CLOSURE REPORT (FINAL)

NORTH MONUMENT GRAYBURG
SAN ANDRES UNIT (NMGSAU) #603
NMOCD 1RP# 1019
EPI REF: 240014
NMSLO ROE #1519

UL-C (NE¼ OF THE NW¼) OF SECTION 20 T19S R37E

~2 MILES NORTH-NORTHWEST OF MONUMENT

LEA COUNTY, NEW MEXICO

LATITUDE: N 32° 39' 04.30" LONGITUDE: W 103° 16' 33.43"

JULY 2007

PREPARED BY:

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

PREPARED FOR:

Apache CORPORATION

STANDARD OF CARE

Closure Report (Final)

North Monument Grayburg San Andres Unit #603

NMOCD 1RP # 1019

(NMSLO ROE #1519; EPI Ref. #240014)

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:

Jason Stegemoller
Environmental Scientist

7-9-07
Date

This report was reviewed by:

David P. Duncan
Civil Engineer

7-09-07
Date

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TABLES

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1.0 PROJECT SYNOPSIS

Site Specific:

- ***Company Name:*** Apache Corporation
- ***Facility Name:*** North Monument Grayburg San Andres Unit (NMGSAU) #603
- ***Project Reference:*** NMOCD 1RP # 1019; NMSLO ROE #1519; EPI # 240014
- ***Company Contacts:*** Guinn Burks
- ***Site Location:*** WGS84 N32° 39' 04.30"; W103° 16' 33.43"
- ***Legal Description:*** Unit Letter-C, (NE¼ of the NW¼), Section 20, T19S, R37E
- ***General Description:*** Approximately 2-miles north-northwest of Monument, New Mexico
- ***Elevation:*** 3,680-ft amsl
- ***Land Ownership:*** State of New Mexico, agriculturally leased by Jimmie T. Cooper
- ***EPI Personnel:*** Project Consultant – Jason Stegemoller

Release Specific:

- ***Product Released:*** Injection Water
- ***Volume Released:*** 85 barrels ***Volume Recovered:*** 60 barrels
- ***Time of Occurrence:*** July 16, 2006 a.m. ***Time of Discovery:*** July 16, 2006 @ 08:45 hrs
- ***Release Source:*** Plug blew out on injection line
- ***Initial Surface Area Affected:*** ~ 42,800 - square feet

Remediation Specific:

- ***Final Vertical extent of contamination:*** 10-feet bgs at maximum depth
- ***Depth to Ground Water:*** Approximately 50-ft bgs (based on an average depth of wells nearest the release site)
- ***Water wells within 1,000-ft:*** None
- ***Private domestic water sources within 200-ft:*** None
- ***Surface water bodies within 1,000-ft:*** None at the point of release; however an ephemeral pond resides approximately 75-feet south of the southernmost point of the flowpath.
- ***NMOCD Site Ranking Index:*** 20 points
- ***Remedial goals for Soil:*** TPH – 100 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 soil impacted by injection water; b) laboratory analyses of soil samples collected from excavation sidewall and floor; c) transport excavated, impacted soil to Sundance Services/C and C Landfarm; d) backfill excavation with clean soil obtained from an off site source.
- ***Disposal Facility:*** Sundance Services, Eunice, Lea County, New Mexico (~1,350-yd^3) and C and C Landfarm near Monument, Lea County, New Mexico (~6,250-yd^3)
- ***Volume disposed:*** ~7,600-yd^3 (~1,350-yd^3 during initial response and 6,250-yd^3 during remediation activities)
- ***Project Completion Date:*** 14 June 2007

2.0 SITE AND RELEASE INFORMATION

2.1 ***Describe the land use and pertinent geographic features within 1,000 feet of the site.***
Land surrounding the area is rangeland in native grasses utilized for livestock grazing along with oilfield operations.

2.2 ***Identify and describe the source or suspected source(s) of the release.***
Plug on injection line blew out.

2.3 ***What is the volume of the release? (if known):*** approximately 85 ***barrels of*** injection water

2.4 ***What is the volume recovered? (if any):*** approximately 60 ***barrels***

2.5 ***When did the release occur? (if known):*** July 16, 2006

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

The release site is located in the Laguna Valley physiographic subdivision, described by Nicholson & Clebsch as an area that "is a vast sand dune area, stable or semi-stable over most of the area, but which drifts locally. The surface is very irregular and has no drainage features except at the edges of several playas."

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

2.8 ***Area Groundwater***
The unconfined groundwater aquifer at this site is projected to be ~50 feet (ft) bgs based on water depth data obtained from the New Mexico State Engineers Office and the United States Geological Survey data base (reference *Table 1*).

2.9 ***Area Water Wells***
No water wells exist within a 1,000-foot radius of the site (reference *Table 1* and *Figure 2*).

2.10 ***Area Surface Water Features***
No surface water features within a 1,000-foot radius of the point of release (reference *Figure 2*). However, an ephemeral pond resides approximately 75-feet south of the southernmost portion of the flowpath (reference *Figure 3*).

3.0 NMOCD SITE RANKING

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

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

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

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

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

1. GROUNDWATER	2. WELLHEAD PROTECTION AREA	3. DISTANCE TO SURFACE WATER
Depth to GW <50 feet: 20 points	If <1,000' from water source, or <200' from private domestic water source: *20 points*	<200 horizontal feet: *20 points*
Depth to GW 50 to 99 feet: *10 points*		200-1,000 horizontal feet: *10 points*
Depth to GW >100 feet: 0 points	If >1,000' from water source, or >200' from private domestic water source: *0 points*	>1,000 horizontal feet: *0 points*
Site Rank (1+2+3) = 20 + 0 + 0 = 20 points		

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

[1] A field soil vapor headspace measurement of 100 ppm 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: July 25 through August 3, 2006 and April 11 through May 18, 2007

Total volume removed: Approximately 7,600-cubic yards

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

☒ ***Disposal***
☒ ***Land Treatement***
☐ ***Composting/Biopiling***
☐ ***Other*** ( )

Name and location of treatment/disposal facility:
Disposal – Sundance Services, Eunice, New Mexico (~1,350-cubic yards)
Treatment – C and C Landfarm, Monument, New Mexico (~6,250-cubic yards)

5.0 SAMPLING INFORMATION

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

Organic Vapor Concentrations – A portion of each soil sample was placed in a polyethylene bag and allowed sufficient time and temperature for organic vapors to volatilize. The detector portion of a Photoionization Detector equipped with a 10.6 electron volt lamp was placed in the bag to analyze organic vapor concentration.

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

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

Soil samples collected from the excavation were collected utilizing hand and/or mechanical excavation equipment to gather the sample from at least 6-inches below/within the surface of the excavation. Prior to the collection of each sample, the sampling instrument was decontaminated with an Alconox solution.

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

5.3 Discuss sample locations and provide rationale for their locations.

Soil samples were collected on July 25, 26 and 31 and August 1 and 2, 2006 from twenty-six (26) locations within the excavation area utilizing a backhoe. Soil samples were collected at a depth of 1-ft bgs. Soil sample locations were chosen to provide the best representative example of soil within the excavation floor and sidewalls (reference *Figure 4*).

Soil samples were collected on November 29, 2006 from a series of four (4) soil borings (i.e., SB-1, SB-2, SB-3 and SB-4). Soil borings were advanced within the excavation floor, the pooling area west of the Lanexco pad and the center of the ephemeral pond area (reference *Figure 5*). Soil boring placement was chosen to allow collection of soil samples to delineate vertical extents of impacted soil.

Soil samples were collected during excavation activities from multiple locations in the three main excavations (i.e., north, south and injection well excavations). Soil sample locations were chosen to provide the best representative example of soil within the excavation floor and sidewalls (reference *Figures 7, 8 and 9 for locations*; *Tables 4, 5 and 6* for analytical dates and results; *Appendix I* for laboratory analyses). Due to low hydrocarbon concentrations in previous soil sample analyses, excavation soil samples were submitted for chloride and sulfate analyses.

6.0 ANALYTICAL RESULTS

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

Laboratory analyses of initial excavation soil samples indicated BTEX constituent concentrations were non-detectable (ND) at or above laboratory analytical method detection limits (MDL). TPH was reported as ND at or above laboratory analytical MDL, with the exception of the soil sample collected from BH-21 (6"). Analytical results of BH-21 (6") indicated TPH concentrations were 71 mg/Kg, below the NMOCD remedial threshold of 100 mg/Kg. Reported chloride concentrations ranged from 126 to 2,110 mg/Kg. Sulfate concentrations ranged from 17.6 to 2,380 mg/Kg (reference *Table 2, Figure 4* and *Appendix I*).

Laboratory analyses of soil samples collected during soil boring advancement indicated TPH and BTEX constituent concentrations were ND at or above laboratory MDL. Chloride concentrations were below the 250 mg/Kg remedial goal in all sampling intervals, with the exception of sample SB-1 (5') (i.e., 464 mg/Kg). Sulfate concentrations ranged from ND to 148 mg/Kg, below the 600 mg/Kg remedial goal (reference *Table 3, Figure 5* and *Appendix I* and *III*). .

Laboratory analyses of final excavation soil samples indicated chloride concentrations were under 600 mg/Kg and sulfate concentrations were under 700 mg/Kg (reference *Tables 4, 5* and *6, Figures 7, 8* and *9* and *Appendix I*).

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

☐ *yes* ☒ *no*

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

Visibly stained soil during initial response was excavated and transported to Sundance Services for disposal. Remainder of excavated, impacted soil was transported to C and C Landfarm for treatment.

7.0 DISCUSSION

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

Laboratory analytical results indicated TPH and BTEX constituent concentrations were below NMOCD remedial thresholds. Chloride residuals exist within/below the excavation floor. Based on depth to groundwater (approximately 50- ft bgs) and excavation soil sample laboratory analyses, chloride residuals remaining in the soil should not be capable of impacting groundwater above NMWQCC groundwater standards.

7.2 ***Discuss the risks associated with the impacted groundwater:*** Chloride residuals remaining in the soil should not be capable of impacting local groundwater above NMWQCC groundwater standard of 250 mg/L.

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

8.0 CONCLUSIONS AND RECOMMENDATIONS

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

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

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

Approximately 7,600 cubic yards of impacted soil were removed from an excavation area of approximately 42,800 square feet to a maximum depth of 10-ft bgs. Impacted soil excavated during initial response activities (~1,350 cubic yards) was transported to Sundance Services for disposal. Remaining impacted soil (~6,250 cubic yards) was excavated and transported to C and C Landfarm for treatment.

Field and laboratory analyses of final soil samples collected from excavation sidewalls and floor locations indicate residual chloride and sulfate concentrations are inadequate to impact local groundwater (i.e. ~50-feet bgs) or impede vegetative growth.

Environmental Plus, Inc., on behalf of Apache Corporation, request the NMOCD require no further action and issue Apache Corporation a "Site Closure Letter."

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

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

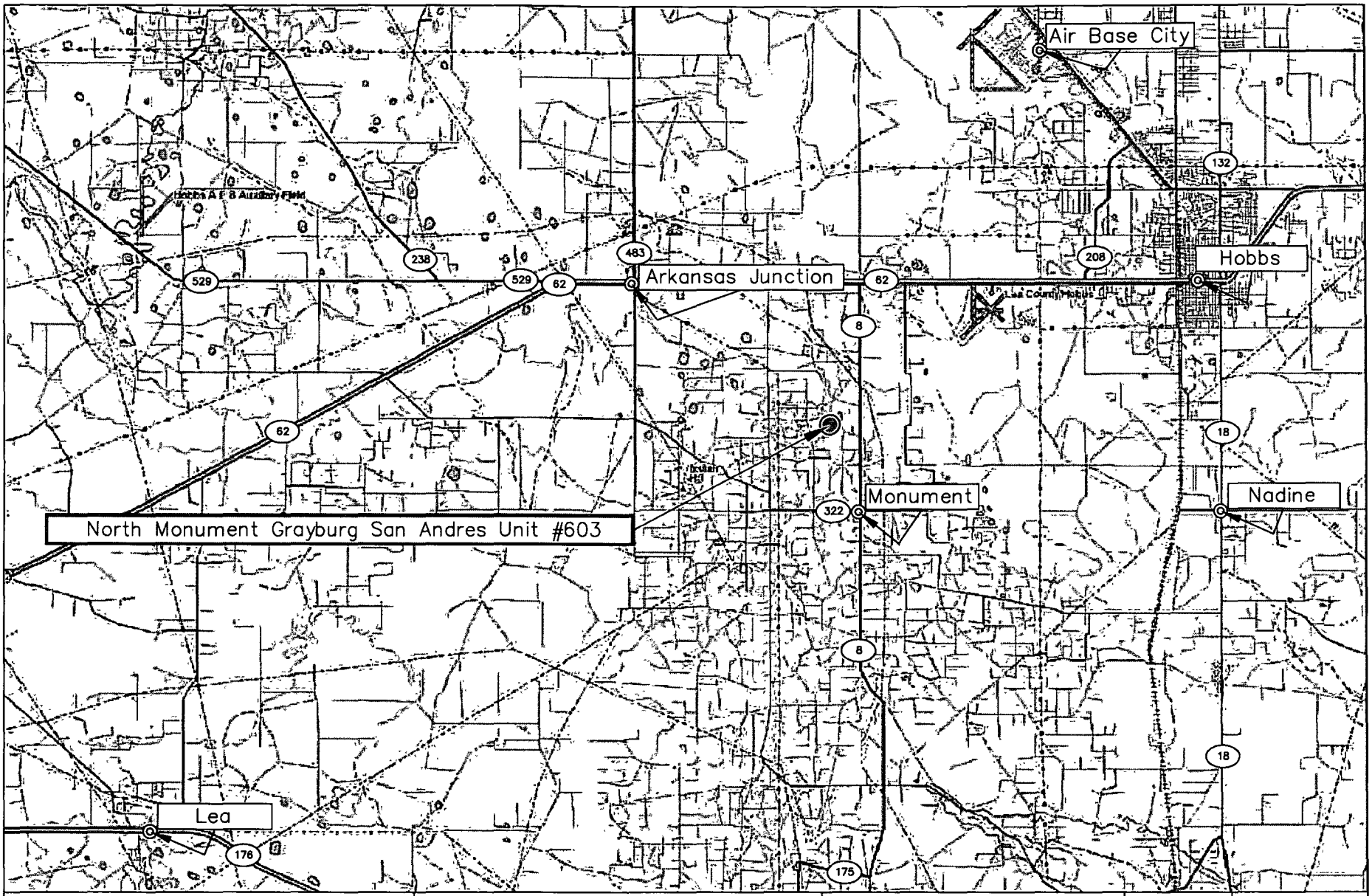

Figure 1
Area Map
Apache Corporation
North Monument Grayburg
San Andres Unit #603

Lea County, New Mexico
NE 1/4 of the NW 1/4, Sec. 20, T19S, R37E
N 32° 39' 04.3" W 103° 16' 33.43"
Elevation: 3,680 feet amsl

DWG By: Daniel Dominguez
July 2006

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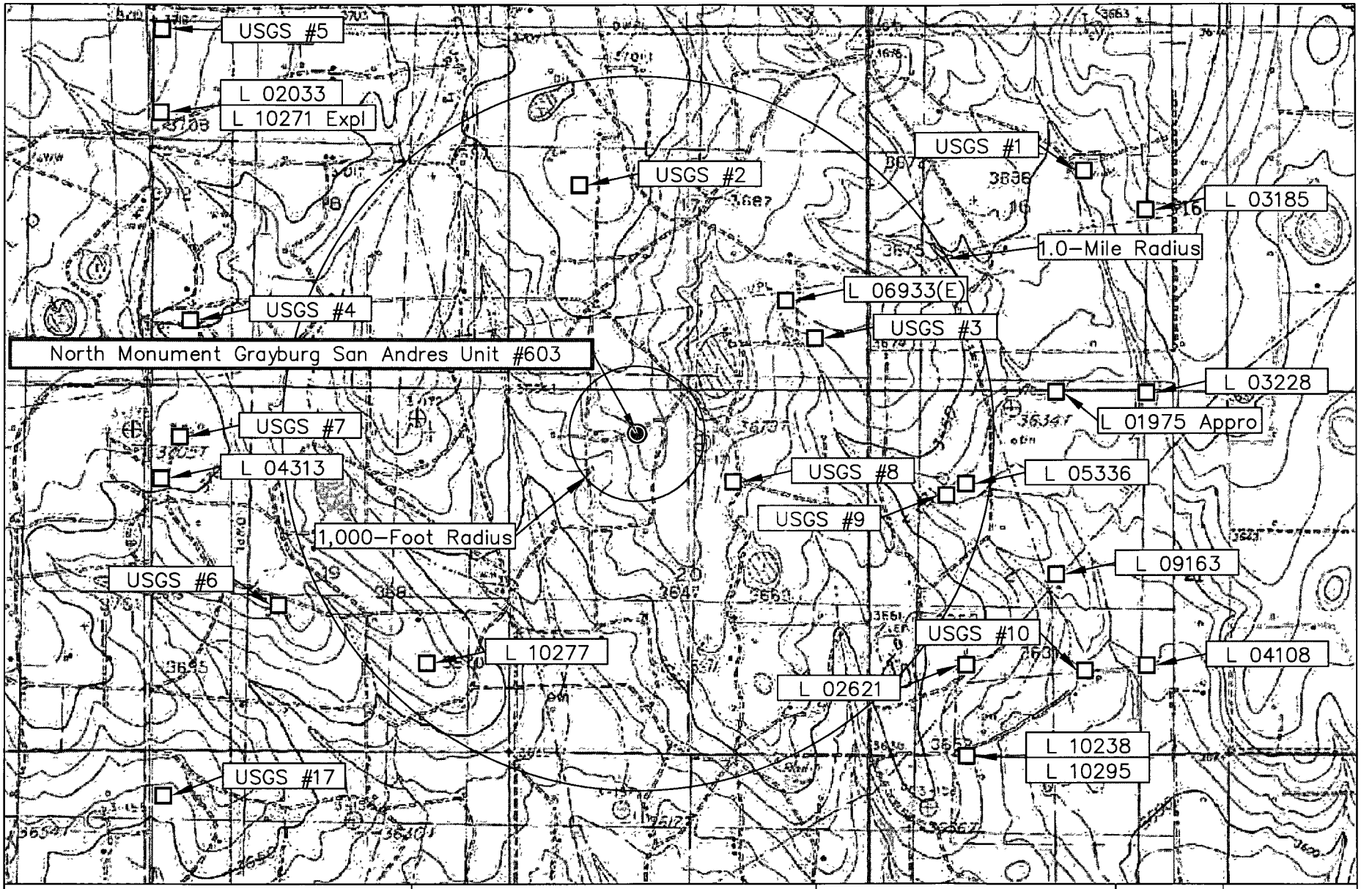

Figure 2
Site Location Map
Apache Corporation
North Monument Grayburg
San Andres Unit #603

Lea County, New Mexico
NE 1/4 of the NW 1/4, Sec. 20, T19S, R37E
N 32° 39' 04.3" W 103° 16' 33.43"
Elevation: 3,680 feet amsl

DWG By: Daniel Dominguez
July 2006

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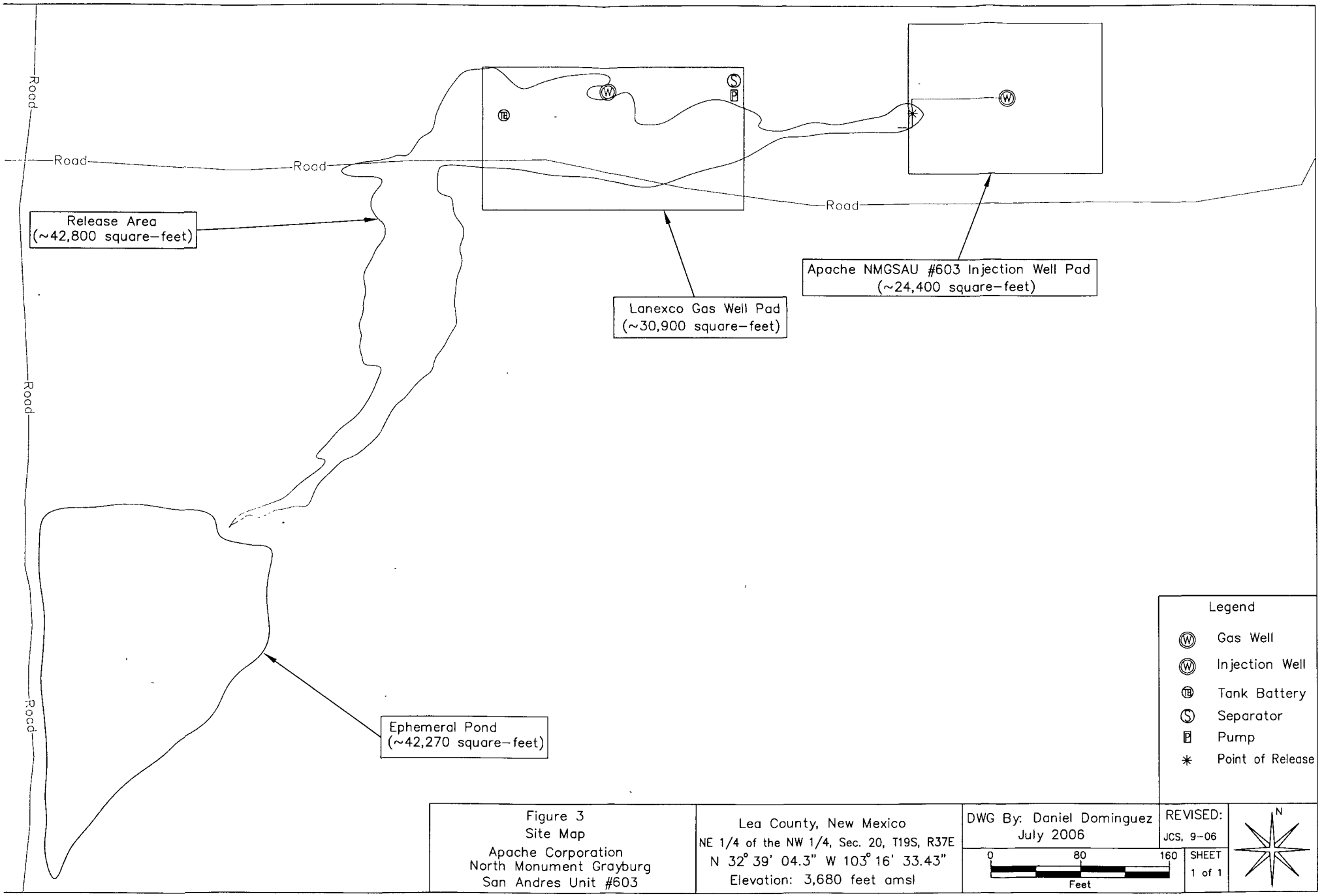

Figure 3
Site Map
Apache Corporation
North Monument Grayburg
San Andres Unit #603

Lea County, New Mexico
NE 1/4 of the NW 1/4, Sec. 20, T19S, R37E
N 32° 39' 04.3" W 103° 16' 33.43"
Elevation: 3,680 feet amsl

