

3R - 71

**GENERAL
CORRESPONDENCE**

YEAR(S):

1999-1998

BURLINGTON RESOURCES

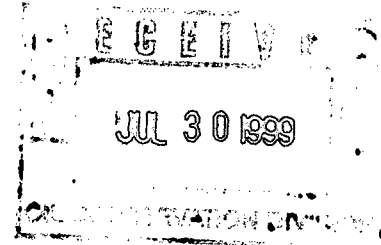
SAN JUAN DIVISION

July 29, 1999

Certified Mail: Z 186 732 886

Bill Olson
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

**RE: Johnson Federal #4 Metering Location
Unit Letter M, Section 27, Township 31N, Range 9W
Notification of Groundwater Impact**



Dear Mr. Olson:

As per the e-mail notification dated June 1, 1999 (Mr. Hasely to Mr. Olson), this letter is Burlington Resources' (BR) written notification of groundwater impact at the subject location. The final analytical results and final paperwork from the consultant did not make it to my attention until recently.

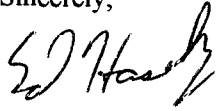
Due to El Paso having groundwater impacts at this location, BR conducted initial assessments of two earthen pits on the Johnson Federal #4 metering location. The separator pit tested clean and was closed. The tank drain earthen pit had levels above closure standards and BR excavated soils to 30 feet below ground surface. At that point, soil samples from the bottom of the excavation were collected and tested above pit closure standards. The excavation was sprayed with 20 barrels of Oxy-1 and backfilled with clean fill. BR conducted vertical extent determination in the center of BR's former earthen pit and encountered groundwater at approximately 43 feet. BR installed a temporary groundwater monitoring well. After developing the well and allowing it to stabilize for one week, the well was purged and sampled on May 25, 1999. The sample results are as follows:

Benzene	8700 ppb
Toluene	2900 ppb
Ethylbenzene	2800 ppb
Total Xylenes	29000 ppb

Included with this letter are the original Pit Remediation and Closure Reports for the BR earthen pits along with the analytical results of the soil testing. Also attached are the groundwater lab analysis, the drilling log, the monitoring well installation record, and a location diagram from El Paso's 1997 Annual Groundwater Report.

The temporary monitoring well has since been completed as permanent. BR will conduct future activities at the site pursuant to Burlington Resources' Groundwater Management Plan, and it is our plan to work in conjunction with El Paso to assure proper assessment and closure. If you have questions or additional information is needed, please contact me at (505) 326-9841.

Sincerely,



Ed Hasely
Sr. Staff Environmental Representative

Attachments: Pit Remediation and Closure Reports (Pit #1)
Pit Remediation and Closure Reports (Pit #2)
Drilling Log/Wellbore Diagram
Analytical Results - Groundwater
Location Diagram

cc: Denny Foust - NMOCD Aztec
Sandra Miller - El Paso
Rob Stanfield
Gary Osborne
Bruce Gantner
Facility File
Correspondence

RANKING SCORE (TOTAL POINTS): 20

Date Remediation Started: 8/10/98 Date Completed: 8/10/98

Remediation Method: Excavation - Approx. cubic yards -
(Check all appropriate sections) Landfarmed - Insitu Bioremediation -
Other -

Remediation Location: Onsite - Offsite -
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: -

Initial assessment showed the pit met the
closure standards.

Ground Water Encountered: No X Yes - Depth -

Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location Center of Pit

Sample depth 3'

Sample date 8/10/98 Sample time -

Sample Results

Benzene(ppm) -

Total BTEX(ppm) -

Field headspace(ppm) 0

TPH 1.2

Ground Water Sample: Yes - No X (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 7/29/99

SIGNATURE E. Hasely

PRINTED NAME
AND TITLE

Ed Hasely
Sr. Staff Environmental Rep.

Pit Remediation and Closure Reports (Pit #1)

Pit # 1



PRODUCTION PIT ASSESSMENT FORM

GENERAL

WELL NAME: JOHNSTON FEDERAL WELL NUMBER: 4 DP NO.: NO NAME B154

OPERATOR NAME: BURLINGTON RESOURCES P/L DISTRICT:

COORDINATES: TOWNSHIP 31N RANGE 9W SECTION 27 LETTER H

PIT TYPE: DEHYDRATOR ☐ SEPARATOR ☐ BLOW PIT ☐ OTHER: UNKNOWN
CATHODIC PROTECTION WELL: ☐ YES ☒ NO

SITE ASSESSMENT DATE: 8/10/98 MOI FOREMAN NO. AREA:

NMOCD ZONE: (from NMOCD Maps): Inside ☒ Outside ☐

LAND TYPE: BLM ☒ (1) STATE ☐ (2) FEE ☐ (3) INDIAN:

DEPTH TO GROUNDWATER: LESS THAN 50 FT (1) ☒ (20 POINTS)
50 FT TO 99 FT (2) ☐ (10 POINTS)
GREATER THAN 100 FT (3) ☐ (0 POINTS)

WELLHEAD PROTECTION AREA: Is it less than 1,000 feet from wells, springs, or other sources of fresh water extraction?, or; is it less than 200 ft from a private domestic water source (or 1,000' on Navajo surface)?
YES ☐ (20 POINTS) NO ☒ (0 POINTS)

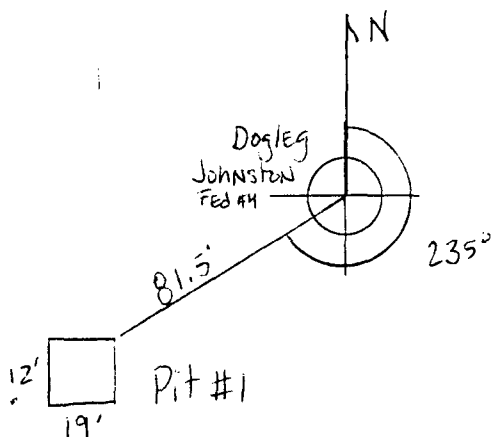
HORIZONTAL DISTANCE TO SURFACE WATER BODY: LESS THAN 200 FT (1) ☐ (20 POINTS)
200 FT TO 1,000 FT (2) ☐ (10 POINTS)
GREATER THAN 1,000 FT (3) ☒ (0 POINTS)
NAME OF SURFACE WATER BODY _____
SURFACE WATER BODY: PERENNIAL RIVERS, STREAMS, CREEKS, IRRIGATION CANALS, DITCHES, LAKES, PONDS

DISTANCE TO NEAREST EPHEMERAL STREAM (1) ☐ <100 FEET (NAVAJO PITS ONLY)
(2) ☐ >100 FEET

SITE ASSESSMENT

TOTAL HAZARD RANKING SCORE: 20 POINTS

ORIGINAL PIT LOCATION

ORIGINAL PIT: (A) DEGREES FROM NORTH 235°
CORRECTED 13° FOR MAGNETIC NORTHFOOTAGE FROM WELLHEAD 81.5'
DOGLEG(B) LENGTH: 19' WIDTH: 12' DEPTH: 4'

SAMPLE

SAMPLE SENT TO LAB FOR: ☐ BTEX ☒ TPH ☐ NO SAMPLE TAKENPID - FIELD HEADSPACE READING: 0 ppmSAMPLE NUMBER: BRB131541AV

REMARKS

SAMPLE WAS COLLECTED AT 3 FEET. SENT TO LAB FOR TPH
B154 IS NODE NAME TAKEN FROM INSIDE METER HOUSE

BEARING TAKEN FROM JOHNSTON FED #4 DOGLEG

COMPLETED BY: H BRADLEY

SIGNATURE

DATE: 8/10/98



Certificate of Analysis No. 9803038-02

FARMINGTON LABORATORY

807 S. CARLTON
FARMINGTON, NM 87499-1289
(505) 326-2588

Philip Environmental Services

4000 Monroe Road

Farmington, NM 87401

Attn: Cory Chance

Date: 08/17/98

Project: BR Misc.

Project No: 19074

Site: Johnston Fed. #4, Pit #1

Matrix: Soil

Sampled By: Holly Bradbury

Date Sampled: 08/10/98

Sample ID: BR8B1541AV

Date Received: 08/11/98

Analytical Data

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Gasoline Range Organics	1.2	0.1 (P)	mg/kg
Surrogate	% Recovery		
1,4-Difluorobenzene	147		
4-Bromofluorobenzene	310MI		
Method 8015B*** for Gasoline			
Analyzed by: AA			
Date: 08/12/98			
Total Petroleum Hydrocarbons-Diesel	ND	10 (P)	mg/kg
Surrogate	% Recovery		
n-Pentacosane	118		
Method 8015B*** for Diesel			
Analyzed by: RR			
Date: 08/14/98			

ND-Not Detected

MI-Matrix Interference

(P)-Practical Quantitation Limit

Notes:

*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA

**Ref: Standard Methods for Examination of Water & Wastewater, 18th Ed

***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

Billy G. Rich, Lab Director

Pit Remediation and Closure Reports (Pit #2)

RANKING SCORE (TOTAL POINTS): 20

Date Remediation Started: 12/17/98 Date Completed: _____

Remediation Method: Excavation x Approx. cubic yards 3055
(Check all appropriate sections) Landfarmed x Insitu Bioremediation _____
Other _____

Remediation Location: Onsite _____ Offsite Johnston Fed #4 NE Sec 33-31N-9W
(ie. landfarmed onsite, name and location of offsite facility) Johnston Fed #22R NE Sec 33-31N-9W

General Description Of Remedial Action: Soils were removed to an approximate depth of 30 ft which was the practical extent. Soil samples were collected. The walls and bottom of the excavation were sprayed with 20 bbls of Oxy-1 and then backfilled with clean sand. A groundwater monitoring well was installed in the center of the old pit.

