BP America
Archuleta GC A 4
(K) Sec 5 – T29N – R9W
San Juan County, New Mexico
API: 30-045-20977
3RP-465

Summary Record of Impact Remediation

March 2, 2007 Soils impacted with hydrocarbons encountered during removal of a small (8' diameter x 2' tall) steel drip tank adjacent to the well meter run. Initial laboratory analysis of soils collected 6' below grade @ tank center tested TPH = 1,960 mg/Kg. Tank and piping appeared to have good integrity and impacts believed to be historical, with no original source evident.

Site Closure Standard Determined at 100 ppm TPH based on:

Depth to Groundwater based site investigation < 10 feet (20 points)

April 22, 2009 Conduct preliminary investigation on extent of impacts. Use backhoe to dig 5 test holes to 7' below grade. Collect soil samples to determine extent of impacts. Install 3 temporary piezometers in test holes to determine local site gradient.

April 27, 2009 Survey piezometer well tops and measure depth to groundwater. Determine site gradient is approximately WSW at 0.002 feet/foot.

April 28, 2009 Begin site remediation by excavation with trackhoe and transporting impacted soils to landfarm. Conduct additional soils investigation to confirm impact footprint. Backfill remediated areas as excavation progresses.

May 13, 2009 Complete impact removal, complete backfilling.

July 21, 2010 Install groundwater monitor well in source area.

July 26, 2010 Develop monitor well.

July 28, 2010 Sample monitor well for laboratory analysis. All BTEX constituents below NMOCD/NMWQCC closure standards.

Jan 24, 2011 BP submits C-141 to NMOCD with request for site closure.

CLIENT: BP

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO:
COCR NO: 2194

FIELD REPORT: PIT CLOSURE VERIFICATION

PAGE No: 1 of

LOCATION: NAME: ARCHULETA GCA WELL #: 4 TYPE: DRIP TANK
QUAD/UNIT: K SEC: 5 TWP: 29N RNG: 9W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: CONTRACTOR: HDI - Lynell

DATE STARTED: 3-2-07
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: JCB

EXCAVATION APPROX. NA FT. x NA FT. x NA FT. DEEP. CUBIC YARDAGE: 0
DISPOSAL FACILITY: NA REMEDIATION METHOD: NA
LAND USE: FEE - PASTURE LEASE: FEE FORMATION: PC

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 75 FT. NORTH FROM WELLHEAD.
DEPTH TO GROUNDWATER: <50 NEAREST WATER SOURCE: >1000 NEAREST SURFACE WATER: >1000
NMOCD RANKING SCORE: 20 NMOCD TPH CLOSURE STD: 100 PPM

OVM CALIB. READ. = 53.1 ppm
OVM CALIB. GAS = 100 ppm RF = 0.52
TIME: 1125 am/pm DATE: 3/2

SOIL AND EXCAVATION DESCRIPTION:

SOIL TYPE: SAND / (SILTY SAND) SILT / (SILTY CLAY) CLAY / GRAVEL / OTHER
SOIL COLOR: DARK TAN
COHESION (ALL OTHERS): NON COHESIVE / (SLIGHTLY COHESIVE) COHESIVE / HIGHLY COHESIVE
CONSISTENCY (NON COHESIVE SOILS): LOOSE / (FIRM) / DENSE / VERY DENSE
PLASTICITY (CLAYS): NON PLASTIC / (SLIGHTLY PLASTIC) / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC
DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD
MOISTURE: DRY / (SLIGHTLY MOIST) / MOIST / WET / SATURATED / SUPER SATURATED
DISCOLORATION/STAINING OBSERVED: (YES) / NO EXPLANATION - GRAY STREAKING
HC ODOR DETECTED: (YES) NO EXPLANATION - MODERATE
SAMPLE TYPE: (GRAB) / COMPOSITE - # OF PTS.
ADDITIONAL COMMENTS: 8' DIA x 2' TALL Steel tank sitting on surface. Move TANK & collect @ SAMPLE with BACKHOE

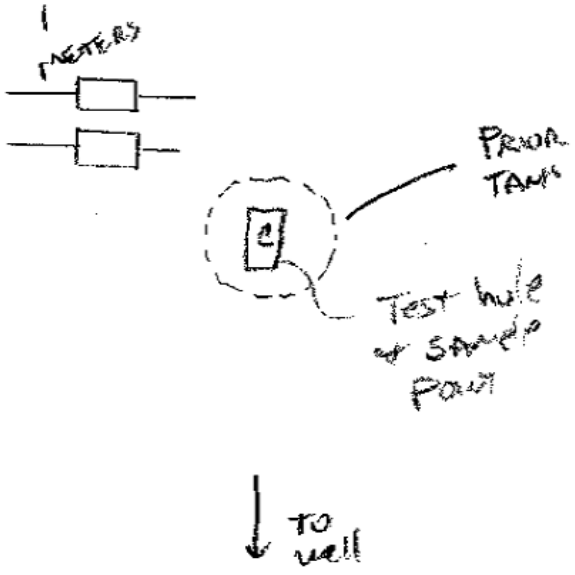
NEED ADDITIONAL INVESTIGATION

FIELD 418.1 CALCULATIONS

SAMP. TIME	SAMP. ID	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (ppm)