DWG By: Daniel Dominguez
July 2006

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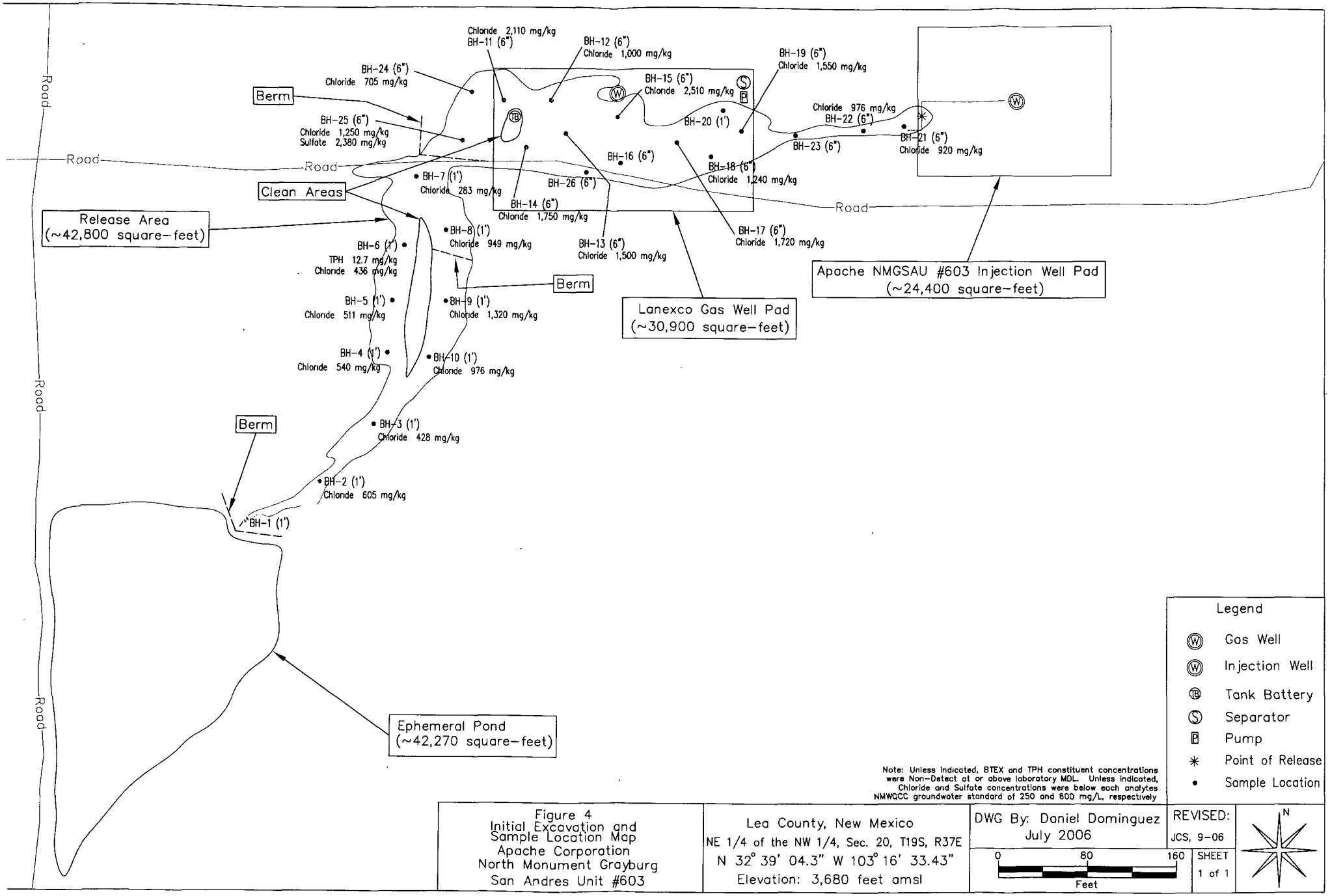
Chloride 2,110 mg/kg
BH-11 (6")
BH-12 (6")
Chloride 1,000 mg/kg
BH-19 (6")
Chloride 1,550 mg/kg
BH-24 (6")
Chloride 705 mg/kg
BH-15 (6")
Chloride 2,510 mg/kg
Berm
BH-25 (6")
Chloride 1,250 mg/kg
Sulfate 2,380 mg/kg
BH-20 (1')
Chloride 976 mg/kg
BH-22 (6")
BH-21 (6")
Chloride 920 mg/kg
BH-23 (6")
BH-16 (6")
BH-18 (6")
Chloride 1,240 mg/kg
Road
Road
Road
Clean Areas
BH-7 (1')
Chloride 283 mg/kg
BH-26 (6")
BH-14 (6")
Chloride 1,750 mg/kg
Release Area
(~42,800 square-feet)
BH-8 (1')
Chloride 949 mg/kg
BH-13 (6")
Chloride 1,500 mg/kg
BH-17 (6")
Chloride 1,720 mg/kg
Apache NMGSAU #603 Injection Well Pad
(~24,400 square-feet)
BH-6 (1')
TPH 12.7 mg/kg
Chloride 436 mg/kg
Berm
BH-5 (1')
Chloride 511 mg/kg
BH-9 (1')
Chloride 1,320 mg/kg
Lanexco Gas Well Pad
(~30,900 square-feet)
BH-4 (1')
Chloride 540 mg/kg
BH-10 (1')
Chloride 976 mg/kg
Road
Berm
BH-3 (1')
Chloride 428 mg/kg
BH-2 (1')
Chloride 605 mg/kg
BH-1 (1')
Road
Ephemeral Pond
(~42,270 square-feet)
Legend
Gas Well
Injection Well
Tank Battery
Separator
Pump
Point of Release
Sample Location
Note: Unless indicated, BTEX and TPH constituent concentrations were Non-Detect at or above laboratory MDL. Unless indicated, Chloride and Sulfate concentrations were below each analytes NMWQCC groundwater standard of 250 and 600 mg/L, respectively
Figure 4
Initial Excavation and
Sample Location Map
Apache Corporation
North Monument Grayburg
San Andres Unit #603
Lea County, New Mexico
NE 1/4 of the NW 1/4, Sec. 20, T19S, R37E
N 32° 39' 04.3" W 103° 16' 33.43"
Elevation: 3,680 feet amsl
DWG By: Daniel Dominguez
July 2006
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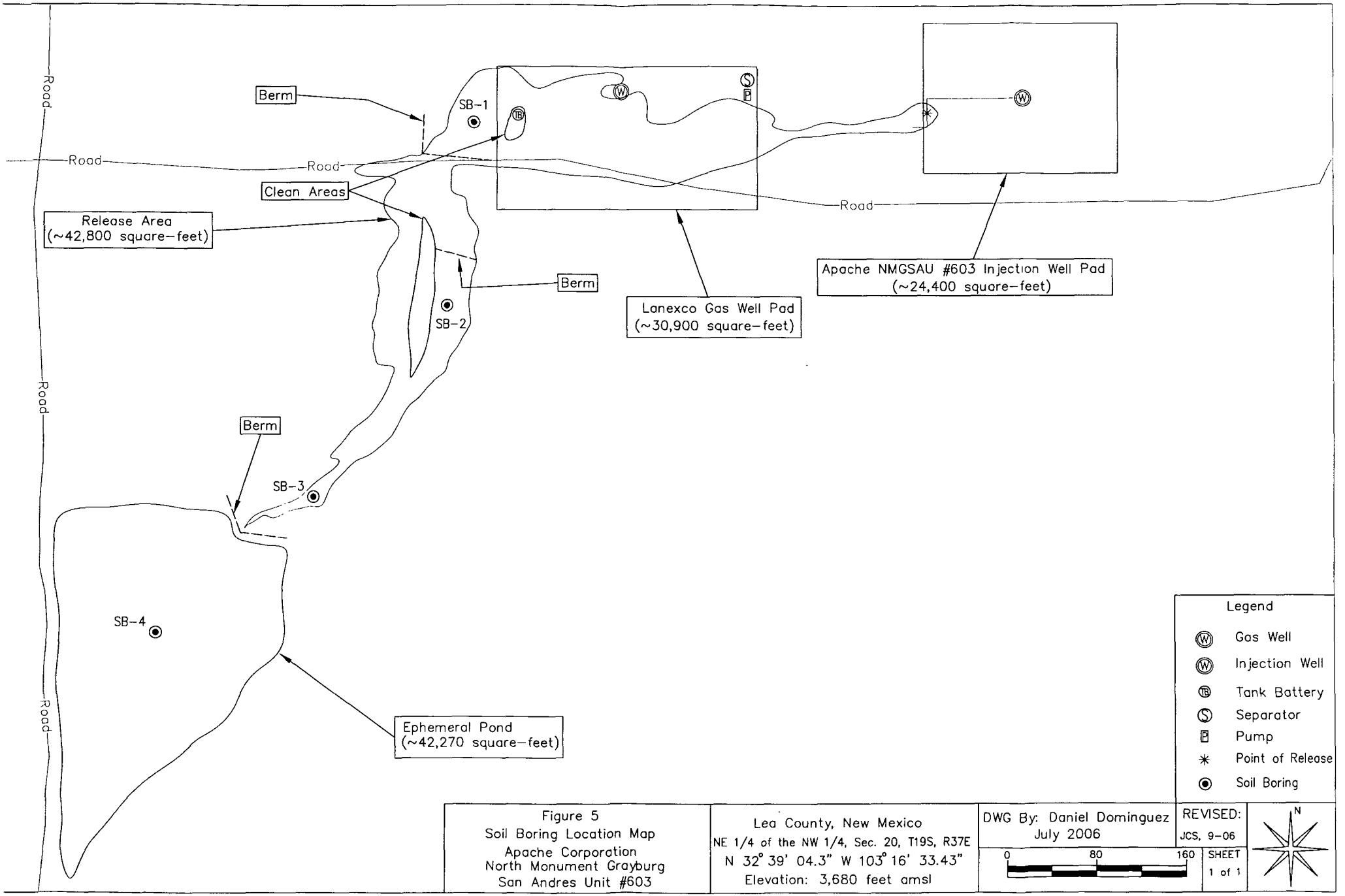

Figure 5
Soil Boring Location Map
Apache Corporation
North Monument Grayburg
San Andres Unit #603

Lea County, New Mexico
NE 1/4 of the NW 1/4, Sec. 20, T19S, R37E
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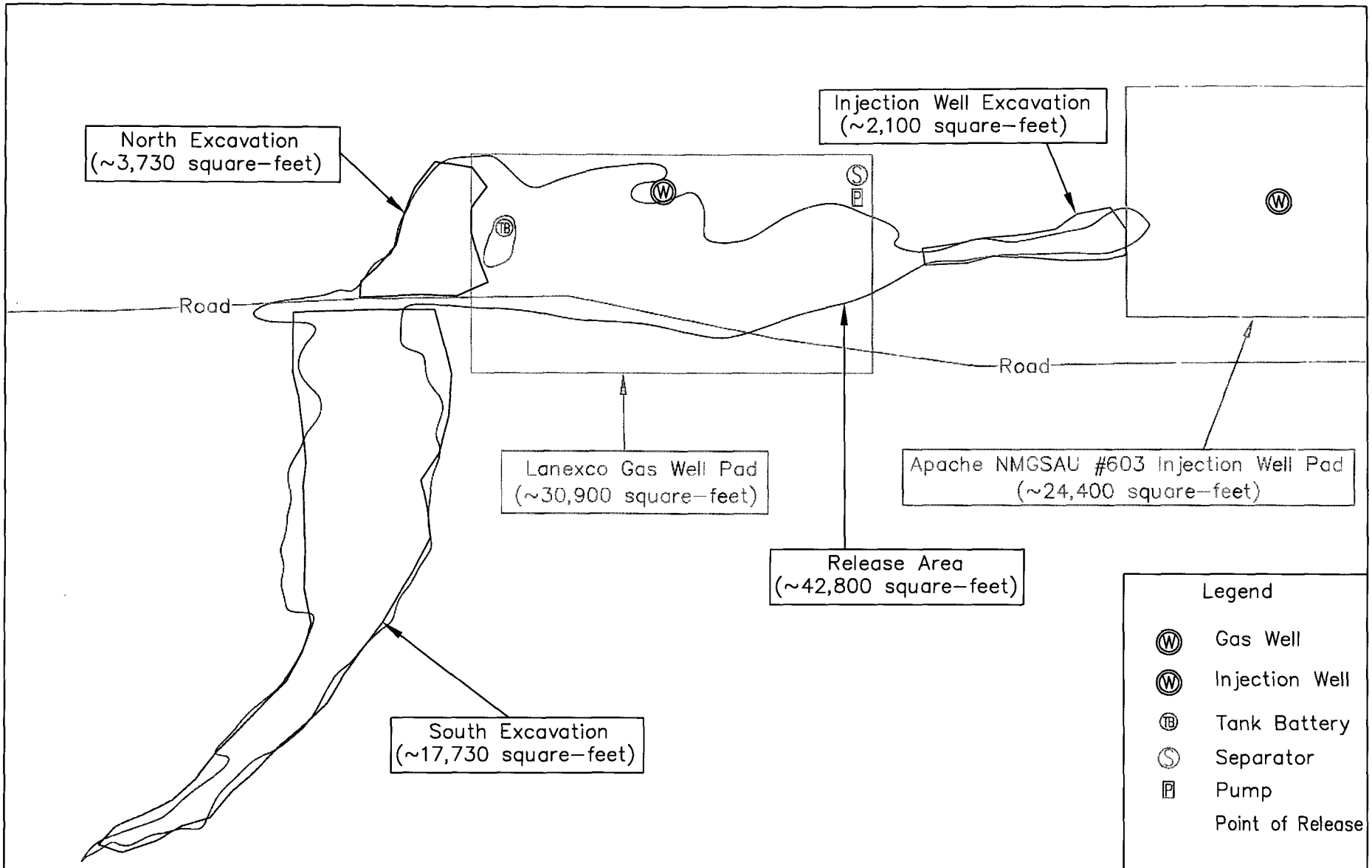

Figure 6
Excavation Location Map

Apache Corporation
North Monument Grayburg
San Andres Unit #603

Lea County, New Mexico
NE 1/4 of the NW 1/4, Sec. 20, T19S, R37E
N 32° 39' 04.3" W 103° 16' 33.43"
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July 2006

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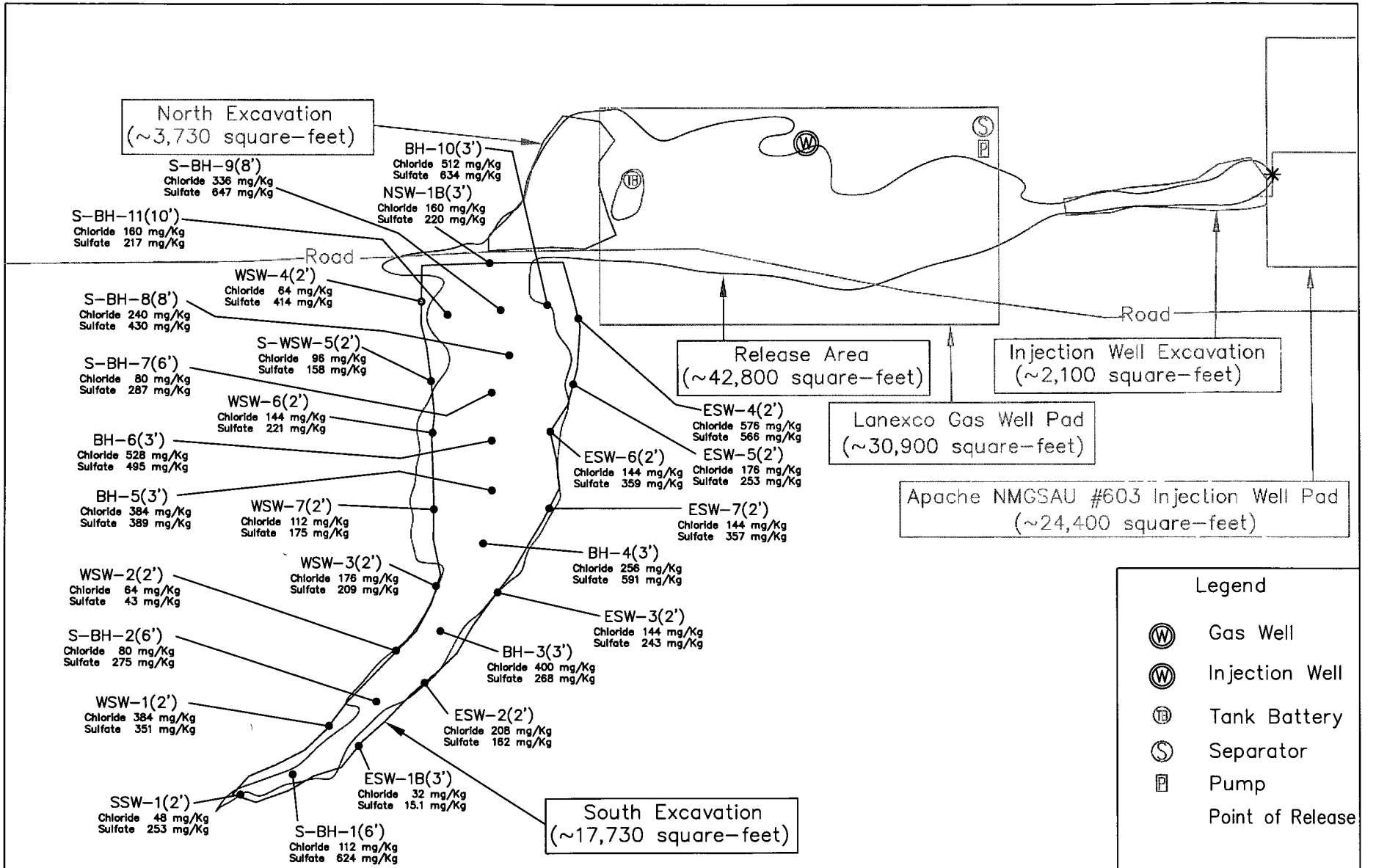

Figure 7
South Excavation
Final Sample Location Map
Apache Corporation
North Monument Grayburg
San Andres Unit #603

Lea County, New Mexico
NE 1/4 of the NW 1/4, Sec. 20, T19S, R37E
N 32° 39' 04.3" W 103° 16' 33.43"
Elevation: 3,680 feet amsl

DWG By: Daniel Dominguez
July 2006

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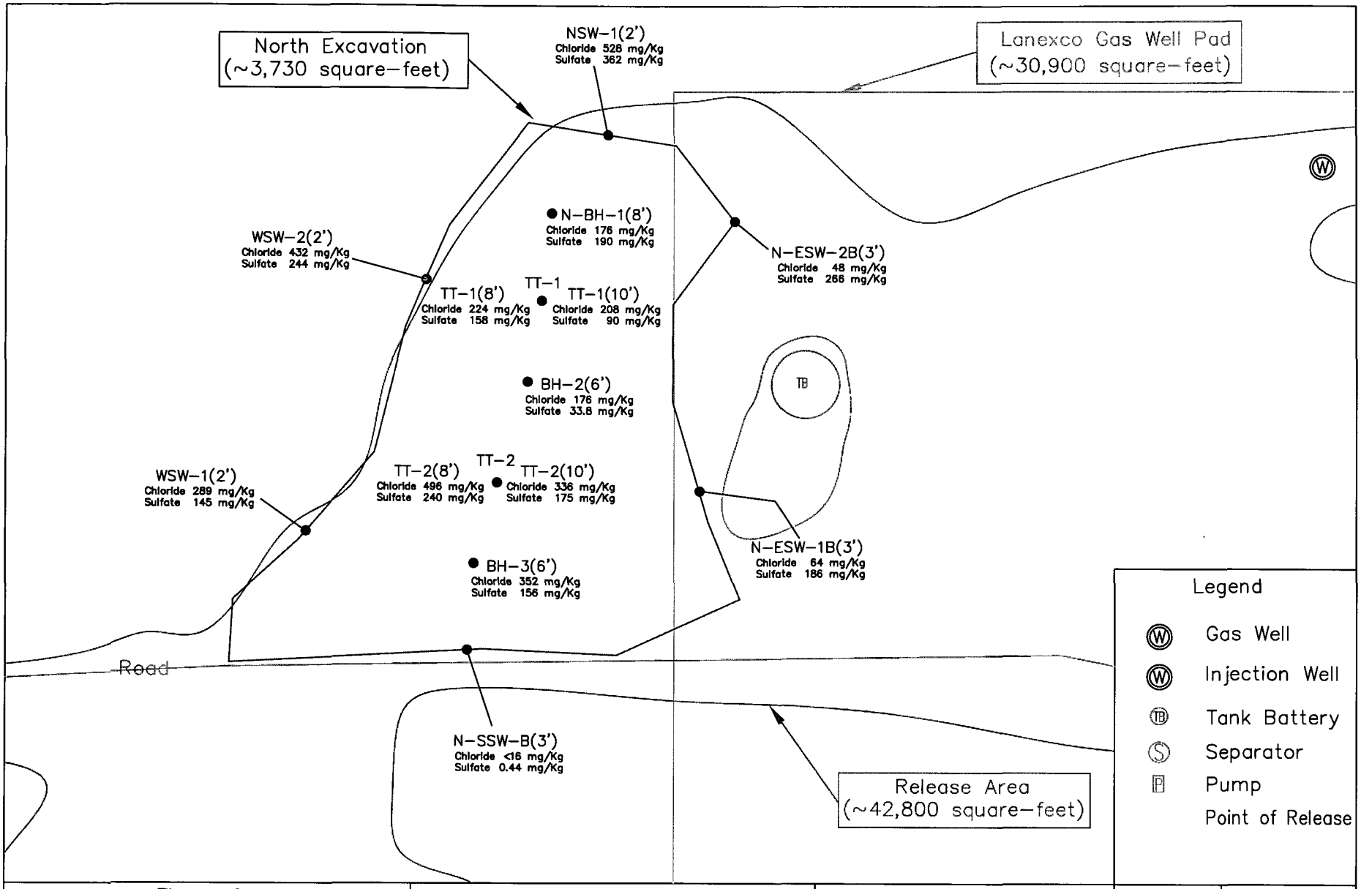

Figure 8
North Excavation
Final Sample Location Map
Apache Corporation
North Monument Grayburg
San Andres Unit #603

Lea County, New Mexico
NE 1/4 of the NW 1/4, Sec. 20, T19S, R37E
N 32° 39' 04.3" W 103° 16' 33.43"
Elevation: 3,680 feet amsl

DWG By: Daniel Dominguez
July 2006

REVISED:
JCS, 5-07

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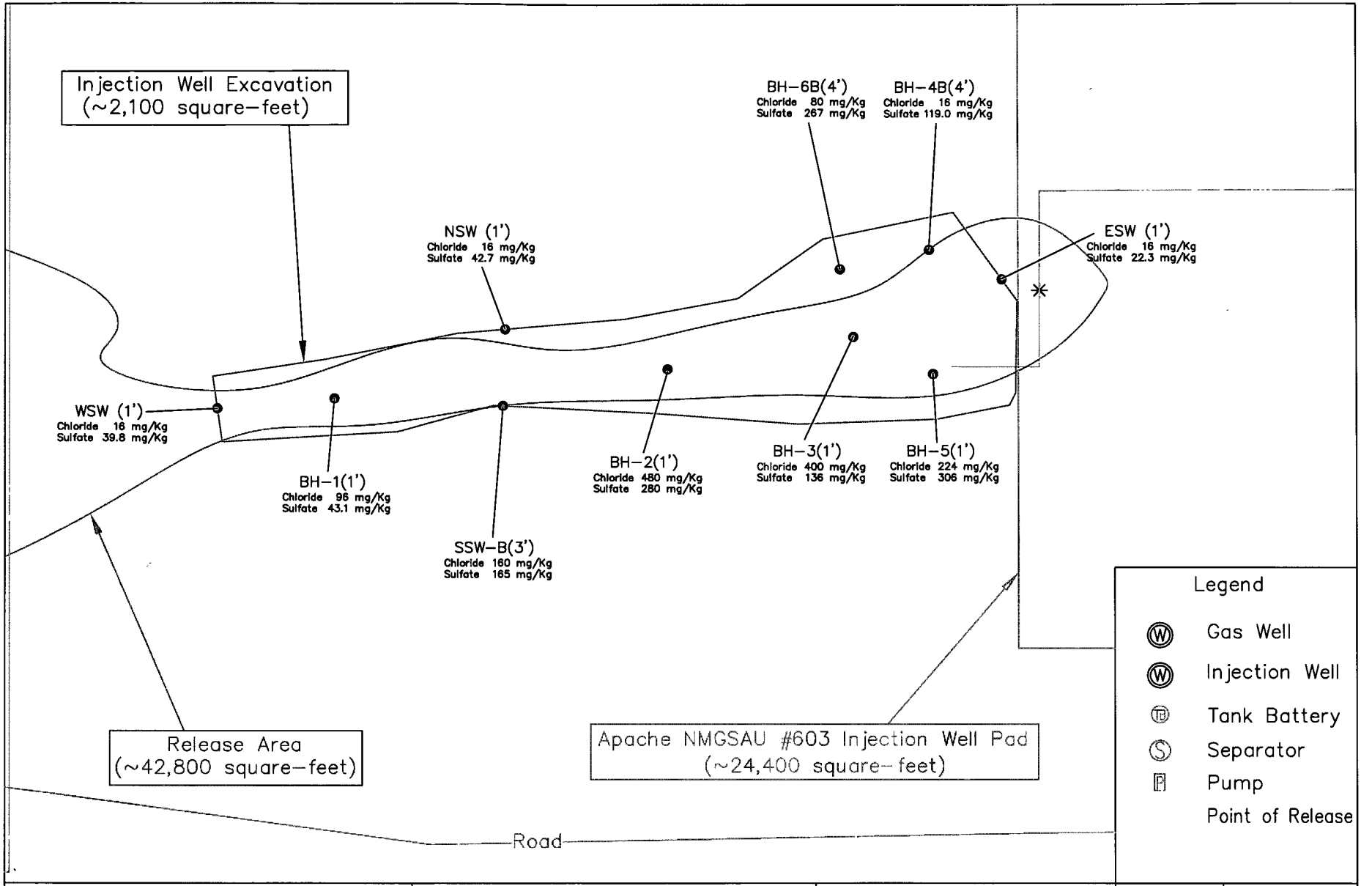

Figure 8
Injection Well Excavation
Final Sample Location Map
Apache Corporation
North Monument Grayburg
San Andres Unit #603

Lea County, New Mexico
NE 1/4 of the NW 1/4, Sec. 20, T19S, R37E
N 32° 39' 04.3" W 103° 16' 33.43"
Elevation: 3,680 feet amsl

DWG By: Daniel Dominguez
July 2006

REVISED:
JCS, 5-07

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Feet

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TABLE 1

Well Data

Apache Corporation - North Monument Grayburg San Andres Unit #603 (Ref. # 240014)

Well Number	Diversion[A]	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation[B]	Depth to Water (ft bgs)
L 01975 APPRO	3	O & W DRLG. CO.	PRO	19S	37E	16 4 3	N32° 39' 10.30"	W103° 15' 21.56"	12-Feb-53	3,638	20
L 03185	3	CARPER DRILLING CO.	PRO	19S	37E	16 2 4	N32° 39' 36.37"	W103° 15' 6.16"	24-Apr-56	3,668	45
L 03228	3	MAKIN DRILLING COMPANY	PRO	19S	37E	16 4 4	N32° 39' 10.26"	W103° 15' 6.14"	18-Jun-56	3,641	42
L 06933 (E)	0	GULF OIL CORPORATION	PRO	19S	37E	17 4 2 3	N32° 39' 23.47"	W103° 16' 7.86"	12-Apr-72	3,678	65
L 02033	0	MONUMENT WATER USERS	DOM	19S	37E	18 1 1 1	N32° 39' 50.42"	W103° 17' 55.35"	12-Sep-47	3,717	35
L 10271 EXPL	0	INC. SNYDER RANCHES	EXP	19S	37E	18 1 1 1	N32° 39' 50.42"	W103° 17' 55.35"	13-Jul-92	3,717	70
L 04313	3	MCVAY AND STAFFORD DRILLING CO	PRO	19S	37E	19 1 1	N32° 38' 58.03"	W103° 17' 55.36"	23-Oct-59	3,704	52
L 10277	3	INC. SNYDER RANCHES	STK	19S	37E	19 4 2 2	N32° 38' 31.48"	W103° 17' 9.65"	10-Jul-92	3,678	40
L 02621	3	LA MANCE DRILLING COMPANY	PRO	19S	37E	21 3 2 3	N32° 38' 31.20"	W103° 15' 37.02"	14-Sep-54	3,642	40
L 04108	3	R.H. HUSTON	PRO	19S	37E	21 4 2	N32° 38' 31.15"	W103° 15' 6.17"	01-Apr-59	3,619	22
L 05336	0	GULF OIL CORPORATION	PRO	19S	37E	21 1 2 4	N32° 38' 57.29"	W103° 15' 37.00"	15-Feb-64	3,639	30
L 09163	3	LEROY LOTT	DOM	19S	37E	21 2 3 2	N32° 38' 44.21"	W103° 15' 21.58"	16-Apr-83	3,632	47
L 10238	3	W. S. ISRAEL	DOM	19S	37E	21 3 4 3	N32° 38' 18.16"	W103° 15' 37.03"	19-Mar-92	3,637	30
L 10295	3	TERRY ISRAEL	DOM	19S	37E	21 3 4 3	N32° 38' 18.16"	W103° 15' 37.03"	29-Oct-92	3,637	30
USGS #1				19S	37E	16 2 3 3			08-Mar-91	3,648	26.94
USGS #2				19S	37E	17 1 3 4			27-Feb-96	3,706	62.54
USGS #3				19S	37E	17 4 3 1			24-Apr-91	3,670	36.96
USGS #4				19S	37E	18 3 3 1			18-Mar-54	3,701	51.93
USGS #5				19S	37E	18 1 1 1			22-Feb-91	3,716	63.87
USGS #6				19S	37E	19 3 2 1			21-Feb-91	3,670	58.43
USGS #7				19S	37E	19 1 1 3			06-Mar-96	3,702	57.31
USGS #8				19S	37E	20 2 3 1			19-Apr-68	3,662	47.85
USGS #9				19S	37E	21 1 3 2			29-Feb-96	3,640	24.13
USGS #10				19S	37E	21 4 3 1			09-Jan-86	3,614	16.19
USGS #17				19S	37E	30 1 1 1			11-Feb-66	3,654	26.88