Ground Water Encountered: No x Yes _____ Depth _____

Final Pit:
Closure Sampling:
(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location Bottom of excavation

Sample depth 30'

Sample date 12/28/98 Sample time 2:10 pm

Sample Results

Benzene(ppm) ND

Total BTEX(ppm) 148.1

Field headspace(ppm) 1967

TPH 2530

Ground Water Sample: Yes _____ No x (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 7/29/99

SIGNATURE Ed Hasely

PRINTED NAME
AND TITLE

Ed Hasely
Sr. Staff Environmental Rep.



PRODUCTION PIT REMEDIATION FORM

WELL NAME: Johnston Fed. #4 WELL No.: _____ DP No.: _____
OPERATOR NAME: Rochington Resources P/L DISTRICT: _____
COORDINATES: LETTER: H SECTION: 27 TOWNSHIP: 31N RANGE: 9W
PIT TYPE: DEHYDRATOR: _____ LOCATION DRIP: _____ LINE DRIP: _____ OTHER: X
FOREMAN No.: GARY OSBORNE AREA: Aster TANK DRAIN PIT

INITIAL REMEDIATION ACTIVITIES

DATE: 12-17-98 TIME: _____

GROUND WATER ENCOUNTERED? ☐ Y / ☒ N

INSIDE NMOCD ZONE

FINAL EXCAVATION DIMENSIONS: LENGTH: 58 WIDTH: 45 DEPTH: 30

APPROX. CUBIC YARDS: 4,702 FINAL PID READING: 1967 ppm

REMEDICATION METHOD: ONSITE LANDFARM _____

OFFSITE LANDFARM X

LOCATION: Johnston FD 22 R & 4

OTHER _____

LANDFARM DIMENSIONS: LENGTH: _____ WIDTH: _____

OUTSIDE NMOCD ZONE

FINAL SAMPLE DEPTH: _____ FINAL PID READING: _____

EXCAVATION SAMPLING INFORMATION

IF PID READINGS ARE LESS THAN 100 PPM, SAMPLE TAKEN DURING EXCAVATION)

SAMPLE DATE: _____ SAMPLE NOS _____

SAMPLE ANALYSIS: TPH METHOD 8015 MODIFIED

IF PID READINGS ARE GREATER THAN 100 PPM, NO SAMPLE WILL BE TAKEN DURING EXCAVATION.
THE EXCAVATION WILL BE SAMPLED PRIOR TO BACKFILLING (SEE ADDITIONAL SAMPLING SECTION).

REMARKS: Contaminated Soil 3,055 cu. yd
Clean Soil 1,647 cu. yd.

SIGNATURE: Pat Champion

DATE: 12/17/98

ADDITIONAL REMEDIATION ACTIVITIES

SOIL TILLING

DATE: _____ PID READING: _____ SIGNATURE: _____

REMARKS: _____

DATE: _____ PID READING: _____ SIGNATURE: _____

REMARKS: _____

DATE: _____ PID READING: _____ SIGNATURE: _____

REMARKS: _____

DATE: _____ PID READING: _____ SIGNATURE: _____

REMARKS: _____

ADDITIONAL SAMPLING INFORMATION

EXCAVATION SAMPLING(IF REQUIRED)

IF NO SAMPLE WAS TAKEN DURING EXCAVATION, THE EXCAVATION WILL BE SAMPLED BEFORE BACKFILLING).

SAMPLE DATE: _____ SAMPLE NOS _____

SIGNATURE: _____

IF PID READINGS ARE LESS THAN 100 PPM , SAMPLE ANALYSIS: TPH METHOD 8015 MODIFIED

IF PID READINGS ARE GREATER THAN 100 PPM, SAMPLE ANALYSES: BTEX METHOD 8020 AND TPH METHOD 8015 MODIFIED

SOIL REMEDIATION VERIFICATION SAMPLE

SAMPLE DATE: _____ SAMPLE NOS _____

SIGNATURE: _____

SAMPLE ANALYSIS: TPH METHOD 8015 MODIFIED

BACKFILLING INFORMATION

DATE: _____ TIME: _____

BACKFILL SOURCE: ONSITE LANDFARM: _____

OFFSITE SOURCE: _____ APPROX. VOLUME: _____

REMARKS: _____

SIGNATURE: _____

DATE: _____



Certificate of Analysis No. 9812150-01a

807 S. CARLTON AVE.
FARMINGTON, NEW MEXICO 87401
PHONE (505) 326-2588
FAX (505) 326-2875

Philip Environmental Services

4000 Monroe Road

Farmington, NM 87401

Attn: Robert Thompson

Date: 01/06/99

Project: BR Pits

Project No: 20440

Site: Farmington

Matrix: Soil

Sampled By: R. Thompson

Date Sampled: 12/28/98

Sample ID: 12281416 - BOTTOM

Date Received: 12/30/98

Analytical Data

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Benzene	ND	500 (P)	µg/Kg
Toluene	20000	500 (P)	µg/Kg
Ethylbenzene	8100	500 (P)	µg/Kg
Total Xylene	120000	500 (P)	µg/Kg
Total Volatile Aromatic Hydrocarbons	148100		µg/Kg

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	160MI

Method 8020A***
Analyzed by: AA
Date: 01/05/99

ND-Not Detected

MI-Matrix Interference

(P)-Practical Quantitation Limit

Notes:

*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA

**Ref: Standard Methods for Examination of Water & Wastewater, 18th Ed

***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

Billy G. Rich, Lab Director



Certificate of Analysis No. 9812150-01b

807 S. CARLTON AVE.
FARMINGTON, NEW MEXICO 87401
PHONE (505) 326-2588
FAX (505) 326-2875

Philip Environmental Services
4000 Monroe Road
Farmington, NM 87401
Attn: Robert Thompson

Date: 01/06/99

Project: BR Pits
Site: Farmington
Sampled By: R. Thompson
Sample ID: 12281416 - BOTTOM

Project No: 20440

Matrix: Soil

Date Sampled: 12/28/98

Date Received: 12/30/98

Analytical Data

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Gasoline Range Organics	2100	50 (P)	mg/kg
Surrogate	% Recovery		
1,4-Difluorobenzene	80		
4-Bromofluorobenzene	613MI		
Method 8015B*** for Gasoline			
Analyzed by: AA			
Date: 01/05/99			
Total Petroleum Hydrocarbons-Diesel	430	250 (P)	mg/kg
Surrogate	% Recovery		
n-Pentacosane	96		
Method 8015B*** for Diesel			
Analyzed by: RR			
Date: 01/04/99			

MI-Matrix Interference (P)-Practical Quantitation Limit ND-Not Detected

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
 **Ref: Standard Methods for Examination of Water & Wastewater, 18th Ed
 ***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.


Billy G. Rich, Lab Director



Certificate of Analysis No. 9812150-02a

807 S. CARLTON AVE.
FARMINGTON, NEW MEXICO 87401
PHONE (505) 326-2588
FAX (505) 326-2875

Philip Environmental Services
4000 Monroe Road
Farmington, NM 87401
Attn: Robert Thompson

Date: 01/06/99

Project: BR Pits
Site: Farmington
Sampled By: R. Thompson
Sample ID: 12281410 - WALLS

Project No: 20440

Matrix: Soil

Date Sampled: 12/28/98

Date Received: 12/30/98

Analytical Data

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Benzene	ND	500 (P)	µg/Kg
Toluene	6100	500 (P)	µg/Kg
Ethylbenzene	3400	500 (P)	µg/Kg
Total Xylene	75000	500 (P)	µg/Kg
Total Volatile Aromatic Hydrocarbons	84500		µg/Kg

Surrogate

% Recovery

1,4-Difluorobenzene

100

4-Bromofluorobenzene

167MI

Method 8020A***

Analyzed by: AA

Date: 01/05/99

ND-Not Detected

MI-Matrix Interference

(P)-Practical Quantitation Limit

Notes:

*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA

**Ref: Standard Methods for Examination of Water & Wastewater, 18th Ed

***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

Billy G. Rich, Lab Director



Certificate of Analysis No. 9812150-02b

807 S. CARLTON AVE.
FARMINGTON, NEW MEXICO 87401
PHONE (505) 326-2588
FAX (505) 326-2875

Philip Environmental Services
4000 Monroe Road
Farmington, NM 87401
Attn: Robert Thompson

Date: 01/06/99

Project: BR Pits
Site: Farmington
Sampled By: R. Thompson
Sample ID: 12281410 - WAUS

Project No: 20440

Matrix: Soil

Date Sampled: 12/28/98

Date Received: 12/30/98

Analytical Data

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Gasoline Range Organics	1600	50 (P)	mg/kg
Surrogate	% Recovery		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	667MI		
Method 8015B*** for Gasoline			
Analyzed by: AA			
Date: 01/05/99			
Total Petroleum Hydrocarbons-Diesel	250	50 (P)	mg/kg
Surrogate	% Recovery		
n-Pentacosane	92		
Method 8015B*** for Diesel			
Analyzed by: RR			
Date: 01/04/99			

MI-Matrix Interference (P)-Practical Quantitation Limit

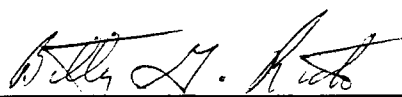
D-Diluted, limits not applicable

Notes:

*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA

**Ref: Standard Methods for Examination of Water & Wastewater, 18th Ed

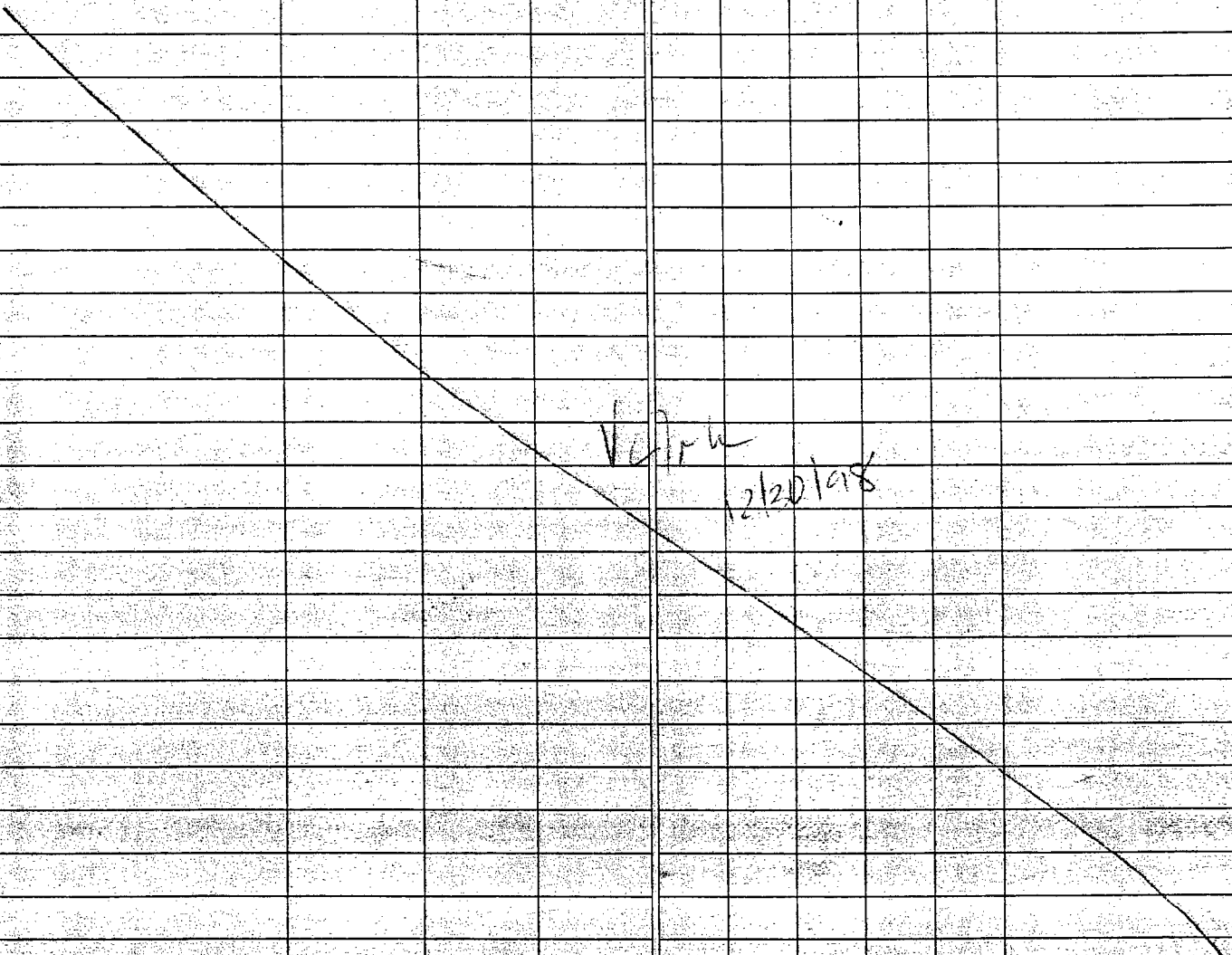
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.


Billy G. Rich, Lab Director

PHILIP

ENVIRONMENTAL

Chain of Custody Record — Nonchemical Samples210 West Sand Bank Road
P.O. Box 230
Columbia, IL 62236-0230(618) 281-7173 Phone
(618) 281-5120 FAXCOC Serial No. **G 3232**

Project Name BE PITS				Lab	Name SPL			
Project Number 20440		Phase . Task 1000 . 77			Location Farmington			
Samplers Paul Archuleta				Analysis Type				
Sample Number	Date	Time	Matrix	X	X		Comments	
12281416	12-28-98	1416	Soil	TPH	BTEX		PIV (eq 2) 1467 ppm	
12281410	12-28-98	1410	Soil	TPH	BTEX		PIV (eq 2) 2026 ppm	
								

Relinquished by:

Received By:

Signature	Date	Time	Signature	Date	Time
<i>Debra Lambert</i>	12/30/98	1333hrs	<i>V. J. W.</i>	12/30/98	1333hrs

Carrier:

Airbill No.

Shipping and Lab Notes:

Drilling Log/Wellbore Diagram



Pit # 2

PRODUCTION PIT ASSESSMENT FORM

WELL NAME: JOHNSTON FEDERAL

WELL NUMBER: 4

DP NO.:
WDE NAME: B154

OPERATOR NAME: BURLINGTON RESOURCES

PIL DISTRICT:

COORDINATES: TOWNSHIP 31N RANGE 9W SECTION 27 LETTER H

PIT TYPE: DEHYDRATOR ☐

SEPARATOR ☐

BLOW PIT ☐

OTHER:

CATHODIC PROTECTION WELL: ☐ YES ☒ NO

UNKNOWN

SITE ASSESSMENT DATE: 8/10/98

MOI FOREMAN NO.

AREA:

NMOCD ZONE: (from NMOCD Maps):

Inside ☒

Outside ☐

LAND TYPE: BLM ☒ (1)

STATE ☐ (2)

FEE ☐ (3)

INDIAN:

DEPTH TO GROUNDWATER:

LESS THAN 50 FT (1) ☒ (20 POINTS)

50 FT TO 99 FT (2) ☐ (10 POINTS)

GREATER THAN 100 FT (3) ☐ (0 POINTS)

WELLHEAD PROTECTION AREA: Is it less than 1,000 feet from wells, springs, or other sources of fresh water extraction?, or, is it less than 200 ft from a private domestic water source (or 1,000' on Navajo surface)?

YES ☐ (20 POINTS)

NO ☒ (0 POINTS)

HORIZONTAL DISTANCE TO SURFACE WATER BODY:

LESS THAN 200 FT (1) ☐ (20 POINTS)

200 FT TO 1,000 FT (2) ☐ (10 POINTS)

GREATER THAN 1,000 FT (3) ☒ (0 POINTS)

NAME OF SURFACE WATER BODY _____

SURFACE WATER BODY: PERENNIAL RIVERS, STREAMS, CREEKS, IRRIGATION CANALS, DITCHES, LAKES, PONDS

DISTANCE TO NEAREST EPHEMERAL STREAM

(1) ☐ <100 FEET (NAVAJO PITS ONLY)

(2) ☐ >100 FEET

TOTAL HAZARD RANKING SCORE: 20 POINTS

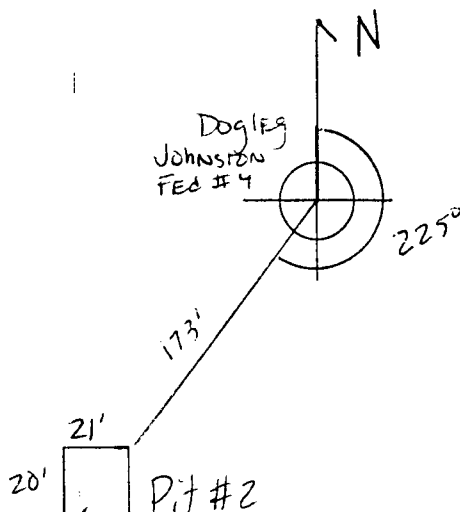
GENERAL

SITE ASSESSMENT

ORIGINAL PIT LOCATION

ORIGINAL PIT: (A) DEGREES FROM NORTH 225FOOTAGE FROM WELLHEAD 173'

CORRECTED 13° FOR MAGNETIC NORTH

(B) LENGTH: 21'WIDTH: 20'DEPTH: 3'

SAMPLE

SAMPLE SENT TO LAB FOR:

☒ BTEX☒ TPH☐ NO SAMPLE TAKENPID - FIELD HEADSPACE READING: 767 ppmSAMPLE NUMBER: BR8B1541B1

REMARKS

SAMPLE WAS COLLECTED AT 3 FEET. SENT TO LAB FOR
BTEX & TPH

BEARING TAKEN FROM JOHNSON FED #4 DOGLE

B154 IS NODE NAME TAKEN FROM INSIDE METER HOUS

COMPLETED BY:

H. BRADLEY

SIGNATURE

H. Bradley

DATE:

8/10/98



Certificate of Analysis No. 9803038-03a

FARMINGTON LABORATORY

807 S. CARLTON
FARMINGTON, NM 87499-1289
(505) 326-2588

Philip Environmental Services

4000 Monroe Road

Farmington, NM 87401

Attn: Cory Chance

Date: 08/17/98

Project: BR Misc.

Project No: 19074

Site: Johnston Fed #4, Pit #2

Matrix: Soil

Sampled By: Holly Bradbury

Date Sampled: 08/10/98

Sample ID: BR8B1541BV

Date Received: 08/11/98

Analytical Data

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Benzene	81000	5000 (P)	µg/Kg
Toluene	41000	5000 (P)	µg/Kg
Ethylbenzene	85000	5000 (P)	µg/Kg
Total Xylene	780000	5000 (P)	µg/Kg
Total Volatile Aromatic Hydrocarbons	987000		µg/Kg

Surrogate

% Recovery

1,4-Difluorobenzene

120

4-Bromofluorobenzene

193MI

Method 8020A***

Analyzed by: AA

Date: 08/13/98

ND-Not Detected

MI-Matrix Interference

(P)-Practical Quantitation Limit

Notes:

*Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA

**Ref: Standard Methods for Examination of Water & Wastewater, 18th Ed

***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

Billy G. Rich, Lab Director



Certificate of Analysis No. 9803038-03b

FARMINGTON LABORATORY

807 S. CARLTON
FARMINGTON, NM 87499-1289
(505) 326-2588

Philip Environmental Services

4000 Monroe Road

Farmington, NM 87401

Attn: Cory Chance

Date: 08/17/98

Project: BR Misc.