SCALE
0 FT

PIT PERIMETER



P.D. = PIT DEPRESSION; B.G. = BELOW GRADE; B = BELOW
T.H. = TEST HOLE; ~ = APPROX.; T.B. = TANK BOTTOM

OVM READING

SAMPLE ID	FIELD HEADSPACE (ppm)
1 @	
2 @	
3 @	
4 @	
5 @	
C@6'	161

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
C@6'	TPH	1115
	BTEX	
	Cl-	

PIT PROFILE

NA

TRAVEL NOTES: CALLOUT: ONSITE: 3/2/07

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	C @ 6'	Date Reported:	03-07-07
Laboratory Number:	40296	Date Sampled:	03-02-07
Chain of Custody No:	2194	Date Received:	03-06-07
Sample Matrix:	Soil	Date Extracted:	03-06-07
Preservative:	Cool	Date Analyzed:	03-07-07
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**1,600**	**0.2**
Diesel Range (C10 - C28)	**356**	**0.1**
Total Petroleum Hydrocarbons	**1,960**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta GC A #4 Drip Tank**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	C @ 6'	Date Reported:	03-07-07
Laboratory Number:	40296	Date Sampled:	03-02-07
Chain of Custody:	2194	Date Received:	03-06-07
Sample Matrix:	Soil	Date Analyzed:	03-07-07
Preservative:	Cool	Date Extracted:	03-06-07
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**1,780**	**1.8**
Toluene	**1,200**	**1.7**
Ethylbenzene	**4,950**	**1.5**
p,m-Xylene	**16,880**	**2.2**
o-Xylene	**1,270**	**1.0**
Total BTEX	**26,080**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**98.0 %**
	1,4-difluorobenzene	**98.0 %**
	Bromochlorobenzene	**98.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta GC A #4 Drip Tank**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Chloride

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	C @ 6'	Date Reported:	03-07-07
Lab ID#:	40296	Date Sampled:	03-02-07
Sample Matrix:	Soil	Date Received:	03-06-07
Preservative:	Cool	Date Analyzed:	03-06-07
Condition:	Cool and Intact	Chain of Custody:	2194

Parameter	Concentration (mg/Kg)
Total Chloride	**18.0**

Reference: Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Archuleta GC A #4 Drip Tank**

Analyst

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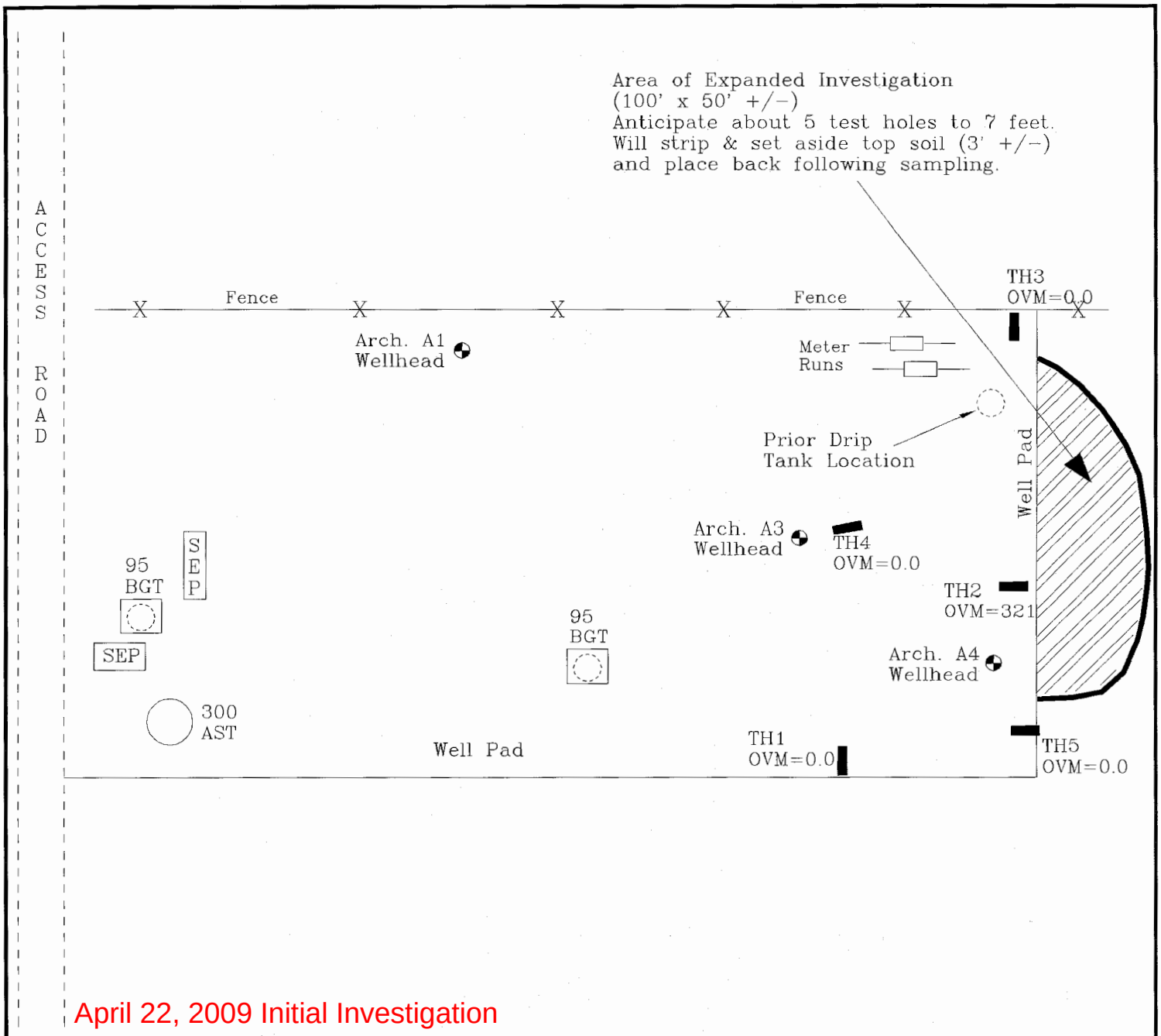


