12-C28	ND	10 0	mg/kg dry	1	EF61314	06/13/06	06/14/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0		**	п	"	n	п	
Total Hydrocarbon nC6-nC35	ND	10.0	11	u	u	n	"	**	
Surrogate 1-Chlorooctane		956%	70-	130	"	"	"	,,	
Surrogate 1-Chlorooctadecane		101 %	70-1	130	"	"	"	"	
PA3-SW-1 3' (6F13008-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EF61420	06/14/06	06/15/06	EPA 8021B	
Toluene	ND	0.0250	11	**	п	**	11	п	
Ethylbenzene	ND	0.0250	п	"	**	"	ш	н	
Xylene (p/m)	ND	0.0250	"	"	11	**	**	"	
Xylene (o)	ND	0 0250	п	"	"	"	11	" - .	
Surrogate a,a,a-Trifluorotoluene		80.8 %	80-1	20	"	"	"	"	
Surrogate. 4-Bromofluorobenzene		81.2 %	80-1	20	"	"	~* <i>"</i>	4 "	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61314	06/13/06	06/14/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	ır	"	n	"	"	tt	
Carbon Ranges C28-C35	ND	10.0	**	**	**	#	п	н	
Total Hydrocarbon nC6-nC35	ND	10 0	"	11	II	n	u	n -	
Surrogate 1-Chlorooctane		98.4 %	70-1	130	"	"	"	"	
Surrogate 1-Chlorooctadecane		104 %	70-1	130	"	" 3,	"	u	
PA3-SW-2 3' (6F13008-05) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EF61420	06/14/06	06/15/06	EPA 8021B	
Toluene	ND	0.0250	n	"	**	11	"	"	
Ethylbenzene	ND	0 0250	11	ii.		"	"	"	
Xylene (p/m)	ND	0.0250	"	11	**	п	**	n	
Xylene (o)	ND	0.0250	n	"	n	11	n	11	
Surrogate a,a,a-Trifluorotoluene		95.5 %	80-1	120	n	"	ıı .	n	
Surrogate 4-Bromofluorobenzene		84.8 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EF61314	06/13/06	06/14/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	11	и	"	11	"	"	
Carbon Ranges C28-C35	ND	10.0	"	ü	**	**	tt.	"	
Total Hydrocarbon nC6-nC35	ND	10.0		11	n.	"	11	u .	
Surrogate 1-Chlorooctane		105 %	70-	130	"	"	"	"	
Surrogate 1-Chlorooctadecane		111 %	70-1	130	n	"	"	"	

Environmental Lab of Texas

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

Fax 505-394-2601

P O Box 1558

Eunice NM, 88231

Project. Chesapeake/ E W Walden No 4 SWD

Project Number. 160053 Project Manager Iain Olness

Fax 505-394-2601

Organics by GC

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA3-SW-3 3' (6F13008-06) Soil	_								
Benzene	ND	0 0250	mg/kg dry	25	EF61420	06/14/06	06/15/06	EPA 8021B	
Toluene	ND	0.0250	n	11	"	11	11	**	
Ethylbenzene	ND	0.0250	н	н	н	**	"	ı	
Xylene (p/m)	ND	0 0250	it	"	"	**	ıi	11	
Xylene (o)	ND	0 0250	"	"	"	н	11	**	
Surrogate a,a,a-Trifluorotoluene		81.0 %	80-1.	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		83 0 %	80-1.	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61314	06/13/06	06/14/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	п	**	"		**	u	
Carbon Ranges C28-C35	ND	10.0	н	41	"	*	n	n	
Total Hydrocarbon nC6-nC35	ND	10 0	и	11	11	**	"	**	
Surrogate. 1-Chlorooctane		107 %	70-1.	30	"	"	"	" -	
Surrogate 1-Chlorooctadecane		112 %	70-1.	30	**	u	"	**	
PA3-SW-4 3' (6F13008-07) Soil							4.5	4.	
									
Benzene	ND	0.0250	mg/kg dry	25	EF61421	06/14/06	06/15/06	EPA 8021B	
Toluene	ND	0.0250	11	"	"	11	"	"	
Ethylbenzene	ND	0.0250	"	"		"	"	"	
Xylene (p/m)	ND	0 0250	*	**	"	11	ŧŧ	"	
Xylene (o)	ND	0.0250		***		# \$ /	n	P	
Surrogate a,a,a-Trifluorotoluene		92.2 %	80-12	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.8 %	80-12	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF61314	06/13/06	06/14/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	n	"	
Carbon Ranges C28-C35	ND	10.0	**	"	11	"	11	н	
Total Hydrocarbon nC6-nC35	ND	10.0		"	"	11	n	н	
Surrogate 1-Chlorooctane		95 4 %	70-13	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		100 %	70-13	30	"	n	"	"	

Project Chesapeake/ E W. Walden No 4 SWD

Fax 505-394-2601

PO. Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager lain Olness

General Chemistry Parameters by EPA / Standard Methods **Environmental Lab of Texas**

Analyte	D1	Reporting	I I						
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
PA3-BH-1 3' (6F13008-01) Soil									
Chloride	406	10 0	mg/kg	20	EF61609	06/16/06	06/16/06	EPA 300.0	
% Moisture	9.1	0 1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	127	10 0	mg/kg	20	EF61609	06/16/06	06/16/06	EPA 300 0	
PA3-BH-2 3' (6F13008-02) Soil									
Chloride	412	10.0	mg/kg	20	EF61609	06/16/06	06/16/06	EPA 300 0	1 11210212
% Moisture	8.8	0 1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	136	10 0	mg/kg	20	EF61609	06/16/06	06/16/06	EPA 300 0	
PA3-BH-3 3' (6F13008-03) Soil									
Chloride	17.7	5 00	mg/kg	10	EF61609	06/16/06	06/16/06	EPA 300 0	
% Moisture	7.0	0 1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	28.1	5 00	mg/kg	10	EF61609	06/16/06	06/16/06	EPA 300 0	
PA3-SW-1 3' (6F13008-04) Soil							÷	ય	
Chloride	214	10 0	mg/kg	20	EF61609	06/16/06	06/16/06	EPA 300 0	
% Moisture	2.6	0.1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	84.0	10 0	mg/kg	20	EF61609	06/16/06	06/16/06	EPA 300.0	
PA3-SW-2 3' (6F13008-05) Soil						6.			
Chloride	13.0	5 00	mg/kg	10	EF61609	06/16/06	06/16/06	EPA 300 0	
% Moisture	1.0	0.1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	19.6	5.00	mg/kg	10	EF61609	06/16/06	06/16/06	EPA 300 0	
PA3-SW-3 3' (6F13008-06) Soil					,				
Chloride	15.3	5 00	mg/kg	10	EF61609	06/16/06	06/16/06	EPA 300 0	
% Moisture	2.4	0.1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	24.0	5.00	mg/kg	10	EF61609	06/16/06	06/16/06	EPA 300 0	
PA3-SW-4 3' (6F13008-07) Soil									
Chloride	213	10.0	mg/kg	20	EF61609	06/16/06	06/16/06	EPA 300 0	
% Moisture	5.1	0.1	%	1	EF61407	06/13/06	06/14/06	% calculation	
Sulfate	101	10.0	mg/kg	20	EF61609	06/16/06	06/16/06	EPA 300 0	