Project No: 19074

Site: Johnston Fed #4, Pit #2

Matrix: Soil

Sampled By: Holly Bradbury

Date Sampled: 08/10/98

Sample ID: BR8B1541BV

Date Received: 08/11/98

Analytical Data

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Gasoline Range Organics	17000	1000 (P)	mg/kg
Surrogate	% Recovery		
1,4-Difluorobenzene	123		
4-Bromofluorobenzene	367MI		
Method 8015B*** for Gasoline			
Analyzed by: AA			
Date: 08/13/98			
Total Petroleum Hydrocarbons-Diesel	2700	200 (P)	mg/kg
Surrogate	% Recovery		
n-Pentacosane	D		
Method 8015B*** for Diesel			
Analyzed by: RR			
Date: 08/14/98			

MI_Matrix Interference (P)-Practical Quantitation Limit D-Diluted, limits not applicable.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
 **Ref: Standard Methods for Examination of Water & Wastewater, 18th Ed
 ***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

Comments: Sample contains petroleum hydrocarbons from C10 - C24 that do not resemble a diesel pattern. (C10 - C24) RR

Billy G. Rich, Lab Director

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2282 FAX (505) 326-2388

Borehole # 1
Well # nw-BZ
Page 1 of 2

Project Name Burlington
Project Number 21057 Phase 1000.99
Project Location Johnston Fed #41

Elevation _____
Borehole Location _____
GWL Depth 43'
Logged By P. Cheney
Drilled By K. Padilla
Date/Time Started 5/13/99 0920
Date/Time Completed 5/13/99 1200

Well Logged By P. Cheney
Personnel On-Site P. Cheney, K. Padilla, R. Padilla
Contractors On-Site _____
Client Personnel On-Site Ed Haseley
Drilling Method 4 1/4" ID 1 1/2" SA
Air Monitoring Method PID

Depth (Feet)	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ BH S			Drilling Conditions & Blow Counts
0			Pit has been excavated and back filled to 30' (ed Haseley) First sample will be from 30'-32' Back fill is a yellowish brown, medium to coarse grained sand						
5									
10									
15									
20									
25									
30									
35	35		gray to dark gray clay. Approx 5-10% sand. soft, low plasticity. strong ltc odor		30'	0.1	9.1	1064	BC = 5 S/H = 1133
40	37		dark gray, fine grained clayey sand, strong ltc odor			0.2	11.5	560	BC = 12 S/H = 1103

Comments:

Geologist Signature _____

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2282 FAX (505) 326-2388

Borehole # 1
Well # MW-B1
Page 2 of 2

Project Name Burlington
Project Number 21057 Phase 1000.99
Project Location Johnston Fed #4

Elevation _____
Borehole Location _____
GWL Depth _____
Logged By P. Cheney
Drilled By K. Padilla
Date/Time Started 5/13/99 6:20
Date/Time Completed 5/13/99 1200

Well Logged By P. Cheney
Personnel On-Site P. Cheney, K. Padilla, A. Padilla
Contractors On-Site _____
Client Personnel On-Site Ed Kelsely
Drilling Method 4 1/4" ID HSA
Air Monitoring Method PID

Depth (Feet)	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
						BZ	BH	S	
40	40		light gray, fine to medium grained clayey sand, Firm			1.6	5.0	1015	BC = 7 S/H = 291
	42								
45	45		gray, very coarse grained sand w/ 5% small gravel. Strong odor. Approx 2' of yellowish brown consolidated sand at 47'		6.2		946		BC = 36 S/H = 256
	47								
50	50		gray, fine to medium grained sand. 2-5% black mineral grains. well consolidated		0.3		77		BC = 50 (7") S/H = 141
	52								
55			TD = 50' Set Screen 35-50						
20									
25									
30									
35									
40									

Comments:

Materials: 1 silt trap, 1-10' screen, 1-5' screen, 4-10' risers, 1-5' riser
7 sacks silica sand.

Geologist Signature _____

MONITORING WELL INSTALLATION RECORD

Phillip Environmental Services Corp.
1000 Monroe Road
Farmington, New Mexico 87401
5061 326-2262 FAX (506) 326-2388

Borehole # 1
Well # MW-B1
Page 1 of 1

Project Name Burlington Drilling
Project Number 21057 Phase POD.99
Project Location Johnson Federal #4

On-Site Geologist P Cheney
Personnel On-Site K Padilla, D Padilla
Contractors On-Site
Client Personnel On-Site Ed Hasely

Elevation _____
Well Location _____
GWL Depth 42'
Installed By K Padilla
D Padilla
Date/Time Started 5/13/99 1300
Date/Time Completed 6/4/99 1300

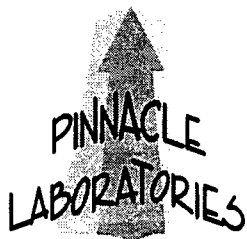
Depths in Reference to Ground Surface			
Item	Material	Depth	
Top of Protective Casing			Top of Protective Casing <u>±3'</u>
Bottom of Protective Casing			Top of Riser <u>±2'</u>
Top of Permanent Borehole Casing			Ground Surface <u>- -</u>
Bottom of Permanent Borehole Casing			
Top of Concrete			
Bottom of Concrete			
Top of Grout			
Bottom of Grout			
Top of Well Riser			
Bottom of Well Riser			
Top of Well Screen			Top of Seal <u>31</u>
Bottom of Well Screen			
Top of Peltonite Seal			Top of Gravel Pack <u>33</u>
Bottom of Peltonite Seal			Top of Screen <u>35</u>
Top of Gravel Pack			
Bottom of Gravel Pack			
Top of Natural Cave-In			
Bottom of Natural Cave-In			
Top of Groundwater			Bottom of Screen <u>50'</u>
Total Depth of Borehole			Bottom of Borehole <u>52'</u>

Comments:

Geologist Signature

Paul Cheney For Paul Cheney

Analytical Results - Groundwater



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **905083**
July 14, 1999

PHILIP SERVICES
4000 MONROE RD.
FARMINGTON, NM 87401

Project Name BURL. PITS
Project Number 21057

Attention: C. IRBY

On 5/22/99 Pinnacle Laboratories, Inc. Inc., (ADHS License No. AZ0592), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

Due to the lateness of this report, there will be no charge for the analyses.

EPA method 8021 was performed by Pinnacle Laboratories, Inc., Albuquerque, NM.

All other parameters were performed by ESL (OR) Inc., Portland, OR.

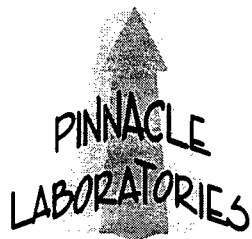
If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph. D.
General Manager

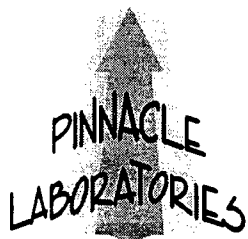
MR: mt

Enclosure



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: PHILIP SERVICES	PINNACLE ID	: 905083
PROJECT #	: 21057	DATE RECEIVED	: 5/22/99
PROJECT NAME	: BURL. PITS	REPORT DATE	: 7/14/99
PIN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	PC-03JF6A89232	AQUEOUS	5/21/99
02	PC-04JF470194	AQUEOUS	5/21/99



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP SERVICES
PROJECT # : 21057
PROJECT NAME : BURL. PITS

PINNACLE I.D.: 905083

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	PC-03JF6A89232	AQUEOUS	5/21/99	NA	5/25/99	1
02	PC-04JF470194	AQUEOUS	5/21/99	NA	5/25/99	100

PARAMETER	DET. LIMIT	UNITS	PC-03JFGA89232		PC-04JF470194	
BENZENE	0.5	UG/L	< 0.5		8700	
TOLUENE	0.5	UG/L	< 0.5		2900	
ETHYLBENZENE	0.5	UG/L	< 0.5		2800	
TOTAL XYLENES	0.5	UG/L	0.5		29000	
1,3,5-TRIMETHYLBENZENE	0.5	UG/L	< 0.5		1100	
1,2,4-TRIMETHYLBENZENE	0.5	UG/L	< 0.5		2300	
METHYL-t-BUTYL ETHER	2.5	UG/L	< 2.5		< 250	

SURROGATE:

BROMOFLUOROBENZENE (%)

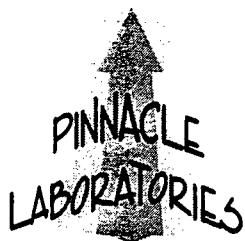
103

82

SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

N/A



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 905083
BLANK I. D.	: 052599	DATE EXTRACTED	: NA
CLIENT	: PHILIP SERVICES	DATE ANALYZED	: 5/25/99
PROJECT #	: 21057	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: BURL. PITS		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
METHYL-T-BUTYL ETHER	UG/L	<2.5
1,3,5-TRIMETHYLBENZENE	UG/L	<0.5
1,2,4-TRIMETHYLBENZENE	UG/L	<0.5

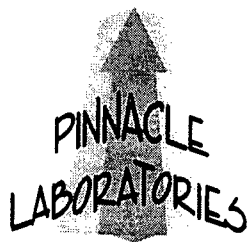
SURROGATE:

BROMOFLUOROBENZENE (%)	102
------------------------	-----

SURROGATE LIMITS: (80 - 120)

CHEMIST NOTES:

N/A



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 905065-03
CLIENT : PHILIP SERVICES
PROJECT # : 21057
PROJECT NAME : BURL. PITS

PINNACLE I.D. : 905083
DATE EXTRACTED : NA
DATE ANALYZED : 5/25/99
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	10.0	10.3	103	10.9	109	6	(80 - 120)	20
TOLUENE	<0.5	10.0	10.5	105	10.6	106	1	(80 - 120)	20
ETHYLBENZENE	<0.5	10.0	10.7	107	10.6	106	1	(80 - 120)	20
TOTAL XYLENES	<0.5	30.0	31.9	106	32.0	107	0	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	10.0	9.6	96	9.4	94	2	(70 - 133)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Environmental Services Laboratory, Inc.