TABLE 1

Well Data

Apache Corporation - North Monument Grayburg San Andres Unit #603 (Ref. # 240014)

Well Number	Diversion[A]	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation[B]	Depth to Water (ft bgs)
L 02596	3	MAKIN DRILLING COMPANY	PRO	19S	37E	29 3 2	N32° 37' 39.11"	W103° 16' 38.84"	20-Jul-54	3,609	20
L 03884	3	R.L. LEWIS	DOM	19S	37E	28	N32° 37' 25.94"	W103° 15' 52.53"	14-Jun-58	3,606	30
L 03905	3	LILLIE B. LONGNECKER	DOM	19S	37E	30 4 4	N32° 37' 26.16"	W103° 17' 9.72"	12-Aug-58	3,599	20
L 03906	3	ROBET P. III SHORT	DOM	19S	37E	30 4 4	N32° 37' 26.16"	W103° 17' 9.72"	11-Aug-58	3,599	20
L 03922	3	LEON DICKERSON	DOM	19S	37E	29	N32° 37' 26.10"	W103° 16' 54.28"	11-Aug-58	3,596	22
L 03949	3	ROY L. WHEELER	DOM	19S	37E	29	N32° 37' 26.10"	W103° 16' 54.28"	12-Aug-58	3,596	18
L 03954	3	K. W. LITTLE	DOM	19S	37E	30 4 4	N32° 37' 26.16"	W103° 17' 9.72"	10-Aug-58	3,599	20
L 03956	3	DENNIS C. SMITH	DOM	19S	37E	29	N32° 37' 26.10"	W103° 16' 54.28"	13-Aug-58	3,596	20
L 03982 APPRO				19S	37E	28 3 3	N32° 37' 25.94"	W103° 15' 52.53"	10-Nov-58	3,606	31
L 03995	3	W.E. COPELAND	DOM	19S	37E	30 4 4	N32° 37' 26.16"	W103° 17' 9.72"	26-Sep-58	3,599	20
L 05995	3	H.L. STEPHENS	DOM	19S	37E	30 4 4 4	N32° 37' 26.16"	W103° 17' 9.72"	04-Aug-66	3,599	23
USGS #11				19S	37E	28 4 2 4			18-Apr-91		20.30
USGS #12				19S	37E	29 3 2 2			16-Jan-81		17.50
USGS #13				19S	37E	29 3 4 4			23-Mar-60		21.50P
USGS #14				19S	37E	29 4 4 4			22-Feb-80		34.45
USGS #15				19S	37E	29 4 4 4			19-Jan-71		35.05
USGS #16				19S	37E	29 3 3 3			18-Apr-91		13.01

[A] = In acre feet per annum

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

PRO = Prospecting or development of natural resource

DOM = Domestic

EXP = Exploration

STK= Livestock watering

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

Shaded areas indicate wells not shown on Figure 2

TABLE 2

Summary of Initial Excavation Soil Sample Analytical Results

Apache Corporation - North Monument Grayburg San Andres Unit #603 (Ref. #240014)

Sample I.D.	Depth (feet)	PID analysis	Field Chloride Analysis	Soil Status	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon C6-C12 Range (mg/Kg)	Carbon C12-C28 Range (mg/Kg)	Carbon C28-C35 Range (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
BH-1 (1')	1	8.9	240	In Situ	26-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	126	43.0
BH-2 (1')	1	12.4	960	In Situ	26-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**605**	111
BH-3 (1')	1	0.0	520	In Situ	26-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	7.91 [B]	<10.0	<10.0	**428**	63.6
BH-4 (1')	1	18.8	900	In Situ	25-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**540**	151
BH-5 (1')	1	18.9	560	In Situ	25-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**511**	98.5
BH-6 (1')	1	4.0	560	In Situ	25-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	12.7	8.53 [B]	12.7	**436**	117
BH-7 (1')	1	18.9	500	In Situ	25-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**283**	49.3
BH-8 (1')	1	0.0	1,200	In Situ	26-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	4.45 [B]	1.98 [B]	<10.0	**949**	131
BH-9 (1')	1	0.0	1,760	In Situ	26-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**1,320**	172
BH-10 (1')	1	8.3	800	In Situ	26-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**976**	134
BH-11 (6")	0.5	4.3	2,000	In Situ	31-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**2,110**	281
BH-12 (6")	0.5	4.1	960	In Situ	31-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**1,000**	74.5
BH-13 (6")	0.5	4.3	1,200	In Situ	31-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**1,500**	178
BH-14 (6")	0.5	4.1	1,760	In Situ	31-Jul-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**1,750**	216

TABLE 2

Summary of Initial Excavation Soil Sample Analytical Results

Apache Corporation - North Monument Grayburg San Andres Unit #603 (Ref. #240014)

Sample I.D.	Depth (feet)	PID analysis	Field Chloride Analysis	Soil Status	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon C6-C12 Range (mg/Kg)	Carbon C12-C28 Range (mg/Kg)	Carbon C28-C35 Range (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
BH-15 (6")	0.5	11.1	2,000	In Situ	01-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**2,510**	146
BH-16 (6")	0.5	0.0	400	In Situ	01-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	226	84.6
BH-17 (6")	0.5	0.0	1,600	In Situ	01-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**1,720**	290
BH-18 (6")	0.5	0.0	1,200	In Situ	01-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**1,240**	176
BH-19 (6")	0.5	0.0	1,360	In Situ	01-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**1,550**	253
BH-20 (6")	0.5	0.0	160	In Situ	01-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	7.20	21.8
BH-21 (6")	0.5	0.0	1,280	In Situ	02-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	13.4	57.8	<10.0	71.2	**920**	168
BH-22 (6")	0.5	0.0	1,280	In Situ	02-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**976**	121
BH-23 (6")	0.5	0.0	120	In Situ	02-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	6.09	17.6
BH-24 (6")	0.5	18.3	1,440	In Situ	02-Aug-06	<0.0250	<0.0250	<0.0250	0.0361	0.0361	<10.0	<10.0	<10.0	<10.0	**705**	65.3
BH-25 (6")	0.5	19.5	1,040	In Situ	02-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	**1,250**	**2,380**
BH-26 (6")	0.5	0.0	320	In Situ	02-Aug-06	<0.0250	<0.0250	<0.0250	<0.05	<0.125	<10.0	<10.0	<10.0	<10.0	136	151
NMOCD Remedial Thresholds						**10**				**50**				**100**	**250** [A]	**600** [A]

Bolded *values are in excess of NMOCD Remediation Thresholds*

-- =Not Analyzed

[A] *Chloride and Sulfate residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 mg/L and 650 mg/L respectively*

[B] = *Estimated value, analyte detected below reporting limit*

TABLE 3

Summary of Soil Boring Analytical Results

Apache Corporation - North Monument Grayburg San Andres Unit #603 (Ref. #240014)

Sample I.D.	Depth (feet)	PID analysis	Field Chloride Analysis	Soil Status	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
SB-1 (5')	5	--	480	In Situ	29-Nov-06	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	**464**	148
SB-1 (10')	10	--	240	In Situ	29-Nov-06	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	144	45
SB-1 (15')	15	--	160	In Situ	29-Nov-06	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	80	40.2
SB-2 (5')	5	--	240	In Situ	29-Nov-06	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	144	269
SB-2 (10')	10	--	160	In Situ	29-Nov-06	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	80	198
SB-3 (5')	5	--	240	In Situ	29-Nov-06	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	176	245
SB-3 (10')	10	--	160	In Situ	29-Nov-06	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	96	158
SB-4 (1')	1	--	160	In Situ	30-Nov-06	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	<16	<1
SB-4 (5')	5	--	160	In Situ	29-Nov-06	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	<16	104
SB-4 (10')	10	--	160	In Situ	29-Nov-06	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	32	134
NMOCD Remedial Thresholds						**10**				**50**			**100**	**250** [A]	**600** [A]

Bolded *values are in excess of NMOCD Remediation Thresholds*

-- =Not Analyzed

[A] *Chloride and Sulfate residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 mg/L and 650 mg/L respectively*

TABLE 4

Summary of South Excavation Soil Sample Analytical Results

Apache Corporation - North Monument Grayburg San Andres Unit #603 (Ref. #240014)

Sample I.D.	Depth (feet)	PID analysis	Field Chloride Analysis	Soil Status	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon C6-C12 Range (mg/Kg)	Carbon C12-C28 Range (mg/Kg)	Carbon C28-C35 Range (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
BH-1 (3')	3	0.2	380	Excavated	10-Apr-07	--	--	--	--	--	--	--	--	--	**256**	**3,378**
S-BH-1 (6')	6	1.2	240	In Situ	01-May-07	--	--	--	--	--	--	--	--	--	112	**624**
BH-2 (3')	3	0.1	560	Excavated	10-Apr-07	--	--	--	--	--	--	--	--	--	**496**	**806**
S-BH-2 (6')	6	0.5	260	In Situ	01-May-07	--	--	--	--	--	--	--	--	--	80	275
BH-3 (3')	3	0.2	480	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	**400**	268
BH-4 (3')	3	0.2	440	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	**256**	591
BH-5 (3')	3	0.7	320	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	**384**	389
BH-6 (3')	3	0.8	460	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	**528**	495
BH-7 (3')	3	0.5	560	Excavated	19-Apr-07	--	--	--	--	--	--	--	--	--	**416**	**668**
S-BH-7 (6')	6	0.2	240	In Situ	01-May-07	--	--	--	--	--	--	--	--	--	80	287
BH-8 (3')	3	0.7	420	Excavated	19-Apr-07	--	--	--	--	--	--	--	--	--	**336**	**849**
S-BH-8 (6')	6	1.7	680	Excavated	01-May-07	--	--	--	--	--	--	--	--	--	**608**	**996**
S-BH-8 (8')	8	0.8	560	In Situ	10-May-07	--	--	--	--	--	--	--	--	--	**336**	**647**
BH-9 (3')	3	0.4	580	Excavated	19-Apr-07	--	--	--	--	--	--	--	--	--	**592**	**5,805**
S-BH-9 (6')	6	2.1	680	Excavated	01-May-07	--	--	--	--	--	--	--	--	--	**576**	**1,240**
S-BH-9 (8')	8	0.3	360	In Situ	10-May-07	--	--	--	--	--	--	--	--	--	240	430
BH-10 (3')	3	0.2	560	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	**512**	634
BH-11 (3')	3	1.6	600	Excavated	19-Apr-07	--	--	--	--	--	--	--	--	--	**560**	**1,058**
S-BH-11 (10')	10	--	--	In Situ	15-May-07	--	--	--	--	--	--	--	--	--	160	217
ESW-1 (2')	2	0.2	400	Excavated	10-Apr-07	--	--	--	--	--	--	--	--	--	**352**	**1,009**
ESW-1 B (3')	3	--	240	In Situ	01-May-07	--	--	--	--	--	--	--	--	--	32	15.1

TABLE 4

Summary of South Excavation Soil Sample Analytical Results

Apache Corporation - North Monument Grayburg San Andres Unit #603 (Ref. #240014)

Sample I.D.	Depth (feet)	PID analysis	Field Chloride Analysis	Soil Status	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon C6-C12 Range (mg/Kg)	Carbon C12-C28 Range (mg/Kg)	Carbon C28-C35 Range (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
ESW-2 (2')	2	0.0	240	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	208	162
ESW-3 (2')	2	0.2	260	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	144	243
ESW-4 (2')	2	0.4	580	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	**576**	566
ESW-5 (2')	2	0.4	240	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	176	253
ESW-6 (2')	2	0.1	260	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	144	359
ESW-7 (2')	2	0.4	340	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	144	357
WSW-1 (2')	2	0.0	560	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	**384**	351
WSW-2 (2')	2	0.1	240	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	64	43
WSW-3 (2')	2	0.0	280	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	176	209
WSW-4 (2')	2	0.0	180	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	64	414
WSW-5 (2')	2	0.6	380	Excavated	19-Apr-07	--	--	--	--	--	--	--	--	--	**352**	**2,733**
S-WSW-5 (2')	2	--	--	In Situ	15-May-07	--	--	--	--	--	--	--	--	--	176	190
WSW-6 (2')	0.5	0.2	240	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	144	221
WSW-7 (2')	2	0.1	240	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	112	175
NSW-1 (2')	2	0.0	480	Excavated	19-Apr-07	--	--	--	--	--	--	--	--	--	**432**	**1,319**
NSW-1B (3')	3	--	580	In Situ	01-May-07	--	--	--	--	--	--	--	--	--	160	220
SSW-1 (2')	2	0.1	160	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	48	253
BACKGROUN		0.0	160	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	<16	<1
NMOCD Remedial Thresholds						**10**				**50**				**100**	**250** [A]	**600** [A]

Bolded *values are in excess of NMOCD Remediation Thresholds*

-- =*Not Analyzed*.

NOTE Shaded cells indicate excavated sample location areas

[A] *Chloride and Sulfate residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 mg/L and 650 mg/L respectively*

[B] = *Estimated value, analyte detected below reporting limit*

TABLE 5

Summary of North Excavation Soil Sample Analytical Results

Apache Corporation - North Monument Grayburg San Andres Unit #603 (Ref. #240014)

Sample I.D.	Depth (feet)	PID analysis	Field Chloride Analysis	Soil Status	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon C6-C12 Range (mg/Kg)	Carbon C12-C28 Range (mg/Kg)	Carbon C28-C35 Range (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
BH-1 (6')	6	0.9	800	Excavated	24-Apr-07	--	--	--	--	--	--	--	--	--	**880**	677
N-BH-1 (8')	8	--	--	In Situ	16-May-07	--	--	--	--	--	--	--	--	--	176	190
TT-1 (8')	8	0.8	480	In Situ	24-Apr-07	--	--	--	--	--	--	--	--	--	224	158
TT-1 (10')	10	0.5	280	In Situ	24-Apr-07	--	--	--	--	--	--	--	--	--	208	90
BH-2 (6')	6	0.5	720	In Situ	24-Apr-07	--	--	--	--	--	--	--	--	--	176	33.8
TT-2 (8')	8	0.3	560	In Situ	24-Apr-07	--	--	--	--	--	--	--	--	--	**496**	240
TT-2 (10')	10	0.7	560	In Situ	24-Apr-07	--	--	--	--	--	--	--	--	--	**336**	175
BH-3 (6')	6	0.5	920	In Situ	24-Apr-07	--	--	--	--	--	--	--	--	--	**352**	156
NSW-1 (2')	2	0.1	580	In Situ	24-Apr-07	--	--	--	--	--	--	--	--	--	**528**	362
WSW-1 (2')	2	0.4	400	In Situ	24-Apr-07	--	--	--	--	--	--	--	--	--	**289**	145
WSW-2 (2')	2	0.5	480	In Situ	24-Apr-07	--	--	--	--	--	--	--	--	--	**432**	244
ESW-1 (2')	2	2.9	580	Excavated	24-Apr-07	--	--	--	--	--	--	--	--	--	**688**	**1,175**
N-ESW-1B (3')	3	--	240	In Situ	01-May-07	--	--	--	--	--	--	--	--	--	64	186
ESW-2 (2')	2	8.6	720	Excavated	24-Apr-07	--	--	--	--	--	--	--	--	--	80	**1,200**
N-ESW-2B (3')	3	--	280	In Situ	01-May-07	--	--	--	--	--	--	--	--	--	48	266
SSW-1 (2')	2	--	1,360	Excavated	24-Apr-07	--	--	--	--	--	--	--	--	--	--	--
SSW-2 (2')	2	14.7	1,200	Excavated	24-Apr-07	--	--	--	--	--	--	--	--	--	**928**	314
N-SSW-B (3')	3	--	460	In Situ	01-May-07	--	--	--	--	--	--	--	--	--	**448**	183
BACKGROUND	2	0.1	160	In Situ	24-Apr-07	--	--	--	--	--	--	--	--	--	<16	0.44
NMOCD Remedial Thresholds						**10**				**50**				**100**	**250** [A]	**600** [A]

Bolded *values are in excess of NMOCD Remediation Thresholds*

-- =Not Analyzed

NOTE Shaded cells indicate excavated sample location areas

[A] *Chloride and Sulfate residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 mg/L and 650 mg/L respectively*

[B] = *Estimated value, analyte detected below reporting limit*

TABLE 6

Summary of Injection Well Excavation Soil Sample Analytical Results

Apache Corporation - North Monument Grayburg San Andres Unit #603 (Ref. #240014)

Sample I.D.	Depth (feet)	PID analysis	Field Chloride Analysis	Soil Status	Sample Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon C6-C12 Range (mg/Kg)	Carbon C12-C28 Range (mg/Kg)	Carbon C28-C35 Range (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)
BH-1 (1')	1	--	240	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	96	43.1
BH-2 (1')	1	--	480	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	**480**	280
BH-3 (1')	1	--	440	In Situ	10-Apr-07	--	--	--	--	--	--	--	--	--	**400**	136
BH-4 (1')	1	--	960	Excavated	10-Apr-07	--	--	--	--	--	--	--	--	--	**784**	261
BH-4B (4')	4	0.2	160	In Situ	10-May-07	--	--	--	--	--	--	--	--	--	16	119
BH-5 (1')	1	--	380	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	224	306
BH-6 (1')	1	--	360	Excavated	19-Apr-07	--	--	--	--	--	--	--	--	--	240	**613**
BH-6B (4')	4	0.4	240	In Situ	10-May-07	--	--	--	--	--	--	--	--	--	80	267
SSW (1')	1	--	580	Excavated	19-Apr-07	--	--	--	--	--	--	--	--	--	**688**	250
SSW-B (3')	3	0.6	380	In Situ	10-May-07	--	--	--	--	--	--	--	--	--	160	165
NSW (1')	1	--	240	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	16	42.7
ESW (1')	1	--	180	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	16	22.3
WSW (1')	1	--	200	In Situ	19-Apr-07	--	--	--	--	--	--	--	--	--	16	39.8
NMOCD Remedial Thresholds						**10**				**50**				**100**	**250** [A]	**600** [A]

Bolded *values are in excess of NMOCD Remediation Thresholds*

-- =Not Analyzed

NOTE Shaded cells indicate excavated sample location areas

[A] *Chloride and Sulfate residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 mg/L and 650 mg/L respectively*

[B] = *Estimated value, analyte detected below reporting limit*

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Analytical Report

Prepared for:

Jason Stegemoller

Environmental Plus, Incorporated

P.O. Box 1558

Eunice, NM 88231

Project: Apache/ N. Mon. Grayburg SA 603

Project Number: 240014

Location: UL-C, Sect. 20, T 19 S, R 37 E

Lab Order Number: 6G28008

Report Date: 08/03/06

Environmental Plus, Incorporated	Project Apache/ N Mon Grayburg SA 603	Fax 505-394-2601
P O Box 1558	Project Number 240014	
Eunice NM, 88231	Project Manager Jason Stegemoller	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-1 1'	6G28008-01	Soil	2006-07-26 10 15	2006-07-28 10 50
BH-2 1'	6G28008-02	Soil	2006-07-26 10 35	2006-07-28 10 50
BH-3 1'	6G28008-03	Soil	2006-07-26 10 45	2006-07-28 10 50
BH-4 1'	6G28008-04	Soil	2006-07-25 10 20	2006-07-28 10 50
BH-5 1'	6G28008-05	Soil	2006-07-25 10 40	2006-07-28 10 50
BH-6 1'	6G28008-06	Soil	2006-07-25 13 30	2006-07-28 10 50
BH-7 1'	6G28008-07	Soil	2006-07-25 13 45	2006-07-28 10 50
BH-8 1'	6G28008-08	Soil	2006-07-26 13 15	2006-07-28 10 50
BH-9 1'	6G28008-09	Soil	2006-07-26 13 30	2006-07-28 10 50
BH-10 1'	6G28008-10	Soil	2006-07-26 13 45	2006-07-28 10 50

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Project Number 240014
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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 1' (6G28008-01) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EG63119	07/31/06	08/01/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a a-Trifluorotoluene		*94 8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*88 5 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*113 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*111 %*	*70-130*		"	"	"	"	
BH-2 1' (6G28008-02) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EG63119	07/31/06	08/01/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*100 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*83 2 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*114 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*111 %*	*70-130*		"	"	"	"	
BH-3 1' (6G28008-03) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EG63119	07/31/06	08/01/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*91 8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*84.8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-3 1' (6G28008-03) Soil									
Carbon Ranges C12-C28	**J [7.91]**	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	J
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*117 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*115 %*	*70-130*		"	"	"	"	
BH-4 1' (6G28008-04) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EG63119	07/31/06	08/01/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*94 0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*88 0 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*116 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*113 %*	*70-130*		"	"	"	"	
BH-5 1' (6G28008-05) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EG63119	07/31/06	08/01/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*88 2 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*80 0 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*116 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*113 %*	*70-130*		"	"	"	"	

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Project Number: 240014
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-6 1' (6G28008-06) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60114	08/01/06	08/02/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*83 2 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*82 8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	
Carbon Ranges C12-C28	**12.7**	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**J [8.53]**	10 0	"	"	"	"	"	"	J
Total Hydrocarbons	**12.7**	10 0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*118 %*	*70-130*		"	"	"	"	
Surrogate. 1-Chlorooctadecane		*115 %*	*70-130*		"	"	"	"	
BH-7 1' (6G28008-07) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60114	08/01/06	08/02/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*94 0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*83 5 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*118 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*115 %*	*70-130*		"	"	"	"	
BH-8 1' (6G28008-08) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60114	08/01/06	08/02/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*93 0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*84 0 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-8 1' (6G28008-08) Soil									
Carbon Ranges C12-C28	**J [4.45]**	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	J
Carbon Ranges C28-C35	**J [1.98]**	10 0	"	"	"	"	"	"	J
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*116 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*114 %*	*70-130*		"	"	"	"	
BH-9 1' (6G28008-09) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60114	08/01/06	08/02/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*94 8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*85 5 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*113 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*110 %*	*70-130*		"	"	"	"	
BH-10 1' (6G28008-10) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60114	08/01/06	08/02/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*90 0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*81 8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EG62817	07/28/06	07/30/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*117 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*114 %*	*70-130*		"	"	"	"	

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General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 1' (6G28008-01) Soil									
Chloride	**126**	5 00	mg/kg	10	EG63104	07/28/06	07/31/06	EPA 300 0	
% Moisture	**11.0**	0 1	%	1	EG63118	"	07/31/06	% calculation	
Sulfate	**43.0**	5 00	mg/kg	10	EG63104	"	07/31/06	EPA 300 0	
BH-2 1' (6G28008-02) Soil									
Chloride	**605**	10 0	mg/kg	20	EG63104	07/28/06	07/31/06	EPA 300 0	
% Moisture	**11.5**	0 1	%	1	EG63118	"	07/31/06	% calculation	
Sulfate	**111**	10 0	mg/kg	20	EG63104	"	07/31/06	EPA 300 0	
BH-3 1' (6G28008-03) Soil									
Chloride	**428**	10 0	mg/kg	20	EG63104	07/28/06	07/31/06	EPA 300 0	
% Moisture	**3.1**	0 1	%	1	EG63118	"	07/31/06	% calculation	
Sulfate	**63.6**	10 0	mg/kg	20	EG63104	"	07/31/06	EPA 300 0	
BH-4 1' (6G28008-04) Soil									
Chloride	**540**	10 0	mg/kg	20	EG63104	07/28/06	07/31/06	EPA 300 0	
% Moisture	**14.6**	0 1	%	1	EG63118	"	07/31/06	% calculation	
Sulfate	**151**	10 0	mg/kg	20	EG63104	"	07/31/06	EPA 300 0	
BH-5 1' (6G28008-05) Soil									
Chloride	**511**	10 0	mg/kg	20	EG63104	07/28/06	07/31/06	EPA 300 0	
% Moisture	**16.1**	0 1	%	1	EG63118	"	07/31/06	% calculation	
Sulfate	**98.5**	10 0	mg/kg	20	EG63104	"	07/31/06	EPA 300 0	
BH-6 1' (6G28008-06) Soil									
Chloride	**436**	10 0	mg/kg	20	EG63104	07/28/06	07/31/06	EPA 300 0	
% Moisture	**12.0**	0 1	%	1	EG63118	"	07/31/06	% calculation	
Sulfate	**117**	10 0	mg/kg	20	EG63104	"	07/31/06	EPA 300 0	
BH-7 1' (6G28008-07) Soil									
Chloride	**283**	10 0	mg/kg	20	EG63104	07/28/06	07/31/06	EPA 300 0	
% Moisture	**8.7**	0 1	%	1	EG63118	"	07/31/06	% calculation	
Sulfate	**49.3**	10 0	mg/kg	20	EG63104	"	07/31/06	EPA 300 0	

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P O Box 1558	Project Number 240014	
Eunice NM, 88231	Project Manager Jason Stegemoller	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-8 1' (6G28008-08) Soil									
Chloride	**949**	20 0	mg/kg	40	EG63104	07/28/06	07/31/06	EPA 300 0	
% Moisture	**5.5**	0 1	%	1	EG63118	"	07/31/06	% calculation	
Sulfate	**131**	20 0	mg/kg	40	EG63104	"	07/31/06	EPA 300 0	
BH-9 1' (6G28008-09) Soil									
Chloride	**1320**	25 0	mg/kg	50	EG63104	07/28/06	07/31/06	EPA 300 0	
% Moisture	**6.8**	0 1	%	1	EG63118	"	07/31/06	% calculation	
Sulfate	**172**	25 0	mg/kg	50	EG63104	"	07/31/06	EPA 300 0	
BH-10 1' (6G28008-10) Soil									
Chloride	**976**	20 0	mg/kg	40	EG63104	07/28/06	07/31/06	EPA 300 0	
% Moisture	**11.2**	0 1	%	1	EG63118	"	07/31/06	% calculation	
Sulfate	**134**	20 0	mg/kg	40	EG63104	"	07/31/06	EPA 300 0	

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Project Number 240014
Project Manager Jason Stegemoller

