FINAL CLOSURE REPORT

PAPAGAYO FEDERAL #1

EPI REF: #160049 NMOCD: 1RP#808 NMOCD ADMIN: #PPAC0609634261

UL-M (SW4 OF THE SW4) OF SECTION 27, T 23 S, R 34 E ~20 Miles Northwest of Jal, Lea County, New Mexico Latitude: N 32° 16' 12.55" Longitude: W 103° 27' 51.63"

JUNE 2007

PREPARED BY: Environmental Plus, Inc. 2100 Avenue O Eunice, New Mexico 88231

PREPARED FOR:





Distribution List

Site Closure Report

Papagayo Federal #1 Oil Unit Tank Battery

NMOCD Ref. 1RP#808: EPI Ref. #160049

Name	Title	Company or Agency	Mailing Address	e-mail	
Chris Williams	District I Supervisor	New Mexico Oil Conservation Division – 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 Operating, Inc.	6100 N. Western Avenue Oklahoma City, OK 73118	hbrown@chkenergy.com	
Paul Evans	Environmental Protection Specialist	U.S. Department of the Interior- Bureau of Land Management	U.S. Department of the Interior Bureau of Land Management 260 E. Greene Street Carlsbad, New Mexico 887220	Paul_Evans@nm.blm.gov	
File		Environmental Plus, Inc.	P.O. Box 1558 Eunice, NM 88231-1558	dduncan@envplus.net	

ł.

STANDARD OF CARE

Site Closure Report Papagayo Federal #1 NMOCD Ref. 1RP808: EPI Ref. #160049

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

This report was prepared by:

Mechael H. Stewart

Michael H. Stewart, P.E., C.P.G. Geological Engineer

59.07 Date

This report was reviewed by:

David P. Duncan Civil Engineer

Table of Contents

1.0	Project Synopsis	. v
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	. 7
8.0	Conclusions and Recommendations	.8

FIGURES

Figure 1:	Area Map
Figure 2:	Site Location Map
Figure 3:	Site Map
Figure 4:	Soil Boring Map
Figure 5:	April 3, 2006 Excavation Sample Map
Figure 6:	April 12-13 and May 22, 2006 Excavation Sample Map
-	

TABLES

Table 1: Well DataTable 2: Summary of Soil Boring Analytical ResultsTable 3: Summary of Excavation Soil Sample Analytical Results

APPENDICES

Appendix I: Laboratory Analytical Reports and Chain-of-Custody Forms Appendix II: Project Photographs Appendix III: Soil Boring Log Appendix IV: 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: Papagayo Federal #1 Oil Unit Tank Battery
- *Project Reference:* NMOCD Ref. 1RP #808: EPI Ref. #160049
- Company Contacts: Bradley Blevins
- Site Location: WGS84 N32° 16' 12.55"; W103° 27' 51.63"
- Legal Description: Unit Letter-M, (SW¼ of the SW¼), Section 27, T 23 S, R 34 E
- General Description: Approximately 20-miles northwest of Jal, New Mexico
- *Elevation:* 3,472-ft amsl
- Land Ownership: U.S. Department of the Interior Bureau of Land Management
- EPI Personnel: Project Consultant David P. Duncan

Site Foreman – Kirt Tyree

Danny Deaton

Release Specific:

- Product Released: Crude oil and produced water
- Volume Released: >5.0 bbls
- Time of Occurrence: Historical

- ♦ Volume Recovered: Zero (0)
- ◆ *Time of Discovery:* January 2, 2006

- *Release Source:* Various sources
- Initial Surface Area Affected: Release Area ~ 900-ft²; Overspray Area none

Remediation Specific:

- Final Vertical extent of contamination: >13.5-feet bgs
- Water wells within 1,000-ft: None
- Private domestic water sources within 200-ft: None
- Depth to Groundwater: >100 ft bgs
- Surface water bodies within 1,000-ft: None
- *NMOCD Site Ranking Index:* Zero (0) points (>100-ft to top of water table)
- Remedial goals for Soil: TPH 5,000 mg/Kg; BTEX 50 mg/Kg; Benzene 10 mg/Kg; Chloride and sulfate residuals may not be capable of impacting groundwater above NMWQCC groundwater standards of 250 mg/L and 600 mg/L, respectively.
- **RCRA Waste Classification:** Exempt
- **Remediation Option Selected:** a) Excavation of contaminated soil above NMOCD remedial goals with repository at a disposal facility; b) laboratory analyses confirmed removal of impacted soil above NMOCD remedial threshold goals; c) backfilled excavation with caliche to original ground surface; d) graded area to a smooth, level surface allowing natural drainage
- Disposal Facility: Sundance Services, Inc., Eunice, New Mexico
- Volume disposed: ~ 1,016-yd³
- Project Completion Date: June 3, 2006

2.0 SITE AND RELEASE INFORMATION

2.1 Describe the land use and pertinent geographic features within 1,000 feet of the site. The release site is located within the confines of an established oil field. Surrounding land is used for grazing purposes

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

Historical releases within a bulk storage tank area, around heater treater and overland to the northeast. Limited excavation around well head.

- 2.3 What was the volume of the release? (if known): >5-bbls
- 2.4 What was the volume recovered? (if known): No hydrocarbon liquids recovered
- 2.5 When did the release occur? (if known): Historical releases

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), Plate 1, shows that the release site is outside of the boundaries of the saturated Tertiary and Quaternary rocks (High Plains Aquifer). Plate 1 shows the top of the Dockum Formation (redbeds) at approximately 3,400 feet, resulting in a thin veneer (~70 feet) of Tertiary and recent deposits.

Nelson and Clebsch show the potentiometric surface of water in the Triassic aquifers (redbeds) at 3100 feet or approximately 470 feet bgs. The redbeds are generally dominated by shales and siltstones so the uppermost groundwater beneath the release site would thus either be present in the low-permeability materials or hydraulically isolated from surface interactions.

2.7 Ecological Description

The area is typical of the Upper Chihuahuan Desert Biome consisting primarily of sandy soil covered with short semi-arid grasses, interspersed with Honey Mesquite, 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 the area. A survey of *Listed*, *Threatened* or *Endangered* species was not conducted.

2.8 Area Groundwater

The groundwater potentiometric surface at this site is projected to be a minimum of 250 feet 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 1-mile of the release site. Similarly, no private, domestic fresh water wells or springs used by less than five (5) households for domestic or stock watering purposes exist within 200-feet of the release site (reference *Figure 2* and *Table 1*).

2.10 Area Surface Water Features

No surface water features exist within 1,000-feet of the release site (reference Figure 2).

3.0 <u>NMOCD SITE RANKING</u>

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

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

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

- Depth to Groundwater (i.e., distance from the lower most acceptable concentration to groundwater);
- Wellhead Protection Area (i.e., distance from fresh water supply wells);
- Distance to Surface Water Body (i.e., horizontal distance to all down gradient surface water bodies).

Based on the distance of the site from protectable area water wells, surface water bodies, and depth to groundwater from the lower most contamination, the NMOCD ranking score for the site is Zero (0) points with the soil remedial goals highlighted in the Site Ranking table presented below:

1. GROUNE	OWATER	2. WELLHEAD PROTECTION AREA	3. DISTANCE TO SURFACE WATER
Depth to GW <50 fe	eet: 20 points	If <1,000' from water source, or <200' from	<200 horizontal feet: 0 points
Depth to GW 50 to 99 feet: <i>10 points</i>		private domestic water source: 20 points	200-1,000 horizontal feet: 10 points
Depth to GW >100	feet: 0 points	If >1,000' from water source, or >200' from private domestic water source: <i>0 points</i>	>1,000 horizontal feet: <i>0 points</i>
Site Rank (1+2+3) =	= 0 + 0 + 0 = 0	points	
	Total Site	Ranking Score and Acceptable Remedial Go	al Concentrations
Site Ranking	20	or > 10	0
Benzene ¹	10 μ	opm 10 ppm	10 ppm
BTEX ¹	50 j	opm 50 ppm	50 ppm
трн	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 EXCAVATED SOIL INFORMATION

4.1 Was soil excavated for off-site treatment or disposal? 🛛 🖾 Yes 🗌 No

Date excavated: March 23 through June 3, 2006

Total volume removed: ~ 1,016 cubic yards

4.2 Indicated soil treatment type:

\boxtimes	Disposal
	Land Treatement
	Composting/Biopiling
	Other ()

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

5.0 <u>SAMPLING INFORMATION</u>

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 $\sim 70^{\circ}$ F, they were analyzed for organic vapors utilizing a MiniRae® Photoionization Detector (PID) equipped with a 10.6 electron volt (eV) lamp and calibrated for detection of benzene vapors.

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

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

Initial soil samples were collected January 31, 2006 during the advancement of soil boring SB-1 utilizing a hollow core drill (reference *Figure 3*). Initial soil samples were collected from 2-3, 5-6 and 10-11 feet below ground surface (bgs) (reference *Table 1*).

Three (3) separate excavation episodes were completed on April 3, 2006, April 12, 2006 and May 22, 2006. During excavation of impacted soil from the release site, soil samples were collected from bottom and sidewalls excavation at different locales and depths to characterize materials for disposal. Soil samples were analyzed in the field for organic vapor and chloride concentrations. Excavation of impacted soil continued until organic vapor concentrations were below 100 parts per million (ppm) (reference *Table 2*).

Verification soil samples were then collected. A portion of each verification soil sample was immediately put into an approved sample container, labeled and placed on ice for submittal to an independent laboratory under standard Chain-of-Custody protocol for quantification of total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and total xylenes (BTEX), chloride and/or sulfate concentrations. Remaining portions of each verification soil sample were analyzed in the field for chloride and organic vapor concentrations utilizing methods described in Section 5.0, *Sampling Information*, Article 5.1.

5.3 Discuss sample locations and provide rationale for their locations.

On January 31, 2006 boring BH-1 was advanced to a total depth (TD) of 13.5-feet bgs. The locale was chosen near the apparent maximum surface impact in the release area in order to delineate the vertical extent of impacted soils (reference *Figure 3*).

From April 3, 2006 through May 22, 2006 the affected area was excavated for removal of visibly impacted soils. Impacted soil was temporarily stockpiled "on-site" for transportation to a state approved disposal facility. During the removal activities, soil samples were collected from the bottom and sidewalls of the excavation. Locales and depth of the sample points were determined from visual inspection of the soil and assisted by field analyses of chloride and organic vapor concentrations. Laboratory analytical results were used to verify removal of soil impacted above NMOCD remedial threshold limits.

8.0 **CONCLUSIONS AND RECOMMENDATIONS**

8.1 **Recommendation for the site:** Site Closure

Additional Groundwater Monitoring **Corrective** Action

8.2 Base the recommendation above on Guidelines for Remediation of Leaks, Spills and <u>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.

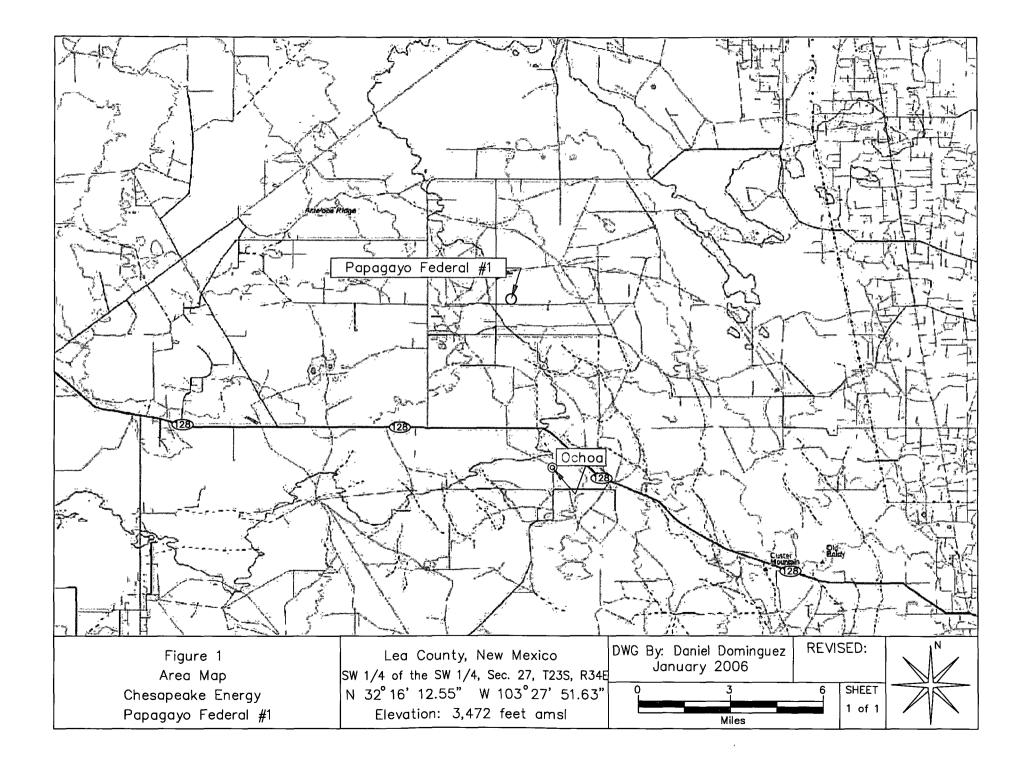
All hydrocarbon impacted soil above NMOCD remedial threshold goals for BTEX and TPH constituent concentrations was excavated from the release area. Approximately 1,016 cubic yards of soil impacted above NMOCD remedial threshold goals were disposed at Sundance Services, Inc.

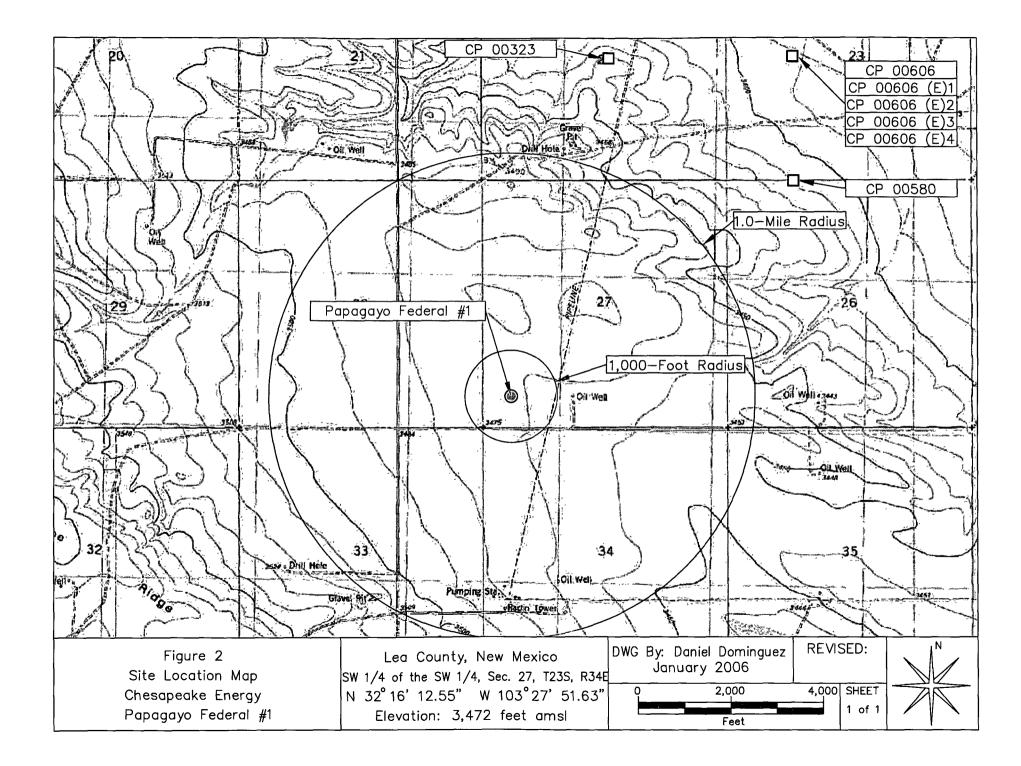
Residual chlorides remaining in situ which are above remedial threshold goal for chloride concentrations are limited in extent.

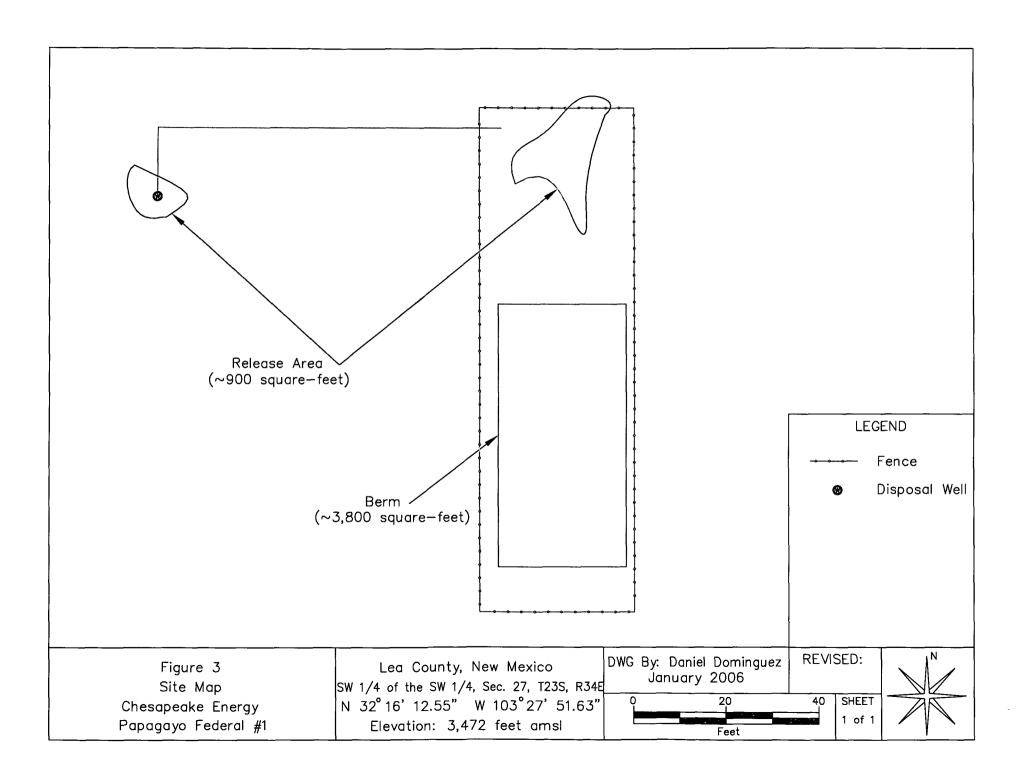
In accordance with Chesapeake Operating, Inc., specifications, a 20-mil polyethylene liner was placed on bottom of the excavation to retard vertical migration of in situ chloride residuals. The polyethylene liner was enveloped between two (2) one (1) foot thick layers of cushion sand. The excavated areas were backfilled with approximately 1,034 cubic yards of imported material (caliche-700 c.y., top soil-292 c.y. and clay-42 c.y.)