17400 SW Upper Boones Ferry Road • Suite 270 • Portland, OR 97224 • (503) 670-8520

July 09, 1999

Kim McNeill
Pinnacle Laboratories
2709-D Pan American Fwy NE
Albuquerque, NM 87107

TEL: 505-344-3777
FAX (505) 344-4413

RE: 905083/PHIL/Barl. Pits

Order No.: 9905121

Dear Kim McNeill,

Environmental Services Laboratory received 2 samples on 05/25/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

CHLORIDE (Chloride)
ICP Metals (ICPMET)
MERCURY (Mercury)
Nitrate/Nitrite (Nitrogen)
Sulfate (Sulfate)
TOTAL DISSOLVED SOLIDS (E160.1)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety, without the written approval from the Laboratory.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Kimberly Hill
Project Manager

Technical Review

ANALYTICAL SERVICES FOR THE ENVIRONMENT

Environmental Services Laboratory

Date: 13-Jul-99

CLIENT: Pinnacle Laboratories
Lab Order: 9905121
Project: 905083/PHIL/Barl. Pits
Lab ID: 9905121-01A

Client Sample ID: 905083-01
Tag Number:
Collection Date: 05/21/99
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
CHLORIDE		EPA 325.3				Analyst: kfl
Chloride	15	50		mg/L	20	05/26/99
NITRATE/NITRITE		EPA 353.3				Analyst: sld
Nitrogen, N+N	ND	0.05		mg/L	1	05/28/99
SULFATE		EPA 375.4				Analyst: sld
Sulfate	1100	420		mg/L	83.3	05/27/99
TOTAL DISSOLVED SOLIDS		EPA 160.1				Analyst: kfl
Total Dissolved Solids (Residue, Filterable)	2000	10		mg/L	1	05/25/99
MERCURY		SW 7470 / EPA 245.				Analyst: btn
Mercury	ND	0.002		mg/L	1	06/08/99
ICP METALS		SW 6010 / EPA 200.				Analyst: btn
Arsenic	ND	0.05		mg/L	1	06/16/99
Barium	ND	0.3		mg/L	1	06/16/99
Cadmium	ND	0.005		mg/L	1	06/16/99
Chromium	ND	0.05		mg/L	1	06/16/99
Lead	ND	0.05		mg/L	1	06/16/99
Selenium	ND	0.05		mg/L	1	06/16/99
Silver	ND	0.05		mg/L	1	06/16/99

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Environmental Services Laboratory

Date: 13-Jul-99

CLIENT: Pinnacle Laboratories
Lab Order: 9905121
Project: 905083/PHIL/Barl. Pits
Lab ID: 9905121-02A

Client Sample ID: 905083-02
Tag Number:
Collection Date: 05/21/99
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
CHLORIDE		EPA 325.3				Analyst: kfl
Chloride	75	50		mg/L	100	05/26/99
NITRATE/NITRITE		EPA 353.3				Analyst: sld
Nitrogen, N+N	ND	0.05		mg/L	1	05/28/99
SULFATE		EPA 375.4				Analyst: sld
Sulfate	170	62		mg/L	12.5	05/27/99
TOTAL DISSOLVED SOLIDS		EPA 160.1				Analyst: kfl
Total Dissolved Solids (Residue, Filterable)	1800	10		mg/L	1	05/25/99
MERCURY		SW 7470 / EPA 245.				Analyst: btn
Mercury	ND	0.002		mg/L	1	06/08/99
ICP METALS		SW 6010 / EPA 200.				Analyst: btn
Arsenic	ND	0.05		mg/L	1	06/16/99
Barium	ND	0.3		mg/L	1	06/16/99
Cadmium	ND	0.005		mg/L	1	06/16/99
Chromium	ND	0.05		mg/L	1	06/16/99
Lead	ND	0.05		mg/L	1	06/16/99
Selenium	ND	0.05		mg/L	1	06/16/99
Silver	ND	0.05		mg/L	1	06/16/99

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Environmental Services Laboratory

Date: 09-Jul-99

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QCC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/26/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990526A	SeqNo: 9937	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual
Chloride	ND		0.5		
Sample ID: MBlank	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/07/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990507B	SeqNo: 11086	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual
Chloride	ND		0.5		
Sample ID: MBlank	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/17/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990517C	SeqNo: 11134	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual
Chloride	ND		0.5		
Sample ID: MBlank	Batch ID: 01 N+N-6/2/9	Test Code: Nitrogen	Units: mg/L	Analysis Date 05/28/99	Prep Date:
Client ID:	9905121	Run ID:	HIT MAN_990528B	SeqNo: 11800	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual
Nitrogen, N+N	ND		0.05		
Sample ID: MBlank	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/21/99	Prep Date:
Client ID:	9905121	Run ID:	HIT MAN_990521B	SeqNo: 9661	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual
Sulfate	ND		5		

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT
Method Blank

Sample ID: MBlank	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/27/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990527A		SeqNo: 9765	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	5			
Sample ID: MBlank	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 04/29/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990429A		SeqNo: 10621	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	5			
Sample ID: MBlank	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/12/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990512B		SeqNo: 10869	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	5			
Sample ID: MBlank	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/20/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990520A		SeqNo: 10997	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	5			
Sample ID: MBlank	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/25/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990525C		SeqNo: 10233	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	ND	10			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT
Method Blank

Sample ID: MBlank	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/26/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990526C	SeqNo: 10284	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera ND 10					
Sample ID: MBlank	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 04/28/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990428C	SeqNo: 11254	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera ND 10					
Sample ID: MBlank	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/05/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990505B	SeqNo: 11272	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera ND 10					
Sample ID: MBlank	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/11/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990511D	SeqNo: 11287	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera ND 10					
Sample ID: MBlank	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/18/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990518B	SeqNo: 11307	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera ND 10					

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT
Method Blank

Sample ID: MB-489 Batch ID: 489 Test Code: ICPMET Units: mg/L Analysis Date: 06/16/99 Prep Date: 05/28/99
Client ID: 9905121 Run ID: ICP_990616D SeqNo: 16862

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.05									
Barium	ND	0.3									
Cadmium	ND	0.005									
Calcium	ND	0.1									
Chromium	ND	0.05									
Copper	ND	0.02									
Iron	ND	0.1									
Lead	ND	0.05									
Magnesium	ND	0.02									
Manganese	ND	0.02									
Potassium	ND	0.1									
Selenium	ND	0.05									
Silver	ND	0.05									
Sodium	ND	0.2									
Zinc	ND	0.02									

Sample ID: MB-513 Batch ID: 513 Test Code: Mercury Units: mg/L Analysis Date: 06/08/99 Prep Date: 06/07/99
Client ID: 9905121 Run ID: MERC_990608A SeqNo: 13237

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Environmental Services Laboratory

Date: 09-Jul-99

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT Sample Duplicate

Sample ID: 9904166-01A DUP	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/07/99	Prep Date:	
Client ID:	9905121	Run ID:	NO INST_990507B	SeqNo: 11108		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual
Chloride	38	5	0	0	0.0%	0 0 40 5.1% 20
Sample ID: 9904166-02A DUP	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/07/99	Prep Date:	
Client ID:	9905121	Run ID:	NO INST_990507B	SeqNo: 11112		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual
Chloride	32	5	0	0	0.0%	0 0 35 9.0% 20
Sample ID: 9905030-01A DUP	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/17/99	Prep Date:	
Client ID:	9905121	Run ID:	NO INST_990517C	SeqNo: 11137		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual
Chloride	140	5	0	0	0.0%	0 0 130 7.4% 20
Sample ID: 9905097-02A DUP	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/26/99	Prep Date:	
Client ID:	9905121	Run ID:	NO INST_990526A	SeqNo: 9944		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual
Chloride, Diss	5	0.5	0	0	0.0%	0 0 5.25 4.9% 20
Sample ID: 9905133-05A DUP	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/26/99	Prep Date:	
Client ID:	9905121	Run ID:	NO INST_990526A	SeqNo: 9959		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual
Chloride, Diss	17.5	5	0	0	0.0%	0 0 17.5 0.0% 20

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT Sample Duplicate

Sample ID: 9904111-01A DUP		Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 04/29/99	Prep Date:					
Client ID:		9905121	Run ID: HIT MAN_990429A		SeqNo: 10624						
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	59.02	12	0	0	0.0%	80	120	56.18	4.9%	20	-
Sample ID: 9904157-03A DUP		Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 04/29/99	Prep Date:					
Client ID:		9905121	Run ID: HIT MAN_990429A		SeqNo: 10662						
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	233.1	62	0	0	0.0%	80	120	203.9	13.4%	20	
Sulfate, Diss	ND	62	0	0	0.0%	80	120	0	0.0%	20	
Sample ID: 9904166-01A DUP		Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/12/99	Prep Date:					
Client ID:		9905121	Run ID: HIT MAN_990512B		SeqNo: 10872						
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	126.9	62	0	0	0.0%	80	120	130.2	2.6%	20	
Sample ID: 9905045-01A DUP		Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/20/99	Prep Date:					
Client ID:		9905121	Run ID: HIT MAN_990520A		SeqNo: 11008						
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	134.4	25	0	0	0.0%	80	120	121	10.5%	20	
Sample ID: 9905078-01A DUP		Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/21/99	Prep Date:					
Client ID:		9905121	Run ID: HIT MAN_990521B		SeqNo: 9668						
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	574.8	120	0	0	0.0%	80	120	494	15.1%	20	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT
Sample Duplicate