Project Chesapeake/ E W Walden No 4 SWD

PO Box 1558

Eunice NM, 88231

Project Number 160053
Project Manager lain Olness

Fax 505-394-2601

Analyta	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD	Massa
Analyte	Result	Limit	Onns	Level	resun	/ONEC	Limits	ועיט	Limit	Notes
Batch EF61314 - Solvent Extraction (GC)				<u></u>						
Blank (EF61314-BLK1)				Prepared (06/13/06 A	nalyzed 06	5/14/06			
Carbon Ranges C6-C12	ND	100	mg/kg wet					-		
Carbon Ranges C12-C28	ND	100	н							
Carbon Ranges C28-C35	ND	10 0	"							
Total Hydrocarbon nC6-nC35	ND	100	**							
Surrogate I-Chlorooctane	41.6		mg/kg	50 0		83 2	70-130			
Surrogate 1-Chlorooctadecane	43 0		"	50 0		86 0	70-130			
LCS (EF61314-BS1)				Prepared. 0	06/13/06 At	nalyzed 06	/14/06			
Carbon Ranges C6-C12	519	10 0	mg/kg wet	500		104	75-125			
Carbon Ranges C12-C28	535	100	n	500		107	75-125			
Total Hydrocarbon nC6-nC35	1050	10 0	"	1000		105	75-125			
Surrogate 1-Chlorooctane	61.0		mg/kg	50 0		122	70-130			
Surrogate. 1-Chlorooctadecane	61 0		"	50 0		122	70-130		-	
Calibration Check (EF61314-CCV1)				Prepared. 0	6/13/06 Ar	nalyzed 06	/14/06_	4.		
Carbon Ranges C6-C12	253		mg/kg	250		101	80-120			
Carbon Ranges C12-C28	256		**	250		102	80-120			
Total Hydrocarbon nC6-nC35	509		"	500		102	80-120			
Surrogate 1-Chlorooctane	48 5		"	500		97 0	70-130			
Surrogate 1-Chlorooctadecane	50 3		"	50 0		101	70-130			
Matrix Spike (EF61314-MS1)	Source: 6F13008-01			Prepared, 06/13/06 Analyzed :06/14/06						
Carbon Ranges C6-C12	578	10.0	mg/kg dry	550	ND	105	75-125			
Carbon Ranges C12-C28	608	10 0	**	550	ND	111	75-125			
Total Hydrocarbon nC6-nC35	1190	10.0	н	1100	ND	108	75-125			
Surrogate 1-Chlorooctane	59.0		mg/kg	50 0		118	70-130			
Surrogate 1-Chlorooctadecane	52 3		"	50.0		105	70-130			

Project Chesapeake/ E W Walden No. 4 SWD

Fax 505-394-2601

P.O Box 1558 Eunice NM, 88231 Project Number 160053

Project Manager Iain Olness

A	D Is	Reporting	11	Spike	Source	N/DEC	%REC	DDD	RPD	M
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF61314 - Solvent Extraction (GC	<u> </u>									
Matrix Spike Dup (EF61314-MSD1)	Sour	ce: 6F13008	-01	Prepared (06/13/06 A	nalyzed 06	/14/06			
Carbon Ranges C6-C12	584	10 0	mg/kg dry	550	ND	106	75-125	1 03	20	
Carbon Ranges C12-C28	611	100	11	550	ND	111	75-125	0 492	20	
Total Hydrocarbon nC6-nC35	1200	100	"	1100	ND	109	75-125	0 837	20	
Surrogate 1-Chlorooctane	59.7		mg/kg	50 0		119	70-130			
Surrogate 1-Chlorooctadecane	52 4		"	50 0		105	70-130			
Batch EF61420 - EPA 5030C (GC)										
Blank (EF61420-BLK1)				Prepared. (06/14/06 At	nalyzed, 06	/15/06			
Benzene	ND	0 0250	mg/kg wet							
Toluenc	ND	0 0250	**							
Ethylbenzene	ND	0 0250	11							
Xylene (p/m)	ND	0 0250	11						- .	
Xylene (o)	ND	0 0250	**							
Surrogate a,a,a-Trıfluorotoluene	37 4		ug/kg	40 0		93 5	80-120	+		
Surrogate 4-Bromofluorobenzene	32 5		"	40 0		81 2	80-120			
LCS (EF61420-BS1)				Prepared &	Analyzed.	06/14/06				
Benzene	1.13	0 0250	mg/kg wet	1 25		90 4	80-120			
Toluene	1 11	0 0250	"	1 25		88 8	80-120			
Ethylbenzene	1 05	0 0250	**	1 25		84 0	80-120	•		
Xylene (p/m)	2 41	0.0250	"	2 50		964	80-120			
Xylene (o)	1 29	0 0250	"	1 25		1033	80-120			
Surrogate a,a,a-Trifluorotoluene	34 6		ug/kg	40 0		86 5	80-120			
Surrogate 4-Bromofluorobenzene	43 0		"	40 0		108	80-120			
Calibration Check (EF61420-CCV1)				Prepared (06/14/06 Aı	nalyzed. 06	/15/06			
Benzene	46.8		ug/kg	50 0		93 6	80-120			
Toluene	45 0		0	50 0		90 0	80-120			
Ethylbenzene	48 7		0	50.0		97.4	80-120			
Xylene (p/m)	86 9		"	100		86.9	80-120			
Xylene (o)	47 5		"	50 0		95 0	80-120			
Surrogate a,a,a-Trifluorotoluene	36 1		"	40 0		90 2	80-120			
Surrogate 4-Bromofluorobenzene	34 8		n	40 0		87 0	80-120			

Project. Chesapeake/ E W Walden No. 4 SWD

Fax 505-394-2601

PO Box 1558 Eunice NM, 88231 Project Number, 160053

Project Manager Iain Olness

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Notes
Analyte	Kesun	Limit	Units	Level	Resuit	70KEC	Limus	KFD	Limi	INOICS
Batch EF61420 - EPA 5030C (GC)										
Matrix Spike (EF61420-MS1)	Sou	rce: 6F13007	-01	Prepared (06/14/06 At	nalyzed 06	5/15/06			
Benzene	1 39	0 0250	mg/kg dry	1 42	ND	97 9	80-120			
Toluenc	1.34	0 0250	n	1 42	ND	94 4	80-120			
Ethylbenzene	1 20	0 0250	"	1 42	ND	84 5	80-120			
Xylene (p/m)	2 66	0 0250	"	2 84	ND	93 7	80-120			
Xylene (o)	1 42	0 0250	**	1.42	ND	100	80-120			
Surrogate a,a,a-Trifluorotoluene	39 7		ug/kg	40 0		99 2	80-120			
Surrogate 4-Bromofluorobenzene	38 4		"	40 0		96 0	80-120			
Matrix Spike Dup (EF61420-MSD1)	Sou	rce: 6F13007	-01	Prepared 0	06/14/06 Ar	nalyzed 06	/15/06			
Benzene	1 31	0 0250	mg/kg dry	1 42	ND	92.3	80-120	5 89	20	
Toluene	1 28	0 0250	*	1 42	ND	90 1	80-120	4.66	20	
Ethylbenzene	1.15	0 0250	**	1.42	ND	81 0	80-120	4 23	20	
Xylene (p/m)	2 55	0 0250	п	2 84	ND	89 8	80-120	4 25	20.	
Xylene (o)	1 37	0 0250	"	1 42	ND	96 5	80-120	3.56	20	
Surrogate a,a,a-Trıfluorotoluene	33 I		ug/kg	40 0		82 8	80-120	4		
Surrogate 4-Bromofluorobenzene	37 5		55	40 0		93 8	80=120			
Batch EF61421 - EPA 5030C (GC)										
Blank (EF61421-BLK1)				Prepared 0	6/14/06 An	alyzed 06	/15/06			
Benzene	ND	0 0250	mg/kg wet	W-11				•		
Toluene	ND	0.0250	n							
Ethylbenzene	ND	0 0250	n			* '				
Xylene (p/m)	ND	0 0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate a,a.a-Trifluorotoluene	40 4		ug/kg	40 0		101	80-120			
Surrogate 4-Bromofluorobenzene	369		"	40 0		92 2	80-120			