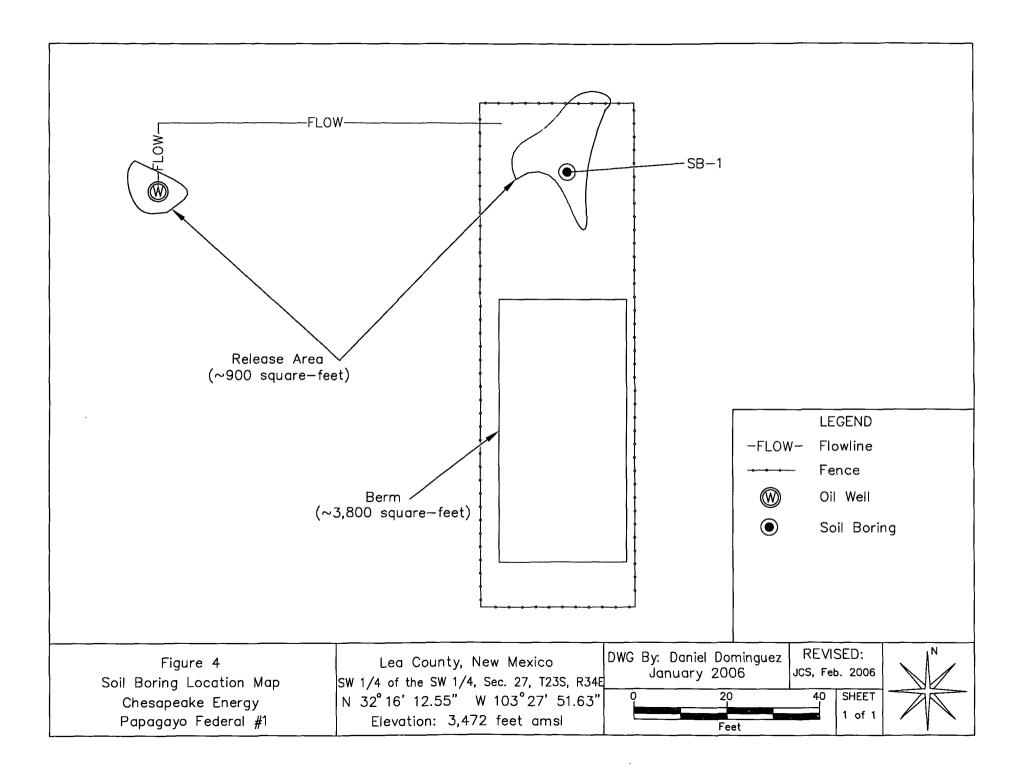
- 8.3 If additional groundwater and monitoring is recommended, indicate the proposed monitoring schedule and frequency. Conduct quarterly monitoring until the NMOCD responds to this report. Not applicable
- 8.4 If corrective action is recommended, provide a conceptual approach. Not applicable

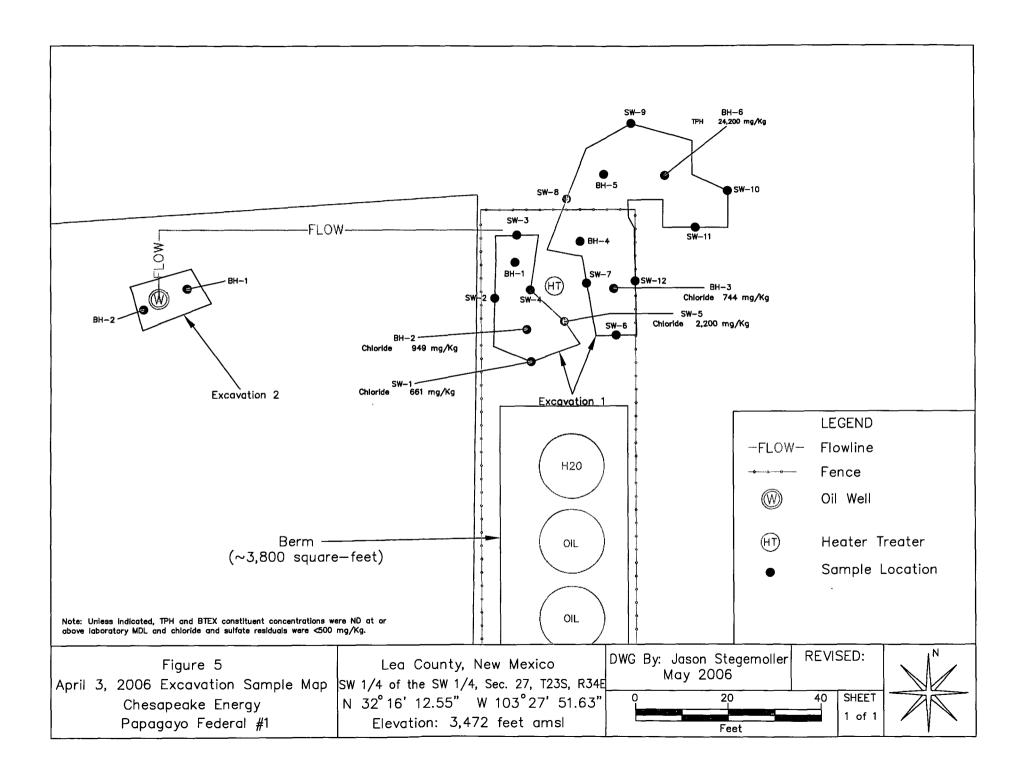
FIGURES

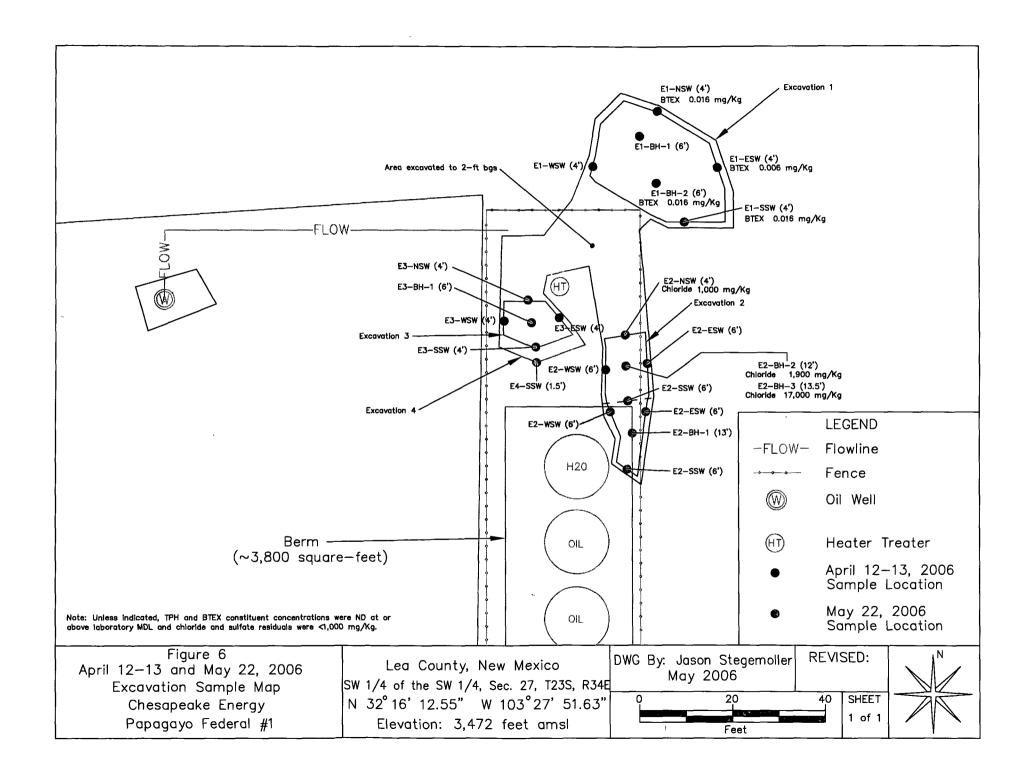












TABLES

Î

TABLE 1

Well Data

Chesapeake Energy - Papagayo Federal #1 (Ref. # 160049)

Well Number	Diversion ^A	Owner Us		Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation ^B	Depth to Water (ft bgs)
CP_00323 EXP_	0	SHELL OIL COMPANY	PRO	23S	34E	22 2 3	N32° 17' 24.05"	W103° 27' 26.74"		3,445	
CP 00580	0	INC. NATOMAS NORTH AMERICA	PRO	23S	34E	23 343	N32° 16' 57.94"	W103° 26' 40.59"	09-Feb-79	3,417	
CP 00606	0	INC. NATOMAS NORTH AMERCIA	PRO	23S	34E	23 1 4	N32° 17' 24.04"	W103° 26' 40.60"	26-Jul-79	3,396	265
CP 00606 (E) 1 EXP	ERROR	NATOMAS NORTH AMERCIA	PRO	23S	34E	23 1 4	N32° 17' 24.04"	W103° 26' 40.60"			
CP_00606 (E) 2 EXP	ERROR	INC. NATOMAS NORTH AMERCIA	PRO	23S	34E	23 14	N32° 17' 24.04"	W103° 26' 40.60"	_		
CP_00606 (E) 3 EXP	ERROR	INC. NATOMAS NORTH AMERCIA	PRO	23S	34E	23 1 4	N32° 17' 24.04"	W103° 26' 40.60"			
CP 00606 (E) 4 EXP	ERROR	APACHE CORPORATION	PRO	23S	34E	23 1 4	N32° 17' 24.04"	W103° 26' 40.60"			

Data obtained from the New Mexico Office of the State Engineer Website (http://iwaters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet1) and USGS Database

 A = In acre feet per annum

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

PRO = 72-12-1 Prospecting or Development of natural resource

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

Shaded area indicates wells not shown in Figure 2

TABLE 2

Summary of Soil Boring Analytical Results

Chesapeake- Papagayo Fed. No. 1 (Ref. #160049)

Soil Boring	Soil Sample I.D.	Depth (feet)	Sample Date	Soil Status	PID Reading (ppm)	Field Chloride Analyses (ppm)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) _(mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sultate (mg/Kg)
	SB-1 2'-3'	2-3	31-Jan-06	In Situ	0 5	640	<0 0250	<0 0250	<0 0250	<0 050	<0 125	<10 0	<10.0	<10.0	1,060	587
SB-1	SB-1 5'-6'	5-6	31-Jan-06	In Situ	05	160	<0 0250	<0 0250	<0 0250	<0 050	<0 125	<10.0	<10.0	<10.0	39 2	25
	SB-1 10'-11'	10-11	31-Jan-06	In Situ	0.6	160									34 6	34 6
	NMOCD Remedial Thresholds					_	10				50			5,000	250 ^B	600 ^B

1

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

TABLE 3

Summary of Excavation Soil Sample Analytical Results

Chesapeake- Papagayo Fed. No. 1 (Ref. #160049)

Soil Sample I.D.	Depth (feet)	Sample Date	Soil Status	PID Reading (ppm)	Field Chloride Analyses (ppm)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene	Total Xylenes	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	C29-C35 Range Organics (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
E1-BH-1 (2')	2	03-Apr-06	Excavated	87		<0 0250	<0 0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	143	30 1
E1-BH-2 (2')	2	03-Apr-06	Excavated	21.4		<0 0250	<0 0250	<0 0250	< 0.050	<0 125	<10	<10	<10	<10	949	44
E1-BH-3 (2')	2	03-Apr-06	Excavated	19.4		<0 0250	<0 0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	744	38.6
E1-BH-4 (2')	2	03-Apr-06	Excavated	89		<0 0250	<0 0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	12 7	21 7
E1-BH-5 (2')	2	03-Apr-06	Excavated	18.9		<0 0250	<0 0250	<0 0250	<0 050	<0.125	<10	<10	<10	<10	107	12.9
E1-BH-6 (2')	2	03-Apr-06	Excavated	1510		0 796	2 09	2 31	11 55	16 746	6,740	16,100	1,400	24,200	239	25 5
E1-SW-1 (1')	1	03-Apr-06	Excavated	196		< 0.0250	<0 0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	661	68 4
E1-SW-2 (1')	1	03-Apr-06	Excavated	26 8		<0 0250	<0 0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	596	33.0
E1-SW-3 (1')	1	03-Apr-06	Excavated	24 5		<0 0250	<0 0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	84 3	43 9
E1-SW-4 (1')	1	03-Apr-06	Excavated	24 1		<0 0250	<0 0250	< 0.0250	<0 050	<0 125	<10	<10	<10	<10	66 4	21.6
E1-SW-5 (1')	1	03-Apr-06	Excavated	16.8		<0 0250	<0 0250	< 0.0250	< 0.050	<0 125	<10	<10	<10	<10	2,200	7 94
E1-SW-6 (1')	1	03-Apr-06	Excavated	115		<0 0250	< 0.0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	149	20.8
E1-SW-7 (1')	1	03-Apr-06	Excavated	34.8		<0 0250	<0 0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	119	16 1
E1-SW-8 (1')	1	03-Apr-06	Excavated	214		<0 0250	< 0.0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	22 5	199
E1-SW-9 (1')	1	03-Apr-06	Excavated	16.6		<0 0250	<0 0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	17.1	18.8
E1-SW-10(1')	1	03-Apr-06	Excavated	23 3		<0 0250	< 0.0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	18.6	16.1
E1-SW-11 (1')	1	03-Apr-06	Excavated	193		<0 0250	<0 0250	< 0.0250	<0 050	<0 125	<10	<10	<10	<10	6 46	12.8
E1-SW-12 (1')	1	03-Apr-06	Excavated	27.4		<0 0250	<0 0250	<0 0250	< 0.050	<0 125	<10	<10	<10	<10	7 79	12 1
E2-BH-2 (1')	1	03-Apr-06	In Situ	287		<0 0250	<0 0250	<0 0250	<0 050	<0 125	<10	<10	<10	<10	28.1	13.5
E2-BH-2 (1')	1	03-Apr-06	In Situ	28 6		<0 0250	<0 0250	<0 0250	< 0.050	<0 125	<10	<10	<10	<10	162	32.6
E1-BH-1 (6')	6	12-Apr-06	In Situ	0.0	480	<0 005	<0 005	<0 005	< 0.010	<0 025	<10.0	<100	<10.0	<30.0	440	<50
E1-BH-2 (6')	6	12-Apr-06	In Situ	0.0	320	0.016	<0 005	<0 005	<0.010	0.016	<10 0	<100	<10 0	<30.0	57	<25
E1-SSW(4')	4	12-Apr-06	In Situ	0.0	240	0 009	<0 005	<0 005	<0 010	0 009	<10.0	<10.0	<10.0	<30 0	<10	<5 0
E1-ESW(4')	4	12-Apr-06	In Situ	0.0	160	0 006	<0 005	< 0.005	<0 010	0.006	<10 0	<100	<100	<30.0	<10	32
E1-NSW (4')	4	12-Apr-06	In Situ	0.0	160	0 006	<0 005	<0 005	<0 010	0 006	<10.0	<10.0	<10.0	<30.0	<10	17
E1-WSW (4')	4	12-Apr-06	In Situ	0.0	320	<0 005	<0 005	<0 005	<0 010	<0 025	<10.0	<10.0	<10.0	<30.0	130	<25
E2-ESW (4')	4	12-Apr-06	In Situ	14	320										110	27
E2-NSW (4')	4	12-Apr-06	In Situ	0.0	720										1,000	<25
E2-WSW (4')	4	12-Apr-06	In Situ	0.0	320										140	<25
E2-SSW (5')	5	13-Apr-06	In Situ	0.0	2,640										2,900	
E2-BH-2 (12')	12	13-Apr-06	Excavated	0.0	1,120										1,900	
E2-BH-3 (13 5')	13 5	13-Apr-06	In Situ	0.0	4,000										17.000	
E3-BH-1 (6')	4	12-Apr-06	In Situ	0.0	160					+-					<10	24
E3-SSW (4')	4	12-Apr-06	In Situ	0.0	240										<10	12
E3-ESW (4')	4	12-Apr-06	In Situ	0.0	160										<10	13
E3-NSW (4')	4	12-Apr-06	In Situ	0.0	240										<10	<5 0
E3-WSW (4')	4	12-Apr-06	In Situ	1.3	240										10	13
E4-SSW (1.5')	15	12-Apr-06	In Situ	0.0	400										320	
E2-BH-1 (13')	13	22-May-06	In Sıtu	0.0	400	<0 005	<0 005	<0 005	<0.010	<0 025	<10.0	<10.0	<20 0	<40 0	180	36
E2-ESW (6')	6	22-May-06	In Situ	0.0	400	< 0.005	<0 005	<0 005	<0.010	<0 025	<10.0	<10.0	<20.0	<40 0	380	11
E2-WSW (6')	6	22-May-06	In Situ	0.0	560	<0 005	<0 005	<0 005	<0 010	<0 025	<10 0	<10.0	<20 0	<40 0	390	10
E2-SSW (6')	6	22-May-06	In Situ	0.0	320	<0 005	<0 005	<0 005	<0 010	<0 025	<10 0	<10.0	<20 0	<40 0	90	41
		ial Thresholds		100		10				50				5,000	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

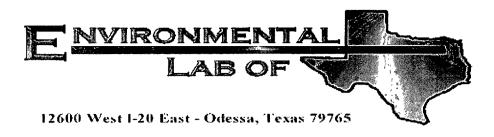
~

APPENDIX I

.

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY FORM

7



Analytical Report

Prepared for:

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

Project: Chesapeake/ Papagayo Fed. #1 Project Number: 160049 Location: UL-M, Sect. 27, T 23 S, R 34 E

Lab Order Number: 6B03016

Report Date: 02/10/06

Environmental Plus, Incorporated	Project.	Chesapeake/ Papagayo Fed #1	Fax 505-394-2601
P.O. Box 1558	Project Number	160049	Reported:
Eunice NM, 88231	Project Manager	laın Olness	02/10/06 17.48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-1 2'-3'	6B03016-01	Soil	02/02/06 11.15	02/03/06 11 40
SB-1 5'-6'	6B03016-02	Soil	02/02/06 11 20	02/03/06 11 40
SB-1 10'-11'	6B03016-03	Soil	02/02/06 11.30	02/03/06 11 40

Environmental Plus, Incorporated P O Box 1558 Eunice NM, 88231 Project Mumber Chesapeake/ Papagayo Fed. #1 Project Number 160049 Project Manager lain Olness

Reported: 02/10/06 17 48

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-1 2'-3' (6B03016-01) Soil									
Gasoline Range Organics C6-C12	ND	10 0	mg/kg dry	1	EB60610	02/06/06	02/08/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	11	н	**	н	u	"	
Total Hydrocarbon C6-C35	ND	10 0	н	"	"	н	"		
Surrogate 1-Chlorooctane		77.0 %	70-13	0	"	"	"	"	
Surrogate 1-Chlorooctadecane		71.8 %	70-13	0	"	"	"	"	
SB-1 5'-6' (6B03016-02) Soil									
Gasoline Range Organics C6-C12	ND	10 0	mg/kg dry	1	EB60610	02/06/06	02/08/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10 0	н	"		*	н		
Total Hydrocarbon C6-C35	ND	10 0	н	н			"	"	
Surrogate. 1-Chlorooctane		79.2 %	70-13	0	"	"	"	"	
Surrogate. 1-Chlorooctadecane		73.8%	70-13	0	"	"	"	"	

Environmental Lab of Texas

Reported: 02/10/06 17.48

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-1 2'-3' (6B03016-01) Soil									
Chloride	1060	20 0	mg/kg	40	EB60803	02/06/06	02/08/06	EPA 300 0	
% Moisture	1.0	0.1	%	1	EB60703	02/06/06	02/07/06	% calculation	
Sulfate	58.7	20 0	mg/kg	40	EB60803	02/06/06	02/08/06	EPA 300.0	
SB-1 5'-6' (6B03016-02) Soil	_							_	
Chloride	39.2	5 00	mg/kg	10	EB60803	02/06/06	02/08/06	EPA 300 0	
% Moisture	3.3	0.1	%	1	EB60703	02/06/06	02/07/06	% calculation	
Sulfate	25.0	5.00	mg/kg	10	EB60803	02/06/06	02/08/06	EPA 300 0	
SB-1 10'-11' (6B03016-03) Soil									
Chloride	34.6	5 00	mg/kg	10	EB60804	02/06/06	02/09/06	EPA 300 0	

Environmental Lab of Texas

Environmental Plus, Incorporated	Project	Chesapeake/ Papagayo Fed #1	Fax 505-394-2601
P.O Box 1558	Project Number	160049	Reported:
Eunice NM, 88231	Project Manager	lain Olness	02/10/06 17 48

Volatile Organic Compounds by EPA Method 8260B

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-1 2'-3' (6B03016-01) Soil									
Benzene	ND	25 0	ug/kg dry	25	EB60819	02/08/06	02/10/06	EPA 8260B	
Toluene	ND	25.0	п		н	11	н	11	
Ethylbenzene	ND	25 0	"				"	"	
Xylene (p/m)	ND	25 0			"		н	"	
Xylene (0)	ND	25.0	11		п	**	п	"	
Surrogate Dibromofluoromethane		119 %	70-1	39	"	"	"	"	
Surrogate 1,2-Dichloroethane-d4		109 %	52-1	49	"	"	"	"	
Surrogate Toluene-d8		984%	76-1	25	"	"	"	"	
Surrogate 4-Bromofluorobenzene		105 %	66-1	45	"	"	"	"	

Benzene	ND	25.0	ug/kg dry	25	EB60819	02/08/06	02/10/06	EPA 8260B
Toluene	ND	25 0		11	"	**	"	"
Ethylbenzene	ND	25.0	"	"	"	п	"	и
Xylene (p/m)	ND	25.0	**	и			"	"
Xylene (0)	ND	25.0	"	11	н	"	н	"
Surrogate Dibromofluoromethane		126 %	70-13	9	"	"	"	"
Surrogate 1,2-Dichloroethane-d4		111%	52-14	9	"	"	"	"
Surrogate Toluene-d8		99.2 %	76-12.	5	"	"	"	"
Surrogate 4-Bromofluorobenzene		107 %	66-14.	5	"	"	"	"

Environmental Lab of Texas

ProjectChesapeake/ Papagayo Fed #1Project Number.160049Project ManagerIain Olness