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG62817 - Solvent Extraction (GC)										
Blank (EG62817-BLK1)				Prepared 07/28/06 Analyzed 07/30/06						
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 Hydrocarbons	ND	10 0	"							
Surrogate 1-Chlorooctane	*64 7*		*mg/kg*	*50 0*		*129*	*70-130*			
Surrogate 1-Chlorooctadecane	*64 1*		*"*	*50 0*		*128*	*70-130*			
LCS (EG62817-BS1)				Prepared 07/28/06 Analyzed 07/30/06						
Carbon Ranges C6-C12	574	10 0	mg/kg wet	500		115	75-125			
Carbon Ranges C12-C28	417	10 0	"	500		83 4	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00			75-125			
Total Hydrocarbons	991	10 0	"	1000		99 1	75-125			
Surrogate 1-Chlorooctane	*62 8*		*mg/kg*	*50 0*		*126*	*70-130*			
Surrogate 1-Chlorooctadecane	*63 4*		*"*	*50 0*		*127*	*70-130*			
Calibration Check (EG62817-CCV1)				Prepared 07/28/06 Analyzed 07/31/06						
Carbon Ranges C6-C12	298		mg/kg	250		119	80-120			
Carbon Ranges C12-C28	228		"	250		91 2	80-120			
Total Hydrocarbons	526		"	500		105	80-120			
Surrogate 1-Chlorooctane	*83 3*		*"*	*100*		*83 3*	*70-130*			
Surrogate 1-Chlorooctadecane	*80 8*		*"*	*100*		*80 8*	*70-130*			
Matrix Spike (EG62817-MS1)	**Source: 6G28008-02**			Prepared 07/28/06 Analyzed 07/31/06						
Carbon Ranges C6-C12	663	10 0	mg/kg dry	565	ND	117	75-125			
Carbon Ranges C12-C28	501	10 0	"	565	ND	88 7	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125			
Total Hydrocarbons	1160	10 0	"	1130	ND	103	75-125			
Surrogate 1-Chlorooctane	*62 2*		*mg/kg*	*50 0*		*124*	*70-130*			
Surrogate 1-Chlorooctadecane	*63 3*		*"*	*50 0*		*127*	*70-130*			

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Eunice NM, 88231

Project Apache/ N Mon Grayburg SA 603
Project Number 240014
Project Manager Jason Stegemoller

Fax 505-394-2601

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG62817 - Solvent Extraction (GC)										
Matrix Spike Dup (EG62817-MSD1)	**Source: 6G28008-02**			Prepared 07/28/06 Analyzed 07/30/06						
Carbon Ranges C6-C12	654	10 0	mg/kg dry	565	ND	116	75-125	1 37	20	
Carbon Ranges C12-C28	474	10 0	"	565	ND	83 9	75-125	5 54	20	
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125		20	
Total Hydrocarbons	1130	10 0	"	1130	ND	100	75-125	2 62	20	
Surrogate 1-Chlorooctane	*61 6*		*mg kg*	*50 0*		*123*	*70-130*			
Surrogate 1-Chlorooctadecane	*64 9*		*"*	*50 0*		*130*	*70-130*			
Batch EG63119 - EPA 5030C (GC)										
Blank (EG63119-BLK1)				Prepared & Analyzed 07/31/06						
Benzene	ND	0 0250	mg/kg wet							
Toluene	ND	0 0250	"							
Ethylbenzene	ND	0 0250	"							
Xylene (p/m)	ND	0 0250	"							
Xylene (o)	ND	0 0250	"							
Surrogate a,a a-Trifluorotoluene	*37 5*		*ug/kg*	*40 0*		*93 8*	*80-120*			
Surrogate 4-Bromofluorobenzene	*33 3*		*"*	*40 0*		*83 2*	*80-120*			
LCS (EG63119-BS1)				Prepared & Analyzed 07/31/06						
Benzene	1 27	0 0250	mg/kg wet	1 25		102	80-120			
Toluene	1 26	0 0250	"	1 25		101	80-120			
Ethylbenzene	1 23	0 0250	"	1 25		98 4	80-120			
Xylene (p/m)	2 74	0 0250	"	2 50		110	80-120			
Xylene (o)	1.37	0 0250	"	1 25		110	80-120			
Surrogate a,a,a-Trifluorotoluene	*39 5*		*ug/kg*	*40 0*		*98 8*	*80-120*			
Surrogate 4-Bromofluorobenzene	*38 1*		*"*	*40 0*		*95 2*	*80-120*			

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG63119 - EPA 5030C (GC)										
Calibration Check (EG63119-CCV1)				Prepared 07/31/06 Analyzed 08/01/06						
Benzene	51 5		ug/kg	50 0		103	80-120			
Toluene	49 9		"	50 0		99 8	80-120			
Ethylbenzene	51 7		"	50 0		103	80-120			
Xylene (p/m)	103		"	100		103	80-120			
Xylene (o)	50 8		"	50 0		102	80-120			
Surrogate a,a,a-Trifluorotoluene	*35 7*		*"*	*40 0*		*89 2*	*80-120*			
Surrogate 4-Bromofluorobenzene	*33 7*		*"*	*40 0*		*84 2*	*80-120*			
Matrix Spike (EG63119-MS1)		**Source: 6G28008-01**		Prepared 07/31/06 Analyzed 08/01/06						
Benzene	1 51	0 0250	mg/kg dry	1 40	ND	108	80-120			
Toluene	1 52	0 0250	"	1 40	ND	109	80-120			
Ethylbenzene	1 47	0 0250	"	1 40	ND	105	80-120			
Xylene (p/m)	3 25	0 0250	"	2 81	ND	116	80-120			
Xylene (o)	1 58	0 0250	"	1 40	ND	113	80-120			
Surrogate a,a,a-Trifluorotoluene	*38 5*		*ug/kg*	*40 0*		*96 2*	*80-120*			
Surrogate 4-Bromofluorobenzene	*40 9*		*"*	*40 0*		*102*	*80-120*			
Matrix Spike Dup (EG63119-MSD1)		**Source: 6G28008-01**		Prepared 07/31/06 Analyzed 08/01/06						
Benzene	1 43	0 0250	mg/kg dry	1 40	ND	102	80-120	5 71	20	
Toluene	1 41	0 0250	"	1 40	ND	101	80-120	7 62	20	
Ethylbenzene	1 35	0 0250	"	1 40	ND	96 4	80-120	8 54	20	
Xylene (p/m)	3 00	0 0250	"	2 81	ND	107	80-120	8 07	20	
Xylene (o)	1 49	0 0250	"	1 40	ND	106	80-120	6 39	20	
Surrogate a,a,a-Trifluorotoluene	*40 4*		*ug/kg*	*40 0*		*101*	*80-120*			
Surrogate 4-Bromofluorobenzene	*39 2*		*"*	*40 0*		*98 0*	*80-120*			
Batch EH60114 - EPA 5030C (GC)										
Blank (EH60114-BLK1)				Prepared 08/01/06 Analyzed 08/02/06						
Benzene	ND	0 0250	mg/kg wet							
Toluene	ND	0 0250	"							
Ethylbenzene	ND	0 0250	"							
Xylene (p/m)	ND	0 0250	"							
Xylene (o)	ND	0 0250	"							
Surrogate a,a,a-Trifluorotoluene	*35 5*		*ug/kg*	*40 0*		*88 8*	*80-120*			
Surrogate 4-Bromofluorobenzene	*33 2*		*"*	*40 0*		*83 0*	*80-120*			

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60114 - EPA 5030C (GC)										
LCS (EH60114-BS1)				Prepared 08/01/06 Analyzed 08/02/06						
Benzene	1 20	0 0250	mg/kg wet	1 25		96 0	80-120			
Toluene	1 27	0 0250	"	1 25		102	80-120			
Ethylbenzene	1 13	0 0250	"	1 25		90 4	80-120			
Xylene (p/m)	2 68	0 0250	"	2 50		107	80-120			
Xylene (o)	1 33	0 0250	"	1 25		106	80-120			
Surrogate a,a,a-1rifluorotoluene	*41 7*		*ug/kg*	*40 0*		*104*	*80-120*			
Surrogate 4-Bromofluorobenzene	*38 8*		*"*	*40 0*		*97 0*	*80-120*			
Calibration Check (EH60114-CCV1)				Prepared 08/01/06 Analyzed 08/02/06						
Benzene	53 8		ug/kg	50 0		108	80-120			
Toluene	54 3		"	50 0		109	80-120			
Ethylbenzene	51 0		"	50 0		102	80-120			
Xylene (p/m)	110		"	100		110	80-120			
Xylene (o)	54 8		"	50 0		110	80-120			
Surrogate a,a,a-1rifluorotoluene	*37 1*		*"*	*40 0*		*92 8*	*80-120*			
Surrogate 4-Bromofluorobenzene	*33 0*		*"*	*40 0*		*82 5*	*80-120*			
Matrix Spike (EH60114-MS1)	**Source: 6G28010-01**			Prepared 08/01/06 Analyzed 08/02/06						
Benzene	1 43	0 0250	mg/kg dry	1 39	ND	103	80-120			
Toluene	1 44	0 0250	"	1 39	ND	104	80-120			
Ethylbenzene	1 37	0 0250	"	1 39	ND	98 6	80-120			
Xylene (p/m)	3 09	0 0250	"	2 78	ND	111	80-120			
Xylene (o)	1 51	0 0250	"	1 39	ND	109	80-120			
Surrogate a a,a-1rifluorotoluene	*38 9*		*ug/kg*	*40 0*		*97 2*	*80-120*			
Surrogate 4-Bromofluorobenzene	*36 9*		*"*	*40 0*		*92 2*	*80-120*			
Matrix Spike Dup (EH60114-MSD1)	**Source: 6G28010-01**			Prepared 08/01/06 Analyzed 08/02/06						
Benzene	1 30	0 0250	mg/kg dry	1 39	ND	93 5	80-120	9 67	20	
Toluene	1 37	0 0250	"	1 39	ND	98 6	80-120	5 33	20	
Ethylbenzene	1 29	0 0250	"	1 39	ND	92 8	80-120	6 06	20	
Xylene (p/m)	2 88	0 0250	"	2 78	ND	104	80-120	6 51	20	
Xylene (o)	1 42	0 0250	"	1 39	ND	102	80-120	6 64	20	
Surrogate a,a,a-1rifluorotoluene	*32 7*		*ug/kg*	*40 0*		*81 8*	*80-120*			
Surrogate 4-Bromofluorobenzene	*37 0*		*"*	*40 0*		*92 5*	*80-120*			

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Eunice NM, 88231	Project Manager Jason Stegemoller	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG63104 - General Preparation (WetChem)										
Blank (EG63104-BLK1)				Prepared 07/28/06 Analyzed 07/31/06						
Chloride	ND	0 500	mg/kg							
Sulfate	ND	0 500	"							
LCS (EG63104-BS1)				Prepared 07/28/06 Analyzed 07/31/06						
Sulfate	10 4	0 500	mg/kg	10 0		104	80-120			
Chloride	9 56	0 500	"	10 0		95 6	80-120			
Calibration Check (EG63104-CCV1)				Prepared 07/28/06 Analyzed 07/31/06						
Sulfate	10 1		mg/L	10 0		101	80-120			
Chloride	10 1		"	10 0		101	80-120			
Duplicate (EG63104-DUP1)	**Source: 6G21001-01**			Prepared 07/28/06 Analyzed 07/31/06						
Sulfate	560	5 00	mg/kg		523			6 83	20	
Chloride	344	5 00	"		320			7 23	20	
Duplicate (EG63104-DUP2)	**Source: 6G28008-09**			Prepared 07/28/06 Analyzed 07/31/06						
Sulfate	177	25 0	mg/kg		172			2 87	20	
Chloride	1350	25 0	"		1320			2 25	20	
Matrix Spike (EG63104-MS1)	**Source: 6G21001-01**			Prepared 07/28/06 Analyzed 07/31/06						
Chloride	452	5 00	mg/kg	100	320	132	80-120			S-07
Sulfate	625	5 00	"	100	523	102	75-125			
Matrix Spike (EG63104-MS2)	**Source: 6G28008-09**			Prepared 07/28/06 Analyzed 07/31/06						
Sulfate	669	25 0	mg/kg	500	172	99 4	75-125			
Chloride	1890	25 0	"	500	1320	114	80-120			

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Eunice NM, 88231	Project Manager Jason Stegemoller	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG63118 - General Preparation (Prep)										
Blank (EG63118-BLK1)				Prepared 07/28/06 Analyzed 07/31/06						
% Moisture	ND	0 1	%							
Duplicate (EG63118-DUP1)		**Source: 6G21001-01**		Prepared 07/28/06 Analyzed 07/31/06						
% Solids	90 8		%		91 9			1 20	20	
Duplicate (EG63118-DUP2)		**Source: 6G28008-03**		Prepared 07/28/06 Analyzed 07/31/06						
% Solids	97 4		%		96 9			0 515	20	
Duplicate (EG63118-DUP3)		**Source: 6G28013-01**		Prepared 07/28/06 Analyzed 07/31/06						
% Solids	93 9		%		93 5			0 427	20	

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P O Box 1558	Project Number 240014	
Eunice NM, 88231	Project Manager Jason Stegemoller	

Notes and Definitions

S-07	Recovery outside Laboratory historical or method prescribed limits
J	Detected but below the Reporting Limit, therefore, result is an estimated concentration (CLP J-Flag)
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 8/3/2006

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

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Jacob Melancon

Bill To

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

LAB I.D. [illegible]		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CRUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^=$)	pH	TCLP	OTHER >>>	PAH			
-01	1	BH-1 (1')	G	1			1					X		26-Jul-06	10:15	X	X	X	X							
-02	2	BH-2 (1')	G	1			1					X		26-Jul-06	10:35	X	X	X	X							
-03	3	BH-3 (1')	G	1			1					X		26-Jul-06	10:45	X	X	X	X							
-04	4	BH-4 (1')	G	1			1					X		25-Jul-06	10:20	X	X	X	X							
-05	5	BH-5 (1')	G	1			1					X		25-Jul-06	10:40	X	X	X	X							
-06	6	BH-6 (1')	G	1			1					X		25-Jul-06	13:30	X	X	X	X							
-07	7	BH-7 (1')	G	1			1					X		25-Jul-06	13:45	X	X	X	X							
-08	8	BH-8 (1')	G	1			1					X		26-Jul-06	13:15	X	X	X	X							
-09	9	BH-9 (1')	G	1			1					X		26-Jul-06	13:30	X	X	X	X							
-10	10	BH-10 (1')	G	1			1					X		26-Jul-06	13:45	X	X	X	X							

Sampler Relinquished: Jacob Melancon	Date 7-28 Time 7:30	Received By: [illegible signature]	E-mail results to: jstegemoller@envplus.net
Relinquished by: [illegible signature]	Date [illegible] Time [illegible]	Received By: (lab staff) [illegible signature]	NOTES: 2.5°C 4oz glass w/ labels
Delivered by:	Sample Cool & Intact (Yes) No	Checked By:	

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent: EPI

ate/ Time: 7/28/06 10:50

ab ID #: 6G28005

tials: CK

Sample Receipt Checklist

					Client Initials
	Temperature of container/ cooler?	Yes	No	2.5 °C	
2	Shipping container in good condition?	Yes	No		
3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
5	Chain of Custody present?	Yes	No		
6	Sample instructions complete of Chain of Custody?	Yes	No		
7	Chain of Custody signed when relinquished/ received?	Yes	No		
8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
9	Container label(s) legible and intact?	Yes	No	Not Applicable	
10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
11	Containers supplied by ELOT?	Yes	No		
12	Samples in proper container/ bottle?	Yes	No	See Below	
13	Samples properly preserved?	Yes	No	See Below	
14	Sample bottles intact?	Yes	No		
15	Preservations documented on Chain of Custody?	Yes	No		
16	Containers documented on Chain of Custody?	Yes	No		
17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
18	All samples received within sufficient hold time?	Yes	No	See Below	
19	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply.

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Jason Stegemoller

Environmental Plus, Incorporated

P.O. Box 1558

Eunice, NM 88231

Project: Apache/ N. Mon. Grayburg SA 603

Project Number: 240014

Location: UL-C, Sec. 20, T19S, R37E

Lab Order Number: 6H02006

Report Date: 08/08/06

Environmental Plus, Incorporated	Project Apache/ N Mon Grayburg SA 603	Fax 505-394-2601
P O Box 1558	Project Number 240014	
Eunice NM, 88231	Project Manager Jason Stegemoller	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-11 6"	6H02006-01	Soil	2006-07-31 08 30	2006-08-02 11 15
BH-12 6"	6H02006-02	Soil	2006-07-31 11 40	2006-08-02 11 15
BH-13 6"	6H02006-03	Soil	2006-07-31 13 43	2006-08-02 11 15
BH-14 6"	6H02006-04	Soil	2006-07-31 15 39	2006-08-02 11 15

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Project Number 240014
Project Manager Jason Stegemoller

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-11 6" (6H02006-01) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60402	08/04/06	08/06/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*86 8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*80 2 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*79 8 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*70 8 %*	*70-130*		"	"	"	"	
BH-12 6" (6H02006-02) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60402	08/04/06	08/06/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*89 0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*85 0 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*78 4 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*71 0 %*	*70-130*		"	"	"	"	
BH-13 6" (6H02006-03) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60702	08/04/06	08/06/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*96 0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*93 8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-13 6" (6H02006-03) Soil									
Carbon Ranges C12-C28	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*79 2 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*71 4 %*	*70-130*		"	"	"	"	
BH-14 6" (6H02006-04) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60702	08/04/06	08/06/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*90 0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*92 8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*92 4 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*112 %*	*70-130*		"	"	"	"	

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General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-11 6" (6H02006-01) Soil									
Chloride	**2110**	50 0	mg/kg	100	EH60204	08/02/06	08/02/06	EPA 300 0	
% Moisture	**18.6**	0 1	%	1	EH60302	08/02/06	08/03/06	% calculation	
Sulfate	**281**	50 0	mg/kg	100	EH60204	08/02/06	08/02/06	EPA 300 0	
BH-12 6" (6H02006-02) Soil									
Chloride	**1000**	25 0	mg/kg	50	EH60204	08/02/06	08/02/06	EPA 300 0	
% Moisture	**18.5**	0 1	%	1	EH60302	08/02/06	08/03/06	% calculation	
Sulfate	**74.5**	25 0	mg/kg	50	EH60204	08/02/06	08/02/06	EPA 300 0	
BH-13 6" (6H02006-03) Soil									
Chloride	**1500**	25 0	mg/kg	50	EH60204	08/02/06	08/02/06	EPA 300 0	
% Moisture	**17.0**	0 1	%	1	EH60302	08/02/06	08/03/06	% calculation	
Sulfate	**178**	25 0	mg/kg	50	EH60204	08/02/06	08/02/06	EPA 300 0	
BH-14 6" (6H02006-04) Soil									
Chloride	**1750**	50 0	mg/kg	100	EH60204	08/02/06	08/02/06	EPA 300 0	
% Moisture	**16.5**	0 1	%	1	EH60302	08/02/06	08/03/06	% calculation	
Sulfate	**216**	50 0	mg/kg	100	EH60204	08/02/06	08/02/06	EPA 300 0	

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60209 - EPA 5030C (GC)										
Blank (EH60209-BLK1)				Prepared & Analyzed 08/02/06						
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 Hydrocarbons	ND	10 0	"							
Surrogate 1-Chlorooctane	*64 0*		*mg/kg*	*50 0*		*128*	*70-130*			
Surrogate 1-Chlorooctadecane	*61 1*		*"*	*50 0*		*122*	*70-130*			
LCS (EH60209-BS1)				Prepared & Analyzed 08/02/06						
Carbon Ranges C6-C12	441	10 0	mg/kg wet	500		88 2	75-125			
Carbon Ranges C12-C28	451	10 0	"	500		90 2	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00			75-125			
Total Hydrocarbons	892	10 0	"	1000		89 2	75-125			
Surrogate 1-Chlorooctane	*49 0*		*mg/kg*	*50 0*		*98 0*	*70-130*			
Surrogate 1-Chlorooctadecane	*37 1*		*"*	*50 0*		*74 2*	*70-130*			
Calibration Check (EH60209-CCV1)				Prepared 08/02/06 Analyzed 08/03/06						
Carbon Ranges C6-C12	210		mg/kg	250		84 0	80-120			
Carbon Ranges C12-C28	271		"	250		108	80-120			
Total Hydrocarbons	481		"	500		96 2	80-120			
Surrogate 1-Chlorooctane	*87 7*		*"*	*100*		*87 7*	*70-130*			
Surrogate 1-Chlorooctadecane	*75 9*		*"*	*100*		*75 9*	*70-130*			
Matrix Spike (EH60209-MS1)	**Source: 6H02005-01**			Prepared & Analyzed 08/02/06						
Carbon Ranges C6-C12	466	10 0	mg/kg dry	520	ND	89 6	75-125			
Carbon Ranges C12-C28	479	10 0	"	520	ND	92 1	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125			
Total Hydrocarbons	945	10 0	"	1040	ND	90 9	75-125			
Surrogate 1-Chlorooctane	*49 7*		*mg/kg*	*50 0*		*99 4*	*70-130*			
Surrogate 1-Chlorooctadecane	*38 3*		*"*	*50 0*		*76 6*	*70-130*			

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60209 - EPA 5030C (GC)										
Matrix Spike Dup (EH60209-MSD1)	**Source: 6H02005-01**			Prepared & Analyzed 08/02/06						
Carbon Ranges C6-C12	470	10 0	mg/kg dry	520	ND	90 4	75-125	0 855	20	
Carbon Ranges C12-C28	484	10 0	"	520	ND	93 1	75-125	1 04	20	
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125		20	
Total Hydrocarbons	954	10 0	"	1040	ND	91 7	75-125	0 948	20	
Surrogate 1-Chlorooctane	*50 5*		*mg kg*	*50 0*		*101*	*70-130*			
Surrogate 1-Chlorooctadecane	*37 2*		"	*50 0*		*74 4*	*70-130*			
Batch EH60402 - EPA 5030C (GC)										
Blank (EH60402-BLK1)				Prepared & Analyzed 08/04/06						
Benzene	ND	0 0250	mg/kg wet							
Toluene	ND	0 0250	"							
Ethylbenzene	ND	0 0250	"							
Xylene (p/m)	ND	0 0250	"							
Xylene (o)	ND	0 0250	"							
Surrogate a,a a-Trifluorotoluene	*34 6*		*ug/kg*	*40 0*		*86 5*	*80-120*			
Surrogate 4-Bromofluorobenzene	*36 8*		"	*40 0*		*92 0*	*80-120*			
LCS (EH60402-BS1)				Prepared & Analyzed 08/04/06						
Benzene	1 14	0 0250	mg/kg wet	1 25		91 2	80-120			
Toluene	1 17	0 0250	"	1 25		93 6	80-120			
Ethylbenzene	1 15	0 0250	"	1 25		92 0	80-120			
Xylene (p/m)	2 57	0 0250	"	2 50		103	80-120			
Xylene (o)	1 28	0 0250	"	1 25		102	80-120			
Surrogate a,a,a-Trifluorotoluene	*37 3*		*ug/kg*	*40 0*		*93 2*	*80-120*			
Surrogate 4-Bromofluorobenzene	*39 0*		"	*40 0*		*97 5*	*80-120*			

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60402 - EPA 5030C (GC)										
Calibration Check (EH60402-CCV1)				Prepared 08/04/06 Analyzed 08/06/06						
Benzene	50 6		ug/kg	50 0		101	80-120			
Toluene	49 6		"	50 0		99 2	80-120			
Ethylbenzene	48 4		"	50 0		96 8	80-120			
Xylene (p/m)	103		"	100		103	80-120			
Xylene (o)	51 5		"	50 0		103	80-120			
Surrogate a,a,a-Trifluorotoluene	*37 6*		"	*40 0*		*94 0*	*80-120*			
Surrogate 4-Bromofluorobenzene	*39 2*		"	*40 0*		*98 0*	*80-120*			
Matrix Spike (EH60402-MS1)	**Source: 6G31011-06**			Prepared 08/04/06 Analyzed 08/07/06						
Benzene	1 20	0 0250	mg/kg dry	1 28	ND	93 8	80-120			
Toluene	1 21	0 0250	"	1 28	ND	94 5	80-120			
Ethylbenzene	1 24	0 0250	"	1 28	ND	96 9	80-120			
Xylene (p/m)	2 67	0 0250	"	2 56	ND	104	80-120			
Xylene (o)	1 30	0 0250	"	1 28	ND	102	80-120			
Surrogate a,a,a-Trifluorotoluene	*35 2*		*ug kg*	*40 0*		*88 0*	*80-120*			
Surrogate 4-Bromofluorobenzene	*36 3*		"	*40 0*		*90 8*	*80-120*			
Matrix Spike Dup (EH60402-MSD1)	**Source: 6G31011-06**			Prepared 08/04/06 Analyzed 08/07/06						
Benzene	1 23	0 0250	mg/kg dry	1 28	ND	96 1	80-120	2 42	20	
Toluene	1 25	0 0250	"	1 28	ND	97 7	80-120	3 33	20	
Ethylbenzene	1 25	0 0250	"	1 28	ND	97 7	80-120	0 822	20	
Xylene (p/m)	2 90	0 0250	"	2 56	ND	113	80-120	8 29	20	
Xylene (o)	1 38	0 0250	"	1 28	ND	108	80-120	5 71	20	
Surrogate a,a,a-Trifluorotoluene	*40 7*		*ug/kg*	*40 0*		*102*	*80-120*			
Surrogate 4-Bromofluorobenzene	*39 2*		"	*40 0*		*98 0*	*80-120*			
Batch EH60702 - EPA 5030C (GC)										
Blank (EH60702-BLK1)				Prepared 08/04/06 Analyzed 08/06/06						
Benzene	ND	0 0250	mg/kg wet							
Toluene	ND	0 0250	"							
Ethylbenzene	ND	0 0250	"							
Xylene (p/m)	ND	0 0250	"							
Xylene (o)	ND	0 0250	"							
Surrogate a,a,a-Trifluorotoluene	*37 0*		*ug/kg*	*40 0*		*92 5*	*80-120*			
Surrogate 4-Bromofluorobenzene	*33 9*		"	*40 0*		*84 8*	*80-120*			