Sample ID: 9905097-02A DUP	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/27/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990527A	SeqNo: 9769		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate, Diss	13	5	0	0	0.0% 80 120 13 0.0% 20
Sample ID: 9904140-04A DUP	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 04/28/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990428C	SeqNo: 11267		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	510	10	0	0	0.0% 0 0 480 6.1% 20
Sample ID: 9905011-03A DUP	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/05/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990505B	SeqNo: 11286		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	470	10	0	0	0.0% 0 0 470 0.0% 20
Sample ID: 9905026-01A DUP	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/11/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990511D	SeqNo: 11290		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	430	10	0	0	0.0% 0 0 420 2.4% 20
Sample ID: 9905053-01A DUP	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/18/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990518B	SeqNo: 11310		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	440	10	0	0	0.0% 0 0 420 4.7% 20

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT
Sample Duplicate

Sample ID: 9905098-01A DUP Batch ID: 01 TDS-6/1/99 Test Code: E160.1 Units: mg/L Analysis Date: 05/25/99 Prep Date:

Client ID: 9905121 Run ID: NO INST_990525C SeqNo: 10238

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Lowlimit	Hightlimit	RPD Ref Val	%RPD	RPDLimit	Qual
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Total Dissolved Solids (Residue, Filtera	15	10	0	0	0.0%	0	0	34	77.6%	20	R,T
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Sample ID: 9905133-03A DUP Batch ID: 01 TDS-6/1/99 Test Code: E160.1 Units: mg/L Analysis Date: 05/26/99 Prep Date:

Client ID: 9905121 Run ID: NO INST_990526C SeqNo: 10287

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Lowlimit	Hightlimit	RPD Ref Val	%RPD	RPDLimit	Qual
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Total Dissolved Solids (Residue, Filtera	110	10	0	0	0.0%	0	0	130	16.7%	20	
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Sample ID: 9905102-01A DUP Batch ID: 489 Test Code: ICPMET Units: mg/L Analysis Date: 06/16/99 Prep Date: 05/28/99

Client ID: 9905121 Run ID: ICP_990616D SeqNo: 16864

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Lowlimit	Hightlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.05	0	0	0.0%	0	0	0	0.0%	20	
Barium	ND	0.3	0	0	0.0%	0	0	0	0.0%	20	
Cadmium	ND	0.005	0	0	0.0%	0	0	0	0.0%	20	
Calcium	2.91	0.1	0	0	0.0%	0	0	2.5	15.2%	20	
Chromium	ND	0.05	0	0	0.0%	0	0	0	0.0%	20	
Copper	ND	0.02	0	0	0.0%	0	0	0	0.0%	20	
Iron	ND	0.1	0	0	0.0%	0	0	0	0.0%	20	
Lead	ND	0.05	0	0	0.0%	0	0	0	0.0%	20	
Magnesium	2.02	0.02	0	0	0.0%	0	0	2.01	0.5%	20	
Manganese	.678	0.02	0	0	0.0%	0	0	0.668	1.5%	20	
Potassium	.772	0.1	0	0	0.0%	0	0	0.911	16.5%	20	
Selenium	ND	0.05	0	0	0.0%	0	0	0	0.0%	20	
Silver	ND	0.05	0	0	0.0%	0	0	0	0.0%	20	
Sodium	4.73	0.2	0	0	0.0%	0	0	4.67	1.3%	20	
Zinc	ND	0.02	0	0	0.0%	0	0	0	0.0%	20	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT
Sample Duplicate

Sample ID: 9906044-12A DUP Batch ID: 513 Test Code: Mercury Units: mg/L Analysis Date: 06/08/99 Prep Date: 06/07/99

Client ID: 9905121 Run ID: MERC_990608A SeqNo: 13240

Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002	0	0	0.0%	0	0	0	0.0%	20	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Environmental Services Laboratory

Date: 09-Jul-99

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Bart. Pits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9904166-01A MS	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/07/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990507B	SeqNo: 11109	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Chloride	82	5	50	40	84.0% 75 125 0
Sample ID: 9904166-01A MSD	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/07/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990507B	SeqNo: 11110	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Chloride	85	5	50	40	90.0% 75 125 82 3.6% 20
Sample ID: 9904166-02A MS	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/07/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990507B	SeqNo: 11113	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Chloride	90	5	50	35	110.0% 75 125 0
Sample ID: 9904166-02A MSD	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/07/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990507B	SeqNo: 11114	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Chloride	80	5	50	35	90.0% 75 125 90 11.8% 20
Sample ID: 9905030-01A MS	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/17/99	Prep Date:
Client ID:	9905121	Run ID:	NO INST_990517C	SeqNo: 11138	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Chloride	240	5	100	130	110.0% 75 125 0

Qualifiers:

ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID: 9905030-01A MSD		Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/17/99	Prep Date:					
Client ID:	9905121	Run ID:	NO INST_990517C	SeqNo: 11139							
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	230	5	100	130	100.0%	75	125	240	4.3%	20	
Sample ID: 9905097-02A MS		Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/26/99	Prep Date:					
Client ID:	9905121	Run ID:	NO INST_990526A	SeqNo: 9945							
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride, Diss	16	0.5	10	5.25	107.5%	75	125	0			
Sample ID: 9905097-02A MSD		Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/26/99	Prep Date:					
Client ID:	9905121	Run ID:	NO INST_990526A	SeqNo: 9946							
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride, Diss	15	0.5	10	5.25	97.5%	75	125	16	6.5%	20	
Sample ID: 9905133-05A MS		Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/26/99	Prep Date:					
Client ID:	9905121	Run ID:	NO INST_990526A	SeqNo: 9960							
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride, Diss	122.5	5	100	17.5	105.0%	75	125	0			
Sample ID: 9905133-05A MSD		Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/26/99	Prep Date:					
Client ID:	9905121	Run ID:	NO INST_990526A	SeqNo: 9961							
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride, Diss	117.5	5	100	17.5	100.0%	75	125	122.5	4.2%	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9904111-01A MS	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 04/29/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990429A	SeqNo: 10625		
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDlimit Qual

Sulfate	96.15	25	50	56.18	80.0%	75	125	0	
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Sample ID: 9904111-01A MSD	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 04/29/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990429A	SeqNo: 10626		

Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDlimit Qual
Sulfate	96.15	25	50	56.18	80.0%	75 125 96.15 0.0% 20

Sample ID: 9904157-03A MS	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 04/29/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990429A	SeqNo: 10663		

Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDlimit Qual
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Sample ID: 9904157-03A MSD	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 04/29/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990429A	SeqNo: 10664		

Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDlimit Qual
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Sample ID: 9904166-01A MS	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/12/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990512B	SeqNo: 10873		

Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDlimit Qual
Sulfate	1064	500	800	130.2	116.7%	75 125 0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID: 9904166-01A MSD		Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/12/99		Prep Date:				
Client ID:	9905121	Run ID: HIT MAN_990512B			SeqNo: 10874						
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1063	500	800	130.2	116.6%	75	125	1064	0.1%	20	-
Sample ID: 9905045-01A MS		Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/20/99		Prep Date:				
Client ID:	9905121	Run ID: HIT MAN_990520A			SeqNo: 11010						
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	98.85	42	66	121	-33.6%	75	125	0		S,H	
Sample ID: 9905045-01A MSD		Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/20/99		Prep Date:				
Client ID:	9905121	Run ID: HIT MAN_990520A			SeqNo: 11012						
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	99.02	42	66	121	-33.3%	75	125	98.85	0.2%	20	S,H
Sample ID: 9905078-01A MS		Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/21/99		Prep Date:				
Client ID:	9905121	Run ID: HIT MAN_990521B			SeqNo: 9669						
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	839.8	120	300	494	115.3%	75	125	0			
Sample ID: 9905078-01A MSD		Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/21/99		Prep Date:				
Client ID:	9905121	Run ID: HIT MAN_990521B			SeqNo: 9670						
Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	803	120	300	494	103.0%	75	125	839.8	4.5%	20	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9905097-02A MS Batch ID: 01 SULFATE Test Code: Sulfate Units: mg/L Analysis Date 05/27/99 Prep Date:

Client ID: 9905121 Run ID: HIT MAN_990527A SeqNo: 9770

Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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Sulfate, Diss	20.2	5	8	13	90.0%	75	125	0			
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Sample ID: 9905097-02A MSD Batch ID: 01 SULFATE Test Code: Sulfate Units: mg/L Analysis Date 05/27/99 Prep Date:

Client ID: 9905121 Run ID: HIT MAN_990527A SeqNo: 9771

Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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Sulfate, Diss	20.3	5	8	13	91.3%	75	125	20.2	0.5%	20	
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Sample ID: 9905102-01A MS Batch ID: 489 Test Code: ICPMET Units: mg/L Analysis Date 06/16/99 Prep Date: 05/28/99

Client ID: 9905121 Run ID: ICP_990616D SeqNo: 16865

Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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Arsenic	.445	0.05	0.5	0	89.0%	80	120	0			
Barium	.475	0.3	0.5	0	95.0%	80	120	0			
Cadmium	.45	0.005	0.5	0	90.0%	80	120	0			
Calcium	8.02	0.1	5	2.5	110.4%	80	120	0			
Chromium	.45	0.05	0.5	0	90.0%	80	120	0			
Copper	.416	0.02	0.5	0	83.2%	80	120	0			
Iron	5.08	0.1	5	0	101.6%	80	120	0			
Lead	.434	0.05	0.5	0	86.8%	80	120	0			
Magnesium	6.85	0.02	5	2.01	96.8%	80	120	0			
Manganese	1.13	0.02	0.5	0.668	92.4%	80	120	0			
Potassium	5.59	0.1	5	0.911	93.6%	80	120	0			
Selenium	.478	0.05	0.5	0	95.6%	80	120	0			
Silver	.451	0.05	0.5	0	90.2%	80	120	0			
Sodium	9.6	0.2	5	4.67	98.6%	80	120	0			
Zinc	.438	0.02	0.5	0	87.6%	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Bart. Pits