Reported: 02/10/06 17.48

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 EB60610 - Solvent Extraction (GC)										
Blank (EB60610-BLK1)				Prepared (02/06/06 A	nalyzed 02	/08/06			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet			-				
Diesel Range Organics >C12-C35	ND	10 0	п							
Total Hydrocarbon C6-C35	ND	10 0	11							
Surrogate 1-Chlorooctane	44 9		mg/kg	50 0		89 8	70-130			
Surrogate 1-Chlorooctadecane	46 1		"	50 0		92 2	70-130			
LCS (EB60610-BS1)				Prepared. (02/06/06 A	nalyzed. 02	/08/06			
Gasoline Range Organics C6-C12	434	10 0	mg/kg wet	500		86 8	75-125			
Diesel Range Organics >C12-C35	507	10 0	"	500		101	75-125			
Total Hydrocarbon C6-C35	940	10 0	н	1000		94.0	75-125			
Surrogate 1-Chlorooctane	60 6		mg/kg	50 0		121	70-130			
Surrogate 1-Chlorooctadecane	49 4		"	50 0		988	70-130			
Calibration Check (EB60610-CCV1)	Prepa				02/06/06 A	nalyzed 02	/08/06			
Gasoline Range Organics C6-C12	467		mg/kg	500		93 4	80-120			
Diesel Range Organics >C12-C35	515		н	500		103	80-120			
Total Hydrocarbon C6-C35	982		н	1000		98 2	80-120			
Surrogate 1-Chlorooctane	617		"	50 0		123	70-130			
Surrogate 1-Chlorooctadecane	51 1		"	50 0		102	70-130			
Matrix Spike (EB60610-MS1)	Sour	ce: 6B03015	5-08	Prepared (02/06/06 A	nalyzed. 02	/08/06			
Gasoline Range Organics C6-C12	473	10 0	mg/kg dry	513	ND	92.2	75-125			
Diesel Range Organics >C12-C35	533	10 0	**	513	ND	104	75-125			
Total Hydrocarbon C6-C35	1010	10 0	н	1030	ND	98-1	75-125			
Surrogate 1-Chlorooctane	597		mg/kg	50 0		119	70-130			
Surrogate 1-Chlorooctadecane	49 5		"	50 0		99 O	70-130			
Matrix Spike Dup (EB60610-MSD1)	Sour	ce: 6B03015	5-08	Prepared. (02/06/06 A	nalyzed 02	/08/06			
Gasoline Range Organics C6-C12	483	10 0	mg/kg dry	513	ND	94.2	75-125	2 09	20	
Diesel Range Organics >C12-C35	540	10 0	н	513	ND	105	75-125	1 30	20	
Total Hydrocarbon C6-C35	1020	10 0	и	1030	ND	99 0	75-125	0 985	20	
Surrogate 1-Chlorooctane	60 1		mg/kg	50 0		120	70-130			
Surrogate 1-Chlorooctadecane	49 4		"	50 0		98 <i>8</i>	70-130			

Environmental Lab of Texas

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Amelute	Result	Reporting	Units	Spike	Source	%REC	%REC	RPD	RPD	Notes
Analyte	Result	Limit	Units	Level	Result	%KEU	Limits	KPD	Limit	Notes
Batch EB60703 - General Preparation (Prep)										
Blank (EB60703-BLK1)				Prepared	02/06/06 A	nalyzed 02	2/07/06			
% Solids	100		%							
Duplicate (EB60703-DUP1)	Sou	rce: 6B03010-	01	Prepared	02/06/06 A	nalyzed 02	/07/06			
% Solids	99 4		%		99 6			0 201	20	
Duplicate (EB60703-DUP2)	Sou	rce: 6B03015-	09	Prepared:	02/06/06 A	nalyzed. 02	/07/06			
% Solids	97 6		%		97 1			0 514	20	
Duplicate (EB60703-DUP3)	Sou	rce: 6B06002-	12	Prepared.	02/06/06 A	nalyzed 02	/07/06			
% Solids	92 7		%		92 7			0 00	20	4.13-
Batch EB60803 - Water Extraction Blank (EB60803-BLK1)				Prenared	02/06/06 A	nalvzed: 02	/08/06			
Sulfate	ND	0 500	mg/kg	Tieparea	02/00/00 11	naryzed 02				
Chloride	ND	0 500	"							
LCS (EB60803-BS1)				Prepared.	02/06/06 A	nalyzed 02	/08/06			
Chloride	8 66		mg/L	10 0		86 6	80-120			
Sulfate	9 80		11	10 0		98 0	80-120			
Calibration Check (EB60803-CCV1)				Prepared	02/06/06 A	nalyzed. 02	/08/06			
Chloride	8 81		mg/L	10 0		88 1	80-120			
Sulfate	10 0			10 0		100	80-120			
Duplicate (EB60803-DUP1)	Sou	-ce: 6B03015-	01	Prepared.	02/06/06 A	nalyzed 02	/08/06			
Chloride	69 5	20 0	mg/kg		74 0			6 27	20	
Sulfate	1390	20 0			1380			0 722	20	

Environmental Lab of Texas

Reported: 02/10/06 17 48

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 EB60804/- Water Extraction										
Blank (EB60804-BLK1)				Prepared (02/07/06 A	nalyzed 02	/08/06			
Chloride	ND	0 500	mg/kg							
LCS (EB60804-BS1)				Prepared. (02/07/06 A	nalyzed 02	/08/06			
Chloride	8 78		mg/L	10 0		87 8	80-120			
Calibration Check (EB60804-CCV1)				Prepared. (02/07/06 A	nalyzed 02	/08/06			
Chloride	8 73		mg/L	10 0		87.3	80-120			
Duplicate (EB60804-DUP1)	Sou	rce: 6B06002-	08	Prepared. ()2/07/06 A	nalyzed. 02	/08/06			
Chloride	39 0	5 00	mg/kg		43 8			11.6	20	

Environmental Lab of Texas

Reported: 02/10/06 17 48

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD	Net
Analyte	resuit	Limit	Units	Level		70KEU	Limits	KPU	Limit	Notes
Batch EB60819 - EPA 5030C (GCMS)										
Blank (EB60819-BLK1)				Prepared &	2 Analyzed	02/08/06				
Benzene	ND	25 0	ug/kg wet							
Toluene	ND	25 0	"							
Ethylbenzene	ND	25 0	н							
Xylene (p/m)	ND	25 0	"							
Xylene (0)	ND	25 0	"							
Surrogate Dibromofluoromethane	56 0		ug/kg	50 0		112	70-139			na
Surrogate 1,2-Dichloroethane-d4	511		"	50 0		102	52-149			
Surrogate Toluene-d8	49 2		"	50 0		98 4	76-125			
Surrogate 4-Bromofluorobenzene	50 6		"	50 0		101	66-145			
LCS (EB60819-BS1)				Prepared &	Analyzed	02/08/06				
Benzene	1180	25 0	ug/kg wet	1250		94 4	70-130			
Toluene	1340	25 0		1250		107	70-130			
Ethylbenzene	1360	25 0		1250		109	70-130			
Xylene (p/m)	2810	25 0		2500		112	70-130			
Xylene (o)	1460	25 0		1250		117	70-130			
Surrogate Dibromofluoromethane	58 0		ug/kg	50 0		116	70-139			
Surrogate 1,2-Dichloroethane-d4	54 2		"	50 0		108	52-149			
Surrogate Toluene-d8	50 3		"	50 0		101	76-125			
Surrogate 4-Bromofluorobenzene	49 7		"	50 0		99 <i>4</i>	66-145			
Calibration Check (EB60819-CCV1)				Prepared &	Analyzed.	02/08/06				
Toluene	58 1		ug/kg	50 0		116	70-130			
Ethylbenzene	56 7			50 0		113	70-130			
Surrogate Dibiomofluoromethane	57 0		"	50 0		114	70-139			
Surrogate 1,2-Dichloroethane-d4	536		"	50 0		107	52-149			
Surrogate Toluene-d8	49 7		"	50 0		99 <i>4</i>	76-125			
Surrogate 4-Bromofluorobenzene	518		"	50 0		104	66-145			

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EB60819 - EPA 5030C (GCMS)

Matrix Spike (EB60819-MS1)	Sourc	e: 6B03005	-01	Prepared &	Analyzed.	02/08/06				
Benzene	1210	8 8 9				94 5	70-130			
Tolucne	1360	25 0	"	1280	ND	106	70-130			
Ethylbenzene	1350	25 0	"	1280	ND	105	70-130			
Xylene (p/m)	2870	25 0	"	2570	24 1	111	70-130			
Xylene (0)	1520	25 0	11	1280	ND	119	70-130			
Surrogate Dibromofluoromethane	60 1		ug/kg	50 0		120	70-139			
Surrogate 1,2-Dichloroethane-d4	55 3		"	50 O		111	52-149			
Surrogate Toluene-d8	50 4		n	50 0		101	76-125			
Surrogate 4-Bromofluorobenzene	53 6		n	50 0		107	66-145			
Matrix Spike Dup (EB60819-MSD1)	Sourc	e: 6B03005	-01	Prepared &	Analyzed.	02/08/06				
Benzene	1260	25 0	ug/kg dry	1280	ND	98 4	70-130	4 04	20	
Toluene	1410	25 0	"	1280	ND	110	70-130	3 70	20	
Ethylbenzene	1370	25 0	19	1280	ND	107	70-130	1 89	20	
Xylene (p/m)	2890	25 0	и	2570	24 1	112	70-130	0 897	20	
Xylene (o)	1530	25 0		1280	ND	120	70-130	0 837	20	
Surrogate Dibromofluoromethane	61 8		ug/kg	50 0		124	70-139			
Surrogate 1,2-Dichloroethane-d4	55 2		"	50 0		110	52-149			
Surrogate Toluene-d8	508		"	50 0		102	76-125			
binnogure Totalene-uo										

Environmental Lab of Texas

Environmental Plus, Incorporated	Project. Chesapeake/ Papagayo	Fed. #1 Fax 505-394-2601
P O Box 1558	Project Number. 160049	Reported:
Eunice NM, 88231	Project Manager lain Olness	02/10/06 17 48

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 Kitus

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.

Date:

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

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

Environmental Lab of Texas

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

2/10/2006

						58, Eunice, NM 88231								LAB: ELT											
(505) 394 -3 481	FAX: (505) 394-2601																								
Company Name		, Inc	2.							Č23	B	<u>IIR</u>	Ō				A	ŊĂ	ŶS	IS P	EQ	UES	J		7
EPI Project Man																									
Mailing Address	P.O. BOX 1558														:										
City, State, Zip	Eunice New Mexico	882	:31							-	المحم	F	b												
EPI Phone#/Fax		394-	260	1							Ę.	٦ _Р) –												
Client Company											4	m													
Facility Name	Papagayo Fed. #1											88													
Location	UL-M, Sect. 27, T 23	S, I	R 34	ΙE						Att	n: la	ain (Olness												
Project Reference													1558												
EPI Sampler Na	ne George Blackburn									_		·	<u>// 88231</u>												
						MA	FRIX			PR	ESE	RV.	SAMPLI	NG											
LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	ТІМЕ	BTEX 8021B	TPH 8015M	CHLORIDES (CI')	SULFATES (SO4 [®])	pH	TCLP	OTHER >>>	РАН			
-0[1	SB-1 (2'-3')	G	1			Х					Х		02-Feb-06	11:15	X	X	Х	Х	Γ						
-02 2	SB-1 (5'-6')	G	1			X					X	\Box	02-Feb-06	11:20	X	X	Х	Х							\Box
	SB-1 (10'-11')	G	1			X					Х		02-Feb-06	11:30	Х	X	X	Х							
-04 4	SB-1 (15'-16')	G	1			X					Х		02-Feb-06	11:40	X	X	Х	X							
5																									
6																									\Box
7																				[
9			L												<u> </u>				<u> </u>	<u> </u>		\square			
10															L			L							
		SZ.	23	<u>I</u>			÷.			×.												<u> 7</u>		Ú.	
Sampter Helinguished:	Date 2/3/06 Time 0857 Date 2/3/8/6 Tune 7/3/8/6 Tune 7/3/8/6 Sample (85	, Réce	\dot{c}	[] By: (1)	tu ab sta	vi m k	- Che Ch	Q acked	By.		NOTI are N PLE/	ES: Ar ID for	esults to iolness halyze subsequents organics and <250 m ALL IAIN OLNESS	amples in eac ng/Kg for chic AT (505) 394-	h soil Irides 3481.	borin and < PL	600 n	ng/Kg \S	for si	Mates RE/	s-any AD!	1-04E	sive s	samol NS,	a's

Environmental Plus, Inc.

Chain of Custody Form

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

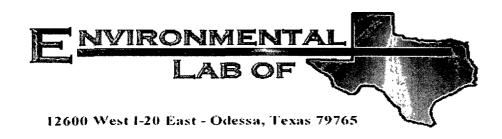
lient:	
Date/Time:2/3/01611	.40
Drder #:6603016	
nitials:	

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No_	1.5 CI
Shipping container/cooler in good condition?		No	
Custody Seals intact on shipping container/cooler?	Yes	No	dui instato
Custody Seals intact on sample bottles?	1 YES	No	Not present
Chain of custody present?		No	1
Sample Instructions complete on Chain of Custody?		No	1
Chain of Custody signed when relinquished and received?	Ces	No	
Chain of custody acrees with sample label(s)	1753 1	No	
Container labels legicle and intact?	1231	No	
Sample Matrix and procerties same as on chain of custody?		No	1
Samples in procer container/bottle?	123	No	
Samples procerly preserved?	Ya	No	
Samele bettles intact?	1 Ces	No	
Preservations documented on Chain of Custody?	1 (205	No	
Containers documented on Chain of Custody?	YES	No	1
Sufficient sample amount for indicated test?	1 268	Nc	1
All samples received within sufficient hold time?	1 765	Ne	
VOC samples have zero headspace?	XES	Nc	Not Accilcable

Other observations:

Contact Person: Regarding:	Variance Documentation: Date/Time:	_ Contacted by:
Corrective Action Taken:		
<u> </u>		



Analytical Report

Prepared for:

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

Project: Chesapeake/ Papagayo Fed. #1 Project Number: 160049 Location: UL-M, Sect. 27, T 23 S, R 34 E

Lab Order Number: 6D04008

Report Date: 04/12/06

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

ProjectChesapeake/ Papagayo Fed #1Project Number160049Project Manager.Iaun Olness

Reported: 04/12/06 10 16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E1-BH-1 2'	6D04008-01	Soil	04/03/06 11.00	04/04/06 10 30
E1-BH-2 2'	6D04008-02	Soil	04/03/06 11.02	04/04/06 10.30
E1-BH-3 2'	6D04008-03	Soil	04/03/06 11:21	04/04/06 10.30
EI-BH-4 2'	6D04008-04	Soil	04/03/06 11.23	04/04/06 10.30
EI-BH-5 2'	6D04008-05	Soil	04/03/06 11:26	04/04/06 10.30
E1-BH-6 2'	6D04008-06	Soil	04/03/06 11 54	04/04/06 10 30
E1-SW-1 1'	6D04008-07	Soil	04/03/06 11.05	04/04/06 10 30
E1-SW-2 1'	6D04008-08	Soil	04/03/06 11.08	04/04/06 10.30
E1-SW-3 1'	6D04008-09	Soil	04/03/06 11 10	04/04/06 10 30
E1-SW-4 1'	6D04008-10	Soil	04/03/06 11.14	04/04/06 10 30
E1-SW-5 1'	6D04008-11	Soil	04/03/06 11.17	04/04/06 10.30
E1-SW-6 1'	6D04008-12	Soil	04/03/06 11.30	04/04/06 10.30
E1-SW-7 1'	6D04008-13	Soil	04/03/06 11 33	04/04/06 10.30
E1-SW-8 1'	6D04008-14	Soil	04/03/06 11.35	04/04/06 10 30
E1-SW-9 1'	6D04008-15	Soil	04/03/06 11.37	04/04/06 10 30
E1-SW-10 1'	6D04008-16	Soil	04/03/06 11 41	04/04/06 10.30
E1-SW-11 1'	6D04008-17	Soil	04/03/06 11.46	04/04/06 10.30
E1-SW-12 1'	6D04008-18	Soil	04/03/06 11 51	04/04/06 10.30
E2-BH-1 1'	6D04008-19	Soil	04/03/06 12.16	04/04/06 10 30
E2-BH-2 1'	6D04008-20	Soil	04/03/06 12 18	04/04/06 10.30

ProjectChesapeake/ Papagayo Fed. #1Project Number.160049Project ManagerIaın Olness

Reported: 04/12/06 10.16

Organics by GC

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
E1-BH-1 2' (6D04008-01) Soil									
Benzene	ND	0 0250	mg/kg dry	25	ED60620	04/06/06	04/07/06	EPA 8021B	
Foluene	ND	0.0250	**	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"			"	н	"	
Xylene (p/m)	ND	0 0250	"	0	u.	"			
Xylene (o)	ND	0 0250	н	н	п	н	11	n	
Surrogate a,a,a-Trifluorotoluene		85.5 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		84.0 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED60512	04/05/06	04/07/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	11	"	"	"	н	"	
Carbon Ranges C28-C35	ND	10.0	11	"	"	"	ш	"	
Total Hydrocarbon C6-C35	ND	10 0	н	"	"	"	u	n	
Surrogate 1-Chlorooctane		74 0 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		73 2 %	70-1	30	"	"	"	"	
E1-BH-2 2' (6D04008-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/07/06	EPA 8021B	
`oluene	ND	0 0250	"		н	"	н	"	
Ethylbenzene	ND	0.0250	"	"	11	H	*	"	
Xylene (p/m)	ND	0 0250	"	"	"	н		"	
Xylene (o)	ND	0.0250	"	"	"	н	"		
Surrogate a,a,a-Trifluorotoluene	`	89.2 %	80-,	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		85.2 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED60512	04/05/06	04/06/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	н	"		11	11	"	
Carbon Ranges C28-C35	ND	10 0		"	"	"	11	"	
Fotal Hydrocarbon C6-C35	ND	10 0	11	"	"	"	н	15	
Surrogate I-Chlorooctane		112 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		114 %	70-1	30	"	"	"	"	
E1-BH-3 2' (6D04008-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/07/06	EPA 8021B	
Foluene	ND	0 0250	н	"	и	"	"	11	
Ethylbenzene	ND	0 0250	"	"	"	н	"	11	
Kylene (p/m)	ND	0 0250	"	"	"	н	"	н	
Cylene (o)	ND	0.0250	11	"	"	n	"	"	
Surrogate a,a,a-Trifluorotoluene		90.0 %	80-1	20	"	"	"	n	
Surrogate 4-Bromofluorobenzene		84.8 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED60512	04/05/06	04/06/06	EPA 8015M	
Environmental Lab of Texas			The re	sults in this i	report annly te	the samples a	alvzed in accord	ance with the sample	~

	0	es by GC Il Lab of Texas	
Eunice NM, 88231	Project Manager	laın Olness	04/12/06 10.16
P.O Box 1558	Project Number	160049	Reported:
Environmental Plus, Incorporated	Project	Chesapeake/ Papagayo Fed. #1	Fax 505-394-2601

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
E1-BH-3 2' (6D04008-03) Soil									
Carbon Ranges C12-C28	ND	10 0	mg/kg dry	1	ED60512	04/05/06	04/06/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10.0	"		**	**	"	"	
Total Hydrocarbon C6-C35	ND	10 0	"		"	"	n	**	
Surrogate 1-Chlorooctane		119 %	70-1.	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		117 %	70-1.	30	"	"	"	"	

E1-BH-4 2' (6D04008-04) Soil

Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/07/06	EPA 8021B	
Toluene	ND	0.0250	"	н	"	"	н	"	
Ethylbenzene	ND	0 0250	"	11	"	"	n	D	
Xylene (p/m)	ND	0 0250	"		"	"	"	"	
Xylene (o)	ND	0 0250	"	п	"	"	**	"	
Surrogate a,a,a-Trifluorotoluene		86.8 %	80-120	1	"	"	"	n	
Surrogate 4-Bromofluorobenzene		875%	80-120)	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED60512	04/05/06	04/06/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	11		"	11	н	"	
Carbon Ranges C28-C35	ND	10.0	11	"	"	11	11	**	
Total Hydrocarbon C6-C35	ND	10 0	н	н	"	11	"	н	
Surrogate 1-Chlorooctane		125 %	70-130)	"	"	"	"	
Surrogate 1-Chlorooctadecane		124 %	70-130	1	"	"	"	"	