Project Chesapeake/ E.W. Walden No. 4 SWD

PO Box 1558

Eunice NM, 88231

Project Number 160053
Project Manager Iain Olness

Fax 505-394-2601

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 EF61421 - EPA 5030C (GC)						-				
LCS (EF61421-BS1)				Prepared. (06/14/06 A	nalyzed. 06	/15/06			
Benzenc	1 16	0 0250	mg/kg wet	1 25		92 8	80-120			
Toluenc	1 22	0 0250	"	1 25		97 6	80-120			
Ethylbenzene	1 03	0 0250	*	1 25		82 4	80-120			
Xylene (p/m)	2 44	0 0250	**	2 50		97 6	80-120			
Xylene (o)	1 29	0 0250	u u	1.25		103	80-120			
Surrogate a,a,a-Trifluorotoluene	40 9		ug/kg	40 0		102	80-120			
Surrogate 4-Bromofluorobenzene	34 8		"	40 0		87 0	80-120			
Calibration Check (EF61421-CCV1)				Prepared. (06/14/06 A	nalyzed. 06	15/06			
Benzene	43.3	•	ug/kg	50 0	· ·	86 6	80-120			
Toluene	43 5		"	50 0		87 0	80-120			
Ethylbenzene	42 8		"	50 0		85 6	80-120			
Xylenc (p/m)	84 8		*	100		84 8	80-120		- .	
Xylene (o)	46 7		"	50 0		93 4	80-120			
Surrogate a,a,a-Trıfluorotoluene	36 7		"	40 0		918	80-120	4		
Surrogate 4-Bromofluorobenzene	37 8		"	40 0		94 5	80-120			
Matrix Spike (EF61421-MS1)	Sou	rce: 6F13009	-12	Prepared. (06/14/06 A	nalyzed. 06/	15/06			
Benzene	1 24	0 0250	mg/kg dry	1 35	ND	919	80-120			
Toluene	1 22	0 0250	"	1 35	ND	90 4	80-120			
Ethylbenzene	1 25	0 0250	"	1 35	ND	92 6	80-120			
Xylene (p/m)	2 51	0 0250	**	271	ND	92 6	80-120			
Xylene (o)	1 37	0 0250	"	1 35	ND	101	80-120			
Surrogate a,a,a-Trifluorotoluene	38 6		ug/kg	40 0		96 5	80-120			
Surrogate 4-Bromofluorobenzene	40 8		"	40 0		102	80-120			
Matrix Spike Dup (EF61421-MSD1)	Sou	rce: 6F13009	-12	Prepared: (06/14/06 A	nalyzed 06/	/15/06			
Benzene	1.12	0 0250	mg/kg dry	1 35	ND	83 0	80-120	10 2	20	
Tolucne	1.13	0 0250	"	1 35	ND	83 7	80-120	7 70	20	
Ethylbenzene	1 17	0 0250	"	1 35	ND	86 7	80-120	6 58	20	
Xylene (p/m)	2 22	0 0250	"	2 71	ND	81.9	80-120	12 3	20	
Xylene (o)	1 18	0 0250	ii	1 35	ND	87 4	80-120	14 4	20	
Surrogate a,a,a-Trifluorotoluene	33 2		ug/kg	40 0		83.0	80-120			
Surrogate 4-Bromofluorobenzene	34 6		u	40 0		86 5	80-120			

Project Chesapeake/ E W Walden No. 4 SWD

Fax 505-394-2601

PO Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager Iain Olness

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 EF61428 - Solvent Extraction (GC)								-		
Blank (EF61428-BLK1)				Prepared (06/14/06 At	nalyzed 06	/15/06			
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10 0	1f							
Total Hydrocarbon nC6-nC35	ND	10 0	"							
Surrogate 1-Chlorooctane	42.2		mg/kg	50 0		84 4	70-130			
Surrogate 1-Chlorooctadecane	45 7		"	50 0		91 4	70-130			
LCS (EF61428-BS1)				Prepared 0	06/14/06 Ar	ıalyzed. 06	/15/06			
Carbon Ranges C6-C12	506	10 0	mg/kg wet	500		101	75-125			
Carbon Ranges C12-C28	516	100	11	500		103	75-125			
Total Hydrocarbon nC6-nC35	1020	10 0	"	1000		102	75-125			
Surrogate 1-Chlorooctane	49.0		mg/kg	50 0		98 0	70-130			
Surrogate 1-Chlorooctadecane	48 3		"	50 0		96 6	70-130		- .	
Calibration Check (EF61428-CCV1)				Prepared 0	06/14/06 An	nalyzed. 06/	/15/06	4.		
Carbon Ranges C6-C12	208	-	mg/kg	250		83 2	80-120	!		
Carbon Ranges C12-C28	289		"	250		116	80-120			
Total Hydrocarbon nC6-nC35	497		п	500		99.4	80-120			
Surrogate 1-Chlorooctane	62 2		"	50 0		124	70-130			
Surrogate 1-Chlorooctadecane	60 1		"	50 0		120	70-130			
Matrix Spike (EF61428-MS1)	Sour	rce: 6F13009	-15	Prepared: 0	06/14/06 An	alyzed. 06/	15/06			
Carbon Ranges C6-C12	455	10 0	mg/kg dry	504	ND	90 3	75-125			
Carbon Ranges C12-C28	476	10 0	*1	504	ND	94.4	75-125			
Total Hydrocarbon nC6-nC35	931	10 0	"	1010	ND	92 2	75-125			
Surrogate 1-Chlorooctane	60 9		mg/kg	50 0		122	70-130			
Surrogate 1-Chlorooctadecane	55 <i>3</i>		"	50 0		111	70-130			

Project Chesapeake/ E W Walden No. 4 SWD

Fax 505-394-2601

PO. Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager lain Olness

Organics by GC - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF61428 - Solvent Extraction (GC)										
Matrix Spike Dup (EF61428-MSD1)	Sourc	ce: 6F13009	-15	Prepared	06/14/06 A	nalyzed 06	/16/06			
Carbon Ranges C6-C12	479	10 0	mg/kg dry	504	ND	95 0	75-125	5 14	20	
Carbon Ranges C12-C28	494	100	"	504	ND	98 0	75-125	3 71	20	
Total Hydrocarbon nC6-nC35	973	10 0	н	1010	ND	96 3	75-125	4 41	20	
Surrogate 1-Chlorooctane	60 9		mg/kg	50 0		122	70-130			
Surrogate 1-Chlorooctadecane	59 1		"	50 0		118	70-130			

Project Chesapeake/ E W Walden No 4 SWD

Fax. 505-394-2601

P.O Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager Iain Olness

General Chemistry Parameters by EPA / Standard Methods - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source	:	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF61407 - General Preparatio	n (Prep)									
Blank (EF61407-BLK1)				Prepared (06/13/06	Analyzed 06	5/14/06			
% Solids	100		%							
Duplicate (EF61407-DUPI)	Source	ce: 6F12025-	01	Prepared (06/13/06	Analyzed 06	5/14/06			
% Solids	95 0		%		95 1			0 105	20	
Duplicate (EF61407-DUP2)	Source	e: 6F13004-	02	Prepared. (06/13/06	Analyzed 06	5/14/06			
% Solids	92 3		%		92 5	,		0 216	20	
Duplicate (EF61407-DUP3)	Source	e: 6F13009-	02	Prepared. (06/13/06	Analyzed. 06	6/14/06			
% Solids	94.4	•	%		94 4			0.00	20	
Duplicate (EF61407-DUP4)	Source	e: 6F13009-	22	Prepared. (06/13/06	Analyzed: 06	5/14/06			
% Solids	94 8		%		94 0			0 847	20	
Duplicate (EF61407-DUP5)	Source	e: 6F13013-	04	Prepared 0	06/13/06	Analyzed 06	/14/06		- .	
% Solids	89 4		%		89 4			0 00	20	
Batch EF61609 - General Preparatio	n (WetChem)						nut.	4		
Blank (EF61609-BLK1)				Prepared &	Analyze	d. 06/16/06				
Sulfate	ND	0 500	mg/kg	·						
Chloride	ND	0 500	н							
LCS (EF61609-BS1)				Prepared &	Analyze	d 06/16/06				
Chloride	11 1		mg/L	10.0		1114	80-120			
Sulfate	10 2		н	100		102	80-120			