April 22, 2009 Initial Investigation

TH1
OVM=0.0

Test Hole Location
with maximum field
headspace reading

N

0 50 100 FEET

BP - America
ARCHULETA A3/A4
SAN JUAN CO., NEW MEXICO

April 2009

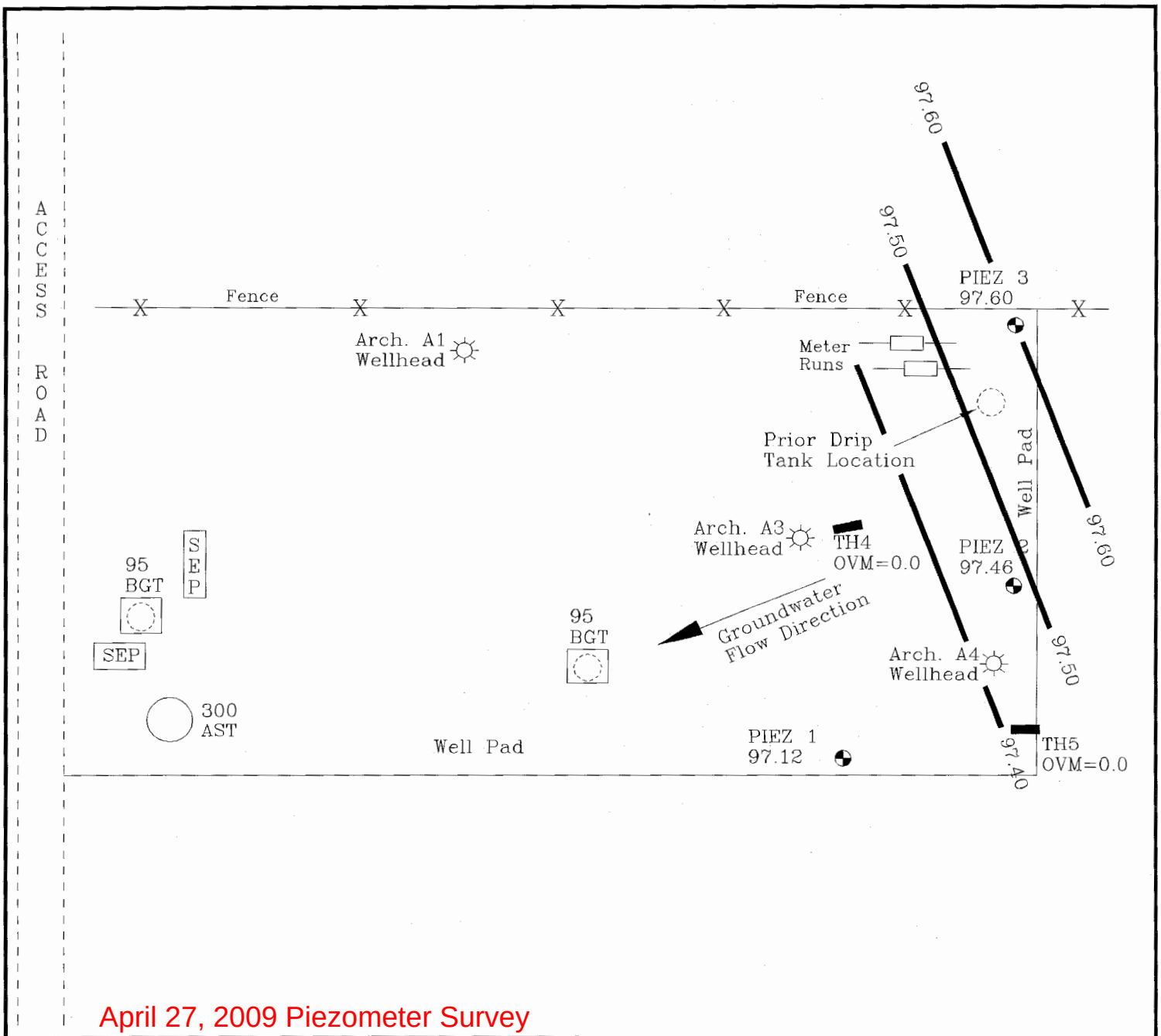
BLAGG ENGINEERING, INC.
CONSULTING ENGINEERING SERVICES

P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413

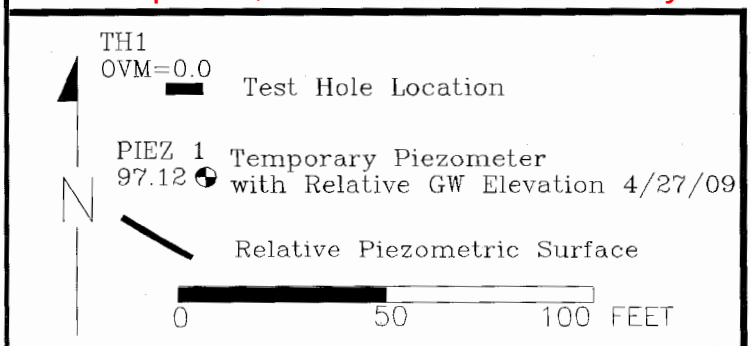
PHONE: (505) 632-1199

AREA
SCHEMATIC

FIGURE 1.1	DRWN BY: JCB
Arch-A3/A4	PROJ MGR: JCB



April 27, 2009 Piezometer Survey



BP – America
ARCHULETA A3/A4