E1-BH-5 2' (6D04008-05) Soil

Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/07/06	EPA 8021B
Toluene	ND	0.0250	11	**	11	н	н	H
Ethylbenzene	ND	0.0250	11		"	н	н	
Xylene (p/m)	ND	0.0250	11	"	"	11	11	11
Xylene (o)	ND	0 0250	11	"	n	н	м	"
Surrogate a,a,a-Trifluorotoluene		87 2 %	80-120)	"	"	"	"
Surrogate 4-Bromofluorobenzene		92 5 %	80-120)	"	"	"	"
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED60512	04/05/06	04/06/06	EPA 8015M
Carbon Ranges C12-C28	ND	10.0	"		"	11	11	н
Carbon Ranges C28-C35	ND	10 0	"		н	u Z	11	11
Total Hydrocarbon C6-C35	ND	10 0	"	11	н	"	**	н
Surrogate 1-Chlorooctane		92.4 %	70-130)	"	"	"	"
Surrogate 1-Chlorooctadecane		91.8 %	70-130)	"	"	"	"

Environmental Plus, Incorporated P O Box 1558 Eunice NM, 88231 Project Chesapeake/ Papagayo Fed. #1 Project Number 160049 Project Manager Iain Olness

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
E1-BH-6 2' (6D04008-06) Soil									
Benzene	0.796	0.0250	mg/kg dry	25	ED60711	04/07/06	04/07/06	EPA 8021B	
Toluene	2.09	0.0250	м	**	"	"	"	"	
Ethylbenzene	2.31	0 0250	и	**		**	н		
Xylene (p/m)	6.25	0 0250	"	**	"	и	и	"	
Xylene (0)	5.30	0.0250	"	**	"	п	11		
Surrogate a,a,a-Trifluorotoluene		265 %	80-1	20	"	"	"	п	S-0
Surrogate 4-Bromofluorobenzene		332 %	80-1	20	"	"	"	"	S-0
Carbon Ranges C6-C12	6740	20 0	mg/kg dry	2	ED60512	04/05/06	04/06/06	EPA 8015M	
Carbon Ranges C12-C28	16100	20.0	"	**		"	"	"	
Carbon Ranges C28-C35	1400	20.0	"	11		"	"		
Total Hydrocarbon C6-C35	24200	20.0	"		п	"	"	"	
Surrogate 1-Chlorooctane		61.6 %	70-1	30	"	"	"	"	S-0
Surrogate. 1-Chlorooctadecane		139 %	70-1	30	"	"	"	n	S-0-
E1-SW-1 1' (6D04008-07) Soil									
Benzene	ND	0 0250	mg/kg dry	25	ED60711	04/07/06	04/07/06	EPA 8021B	
Toluene	ND	0.0250	н	"	н	"	"	"	
Ethylbenzene	ND	0.0250	n	"	н	"	11		
Xylene (p/m)	ND	0 0250	"	"	н	н	11	"	
Xylene (o)	ND	0.0250	"	11	н	н	*1	**	
Surrogate a,a,a-Trifluorotoluene		94 5 %	80-1	20	"	"	"	11	
Surrogate 4-Bromofluorobenzene		82.2 %	80-1	20	"	n	"	11	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED60512	04/05/06	04/06/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	н	"	"	"	"		
Carbon Ranges C28-C35	ND	10.0	н	"	11	11	•		
Total Hydrocarbon C6-C35	ND	10.0	н	н	11	11			
Surrogate 1-Chlorooctane		125 %	70-1	30	"	"	"	n	
Surrogate 1-Chlorooctadecane		123 %	70-1	30	"	"	"	"	
E1-SW-2 1' (6D04008-08) Soil									
Benzene	ND	0 0250	mg/kg dry	25	ED60711	04/07/06	04/07/06	EPA 8021B	
Toluene	ND	0.0250	"	11		**	н	п	
Ethylbenzene	ND	0.0250	"	"	"	"	н	н	
Xylene (p/m)	ND	0.0250		"		"	"	п	
Xylene (o)	ND	0 0250		**	"	*	"	"	
Surrogate a,a,a-Trifluorotoluene		87.8 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		90.0 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	ED60512	04/05/06	04/06/06	EPA 8015M	
Environmental Lab of Texas			<i>T</i> '					ance with the samples	

Environmental Plus, Incorporated P.O. Box 1558 Eunice NM, 88231 Project. Chesapeake/ Papagayo Fed #1 Project Number. 160049 Project Manager: Iain Olness

Reported: 04/12/06 10.16

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
E1-SW-2 1' (6D04008-08) Soil									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	1	ED60512	04/05/06	04/06/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10.0	"	"		н	н	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"		"	н	**	
Surrogate 1-Chlorooctane		116 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		118 %	70-1	30	"	"	"	"	
E1-SW-3 1' (6D04008-09) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/07/06	EPA 8021B	
Toluene	ND	0.0250				"		*1	
Ethylbenzene	ND	0.0250	н	**		"	D.	11	
Xylene (p/m)	ND	0 0250	н	"		"		"	
Xylene (o)	ND	0.0250	н	**	п	"	D.	"	
Surrogate a,a,a-Trifluorotoluene		858%	80-1	20	"	"	"	п	
Surrogate 4-Bromofluorobenzene		912%	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	ED60512	04/05/06	04/06/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	н	**	"	11	**	"	
Carbon Ranges C28-C35	ND	10 0	н			н	"	"	
Total Hydrocarbon C6-C35	ND	10.0	н	"	"	н	11	н	
Surrogate 1-Chlorooctane		121 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		118 %	70-1	30	"	n	"	"	
E1-SW-4 1' (6D04008-10) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/07/06	EPA 8021B	
Toluene	ND	0 0250	11	"		u	11	**	
Ethylbenzene	ND	0 0250	*1	11	"	"	н	"	
Xylene (p/m)	ND	0.0250	11	"		"	н	**	
Xylene (o)	ND	0.0250	"	н	"	"	п	**	
Surrogate a,a,a-Trifluorotoluene	-	85.0 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		83.0 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED60512	04/05/06	04/06/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	11	•	
Carbon Ranges C28-C35	ND	10 0	**	"	"	"	**		
Total Hydrocarbon C6-C35	ND	10.0	н	"		"	"	**	
Surrogate 1-Chlorooctane		117 %	70-1	30	n	"	"	"	

Surrogate 1-Chlorooctadecane

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

70-130

116 %

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

Project Chesapeake/ Papagayo Fed. #1 Project Number 160049 Project Manager. Iain Olness

04/12/06 10 16

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
E1-SW-5 1' (6D04008-11) Soil									
Benzene	ND	0 0250	mg/kg dry	25	ED60711	04/07/06	04/07/06	EPA 8021B	
Toluene	ND	0.0250	н	н	н	"	"	11	
Ethylbenzene	ND	0 0250	н	u.	"	n	"	15	
Xylene (p/m)	ND	0 0250	"	u.	"	"	11	11	
Xylene (o)	ND	0 0250	"	"	"	"	**	19	
Surrogate a,a,a-Trifluorotoluene		88.5 %	80-1	120	"	"	"	"	
Surrogate 4-Bromofluorobenzene		858%	80-1	120	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	н	11	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"		
Total Hydrocarbon C6-C35	ND	10 0	**	и	и	и	"		
Surrogate 1-Chlorooctane		113 %	70	130	"	"	"	"	
Surrogate 1-Chlorooctadecane		114 %	70	130	"	"	"	"	
E1-SW-6 1' (6D04008-12) Soil									
Benzene	ND	0 0250	mg/kg dry	25	ED60711	04/07/06	04/08/06	EPA 8021B	
Foluene	ND	0 0250	"		н	н	н		
Ethylbenzene	ND	0.0250	"	"	п	н	н	п	
Xylene (p/m)	ND	0 0250	"			0	ц	11	
Xylene (o)	ND	0.0250	"	"		u	11		
Surrogate a,a,a-Trifluorotoluene		95.5 %	80	120	"	"	n	"	
Surrogate 4-Bromofluorobenzene		80 2 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	*1	"	"	"	11	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	11	н	
Total Hydrocarbon C6-C35	ND	10.0	н	н	"	"	ш	и	
Surrogate 1-Chlorooctane		88 0 %	70	130	"	"	"	"	
Surrogate 1-Chlorooctadecane		86 6 %	70	130	"	"	"	"	
E1-SW-7 1' (6D04008-13) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/08/06	EPA 8021B	
Foluene	ND	0 0250	н		н	"	"	**	
Ethylbenzene	ND	0.0250	н		п	н		**	
Xylene (p/m)	ND	0.0250	н	"	н	п	**	"	
Xylene (o)	ND	0.0250	н		u		11	"	
Surrogate [•] a,a,a-Trifluorotoluene		98.8 %	80	120	"	"	"	"	
Surrogate 4-Bromofluorobenzene		84.8 %	80	120	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Environmental Lab of Texas			Thana					ance with the sample.	

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

Project Chesapeake/ Papagayo Fed. #1 Project Number 160049 Project Manager. lain Olness

Reported: 04/12/06 10 16

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
E1-SW-7 1' (6D04008-13) Soil									
Carbon Ranges C12-C28	ND	10 0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0		"	11	"	н	**	
Total Hydrocarbon C6-C35	ND	10 0	"	"	н	"	н	**	
Surrogate 1-Chlorooctane		110 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		110 %	70-1	30	"	"	"	n	
E1-SW-8 1' (6D04008-14) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/09/06	EPA 8021B	
Toluene	ND	0.0250	"	11	"	н	н	**	
Ethylbenzene	ND	0.0250	11	"			"	85	
Xylene (p/m)	ND	0 0250	п	"	"	н	*1	**	
Xylene (o)	ND	0 0250	н	"	"	u .	11	33	
Surrogate a,a,a-Trifluorotoluene		93.8 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		81.0 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	••	11	н	"		11	
Carbon Ranges C28-C35	ND	10 0	"	"		"	"	**	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	**	
Surrogate 1-Chlorooctane		82.4 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		840%	70-1	30	"	"	"	"	
E1-SW-9 1' (6D04008-15) Soil									
Benzene	ND	0 0250	mg/kg dry	25	ED60711	04/07/06	04/09/06	EPA 8021B	
Toluene	ND	0.0250	"	п	11	"		*1	
Ethylbenzene	ND	0.0250	"	п	н	"	н	н	
Xylene (p/m)	ND	0 0250	"	н	14	н	n	"	
Xylene (o)	ND	0 0250	11	n	14			11	
Surrogate a,a,a-Trifluorotoluene		90.0 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		81.8 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	п	"		"			
Carbon Ranges C28-C35	ND	10.0	н	"	"	"	*		
Total Hydrocarbon C6-C35	ND	10 0	п	**	"	n	"	**	
Surrogate 1-Chlorooctane		870%	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		87.8 %	70-1	30	"	"	"	"	

Environmental Lab of Texas

Project. Chesapeake/ Papagayo Fed #1 Project Number 160049 Project Manager: Iain Olness

Reported: 04/12/06 10 16

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	No
E1-SW-10 1' (6D04008-16) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/09/06	EPA 8021B	
Toluene	ND	0.0250	**		"	**	**	**	
Ethylbenzene	ND	0.0250	**	"	"	"	"	**	
Xylene (p/m)	ND	0.0250	**		"	*		**	
Xylene (0)	ND	0 0250	•	"	"	*	"	11	
Surrogate a,a,a-Trifluorotoluene		100 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		92.0%	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	**	н			11	11	
Carbon Ranges C28-C35	ND	10 0	**	n	n	'n	'n	**	
Total Hydrocarbon C6-C35	ND	10 0	"	**	н	"	н	**	
Surrogate I-Chlorooctane		87.6 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		87.6 %	70-1	30	"	"	"	"	
E1-SW-11 1' (6D04008-17) Soil									
Benzene	ND	0 0250	mg/kg dry	25	ED60711	04/07/06	04/09/06	EPA 8021B	
Foluene	ND	0.0250		**		н			
Ethylbenzene	ND	0 0250	и	н	••	н	"	"	
Xylene (p/m)	ND	0.0250	11	п	"	н	"	н	
Xylene (0)	ND	0.0250	11		11	"	н		
Surrogate a,a,a-Trifluorotoluene		94.5 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		90.0 %	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0		•		"	н	н	
Carbon Ranges C28-C35	ND	10.0	"	**		31	*	"	
Total Hydrocarbon C6-C35	ND	10 0		**	"	11	"	"	
Surrogate 1-Chlorooctane		84.2 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		82 6 %	70-1	30	"	n	"	"	
E1-SW-12 1' (6D04008-18) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/09/06	EPA 8021B	
Foluene	ND	0 0250	"	**		"	п	"	
Ethylbenzene	ND	0.0250	"			"	"	"	
Xylene (p/m)	ND	0.0250	11			"	"	"	
Xylene (o)	ND	0.0250	11		н	н	•	"	
Surrogate a,a,a-Trifluorotoluene		91.8 %	80-1	20	"	"	"	"	
Surrogate 4-Bromofluorobenzene		862%	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND		mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	

received in the laboratory This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas

Project. Chesapeake/ Papagayo Fed #1 Project Number. 160049 Project Manager Iain Olness

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
E1-SW-12 1' (6D04008-18) Soil									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10.0	"		"	*	**	19	
Total Hydrocarbon C6-C35	ND	10.0	"	u	"		н	11	
Surrogate 1-Chlorooctane		88.0 %	70-1	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		86.0 %	70-1.	30	"	"	"	"	
E2-BH-1 1' (6D04008-19) Soil									
Benzene	ND	0 0250	mg/kg dry	25	ED60711	04/07/06	04/09/06	EPA 8021B	
Toluene	ND	0.0250	"	11	**	н	11	**	
Ethylbenzene	ND	0.0250	"	11	11	н	"	"	
Xylene (p/m)	ND	0 0250		11	"	11	н	"	
Xylene (0)	ND	0 0250		н	**	11	н	"	
Surrogate a,a,a-Trifluorotoluene		920%	80-1.	20	"	n	"	"	
Surrogate · 4-Bromofluorobenzene		920%	80-1	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"		11	"			
Carbon Ranges C28-C35	ND	10 0	"		**	"	u	· •	
Total Hydrocarbon C6-C35	ND	10 0	"	"	"	"		"	
Surrogate 1-Chlorooctane		107 %	70-1	30	"	"	"	11	
Surrogate: 1-Chlorooctadecane		105 %	70-1	30	n	n	"	"	
E2-BH-2 1' (6D04008-20) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED60711	04/07/06	04/09/06	EPA 8021B	
Toluene	ND	0 0250	11		"	"		"	
Ethylbenzene	ND	0 0250	n	"	**	n		н	
Xylene (p/m)	ND	0.0250	н		н	н	н		
Xylene (o)	ND	0 0250	н	"		н	"		
Surrogate. a,a,a-Trifluorotoluene		91.5 %	80-1.	20	"	"	"	"	
Surrogate. 4-Bromofluorobenzene		82 8 %	80-1.	20	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	ED60511	04/05/06	04/05/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	н	"	n	11	"		
Carbon Ranges C28-C35	ND	10 0	н	"		11	"		
Fotal Hydrocarbon C6-C35	ND	10 0	n	"	"	н	"	"	
Surrogate 1-Chlorooctane		114 %	70-1.	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		114 %	70-1.	30	"	"	"	п	

Environmental Lab of Texas

Project. Chesapeake/ Papagayo Fed. #1 Project Number. 160049 Project Manager laun Olness

Reported: 04/12/06 10.16

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
E1-BH-1 2' (6D04008-01) Soil									
Chloride	143	10.0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	<u> </u>
% Moisture	4.7	0.1	%	I	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	30.1	0.500	mg/kg	"	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-BH-2 2' (6D04008-02) Soil									
Chloride	949	10.0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	3.9	01	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	4.40	0.500	mg/kg	н	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-BH-3 2' (6D04008-03) Soil									
Chloride	744	10.0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	7.8	01	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	38.6	10 0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-BH-4 2' (6D04008-04) Soil									
Chloride	12.7	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	4.0	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	21.7	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-BH-5 2' (6D04008-05) Soil									
Chloride	10.7	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	8.6	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	12.9	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-BH-6 2' (6D04008-06) Soil									
Chloride	239	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	10.5	01	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	25.5	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-SW-1 1' (6D04008-07) Soil									
Chloride	661	10.0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	3.5	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	68.4	10 0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	

Environmental Lab of Texas

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
E1-SW-2 1' (6D04008-08) Soil									
Chloride	59.6	10 0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300.0	
% Moisture	4.3	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	33.0	10.0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-SW-3 1' (6D04008-09) Soil									
Chloride	84.3	10.0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	6.3	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	43.9	10.0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-SW-4 1' (6D04008-10) Soil									
Chloride	66.4	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300.0	
% Moisture	2.3	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	21.6	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300.0	
E1-SW-5 1' (6D04008-11) Soil									
Chloride	2200	25.0	mg/kg	50	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	5.6	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	7.94	0.500	mg/kg	"	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-SW-6 1' (6D04008-12) Soil									
Chloride	149	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	3.3	01	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	20.8	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-SW-7 1' (6D04008-13) Soil									
Chloride	11.9	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300.0	
% Moisture	3.8	0.1	%	I	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	16.1	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-SW-8 1' (6D04008-14) Soil									
Chloride	22.5	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	2.9	01	%	ı	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	19.9	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	

Environmental Lab of Texas

l

i.

Environmental Plus, Incorporated	Project	Chesapeake/ Papagayo Fed #1	Fax 505-394-2601
P.O. Box 1558	Project Number.	160049	Reported:
Eunice NM, 88231	Project Manager.	laın Olness	04/12/06 10.16

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
E1-SW-9 1' (6D04008-15) Soil									
Chloride	17.1	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	8.7	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	18.8	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-SW-10 1' (6D04008-16) Soil									
Chloride	18.6	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	7.4	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	16.1	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-SW-11 1' (6D04008-17) Soil									
Chloride	6.46	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	6.7	0 1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	12.8	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
E1-SW-12 1' (6D04008-18) Soil									
Chloride	7.79	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	7.4	01	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	12.1	5.00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
E2-BH-1 1' (6D04008-19) Soil									
Chloride	28.1	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	8.0	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	13.5	5 00	mg/kg	10	ED60602	04/05/06	04/05/06	EPA 300 0	
E2-BH-2 1' (6D04008-20) Soil									
Chloride	162	10.0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	
% Moisture	5.4	0.1	%	1	ED60417	04/04/06	04/05/06	% calculation	
Sulfate	32.6	10 0	mg/kg	20	ED60602	04/05/06	04/05/06	EPA 300 0	

Project. Chesapeake/ Papagayo Fed. #1 Project Number 160049 Project Manager. Iain Olness

Reported: 04/12/06 10.16

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 ED60511 - Solvent Extraction (GC)										
Blank (ED60511-BLK1)				Prepared &	Analyzed	04/05/06				
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	н							
Carbon Ranges C28-C35	ND	10 0	н							
Total Hydrocarbon C6-C35	ND	10 0	н							
Surrogate 1-Chlorooctane	42 6		mg/kg	50 0		85 2	70-130			
Surrogate 1-Chlorooctadecane	438		"	50 0		876	70-130			
LCS (ED60511-BS1)				Prepared &	Analyzed.	04/05/06				
Carbon Ranges C6-C12	546	10.0	mg/kg wet	500		109	75-125		· · · · · ·	
Carbon Ranges C12-C28	543	10 0	н	500		109	75-125			
Total Hydrocarbon C6-C35	1090	10 0	п	1000		109	75-125			
Surrogate 1-Chlorooctane	56 5		mg/kg	50 0		113	70-130			
Surrogate I-Chlorooctadecane	50 5		"	500		101	70-130			
Calibration Check (ED60511-CCV1)				Prepared. (04/05/06 A	nalyzed 04	/06/06			
Carbon Ranges Ç6-C12	254		mg/kg	250	et al al an	102	80-120			
Carbon Ranges C12-C28	293		н	250		117	80-120			
Total Hydrocarbon C6-C35	547		н	500		109	80-120			
Surrogate I-Chlorooctane	52 1		"	50 0		104	70-130			
Surrogate 1-Chlorooctadecane	473		"	50 0		94 6	70-130			
Matrix Spike (ED60511-MS1)	Sou	ırce: 6D04008	8-11	Prepared &	Analyzed.	04/05/06				
Carbon Ranges C6-C12	555	10 0	mg/kg dry	530	ND	105	75-125			
Carbon Ranges C12-C28	539	10 0	ч	530	ND	102	75-125			
Total Hydrocarbon C6-C35	1090	10 0	н	1060	ND	103	75-125			
Surrogate 1-Chlorooctane	55 2	<u></u>	mg/kg	50 0		110	70-130	<u> </u>		
Surrogate I-Chlorooctadecane	470		"	50 0		94 0	70-130			