Environmental Plus, Incorporated Project. Chesapeal

Project. Chesapeake/ E W Walden No 4 SWD

4 SWD Fax 505-394-2601

P O. Box 1558 Eunice NM, 88231 Project Number 160053
Project Manager Iain Olness

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 EF61609 - General Preparation (V	VetChem)									
Calibration Check (EF61609-CCV1)				Prepared &	: Analyzed	06/16/06				
Chloride	11 4		mg/L	10 0		114	80-120			
Sulfate	11 2		**	10 0		112	80-120			
Duplicate (EF61609-DUP1)	Sourc	e: 6F13001-	03	Prepared &	: Analyzed	06/16/06				
Sulfate	323	50 0	mg/kg		329			1 84	20	
Chloride	2430	50 0	н		2400			1 24	20	
Duplicate (EF61609-DUP2)	Sourc	e: 6F13009-	07	Prepared &	: Analyzed	06/16/06				
Sulfate	49 1	5 00	mg/kg		48 4			1 44	20	
Chloride	80 2	5 00	11		88 9			10.3	20	
Matrix Spike (EF61609-MS1)	Sourc	e: 6F13001-	03	Prepared &	: Analyzed.	06/16/06				
Chloride	3110	50 0	mg/kg	1000	2400	71 0	80-120			S-07
Sulfate	735	50 0	**	1000	329	40.6	80-120		-	S-07
Matrix Spike (EF61609-MS2)	Sourc	e: 6F13009-	07	Prepared &	Analyzed	06/16/06		4		
Chloride	210	5 00	mg/kg	100	88 9	121	80-120			S-07
Sulfate	132	5 00	"	100	48 4	83 6	80-120			

Environmental Plus, Incorporated Project. Chesapeake/ E.W Walden No 4 SWD Fax 505-394-2601

P O Box 1558 Project Number 160053

Eunice NM, 88231 Project Manager Iain Olness

Notes and Definitions

S-07 Recovery outside Laboratory historical or method prescribed limits. Analyte DETECTED DET Analyte NOT DETECTED at or above the reporting limit ND NR Sample results reported on a dry weight basis dry Relative Percent Difference RPD LCS Laboratory Control Spike MS Matrix Spike Dup Duplicate

	Kaland K Justs		
Report Approved By:		Date:	6/19/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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

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

Environmental Plus, Inc.

Chain of Custody Form

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

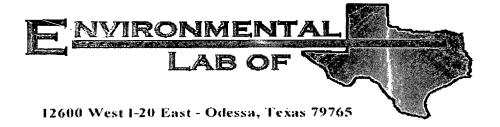
P.O. Box 1558, Eunice, NM 88231

Lab: ELT

	FAX: (505) 394-2601											-												وسنداد	
Company Name			Inc						78			₩ B	ill)	0				A	NAL	YS	IS R	EQ	UES	Tes	
EPI Project Mar																								1	1
Mailing Addres														1		ŀ								- }	j
City, State, Zip	Eunice Net	w Mexico	882	31									E,							Ì				ı	1
EPI Phone#/Fax	x# 505-394-34	81 / 505-3	94-	260	1						•	-	~												
Client Compan														The state of the s											- 1
Facility Name	E. W. Wald	en No. 4 S	SWE)			•																		
Location	UL-K, Sec.	15, T 22 S	3, R	37	E						Att	n: ja	ain i	Olness											
Project Referer	nce 160053													1558,											
EPI Sampler Na	ıme Sebastian	Romero								Eu				8231-1558		}								١	l
					L		MAT	RIX			PR	ESE	RV.	SAMPLI	NG					ĺ				9	
LABI.D.	SAMPLE I.D		(G)RAB OR (C)OMP.	# CONTAINERS	GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	отнев:	ACID/BASE	CE/COOL	отнев	DATE	TIME	BTEX 8021B	трн 8015М	CHLORIDES (CI)		hd	ТСГР	OTHER >>>	РАН		
~07 ~07	1 PA3-BH-1 (3')		X	1	_	-	×					X	_	09-Jun-06	7:35	Х	X	X	X	<u> </u>	 	 	-	_	-
901	2 PA3-BH-2 (3')		X	1	-	<u> </u>	X		_		_	X		09-Jun-06	7:50	X	X	X	X						-
-63 -04	3 PA3-BH-3 (3')		X	1	-	 - -	X	-				X		09-Jun-06	8:05	X	X	X					-		-
	4 PA3-SW-1 (3')		X	1	-	-	X X		_			X		09-Jun-06	8;20	X	X		X			 			
705	5 PA3-SW-2 (3') 6 PA3-SW-3 (3')	<u> </u>	X		-	_	x	-	-		-	X	-	09-Jun-06 09-Jun-06	8:45 9:00	X		X		<u> </u>		┝╌┤	_	-	-
700			Ŷ		├-		X		-	_	-	Ŷ		09-Jun-06	9:00	\		X		-	-			-	-
10M	7 PA3-SW-4 (3')		 	-	-	20.00	<u> </u>					^		บละมนกะบธ	9:15	├^	^	-	^	├	┝╼┥		-	_+	-+
	0			├-	┢╾	<u> </u>	-	_								-	-	 		├				-+	-+
1	0		_	-	_				-	-		-				├		 	-		\vdash	\vdash		-+	
											1 30,586	7500													
Mainquished by: _		11 11 12 16 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Rece	2	<u>[2</u> By: (1)	$\overline{}$	(ff)		2 Jeked				ARK\$	esults ta: iolnes : v-glass Mabel	-										
Delivered by		Sample Yes	Cool	& Int	act Io			Uni	=exed	ъy.				of label	D	5								77.88	·····

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

Client:				
Date/Time: Le 13/00				
Order#			·	
Initials:				
Sample Receipt C	heckli	st		
Temperature of container/cooler?	Yes	No	05 01	
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?	(€3)	No		
Sample Instructions complete on Chain of Custody?	XE3	No	[
Chain of Custody signed when relinquished and received?	(29	No		
Chain of custody agrees with sample label(s)	(e)	No		
Container labels legible and intact?	(ES	No		
Sample Matrix and properties same as on chain of custody?	(Fes	No		
Samples in proper container/bottle?	Yes	No		- .
Samples properly preserved?	₹ €3	No		
Sample bottles intact?	1 789	No		4
Preservations documented on Chain of Custody?	₹ 95	No		•
Containers documented on Chain of Custody?	\ (Ces	No		
Sufficient sample amount for indicated test?	(35)	Na		
All samples received within sufficient hold time?	₹26	No_	1	
All samples received within sufficient hold time? VOC samples have zero headspace?	(Pa)	No	Not Apolicable	
			Not Apolicable	
VOC samples have zero headspace?				
Other observations: Variance Docum Contact Person: - Date/Time: Regarding:	(Yes)	No on:	Contacted by:	
Other observations: Variance Docum Contact Person: - Date/Time: Regarding:	entatio	No on:	Contacted by:	
Other observations: Contact Person: Date/Time: Regarding: Corrective Action Taken:	entatio	on:	Contacted by:	
Other observations: Contact Person: - Date/Time: Regarding: Corrective Action Taken:	entatio	on:	Contacted by:	
Other observations: Contact Person: Date/Time: Regarding: Corrective Action Taken:	entatio	on:	Contacted by:	
Other coservations: Variance Docum Contact Person: Date/Time: Regarding: Corrective Action Taken:	entatio	on:	Contacted by:	



Analytical Report

Prepared for:

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

Project: Chesapeake/ E.W. Walden No. 4 SWD

Project Number: 160053

Location: UL-K, Sec, 15, T 22S, R 37 E

Lab Order Number: 6G18010

Report Date: 07/19/06

Project Chesapeake/ E W Walden No 4 SWD

Fax. 505-394-2601

P.O Box 1558 Eunice NM, 88231

Project Number 160053 Project Manager lain Olness

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PA3-BH-1A 10'	6G18010-01	Soıl	07/17/06 15 20	07/18/06 14.05
PA3-BH-2A 10'	6G18010-02	Soil	07/17/06 15.22	07/18/06 14.05