SAN JUAN CO., NEW MEXICO

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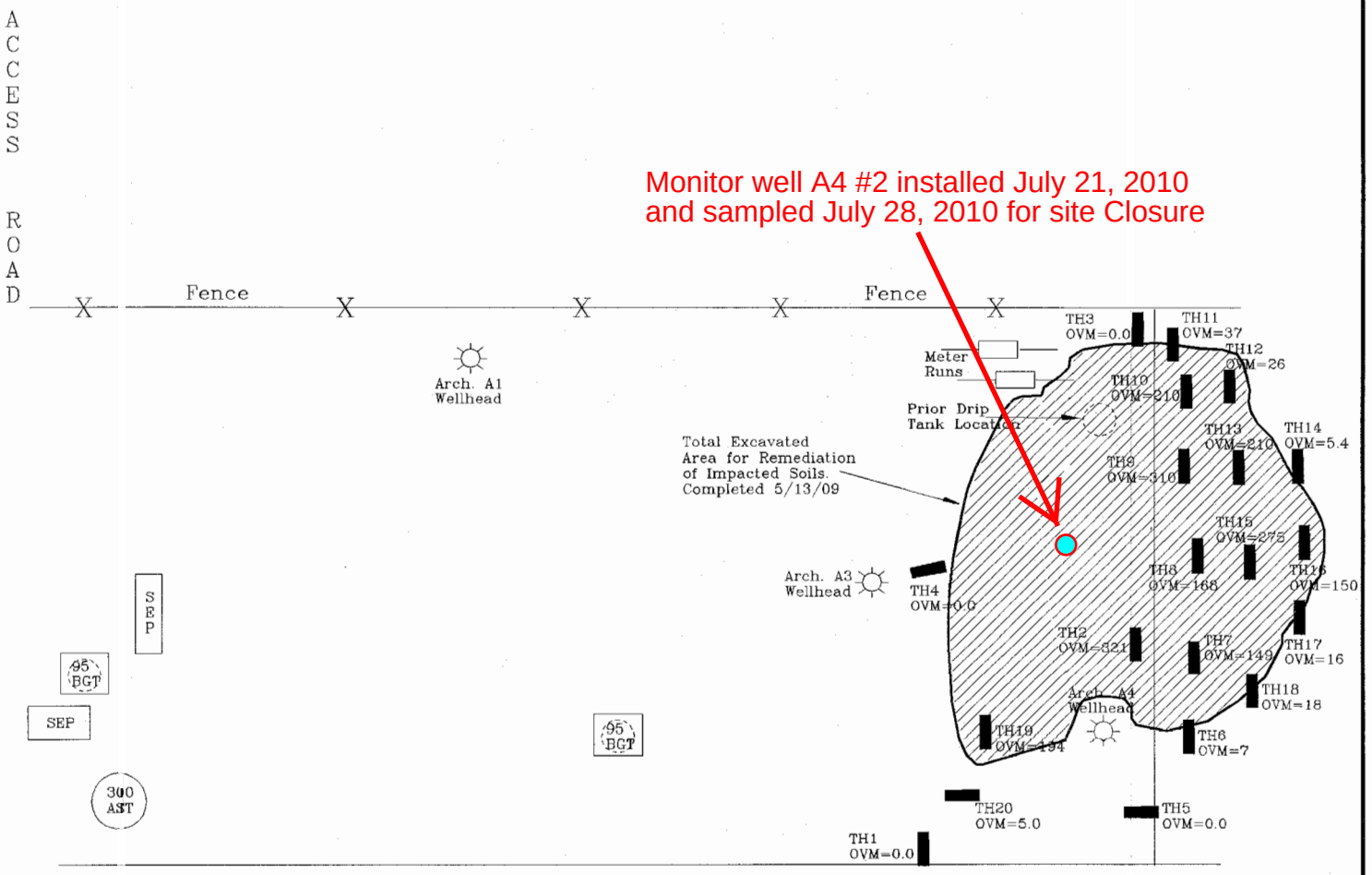
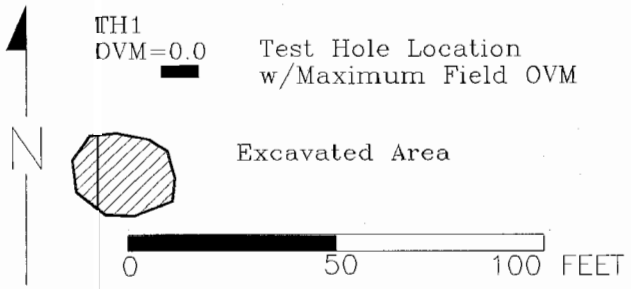
AREA SCHEMATIC

FIGURE 1.1	DRWN BY: JCB
Arch-A3/A4	PROJ MGR: JCB



May 13, 2009 Completed Remedial Excavation



BP – America
ARCHULETA A3/A4
SAN JUAN CO., NEW MEXICO

MAY 2009

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CONSULTING ENGINEERING SERVICES

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BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