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60702 - EPA 5030C (GC)										
LCS (EH60702-BS1)				Prepared 08/04/06 Analyzed 08/06/06						
Benzene	1 19	0 0250	mg/kg wet	1 25		95 2	80-120			
Toluene	1 21	0 0250	"	1 25		96 8	80-120			
Ethylbenzene	1 08	0 0250	"	1 25		86 4	80-120			
Xylene (p/m)	2 66	0 0250	"	2 50		106	80-120			
Xylene (o)	1 31	0 0250	"	1 25		105	80-120			
Surrogate a,a,a-Trifluorotoluene	*39 7*		*ug/kg*	*40 0*		*99 2*	*80-120*			
Surrogate 4-Bromofluorobenzene	*40 7*		"	*40 0*		*102*	*80-120*			
Calibration Check (EH60702-CCV1)				Prepared 08/04/06 Analyzed 08/07/06						
Benzene	50 4		ug/kg	50 0		101	80-120			
Toluene	49 1		"	50 0		98 2	80-120			
Ethylbenzene	49 4		"	50 0		98 8	80-120			
Xylene (p/m)	99 8		"	100		99 8	80-120			
Xylene (o)	48 8		"	50 0		97 6	80-120			
Surrogate a,a,a-Trifluorotoluene	*37 3*		"	*40 0*		*93 2*	*80-120*			
Surrogate 4-Bromofluorobenzene	*34 2*		"	*40 0*		*85 5*	*80-120*			
Matrix Spike (EH60702-MS1)	**Source: 6H04011-01**			Prepared 08/04/06 Analyzed 08/07/06						
Benzene	1 27	0 0250	mg/kg dry	1 36	ND	93 4	80-120			
Toluene	1 27	0 0250	"	1 36	ND	93 4	80-120			
Ethylbenzene	1 23	0 0250	"	1 36	ND	90 4	80-120			
Xylene (p/m)	2 67	0 0250	"	2 72	ND	98 2	80-120			
Xylene (o)	1 36	0 0250	"	1 36	ND	100	80-120			
Surrogate a,a,a-Trifluorotoluene	*32 8*		*ug/kg*	*40 0*		*82 0*	*80-120*			
Surrogate 4-Bromofluorobenzene	*35 8*		"	*40 0*		*89 5*	*80-120*			
Matrix Spike Dup (EH60702-MSD1)	**Source: 6H04011-01**			Prepared 08/04/06 Analyzed 08/07/06						
Benzene	1 24	0 0250	mg/kg dry	1 36	ND	91 2	80-120	2 38	20	
Toluene	1 24	0 0250	"	1 36	ND	91 2	80-120	2 38	20	
Ethylbenzene	1 20	0 0250	"	1 36	ND	88 2	80-120	2 46	20	
Xylene (p/m)	2 62	0 0250	"	2 72	ND	96 3	80-120	1 95	20	
Xylene (o)	1 31	0 0250	"	1 36	ND	96 3	80-120	3 77	20	
Surrogate a,a,a-Trifluorotoluene	*33 1*		*ug kg*	*40 0*		*82 8*	*80-120*			
Surrogate 4-Bromofluorobenzene	*35 5*		"	*40 0*		*88 8*	*80-120*			

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60204 - Water Extraction										
Blank (EH60204-BLK1)				Prepared & Analyzed 08/02/06						
Sulfate	ND	0 500	mg/kg							
Chloride	ND	0 500	"							
LCS (EH60204-BS1)				Prepared & Analyzed 08/02/06						
Sulfate	8 62	0 500	mg/kg	10 0		86 2	80-120			
Chloride	9 70	0 500	"	10 0		97 0	80-120			
Calibration Check (EH60204-CCV1)				Prepared & Analyzed 08/02/06						
Chloride	9 83		mg/L	10 0		98 3	80-120			
Sulfate	10 9		"	10 0		109	80-120			
Duplicate (EH60204-DUP1)	**Source: 6G31011-02**			Prepared & Analyzed 08/02/06						
Sulfate	154	5 00	mg/kg		149			3 30	20	
Chloride	47 1	5 00	"		48 0			1 89	20	
Duplicate (EH60204-DUP2)	**Source: 6G31013-02**			Prepared & Analyzed 08/02/06						
Sulfate	126	5 00	mg/kg		127			0 791	20	
Chloride	173	5 00	"		176			1 72	20	
Matrix Spike (EH60204-MS1)	**Source: 6G31011-02**			Prepared & Analyzed 08/02/06						
Chloride	152	5 00	mg/kg	100	48 0	104	80-120			
Sulfate	256	5 00	"	100	149	107	80-120			
Matrix Spike (EH60204-MS2)	**Source: 6G31013-02**			Prepared & Analyzed 08/02/06						
Chloride	285	5 00	mg/kg	100	176	109	80-120			
Sulfate	234	5 00	"	100	127	107	80-120			

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60302 - General Preparation (Prep)										
Blank (EH60302-BLK1)				Prepared 08/02/06 Analyzed 08/03/06						
% Solids	100		%							
Duplicate (EH60302-DUP1)	**Source: 6H02001-01**			Prepared 08/02/06 Analyzed 08/03/06						
% Solids	99 5		%		99 4			0 101	20	

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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 K Tuttle Date: 8/8/2006

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

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Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	George Blackburn

Bill To

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

ANALYSIS REQUEST

LAB I.D. (ef102006)		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CRUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl⁻)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
-01	1	BH-11 (6")	G	1			1					X		31-Jul-06	8:30	X	X	X	X							
-02	2	BH-12 (6")	G	1			1					X		31-Jul-06	11:40	X	X	X	X							
-03	3	BH-13 (6")	G	1			1					X		31-Jul-06	13:43	X	X	X	X							
-04	4	BH-14 (6")	G	1			1					X		31-Jul-06	15:39	X	X	X	X							
	5																									
	6																									
	7																									
	8																									
	9																									
	10																									

Sampler Relinquished:	Date / Time	Received By:	E-mail results to: jstegemoller@envplus.net
Relinquished by:	Date: 8-2-06 Time: 16:15	Received By: (lab staff)	NOTES: 3.0 40z glass w/label & jar seal
Delivered by:	Sample Cool & Intact: (Yes) No	Checked By:	

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: EPI

Date/ Time: 8/2/06 11:15

Lab ID #: 608020006

Initials: CK

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	3.0 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken

_____

_____

_____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Jason Stegemoller

Environmental Plus, Incorporated

P.O. Box 1558

Eunice, NM 88231

Project: Apache/ N. Mon. Grayburg SA 603

Project Number: 240014

Location: UL-C, Sec. 20, T19S, R37E

Lab Order Number: 6H02007

Report Date: 08/08/06

Environmental Plus, Incorporated	Project Apache/ N Mon Grayburg SA 603	Fax 505-394-2601
P O Box 1558	Project Number 240014	
Eunice NM, 88231	Project Manager Jason Stegemoller	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-15 6"	6H02007-01	Soil	2006-08-01 08 55	2006-08-02 11 15
BH-16 6"	6H02007-02	Soil	2006-08-01 10 10	2006-08-02 11 15
BH-17 6"	6H02007-03	Soil	2006-08-01 11 25	2006-08-02 11 15
BH-18 6"	6H02007-04	Soil	2006-08-01 13 10	2006-08-02 11 15
BH-19 6"	6H02007-05	Soil	2006-08-01 14 25	2006-08-02 11 15
BH-20 6"	6H02007-06	Soil	2006-08-01 15 25	2006-08-02 11 15

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Environmental Plus, Incorporated
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Eunice NM, 88231

Project Apache/ N Mon Grayburg SA 603
Project Number 240014
Project Manager Jason Stegemoller

Fax 505-394-2601

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-15 6" (6H02007-01) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60702	08/04/06	08/06/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*96 5 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*93 8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*96 0 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*115 %*	*70-130*		"	"	"	"	
BH-16 6" (6H02007-02) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60702	08/04/06	08/06/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate, a,a,a-Trifluorotoluene		*97 5 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*90 5 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*96 4 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*113 %*	*70-130*		"	"	"	"	
BH-17 6" (6H02007-03) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60702	08/04/06	08/06/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*98 5 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*93.5 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	

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Project Apache/ N Mon Grayburg SA 603
Project Number 240014
Project Manager Jason Stegemoller

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-17 6" (6H02007-03) Soil									
Carbon Ranges C12-C28	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*93 8 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*112 %*	*70-130*		"	"	"	"	
BH-18 6" (6H02007-04) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60702	08/04/06	08/06/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*92 8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*87 2 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*93 4 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*112 %*	*70-130*		"	"	"	"	
BH-19 6" (6H02007-05) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60702	08/04/06	08/06/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*90 5 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*90 8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*96 2 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*113 %*	*70-130*		"	"	"	"	

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P O Box 1558	Project Number 240014	
Eunice NM, 88231	Project Manager Jason Stegemoller	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-20 6" (6H02007-06) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60702	08/04/06	08/07/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*98 0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*94 8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60209	08/02/06	08/02/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*104 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*123 %*	*70-130*		"	"	"	"	

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Eunice NM, 88231	Project Manager Jason Stegemoller	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-15 6" (6H02007-01) Soil									
Chloride	**2510**	50 0	mg/kg	100	EH60307	08/02/06	08/04/06	EPA 300 0	
% Moisture	**13.6**	0 1	%	1	EH60302	08/02/06	08/03/06	% calculation	
Sulfate	**146**	50 0	mg/kg	100	EH60307	08/02/06	08/04/06	EPA 300 0	
BH-16 6" (6H02007-02) Soil									
Chloride	**226**	10 0	mg/kg	20	EH60307	08/02/06	08/04/06	EPA 300 0	
% Moisture	**10.6**	0 1	%	1	EH60302	08/02/06	08/03/06	% calculation	
Sulfate	**84.6**	10 0	mg/kg	20	EH60307	08/02/06	08/04/06	EPA 300 0	
BH-17 6" (6H02007-03) Soil									
Chloride	**1720**	50 0	mg/kg	100	EH60307	08/02/06	08/04/06	EPA 300 0	
% Moisture	**11.8**	0 1	%	1	EH60302	08/02/06	08/03/06	% calculation	
Sulfate	**290**	50 0	mg/kg	100	EH60307	08/02/06	08/04/06	EPA 300 0	
BH-18 6" (6H02007-04) Soil									
Chloride	**1240**	25 0	mg/kg	50	EH60307	08/02/06	08/04/06	EPA 300 0	
% Moisture	**8.3**	0 1	%	1	EH60302	08/02/06	08/03/06	% calculation	
Sulfate	**176**	25 0	mg/kg	50	EH60307	08/02/06	08/04/06	EPA 300 0	
BH-19 6" (6H02007-05) Soil									
Chloride	**1550**	25 0	mg/kg	50	EH60307	08/02/06	08/04/06	EPA 300 0	
% Moisture	**9.0**	0 1	%	1	EH60302	08/02/06	08/03/06	% calculation	
Sulfate	**253**	25 0	mg/kg	50	EH60307	08/02/06	08/04/06	EPA 300 0	
BH-20 6" (6H02007-06) Soil									
Chloride	**7.20**	5 00	mg/kg	10	EH60307	08/02/06	08/04/06	EPA 300 0	
% Moisture	**4.6**	0 1	%	1	EH60302	08/02/06	08/03/06	% calculation	
Sulfate	**21.8**	5 00	mg/kg	10	EH60307	08/02/06	08/04/06	EPA 300 0	

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Project Number 240014
Project Manager Jason Stegemoller

Fax 505-394-2601

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60209 - EPA 5030C (GC)										
Blank (EH60209-BLK1)				Prepared & Analyzed 08/02/06						
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 Hydrocarbons	ND	10 0	"							
Surrogate 1-Chlorooctane	*64 0*		*mg/kg*	*50 0*		*128*	*70-130*			
Surrogate 1-Chlorooctadecane	*61 1*		*"*	*50 0*		*122*	*70-130*			
LCS (EH60209-BS1)				Prepared & Analyzed 08/02/06						
Carbon Ranges C6-C12	441	10 0	mg/kg wet	500		88 2	75-125			
Carbon Ranges C12-C28	451	10 0	"	500		90 2	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00			75-125			
Total Hydrocarbons	892	10 0	"	1000		89 2	75-125			
Surrogate 1-Chlorooctane	*49 0*		*mg/kg*	*50 0*		*98 0*	*70-130*			
Surrogate 1-Chlorooctadecane	*37 1*		*"*	*50 0*		*74 2*	*70-130*			
Calibration Check (EH60209-CCV1)				Prepared 08/02/06 Analyzed 08/03/06						
Carbon Ranges C6-C12	210		mg/kg	250		84 0	80-120			
Carbon Ranges C12-C28	271		"	250		108	80-120			
Total Hydrocarbons	481		"	500		96 2	80-120			
Surrogate 1-Chlorooctane	*87 7*		*"*	*100*		*87 7*	*70-130*			
Surrogate 1-Chlorooctadecane	*75 9*		*"*	*100*		*75 9*	*70-130*			
Matrix Spike (EH60209-MS1)	**Source: 6H02005-01**			Prepared & Analyzed 08/02/06						
Carbon Ranges C6-C12	466	10 0	mg/kg dry	520	ND	89 6	75-125			
Carbon Ranges C12-C28	479	10 0	"	520	ND	92 1	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125			
Total Hydrocarbons	945	10 0	"	1040	ND	90 9	75-125			
Surrogate 1-Chlorooctane	*49 7*		*mg/kg*	*50 0*		*99 4*	*70-130*			
Surrogate 1-Chlorooctadecane	*38 3*		*"*	*50 0*		*76 6*	*70-130*			

Environmental Plus, Incorporated
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Eunice NM, 88231

Project Apache/ N Mon Grayburg SA 603
Project Number 240014
Project Manager Jason Stegemoller

Fax 505-394-2601

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60209 - EPA 5030C (GC)										
Matrix Spike Dup (EH60209-MSD1)	**Source: 6H02005-01**			Prepared & Analyzed 08/02/06						
Carbon Ranges C6-C12	470	10 0	mg/kg dry	520	ND	90 4	75-125	0 855	20	
Carbon Ranges C12-C28	484	10 0	"	520	ND	93 1	75-125	1 04	20	
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125		20	
Total Hydrocarbons	954	10 0	"	1040	ND	91 7	75-125	0 948	20	
Surrogate 1-Chlorooctane	*50 5*		*mg kg*	*50 0*		*101*	*70-130*			
Surrogate 1-Chlorooctadecane	*37 2*		*"*	*50 0*		*74 4*	*70-130*			
Batch EH60702 - EPA 5030C (GC)										
Blank (EH60702-BLK1)				Prepared 08/04/06 Analyzed 08/06/06						
Benzene	ND	0 0250	mg/kg wet							
Toluene	ND	0 0250	"							
Ethylbenzene	ND	0 0250	"							
Xylene (p/m)	ND	0 0250	"							
Xylene (o)	ND	0 0250	"							
Surrogate a,a,a-Trifluorotoluene	*37 0*		*ug kg*	*40 0*		*92 5*	*80-120*			
Surrogate 4-Bromofluorobenzene	*33 9*		*"*	*40 0*		*84 8*	*80-120*			
LCS (EH60702-BS1)				Prepared 08/04/06 Analyzed 08/06/06						
Benzene	1 19	0 0250	mg/kg wet	1 25		95 2	80-120			
Toluene	1 21	0 0250	"	1 25		96 8	80-120			
Ethylbenzene	1 08	0 0250	"	1 25		86 4	80-120			
Xylene (p/m)	2 66	0 0250	"	2 50		106	80-120			
Xylene (o)	1 31	0 0250	"	1 25		105	80-120			
Surrogate a,a,a-Trifluorotoluene	*39 7*		*ug kg*	*40 0*		*99 2*	*80-120*			
Surrogate 4-Bromofluorobenzene	*40 7*		*"*	*40 0*		*102*	*80-120*			

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Project: Apache/ N Mon Grayburg SA 603
Project Number: 240014
Project Manager: Jason Stegemoller

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60702 - EPA 5030C (GC)										
Calibration Check (EH60702-CCV1)				Prepared 08/04/06 Analyzed 08/07/06						
Benzene	50 4		ug/kg	50 0		101	80-120			
Toluene	49 1		"	50 0		98 2	80-120			
Ethylbenzene	49 4		"	50 0		98 8	80-120			
Xylene (p/m)	99 8		"	100		99 8	80-120			
Xylene (o)	48 8		"	50 0		97 6	80-120			
Surrogate a,a,a-Trifluorotoluene	*37 3*		"	*40 0*		*93 2*	*80-120*			
Surrogate 4-Bromofluorobenzene	*34 2*		"	*40 0*		*85 5*	*80-120*			
Matrix Spike (EH60702-MS1)		**Source: 6H04011-01**		Prepared 08/04/06 Analyzed 08/07/06						
Benzene	1 27	0 0250	mg/kg dry	1 36	ND	93 4	80-120			
Toluene	1 27	0 0250	"	1 36	ND	93 4	80-120			
Ethylbenzene	1 23	0 0250	"	1 36	ND	90 4	80-120			
Xylene (p/m)	2 67	0 0250	"	2 72	ND	98 2	80-120			
Xylene (o)	1 36	0 0250	"	1 36	ND	100	80-120			
Surrogate a,a,a-Trifluorotoluene	*32 8*		*ug kg*	*40 0*		*82 0*	*80-120*			
Surrogate 4-Bromofluorobenzene	*35 8*		"	*40 0*		*89 5*	*80-120*			
Matrix Spike Dup (EH60702-MSD1)		**Source: 6H04011-01**		Prepared 08/04/06 Analyzed 08/07/06						
Benzene	1 24	0 0250	mg/kg dry	1 36	ND	91 2	80-120	2 38	20	
Toluene	1 24	0 0250	"	1 36	ND	91 2	80-120	2 38	20	
Ethylbenzene	1 20	0 0250	"	1 36	ND	88 2	80-120	2 46	20	
Xylene (p/m)	2 62	0 0250	"	2 72	ND	96 3	80-120	1 95	20	
Xylene (o)	1 31	0 0250	"	1 36	ND	96 3	80-120	3 77	20	
Surrogate a,a,a-Trifluorotoluene	*33 1*		*ug kg*	*40 0*		*82 8*	*80-120*			
Surrogate 4-Bromofluorobenzene	*35 5*		"	*40 0*		*88 8*	*80-120*			

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

Project Apache/ N Mon Grayburg SA 603
Project Number 240014
Project Manager Jason Stegemoller

Fax 505-394-2601

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60302 - General Preparation (Prep)										
Blank (EH60302-BLK1)				Prepared 08/02/06 Analyzed 08/03/06						
% Solids	100		%							
Duplicate (EH60302-DUP1)	**Source: 6H02001-01**			Prepared 08/02/06 Analyzed 08/03/06						
% Solids	99 5		%		99 4			0 101	20	
Batch EH60307 - Water Extraction										
Blank (EH60307-BLK1)				Prepared 08/02/06 Analyzed 08/04/06						
Sulfate	ND	0 500	mg/kg							
Chloride	ND	0 500	"							
LCS (EH60307-BS1)				Prepared 08/02/06 Analyzed 08/04/06						
Chloride	8 90	0 500	mg/kg	10 0		89 0	80-120			
Sulfate	9 47	0 500	"	10 0		94 7	80-120			
Calibration Check (EH60307-CCV1)				Prepared 08/02/06 Analyzed 08/04/06						
Chloride	10 1		mg/L	10 0		101	80-120			
Sulfate	9 57		"	10 0		95 7	80-120			
Duplicate (EH60307-DUP1)	**Source: 6H01008-03**			Prepared 08/02/06 Analyzed 08/04/06						
Sulfate	327	10 0	mg/kg		325			0 613	20	
Chloride	7 30	10 0	"		9 22			23 2	20	S-08 J
Duplicate (EH60307-DUP2)	**Source: 6H01009-06**			Prepared 08/02/06 Analyzed 08/04/06						
Sulfate	30 1	5 00	mg/kg		30 1			0 00	20	
Chloride	13 3	5 00	"		13 3			0 00	20	

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Eunice NM, 88231	Project Manager Jason Stegemoller	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60307 - Water Extraction										
Matrix Spike (EH60307-MS1)	**Source: 6H01008-03**			Prepared 08/02/06 Analyzed 08/04/06						
Chloride	221	10 0	mg/kg	200	9 22	106	80-120			
Sulfate	539	10 0	"	200	325	107	80-120			
Matrix Spike (EH60307-MS2)	**Source: 6H01009-06**			Prepared 08/02/06 Analyzed 08/04/06						
Chloride	109	5 00	mg/kg	100	13 3	95 7	80-120			
Sulfate	120	5 00	"	100	30 1	89 9	80-120			

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Eunice NM, 88231	Project Manager Jason Stegemoller	

Notes and Definitions

S-08	Value outside Laboratory historical or method prescribed QC limits
J	Detected but below the Reporting Limit, therefore, result is an estimated concentration (CLP J-Flag)
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By Raland K Tuttle Date: 8/8/2006

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

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	George Blackburn

Bill To

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

ANALYSIS REQUEST

	LAB I.D. (H02009)	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO_4^{-2})	pH	TCLP	OTHER >>>	PAH
-01	1	BH-15 (6")	G	1			1					X		01-Aug-06	8:55	X	X	X	X				
-02	2	BH-16 (6")	G	1			1					X		01-Aug-06	10:10	X	X	X	X				
-03	3	BH-17(6")	G	1			1					X		01-Aug-06	11:25	X	X	X	X				
-04	4	BH-18 (6")	G	1			1					X		01-Aug-06	13:10	X	X	X	X				
-05	5	BH-19 (6")	G	1			1					X		01-Aug-06	14:25	X	X	X	X				
-06	6	BH-20 (6")	G	1			1					X		01-Aug-06	15:25	X	X	X	X				
	7																						
	8																						
	9																						
	10																						

Sampler Relinquished:	Date / Time	Received By:	E-mail results to: jstegemoller@envplus.net
Relinquished by:	Date 8-1-06 / Time 1115	Received By: (lab staff)	NOTES: 4oz glass w/ label & jar seal 3.0
Delivered by:	Sample Cool & Intact: (Yes) No	Checked By:	

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent: EPI

te/ Time 8/2/06 11:15

b ID # : 6H02007

tials: CK

Sample Receipt Checklist

				Client Initials
Temperature of container/ cooler?	Yes	No	3.0 °C	
2 Shipping container in good condition?	Yes	No		
3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
5 Chain of Custody present?	Yes	No		
6 Sample instructions complete of Chain of Custody?	Yes	No		
7 Chain of Custody signed when relinquished/ received?	Yes	No		
8 Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
9 Container label(s) legible and intact?	Yes	No	Not Applicable	
10 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
11 Containers supplied by ELOT?	Yes	No		
12 Samples in proper container/ bottle?	Yes	No	See Below	
13 Samples properly preserved?	Yes	No	See Below	
14 Sample bottles intact?	Yes	No		
15 Preservations documented on Chain of Custody?	Yes	No		
16 Containers documented on Chain of Custody?	Yes	No		
17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
18 All samples received within sufficient hold time?	Yes	No	See Below	
19 VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken:

_____

_____

_____

Check all that Apply.

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

ENVIRONMENTAL LAB OF

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Analytical Report

Prepared for:

Jason Stegemoller

Environmental Plus, Incorporated

P.O. Box 1558

Eunice, NM 88231

Project: Apache/ N. Mon. Grayburg SA 603

Project Number: 240014

Location: EUL-C, Sec. 20, T19S, R37E

Lab Order Number: 6H08004

Report Date: 08/10/06

Environmental Plus, Incorporated	Project Apache/ N Mon Grayburg SA 603	Fax 505-394-2601
P O Box 1558	Project Number 240014	
Eunice NM, 88231	Project Manager Jason Stegemoller	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-21 6"	6H08004-01	Soil	08/02/06 08 15	08-08-2006 10 40
BH-22 6"	6H08004-02	Soil	08/02/06 09 50	08-08-2006 10 40
BH-23 6"	6H08004-03	Soil	08/02/06 12 00	08-08-2006 10 40
BH-24 6"	6H08004-04	Soil	08/02/06 13 30	08-08-2006 10 40
BH-25 6"	6H08004-05	Soil	08/02/06 14 35	08-08-2006 10 40
BH-26 6"	6H08004-06	Soil	08/02/06 15 06	08-08-2006 10 40

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P O Box 1558	Project Number 240014	
Eunice NM, 88231	Project Manager Jason Stegemoller	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-21 6" (6H08004-01) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60809	08/08/06	08/09/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate· a.a.a-Trifluorotoluene		*98 5 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*89 5 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	**13.4**	10 0	mg/kg dry	1	EH60808	08/08/06	08/08/06	EPA 8015M	
Carbon Ranges C12-C28	**57.8**	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	**71.2**	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*125 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*121 %*	*70-130*		"	"	"	"	
BH-22 6" (6H08004-02) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60809	08/08/06	08/09/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a.a.a-Trifluorotoluene		*89 8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*84 2 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60808	08/08/06	08/08/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate. 1-Chlorooctane		*120 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*117 %*	*70-130*		"	"	"	"	
BH-23 6" (6H08004-03) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60809	08/08/06	08/09/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a.a.a-Trifluorotoluene		*97 0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*91 8 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60808	08/08/06	08/08/06	EPA 8015M	

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-23 6" (6H08004-03) Soil									
Carbon Ranges C12-C28	ND	10 0	mg/kg dry	1	EH60808	08/08/06	08/08/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*130 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*121 %*	*70-130*		"	"	"	"	
BH-24 6" (6H08004-04) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60809	08/08/06	08/08/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	**0.0361**	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*98 8 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*87 5 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60808	08/08/06	08/08/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*129 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*117 %*	*70-130*		"	"	"	"	
BH-25 6" (6H08004-05) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60809	08/08/06	08/08/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*85 0 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*81 5 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60808	08/08/06	08/08/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*125 %*	*70-130*		"	"	"	"	
Surrogate 1-Chlorooctadecane		*117 %*	*70-130*		"	"	"	"	

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Eunice NM, 88231	Project Manager Jason Stegemoller	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-26 6" (6H08004-06) Soil									
Benzene	ND	0 0250	mg/kg dry	25	EH60809	08/08/06	08/08/06	EPA 8021B	
Toluene	ND	0 0250	"	"	"	"	"	"	
Ethylbenzene	ND	0 0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0 0250	"	"	"	"	"	"	
Xylene (o)	ND	0 0250	"	"	"	"	"	"	
Surrogate a,a,a-Trifluorotoluene		*101 %*	*80-120*		"	"	"	"	
Surrogate 4-Bromofluorobenzene		*93 0 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EH60808	08/08/06	08/08/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10 0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10 0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10 0	"	"	"	"	"	"	
Surrogate 1-Chlorooctane		*121 %*	*70-130*		"	"	"	"	
Surrogate. 1-Chlorooctadecane		*113 %*	*70-130*		"	"	"	"	