Project Chesapeake/ E W. Walden No. 4 SWD

PO Box 1558

Eunice NM, 88231

Project Number 160053 Project Manager. Iain Olness Fax 505-394-2601

General Chemistry Parameters by EPA / Standard Methods - Quality Control **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Lımıt	Units	Level	Result	%RÉC	Limits	RPD	Limit	Notes
Batch EG61912 - General Preparation (V	VetChem)									
Blank (EG61912-BLK1)				Prepared &	& Analyzed	07/19/06				
Chloride	ND	0 500	mg/kg							
LCS (EG61912-BS1)				Prepared &	analyzed	07/19/06				
Chloride	10 2	0 500	mg/kg	10 0		102	80-120			
Calibration Check (EG61912-CCV1)				Prepared &	α Analyzed.	07/19/06				
Chloride	10 3		mg/L	10 0		103	80-120			
Duplicate (EG61912-DUP1)	Sou	rce: 6G18010	-01	Prepared 8	k Analyzed	07/19/06				
Chloride	170	5 00	mg/kg		168			1 18	20	
Matrix Spike (EG61912-MS1)	Sou	rce: 6G18010	-01	Prepared &	k Analyzed	07/19/06				
Chloride	287	5 00	mg/kg	100	168	119	80-120			

Environmental Plus, Incorporated Project. Chesapeake/ E.W. Walden No. 4 SWD Fax 505-394-2601

P O Box 1558 Project Number. 160053
Eunice NM, 88231 Project Manager Iain Olness

Notes and Definitions

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By.

Raland Ketuls

Date:

7/19/2006

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

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

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

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

P.O. Box 1558, Eunice, NM 88231

Chain of Custody Form

Lab: ELT

	Delivered by:	Ramquished by	Sampler Meingungep:	10	9	S	7	Ć.	Ų.	4	3	C22	-01 1	LAB I.D.		EPI Sampler Name	Project Reference	Location	Facility Name	Client Company	EPI Phone#/Fax#	City, State, Zip	Mailing Address	EPI Project Manager	Company Name
												PA3-BH-2A (10")	PA3-BH-1A (10')	SAMPLE I.D.		ne David Robinson	e 160053	UL-K, Sec	E. W. Walc	Chesapeake Energy		Eunice Ne	P.O. BOX 1558	iger lain Olness	
Ka)	Sample Cool & Intact	THE LOCAL PROPERTY.	12000 J									×	×	(G)RAB OR (C)OMF)	inson		UL-K, Sec. 15, T 22 S, R 37	E. W. Walden No. 4 SWD	e Energy	505-394-3481 / 505-394-2601	Eunice New Mexico 88231	1558	S	Environmental Plus, Inc
) & Int	Received By. (lab staff)	Court of	T	T			an week	 				_	# CONTAINERS	ernanana A		POPER PROPERTY.	37	O		260	231			5
á	aCt	inved By. (lat	\z, \q					ugibasa		-	********			GROUND WATER				m							
		ab sia	QV											WASTEWATER	Section 1	L									
			Books									×	×	SOIL.	MATRIX								.,		
	er.	X	N											CRUDE OIL	문										
	Checked By:	``.												SLUDGE										i	
	By:													OTHER:		m									
														ACID/BASE	PA	룺	סר	A				_			
			E-mail re							L		×	×	ICE/COOL	PRESERV	Z	O	7							8
=	**		AHKS AH	L							<u> </u>	L		ОТНЕЯ	Š	M 8	X	3	1	STANSON DAMESTON DAME	(7	m	PERSONAL PER		BIII To
		S	E-mail results to: iolness@envplus.net									17-Jul-06	17-Jul-06	DATE	SAMPLING	Eunice, NM 88231-1558	PO Box 1558,	Attn: lain Olness		sizasi,			Ochrosen		O
e tais	- ():		s@envplus									15:22	15:20	Marie de la company de la comp	ରି		FESS. MARCETTS	MICHAE QUI	***********	· · · · · · · · · · · · · · · · · · ·		- CARACINA		********	
	1	181	ક.net ં	<u></u>								199	*	Takan at Madalah at adalah sembangan penjagan penjagan penjagan penjagan penjagan penjagan penjagan penjagan p	Marian de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión d	onti-stonage plic	C16921ans	erenovani-	nueva.	161215000	ragili Acaso	eceratio	and the second	and the second	
and the same of th		S.	3						_			78%	*	THE RESIDENCE AND PARTY OF THE PROPERTY OF THE PARTY OF T		de de la constant	******	uras un sa	-	MCSELLECTORS	indi Aussiana	e shear	real participation in	-	
		3	ک									×	atotals in	PTOTERN DESCRIPTION OF THE PROPERTY AND THE PERSON OF THE	Bar ichanis	nicosos (n	newspectures	Ministrați M	en respec			Tringenjeji.	10.000.00	NASALI	J _B
			{					-	<u> </u>		_ _	8 %	XX	SULFATES (SO ₄ *)	LINE SAN	Uweaw;	C. Hillian San Japan	-	anno commo	manim ces	:q _e nkami			Market .	P
			1		_						<u> </u>			рН	manufan ke	TAN LUCKS	destablished	meace	phrenaer	тоглистициј	1000 Mark 1000	hatte ma	aresquires	(Vertext)	10
			20				-raesta			-			.	TCLP	2044 (HAV-1			PA-baseda s	en en en en en en en en en en en en en e	nandat för		water the co	di parte de	rindavia.	ANALYSIS REQUEST
		7 8	NS SE					Librari Wil	ļ		_	<u> </u>		OTHER >>>	W ESLESS	an executi	ROMEGE	PAPERDON	panem a	KALKG elen t		-	ereppensioner	Francis	B
		Trinoace los							ļ			-		PAH		Selection.	www.	W ith the same	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	eproportions	(Spingerfferden)	minjohadayayı		(m)minutes;	SI.
		1 1-1 m		_											HESSENSPICAL	annoused	ibracecus		*********	unanecen.	COLUMN	aeronas caras		un nage	
		Tai)													Okstanaja ov	UNGGES-	60c#200=	(CO) 344-14-14-14-14-14-14-14-14-14-14-14-14-1	printeppi de	icinintales-		andshikudir	Option:	FORMULA TO	
	aranga mana											Vanemu	anerum.			***************************************	throwner to w					-			

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

Client. EPI				
Date/Time: 7/18/06 4:05				
Date/fille				
Order #: 66/80/0				
Initials:			٠.	
million.				
Sample Receipt	Checkli	ist		
Temperature of container/cooler?	Yes	No	1 1/20 CI	
Shipping container/cooler in good condition?	χ _{es}	No		
Custody Seals intact on shipping container/cooler?	Yes	No	Mot present	
Custody Seals intact on sample bottles?	Yes	No	Notpresent	
Chain of custody present?	Xes	No		
Sample Instructions complete on Chain of Custody?	Ves I	No		
Chain of Custody signed when relinquished and received?	Y 2 S	No		
Chain of custody agrees with sample label(s)	Yes	No	Iton boar	
Container labels legible and intact?	Yes	No		
Sample Matrix and properties same as on chain of custody?	X-ess	No		
Samples in proper container/bottle?	Y#\$	No		
Samples properly preserved?	/es	No		
Sample bottles intact?	Yes	No		
Preservations documented on Chain of Custody?	Yes	No		
Containers documented on Chain of Custody?	¥65	No	F	
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	
Variance Docus Contact Person: Date/Time: Regarding:	Mildido, washiring pyryddylloloddiodd y dwnodae	and desiration by some the sound of sold	Contacted by:	
Corrective Action Taken:				
		hadd all of glighy would relic near yearsh		anna Mariana di Manada da Sara
	Tangana, Antonio de Ario de Septembro de Care	*********	Parkinson-bakerina anggala-bassassanga dilipida ayunya 1944 Parkinda dilammin makaya sapananan ayyyini dada	14 Del 14 00 17 14 14 14 14 14 14 14 14 14 14 14 14 14
	**************************************	····bytegg_eld-ballei-skeft) danske, jersen en en skielde (de danske ferst 1944 en
		rimanimie distrib ^o aris pa	والمنافق والمنافقة والمناف	المتحادث والمتحادث والمتحادث والمتحادث والمتحادث
444 / Particular 10 10 10 10 10 10 10 10 10 10 10 10 10				
	AND THE RESERVE AND ADDRESS OF THE PERSON OF	-	en departure de la companie de la co	Shannangapan wayaddil ayanaadaa aha
		Managar Complete State of Section 1988		
				THE PERSON IN TH
	***************************************	S BELLEVILLE HOLD CO. S. C. C. C. C. C. C. C. C. C. C. C. C. C.	and the second s	STATE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN TRANSPORT NAMED IN THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NAM

argon laboratories

Environmental Plus, Inc.