AREA SCHEMATIC

FIGURE 1.3 | DRWN BY: JCB

Arch-A3/A4 | PROJ MGR: JCB

envirotech
Analytical Laboratory

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #1 @ 4'	Date Reported:	04-28-09
Laboratory Number:	49754	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-27-09
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

Analyst

Review

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envirotech
Analytical Laboratory

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #1 @ 4'	Date Reported:	04-28-09
Laboratory Number:	49754	Date Sampled:	04-22-09
Chain of Custody:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Analyzed:	04-27-09
Preservative:	Cool	Date Extracted:	04-24-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**1.5**	**0.9**
Toluene	**5.0**	**1.0**
Ethylbenzene	**5.4**	**1.0**
p,m-Xylene	**10.5**	**1.2**
o-Xylene	**7.4**	**0.9**
Total BTEX	**29.8**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**97.0 %**
	1,4-difluorobenzene	**97.0 %**
	Bromochlorobenzene	**97.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

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Analytical Laboratory

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #1 @ 4'	Date Reported:	04-28-09
Laboratory Number:	49754	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-24-09
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**18.1**	**9.7**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Archuleta A #3.**

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Analytical Laboratory

Chloride

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #1 @ 4'	Date Reported:	04-29-09
Lab ID#:	49754	Date Sampled:	04-22-09
Sample Matrix:	Soil	Date Received:	04-23-09
Preservative:	Cool	Date Analyzed:	04-29-09
Condition:	Intact	Chain of Custody:	6859

Parameter	Concentration (mg/Kg)
Total Chloride	**14**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Archuleta A #3.**

Analyst

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Analytical Laboratory

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 4'	Date Reported:	04-28-09
Laboratory Number:	49755	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-27-09
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**412**	**0.2**
Diesel Range (C10 - C28)	**273**	**0.1**
Total Petroleum Hydrocarbons	**685**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

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Analytical Laboratory

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 4'	Date Reported:	04-28-09
Laboratory Number:	49755	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-24-09
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**1,270**	**9.7**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Archuleta A #3.**

Analyst

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Analytical Laboratory

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 4'	Date Reported:	04-28-09
Laboratory Number:	49755	Date Sampled:	04-22-09
Chain of Custody:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Analyzed:	04-27-09
Preservative:	Cool	Date Extracted:	04-24-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**148**	**0.9**
Toluene	**597**	**1.0**
Ethylbenzene	**491**	**1.0**
p,m-Xylene	**7,690**	**1.2**
o-Xylene	**1,260**	**0.9**
Total BTEX	**10,200**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**97.0 %**
	1,4-difluorobenzene	**97.0 %**
	Bromochlorobenzene	**97.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

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Analytical Laboratory

Chloride

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 4'	Date Reported:	04-29-09
Lab ID#:	49755	Date Sampled:	04-22-09
Sample Matrix:	Soil	Date Received:	04-23-09
Preservative:	Cool	Date Analyzed:	04-29-09
Condition:	Intact	Chain of Custody:	6859

Parameter	Concentration (mg/Kg)
Total Chloride	**8**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Archuleta A #3.**

Analyst

Review

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Analytical Laboratory

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49756	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-27-09
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**281**	**0.2**
Diesel Range (C10 - C28)	**139**	**0.1**
Total Petroleum Hydrocarbons	**420**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

Analyst

Review

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envirotech
Analytical Laboratory

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49756	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-24-09
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**1,120**	**9.7**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Archuleta A #3.**

Analyst

Review

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com

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Analytical Laboratory

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49756	Date Sampled:	04-22-09
Chain of Custody:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Analyzed:	04-27-09
Preservative:	Cool	Date Extracted:	04-24-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**109**	**0.9**
Toluene	**403**	**1.0**
Ethylbenzene	**277**	**1.0**
p,m-Xylene	**6,170**	**1.2**
o-Xylene	**743**	**0.9**
Total BTEX	**7,700**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**98.0 %**
	1,4-difluorobenzene	**98.0 %**
	Bromochlorobenzene	**98.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

Analyst

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Analytical Laboratory

Chloride

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 6'	Date Reported:	04-29-09
Lab ID#:	49756	Date Sampled:	04-22-09
Sample Matrix:	Soil	Date Received:	04-23-09
Preservative:	Cool	Date Analyzed:	04-29-09
Condition:	Intact	Chain of Custody:	6859

Parameter	Concentration (mg/Kg)
Total Chloride	**18**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Archuleta A #3.**

Analyst

Review

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 7'	Date Reported:	04-28-09
Laboratory Number:	49757	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-27-09
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**56.5**	**0.2**
Diesel Range (C10 - C28)	**29.5**	**0.1**
Total Petroleum Hydrocarbons	**86.0**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

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EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 7'	Date Reported:	04-28-09
Laboratory Number:	49757	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-24-09
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**115**	**9.7**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Archuleta A #3.**

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 7'	Date Reported:	04-28-09
Laboratory Number:	49757	Date Sampled:	04-22-09
Chain of Custody:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Analyzed:	04-27-09
Preservative:	Cool	Date Extracted:	04-24-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**19.8**	**0.9**
Toluene	**118**	**1.0**
Ethylbenzene	**113**	**1.0**
p,m-Xylene	**1,620**	**1.2**
o-Xylene	**337**	**0.9**
Total BTEX	**2,210**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**99.0 %**
	1,4-difluorobenzene	**99.0 %**
	Bromochlorobenzene	**99.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