QC SUMMARY REPORT Sample Matrix Spike Duplicate

Sample ID: 9905102-01A MSD	Batch ID: 489	Test Code: ICPMET	Units: mg/L	Analysis Date: 06/16/99	Prep Date: 05/28/99
Client ID: 9905121	Run ID: ICP_990616D	SeqNo: 16866			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	.442	0.05	0.5	0	88.4%	80	120	0.445	0.7%	20	
Barium	.468	0.3	0.5	0	93.6%	80	120	0.475	1.5%	20	
Cadmium	.445	0.005	0.5	0	89.0%	80	120	0.45	1.1%	20	
Calcium	7.96	0.1	5	2.5	109.2%	80	120	8.02	0.8%	20	
Chromium	.42	0.05	0.5	0	84.0%	80	120	0.45	6.9%	20	
Copper	.409	0.02	0.5	0	81.8%	80	120	0.416	1.7%	20	
Iron	5.04	0.1	5	0	100.8%	80	120	5.08	0.8%	20	
Lead	.43	0.05	0.5	0	86.0%	80	120	0.434	0.9%	20	
Magnesium	6.75	0.02	5	2.01	94.8%	80	120	6.85	1.5%	20	
Manganese	1.12	0.02	0.5	0.668	90.4%	80	120	1.13	0.9%	20	
Potassium	5.5	0.1	5	0.911	91.8%	80	120	5.59	1.6%	20	
Selenium	.444	0.05	0.5	0	88.8%	80	120	0.478	7.4%	20	
Silver	.445	0.05	0.5	0	89.0%	80	120	0.451	1.3%	20	
Sodium	9.39	0.2	5	4.67	94.4%	80	120	9.6	2.2%	20	
Zinc	.425	0.02	0.5	0	85.0%	80	120	0.438	3.0%	20	

Sample ID: 9906044-12A MSD	Batch ID: 513	Test Code: Mercury	Units: mg/L	Analysis Date: 06/08/99	Prep Date: 06/07/99
Client ID: 9905121	Run ID: MERC_990608A	SeqNo: 13241			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	.00217	0.0002	0.002	0	108.5%	75	125	0			

Sample ID: 9906044-12A MSD	Batch ID: 513	Test Code: Mercury	Units: mg/L	Analysis Date: 06/08/99	Prep Date: 06/07/99
Client ID: 9905121	Run ID: MERC_990608A	SeqNo: 13242			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	.00216	0.0002	0.002	0	108.0%	75	125	0.00217	0.5%	20	

Qualifiers: NID - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Environmental Services Laboratory

Date: 09-Jul-99

CLIENT: Pinnacle Laboratories

Work Order: 9905121

Project: 905083/PHIL/Barl. Pits

QCC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/26/99	Prep Date:	
Client ID:	9905121	Run ID:	NO INST_990526A	SeqNo: 9938		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	10	0.5	10	0	100.0%	85 115 0
Sample ID: LCS	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/07/99	Prep Date:	
Client ID:	9905121	Run ID:	NO INST_990507B	SeqNo: 11087		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	9.5	0.5	10	0	95.0%	85 115 0
Sample ID: LCS	Batch ID: 01 CL A-6/1/9	Test Code: Chloride	Units: mg/L	Analysis Date 05/17/99	Prep Date:	
Client ID:	9905121	Run ID:	NO INST_990517C	SeqNo: 11135		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	10.3	0.5	10	0	103.0%	85 115 0
Sample ID: LCS	Batch ID: 01 N+N-6/2/9	Test Code: Nitrogen	Units: mg/L	Analysis Date 05/28/99	Prep Date:	
Client ID:	9905121	Run ID:	HIT MAN_990528B	SeqNo: 11801		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Nitrogen, N+N	.324	0.05	0.3	0	108.0%	85 115 0
Sample ID: LCS	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/21/99	Prep Date:	
Client ID:	9905121	Run ID:	HIT MAN_990521B	SeqNo: 9662		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	12	5	12	0	100.0%	85 115 0

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID: LCS	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/27/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990527A		SeqNo: 9766	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	7.816	5	8	0	97.7% 85 115 0
Sample ID: LCS	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 04/29/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990429A		SeqNo: 10622	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	10	5	10	0	100.0% 85 115 0
Sample ID: LCS	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/12/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990512B		SeqNo: 10870	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	7.43	5	8	0	92.9% 85 115 0
Sample ID: LCS	Batch ID: 01 SULFATE	Test Code: Sulfate	Units: mg/L	Analysis Date 05/20/99	Prep Date:
Client ID:	9905121	Run ID: HIT MAN_990520A		SeqNo: 10999	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	7.03	5	8	0	87.9% 85 115 0
Sample ID: LCS	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/25/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990525C		SeqNo: 10234	
Analyte	Result	POL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	3674	10	3966	0	92.6% 85 115 0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/26/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990526C		SeqNo: 10285	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Total Dissolved Solids (Residue, Filtera	4080	10	3966	0	102.9% 85 115 0
Sample ID: LCS	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 04/28/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990428C		SeqNo: 11255	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Total Dissolved Solids (Residue, Filtera	3550	10	3966	0	89.5% 85 115 0
Sample ID: LCS	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/05/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990505B		SeqNo: 11273	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Total Dissolved Solids (Residue, Filtera	3490	10	3966	0	88.0% 85 115 0
Sample ID: LCS	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/11/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990511D		SeqNo: 11288	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Total Dissolved Solids (Residue, Filtera	3630	10	3966	0	91.5% 85 115 0
Sample ID: LCS	Batch ID: 01 TDS-6/1/99	Test Code: E160.1	Units: mg/L	Analysis Date 05/18/99	Prep Date:
Client ID:	9905121	Run ID: NO INST_990518B		SeqNo: 11308	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Total Dissolved Solids (Residue, Filtera	3610	10	3966	0	91.0% 85 115 0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
Work Order: 9905121
Project: 905083/PHIL/Barl. Pits

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS-489 **Batch ID:** 489 **Test Code:** ICPMET **Units:** mg/L **Analysis Date:** 06/16/99 **Prep Date:** 05/28/99
Client ID: 9905121 **Run ID:** ICP_990616D **SeqNo:** 16861

Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	.438	0.05	0.5	0	87.6%	80	120	0			
Barium	.426	0.3	0.5	0	85.2%	80	120	0			
Cadmium	.437	0.005	0.5	0	87.4%	80	120	0			
Calcium	4.85	0.1	5	0	97.0%	80	120	0			
Chromium	.414	0.05	0.5	0	82.8%	80	120	0			
Copper	.4	0.02	0.5	0	80.0%	80	120	0			
Iron	4.96	0.1	5	0	99.2%	80	120	0			
Lead	.429	0.05	0.5	0	85.8%	80	120	0			
Magnesium	4.57	0.02	5	0	91.4%	80	120	0			
Manganese	.435	0.02	0.5	0	87.0%	80	120	0			
Potassium	4.49	0.1	5	0	89.8%	80	120	0			
Selenium	.438	0.05	0.5	0	87.6%	80	120	0			
Silver	.432	0.05	0.5	0	86.4%	80	120	0			
Sodium	4.56	0.2	5	0	91.2%	80	120	0			
Zinc	.42	0.02	0.5	0	84.0%	80	120	0			

Sample ID: LCS-513 **Batch ID:** 513 **Test Code:** Mercury **Units:** mg/L **Analysis Date:** 06/08/99 **Prep Date:** 06/07/99
Client ID: 9905121 **Run ID:** MERC_990608A **SeqNo:** 13238

Analyte	Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	.00101	0.0002	0.001	0	101.0%	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Environmental Services Laboratory

Date: 09-Jul-99

CLIENT: Pinnacle Laboratories
 Work Order: 9905121
 Project: 905083/PHL/Barl. Pits

QC SUMMARY REPORT Initial Calibration Verification Standard

Sample ID: ICV	Batch ID: 513	Test Code: Mercury	Units: mg/L	Analysis Date	06/08/99	Prep Date: 06/07/99					
Client ID:	9905121	Run ID: MERC_990608A		SeqNo:	13260						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual.
Mercury	.00216	0.0002	0.002	0	108.0%	90	110	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYSIS REQUEST

(505) 344-3777 Fax (505) 344-4413

PROJECT INFORMATION		SAMPLE RECEIPT		SAMPLES SENT TO:		RELINQUISHED BY: 1.		RELINQUISHED BY: 2.	
PROJECT #:	905083	Total Number of Containers		PENSACOLA - STL-FL		Signature:	Time:	Signature:	Time:
PROJ. NAME:	PHL	Chain of Custody Seals		PORTLAND - ESL-OR	X	Signature:	Time:	Signature:	Time:
QC LEVEL:	STD IV	Received Intact?		STL - CT		Printed Name:	Date:	Printed Name:	Date:
QC REQUIRED:	MS MSD BLANK	Received Good Cond/Cold		STL - NEW JERSEY		Signature:	Time:	Signature:	Time:
TAT:	STANDARD RUSH!!	LAB NUMBER:		N. CREEK		Printed Name:	Date:	Printed Name:	Date:
				BARRINGER		RECEIVED BY:	1.	RECEIVED BY:	2.
DUE DATE:	6/4	COMMENTS:		SEQUOIA		Signature:	Time:	Signature:	Time:
RUSH SURCHARGE:	—					Printed Name:	Date:	Printed Name:	Date:
CLIENT DISCOUNT:	—					Signature:	Time:	Signature:	Time:
SPECIAL CERTIFICATION						Printed Name:	Date:	Printed Name:	Date:
REQUIRED: YES (N)						Signature:	Time:	Signature:	Time:

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:

COMPANY: Philip Services
ADDRESS: 4600 Monroe Rd.
Farmingington, N.M. 87401
PHONE: (505) 326-2262
FAX: (505) 326-2358
BILL TO: Philip Services C. Tidy
COMPANY: Philip Services
ADDRESS: 4600 Monroe Rd.
Farmingington, N.M. 87401

SAMPLE ID DATE TIME MATRIX LAB I.D.