PO Box 1558

Eunice, NM 88231

Project Number: 160053

Project Name: E.W.Walden #4 SWD

Project Manager Iain Olness

Work Order #: A07031

Anions by Ion Chromatography - EPA Method 300.0

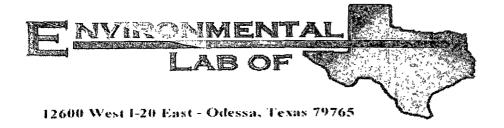
			Rep Lim.				
Analyte		Result	@ D.F.=1	Units	Analyzed	Method	Notes
PA2-BH-5A (5')	(A07031) Soil	Sampled: 07/18/06	Received:	07/19/06			
Chloride		410	10	mg/Kg	07/20/06	EPA 300.0	
PA2-BH-7A (4')	(A07032) Soil	Sampled: 07/18/06	Received:	07/19/06			
Chloride		<10	10	mg/Kg	07/20/06	EPA 300 0	

Approved By Argon Laboratories QC Officer

i i

10.9

Chain of Custody Form	Lab: A Argen					•					.—		<u> </u>		-						-								
1	حريا		Î								***				Г					ヿ									j
ğ	*				HA									HA9														5	1
Si	4												<<<	язнто														3	1
)tC	ä													AJOT						\neg								Š	ı
Ü	-	Ü												Нq											1			١	1
ha													TES (SO.")	SULFA	*	数					1				3-1			ر ن	
S									******				(CID) SEGI	СНГОВ	×	X				7								\mathcal{O}	١
									- 177-75				Mai	08 H9T	100	W					٦								I
	~~												BISO	8 X3T8	9	1				7					3.3	196		for	ı
	(V	J									Ţ			Ή.	5	Q.										white.		•	١
	A0703										إ	اچ		TIME	10:45	8:00			1	1				ļ		E-mail results to: joiness@emplus.net	エクス	analyze	
	0											SAMPLING			9	9					٦					tress (
	ميسع								υħ	Ì	3	3		DATE	子	7			ļ		1	ı				o: io		ž	1
		•			ı				Ē	8	5	l		۵	18-Jul-06	18-Jul-06		1	Ì	l	l	1				its t	7	O	I
		1!				-		;	Attn: lain Ofness	PO Box 1558,	Eunice, NM 88231-1558	-							-	4	4	_				16-21 18-21			1
				Ma	۲		_		lair	8	nice, Nist	5		PAHTO					-	+	4					triail	HEMAPIKS		
	$\tilde{\mathbf{g}}$					ll'			Ħ	8	<u>ဗ</u> ြို	إيّ		ICE/CO VCID/B	×		Н			+	4	┉	-		дэ.(3) 11 — (3)	Ů	<u> </u>	1	4
	88 *								· ·		5	+		REHTO			Н		-	\dashv		ᅱ	\dashv	-		į		L	1
	O. Box 1558, Eunice, NM 88231									•	-	ł		SLUDG	Н	Н	-			┰┼	┥	\dashv	\dashv			٩	1	Checked By	۱
	Ş.										Ş	ا ځ		CRUDE					4	\dashv	\dashv	┥	Н			ž		8	1
	Em											MAINIX	110	ROIL	×	X	_		-	┪	┥	ᅱ			i I	Curan Book	ļ		١
	3 5		┪	T	Γ					Т	┪	┇	R3TAW:				_	Н	+	+	┥	ᅱ				8	SES.	 	┨
	x 75			Ì	1					1	ł	ł	ABTAW GI							+	\dashv	ᅱ	Н			\ \chi_h	<u>a</u> .	Ì	١
	Boj		1	1	_	Š			3 L		H		LAINERS		1	+			+	ᆉ	\dashv	\dashv	\dashv	-		£ 2	, S	1 € 3	1
	P.O.	널			823	4.2			R 37		ŀ		MO(3) RO	*	X	X				\dashv	4	-		Н		Received By:	Reger	8	ļ
_	•	2		l	8	66		4 51	25,	1	H	_				-				+	+	-				3	स्र	Sample Cool & Interco Yes No	ı
్ల		Environmental Plus. In				505-394-3481 / 505-394-2601	Chesapeake Energy	E. W. Walden No. 4 SWD	UL-K, Sec. 15, T 22 S,		ΞÌ										ł	1				35	114	8	l
1		E E	,	P.O. BOX 1558	3	15	a E	eu	15,	١.	David Hobinson		_•						1		ı	Ì				706		4	1
Š		; Ĕ	lain Ofness	×	문	सु	88	/aid	Ç.	·	3		SAMPLE 1.D.							1	١	1				g 7►			1
	23.	Į	Ī	ğ	18	-39	g	٧. ٧	K.	160053	2		7							ı		١						ŀ	۱
	38 36	15	1	P.0	ā	505	S	E.	UL.	图	5		AM.		ତ	.					ł						1 E	1	l
<u>a</u>	E 6		1		Ì						1		v)		PA2-8H-5A (5)	PA2-BH-7A (4")				- (1					5	1 /2	1	-
Ĭ	ربر <u>چر</u> د <u>چر</u>	:	1		•					1					賣	五				- [1					,			J
ne	Eunice, NM 88231 FAX: (505) 394-2601	2			1	<u></u>				N N	ايع				PA											8	3	1 >	Į
n	0, 1		le le	88	B	ax	Ĕ	ds.		ě.	Ē					7	3	4	5	٦	7	8	9	10	A	in a	0	1	
5	nue 345	: 2	T	å	e, Z	F	Ē	틆		efe.	힐		<u></u>		7	32			1							り	3	*	l
Ē	Ave	S	1	4	ă	5	8	Z	덩	뜅	Ē		LAB 1.D.	!	5	7033				-	j				8.7	事しる	of by O	i i	ļ
Environmental Plus, Inc	2100 Avenue O, Eunice, NM 88231 (505) 394-3481 - FAX- (505) 394-26	Company Name	FP! Project Manager	Mailing Addness	City, State, Zip	EPI Phone#/Fax#	Client Company	Facility Name	ceation	Project Reference	EPI Sampler Name				Arros											1		Delivered by:	1
1	22	20	ů	Įž	ت	Щ	ਹ	Π,	נ	a li	ات				<u> </u>					1						8	¥ 2	/ <u>1</u> 8	٢
0.9					9	62	:02	.69	250	126								L	JO 5	אוצר		1.4	_	۰.					