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Chloride

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #2 @ 7'	Date Reported:	04-29-09
Lab ID#:	49757	Date Sampled:	04-22-09
Sample Matrix:	Soil	Date Received:	04-23-09
Preservative:	Cool	Date Analyzed:	04-29-09
Condition:	Intact	Chain of Custody:	6859

Parameter	Concentration (mg/Kg)
Total Chloride	**4**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Archuleta A #3.**

Analyst

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #3 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49758	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-27-09
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

Analyst

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EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #3 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49758	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-24-09
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**16.9**	**9.7**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Archuleta A #3.**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #3 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49758	Date Sampled:	04-22-09
Chain of Custody:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Analyzed:	04-27-09
Preservative:	Cool	Date Extracted:	04-24-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**1.0**	**0.9**
Toluene	**6.3**	**1.0**
Ethylbenzene	**3.3**	**1.0**
p,m-Xylene	**34.5**	**1.2**
o-Xylene	**10.6**	**0.9**
Total BTEX	**55.7**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**98.0 %**
	1,4-difluorobenzene	**98.0 %**
	Bromochlorobenzene	**98.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

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Chloride

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #3 @ 6'	Date Reported:	04-29-09
Lab ID#:	49758	Date Sampled:	04-22-09
Sample Matrix:	Soil	Date Received:	04-23-09
Preservative:	Cool	Date Analyzed:	04-29-09
Condition:	Intact	Chain of Custody:	6859

Parameter	Concentration (mg/Kg)
Total Chloride	**6**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Archuleta A #3.**

Analyst

Review

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #4 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49759	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-27-09
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

Analyst

Review

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EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #4 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49759	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-24-09
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**19.3**	**9.7**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Archuleta A #3.**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #4 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49759	Date Sampled:	04-22-09
Chain of Custody:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Analyzed:	04-27-09
Preservative:	Cool	Date Extracted:	04-24-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**3.3**	**1.0**
Ethylbenzene	**1.3**	**1.0**
p,m-Xylene	**6.9**	**1.2**
o-Xylene	**3.3**	**0.9**
Total BTEX	**14.8**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**98.0 %**
	1,4-difluorobenzene	**98.0 %**
	Bromochlorobenzene	**98.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

Analyst

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Chloride

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #4 @ 6'	Date Reported:	04-29-09
Lab ID#:	49759	Date Sampled:	04-22-09
Sample Matrix:	Soil	Date Received:	04-23-09
Preservative:	Cool	Date Analyzed:	04-29-09
Condition:	Intact	Chain of Custody:	6859

Parameter	Concentration (mg/Kg)
Total Chloride	**10**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Archuleta A #3.**

Analyst

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EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #5 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49760	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-27-09
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

Analyst

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EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #5 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49760	Date Sampled:	04-22-09
Chain of Custody No:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Extracted:	04-24-09
Preservative:	Cool	Date Analyzed:	04-24-09
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**16.9**	**9.7**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Archuleta A #3.**

Analyst

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #5 @ 6'	Date Reported:	04-28-09
Laboratory Number:	49760	Date Sampled:	04-22-09
Chain of Custody:	6859	Date Received:	04-23-09
Sample Matrix:	Soil	Date Analyzed:	04-27-09
Preservative:	Cool	Date Extracted:	04-24-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**1.0**	**0.9**
Toluene	**2.0**	**1.0**
Ethylbenzene	**1.1**	**1.0**
p,m-Xylene	**2.9**	**1.2**
o-Xylene	**2.0**	**0.9**
Total BTEX	**9.0**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**97.0 %**
	1,4-difluorobenzene	**97.0 %**
	Bromochlorobenzene	**97.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Archuleta A #3**

Analyst

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Chloride

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	TH #5 @ 6'	Date Reported:	04-29-09
Lab ID#:	49760	Date Sampled:	04-22-09
Sample Matrix:	Soil	Date Received:	04-23-09
Preservative:	Cool	Date Analyzed:	04-29-09
Condition:	Intact	Chain of Custody:	6859

Parameter	Concentration (mg/Kg)
Total Chloride	**32**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Archuleta A #3.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

6859

Client:	Project Name / Location:
BLAGG/BP	ARCHULETA A #3
Client Address:	**Sampler Name:** J. BLAGG
Client Phone No.:	**Client No.:** 94034-010

ANALYSIS / PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative $HgCl_2$	Preservative HCl	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
TH #1 @ 4'	4/22/09	1123	49754	(Soil) Solid Sludge Aqueous	1-40z			X	X							X	X				✓	✓
TH #2 @ 4'	"	1150	49755	(Soil) Solid Sludge Aqueous	"			X	X							X	X				✓	✓
TH #2 @ 6'	"	1200	49756	(Soil) Solid Sludge Aqueous	"			X	X							X	X				✓	✓
TH #2 @ 7'	"	1204	49757	(Soil) Solid Sludge Aqueous	"			X	X							X	X				✓	✓
TH #3 @ 6'	"	1324	49758	(Soil) Solid Sludge Aqueous	"			X	X							X	X				✓	✓
TH #4 @ 6'	"	1356	49759	(Soil) Solid Sludge Aqueous	"			X	X							X	X				✓	✓
TH #5 @ 6'	"	1425	49760	(Soil) Solid Sludge Aqueous	"			X	X							X	X				✓	✓
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jeff Blagg	4/23/09	1505		4/23/09	1505
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