Environmental Lab of Texas

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 ED60511 - Solvent Extraction (GC)										
Matrix Spike Dup (ED60511-MSD1)	Sou	rce: 6D04008	-11	Prepared &	Analyzed.	04/05/06				
Carbon Ranges C6-C12	561	10 0	mg/kg dry	530	ND	106	75-125	1 08	20	
Carbon Ranges C12-C28	534	10 0	"	530	ND	101	75-125	0 932	20	
Fotal Hydrocarbon C6-C35	1100	10 0	"	1060	ND	104	75-125	0 913	20	
Surrogate 1-Chlorooctane	54 6		mg/kg	50 0		109	70-130			
Surrogate 1-Chlorooctadecane	46 7		"	50 0		934	70-130			
Batch ED60512 - Solvent Extraction (GC)										
Blank (ED60512-BLK1)				Prepared. (04/05/06 A	nalyzed. 04	/06/06			
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0								
Carbon Ranges C28-C35	ND	10 0								
Total Hydrocarbon C6-C35	ND	10 0	u							
Surrogate 1-Chlorooctane	61 5		mg/kg	50 0		123	70-130			
Surrogate 1-Chlorooctadecane	63 0		"	50 0		126	70-130			
LCS (ED60512-BS1)				Prepared ()4/05/06 A	nalyzed 04	/06/06			
Carbon Ranges C6-C12	559	10.0	mg/kg wet	500		112	75-125			
Carbon Ranges C12-C28	542	10 0		500		108	75-125			
Total Hydrocarbon C6-C35	1100	10 0		1000		110	75-125			
Surrogate 1-Chlorooctane	57 4		mg/kg	50 0		115	70-130			
Surrogate I-Chlorooctadecane	509		"	50 0		102	70-130			
Calibration Check (ED60512-CCV1)				Prepared (04/05/06 A	nalyzed 04	/07/06			
Carbon Ranges C6-C12	267		mg/kg	250		107	80-120			
Carbon Ranges C12-C28	290		"	250		116	80-120			
Fotal Hydrocarbon C6-C35	557		н	500		111	80-120			
Surrogate I-Chlorooctane	54 4		"	50 0		109	70-130			

"

500

505

Environmental Lab of Texas

ľ

Surrogate 1-Chlorooctadecane

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

101

70-130

Project. Chesapeake/ Papagayo Fed. #1 Project Number 160049 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 ED60512 - Solvent Extraction (GC)

Matrix Spike (ED60512-MS1)	Sourc	e: 6D04008	8-10	Prepared, 0	4/05/06 A	nalyzed. 04	4/06/06			
Carbon Ranges C6-C12	540	10 0	mg/kg dry	512	ND	105	75-125			
Carbon Ranges C12-C28	583	10 0	"	512	ND	114	75-125			
Total Hydrocarbon C6-C35	1120	10 0	**	1020	ND	110	75-125			
Surrogate 1-Chlorooctane	516		mg/kg	50 0		103	70-130			
Surrogate 1-Chlorooctadecane	43 9		"	50 0		878	70-130			
Matrix Spike Dup (ED60512-MSD1)	Sourc	e: 6D04008	8-10	Prepared. 0	4/05/06 A	nalyzed. 04	4/06/06			
Carbon Ranges C6-C12	539	10 0	mg/kg dry	512	ND	105	75-125	0 185	20	
Carbon Ranges C12-C28	598	10 0	н	512	ND	117	75-125	2 54	20	
Total Hydrocarbon C6-C35	1140	10 0	"	1020	ND	112	75-125	177	20	
Surrogate 1-Chlorooctane	51 9		mg/kg	50 0		104	70-130			
Surrogate 1-Chlorooctadecane	43 0		"	50 0		86.0	70-130			

Batch ED60620 - EPA 5030C (GC)

Blank (ED60620-BLK1)				Prepared & Ana	lyzed. 04/06/06		
Benzenc	ND	0 0250	mg/kg wet			and a state and a state of the	·····
Toluene	ND	0 0250	"				
Ethylbenzene	ND	0 0250	"				
Xylene (p/m)	ND	0 0250	"				
Xylene (0)	ND	0 0250	n				
Surrogate a,a,a-Trifluorotoluene	36 6		ug/kg	40 0	915	80-120	
Surrogate 4-Bromofluorobenzene	32 4		"	40 0	81 0	80-120	
LCS (ED60620-BS1)				Prepared & Ana	lyzed 04/06/06		
Benzenc	1.06	0 0250	mg/kg wet	1 25	84 8	80-120	
Foluene	1 03	0 0250	"	1 25	82 4	80-120	
Ethylbenzene	1 40	0 0250	"	1 25	112	80-120	
Xylene (p/m)	2 42	0 0250	"	2 50	96 8	80-120	
Xylene (o)	1 17	0 0250	"	1 25	93 6	80-120	
Surrogate a,a,a-Trifluorotoluene	33 3		ug/kg	40 0	83 2	80-120	
Surrogate [•] 4-Bromofluorobenzene	37 4		"	40 0	93 5	80-120	

Project. Chesapeake/ Papagayo Fed #1 Project Number 160049 Project Manager: laun Olness

Reported: 04/12/06 10.16

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Lımıts	RPD	RPD Limit	Notes
Batch ED60620 - EPA 5030C (GC)										
Calibration Check (ED60620-CCV1)				Prepared (04/06/06 A	nalyzed. 04	/07/06			
Benzene	41.6		ug/kg	50 0		83 2	80-120			
Toluene	40 4		"	50 0		80 8	80-120			
Ethylbenzone	44 0		н	50 0		88 0	80-120			
Xylene (p/m)	90 2		н	100		90.2	80-120			
Xylenc (0)	44 6		u.	50 0		89 2	80-120			
Surrogate a,a,a-Trifluorotoluene	37 6		"	40 0		94.0	80-120			
Surrogate 4-Bromofluorobenzene	387		"	40 0		96 8	80-120			
Matrix Spike (ED60620-MS1)	Sou	rce: 6D04007	/-01	Prepared (04/06/06 A	nalyzed 04	/07/06			
Benzene	1 08	0 0250	mg/kg dry	1 33	ND	81.2	80-120			
Toluene	1 09	0 0250	"	1 33	ND	82 0	80-120			
Ethylbenzene	1 45	0 0250	м	1 33	ND	109	80-120			
Xylene (p/m)	2 53	0 0250	н	2 66	ND	95 1	80-120			
Xylene (o)	1 19	0 0250	"	1.33	ND	89 5	80-120			
Surrogate a,a,a-Trifluorotoluene	383		ug/kg	40 0		95 8	80-120			
Surrogate 4-Bromofluorobenzene	38 2		"	40 0		95 5	80-120			
Matrix Spike Dup (ED60620-MSD1)	Sou	rce: 6D04007	-01	Prepared (04/06/06 Ai	nalyzed: 04	/07/06			
Benzene	1 07	0 0250	mg/kg dry	1 33	ND	80 5	80-120	0 866	20	
Toluene	1 07	0 0250	ц	1 33	ND	80 5	80-120	1 85	20	
Ethylbenzene	1 43	0 0250	н	1 33	ND	108	80-120	0 922	20	
Xylene (p/m)	2 50	0 0250	н	2 66	ND	94 0	80-120	116	20	
Xylene (o)	1 19	0 0250	11	1 33	ND	89 5	80-120	0 00	20	
Surrogate a,a,a-Trifluorotoluene	37 8		ug/kg	40 0		94 5	80-120			
Surrogate 4-B10mofluorobenzene	35 6		"	40 0		89 ()	80-120			
Batch ED60711 - EPA 5030C (GC)										
Blank (ED60711-BLK1)				Prepared &	k Analyzed	04/07/06				
Benzene	ND	0 0250	mg/kg wet							
Toluene	ND	0 0250	.,							
Ethylbenzene	ND	0.0250	н							
Xylene (p/m)	ND	0 0250	"							
Xylene (0)	ND	0 0250	"							
Surrogate a,a,a-Trifluorotoluene	33.8		ug/kg	40 0		84 5	80-120			
Surrogate 4-Bromofluorobenzene	32 7		"	40 0		818	80-120			

Project. Chesapeake/ Papagayo Fed. #1 Project Number. 160049 Project Manager. Iam Olness

Reported: 04/12/06 10.16

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 ED60711 - EPA 5030C (GC)										
LCS (ED60711-BS1)				Prepared &	k Analyzed	04/07/06				
Benzene	0 0408	0 00100	mg/kg wet	0 0500		81.6	80-120			
Toluene	0 0406	0 00100	"	0 0500		81.2	80-120			
Ethylbenzene	0 0541	0 00100	"	0.0500		108	80-120			
Xylene (p/m)	0 0944	0 00100	н	0 100		94 4	80-120			
Xylene (o)	0 0464	0 00100	"	0 0500		92 8	80-120			
Surrogate a,a,a-Trifluorotoluene	36 4		ug/kg	40 0		91.0	80-120			
Surrogate 4-Bromofluorobenzene	43 8		"	40 0		110	80-120			
Calibration Check (ED60711-CCV1)				Prepared (04/07/06 A	nalyzed 04	/09/06			
Benzene	50 3		ug/kg	50 0		101	80-120			
Toluene	50 2		11	50 0		100	80-120			
Ethylbenzene	51.2		и	50 0		102	80-120			
Xylene (p/m)	102		н	100		102	80-120			
Xylene (o)	50 8			50 0		102	80-120			
Surrogate a,a,a-Trifluorotoluene	43 0		"	40 0		108	80-120			
Surrogate 4-Bromofluorobenzene	32 2		"	40 0		80 5	80-120			
Matrix Spike (ED60711-MS1)	Sou	rce: 6D04008	8-20	Prepared (04/07/06 A	nalyzed 04	/09/06			
Benzene	1 11	0 0250	mg/kg dry	1.32	ND	84 1	80-120			
Toluene	1 09	0 0250	11	1 32	ND	82 6	80-120			
Ethylbenzene	1 16	0 0250	11	1 32	NÐ	87 9	80-120			
Xylene (p/m)	2 38	0 0250	"	2 64	ND	90 2	80-120			
Xylene (o)	1 12	0 0250	11	1 32	ND	84 8	80-120			
Surrogate a,a,a-Trifluorotoluene	40 4		ug/kg	40 0		101	80-120			
Surrogate 4-Bromofluorobenzene	36 6		"	40 0		915	80-120			
Matrix Spike Dup (ED60711-MSD1)	Sou	rce: 6D04008	8-20	Prepared (04/07/06 A	nalyzed 04	/09/06			
Benzene	1 11	0 0250	mg/kg dry	1 32	ND	84 1	80-120	0 00	20	
Toluene	1 11	0 0250	"	1 32	ND	84 1	80-120	1 80	20	
Ethylbenzene	1 16	0 0250	"	1 32	ND	87 9	80-120	0 00	20	
Xylene (p/m)	2 43	0 0250	"	2 64	ND	92 0	80-120	1 98	20	
Xylene (0)	1 15	0 0250		1 32	ND	87 1	80-120	2 68	20	
Surrogate a,a,a-Trifluorotoluene	42 0		ug/kg	40 0		105	80-120			
Surrogate 4-Bromofluorobenzene	39 5		"	40 0		98 <i>8</i>	80-120			

Environmental Lab of Texas

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result		%REC Limits	RPD	RPD Limit	Notes
			01110						Linit	
Batch ED60417 - General Preparation (Prep))									
Blank (ED60417-BLK1)				Prepared	04/04/06	Analyzed 04	/05/06			
% Solids	100		%							
Duplicate (ED60417-DUP1)	Sou	rce: 6D04001	-01	Prepared.	04/04/06	Analyzed. 04	/05/06			
% Solids	97 6		%		97 8			0 205	20	
Duplicate (ED60417-DUP2)	Sou	rce: 6D04007-	-01	Prepared	04/04/06	Analyzed 04	/05/06			
% Solids	93 9		%		93 9			0 00	20	
Duplicate (ED60417-DUP3)	Sou	rce: 6D04008-	-05	Prepared	04/04/06	Analyzed 04	/05/06			
% Solids	92.2		%		91 4			0 871	20	
Duplicate (ED60417-DUP4)	Sou	rce: 6D04009-	-05	Prepared	04/04/06	Analyzed. 04	/05/06			
% Solids	93 8		%		94 1			0 319	20	
Duplicate (ED60417-DUP5)	Sou	rce: 6D04012-	-01	Prepared	04/04/06	Analyzed. 04	/05/06			
% Solids	87 9		%		86 4			1 72	20	
Batch ED60602 - Water Extraction										
				Prepared a	& Analyze	ed. 04/05/06				
Chloride	ND	0 500	mg/kg							
Sulfate	ND	0 500	п							
LCS (ED60602-BS1)				Prepared a	& Analyze	ed 04/05/06				
Sulfate	9 76		mg/L	10.0		97 6	80-120			
Chloride	8 99		п	10 0		89 9	80-120			

Environmental Lab of Texas

Environmental Plus, Incorporated	Project.	Chesapeake/ Papagayo Fed #1	Fax 505-	-394-2601
P O Box 1558	Project Number.	160049	Repo	orted:
Eunice NM, 88231	Project Manager	laın Olness	04/12/0	6 10 16

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Lımıts	RPD	RPD Limit	Notes
Batch ED60602 - Water Extraction										
Calibration Check (ED60602-CCV1)				Prepared &	Analyzed	04/05/06				
Sulfate	9 00		mg/L	10 0		90.0	80-120			
Chloride	8 97		"	10 0		89 7	80-120			
Duplicate (ED60602-DUP1)	Sour	ce: 6D04008-0	05	Prepared &	Analyzed	04/05/06				
Chloride	9.66	5 00	mg/kg		10 7			10 2	20	
Sulfate	12 9	5 00			12 9			0 00	20	

Environmental Lab of Texas

Environmental Plus, Incorporated	Project	Chesapeake/ Papagayo Fed. #1	Fax. 505-394-2601
P O Box 1558	Project Number	160049	Reported:
Eunice NM, 88231	Project Manager	lain Olness	04/12/06 10 16

Notes and Definitions

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's
 S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect

- 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 Junes

Date: 4/12/2006

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

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 20 of 20

2100 Avenue O, Eunice, NM 88231 P.O. Box 1558, Eunice, NM 88231 LAB: ELT (805) 394-341 FAX: (505) 394-2601 Image: Company Name Environmental Plus, Inc. EPI Project Manager Iain Olness Image: Company Name Image: Company Name Image: Company Name Client Company Chesageake Energy Attr: Iain Olness Image: Company Name Image: Company Name Image: Company Name Fecility Name Pagagayo Fed. #1 Image: Company Name Company Name Image: Company Name Image: Company Name Iconation UL-M, Sect. 27, T 23 S, R 34 E Project Reference Ibio Sol 558 Eunice, NM 88231 EPI Sampler Name George Blackburn Image: Company Name Image: Company Name Image: Company Name Image: Company Name LAB 1D, K SAMPLE I.D. Image: Company Name George Blackburn Image: Company Name Image: Company Name Image: Company Name Image: Company Name ILAB 1D, K SAMPLE I.D. Image: Company Name ILAB 1D, K SAMPLE I.D. Image: Company Name Image: Company Name Image: Company Name Image: Compa	Environ	nental Plus	. Inc.																<u>C</u>	ha	in (of (Cus	stoc	dy F	Foi	m
(505) 394-3481 FAX: (506) 394-2601 Company Name Environmental Plus, Inc. Bill To EPI Project Manager Iain Oiness Mailing Address P.O. BOX 1558 City, State, Zip Eunice New Mexico 88231 EPI PonoetR/Fax# 505-394-2811 / 505-394-2801 Citer Company Chesapeake Energy Facility Name Papagayo Fed. #1 Location UL-M, Sect. 27, T 23 S, R 34 E Project Reference 160049 EPI Sampler Name George Blackburn Ward With PRESERV SAMPLING Ward Ward Ward Ward Ward Ward Ward Ward Ward Ward Ward Ward Ward			,	P.(). B	ox .	1558	3. E	unia	e. I	VIV i	882:	31								L	AB:	EL	F			
EPT Project Manager Iain Olness Mailing Address P.O. BOX 1558 City, State, Zip Eunice New Mexico 88231 EPI Phone#/Fax# 505-394-3481 / 505-394-2601 Citer Company Chesapaeke Energy Facility Name Papagapo Fed. #1 Location UL-M, Sect. 27, T 23 S, R 34 E Project Reference 160049 EPI Sampler Name George Blackburn Matrix PRESERV. SAMPLING W </td <td>,</td> <td>,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-, <u>-</u></td> <td></td> <td>, .</td> <td>••••</td> <td></td> <td>-</td> <td></td> <td></td> <td></td>	,	,						-, <u>-</u>		, .	••••													-			
Mailing Address P.O. BOX 1558 City, State, Zip Eunice New Mexico 88231 EPI Phone#/Fax# 505-394-381 / 505-394-2601 Client Company Chesapeake Energy Facility Name Papagayo Fed. #1 Location UL-M, Sect 27, T23 S, R 34 E Project Reference 160049 Project Reference 160049 Client Company NATRIX PRESERV. SAMPLING Will Big Object Pape NATRIX PRESERV. SAMPLING UAB I.D. S SAMPLE I.D. NATRIX PRESERV. SAMPLING Will Big Object Pape Sampler Name George Blackburn NATRIX PRESERV. SAMPLING Will Big Object Pape Sampler Name George Blackburn NATRIX PRESERV. SAMPLING Will Big Object Pape Sampler Name George Blackburn NATRIX PRESERV. SAMPLING Will Big Object Pape Sampler Name George Blackburn NATRIX PRESERV. SAMPLING Will Big Object Pape Sampler Name George Blackburn NATRIX PRESERV. Sampler Name Col 1 Et-BH-1(2) G 1	The second se			, Inc	:.								E	silläi	ō				A	NAI	YS	IS F	EØ	UES	J		
City, State, Zip Eunice New Mexico 88231 EPI Phone#/Fax# 505-394-3481 / 505-394-2601 Cilent Company Chesapeake Energy Facility, Name Papagayo Fed. #1 Location UL-M, Sect. 27, T 23 S, R 34 E Project Reference 160049 EPI Sampler Name George Blackburn LAB I.D. 8 SAMPLE I.D. Group of the section of the sec	EPI Project Man	ager lain Olnes	SS																					\square			
EPI Phone#/Fax# 505-394-3481 / 505-394-2601 Client Company Chesapeake Energy Facility Name Papagayo Fed. #1 Location UL-M, Sect. 27, T 23 S, R 34 E Project Reference 160049 EPI Sampler Name George Blackburn ULAB I,D, & SAMPLE I.D. G g G	Mailing Address	P.O. BOX	1558											. 11.				Ì									
Client Company Chesapeake Energy Facility Name Papagayo Fed. #1 Location UL-M, Sect. 27, T 23 S, R 34 E Project Reference 160049 EPI Sampler Name George Blackburn MATRIX PRESERV. SAMPLING U.AB I.D. % SAMPLE I.D. WO COLSPAN MATRIX PRESERV. SAMPLING U.AB I.D. % SAMPLE I.D. Matrix III IIII IIIIIIIIIIIIIIIIIIIIIIIIIII	City, State, Zip	Eunice No	ew Mexico	882	31								1	Щ	\												
'II' 'II' Location UL-M, Sect. 27, T 23 S, R 34 E Project Reference 160049 Project Reference 160049 EPI Sampler Name George Blackburn MATRIX PRESERV. SAMPLING MATRIX PRESERV. SAMPLING (0) 00 01 01 01 01 01 01 01 01 01 01 01 01	EPI Phone#/Fax	# 505-394-3	3481 / 505-3	394-:	260	1						-		ΈΡ,													
Location UL-M, Sect. 27, T 23 S, R 34 E Attn: Iain Olness Project Reference 180049 P.O. Box 1558 EPI Sampler Name George Blackburn Eunice, NM 88231 LAB I.D.Y SAMPLE I.D. W H H H H H H H H H H H H H H H H H H H	Client Company	Chesapeal	ke Energy											m	<i>•</i>												
Project Reference 160049 Project Reference 160049 EPI Sampler Name George Blackburn LAB I.D. % SAMPLE I.D. MATRIX PRESERV. SAMPLING WIT WIT PRESERV. SAMPLING G. G. G. S. S. WIT WIT PRESERV. SAMPLING G. G. S. S. WIT WIT PRESERV. SAMPLING G. G. S. S. WIT WIT WIT PRESERV. SAMPLING G. G. S. S. WIT WIT WIT WIT PRESERV. SAMPLING G. G. S. S. WIT G. S. SAMPLING G. S. G. S. SAMPLING G. S. G. S. SAMPLING SAMPLING SAMPLING SAMPLING SAMPLING	Facility Name	Papagayo	5 Fed. #1	•																							
EPI Sampler Name George Blackburn Eunice, NM 88231 LAB I.D. 8 SAMPLE I.D.	Location	UL-M, See	ct. 27, T 23	S, F	34	E						Att	in: I	ain	Olness												
LAB I.D. % SAMPLE I.D. MATRIX PRESERV. SAMPLING UMACK WE WALL	Project Reference	ce 160049										Ρ	.0.	Вох	1558			i				ļ					
LAB I.D. % SAMPLE I.D. Substrate for the second secon	EPI Sampler Nar	ne George B	llackburn									Eur	nice	, NA	M 88231										1		
-C[1 E1-BH-1 (2') G 1 X X 03-Apr-06 11:00 X				<u>.</u>				MA	TRIX			PR	ESE	RV.	SAMPLI	NG											
-Cl 1 E1-BH-1 (2) G 1 X X 03-Apr-06 11:00 X<	LABI.D.8	SAMPLE I.	D.	(G)RAB OR (C)OMF	# CONTAINERS	GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	ТІМЕ	BTEX 8021B	TPH 8015M	CHLORIDES (CI)	SULFATES (SO4 ⁼)	РН	TCLP	OTHER >>>	PAH		1	
C3 3 E1-BH-3 (2') G 1 X X 03-Apr-06 11:21 X	0 1				1										03-Apr-06	11:00	Х					1				_	
4 E1-BH-4 (2') G 1 X X 03-Apr-06 11:23 X </td <td></td> <td>E1-BH-2 (2')</td> <td></td> <td>G</td> <td>1</td> <td></td> <td></td> <td>Х</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>03-Apr-06</td> <td>11:02</td> <td>X</td> <td>X</td> <td>X</td> <td>Х</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>\square</td>		E1-BH-2 (2')		G	1			Х					X		03-Apr-06	11:02	X	X	X	Х							\square
5 E1-BH-5 (2') G 1 X X 03-Apr-06 11:26 X </td <td>-03 3</td> <td>E1-BH-3 (2')</td> <td></td> <td>G</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>Х</td> <td></td> <td>03-Apr-06</td> <td>11:21</td> <td>X</td> <td>X</td> <td>Х</td> <td>Х</td> <td></td> <td></td> <td></td> <td></td> <td>\Box</td> <td></td> <td>\Box</td>	-03 3	E1-BH-3 (2')		G	1			X					Х		03-Apr-06	11:21	X	X	Х	Х					\Box		\Box
Op 6 E1-BH-6 (2') G 1 X X 03-Apr-06 11:54 X <thx< th=""> X<!--</td--><td></td><td>E1-BH-4 (2')</td><td></td><td>G</td><td>1</td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td>X</td><td></td><td>03-Apr-06</td><td>11:23</td><td>Х</td><td>Х</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td>\Box</td><td></td><td></td></thx<>		E1-BH-4 (2')		G	1			X					X		03-Apr-06	11:23	Х	Х	X	X					\Box		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	-05 5	E1-BH-5 (2')		G	1			X					X		03-Apr-06	11:26	X	Х	X	X							
OR 8 E1-SW-2 (1') G 1 X X 03-Apr-06 11:08 X <thx< td=""><td><u> </u></td><td>E1-BH-6 (2')</td><td></td><td>G</td><td>1</td><td></td><td></td><td>Х</td><td></td><td></td><td></td><td></td><td>X</td><td></td><td>03-Apr-06</td><td>11:54</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></thx<>	<u> </u>	E1-BH-6 (2')		G	1			Х					X		03-Apr-06	11:54	X	X	X	X							
9 E1-SW-3 (1') G 1 X X 03-Apr-06 11:10 X X X () 10 E1-SW-4 (1') G 1 X X 03-Apr-06 11:10 X		E1-SW-1 (1')			1								Х		03-Apr-06	11:05	X	X	Х	X							
Image: Construction of the station				A second second	1											11:08						ļ					
Sampler Relinquished: The second descent of the second descent					1			_									_										\square
Medinguisnige by: Medinguisnige	10 10	E1-SW-4 (1')		G	1			X					X		03-Apr-06	11:14	X	X	X	X							
Medinguisnige by: Medinguisnige																				1.					<u>88</u>		
Fielinguienge by: Prof M N() Réceived by (lab staff) (1)	Sappler Relinquished:			Rece	ived I	By:	0_	1/		Л		/			esults to iolnes:	s@envplu	s.ne	t									
L	BUILD	K/le	10:30	e Cool	& Inta			· ~	- (Ch	scked	$\overline{\Delta}$	-		4	10 gas really	pr[l	ab	e)									