Analytical Report

Prepared for:

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

Project: Chesapeake/ E.W. Walden No. 4 SWD

Project Number: 160053

Location: UL-K, Sec, 15, T 22S, R 37 E

Lab Order Number: 6G18010

Report Date: 07/19/06

Eunice NM, 88231

Project Chesapeake/ E.W Walden No 4 SWD

Project Number 160053

Project Manager Iain Olness

Fax: 505-394-2601

General Chemistry Parameters by EPA / Standard Methods **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PA3-BH-1A 10' (6G18010-01) Soil									
Chloride	168	5 00	mg/kg	10	EG61912	07/19/06	07/19/06	EPA 300 0	
PA3-BH-2A 10' (6G18010-02) Soil									
Chloride	141	5.00	mg/kg	10	EG61912	07/19/06	07/19/06	EPA 300 0	

Environmental Lab of Texas

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

Page 2 of 4

Project Chesapeake/ E W Walden No 4 SWD

Fax. 505-394-2601

P.O Box 1558 Eunice NM, 88231

Project Number. 160053 Project Manager. Iain Olness

Notes and Definitions

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

	Raland Ktoub		
Report Approved By:	Kacan C 1	Date:	7/19/2006

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

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

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

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

Client LFL				
Date/Time: 1/18/06 14:05				
Order #: 6(180/0				
Initials: <u>Ue</u>			,	
Sample Receipt	Checkli	st		
Temperature of container/cooler?	Yes	No	1 // O C	
Shipping container/cooler in good condition?	Xes	No		
Custody Seals intact on shipping container/cooler?	Yes	No	Mot present	
Custody Seals intact on sample bottles?	Yes	No	Hof present	
Chain of custody present?	XES	No		
Sample Instructions complete on Chain of Custody?	VES	No		
Chain of Custody signed when relinquished and received?	Y#S	No		
Chain of custody agrees with sample label(s)	Yes	No	Item ban	
Container labels legible and intact?	Yes	No		
Sample Matrix and properties same as on chain of custody?	X:ess	No		
Samples in proper container/bottle?	Yas I	No		
Samples properly preserved?	Ves	No		
Sample bottles intact?	Xes	No		
Preservations documented on Chain of Custody?	Yes	No		4 .
Containers documented on Chain of Custody?	¥65 I	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:	**************************************	and we come with a find the state of the sta		
		agidalik dirikin dinggandi dalaksisi.		
Contact Person: - Date/Time: Regarding:	mentatio	n:	Contacted by:	
Corrective Action Taken:		- types and the state of the st		
				re programme de la companya de la companya de programme de la constanció de la constanció de la constanció de Programme de la constanció de l
	and the state of t	mandratika daga daga daga daga daga daga daga da		والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض
	to the second second second second second second second second second second second second second second second	-	and the same of th	***************************************
		THE PERSON NAMED IN POST OF TH	AND A MANUTONING THE COMMENT OF THE	rianiania, po propio estables propio de proceso de la composició de la composició de la composició de la compo
	na anno anno anno anno anno anno anno a	Martin Marian September 1977	mp his course and real-real-real-real-real-real-real-real-	
The state of the s			And the state of t	ORGANISM BY THE SAME OF THE ACTION OF LANGUAGE PARTY SECTION S
The state of the s	The second of th	STATE OF THE PARTY	en der gegeben der er er der der der der der der der d	- Charles of Control o

argon laboratories

Environmental Plus, Inc.

Project Number: 160053

PO Box 1558

Project Name. E W. Walden #4 SWD

Eunice, NM 88231

Project Manager Iain Olness

Work Order #. A07031

Anions by Ion Chromatography - EPA Method 300.0

	_		Rep Lim.				
Analyte		Result	@ D.F.=1	Units	Analyzed	Method	Notes
PA2-BH-5A (5')	(A07031) Soil	Sampled: 07/18/06	Received:	07/19/06			
Chloride		410	10	mg/Kg	07/20/06	EPA 300.0	
PA2-BH-7A (4')	(A07032) Soil	Sampled: 07/18/06	Received:	07/19/06			
Chloride		<10	10	mg/Kg	07/20/06	EPA 300 0	

Approved By Argon Laboratories

QC Officer

Environmental Plus, Inc.

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

P.O. Box 1558, Eunice, NM 88231

A07031

Chain of Custody Form Lab: A Argen

													<i>f</i> *-										
Delivered by:	Happquested by:	Sapple Golingitishes:		10	9	200	6	5		3	70 32 2	A07031 1	LAB LD.	EPI Sampler Name	Project Reference	Location	Facility Name	Client Company	EPI Phone#/Fax#	City, State, Zip	Mailing Address	EPI Project Manager	Company Name
	72.	144.1		24							PA2-BH-7A (4')	PA2-BH-5A (5')	SAMPLE I.D.	ne David Robinson		UL-K, Sec. 15, T	E. W. Walden No. 4 SWD	Chesapeake Energy	505-394-3481 / 505-394-2601	Eunice New Mexico 88231	P.O. BOX 1558	ager lain Olness	Environmental Plus, Inc.
Sample Cod & Intact Yes No	Bir Rederved By: (lab start)	Processed By		1	1		+				X	X	(G)RAB OR (C)OMP.			T 22 S, R 37	. 4 SWD	gy	05-394-2	d co 88 23			lus, inc.
₹ 5	<u>\$</u> }	S and B		4	4	_	_	Ļ	Ļ	Ц	-	1	# CONTAINERS	4		37 E			8	=			
"	8	ž ,		4	4	_	1	1	┞			_	GROUND WATER	-									
<u> </u>	SE SE			-	4	(i)	-	+	┡	_			WASTEWATER	_₹	<u>L</u> _		L					Ц	
		Soon		4	-	-	╀	╄-	╀		X	X	SOIL	MATRIX									
Checked By		ž	ر بر ا ان ر * ب		-	+	╀	丨	╀	H	L		CRUDE OIL SLUDGE	≅									
9		6	A. [-	+	+	┿-	╄	╀	 - -	-	-	OTHER:										
`		,		+	+	+	╀	╀	╀	\vdash	<u> </u>			ᆔᄩ		'							
				+	+	╅	╁	┿	╀╌	Н	×	×	ICE/COOL	PRESERV	8	ŧ			d	l.		1	
	REMARKS:	Electronic de la companya de la comp		+	+	+	十	╁	-	Н	-		OTHER		8			-	لللم		الناسع		1.0
analyze		E-mail results to: ioliness@empfus.net									18-Jul-06	18-Jul-06	g	Eunice, NM 88231-1558	PO Box 1558,	Attn: lain Olness	:						
}		s@envplu									8:00	10:45	THAN	ก็									7
for)	8.56					L				1	0	BTEX 8021B										
		^									W	*	TPH 6015M										32) 33)
	1										X	X	CHLORIDES (CI)										
~				I	T						Ä	4	SULFATES (SO ₄ ")										
1	Ť			J	J	T	Γ						рН										
9			á	Ĭ	J	Τ							TCLP			_							
١٤				J		T							OTHER >>>										
4													PAH										
					\mathbf{I}	I	\prod						All I										
						Ι																	
					I																		# 12 10

Note: Laboratory Analytical Results Not Available For Soil Samples Collected On 7/20/06

Environmental Plus, Inc.

Chain of Custody Form

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

P.O. Box 1558, Eunice, NM 88231

Lab: Argon

Company Name	ental Plus,	Inc	;.			Bill To							ANALYSIS REQUEST:													
EPI Project Manager lain Olness																										П
Mailing Address P.O. BOX 1558													ıll	ł												
City, State, Zip	Eunice Ne	w Mexico	882	31							,		Æ.													
EPI Phone#/Fax#	505-394-3	481 / 505-3	94-	260	1																					
Client Company	pany Chesapeake Energy]																		
Facility Name	E. W. Wal	den No. 4 S	SWI)			1 ."													ĺ						
Location	UL-K, Sec	. 15, T 22 S	S, R	37	E						Att	n: l	ain (Olness												
Project Referenc	e 160053										Ρ	O E	3ox	1558,		ĺ										
EPI Sampler Nan	ne David Rol	oinson								Eu	nice	e, N	M 8	8231-1558												
							MA	rrix			PR	ESE	RV.	SAMPLI	NG											
LAB I.D.	SAMPLE I.I	D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	отнек:	ACID/BASE	ICE/COOL	отнек	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (CI)	SULFATES (SO4")	Нq	TCLP	OTHER >>>	РАН			
1	PA2-BH-5B (6')		X	1			Χ				•	X		20-Jul-06	14:30			X								
	PA2-BH-5B (7')		Х	1			Х					Х		20-Jul-06	14:45			X								
	PA2-BH-5B (8')		Х	1			X					X		20-Jul-06	15:00			X								
	PA2-BH-5B (9')		Х	1			Х					Х		20-Jul-06	15:15			Х								
5	PA2-BH-5B (10')		Х	1			X					Х		20-Jul-06	15:35			X								
6	PA2-BH-5B (15')		Х	1			Х					Χ		21-Jul-06	7:55			X								
	PA2-BH-5B (18')		Х	1			X					Χ		21-Jul-06	8:30			X								
8	PA2-BH-5B (20')		X	1			Х					Х		21-Jul-06	9:00			Х								
9													Ш													
10								Щ								Ļ				ليا						
TANK TE THE TOTAL	The transfer of the second					1		7-9	Air i		(C)(4)	ر شاله	1.	· "你是我	r y War will will had to	W-1996	11.3	F S	-"4,	14.	٠.	K. j.	. di		· 10	
Sampler Relinquished.		Time	Rece	eived E	Зу								ail re	esults to: iolnes	s@envplu	ıs.ne	t									
Relinquished by		Date	Rece	eived E	By (la	ab stat	ff)																			
elivered by Sample Cool 8 Yes					ot o			Che	ecked	Ву		_														