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EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	04-27-09 QA/QC	Date Reported:	04-28-09
Laboratory Number:	49754	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	04-27-09
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	05-07-07	9.6936E+002	9.6975E+002	**0.04%**	**0 - 15%**
Diesel Range C10 - C28	05-07-07	9.5526E+002	9.5564E+002	**0.04%**	**0 - 15%**

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	**ND**	**0.2**
Diesel Range C10 - C28	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	**ND**	**ND**	**0.0%**	**0 - 30%**
Diesel Range C10 - C28	**ND**	**ND**	**0.0%**	**0 - 30%**

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	**ND**	**250**	**245**	**98.0%**	**75 - 125%**
Diesel Range C10 - C28	**ND**	**250**	**239**	**95.6%**	**75 - 125%**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **QA/QC for Sample 49754 - 49762 and 49791.**

Analyst

Review

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	04-27-BT QA/QC	Date Reported:	04-28-09
Laboratory Number:	49754	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	04-27-09
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	6.6909E+006	6.7043E+006	0.2%	ND	0.1
Toluene	6.2181E+006	6.2306E+006	0.2%	ND	0.1
Ethylbenzene	5.4666E+006	5.4776E+006	0.2%	ND	0.1
p,m-Xylene	1.4442E+007	1.4471E+007	0.2%	ND	0.1
o-Xylene	5.2607E+006	5.2712E+006	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	1.5	1.5	0.0%	0 - 30%	0.9
Toluene	5.0	4.6	8.0%	0 - 30%	1.0
Ethylbenzene	5.4	5.2	3.7%	0 - 30%	1.0
p,m-Xylene	10.5	9.8	6.7%	0 - 30%	1.2
o-Xylene	7.4	7.0	5.4%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	1.5	50.0	50.0	97.1%	39 - 150
Toluene	5.0	50.0	52.6	95.6%	46 - 148
Ethylbenzene	5.4	50.0	54.3	98.0%	32 - 160
p,m-Xylene	10.5	100	109	98.5%	46 - 148
o-Xylene	7.4	50.0	54.4	94.8%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for Samples 49754 - 49761 and 49791**

Analyst

Review

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com

envirotech
Analytical Laboratory

EPA METHOD 418.1
TOTAL PETROLEUM HYROCARBONS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	QA/QC	Date Reported:	04-27-09
Laboratory Number:	04-24-TPH.QA/QC 49753	Date Sampled:	N/A
Sample Matrix:	Freon-113	Date Analyzed:	04-24-09
Preservative:	N/A	Date Extracted:	04-24-09
Condition:	N/A	Analysis Needed:	TPH

Calibration	I-Cal Date	C-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
	04-06-09	04-24-09	1,510	1,560	3.3%	+/- 10%

Blank Conc. (mg/Kg)	Concentration	Detection Limit
TPH	ND	9.7

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
TPH	20.5	18.1	11.7%	+/- 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
TPH	20.5	2,000	1,690	83.6%	80 - 120%

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

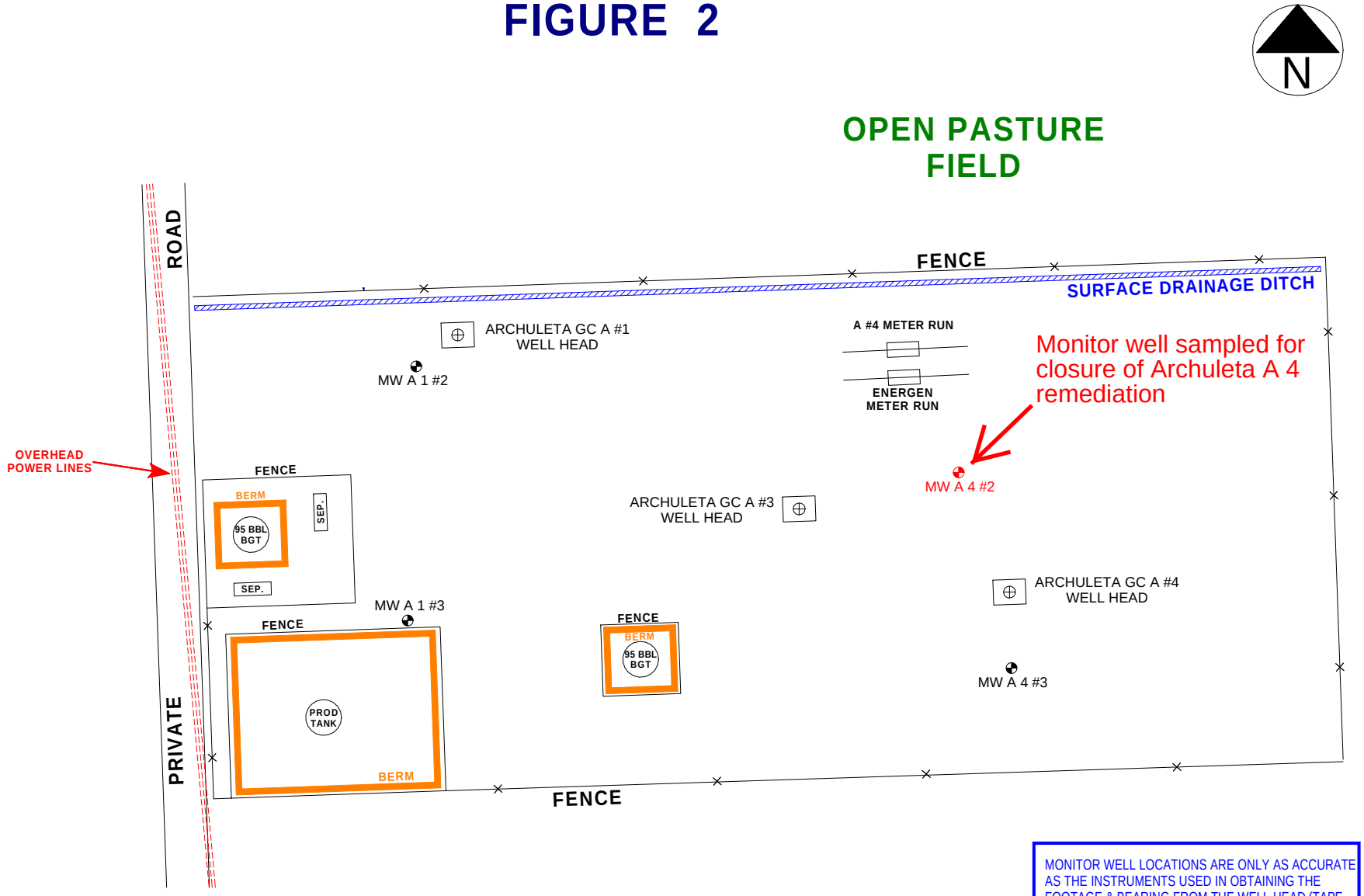
Comments: **QA/QC for Samples 49753 - 49760 and 49791.**