•

	Eunice, NM 88231 FAX: (505) 394-2601	P.(0. E	3ox	155	8, E	uni	ce,	NM	882	31								L.	AB:	ELT	Г		
Company Name		l Plus, In	c.								E	3115	O				A	NA	YS	ISF	₹E0	UE	ST	
EPI Project Man		· · · · · · · · · · · · · · · · · · ·				100092		000000								Ī		Ê	Ē					
Mailing Address	P.O. BOX 1558	3				1	.18.																	
City, State, Zip	Eunice New M	exico 88	231									Щ	•			*								
EPI Phone#/Fax	# 505-394-3481 /	505-394	-260	DÍ.						Ĩ		۳ _{Р.}						ł						
Client Company	Chesapeake En	ergy									8	m	<i>I</i>		1									
Facility Name	Papagayo Fed	. #1				1						e BB s					ł	1		1				
Location	UL-M, Sect. 27	, T 23 S,	R 3	4 E	-	1				Atl	tn: I	ain	Olness				ļ							
Project Referen	ce 160049					1							1558						ĺ					
EPt Sampler Na	me George Blackb	ourn				1				Eur	nice	, NP	N 88231			ĺ			Į					
			Τ			MA	TRIX					RV.	SAMPL	NG	1									
LAB I.D. (21704008	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (CI)	SULFATES (SO ₄ [*])	Hq	TCLP	OTHER >>>	РАН		
() 1	E1-SW-5 (1')	G	1	1		X					Х		03-Apr-06	11:17	X	X	X	X						
	E1-SW-6 (1')	G	1			X					X		03-Apr-06	11:30	X	X	X	X			\Box			
and the second se	E1-SW-7 (1')	G	1			X					X		03-Apr-06	11:33	X	X	X	X						
	E1-SW-8 (1')	G	1			X					X		03-Apr-06	11:35	X	X	X	X						
	E1-SW-9 (1')	G	1			Х					X		03-Apr-06	11:37	Х	X	X	X						
	E1-SW-10 (1')	G	1			X					X		03-Apr-06	11:41	Х	X	X	X					\Box	
	E1-SW-11 (1')	G	1			Х					X		03-Apr-06	11:46	Х	X	Х	X					\Box	
	E1-SW-12 (1')	G	1			Х					X		03-Apr-06	11:51	Х	X	X	X						
	E2-BH-1 (1')	G				X					Х		03-Apr-06	12:16	X	X	X	X					\Box	
-20 10	E2-BH-2 (1')	G	1			X					Х		03-Apr-06	12:18	X	<u>X</u>	<u>x</u>	Х						
Sampler Relinquished: Relinquished by	222.4- 1722 Valde Image	ALC Red		40	N ab ste	la la	<u>ll</u> W	· /			e-m NOT		esults to iolnes	s@envplu	is.ne	ət								
Delivered by:		Sample Cool		act No				ecked	By:															

Environmental Plus, Inc.

Page 2 of 2

Chain of Custody Form

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

Client.	Env. Plus
Date/Time:	<u>AL4/06 10:30</u>
Order #:	(2D04008
Initials:	CK

Sample Receipt Checklist

Yes	No	4,0 C	
Xes	No		.
Yes	No	Mol present	I tust fape
Yes,	No	Not present	
YEŞ	Na		-
6	No		
Yes	No		1
Kess	l No		Ţ
1753	No		_
Xes	No		_
1 123	No	,	_
Yes	No		_
1 Ces	No		1
YES	No		
¥ S	No	1	
Yes	No		_
Yes	No	,	
149	No	Not Applicable	
		Yes No Yes No	Yes No Yes No

Other observations:

Contact Person: - <u></u> Regarding:	Date/Time:	Contacted by:	
Corrective Action Taken:			

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

REPORT DATE: 04/17/06 SAMPLE DATE: 04/12/06

AL JOB #: A04121

ATTN: IAIN OLNESS CLIENT PROJ. ID: 160049 Papagayo Fed. #1 UL-M, Sect. 27, T 23 S, R 34 E

Project Summary:

On April 13, 2006, this laboratory received 14 soil samples.

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

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

Hiram Cueto Lab Manager

:

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

Environmenal Plus, Inc.	Project Number: 160049	
2100 Avenue O	Project Name: Papagayo Fed. #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A04121

Total Petroleum Hydrocarbons - EPA Method 8015M

		Reporting				
Analyte	Result	Limit	Units	Analyzed	Method	Notes
E1-BH-1 (6') (A04121 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Gas Range Organics	ND	10	mg/Kg	04/13/06	8015M	
Diesel Range Organics	ND	11	R	14	17	
C29 · C35 Range Organics	ND	11	11	tr	11	
Total Petroleum Hydrocarbons	ND	30	B1	11	93	

Volatile Organics - EPA Method 8021B

E1-BH-1 (6') (A04121 Soil)	Sampled: 04/12/06	Received: 04/13/06			.	
Benzene	ND	0.005	mg/Kg	04/13/06	 EPA 8021B	
Toluene	ND	11	"	17	tt S	
Ethyl Benzene	ND	*	11	u		
Xylenes	ND	0.010	n	11	*1	
·						

Surrogate Recovery: 106%

Anions by Ion Chromatography - EPA Method 300.0

E1-BH-1 (6') (A04121 Soil)	Sampled: 04/12/06	Received: 04/13/06			
Chloride Sulfate	440 ND	100 50	mg/Kg	04/13/06	EPA 300.0

Approved By Argon Laboratories

QC Officer

Environmenal Plus, Inc.	Project Number: 160049	,
2100 Avenue O	Project Name: Papagayo Fed. #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A04121

Total Petroleum Hydrocarbons - EPA Method 8015M

Reporting						
Analyte	Result	Limit	Units	Analyzed	Method	Notes
E1-BH-2 (6') (A04122 Soil)	Sampled: 04/12/06	Received: 04/13/06	944 million - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 -			
Gas Range Organics	ND	10	mg/Kg	04/13/06	8015M	
Diesel Range Organics	ND	11	w	17	17	
C29 - C35 Range Organics	ND	34	W.	14	11	
Total Petroleum Hydrocarbons	ND	30	U	**	12	

Volatile Organics - EPA Method 8021B

E1-BH-2 (6') (A04122 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Benzene	0.016	0.005	mg/Kg	04/13/06	 EPA 8021B	
Toluene	ND	n	"	B.F	71 4	
Ethyl Benzene	ND	11	11	11	**	
Xylenes	ND	0.010	*1	,	7 8	

Surrogate Recovery. 106%

Anions by Ion Chromatography - EPA Method 300.0

E1-BH-2 (6') (A04122 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride	57	250	mg/Kg	04/13/06	EPA 300.0	
Sulfate	ND	25	 N	17	IF.	

Approved By Argon Laboratories

QC Officer

Environmenal Plus, Inc.	Project Number: 160049	
2100 Avenue O	Project Name: Papagayo Fed. #1	Work Order #:
Eunice, NM 88231	Project Manager: Jain Olness	A04121

Total Petroleum Hydrocarbons - EPA Method 8015M

Reporting						
Analyte	Result	Limit	Units	Analyzed	Method	Notes
E1-SSW (4') (A04123 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Gas Range Organics	ND	10	mg/Kg	04/13/06	8015M	
Diesel Range Organics	ND	N	п	"	"	
C29 - C35 Range Organics	ND	11	"	11		
Total Petroleum Hydrocarbons	ND	30	17		U	

Volatile Organics - EPA Method 8021B E1-SSW (4') (A04123 Soil) Sampled: 04/12/06 Received: 04/13/06						
0.009	0.005	me/Kg	04/13/06	EPA 8021B		
ND	u	"	u	n a		
ND	*1		"			
ND	0.010	*1	u	*1		
-	Sampled: 04/12/06 0.009 ND ND	Sampled: 04/12/06 Received: 04/13/06 0.009 0.005 ND " ND "	Sampled: 04/12/06 Received: 04/13/06 0.009 0.005 mg/Kg ND " " ND " "	Sampled: 04/12/06 Received: 04/13/06 0.009 0.005 mg/Kg 04/13/06 ND " " " " ND " " "		

Anions by Ion Chromatography - EPA Method 300.0

E1-SSW (4') (A04123 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride	ND	10	mg/Kg	04/13/06	EPA 300.0	
Sulfate	ND	5.0	"	"	"	

Approved By Argon Laboratories

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

- - - -

Environmenal Plus, Inc.	Project Number: 160049	
2100 Avenue O	Project Name: Papagayo Fed. #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A04121

Total Petroleum Hydrocarbons - EPA Method 8015M

		Reporting				
Analyte	Result	Limit	Units	Analyzed	Method	Notes
E1-ESW (4') (A04124 Soil)	Sampled: 04/12/06	Received: 04/13/06	te a constant a constan			
Gas Range Organics	ND	10	mg/Kg	04/13/06	8015M	
Diesel Range Organics	ND	**	U	u	41	
C29 · C35 Range Organics	ND	U	н	н	ri	
Total Petroleum Hydrocarbons	ND	30	H	н	U.	

Volatile Organics - EPA Method 8021B

E1-ESW (4') (A04124 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Benzene	0.006	0.005	mg/Kg	04/13/06	EPA 8021B	
Toluene	ND	11	19	u	11	
Ethyl Benzene	ND	14	F 8	17		
Xylenes	ND	0.010	n	14	P	
-						

Surrogate Recovery: 106%

Anions by Ion Chromatography - EPA Method 300.0

E1-ESW (4') (A04124 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride Sulfate	ND 32	10 5.0	mg/Kg	04/13/06	EPA 300.0	

Approved By Argon Laboratories

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

- -

Environmenal Plus, Inc.	Project Number: 160049	
2100 Avenue O	Project Name: Papagayo Fed. #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A04121

Total Petroleum Ilydrocarbons - EPA Method 8015M

		Reporting				
Analyte	Result	Limit	Units	Analyzed	Method	Notes
E1-NSW (4') (A04125 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Gas Range Organics	ND	10	mg/Kg	04/13/06	8015M	
Diesel Range Organics	ND	41	*1	11	11	
C29 · C35 Range Organics	ND	н	RI.	n	n	
Total Petroleum Hydrocarbons	ND	30	H	*1	•	

Volatile Organics - EPA Method 8021B

E1-NSW (4') (A04125 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Benzene	0.006	0.005	mg/Kg	04/13/06	 EPA 8021B	
Toluene	ND	"	"	11/00	4	
Ethyl Benzene	ND	п	"	*1	2	
Xylenes	ND	0.010	Ð	a	U	
S . D 10/0/						

Surrogate Recovery: 106%

Anions by Ion Chromatography - EPA Method 300.0

E1-NSW (4') (A04125 Soil)	Sampled: 04/12/06	Received: 04/13/06	· · · · · · · · · · · · · · · · · · ·		
Chloride Sulfate	ND 17	10 5.0	mg/Kg	04/13/06	EPA 300.0

Approved By Argon Laboratories

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

Environmenal Plus, Inc.	Project Number: 160049	
2100 Avenue O	Project Name: Papagayo Fed. #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A04121

Total Petroleum Hydrocarbons - EPA Method 8015M

		Reporting				
Analyte	Result	Limit	Units	Analyzed	Method	Notes
E1-WSW (4') (A04126 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Gas Range Organics	ND	10	mg/Kg	04/13/06	8015M	
Diesel Range Organics	ND	U	ti.	U	11	
C29 - C35 Range Organics	ND	0	ti.		*1	
Total Petroleum Hydrocarbons	ND	30	н	п	11	

Volatile Organics - EPA Method 8021B

E1-WSW (4') (A04126 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Benzene	ND	0.005	mg/Kg	04/13/06	 EPA 8021B	
Toluene	ND	U	"	п	17 St	
Ethyl Benzene	ND	U	14		11	
Xylenes	ND	0.010	38	11	H	

Surrogate Recovery: 106%

Į

I

l

Į

Anions by Ion Chromatography - EPA Method 300.0

E1-WSW (4') (A04126 Soil)	Sampled: 04/12/06	Received: 04/13/06			
Chloride Sulfate	130 ND	50 25	mg/Kg	04/13/06	EPA 300.0

Approved By Argon Laboratories

OC Officer

Environmenal Plus, Inc. 2100 Avenue O Eunice, NM 88231 Project Number: 160049 Project Name: Papagayo Fed. #1 Project Manager: Iain Olness

Work Order #: A04121

Anions by Ion Chromatography - EPA Method 300.0

		Reporting				
Analyte	Result	Limit	Units	Analyzed	Method	Notes
E2-ESW (4') (A04127 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride	110	20	mg/Kg	04/13/06	EPA 300.0	
Sulfate	27	10	n 		11	
E2-NSW (4') (A04128 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride	1,000	50	mg/Kg	04/13/06	EPA 300.0	
Sulfate	ND	25	"	ĸ	. س	
					4	
E2-WSW (4') (A04129 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride	140	50	mg/Kg	04/13/06	EPA 300.0	
Sulfate	ND	25	II	•••••••••••••••••••••••••••••••••••••••	1 1	
E3-BH-1 (6') (A04130 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride	ND	10	mg/Kg	04/13/06	EPA 300.0	
Sulfate	24	5.0				
E3-SSW (4') (A04131 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride Sulfate	ND	10 5.0	mg/Kg	04/13/06	EPA 300.0	

OC Officer

Approved By Argon Laboratories

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

....

ľ

l

Environmenal Plus, Inc. 2100 Avenue O Eunice, NM 88231 Project Number: 160049 Project Name: Papagayo Fed. #1 Project Manager: Iain Olness

Work Order #: A04121

Anions by Ion Chromatography - EPA Method 300.0

		Reporting		-		
Analyte	Result	Limit	Units	Analyzed	Method	Notes
E3-ESW (4') (A04132 Soil)	Sampled: 04/12/06	Received: 04/13/06			memod	110105
	Bampicu. 04/12/00	Received, 04/13/00				
Chloride	ND	10	mg/Kg	04/13/06	EPA 300.0	
Sulfate	13	5.0	"	17	"	
E3-NSW (4') (A04133 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride	ND	10	mg/Kg	04/13/06	EPA 300.0	
Sulfate	ND	5.0	"	łr	"	
					*	
E3-WSW (4') (A04134 Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride	10	10	mg/Kg	04/13/06	EPA 300.0	
Sulfate	13	5.0	"	11	"	
	<u></u>			9		

Approved By Argon Laboratories

1

QC Officer

l

Environmenal Plus, Inc. 2100 Avenue O Eunice, NM 88231		Project Number: 160049 Project Name: Papagayo Fed. #1 Project Manager: Iain Olness				Work Order #: A04121	
2			5M Quality Co				
[Reporting			
Analyte	MS Rec	MSD Rec	RPD	Limit	Units	Notes	
Matrix Spike / Matrix Spike D	uplicate				Spi	ked Sample ID: A04121	
ТРН	92%	95%	3%	10	mg/Kg		
				Reporting			
Analyte		LCSD Rec	RPD	Limit	Units	Notes	
Laboratory Control Spike / La	boratory Contro	ol Spike Dupli	cate			LCSID: LCS0413A	
ТРН	110%	103%	7%	10	mg/Kg	- · ·	
		BTEX 8021	B - Quality C	ontrol	<u> </u>		
		<u></u>		Reporting			
Analyte	MS Rec	MSD Rec	RPD	Limit	Units	Notes	
Matrix Spike / Matrix Spike Duplicate					Spir	ked Sample ID: A04121	
o-Xylene	114%	104%	11%	0.005	mg/Kg		
				Reporting			
Analyte	LCS Rec	LCSD Rec	RPD	Limit	Units	Notes	
Laboratory Control Spike / La			LCSID: LCS0413A				
Ethyl Benzene	109%	116%	7%	0.005	mg/Kg		
Note: Daily method blank showed no cor	namination at or abov	e the reporting lim	its.				

x.