PC-C3-SEA 89232 5/21 1200 H2O -01
PC-C4-SEA 90199 5/21 1245 H2O -02

Petroleum Hydrocarbons (418.1) TRPH
(MOD.8015) Diesel/Direct Inject
(M8015) Gas/Purge & Trap
8021 (BTEX)/8015 (Gasoline) MTBE
8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE
8021 (TCL)
8021 (EDX)
8021 (HALO)
8021 (CUST)
504.1 EDB ☐ / DBCP ☐
8260 (TCL) Volatile Organics
8260 (Full) Volatile Organics
8260 (CUST) Volatile Organics
8260 (Landfill) Volatile Organics
Pesticides /PCB (608/8081/8082)
Herbicides (615/8151)
Base/Neutral/Acid Compounds GC/MS (625/8270)
Polynuclear Aromatics (610/8310/8270-SIMS)
General Chemistry: Cl, SO4, NO3, NO2, TDS
Priority Pollutant Metals (13)
Target Analyte List Metals (23)
RCRA Metals (8)
RCRA Metals by TCLP (Method 1311)
Metals:
NUMBER OF CONTAINERS

ANALYSIS REQUEST

PROJECT INFORMATION

PROJ NO: 21057
PROJ NAME: Basil, P's
P.O. NO.:
SHIPPED VIA:
SAMPLE RECEIPT
NO. CONTAINERS: 10
CUSTODY SEALS: GY N/NA
RECEIVED INTACT: Y
BLUE ICE/ICE: 580

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 124hr ☐ 48hr ☐ 72hr ☒ 1 WEEK (NORMAL) ☒
CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER
METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

TOTAL AMOUNT \$1160
Even the 5/20/99

RELINQUISHED BY: 1.

Signature: Time:

Printed Name: Date:

Company: See reverse side (Force Majeure)

RECEIVED BY: 1.

Signature: Time:

Printed Name: Date:

Company:

RELINQUISHED BY: 2.

Signature: Time:

Printed Name: Date:

Company:

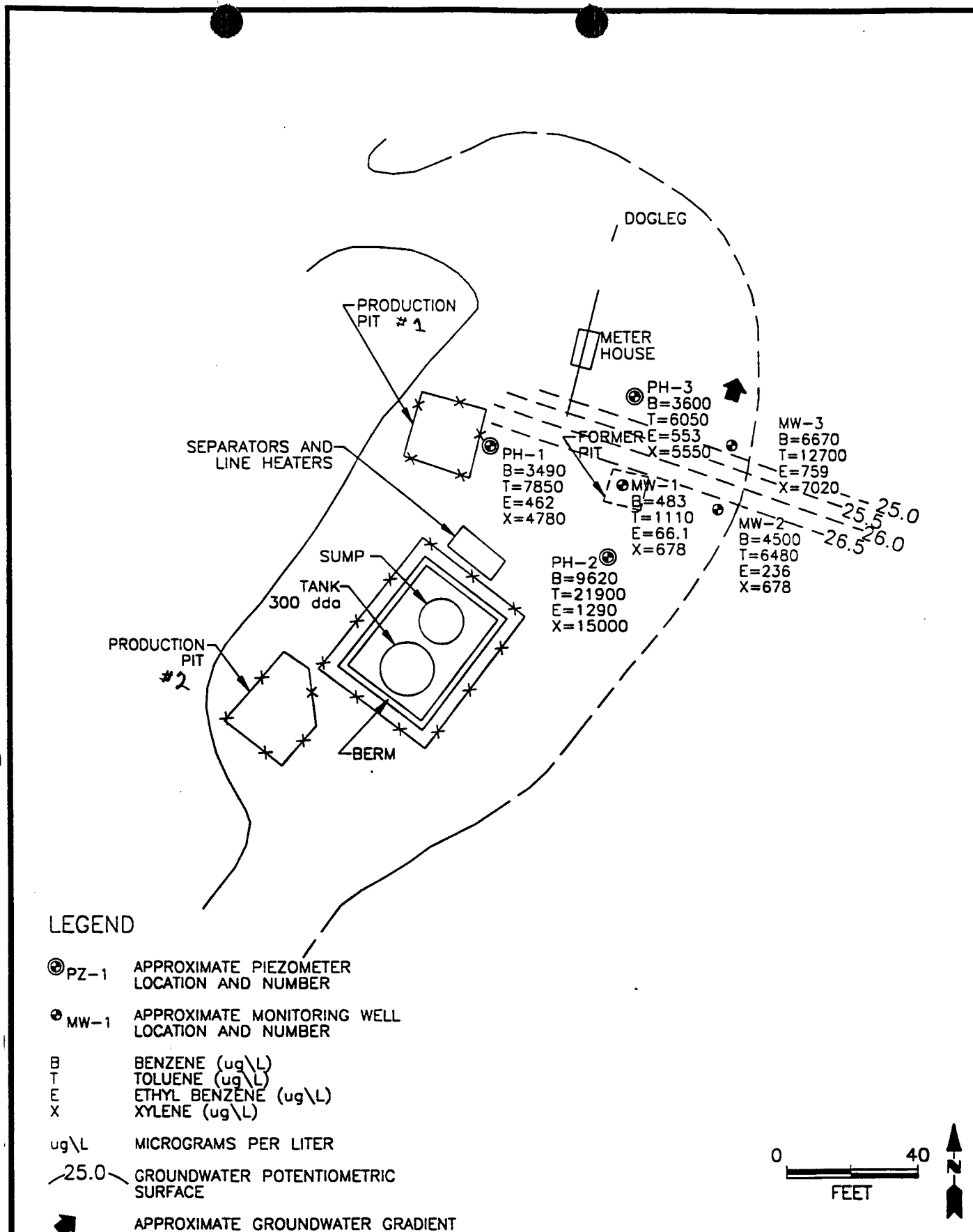
RECEIVED BY: (LAB) 2.

Signature: Time:

Printed Name: Date:

Company:

Location Diagram



COL 17520BP-001



TITLE:

JOHNSTON FEDERAL NO. 4
70194

DWN:

TMM

DES.:

CC

CHKD:

CC

APPO:

DATE:

1/21/98

REV.:

0

PROJECT NO.:

1752

EPFS GW PITS

FIGURE 1

Olson, William

From: Louis Edward Hasely[SMTP:lhasely@br-inc.com]
Reply To: lhasely@br-inc.com
Sent: Tuesday, June 01, 1999 8:17 AM
To: Olson, William
Cc: Bruce Gantner; Gary Osborne; Jeff Schoenbacher
Subject: Groundwater Impact - Johnson Federal #4

Bill - As we discussed this morning, groundwater collected from a temporary monitoring well at the Johnson Federal #4 metering location showed BTEX concentrations above standards.

Location: SW SW Section 27 - T31N - R9W

Depth: Groundwater depth was approximately 45 ft

Lab Results:	Benzene	8700 ppb
	Toluene	2900 ppb
	Ethylbenzene	2800 ppb
	Total Xylenes	29000 ppb

Upon receiving all the final paperwork, I will provide you with a written follow-up including the lab reports, drilling log, and well diagram. Please let me know if you have questions. Thanks.

Ed Hasely
Environmental/Safety
(505) 326-9841



State of New Mexico
ENERGY MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

STATE OF
NEW MEXICO
OIL
CONSERVATION
DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone

☐ Personal

Time

0800

Date

6/1/99

Originating Party

Ed Haseley - Burlington

Other Parties

Bill Olson - Envir. Bureau

Subject

Johnson Federal #4 - Notice of Ground Water Contamination

Discussion

Unit H, Sec 33, T31N, R9W

approx. 45' to ground water

preliminary results - ground water above WACC stds

Conclusions or Agreements

He will file written notification within 15 days

Distribution



Danny Faust - OCO Artec

Signed

Will Olson



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

July 9, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. Z-235-437-307

Mr. Ed Hasely
Burlington Resources
P.O. Box 4289
Farmington, New Mexico 87499-4289

RE: SAN JUAN BASIN PIT GROUND WATER SITES

Dear Mr. Hasely:

Information in El Paso Field Services (EPFS) recent annual ground water monitoring report shows the presence of shallow ground at a number of well sites operated by Burlington Resources (BR). Disposal activities at EPFS pits on these locations have resulted in contamination of shallow ground water. These sites also apparently have former unlined production pits operated by BR, some of which appear to be contributing to ground water contamination seen in EPFS monitoring wells.

Due to the presence of ground water contamination at these sites and the apparent commingling of contaminated waters from EPFS's former unlined dehy pit and BR's former unlined production pits, the OCD requires that BR immediately begin implementation of their previously approved pit closure plan at the sites listed below. Implementation will include investigation and remediation of contaminated soils and ground water at these sites.

- | | |
|-------------------------|------------------------------|
| 1. Fogelson 4-1 Com #14 | Unit P, Sec. 04, T29N, R11W. |
| 2. Johnston Federal #4 | Unit H, Sec. 33, T31N, R09W. |
| 3. Johnston Federal #6A | Unit F, Sec. 35, T31N, R09W. |
| 4. Standard Oil Com #1 | Unit N, Sec. 36, T29N, R09W. |
| 5. Turner A #1 PM | Unit K, Sec. 34, T31N, R11W. |

Since BR does not have an approved San Juan Basin ground water plan, the OCD also requires that BR submit a comprehensive ground water investigation and remediation plan for all pit closure sites in the San Juan Basin that encounter ground water. The plan will be submitted to the OCD Santa Fe Office by August 14, 1998 with a copy provided to the OCD Aztec District Office. In addition, the OCD requests that BR cooperate with EPFS to investigate and remediate ground water at sites with commingled plumes of contaminated ground water.

Mr. Ed Hasely
July 9, 1998
Page 2

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

A handwritten signature in cursive script, appearing to read "Will Olson".

William C. Olson
Hydrologist
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office
Sandra D. Miller, El Paso Field Services
Bill Liess, BLM Farmington Office