Analyst

Review

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com

FIGURE 2



1 INCH = 50 FT.

0 50 100 FT.

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE & BEARING FROM THE WELL HEAD (TAPE MEASURE, LASER RANGE FINDER, & BRUNTON COMPASS). ALL OTHER STRUCTURES DISPLAYED ON THIS MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

BP AMERICA PRODUCTION CO.

ARCHULETA GC A # 4

NE/4 SW/4 SEC. 5, T29N, R9W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: ARCHULETA GC A 4 07-28-10.SKF

REVISED: 09-28-10

SITE MAP

07/10

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

ARCHULETA GC A # 1 / A # 4
UNIT K , SEC. 5 , T29N , R9W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : July 28, 2010

DEVELOPER / SAMPLER : N J V

Filename : 07-28-10.WK4

PROJECT MANAGER : J C B

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
A4 #2	101.79	98.66	3.13	11.92	0950	N / A	1,100	23.3	4.25
A4 #3	101.58	98.38	3.20	13.19	-	-	-	-	-
A1 #2	103.75	100.11	3.64	12.63	-	-	-	-	-
A1 #3	102.71	99.46	3.25	12.53	-	-	-	-	-
INSTRUMENT CALIBRATIONS =						-	2,800		
DATE & TIME =						07/26/09	1630		

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)
Ideally a minimum of three (3) wellbore volumes:
2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

MW A 4 # 2 - excellent recovery , olive gray color in appearance ,
Samples from MW A 4 # 2 analyzed for BTEX per US EPA Method 8021B .
Monitor well top elevations surveyed on 7 / 28 / 10 .
Top of casing MW A 4 #3 ~ 2.50 ft. , MW A 1 # 2 ~ 2.30 ft. , MW A 1 # 3 ~ 2.20 ft. above grade .

Detph to water below grade	
A4 #2	1.13
A4 #3	0.70
A1 #2	1.34
A1 #3	1.05

Hall Environmental Analysis Laboratory, Inc.

Date: *04-Aug-10*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW#A4-2
Lab Order:	1007A39	**Collection Date:**	7/28/2010 9:50:00 AM
Project:	Archuleta GC A #4	**Date Received:**	7/29/2010
Lab ID:	1007A39-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	8/3/2010 4:55:14 PM
Toluene	ND	1.0		µg/L	1	8/3/2010 4:55:14 PM
Ethylbenzene	1.9	1.0		µg/L	1	8/3/2010 4:55:14 PM
Xylenes, Total	9.1	2.0		µg/L	1	8/3/2010 4:55:14 PM
Surr: 4-Bromofluorobenzene	125	65.9-130		%REC	1	8/3/2010 4:55:14 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

Mailing Address: P.O. BOX 87
BLFD., NM 87413

Phone #: (505) 632-1199

email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: ARCHULETA GC A #4

Project #:

Project Manager: JEFF BLAGG

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.2

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1007439
7/28/10	0950	WATER	MW # A4-2	40ml-2	HCl & cool	

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/28/10	1530			7/29	1000
Date:	Time:	Relinquished by:	Received by:	Date	Time

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

(BTEX) + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
✓															

Remarks:

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Archuleta GC A #4 **Work Order:** 1007A39

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R40175**	Analysis Date:	8/3/2010 9:20:14 AM		
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100NG BTEX LCS		*LCS*				Batch ID:	**R40175**	Analysis Date:	8/3/2010 8:57:48 PM		
Benzene	19.79	µg/L	1.0	20	0	99.0	87.9	121			
Toluene	19.77	µg/L	1.0	20	0	98.9	83	124			
Ethylbenzene	19.78	µg/L	1.0	20	0	98.9	81.7	122			
Xylenes, Total	59.62	µg/L	2.0	60	0	99.4	85.6	121			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG** Date Received: **7/29/2010**

Work Order Number **1007A39** Received by: AMG

Sample ID labels checked by: _____ Initials

Checklist completed by: Ashley M Gallegos 7/29/10
Signature Date

Matrix: Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	**-1.2°**	*<6° C Acceptable* If given sufficient time to cool.		

Number of preserved bottles checked for pH: _____

<2 >12 unless noted below.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____