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Eunice NM, 88231	Project Manager Jason Stegemoller	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-21 6" (6H08004-01) Soil									
Chloride	**920**	25 0	mg/kg	50	EH60812	08/08/06	08/08/06	EPA 300 0	
% Moisture	**14.4**	0 1	%	1	EH60906	08/08/06	08/09/06	% calculation	
Sulfate	**168**	25 0	mg/kg	50	EH60812	08/08/06	08/08/06	EPA 300 0	
BH-22 6" (6H08004-02) Soil									
Chloride	**976**	25 0	mg/kg	50	EH60812	08/08/06	08/08/06	EPA 300 0	
% Moisture	**12.0**	0 1	%	1	EH60906	08/08/06	08/09/06	% calculation	
Sulfate	**121**	25 0	mg/kg	50	EH60812	08/08/06	08/08/06	EPA 300 0	
BH-23 6" (6H08004-03) Soil									
Chloride	**6.09**	5 00	mg/kg	10	EH60812	08/08/06	08/08/06	EPA 300 0	
% Moisture	**10.9**	0 1	%	1	EH60906	08/08/06	08/09/06	% calculation	
Sulfate	**17.6**	5 00	mg/kg	10	EH60812	08/08/06	08/08/06	EPA 300 0	
BH-24 6" (6H08004-04) Soil									
Chloride	**705**	20 0	mg/kg	40	EH60812	08/08/06	08/08/06	EPA 300 0	
% Moisture	**10.1**	0 1	%	1	EH60906	08/08/06	08/09/06	% calculation	
Sulfate	**65.3**	20 0	mg/kg	40	EH60812	08/08/06	08/08/06	EPA 300 0	
BH-25 6" (6H08004-05) Soil									
Chloride	**1250**	50 0	mg/kg	100	EH60812	08/08/06	08/08/06	EPA 300 0	
% Moisture	**10.2**	0 1	%	1	EH60906	08/08/06	08/09/06	% calculation	
Sulfate	**2380**	50 0	mg/kg	100	EH60812	08/08/06	08/08/06	EPA 300 0	
BH-26 6" (6H08004-06) Soil									
Chloride	**136**	10 0	mg/kg	20	EH60812	08/08/06	08/08/06	EPA 300 0	
% Moisture	**12.8**	0 1	%	1	EH60906	08/08/06	08/09/06	% calculation	
Sulfate	**151**	10 0	mg/kg	20	EH60812	08/08/06	08/08/06	EPA 300 0	

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Project Apache/ N Mon Grayburg SA 603
Project Number 240014
Project Manager Jason Stegemoller

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60808 - EPA 5030C (GC)										
Blank (EH60808-BLK1)				Prepared & Analyzed 08/08/06						
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 Hydrocarbons	ND	10 0	"							
Surrogate 1-Chlorooctane	*58 0*		*mg/kg*	*50 0*		*116*	*70-130*			
Surrogate 1-Chlorooctadecane	*55 6*		*"*	*50 0*		*111*	*70-130*			
LCS (EH60808-BS1)				Prepared & Analyzed 08/08/06						
Carbon Ranges C6-C12	483	10 0	mg/kg wet	500		96 6	75-125			
Carbon Ranges C12-C28	426	10 0	"	500		85 2	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00			75-125			
Total Hydrocarbons	909	10 0	"	1000		90 9	75-125			
Surrogate 1-Chlorooctane	*63 2*		*mg/kg*	*50 0*		*126*	*70-130*			
Surrogate 1-Chlorooctadecane	*56 3*		*"*	*50 0*		*113*	*70-130*			
Calibration Check (EH60808-CCV1)				Prepared & Analyzed 08/08/06						
Carbon Ranges C6-C12	215		mg/kg	250		86 0	80-120			
Carbon Ranges C12-C28	224		"	250		89 6	80-120			
Total Hydrocarbons	439		"	500		87 8	80-120			
Surrogate 1-Chlorooctane	*64 1*		*"*	*50 0*		*128*	*70-130*			
Surrogate 1-Chlorooctadecane	*62 2*		*"*	*50 0*		*124*	*70-130*			
Matrix Spike (EH60808-MS1)	**Source: 6H08003-02**			Prepared & Analyzed 08/08/06						
Carbon Ranges C6-C12	597	10 0	mg/kg dry	561	ND	106	75-125			
Carbon Ranges C12-C28	520	10 0	"	561	ND	92 7	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125			
Total Hydrocarbons	1120	10 0	"	1120	ND	100	75-125			
Surrogate 1-Chlorooctane	*64 9*		*mg kg*	*50 0*		*130*	*70-130*			
Surrogate 1-Chlorooctadecane	*63 8*		*"*	*50 0*		*128*	*70-130*			

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

Project Apache/ N Mon Grayburg SA 603
Project Number 240014
Project Manager Jason Stegemoller

Fax 505-394-2601

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60808 - EPA 5030C (GC)										
Matrix Spike Dup (EH60808-MSD1)	**Source: 6H08003-02**			Prepared & Analyzed 08/08/06						
Carbon Ranges C6-C12	585	10 0	mg/kg dry	561	ND	104	75-125	2 03	20	
Carbon Ranges C12-C28	498	10 0	"	561	ND	88 8	75-125	4 32	20	
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125		20	
Total Hydrocarbons	1080	10 0	"	1120	ND	96 4	75-125	3 64	20	
Surrogate 1-Chlorooctane	*64 1*		*mg/kg*	*50 0*		*128*	*70-130*			
Surrogate 1-Chlorooctadecane	*63 3*		*"*	*50 0*		*127*	*70-130*			
Batch EH60809 - EPA 5030C (GC)										
Blank (EH60809-BLK1)				Prepared & Analyzed 08/08/06						
Benzene	ND	0 0250	mg/kg wet							
Toluene	ND	0 0250	"							
Ethylbenzene	ND	0 0250	"							
Xylene (p/m)	ND	0 0250	"							
Xylene (o)	ND	0 0250	"							
Surrogate a,a,a-Trifluorotoluene	*37 0*		*ug/kg*	*40 0*		*92 5*	*80-120*			
Surrogate 4-Bromofluorobenzene	*33 5*		*"*	*40 0*		*83 8*	*80-120*			
LCS (EH60809-BS1)				Prepared & Analyzed 08/08/06						
Benzene	1 24	0 0250	mg/kg wet	1 25		99 2	80-120			
Toluene	1 27	0 0250	"	1 25		102	80-120			
Ethylbenzene	1 12	0 0250	"	1 25		89 6	80-120			
Xylene (p/m)	2 78	0 0250	"	2 50		111	80-120			
Xylene (o)	1 39	0 0250	"	1 25		111	80-120			
Surrogate a,a,a-Trifluorotoluene	*34 8*		*ug/kg*	*40 0*		*87 0*	*80-120*			
Surrogate 4-Bromofluorobenzene	*36 8*		*"*	*40 0*		*92 0*	*80-120*			

Environmental Plus, Incorporated
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Project: Apache/ N Mon Grayburg SA 603
Project Number: 240014
Project Manager: Jason Stegemoller

Fax 505-394-2601

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60809 - EPA 5030C (GC)										
Calibration Check (EH60809-CCV1)				Prepared & Analyzed 08/08/06						
Benzene	49 2		ug/kg	50 0		98 4	80-120			
Toluene	48 6		"	50 0		97 2	80-120			
Ethylbenzene	48 4		"	50 0		96 8	80-120			
Xylene (p/m)	101		"	100		101	80-120			
Xylene (o)	50 0		"	50 0		100	80-120			
Surrogate a,a,a-Trifluorotoluene	*32 8*		"	*40 0*		*82 0*	*80-120*			
Surrogate 4-Bromofluorobenzene	*32 1*		"	*40 0*		*80 2*	*80-120*			
Matrix Spike (EH60809-MS1)	**Source: 6H07012-01**			Prepared & Analyzed 08/08/06						
Benzene	1 38	0 0250	mg/kg dry	1 38	ND	100	80-120			
Toluene	1 42	0 0250	"	1 38	ND	103	80-120			
Ethylbenzene	1 40	0 0250	"	1 38	ND	101	80-120			
Xylene (p/m)	3 09	0 0250	"	2 76	ND	112	80-120			
Xylene (o)	1 50	0 0250	"	1 38	ND	109	80-120			
Surrogate a,a,a-Trifluorotoluene	*41 4*		*ug/kg*	*40 0*		*104*	*80-120*			
Surrogate 4-Bromofluorobenzene	*39 6*		"	*40 0*		*99 0*	*80-120*			
Matrix Spike Dup (EH60809-MSD1)	**Source: 6H07012-01**			Prepared & Analyzed 08/08/06						
Benzene	1 37	0 0250	mg/kg dry	1 38	ND	99 3	80-120	0 702	20	
Toluene	1 41	0 0250	"	1 38	ND	102	80-120	0 976	20	
Ethylbenzene	1 39	0 0250	"	1 38	ND	101	80-120	0 00	20	
Xylene (p/m)	3 10	0 0250	"	2 76	ND	112	80-120	0 00	20	
Xylene (o)	1 54	0 0250	"	1 38	ND	112	80-120	2 71	20	
Surrogate a,a,a-Trifluorotoluene	*41 8*		*ug/kg*	*40 0*		*104*	*80-120*			
Surrogate 4-Bromofluorobenzene	*40 1*		"	*40 0*		*100*	*80-120*			

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

Project: Apache/ N Mon Grayburg SA 603
Project Number: 240014
Project Manager: Jason Stegemoller

Fax 505-394-2601

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60812 - Water Extraction										
Blank (EH60812-BLK1)				Prepared & Analyzed 08/08/06						
Chloride	ND	0 500	mg/kg							
Sulfate	ND	0 500	"							
LCS (EH60812-BS1)				Prepared & Analyzed 08/08/06						
Sulfate	8 06	0 500	mg/kg	10 0		80 6	80-120			
Chloride	9 00	0 500	"	10 0		90 0	80-120			
Calibration Check (EH60812-CCV1)				Prepared & Analyzed 08/08/06						
Chloride	10 1		mg/L	10 0		101	80-120			
Sulfate	10 9		"	10 0		109	80-120			
Duplicate (EH60812-DUP1)	**Source: 6H07014-04**			Prepared & Analyzed 08/08/06						
Chloride	4 20	5 00	mg/kg		3 93			6 64	20	J
Duplicate (EH60812-DUP2)	**Source: 6H08004-05**			Prepared & Analyzed 08/08/06						
Sulfate	2200	50 0	mg/kg		2380			7 86	20	
Chloride	1150	50 0	"		1250			8 33	20	
Matrix Spike (EH60812-MS1)	**Source: 6H07014-04**			Prepared & Analyzed 08/08/06						
Chloride	100	5 00	mg/kg	100	3 93	96 1	80-120			
Matrix Spike (EH60812-MS2)	**Source: 6H08004-05**			Prepared & Analyzed 08/08/06						
Chloride	2200	50 0	mg/kg	1000	1250	95 0	80-120			
Sulfate	3190	50 0	"	1000	2380	81 0	80-120			
Batch EH60906 - General Preparation (Prep)										
Blank (EH60906-BLK1)				Prepared 08/08/06 Analyzed 08/09/06						
% Solids	100		%							

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH60906 - General Preparation (Prep)										
Duplicate (EH60906-DUP1)		**Source: 6H08003-01**		Prepared 08/08/06 Analyzed 08/09/06						
% Solids	83 3		%		82 9			0 481	20	

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

Project Apache/ N Mon Grayburg SA 603
Project Number 240014
Project Manager Jason Stegemoller

Fax 505-394-2601

Notes and Definitions

J	Detected but below the Reporting Limit, therefore, result is an estimated concentration (CLP J-Flag)
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date 8/10/2006

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

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Jacob Melancon

Bill To

Attn:Cody Miller
P.O. Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

LAB I.D. (lab # 108004)		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
01	1	BH-21 (6")	G	1			1					X		02-Aug-06	8:15	X	X	X	X							
02	2	BH-22 (6")	G	1			1					X		02-Aug-06	9:50	X	X	X	X							
03	3	BH-23 (6")	G	1			1					X		02-Aug-06	12:00	X	X	X	X							
04	4	BH-24 (6")	G	1			1					X		02-Aug-06	1:30	X	X	X	X							
05	5	BH-25 (6")	G	1			1					X		02-Aug-06	2:35	X	X	X	X							
06	6	BH-26 (6")	G	1			1					X		02-Aug-06	3:06	X	X	X	X							
	7																								
	8																								
	9																								
	10																								

Sampler Relinquished:	Date Time	Received By:	E-mail results to: jstegemoller@envplus.net
Relinquished by	Date 8/8/06 Time 10:40	Received By: (lab staff)	NOTES: 402 glass 3.0
Delivered by:	Sample Cool & Intact (Yes) No	Checked By	w/ label

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: EPI

Date/ Time: 8/8/08 10:40

Lab ID #: 08080604

Initials: DK

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	3.0 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	George Blackburn

Bill To

Attn:Cody Miller
P.O. Box 1558
Eunice, NM 88231

ANALYSIS REQUEST

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
H11861 — 1	SB-1 (5')	G	1			1					X		29-Nov-06	9:15	X	X	X	X							
— 2	SB-1 (10')	G	1			1					X		29-Nov-06	10:20	X	X	X	X							
— 3	SB-1 (15')	G	1			1					X		29-Nov-06	11:23	X	X	X	X							
— 4	SB-2 (5')	G	1			1					X		29-Nov-06	13:05	X	X	X	X							
— 5	SB-2 (10')	G	1			1					X		29-Nov-06	13:35	X	X	X	X							
— 6	SB-3 (5')	G	1			1					X		29-Nov-06	14:13	X	X	X	X							
— 7	SB-3 (10')	G	1			1					X		29-Nov-06	14:50	X	X	X	X							
— 8	SB-4 (1')	G	1			1					X		30-Nov-06	15:15	X	X	X	X							
— 9	SB-4 (5')	G	1			1					X		29-Nov-06	15:45	X	X	X	X							
— 10	SB-4 (10')	G	1			1					X		29-Nov-06	16:40	X	X	X	X							

Sampler Relinquished	Date 12-1-06	Received By	E-mail results to: jstegemoller@envplus.net
	Time 930		NOTES.
Relinquished by.	Date 12-1-06	Received By. (lab staff)	
	Time 4:25		
Delivered by:	Sample Cool & Intact (Yes) No	Checked By.	

CARDINAL LABORATORIES

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

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

Receiving Date: 12/01/06
Reporting Date: 12/05/06
Project Owner: APACHE CORPORATION (240014)
Project Name. N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 11/29/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: BC

LAB NO.	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		12/04/06	12/04/06	12/04/06	12/04/06	12/04/06	12/04/06
H11861-1	SB-1 (5')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H11861-2	SB-1 (10')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H11861-3	SB-1 (15')	<10.0	<10.0	<0.005	<0.005	<0.005	<0 015
H11861-4	SB-2 (5')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H11861-5	SB-2 (10')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H11861-6	SB-3 (5')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H11861-7	SB-3 (10')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H11861-8	SB-4 (1')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H11861-9	SB-4 (5')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H11861-10	SB-4 (10')	<10.0	<10.0	<0.005	<0.005	<0.005	<0 015
Quality Control		777	778	0.101	0.101	0.102	0.294
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		97.1	97.2	101	101	102	97.9
Relative Percent Difference		1.9	1.3	2.7	0.7	1.2	0.9

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.

Burgess J. A. Cooke, Ph. D.

12/5/06
Date

H11861A

CARDINAL LABORATORIES

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

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

Receiving Date: 12/01/06
Reporting Date. 12/05/06
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 11/29/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: HM/NF

LAB NUMBER	SAMPLE ID	SO_4 (mg/Kg)	Cl (mg/Kg)
ANALYSIS DATE:		12/05/06	12/05/06
H11861-1	SB-1 (5')	148	464
H11861-2	SB-1 (10')	45.2	144
H11861-3	SB-1 (15')	40.2	80
H11861-4	SB-2 (5')	269	144
H11861-5	SB-2 (10')	198	80
H11861-6	SB-3 (5')	245	176
H11861-7	SB-3 (10')	158	96
H11861-8	SB-4 (1')	< 1	< 16
H11861-9	SB-4 (5')	104	< 16
H11861-10	SB-4 (10')	134	32
Quality Control		26.2	470
True Value QC		25.0	500
% Recovery		105	94
Relative Percent Difference		7.2	8.2

METHODS:	EPA 600/4-79-020	375.4	SM 4500 Cl B

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

Chemist

12-05-06
Date

H11861

CARDINAL LABORATORIES

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

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

Receiving Date: 04/20/07
Reporting Date: 04/24/07
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 04/10/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/kg)	SO_4 (mg/kg)
ANALYSIS DATE:		04/23/07	04/23/07
H12492-1	BH-1 (3')	256	3378
H12492-2	BH-2 (3')	496	806
H12492-3	BH-3 (3')	400	268
H12492-4	BH-4 (3')	256	591
H12492-5	SSW-1 (2')	48	253
H12492-6	ESW-1 (2')	352	1009
H12492-7	WSW-1 (2')	384	351
H12492-8	ESW-2 (2')	208	162
H12492-9	WSW-2 (2')	64	43.4
H12492-10	ESW-3 (2')	144	243
Quality Control		490	23.1
True Value QC		500	25.0
% Recovery		98.0	92.5
Relative Percent Difference		1.0	3.4

METHODS: Cl: Std. Methods 4500-ClˉB; SO_4: EPA 600 375.4

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

Chemist

04-24-07
Date

H12492

CARDINAL LABORATORIES

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

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

Receiving Date: 04/20/07
Reporting Date: 04/24/07
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 04/10/07 & 04/19/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/kg)	SO_4 (mg/kg)
ANALYSIS DATE:		04/24/07	04/24/07
H12492-11	WSW-3 (2')	176	209
H12492-12	BH-5 (3')	384	389
H12492-13	BH-6 (3')	528	495
H12492-14	BH-7 (3')	416	668
H12492-15	BH-8 (3')	336	849
H12492-16	BH-9 (3')	592	5805
H12492-17	BH-10 (3')	512	634
H12492-18	BH-11 (3')	560	1058
H12492-19	ESW-4 (2')	576	566
H12492-20	ESW-5 (2')	176	253
Quality Control		500	25.0
True Value QC		500	25.0
% Recovery		100	100
Relative Percent Difference		1.0	7.8

METHODS: Cl: Std. Methods 4500-Cl⁻B; SO_4: EPA 600 375.4

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

Chemist

4-24-07
Date

H12492A

CARDINAL LABORATORIES

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

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

Receiving Date: 04/20/07
Reporting Date: 04/24/07
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 04/19/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/kg)	SO_4 (mg/kg)
ANALYSIS DATE:		04/24/07	04/24/07
H12492-21	ESW-6 (2')	144	359
H12492-22	ESW-7 (2')	144	357
H12492-23	WSW-4 (2')	64	414
H12492-24	WSW-5 (2')	352	2733
H12492-25	WSW-6 (2')	144	221
H12492-26	WSW-7 (2')	112	175
H12492-27	NSW-1 (2')	432	1319
H12492-28	BACKGROUND	< 16	< 1
Quality Control		500	25.0
True Value QC		500	25.0
% Recovery		100	100
Relative Percent Difference		1.0	7.8

METHODS: Cl: Std. Methods 4500-Cl⁻B; SO_4: EPA 600 375.4

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

Chemist

04-24-07
Date

H12492B

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

Apache Corporation
Attn: Mr. Guinn Burks
P.O. Box 728
Crane, Texas 79731

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO_4^{2-})	pH	TCLP	OTHER >>>	PAH			
#12492 - 1	WSW-3 (2')	G	1			1					X		10-Apr-07	12:35			X	X							
- 2	BH-5 (3')	G	1			1					X		19-Apr-07	7:45			X	X							
- 3	BH-6 (3')	G	1			1					X		19-Apr-07	8:00			X	X							
- 4	BH-7 (3')	G	1			1					X		19-Apr-07	8:15			X	X							
- 5	BH-8 (3')	G	1			1					X		19-Apr-07	8:21			X	X							
- 6	BH-9 (3')	G	1			1					X		19-Apr-07	8:25			X	X							
- 7	BH-10 (3')	G	1			1					X		19-Apr-07	8:55			X	X							
- 8	BH-11 (3')	G	1			1					X		19-Apr-07	9:30			X	X							
- 9	ESW-4 (2')	G	1			1					X		19-Apr-07	9:45			X	X							
- 10	ESW-5 (2')	G	1			1					X		19-Apr-07	10:00			X	X							

Sampler Relinquished: Sebastian Romero	Date: 4-20-07 Time: 4:00 PM	Received By: Jason Stegemoller	E-mail results to: jstegemoller@envplus.net
Relinquished by: Jason Stegemoller	Date: 4-20-07 Time: 4:35 PM	Received By: (lab staff) Hope L. Moreno	NOTES:
Delivered by: —	Sample Cool & Intact Yes No	Checked By:	

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

Apache Corporation
Attn: Mr. Guinn Burks
P.O. Box 728
Crane, Texas 79731

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
#0492 -21	ESW-6 (2')	G	1			1					X		19-Apr-07	10:30			X	X							
-22	ESW-7 (2')	G	1			1					X		19-Apr-07	10:46			X	X							
-23	WSW-4 (2')	G	1			1					X		19-Apr-07	11:00			X	X							
-24	WSW-5 (2')	G	1			1					X		19-Apr-07	11:05			X	X							
-25	WSW-6 (2')	G	1			1					X		19-Apr-07	13:05			X	X							
-26	WSW-7 (2')	G	1			1					X		19-Apr-07	13:15			X	X							
-27	NSW-1 (2')	G	1			1					X		19-Apr-07	13:30			X	X							
-28	BACKGROUND	G	1			1					X		19-Apr-07	14:15			X	X							
9																									
10																									

Sampler Relinquished: Sebastian Romero
Date: 4-20-07 Time: 9:00 AM
Received By: Jason Stegemoller

Relinquished By: Jason Stegemoller
Date: 4-20-07 Time: 4:35 PM
Received By: (lab staff) Hope L. Moreno

Delivered by:

Sample Cool & Intact: Yes / No

Checked By:

E-mail results to: jstegemoller@envplus.net

NOTES:

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

Apache Corporation
Attn: Mr. Guinn Burks
P.O. Box 728
Crane, Texas 79731

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CRUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 1005M	CHLORIDES (Cl)	SULFATES (SO_4^{-2})	pH	TCLP	OTHER >>>	PAH			
#12492 – 1	BH-1 (3')	G	1			1					X		10-Apr-07	9:50			X	X							
– 2	BH-2 (3')	G	1			1					X		10-Apr-07	10:05			X	X							
– 3	BH-3 (3')	G	1			1					X		10-Apr-07	10:19			X	X							
– 4	BH-4 (3')	G	1			1					X		10-Apr-07	10:35			X	X							
– 5	SSW-1 (2')	G	1			1					X		10-Apr-07	10:45			X	X							
– 6	ESW-1 (2')	G	1			1					X		10-Apr-07	11:10			X	X							
– 7	WSW-1 (2')	G	1			1					X		10-Apr-07	11:20			X	X							
– 8	ESW-2 (2')	G	1			1					X		10-Apr-07	11:35			X	X							
– 9	WSW-2 (2')	G	1			1					X		10-Apr-07	12:05			X	X							
– 10	ESW-3 (2')	G	1			1					X		10-Apr-07	12:25			X	X							

Sampler Relinquished: Sebastian Romero
Date: 4-20-07 Time: 4:05 pm

Relinquished by: Jason Stegemoller
Date: 4-20-07 Time: 4:35 PM

Received By: Jason Stegemoller

Received By: (lab staff) Hope S. Moreno

Delivered by:

Sample Cool & Intact: Yes / No

Checked By:

E-mail results to: jstegemoller@envplus.net

NOTES:

CARDINAL LABORATORIES

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

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

Receiving Date: 04/26/07
Reporting Date: 04/30/07
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 04/24/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/kg)	SO_4 (mg/kg)
ANALYSIS DATE:		04/27/07	04/27/07
H12517-1	BH-1 (6')	880	677
H12517-2	BH-2 (6')	176	33.8
H12517-3	BH-3 (6')	352	156
H12517-4	TT-2 (8')	496	240
H12517-5	TT-2 (10')	336	175
H12517-6	TT-1 (8')	224	158
H12517-7	TT-1 (10')	208	90
H12517-8	NSW-1 (2')	528	362
H12517-9	WSW-1 (2')	289	145
H12517-10	WSW-2 (2')	432	244
H12517-11	ESW-1 (2')	688	1175
H12517-12	ESW-2 (2')	80	1200
H12517-13	SSW-2 (2')	928	314
H12517-14	BACKGROUND	< 16	0.44
Quality Control		490	24.8
True Value QC		500	25.0
% Recovery		98.0	99.3
Relative Percent Difference		0.0	0.7

METHODS: Cl: Std. Methods 4500-Cl⁻B; SO_4: EPA 600 375.4

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

Chemist

04 30 07
Date

H12517

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

Bill To

Apache Corporation
Attn: Mr. Guinn Burks
P.O. Box 728
Crane, Texas 79731

ANALYSIS REQUEST

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES (SO_4^{2-})	pH	TCLP	OTHER >>>	PAH
112517 - 1	BH-1 (6')	G	1			1					X		24-Apr-07	8:40			X	X				
- 2	BH-2 (6')	G	1			1					X		24-Apr-07	8:50			X	X				
- 3	BH-3 (6')	G	1			1					X		24-Apr-07	9:15			X	X				
- 4	TT-2 (8')	G	1			1					X		24-Apr-07	9:50			X	X				
- 5	TT-2 (10')	G	1			1					X		24-Apr-07	12:40			X	X				
- 6	TT-1 (8')	G	1			1					X		24-Apr-07	10:55			X	X				
- 7	TT-1 (10')	G	1			1					X		24-Apr-07	12:33			X	X				
- 8	NSW-1 (2')	G	1			1					X		24-Apr-07	10:10			X	X				
- 9	WSW-1 (2')	G	1			1					X		24-Apr-07	10:43			X	X				
- 10	WSW-2 (2')	G	1			1					X		24-Apr-07	11:20			X	X				

Sampler Relinquished: Sebastian Romero	Date 4-26-07 Time 1:30P	Received By: Jason Stegemoller	E-mail results to: jstegemoller@envplus.net
Relinquished by:	Date Time 2:10	Received By: (lab staff) Burgess & Cash	NOTES:
Delivered by:	Sample Cool & Intact (Yes) No	Checked By:	

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

Bill To

Apache Corporation
Attn: Mr. Guinn Burks
P.O. Box 728
Crane, Texas 79731

ANALYSIS REQUEST

LAB I.D.		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
#12517 - 1	1	ESW-1 (2')	G	1			1					X		24-Apr-07	11:25			X	X							
- 1	2	ESW-2 (2')	G	1			1					X		24-Apr-07	11:46			X	X							
- 3	3	SSW-2 (2')	G	1			1					X		24-Apr-07	14:00			X	X							
- 4	4	Background	G	1			1					X		24-Apr-07	14:15			X	X							
	5																									
	6																									
	7																									
	8																									
	9																									
	10																									

Sampler Relinquished: Sebastian Romero	Date 1:30P Time 4-26-07	Received By: Jason Stegemoller	E-mail results to: jstegemoller@envplus.net NOTES:
Relinquished by:	Date Time 2:10	Received By: (lab staff) Burgess H. Cobb	
Delivered by:	Sample Cool & Intact (Yes) No	Checked By:	

CARDINAL LABORATORIES

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

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

Receiving Date: 04/26/07
Reporting Date: 04/30/07
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 04/25/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/kg)	SO_4 (mg/kg)
ANALYSIS DATE:		04/30/07	04/30/07
H12518-1	BH-1 (1')	96	43.1
H12518-2	BH-2 (1')	480	280
H12518-3	BH-3 (1')	400	136
H12518-4	BH-4 (1')	784	261
H12518-5	BH-5 (1')	224	306
H12518-6	BH-6 (1')	240	613
H12518-7	SSW (1')	688	250
H12518-8	NSW (1')	16	42.7
H12518-9	ESW (1')	16	22.3
H12518-10	WSW (1')	16	39.8
Quality Control		480	26.4
True Value QC		500	25.0
% Recovery		96.0	106
Relative Percent Difference		2.1	6.1

METHODS: Cl: Std. Methods 4500-Cl⁻B; SO_4: EPA 600 375.4

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

Chemist

04-30-07
Date

H12518

Environmental Plus, Inc.