Environmenal Plus, Inc. 2100 Avenue O		Project Number: 160049 Project Name: Papagayo Fed. #1				Work Order #:
Eunice, NM 88231		Project Manager: Iain Olness				
		EPA 300.0) - Quality (Control		
				Reporting		
Analyte	MS Rec	MSD Rec	RPD	Limit	Units	Notes
Matrix Spike / Matrix Sp	ike Duplicate		·····		Spi	ked Sample ID: A04123
Chloride	88%	92%	4%	10	mg/Kg	
	······································			Reporting		
Analyte	LCS Rec	LCSD Rec	RPD	Limit	Units	Notes
Laboratory Control Spike	e / Laboratory Contro	ol Spike Dupli	cate			LCSID: LCS0413A
Chloride	95%	94%	1%	10	mg/Kg	- .

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

.

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

Argon Laboratories Sample Receipt Checklist

.

Client Name	EPI		Dat	e & Time Received:	4/13/2006	9:00		
Project Name	Papagayo Fed #1		Clie	ent Project Number:	160049			
Received By	НС		Matrix:	Water	Soil 🔽			
Sample Carrier	Client 🔽	Laboratory	E Fi	ed Ex 🔲 UPS	S 🗌 Other			
Argon Labs Project N	umber:	<u>A04121</u>						
Shipper Container in go	od condition?			Samples received	in proper container	s?Yes 🗸	No	
	N/A	Yes 🔽	No [] Samples received	intact?	Yes 🗸	No	
Samples received under refingeration?		Yes 🖌	No [Sufficient sample	volume for requeste	ed lest Yes 🔽	No	
Chain of custody present?		Yes 🗸	No [] Samples received	within holding time	γ _{Yes} ☑	No	
Chain of Custody signe	d by all parties?	Yes 🖸	No [] Do samples conta	in proper preservat N/A	ive? ☑Yes	No	
Chain of Custody matches all sample labels?				Do VOA vials contai	n zero headspace?			
		Yes 🔽	No []	(None submitted	√Yes 🗌	No	
	ANY "N	" RESPONSE M	UST BE DET	AILED IN THE COMMEN	ITS SECTION BEL	OW		
Date Client Contacter	d			Person Contacted	·			
Contacted By.			Su	bject				
Comments								
				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Action Taken:								
• • • •								
			ITIONAL TE	ST(S) REQUEST / OTHE				
Contacted By				Date:	Time:			
Call Received By:								
Comments								

		·····						

Page 1 of 2

Environmental Plus, Inc.

Chain of Custody Form

2100 Avenue O, Eunice, NM 88231

P.O. Box 1558, Eunice, NM 88231

LAB: Argon

(505) 394-3481 FAX: (505) 394-2601

÷

.

Company Name	Environmental Plus	. Inc									E		0			al see	Ā	NAL	YS	ISIF	EQ	UES	ST		
EPI Project Mana						112918-642 1	1999 (1999) 1999 (1999)	and a lot of the second		1000000	*********	no politika	ne, serieser in an internet and the series	COMPANY SOUTH STREET	COMESSION	12.81.90275328		anni ibaile	- S	RATE CONTRACT		AT STREET	201-285536	0.39222465	MISSING.
Mailing Address			_									. 80.]							
City, State, Zip	Eunice New Mexico	882	31									Щ	•												ĺ
EPI Phone#/Fax	# 505-394-3481 / 505-3	394-	260	1						2 1933 5312 2		Ĕp,													
Client Company	Chesapeake Energy																1								
Facility Name	Papagayo Fed. #1											881 u													1
Location	UL-M, Sect. 27, T 23	S, I	R 34	Ε		ł				Att	n: l	ain	Olness												l
Project Reference	ce 160049			_						Ρ	.0.	Вох	(1558							'					l
EPI Sampler Nar	ne Kirt Tyree	_				Eunice, NM 88231																•			
						MA	TRIX			PR	ESE	RV.	SAMPLIN	G			l								1
LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUND WATER	WASTEWATER	Soil	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	∕ DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (CI)		Hq	TCLP	OTHER >>>	РАН			/
and the second division of the second divisio	E1-BH-1 (6')	G	1			X					Х		12-Apr-06	12:05	X	X									
والمراجع المراجع المراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والم	E1-BH-2 (6')	G	1			Х					Х		12-Apr-06	12:10	X			X							
	E1-SSW (4')	G	1	<u> </u>		X		ļ			X		in	12:15	Х			-							
	E1-ESW (4')	G	1			X					Х		12-Apr-06	12:20	X	X									
کور ان کا کا در ان کا در بان ان کا	E1-NSW (4')	G	1			X					X			12:25	X	X	_	X							
	E1-WSW (4')	G	1			X					Х		12-Apr-06	12:30	X	X	X	X							
	(04)	_		(10) (LECO)	9116 SAN	×			924	2 BARRONNES	×		-12-Apr-06	14.25		10057255	X				Ļ				Ĺ
		1		annene.	DO BROZANS	MEL N		1999-2999-299 2222-299-29	ales alessa		<u> </u>	990 A.M.A.		4-30		<u></u>	X	T	Ļ		Ļ		\square		
	E2-ESW (4')	G		<u> </u>		<u>X</u>	<u> </u>				X		12-Apr-06	14:35	<u> </u>	 	X		ļ		Ļ	\square	\square	_	
10	E2-NSW (4')	G	1	02/25/20100055	A REAL CONTROL	X		and the second	\$1.9m) (1)78	and the second	X	anningar	12-Apr-06	14:40	CD KAN SI KAN	and a second second	X	Siddad (Street)				BYOM USEC 12		1.0.00.00	L
		LANS.												atta e B											
Sampler Belinguispéd:	^{Date} 4/13/06 Time 09:00	Rece	U	By: (1	ab sta		t	ackad	Bic		e-m NOT		RUSH	@envplus	s.nel	<u> </u>									
Delivered by:	Sampl Yes			act Io			Ch	ecked	ву:				······································												

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

Environmental Plus, Inc. **Company Name** ANALYSIS REQUEST Bill To EPI Project Manager lain Olness Mailing Address P.O. BOX 1558 City, State, Zip Eunice New Mexico 88231 EPI Phone#/Fax# 505-394-3481 / 505-394-2601 **Client Company Chesapeake Energy** Papagayo Fed. #1 Facility Name UL-M, Sect. 27, T 23 S, R 34 E Location Attn: lain Olness **Project Reference** 160049 P.O. Box 1558 **EPI Sampler Name** Kirt Tyree Eunice, NM 88231 MATRIX PRESERV. SAMPLING (G)RAB OR (C)OMP. **GROUND WATER** SULFATES (SO4["]) CHLORIDES (CI) # CONTAINERS WASTEWATER BTEX 8021B SAMPLE I.D. LAB I.D. ACID/BASE Å CRUDE OIL TPH 8015M ICE/COOL SLUDGE OTHER: OTHER > OTHER TCLP SOIL PAH Hd DATE TIME G X E2-WSW (4') 1 X 12-Apr-06 14:45 X G X E3-BH-1 (6') 1 Х 12-Apr-06 Х 16:25 X 3 E3-SSW (4') G 1 X 12-Apr-06 16:30 Х G X E3-ESW (4') 1 X 12-Apr-06 X 16:35 G X 5 E3-NSW (4') 1 X 12-Apr-06 16:40 X G X 6 E3-WSW (4') 1 Х 12-Apr-06 X 16:45 8 9 10 ampler Relinquishe leceived By: 閏/13/06 e-mail results to iolness@envplus.net mer 744 Gul Relmouished by 4113/06 Received By: (lab staff) NOTES: Time 09:00 line Delivered by: Checked By: Sample Cool & Intact Yes No

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

REPORT DATE: 04/14/06 SAMPLE DATE(S): 04/12/06 04/13/06 AL JOB #: A04161

ATTN: IAIN OLNESS CLIENT PROJ. ID: 160049 Papagayo Fed. #1 UL-M, Sect. 27, T 23 S, R 34 E

Project Summary:

On April 13, 2006, this laboratory received 4 soil samples.

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

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

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

Lab Manager

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

Environmenal Plus, Inc. 2100 Avenue O		Project Number: Project Name	160049 Papagayo Fed. #1		Work	Order #:
Eunice, NM 88231		Project Manager:	,			4161
	Anions by I		- EPA Method 300.0			
A	D14	Reporting	T L			NI
Analyte E2-SSW (5') (A04161 Soil)	Result Sampled: 04/13/06	Limit Received: 04/13/06	Units	Analyzed	Method	Notes
Chloride	2,900	500	mg/Kg	04/13/06	EPA 300.0	
E2-BH-2 (12') (A04162Soil)	Sampled: 04/13/06	Received: 04/13/06				
Chloride	1,900	250	mg/Kg	04/13/06	EPA 300.0	
					4	
E2-BH-3 (13.5') (A04163Soil) Sampled: 04/13/06	Received: 04/13/0	6			
Chloride	17,000	2,000	mg/Kg	04/13/06	EPA 300.0	
E4-SSW (1.5') (A04164Soil)	Sampled: 04/12/06	Received: 04/13/06				
Chloride	320	100	mg/Kg	04/13/06	EPA 300.0	

C Officer

Approved By Argon Laboratories

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

Environmenal Plus, Inc.		Proje	ct Number: 160	049		
2100 Avenue O		Pro	ject Name: Pap	agayo Fed. #1		Work Order #:
Eunice, NM 88231		Projec	t Manager: Iain	Olness		A04161
		EPA Method	300.0 - Quality	y Control		
			<u></u>	Reporting		<u></u>
Analyte	MS Rec	MSD Rec	RPD	Limit	Units	Notes
Matrix Spike / Matrix Spike I	Duplicate				Spik	ed Sample ID: A04130
Chloride	91%	87%	4%	10	mg/Kg	
				Reporting		and the second
Analyte	LCS Rec	LCSD Rec	RPD	Limit	Units	Notes
Laboratory Control Spike / L	aboratory Contro	ol Spike Dupli	cate	<u></u>		LCS ID: LCS0413A
Chloride	97%	98%	1%	10	mg/Kg	

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



Argon Laboratories Sample Receipt Checklist

Client Name	EPI			Date & T	ime Received:	4/13/2006		18:00		
Project Name	Papagayo Fed. #1			Client Pi	oject Number	160049	,			
Received By.	HC		Matr	ix:	Water 🗌	Soil 🔽				
Sample Carrier	Client 🖸	Laboratory		Fed Ex		6 🗌 Other				
Argon Labs Project Nu	mber:	<u>A04161</u>								
Shipper Container in good	d condition?				Samples received	in proper containers	? Yes	\square	No	
	N/A	Yes 🖸	No		Samples received	intact?	Yes	$\overline{\checkmark}$	No	 U
Samples received under i	refrigeration?	Yes 📝	No		Sufficient sample v	volume for requested	l test Yes	2	No	
Chain of custody present	?	Yes 🖸	No		Samples received	within holding time?	Yes	\checkmark	No	
Chain of Custody signed	by all parties?	Yes 🔽	No		Do samples contai	n proper preservativ		1.000 anas,		
						N/A	Yes		No	
Chain of Custody matche	s all sample labels?				Do VOA vials contain	zero headspace?				
		Yes 🔽	No			(None submitted	Yes	یسم لیکا	No	
	ANY "No	" RESPONSE N	UST BE C	DETAILEI	D IN THE COMMEN	TS SECTION BELC	w		4	
Date Client Contacted.				F	Person Contacted:					
Contacted By:				Subject [.]						
Comments	<u></u>									
						<u></u>			****	
Action Taken.										
	5 mg w v									
			ITIONAL	TEST(S)	REQUEST / OTHEF					
Contacted By					Date:			;		
Call Received By.					D'010			·		
Comments										
	······									
			*****						<u></u>	

Page 1 of 2

Environmental Plus, Inc.

Chain of Custody Form

LAB: Argon

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

(000) 004-0401	TAN. (000) 094-2001																								
Company Name	Environmental P	lus, In	Ċ.						8 1. j. j.		E	Silla	To				A	NAL	YS	ISIF	IEQ	UE	ST		
EPI Project Mana	ager lain Olness														Î					Π					intéren interes
Mailing Address	P.O. BOX 1558					1						alla													
City, State, Zip	Eunice New Mex					1				_	_	Ē	h												
EPI Phone#/Fax#		5-394	-260	1]																			
Client Company	Chesapeake Energ	IY																							
Facility Name	Papagayo Fed. #	1																							
Location	UL-M, Sect. 27, T	23 S,	R 34	4 E]				Att	n: I	ain	Olness												
Project Reference										Ρ	.0.	Вох	(1558									,			
EPI Sampler Nan	ne Kirt Tyree						Eunice, NM 88231																		
			Ι			MA	TRIX			PR	ESE	RV.	SAMPLI	NG	Ì										
LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.		GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (CI)	SULFATES (SO₄ ⁼)	Hd	TCLP	OTHER >>>	РАН			
1	E2-SSW (5')	G	_			X					<u>X</u>		13-Apr-06	13:00			X								
2	E2-BH-2 (12')	G	_			X					X	L	13-Apr-06	13:05			X								
3	E2-BH-3 (13.5')	G		Ļ	Ļ	X	ļ				X		13-Apr-06	13:10			X	L							
4	E4-SSW (1/5')	G	1	ļ		X			<u> </u>		X	ļ	12-Apr-06	<u> 18:30</u>	L		X								
5					Ļ				L.		L														
б						Ļ									Ļ										
7			┦		Ļ	ļ	ļ		Ļ			ļ			<u> </u>			Ŀ						ļ	
8			Ļ	ļ	<u> </u>	Ļ	Ļ		ļ		L				Ļ					Ļ	Ļ		Ļ	L	Ļ
9			<u> </u>			ļ				[L			Ļ					L	┢	Ļ	Ļ	L	Ļ
10				a hard black	and the second																	L	L		L
Sampler RellAquished:	₽ <u>₽</u> ₽ <u></u> / <i>3</i> /	<i>vv</i> _	eived	By. c	0	4	-				e-m	ail r	esults to iolnes	s@envplu	s.ne	t									
Relinquistied by:	brens Time St Date Time		<u>()</u> eived		سک ab sta	(ff)	۵				NOT	ES:	RUSH	1											
Delivered by	Sa	mple Cor Yes		tact No			Che	ecked	l By:																

P.O. Box 1558, Eunice, NM 88231

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

ATTN: IAIN OLNESS CLIENT PROJ. ID: 160049 PAPAGAYO FEDERAL #1 REPORT DATE: 05/24/06 SAMPLE DATE: 05/22/06

AL JOB #: A05241

Project Summary:

On May 23, 2006, this laboratory received 4 soil samples.

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

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

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

Hiram Cileto Lab Manager

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

Environmental Plus, Inc.	Project Number: 160049	
PO Box 1558	Project Name: Papagayo Fed. #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05241

Anions by Ion Chromatography - EPA Method 300.0

			Rep. Lim.				
Analyte		Result	@ D.F.=1	Units	Analyzed	Method	Notes
E2-BH-1 (13')	(A05241) Soil	Sampled: 05/22/06	Received:	05/23/06			
Chloride		180	10	malka	05/24/06	EPA 300.0	
Sulfate		36	5.0	mg/Kg "	11	EPA 300.0	
E2-ESW (6')	(A05242) Soil	Sampled: 05/22/06	Received:	05/23/06			
Chloride		380	10	mg/Kg	05/24/06	EPA 300.0	
Sulfate		11	5.0	87	n		
E2-WSW (6')	(A05243) Soil	Sampled: 05/22/06	Received:	05/23/06			
Chloride		390	10	mg/Kg	05/24/06	EPA 300.0	
Sulfate		10	5.0	R	I,	*	
E2-SSW (6')	(A05244) Soil	Sampled: 05/22/06	Received:	05/23/06			
Chloride		90	10	mg/Kg	05/24/06	EPA 300.0	
Sulfate		41	5.0	"	19		

Approved By Argon Laboratories

Ì

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

QC Officer

Environmental Plus, Inc.						The second s
			ct Number: 1600			
P.O. Box 1558			ject Name: Papa			Work Order #:
Eunice, NM 88231		Projec	t Manager: Iain	Olness		A05241
		TPH 80151	4 - Quality Co	ontrol		
				Reporting		
Analyte	MS Rec	MSD Rec	RPD	Limit	Units	Notes
<u> Matrix Spike / Matrix Spike Duplic</u>	cate				Spik	ed Sample ID: A0524
ТРН	85%	89%	4%	40	mg/Kg	
				Reporting		
Analyte	LCS Rec	LCSD Rec	RPD	Limit	Units	Notes
Laboratory Control Spike / Labora	atory Control Sp	ike Duplicate				LCS ID: LCS05242
ТРН	90%	88%	2%	40	mg/Kg	
Note: Daily method blank showed no	contamination at					
		or above the rep	orting limits.			-
		or above the rep	orting limits.			 e
	- <u></u>		B - Quality Co	ontrol		
			_	ontrol Reporting		
Analyte	MS Rec		_	······································	Units	
	MS Rec	BTEX 8021	B - Quality Co	Reporting		۲. Notes
Matrix Spike / Matrix Spike Duplic	MS Rec	BTEX 8021	B - Quality Co	Reporting		۲. Notes
Analyte <u>Matrix Spike / Matrix Spike Duplic</u> m,p-Xylenes	MS Rec cate	BTEX 8021 MSD Rec	B - Quality Co RPD	Reporting Limit	Spik	ب
Matrix Spike / Matrix Spike Duplic m,p-Xylenes	MS Rec cate	BTEX 8021 MSD Rec	B - Quality Co RPD	Reporting Limit 0.005	Spik	۲. Notes
Matrix Spike / Matrix Spike Duplic	MS Rec cate 104% LCS Rec	BTEX 8021 MSD Rec 106% LCSD Rec	B - Quality Co RPD 2%	Reporting Limit 0.005 Reporting	<i>Spik</i> mg/Kg	Notes ed Sample ID: A0524

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

Environmental Plus, Inc.		Projec	ct Number: 160	0048		
P.O. Box 1558			ject Name: Cig			Work Order #:
Eunice, NM 88231		Projec	t Manager: Iai	n Olness		A05241
		EPA 300.0	0 - Quality Co	ontrol		
			······	Reporting		
Analyte	MS Rec	MSD Rec	RPD	Limit	Units	Notes
Matrix Spike / Matrix Spike Duplicate					Spi	ked Sample ID: A05201
Chloride	107%	101%	6%	10	mg/Kg	
				Reporting		
Analyte	LCS Rec	LCSD Rec	RPD	Limit	Units	Notes
Laboratory Control Spike / Laboratory	Control Sp	ike Duplicate				LCS ID: LCS0524A
Chloride	98%	104%	5%	10	mg/Kg	

-...

4

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

i

Environmental Plus, Inc.	Project Number: 160049	
PO Box 1558	Project Name: Papagayo Fed. #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05241

			TPH / BTEX ethods: 8015N				
			Rep. Lim.			······	
Analyte		Result	@ D.F.=1	Units	Analyzed	Method	Notes
	(105544) 0 11				Analyzeu		
E2-BH-1 (13')	(A05241) Soil	Sampled: 05/22/06	Received:	05/23/06			
Gas Range Organ	lics	<10	10	mg/Kg	05/24/06	EPA 8015M	
Diesel Range Organ		<10	"	"	11	"	
C29-C35 Range (<20	20				
Total Petroleum I	-	<40	40	n	н		
Surr. Rec.:	89%	~+0	40		•		
barr. Rec	0370						
Benzene		<0.005	0.005	mg/Kg	05/24/06	EPA 8021B	
Toluene		<0.005	n	"	u	u	
Ethyl Benzene		< 0.005	0	н	0	U U	
Xylenes		< 0.010	0.010	D.	ti		
Surr. Rec.:	90%						
E2-ESW (6')	(A05242) Soil	Sampled: 05/22/06	Received:	05/23/06		4	
							-
Gas Range Organ	lics	<10	10	mg/Kg	05/24/06	EPA 8015M	
Diesel Range Org	anics	<10		#1	п	ы	
C29-C35 Range (<20	20	u	н	6 1	
Total Petroleum I	lydrocarbons	<40	40	u		11	
Surr. Rec.:	92%						
Benzene		<0.005	0.005	mg/Kg	05/24/06	EPA 8021B	
Toluene		<0.005	"			11	
Ethyl Benzene		<0.005	19	44			
Xylenes		<0.010	0.010	н	11	fr	
Surr. Rec.:	94%	-0.010	0.010				
E2-WSW (6')	(A05243) Soil	Sampled: 05/22/06	Received:	05/23/06			
<u></u>	······································						
Gas Range Organ	ics	<10	10	mg/Kg	05/24/06	EPA 8015M	
Diesel Range Org	anics	<10	u		п	ų	
C29-C35 Range C	Organics	<20	20	a	u	U	
Total Petroleum H	lydrocarbons	<40	40	0	n		
Surr. Rec.:	94%						
Benzene		<0.005	0.005	mg/Kg	05/24/06	EPA 8021B	
Foluene		<0.005	IF	11	11	u	
Ethyl Benzene		<0.005	h	12	н	н	
Kylenes		< 0.010	0.010	u.	11	u	
	100%						
						10-	

Approved By

Argon Laboratories

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

Wh

QC Officer

argon	laboratories	
-------	--------------	--

Environmental Plus, Inc.	Project Number: 160049	
PO Box 1558	Project Name: Papagayo Fed. #1	Work Order #:
Eunice, NM 88231	Project Manager: Iain Olness	A05241
Eunice, NM 88231	Project Manager: Iain Olness	A05
	ТРН / ВТЕХ	

	EPA M	ethods: 8015M	-											
	Rep. Lim.													
Analyte	Result	@ D.F.=I	Units	Analyzed	Method	Notes								
E2-SSW (6') (A05244) Soil	Sampled: 05/22/06	Received:	05/23/06											
Gas Range Organics	<10	10	mg/Kg	05/24/06	EPA 8015M									
Diesel Range Organics	<10	н	μ	89	n									
C29-C35 Range Organics	<20	20	11	н	U									
Total Petroleum Hydrocarbons	<40	40	w	'n	n									
Surr. Rec.: 94%		1												
Benzene	<0.005	0.005	mg/Kg	05/24/06	EPA 8021B									
Toluene	<0.005		н	11	11									
Ethyl Benzene	<0.005	"	н	81	84									
Xylenes	<0.010	0.010	41	v	u									
Surr. Rec.: 92%						- .								