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



Incident Date: 6 April 2006

NMOCD Notified:

6 April 2006

Information and Metrics

Site: E. W. Walden No. 4 SWD Unit K **Assigned Site Reference:** #160053 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): ~50 bbls Recovered (bbls): ~25-30 bbls >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: E. W. Walden No. 4 SWD Unit K Source of contamination: Produced water line Land Owner, i.e., BLM, ST, Fee, Other: Irvin Boyd LSP Dimensions: variable **LSP Area:** \sim 39,160 ft² Location of Reference Point (RP): Location distance and direction from RP: Latitude: N 32° 23' 28.70" Longitude: W 103° 09' 05.96" Elevation above mean sea level: 3,393 feet Feet from North Section Line: Feet from East Section Line: Location- Unit or ¼¼: NE¼ of the SW¼ Unit Letter: K **Location- Section: 15 Location- Township: T22S Location- Range: R37E** 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: one Public water supply wells within 1000' radius of site: none Depth from land surface to groundwater (DG): ~80 feet Depth of contamination (DC): unknown Depth to groundwater (DG – DC = DtGW): estimated to be between 50 and 100 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 <200 horizontal feet: 20 points If Depth to GW 50 to 99 feet: 10 points private domestic water source: 20 points 200-1000 horizontal feet: 10 points If >1000' from water source, or; >200' from If Depth to GW >100 feet: 0 points >1000 horizontal feet: 0 points private domestic water source: 0 points Site Rank (1+2+3) = 10**Total Site Ranking Score and Acceptable Concentrations** >19 Parameter 10-19 0-9 Benzene¹ 10 ppm 10 ppm 10 ppm BTEX1 50 ppm 50 ppm 50 ppm TPH 100 ppm 1,000 ppm 5,000 ppm 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

Attached

Release Notification and Corrective Action Initial Report **OPERATOR** Final Report **Contact:** Bradley Blevins Name of Company: Chesapeake Energy Address: P.O. Box 190, Hobbs, NM 88240-0190 **Telephone No.:** (505) 391-1462 ext. 6224 Facility Name: E.W. Walden No. 4 SWD Unit K Facility Type: Produced water line Surface Owner: Irvin Boyd **Mineral Owner:** Lease No.: LOCATION OF RELEASE Feet from the North/South Line Feet from the **Unit Letter** Section **Township** Range East/West Line County 22S Lea Latitude: N 32° 23' 28.70" Longitude: W 103° 09' 05.96" NATURE OF RELEASE Type of Release: Produced water Volume of Release: ~50 bbls Volume Recovered: ~25-30 bbls Source of Release: Produced water line failed due to vehicular traffic. Date and Hour of Occurrence: Date and Hour of Discovery: 6 April 2006 6 April 2006 @1015 hrs If YES, To Whom? Was Immediate Notice Given? Buddy Hill, NMOCD - Hobbs By Whom? Dax Kimble - Chesapeake Date and Hour: 6 April 2006 @ 1030 hrs Was a Watercourse Reached? If YES, Volume Impacting the Watercourse: ☐ Yes 🛛 No If a Watercourse was Impacted, Describe Fully.* NA Depth to Groundwater: ~80 feet Describe Cause of Problem and Remedial Action Taken.* A 3" pvc line beneath the road failed due to vehicular traffic. The line was replaced and sleeved with a 4" steel line and fresh caliche brought in to cover the line to proper depth. Describe Area Affected and Cleanup Action Taken.* Approximately 39,160 square-feet of surface area was impacted by the release. A vacuum truck was brought in and recovered 25-30 bbls of standing water. It is proposed to remove surficial chloride impacted soil from the roadbeds and to delineate impacts associated with the three pooling areas. Upon completion of delineation activities, a remediation plan will be developed and submitted to the NMOCD and landowner for approval. 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. OIL CONSERVATION DIVISION Approved by District Supervisor: Printed Name: Bradley Blevins Title: Field Supervisor **Approval Date: Expiration Date:**

Conditions of Approval:

E-mail Address: bblevins@chkenergy.com

Date: Phone: (505) 391-1462 ext. 6224

^{*} Attach Additional Sheets If Necessary

District 1
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																
				OPERAT	OR	OR Initial Report Sinal Repo										
Name of C	Company	y: Chesape	ake En	ergy	(Contact: Bradley Blevins										
Address:	P.O. Box	190, Hob	bs, NM	88240-0190	7	Telephone No.: (505) 391-1462 ext. 6224										
Facility N	ame: E.V	W. Walder	No. 4	SWD Unit K		Facility Type: Produced water line										
Surface O	wner: Ir	vin Boyd		Mineral ()wn	wner: Lease No.:										
Surrace S	***************************************	viii Boyu				F RELEAS	······································	Lease	11011							
Unit Letter	Section	Township	Range	Feet from the		th/South Line	Feet from the	East/West L	ine	County						
K	15	22S	37Ē							Lea						
<u> </u>		Lat	itude: 1	V 32° 23' 28 7()" T.	nngitude: W	7 103° 09' 05.9	6"								
		Dut	ituue. <u>1</u>			RELEASE		<u> </u>	(K	P 873						
Type of Relea	se: Produc	ed water		IVATORI	<u> </u>		lease: ~50 bbls	Volume F	Resover	ed: ~25-30 bbls						
			e failed du	e to vehicular traff	ic.		r of Occurrence:		Hour o	f Discovery:						
Was Immedi	ate Notice (Yes 🔲	No 🔲 Not Requ	iired	If YES, To Whom?										
By Whom? I	Dax Kimble	- Chesapeake	1			Date and Hou	r: 6 Aprıl 2006 @	1030 hrs								
Was a Water	course Rea		Yes 🖂	No		If YES, Volume Impacting the Watercourse: NA										
If a Waterco	ırse was In	npacted, Desc	ribe Fully	y.* NA												
Depth to Gro																
							lease road failed d pipe line to proper		r traffic	. The line was						
							of surface area wa									
							emedial goals and a threshold goals in									
excavation are	as; c) backi	filled excavati	on areas v	nth clean top soil a	nd cal	iche purchased f	rom an off-site sou									
				ere seeded with a bl												
I hereby certif	y that the in	formation giv	en above	is true and complet	e to th	e best of my kno	wledge and unders nd perform correct	stand that purs	uant to l	NMOCD rules						
							nd perform correct CD marked as "Fin									
operator of lia	bility shoul	d their operati	ons have t	failed to adequately	inves	tigate and remed	liate contamination	that pose a thi	reat to g	ground water,						
							141 report does not	relieve the op	erator o	f responsibility						
Tor compnanc	e with any c	otner rederal, s	state, or to	cal laws and/or reg	uranoi		L CONSERVA	A TION DI	VICIO)NI						
<u> </u>		an -	>_	,		011	L CONSERVA	ATTON DI	VISIC	<u>//N</u>						
Signature: (Done	My Z	2/10				ENVIROEN	K42)								
Printed Name	: Bradley E	Blevins			` A	Approved by Di	strict S upervisor :	- X Jal								
Title: Field St	pervisor				A											
E-mail Addre	ss: bblevin	s@chkenergy.	com		Conditions of Approval:											
Date: 7	18-00	Phone: (5	05) 391-1	462 ext. 6224	Attached [

^{*} Attach Additional Sheets If Necessary