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

Chain of Custody Form

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

Bill To

Apache Corporation
Attn: Mr. Guinn Burks
P.O. Box 728
Crane, Texas 79731

ANALYSIS REQUEST

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
4/25/18 — 1	BH-1 (~~0~~) (1')	G	1			1					X		25-Apr-07	9:55			X	X							
— 2	BH-2 (~~0~~) (1')	G	1			1					X		25-Apr-07	10:04			X	X							
— 3	BH-3 (1')	G	1			1					X		25-Apr-07	10:16			X	X							
— 4	BH-4 (1')	G	1			1					X		25-Apr-07	10:27			X	X							
— 5	BH-5 (1')	G	1			1					X		25-Apr-07	10:41			X	X							
— 6	BH-6 (1')	G	1			1					X		25-Apr-07	11:15			X	X							
— 7	SSW (1')	G	1			1					X		25-Apr-07	11:27			X	X							
— 8	NSW (1')	G	1			1					X		25-Apr-07	11:40			X	X							
— 9	ESW (1')	G	1			1					X		25-Apr-07	11:50			X	X							
— 10	WSW (1')	G	1			1					X		25-Apr-07	11:06			X	X							

Sampler Relinquished: Sebastian Romero	Date 1:30P Time 4-26-07	Received By: Jason Stegemoller	E-mail results to: jstegemoller@envplus.net NOTES:
Relinquished by:	Date Time 2:10	Received By: (lab staff) Burgess A Cooke	
Delivered by:	Sample Cool & Intact (Yes) No	Checked By:	

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

Bill To

Apache Corporation
Attn: Mr. Guinn Burks
P.O. Box 728
Crane, Texas 79731

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH
H17552 - 1	S-BH-1 (6')	G	1			1					X		01-May-07	8:45			X	X				
-2	S-BH-2 (6')	G	1			1					X		01-May-07	9:00			X	X				
-3	S-BH-7 (6')	G	1			1					X		01-May-07	9:25			X	X				
-4	S-BH-8 (6')	G	1			1					X		01-May-07	9:40			X	X				
-5	S-BH-9 (6')	G	1			1					X		01-May-07	9:55			X	X				
6																						
7																						
8																						
9																						
10																						

Sampler Relinquished:	Date / Time	Received By:	E-mail results to: jstegemoller@envplus.net NOTES:
Relinquished by:	Date 5-7-07 / Time 240	Received By: (lab staff)	
Delivered by:	Sample Cool & Intact: (Yes) No	Checked By:	

CARDINAL LABORATORIES

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

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

Receiving Date: 05/07/07
Reporting Date: 05/09/07
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 05/01/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AB
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/kg)	SO_4 (mg/kg)
ANALYSIS DATE:		05/09/07	05/09/07
H12552-1	S-BH-1 (6')	112	624
H12552-2	S-BH-2 (6')	80	275
H12552-3	S-BH-7 (6')	80	287
H12552-4	S-BH-8 (6')	608	996
H12552-5	S-BH-9 (6')	576	1240
Quality Control		490	27.2
True Value QC		500	25.0
% Recovery		98.0	109
Relative Percent Difference		2.1	3.0

METHODS: Cl: Std. Methods 4500-Cl⁻B; SO_4: EPA 600 375.4

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

Chemist

05-09-07
Date

H12552

Environmental Plus, Inc.

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

Chain of Custody Form

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

Bill To

Apache Corporation
Attn: Mr. Guinn Burks
P.O. Box 728
Crane, Texas 79731

ANALYSIS REQUEST

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES (SO_4^{-2})	pH	TCLP	OTHER >>>	PAH			
H12570 – 1	ESW-6B (3')	G	1			1					X		01-May-07	9:00			X	X							
– 2	NSW-1B (3')	G	1			1					X		01-May-07	9:25			X	X							
– 3	N-SSW-B (3')	G	1			1					X		01-May-07	11:10			X	X							
– 4	N-ESW-1 B (3')	G	1			1					X		01-May-07	11:30			X	X							
– 5	N-ESW-2 B (3')	G	1			1					X		01-May-07	12:55			X	X							
6																									
7																									
8																									
9																									
10																									

Sampler Relinquished:	Date / Time	Received By:	E-mail results to: jstegemoller@envplus.net NOTES:
Relinquished by:	Date 5-8-07 / Time 2:30	Received By: (lab staff)	
Delivered by:	Sample Cool & Intact: Yes (1) / No	Checked By:	

CARDINAL LABORATORIES

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

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

Receiving Date: 05/08/07
Reporting Date: 05/09/07
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 05/01/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/kg)	SO_4 (mg/kg)
ANALYSIS DATE:		05/09/07	05/09/07
H12552-1	ESW-6B (3')	32	15.1
H12552-2	NSW-1B (3')	160	220
H12552-3	N-SSW-B (3')	448	183
H12552-4	N-ESW-1 B (3')	64	186
H12552-5	N-ESW-2 B (3')	48	266
Quality Control		490	27.2
True Value QC		500	25.0
% Recovery		98.0	109
Relative Percent Difference		2.1	3.0

METHODS: Cl: Std. Methods 4500-Cl⁻B; SO_4: EPA 600 375.4

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

Chemist

05-09-07
Date

H12570

CARDINAL LABORATORIES

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

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

Receiving Date: 05/11/07
Reporting Date: 05/14/07
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 05/10/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: LB
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/kg)	SO_4 (mg/kg)
ANALYSIS DATE:		05/14/07	05/14/07
H12581-1	BH-4B (4')	16	119.0
H12581-2	BH-6B (4')	80	267
H12581-3	SSW-B (3')	160	165
H12581-4	S-BH-8 (8')	336	647
H12581-5	S-BH-9 (8')	240	430
Quality Control		480	25.5
True Value QC		500	25.0
% Recovery		96.0	102
Relative Percent Difference		2.1	9.4

METHODS: Cl: Std. Methods 4500-ClˉB; SO_4: EPA 600 375.4

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

John L. Moore
Chemist

05-14-07
Date

H12581

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

Bill To: Apache Corporation, Attn: Mr. Guinn Burks, P.O. Box 728, Crane, Texas 79731

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH
H12581 – 1	BH-4B (4')	G	1			1					X		10-May-07	9:50			X	X				
– 2	BH-6B (4')	G	1			1					X		10-May-07	10:45			X	X				
– 3	SSW-B (3')	G	1			1					X		10-May-07	11:20			X	X				
– 4	S-BH-8 (8')	G	1			1					X		10-May-07	14:35			X	X				
– 5	S-BH-9 (8')	G	1			1					X		10-May-07	14:45			X	X				
6																						
7																						
8																						
9																						
10																						

Sampler Relinquished: Sebastian Romero — Date 5-11-07 Time 10:00 — Received By:

Relinquished by: — Date 5-11-07 Time 11:50 — Received By: (lab staff)

Delivered by:

Sample Cool & Intact: (Yes) No

Checked By:

E-mail results to: jstegemoller@envplus.net

NOTES:

CARDINAL LABORATORIES

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

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

Receiving Date: 05/15/07
Reporting Date: 05/16/07
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 05/15/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AB

LAB NUMBER	SAMPLE ID	Cl (mg/kg)	SO_4 (mg/kg)
ANALYSIS DATE:		05/16/07	05/16/07
H12598-1	S-BH-11 (10')	160	217
H12598-2	S-WSW-5 (2')	96	158
Quality Control		490	23.7
True Value QC		500	25.0
% Recovery		98.0	95
Relative Percent Difference		0.0	7.3

METHODS: Cl: Std. Methods 4500-Cl⁻B; SO_4: EPA 600 375.4

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

Chemist

05-16-07
Date

H12598

Environmental Plus, Inc.

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

Chain of Custody Form

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

BILL TO

Apache Corporation
Attn: Mr. Guinn Burks
P.O. Box 728
Crane, Texas 79731

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES (SO_4^{-2})	pH	TCLP	OTHER >>>	PAH
H12598-01	1 S-BH-11 (10')	G	1			1					X		15-May-07	11:25			X	X				
-02	2 S-WSW-5 (2')	G	1			1					X		15-May-07	11:10			X	X				
	3																					
	4																					
	5																					
	6																					
	7																					
	8																					
	9																					
	10																					

Sampler Relinquished:	Date	Received By:	E-mail results to: jstegemoller@envplus.net
	Time		NOTES:
Relinquished by:	Date 2:52 PM	Received By: (lab staff)	
	Time 5-15-07		
Delivered by	Sample Cool & Intact: Yes / No	Checked By	

CARDINAL LABORATORIES

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

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

Receiving Date: 05/17/07
Reporting Date: 05/17/07
Project Owner: APACHE CORPORATION (240014)
Project Name: N. MON. GRAYBURG SA 603
Project Location: UL-C, SEC 20, T19S, R37E

Sampling Date: 05/16/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: LB
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/kg)	SO_4 (mg/kg)
ANALYSIS DATE:		05/17/07	05/17/07
H12612-1	N-BH-1 (8')	176	190
Quality Control		490	23.6
True Value QC		500	25.0
% Recovery		98.0	94
Relative Percent Difference		0.0	0.1

METHODS: Cl: Std. Methods 4500-Cl⁻B; SO_4: EPA 600 375.4

NOTE: Analysis performed on a 1:4 w:v aqueous extract.

Chemist

05-17-07
Date

H12612

Environmental Plus, Inc.

Chain of Custody Form

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

Company Name	Environmental Plus, Inc.
EPI Project Manager	Jason Stegemoller
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Apache Corporation
Facility Name	N. Mon. Grayburg SA 603
Location	UL-C, Sec 20, T19S, R37E
Project Reference	240014
EPI Sampler Name	Sebastian Romero

Bill To

Apache Corporation
Attn: Mr. Guinn Burks
P.O. Box 728
Crane, Texas 79731

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^=$)	pH	TCLP	OTHER >>>	PAH
H12612 1	N-BH-1 (8')	G	1			1					X		16-May-07	12:20			X	X				
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Sampler Relinquished: Sebastian Romero	Date 5-17-07 Time 7:00	Received By: Ginnon Burks	E-mail results to: jstegemoller@envplus.net
Relinquished by: Ginnon Burks	Date 5-17-07 Time 11:30	Received By: (lab staff)	NOTES:
Delivered by:	Sample Cool & Intact (Yes) No	Checked By: ZB	

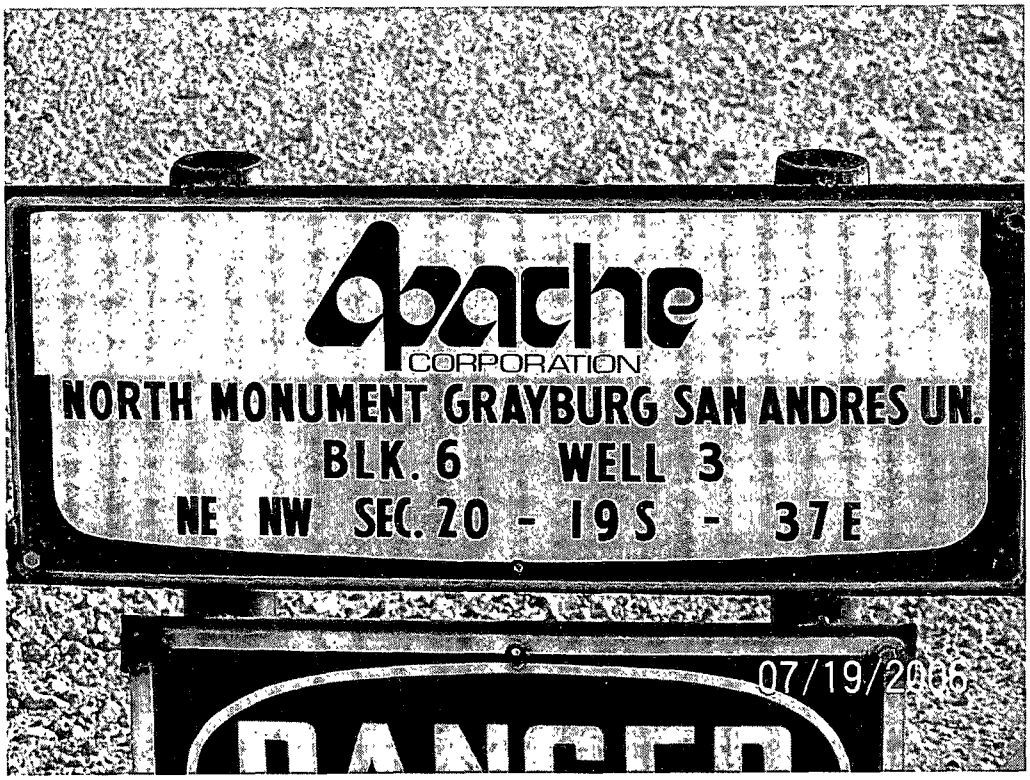

***Photo #1*:** Well location sign.

***Photo #2*:** Lanexco well location sign.

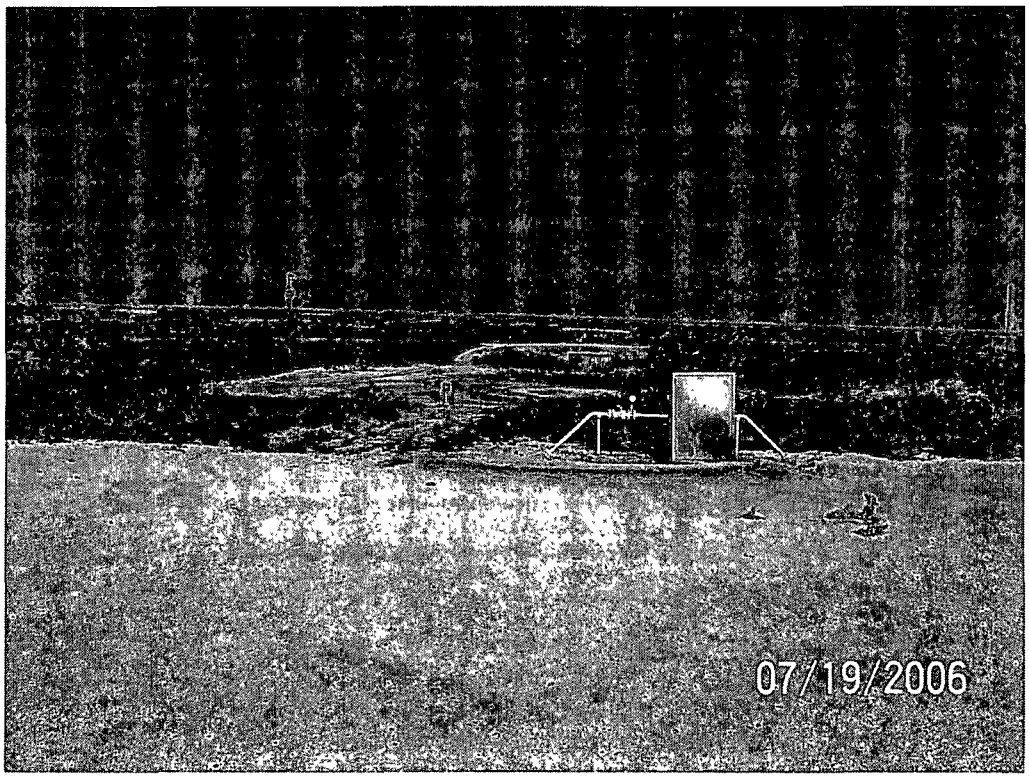

Photo #3: Looking westerly at point of release. Dark stained soil indicates contamination.

Photo #4: Looking westerly from point of release at Lanexco well pad. Dark stained soil indicates contamination.

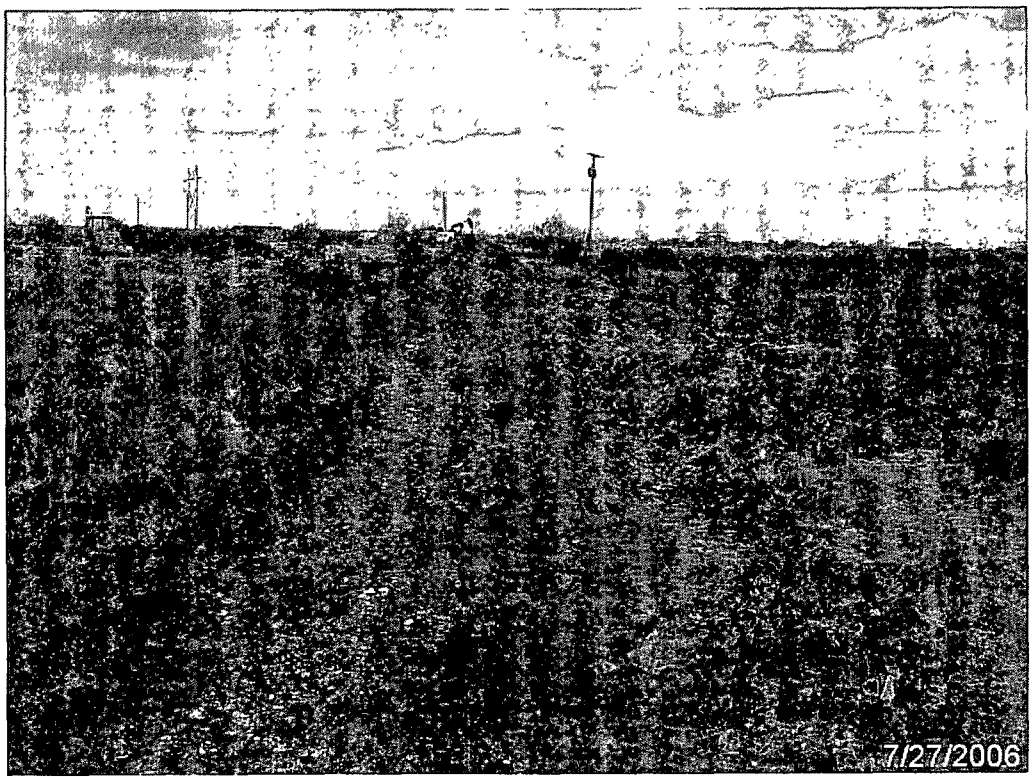

Photo #5: Looking northerly at excavation of the south flowpath area.

Photo #7: Looking west-northwesterly at excavation of Lanexco caliche well pad.

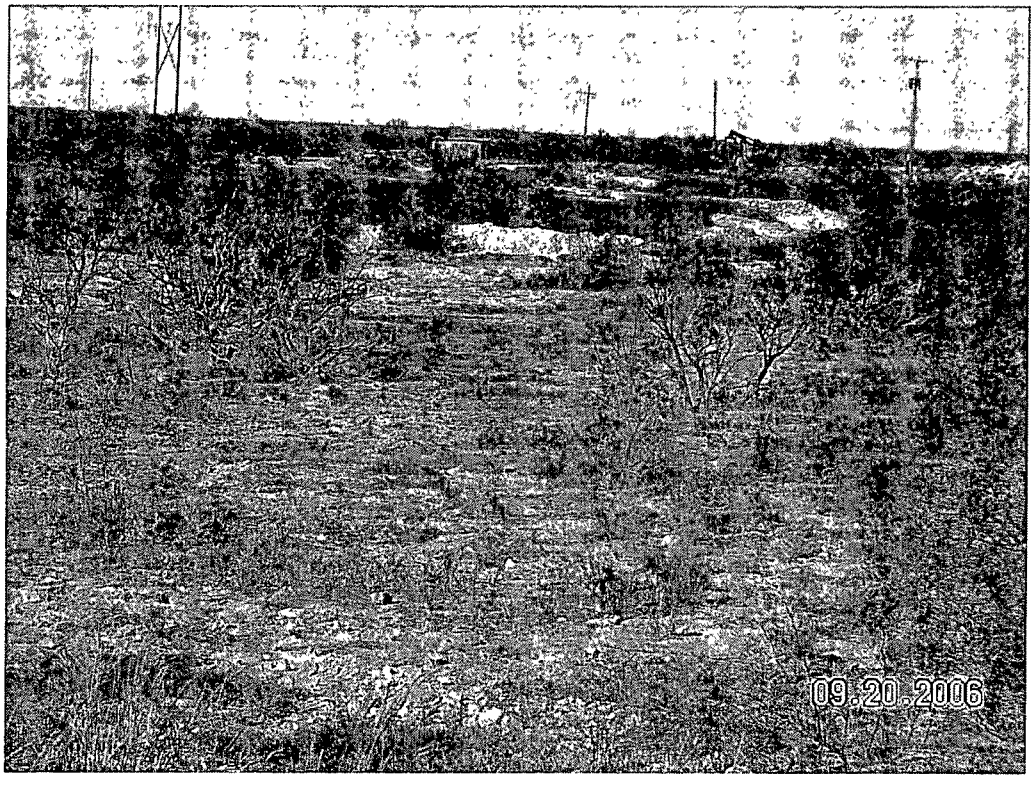

Photo #8: Looking northeasterly across ephemeral pond to excavation.

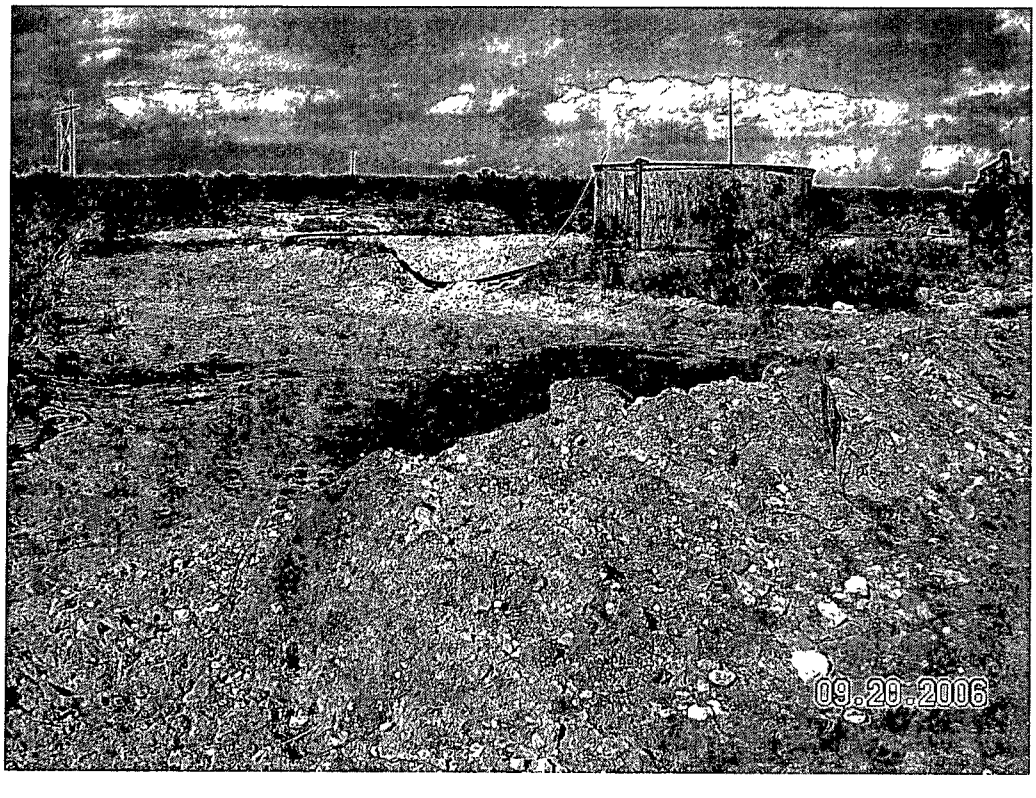

Photo #9: Looking northeasterly at pooling area west of Lanexco caliche well pad (i.e., location of soil boring SB-1).

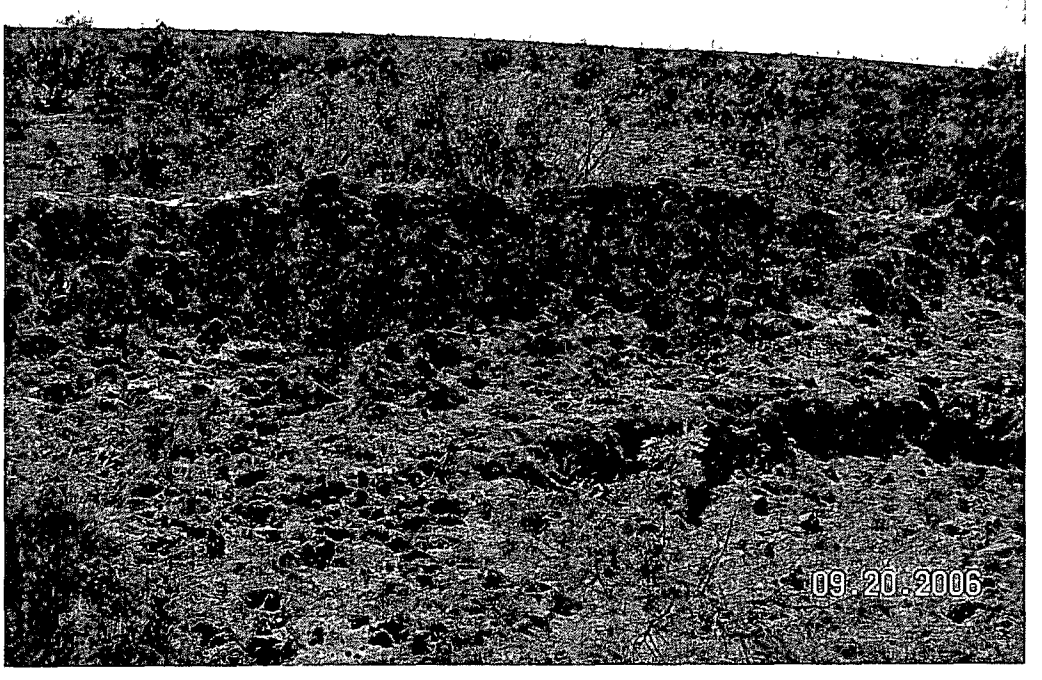

Photo #10: Looking west-southwesterly at southern-most berm (i.e., location of soil boring SB-4), ephemeral pond area is in background.

Photo #11: Looking southerly across release area at center berm in southern portion of excavation.