Approved By Argon Laboratories

l

QC Officer

÷

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

Argon Laboratories Sample Receipt Checklist

Client Name: Environmental Plus, Inc.				C	Date & Tir	ne Rec	eived:		05/23/06	15:0				
Project Name:	Papagayo Fed.	#1	wu		Client Pro	ject Nu	nber:	er: 160049						
Received By:	Pat			Mati	rix:	Water		Soil	I					
Sample Carrier:	Client 🔽	Lab	oratory		Fed Ex		UPS	; 🗆	Other					
Argon Labs Project	Number:	A05	241			-								
Shipper Container in g	good condition?					Sample	s receive	d in prop	er containe	rs?	Yes	7	No	, 🗌
	N/A	Yes	I	No		Sample	s receive	d intact?			Yes	\Box	No	, 🗌
Samples received und	der refrigeration?	Yes	~	No		Sufficie	nt sample	e volume	for request	ed tests?	Yes	\checkmark	No	, 🗌
Chain of custody pres	ent?	Yes	I	No		Sample	s receive	d within h	nolding time	?	Yes	\checkmark	No	, 🗆
Chain of Custody sign	ned by all parties?	Yes	7	No		Do sam	ples cont	ain prope	er preservat N/A	ive?	Yes		No	,
Chain of Custody mat	Chain of Custody matches all sample labe					Do VOA	vials conta	ain zero h	eadspace?					
		Yes	1	No				(None s	ubmitted	ॻ)	Yes		No)
Date Client Contact Contacted By: Comments:	ed:			<u> </u>	Per Subject:	son Co	ntacted:		SECTION					
Action Taken:												· · · · · · · · · · · · · · · · · · ·		
				~ ~~~	NAL TES									
Contacted By:						Da	ite:				fime	e:		
Call Received By: _	<u></u>				-									
Comments:						<u></u>								
	·····													
									···					

Page 1 of 1

Environmental Plus, Inc.

Chain of Custody Form

LAB: Argon

(505) 394-3481 FAX: (505) 394-2601

2100 Avenue O, Eunice, NM 88231

(505) 394-3461	FAX: (505) 394-2601				-																					
												議論 E	SIII M	0		ANALYSIS REQUEST										
EPI Project Man	ager lain Olnes	s																	\square		Π				T	
Mailing Address	P.O. BOX	1558											alla													1
City, State, Zip		ew Mexico	882	231																				1		
EPI Phone#/Fax		481 / 505-3	394-	260	1										:											
Client Company Chesapeake Energy												100	m	۴												
Facility Name Papagayo Fed. #1													- 80-													
Location	UL-M, Sec	ct. 27, T 23	S, I	R 34	4 E						Att	n: I	ain	Olness												1
Project Reference	ce 160049										Ρ	.0.	Box	1558		ł										
EPI Sampler Na	me Kirt Tyree													N 88231												1
			<u>.</u>				MA	TRIX			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	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (CI')	SULFATES (SO4 ⁼)	Hq	TCLP	OTHER >>>	РАН			
1	E2-BH-1 (13')		G	1			Х					Х		22-May-06	15:00	X	X	X	X				\square			
2	E2-ESW (6')		G	1			Х					Χ		22-May-06	15:05	Х	X	X	X	\Box						
3	E2-WSW (6')		G	1			Х					Х		22-May-06	15:10	X	X	X	X							
4	E2-SSW (6')		G	1			Х					Х		22-May-06	15:15	X	X	Х	X				\Box			
5																							\Box	\Box		
б		-		ļ						Ļ																
7										<u> </u>]								
8	-								L	Ļ																l
9									L							ļ		L		Ĺ						Ĺ
10	The second se	and a second	10.00000.00		2 Sreedust	a a constant	0.000702033	10000 A 100			alla, 2022, 22			WALL OF A STAND OF MENON A STATE	100 100 pt 200 10			L.		L						
												ac 201					an da sar Sara									
Sampler Relinquisfièd:	Sampter Relinquished: 100 00000 Time 432 C Received By. Time 432 C Received By. Time 432 C Received By. Time 432 C Received By.						<u>R</u> c	> <u>D</u>	r	<u>e</u>				RUSH		is.ne	et								بالی پی پی بید مالی پی پی بید	
Retinquished by. Parson Boone Delivered by Delivered by Carlon Boone Delivered by Delivered by Delivered by Sample Cool & Intact Yes No							Checked By.																			
			_				_	_	_																	

P.O. Box 1558, Eunice, NM 88231

APPENDIX II

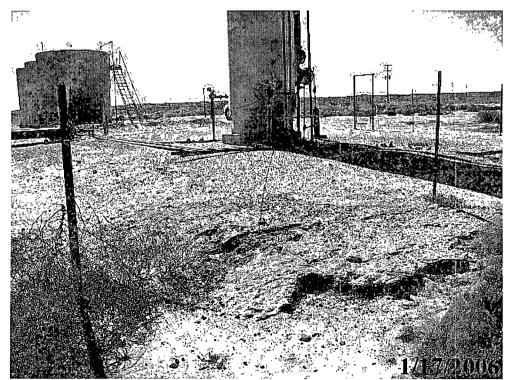
.

~

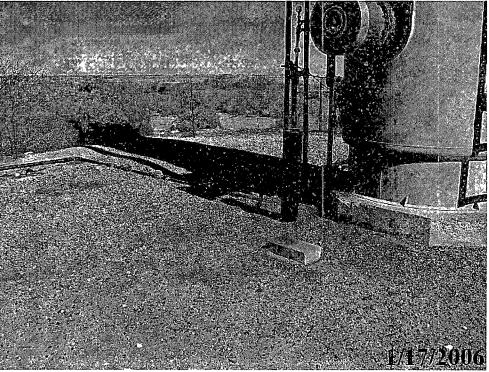
PROJECT PHOTOGRAPHS



Photograph #1 – Lease Sign



Photograph #2 – Looking southwesterly at release area.



Photograph #3 – Looking northeasterly at release area.

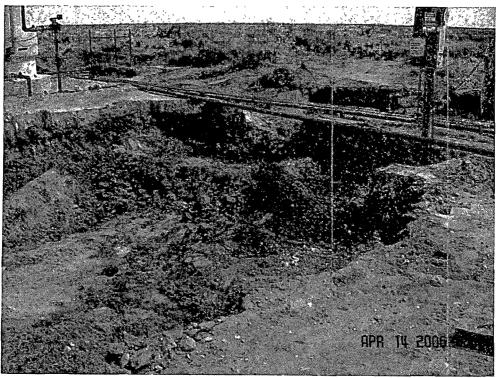


Photograph #4 – Looking northerly at excavation around heater treater.



х С

Photograph #5 – Looking southwesterly at excavation around heater treater



Photograph #6 – Looking northeasterly at excavation



- C - -

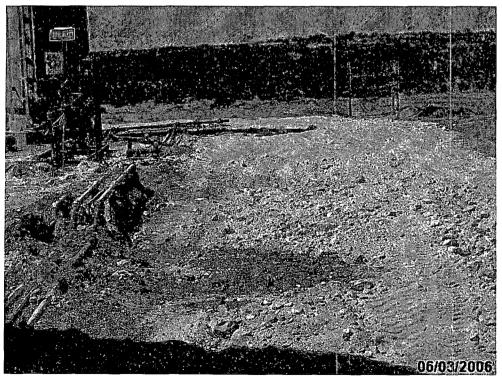
The Number of

and the second se

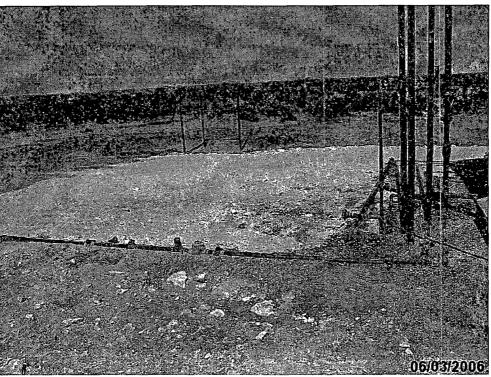
200 A 20

a state

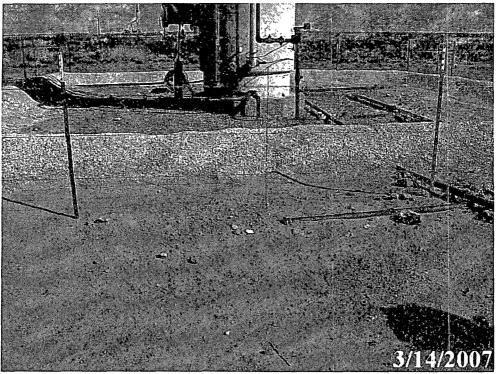
Photograph #7 – Installation of liner



Photograph #8 – Backfilling excavation



Photograph #9 – Remediated site



Photograph #10 – Remediated site

APPENDIX III SOIL BORING LOG

.

1

					L	_og	Of Test	: Borings		(NOTE - Page 1 of 1)
							Projec	t Number:	160049	
		Envi		NTAL F	LUS, II	NC.	<u>_</u>	t Name:		e Energy – Papagayo Federal #1
		REM	EDIAL	LTING AN	ICTION		Location	n: UL-M,	Section 27,	, Township 23 South, Range 34 East
,1		EL	505-3	NEW MEX 94-3481	AICD		Boring N	umber	SB-1	Surface Elevation: 3,472-feet amsl
	۵.	No. 10 V	e e	so	a si co	6	هد ا		Start Date:	2-2-06 Time: 1115 hrs
Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S.	Depth (feet)		Completion 1	Date: <u>2-2-06</u> Time: <u>1150 hrs</u>
	<i>S</i> .	¶. Brie	Ϋ́	_ & _	77 ê					ription
		{					 			
1115			<u> </u>	.5	640				2'	' SAND, Red/brown
		Ļ	L		L		5			
1120		<u> </u>		.5	160			\		5' SAND, Reddish
	l						\vdash			_
							-			-
1130				,6	160					10' CALICHE, Tan
							<u> </u>			
							<u> </u>			_
1140				,6	160		15		15′ (CALICHE, Whitish/tan
										Soil Boring at 16' bgs
							<u> </u>			_
							<u> </u>			-
							20			
										_
			ļ				\vdash			_
							25			_
							-			_
										_
	1									_
										_
							-			-
l	Wate			urement				l Illing Meth	od: Strau	
Date	Tir	ne So De	imple epth	Casing Depth	Cave-i Depth	n W	evel			
-			-		-	_		ckfill Met		
			-		-	1	- Fie	eld Repres	entative: (5B

ļ

Î

APPENDIX IV INFORMATION AND METRICS FORM INITIAL AND FINAL NMOCD FORM C-141

¥ 977 -

1-4- Jan 1

a na state

.

	A	Incident D Historical	ate:	NMOCD N	lotified:						
Ch	esapeake										
	1										
	tion and Metrics										
Site: Papagayo			Assigned Site F	Reference : #16	0049						
	hesapeake Energy										
	: 1616 West Bender			·····							
	ss: P.O. Box 190										
	: Hobbs, New Mexico	88240									
	Bradley Blevins										
Representative	Telephone: (505) <u>391</u>	-1462 ext. 6224	4								
Telephone:											
Fluid volume released (bbls): >5 bbls Recovered (bbls): 0 bbls											
	>25 bbls: Notify NM0 (Also ap		ithin 24 hrs and s/ orized releases >5								
5-25 b	bls: Submit form C-141 wi	thin 15 days (A	lso applies to una	uthorized release	es of 50-500 mcf Natural Gas)						
	Pit (LSP) Name: Papaga	· · · · · · · · · · · · · · · · · · ·									
Source of conta											
	.e., BLM, ST, Fee, Other	•• Federal		· ·							
	ns: 10 feet by 70 feet, 10		+								
LSP Area: ~70		Teet by 20 Teet									
	ference Point (RP):										
	nce and direction from R	D.									
Latitude: N 32		<u></u>									
	103° 27' 51.63" re mean sea level: 3,472	faat									
	th Section Line: 660	ieet		·							
	t Section Line: 660										
	or 1/41/4: SW1/4 of the SV	V 1/4	Unit Letter	: M							
Location-Sect											
Location- Tow											
Location- Ran	ge: R34E										
	body within 1000 ' radiu										
	r wells within 1000' radi										
	ater wells within 1000' r										
	upply wells within 1000'										
	nd surface to groundwate		feet								
	mination (DC): unknow										
	dwater (DG – DC = DtC				r						
	Froundwater		llhead Protectio		3. Distance to Surface Water Body						
	<50 feet: 20 points		m water source, o		<200 horizontal feet: 20 points						
If Depth to GW	50 to 99 feet: 10 points		stic water source:		200-1000 horizontal feet: 10 points						
	>100 feet: 0 points		m water source, o stic water source:		>1000 horizontal feet: 0 points						
Site Rank (1+2-											
		te Ranking Sc	ore and Accepta	ble Concentra	tions						
Parameter	>19		10-19		0-9						
Benzene ¹	10 ppm		10 ppm		10 ppm						
	50 ppm		50 ppm		50 ppm						
BTEX ¹	rorpin		50 ppm								
BTEX ¹ TPH	100 ppm		1,000 ppm		5,000 ppm						

.

And an other state

L. B. S.

1 N 1

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

N. 7.12

· · ~ ...

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised October 10, 2003

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

		F	Release	e Notificatio	on a	nd Correc	tive Action								
				OPERAT	OR		🛛 🖂 İniti	al Report	Final Report						
Name of C			ake En	ergy	Contact: Bradley Blevins										
Address: I				,	Telephone No.: (505) 391-1462 ext. 6224										
Facility Na	ame: Pa	pagayo Fee	leral #1			Facility Type: Tank Battery									
Surface O	wner: F	ederal		Mineral (Dwn	er:		Lease N	o.: LC071949						
				LOCATIO)N C	OF RELEAS	SE								
Unit Letter M	Section 27	Township 23S	Range 34E	Feet from the 660	Nor	rth/South Line S	Feet from the 660	East/West Lin W	e County Lea						
Latitude: <u>N 32° 16' 12.55"</u> Longitude: <u>W 103° 27' 51.63"</u> NATURE OF RELEASE															
Type of Relea	se: Petrole	eum and/or pro	duction fl			Volume of Re	lease: > 5bbls	Volume Re	covered: 0 bbls						
Source of Rel	ease: Vario	ous sources				1	ir of Occurrence:	Date and H	our of Discovery:						
Was Immedia	te Notice (Historical If YES, To W	hom?								
			Yes 🗋	No 🛛 Not Requ	ired										
By Whom? B						Date and Hour: If YES, Volume Impacting the Watercourse:									
Was a Watero			Yes 🛛 I	No		Not Applicable									
Depth to wate			riba Fully	.* Not Applicable											
				on Taken.* The re											
									elease. Soil borings soil sample analyses.						
I hereby certify	y that the in	formation giv	en above i	is true and complete	e to th	e best of my kno	wledge and under	stand that pursua	nt to NMOCD rules						
				t and/or file certain cceptance of a C-1											
operator of lial	oility should	d their operati	ons have f	ailed to adequately	inves	stigate and remed	liate contaminatio	n that pose a threa	at to ground water,						
							141 report does no	t relieve the oper	ator of responsibility						
	with any (mer rederal, s	uite, 01 10	cal laws and/or reg			L CONSERV	ATION DIV	ISION						
Signatures	T	11.	21												
Signature:		My &	y Kei	un	-	Annroved by Ni	Strict Supervisor	ENGA							
Printed Name	Bradley E	Blevins						540-	6						
Title: Field Su	pervisor					Approval Date:	7.19.07	Expiration D	ate:						
E-mail Addre					(Conditions of A _l	pproval:		Attached 🔲						
Date: 1- 5				462 ext. 6224											
Attach Ad	ditional	Sheets If]	Necessa	nry											

<u>District I</u> 1625 N. French D <u>District II</u> 1301 W Grand A						New Mexico and Natural R		Form C-141 Revised October 10, 2003							
District III 1000 Rio Brazos District IV 1220 S St Franci	Road, Aztec,	NM 87410		Oil Coi 1220 S Sant	outh	pies to appropriate ffice in accordance a Rule 116 on back side of form									
		F	Release	e Notificatio	on and Corrective Action										
				OPERAT	OR 🗌 Initial Report (🛛 Final Rep										
Name of C			ake En	ergy	Contact: Bradley Blevins										
Address: I						Telephone N	<u>`</u>			6224	ļ				
Facility Na	ame: Pap	pagayo Fee	leral #1			Facility Typ	e: Tan	k Batte	ery						
Surface O	wner: Fe	ederal		Mineral ()wn	er:			Lease	No.:	LC071949				
				LOCATIO	N C	OF RELEAS	E		WTR 72	250	۱				
Unit Letter M	Section 27	Township 23S	Range 34E	Feet from the 660	Noi	rth/South Line S	Feet fr 66	1	East/West L W		County Lea				
						ongitude: <u>W</u> F RELEASE	7 103° 2	27' 51.6	53" RI	2.	808				
Type of Relea			duction f	uids		Volume of Re					ered: 0 bbls				
Source of Rel	ease: Vario	us sources		7		Date and Hou Historical	r of Occ	urrence:	Date and	Hour	of Discovery:				
Was Immedia	te Notice (Yes 🗌	No 🛛 Not Requ											
By Whom? B						Date and Hour: If YES, Volume Impacting the Watercourse:									
Was a Water	course Rea		Yes 🛛 🛛	No		Not Applicable		ting the	Watercourse:						
Describe Cau Describe Area was advanced repository at S Excavation bad I hereby certify and regulation endanger public operator of lial surface water, for compliance Signature: (Printed Name Title: Field Sur E-mail Addre	rse was In se of Probl Affected a to collect so undance Se ckfilled with y that the in s all operato ic health or bility should human heal with any o Bradley E pervisor ss: bblevins	em and Reme and Cleanup oil samples to rvices, Inc. L h caliche to or formation giv ors are require the environme d their operati- thor the envir ther federal, s	edial Acti Action Ta delineate aboratory riginal gro en above d to repor ent. The a ons have f ronment. tate, or lo	y.* Not Applicable on Taken.* The re- aken.* Approximate extent of impacted analyses confirmed und surface. Grade is true and complete t and/or file certain icceptance of a C-1- failed to adequately In addition, NMOC cal laws and/or regr	ely 9 soil. 1 rem ed are e to th relea 41 rep inves CD ac CD ac ulatio	00 square-feet of Excavated contai oval of impacted a to a smooth, lev- ne best of my kno ise notifications a port by the NMO stigate and remed ceptance of a C-I ns.	surface a minated s soil abov vel surfac owledge a nd perfor CD mark liate conta 141 repor L CON E strict Sup 7. F	rea was i oil above e NMOC e allowir nd under m correc ed as "Fi amination t does no SERV	e NMOCD rem CD remedial thing natural drain stand that purs tive actions for nal Report" do n that pose a th t relieve the op ATION DI	edial reshol uant to relea es not reat to erator VISI	goals with d goals. NMOCD rules ses which may relieve the ground water, of responsibility				
Date: 7-7		Phone: (5 Sheets If 1	05) 391-1 Necessa	462 ext. 6224				\rightarrow							
					*	(KBC	، 		1						