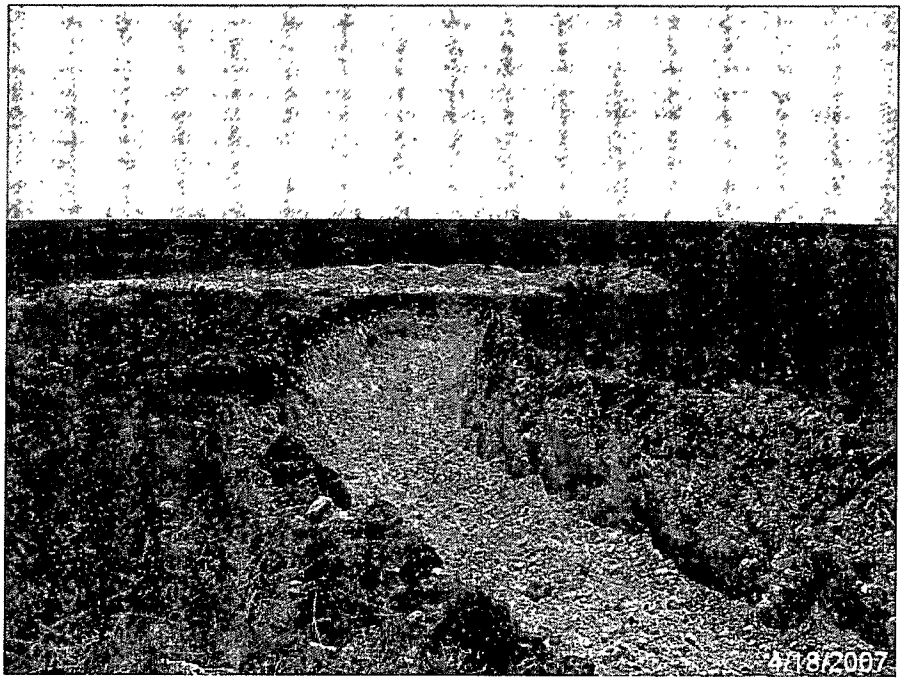

Photo #12: Looking southwesterly across southernmost point of south excavation area

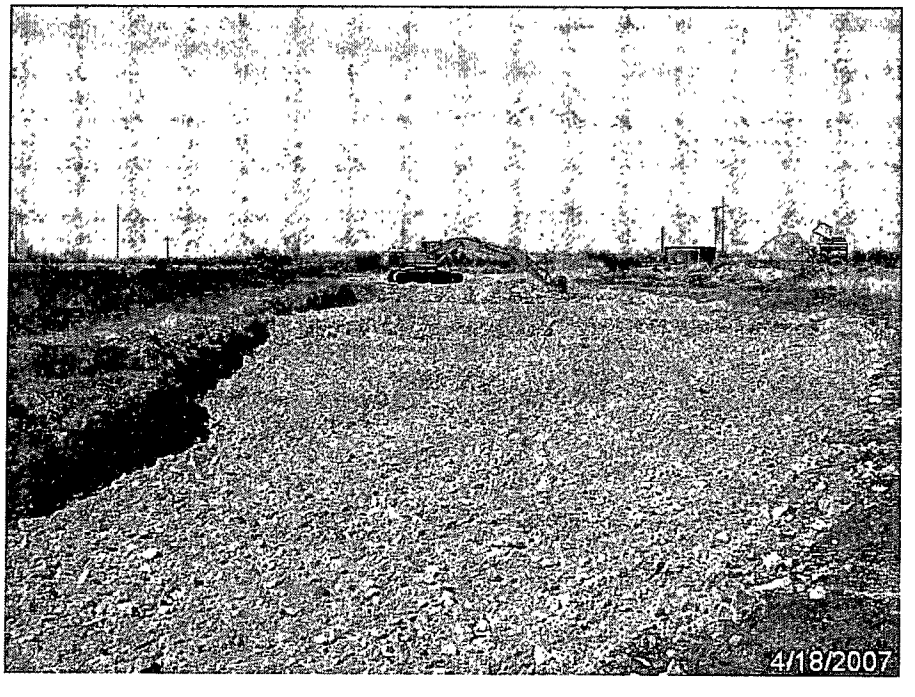

Photo #13: Looking northerly across south excavation area.

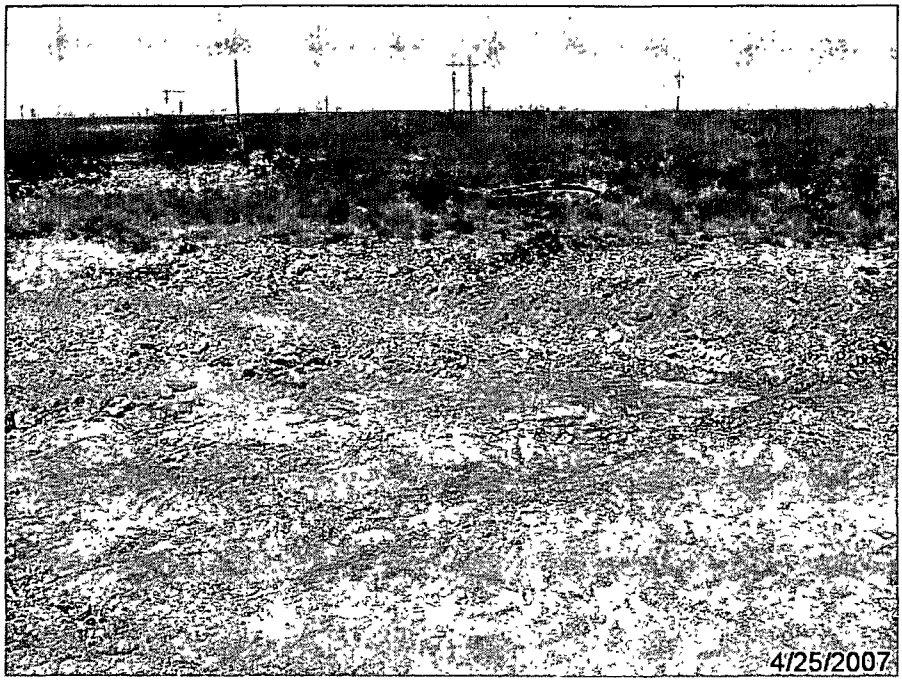

Photo #14: Looking northwesterly across injection well excavation area.

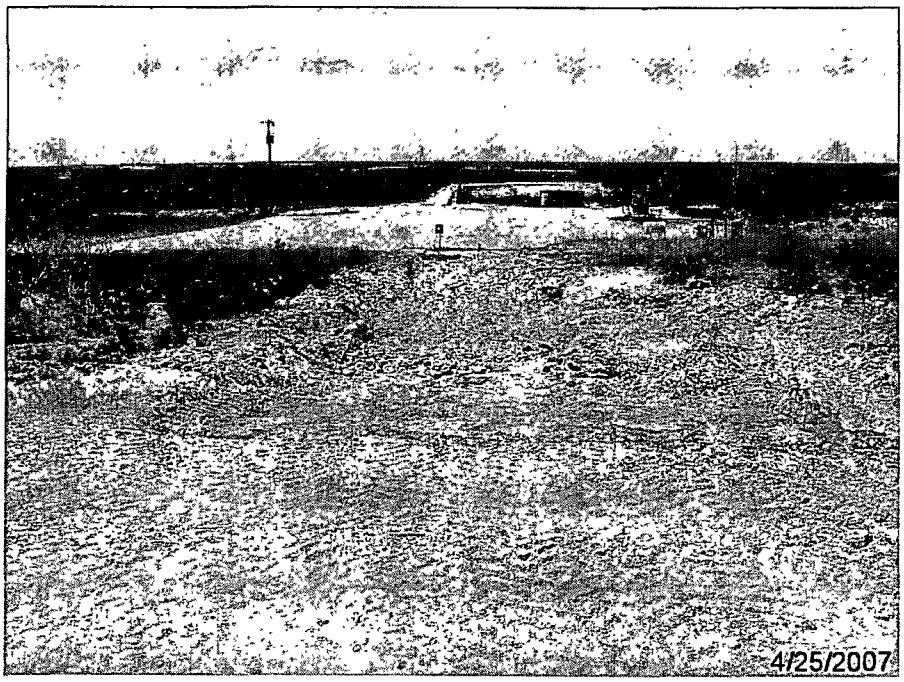

Photo #15: Looking westerly across injection well excavation area.

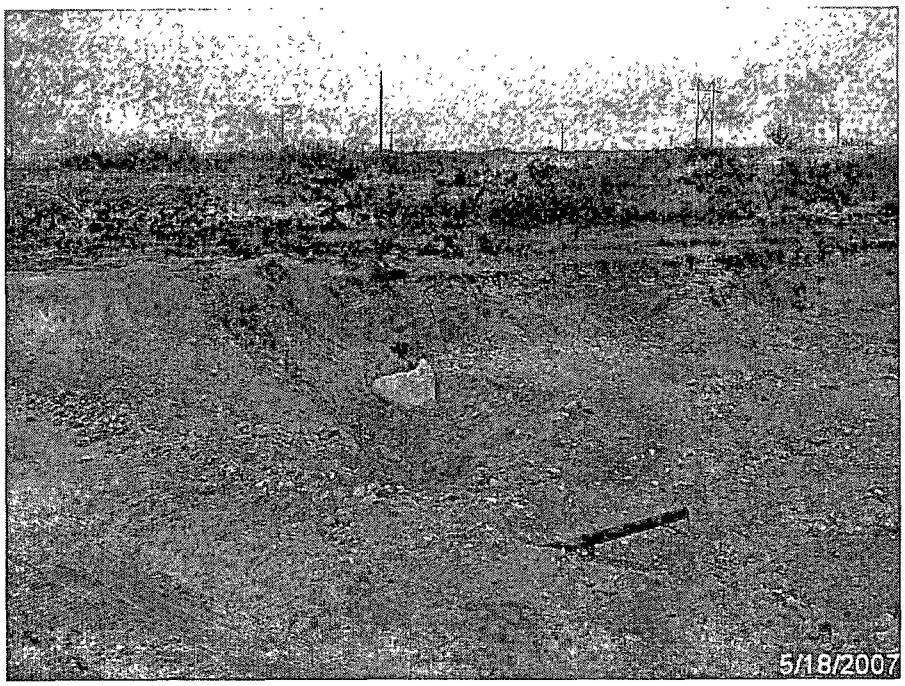

Photo #16: Looking northwesterly across north excavation area

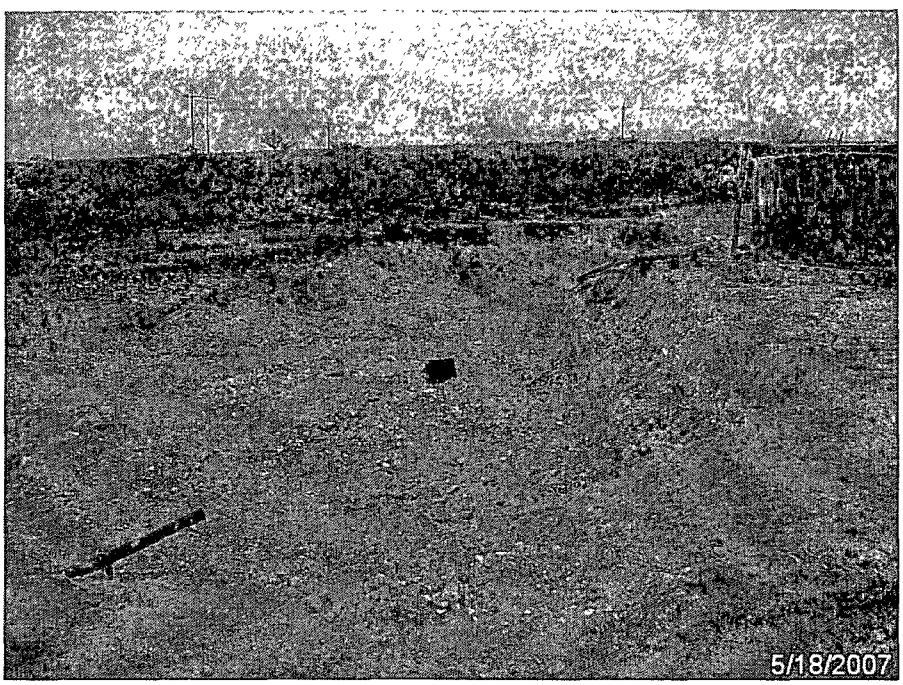

Photo #17: Looking northerly across north excavation area.

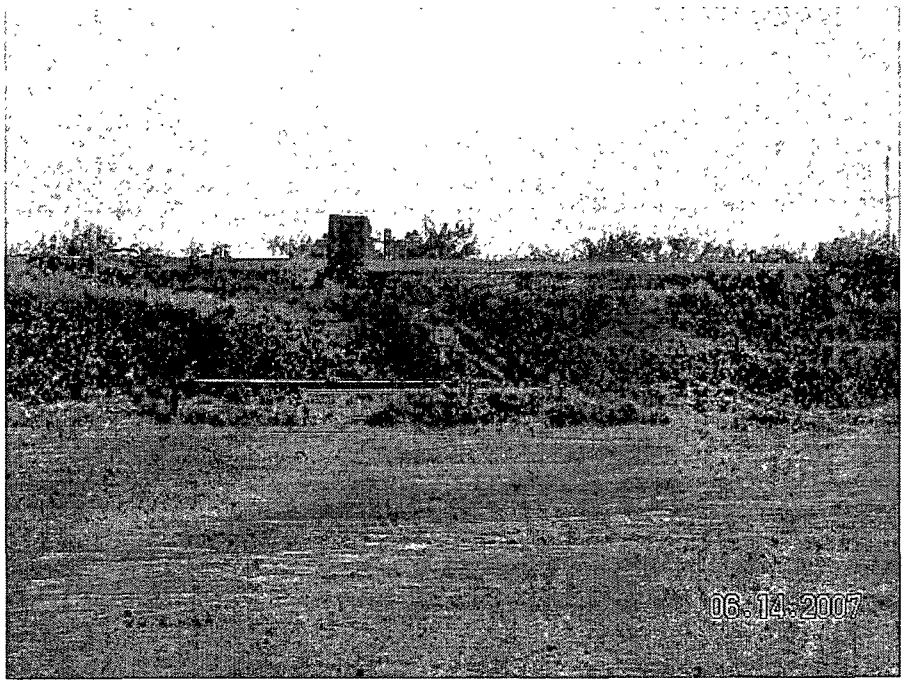

Photo #18: Looking westerly towards injection well excavation area after backfilling.

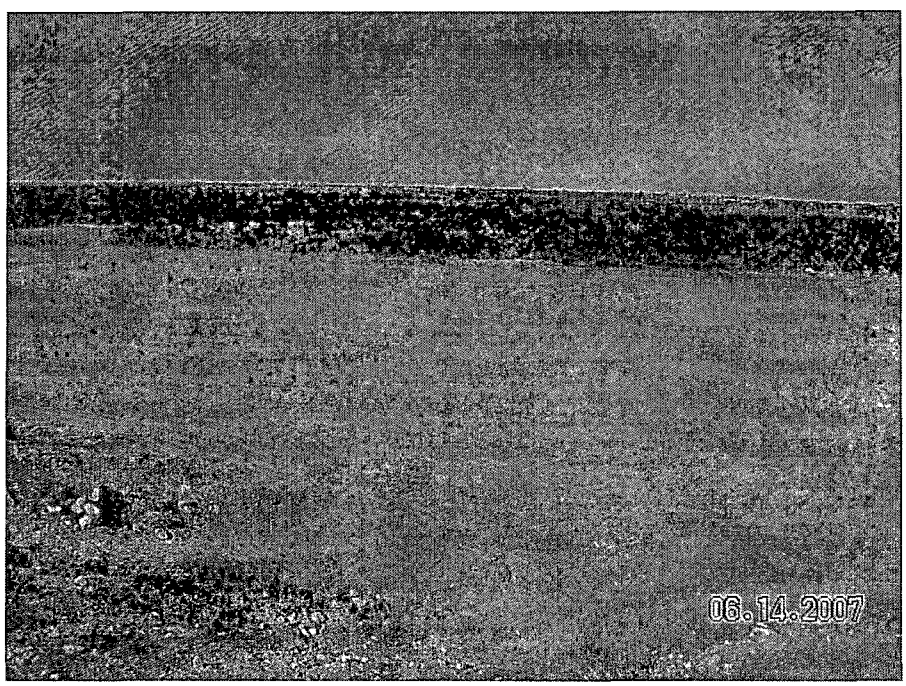

Photo #19: Looking west-southwesterly across northern portion of south excavation area after backfilling.

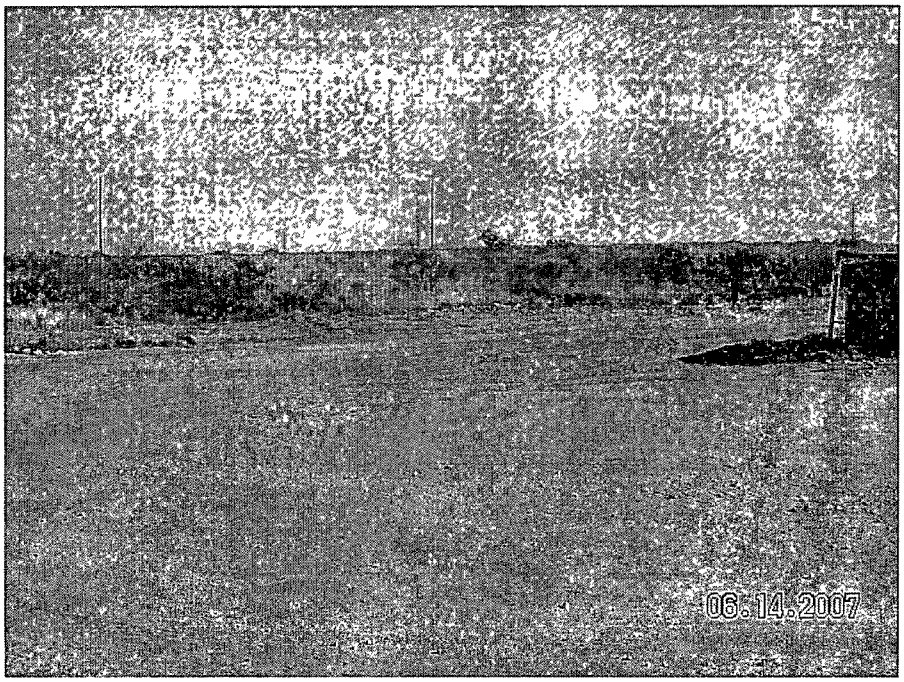

Photo #20: Looking northerly across north excavation area after backfilling.

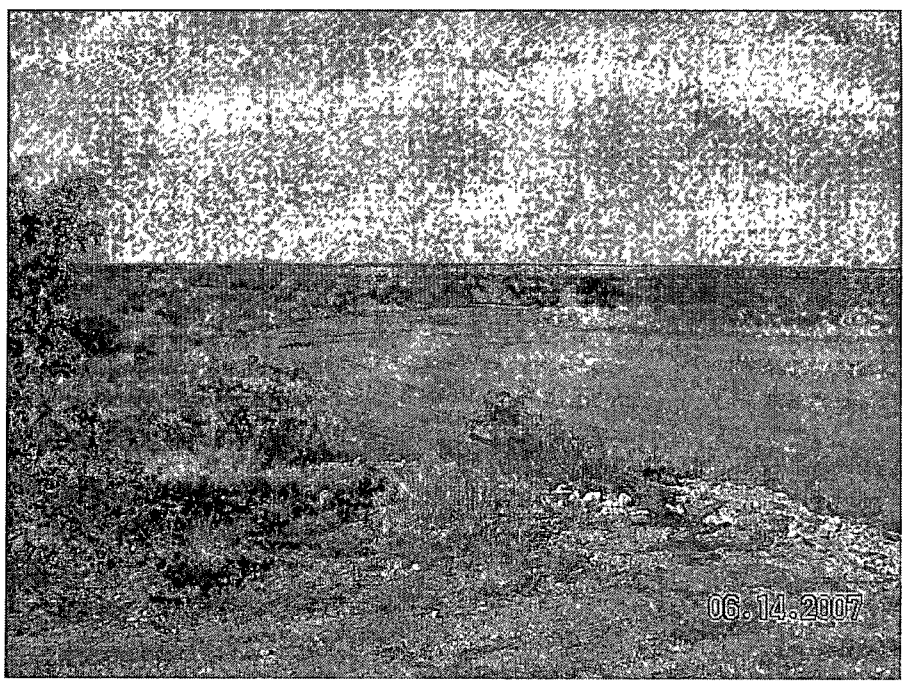

Photo #21: Looking southwesterly across south excavation area after backfilling.

Log Of Test Borings

(NOTE - Page 1 of 1)

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

Project Number: NMOCD 1RP# 1019; EPI Ref. #240014

Project Name: Apache Corporation - NMGSAU #603

Location: UL-C, Section 20, Township 19 South, Range 37 East

Boring Number: SB-1 | Surface Elevation: 3,680-feet amsl

Start Date: 11-29-06 Time: 08:00

Completion Date: 11-29-06 Time: 12:00

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
							0	1' Topsoil - Sandy Loam
								4' Fractured Limestone
0915	SS	5	Dry	--	480		5	5' Caliche, White to Tan, Hard to Firm
							10	
1020	SS	5	Dry	--	240			
							15	
1123	SS	4	Dry	--	160			Sandstone, Hard to Firm
								End of Soil Boring at 16' bgs
							20	
							25	
							30	

Water Level Measurements (feet)

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

Drilling Method: HSA 3.5" ID

Backfill Method: Bentonite

Field Representative: GB

Log Of Test Borings

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

Project Number: NMOCD 1RP# 1019; EPI Ref. #240014

Project Name: Apache Corporation - NMGSAU #603

Location: UL-C, Section 20, Township 19 South, Range 37 East

Boring Number: SB-2 | Surface Elevation: 3,680-feet amsl

Start Date: 11-29-06 Time: 12:30

Completion Date: 11-29-06 Time: 13:30

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
							5	4' Fractured Limestone
1305	SS	5	Dry	--	240			5' Caliche, White to Tan, Hard to Firm
							10	
1325	SS	4	Dry	--	160			Sandstone, Hard to Firm
								End of Soil Boring at 11' bgs
							15	
							20	
							25	
							30	

Water Level Measurements (feet)

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

Drilling Method: HSA 3.5" ID

Backfill Method: Bentonite

Field Representative: GB

Log Of Test Borings

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

Project Number: NMOCD 1RP# 1019; EPI Ref. #240014

Project Name: Apache Corporation - NMGSAU #603

Location: UL-C, Section 20, Township 19 South, Range 37 East

Boring Number: SB-3 | Surface Elevation: 3,680-feet amsl

Start Date: 11-29-06 Time: 13:45

Completion Date: 11-29-06 Time: 15:00

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
								4' Fractured Limestone
1413	SS	5	Dry	--	240		5	5' Caliche, White to Tan, Hard to Firm
1450	SS	4	Dry	--	160		10	Sandstone, Hard to Firm
								End of Soil Boring at 11' bgs
							15	
							20	
							25	
							30	

Water Level Measurements (feet)

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

Drilling Method: HSA 3.5" ID

Backfill Method: Bentonite

Field Representative: GB

Log Of Test Borings

(NOTE - Page 1 of 1)

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

Project Number: NMOCD 1RP# 1019; EPI Ref. #240014

Project Name: Apache Corporation - NMGSAU #603

Location: UL-C, Section 20, Township 19 South, Range 37 East

Boring Number: SB-4 | Surface Elevation: 3,680-feet amsl

Start Date: 11-29-06 Time: 15:15

Completion Date: 11-29-06 Time: 16:45

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
1515	SS	5	Dry	--	160			1' Topsoil-Sandy Loam
								4' Fractured Limestone
1545	SS	5	Dry	--	160		5	
1640	SS	3	Dry	--	160		10	Sandstone, Tan, Hard to Firm
								End of Soil Boring at 11' bgs
							15	
							20	
							25	
							30	

Water Level Measurements (feet)

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

Drilling Method: HSA 3.5" ID

Backfill Method: Bentonite

Field Representative: GB

District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

RELEASE NOTIFICATION AND CORRECTIVE ACTION

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Apache Corporation	**Contact:** Guinn Burks
Address: P.O. Box 728 Crane, TX 79731	**Telephone No.:** (432) 556-9143
Facility Name: North Monument Grayburg San Andres Unit (NMGSAU) #603	**Facility Type:** Injection Well

Surface Owner: State of New Mexico	**Mineral Owner:** State of New Mexico	**Lease No.:** 1RP #1019 API 30025056690000

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	20	19 S	37 E					Lea

Latitude: N 32° 39' 04.30" **Longitude:** W 103° 16' 33.43"

NATURE OF RELEASE

Type of Release: Injection Water	**Volume of Release:** ≈ 85 barrels	**Volume Recovered:** 60 barrels
Source of Release: Injection Line	**Date and Hour of Occurrence:** July 16, 2006 @ A.M.	**Date and Hour of Discovery:** July 16, 2006 @ 8:45 A.M.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** Gary Wink	
By Whom? Doug Mathews, Apache Corp.	**Date and Hour** July 16, 2006 @ 12:00 P.M.	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse.** Not Applicable	

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

Describe Cause of Problem and Remedial Action Taken.* Plug blew out of injection line. Vacuum trucks were dispatched to recover free liquids and line repaired. EPI was retained to began recovery of injection water saturated soil and delineate extent of impacts.

Describe Area Affected and Cleanup Action Taken.* Approximately 7,600-yd^3 of impacted soil was removed from an excavation area of approximately 42,800-ft^2 to a maximum depth of 10-ft bgs. Impacted soil excavated during initial response activities (~1,350-yd^3) was transported to Sundance Services for disposal. Remaining impacted soil (~6,250-yd^3) was excavated and transported to C and C Landfarm for treatment. Field and laboratory analyses of final soil samples collected from the excavation sidewalls and floor locations indicate residual chloride and sulfate concentrations are inadequate to impact local groundwater (i.e., ~50-feet bgs) or impede vegetative growth. NMOCD Remedial Goals: benzene-10 mg/Kg; BTEX-50mg/Kg; TPH-100 mg/Kg.

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

Signature: Guinn Burks	**OIL CONSERVATION DIVISION**
Printed Name: Guinn Burks	**Approved by District ~~Supervisor~~:** ENVIRO ENGR
Title: EH&S Technician South/Central Permian	**Approval Date:** 9.7.07 **Expiration Date:** —
E-mail Address: guinn.burks@apachecorp.com	**Conditions of Approval:** **Attached** ☐
Date: **Phone:**	

* Attach Additional Sheets If Necessary

RP 1519