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REPORTS

DATE: 198



Certified Mail: #Z 211 324 121

March 31, 1999

Mr. William C. Olson New Mexico Oil Conservation Division 2040 S. Pacheco Santa Fe, NM 87504 RECEIVED

APR 0 5 1999

ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION

RE: 1998 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for the 49 remaining groundwater impacted locations that were identified during our pit closure project of 1994 / 1995.

Of the 49 reports, EPFS hereby requests closure of 18 of these locations. The 18 sites EPFS is requesting closure on are presented in 4 separate binders entitled "Final Closure Report for Groundwater Sites with Four Consecutive Quarters Below Standards".

The Jaquez Com. C #1 and Jaquez Com. E #1 site is included in a separate report which is entitled "Jaquez Com. C #1 and Jaquez Com. E #1 Annual Report for Soil and Groundwater Remediation".

If you have any questions concerning the enclosed reports or closure requests, please call me at (505) 599-2124.

Sincerely,

Scott T. Pope P.G.

Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w/enclosures; Certified Mail # Z 211 324 122 Mr. Bill Liesse, BLM - w/enclosures; Certified Mail # Z 211 324 123

Ms. Charmaine Tso, Navajo EPA – w/enclosures; Certified Mail # Z 211 324 120

SAN JUAN BASIN PIT CLOSURES San Juan Basin, New Mexico

El Paso Field Services Final Closure Report For Groundwater Sites With Four Consecutive Quarters Below Standards

December 1998

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APR 0 5 1999

ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION

Prepared For

El Paso Field Services Farmington, New Mexico

> Project 17520 Book 1



EPFS GROUNDWATER PITS 1998 ANNUAL GROUNDWATER REPORT



SITE DETAILS

Legals - Twn: 26N

Rng: 6W

Sec: 34

Unit: A

NMOCD Hazard Ranking: 30

Land Type: FEDERAL

Operator: EL PASO FIELD SERVICES

PREVIOUS ACTIVITIES

Site Assessment: Sep-95

Excavation: Sep-95 (230 cy)

Soil Boring: May-97

Monitor Well: May-97

Quarterly Sampling Initiated: July-97

1998 ACTIVITIES

Quarterly Groundwater Monitoring - Quarterly groundwater has continued through 1998. Groundwater analytical data are presented in Table 1. A site map is presented as Figure 1.

CONCLUSIONS

Analytical results of groundwater samples collected from MW-1 show levels of hydrocarbon constituents below New Mexico Groundwater Standards for all analytes during the first and last monitoring event in 1998. New Mexico Groundwater Standards for Benzene were exceeded during the second and third monitoring events. Benzene levels have been reduced by an order of magnitude through natural attenuation since monitoring began at this site.

Pertinent data from the 1997 groundwater report include the following: Groundwater samples collected during the first quarterly sampling event were 81.9 ppb, which is above New Mexico Groundwater Standards. Groundwater samples collected during the second, third and sixth quarters were below standards for BTEX. Groundwater gradient has not been established at this site.

RECOMMENDATIONS

- Quarterly sampling will continue at MW-1 until analytical results show hydrocarbon constituents are below New Mexico Groundwater Standards for four consecutive quarters.
- Following OCD approval for closure, MW-1 will be abandoned using OCD approved abandonment procedures.

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ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION

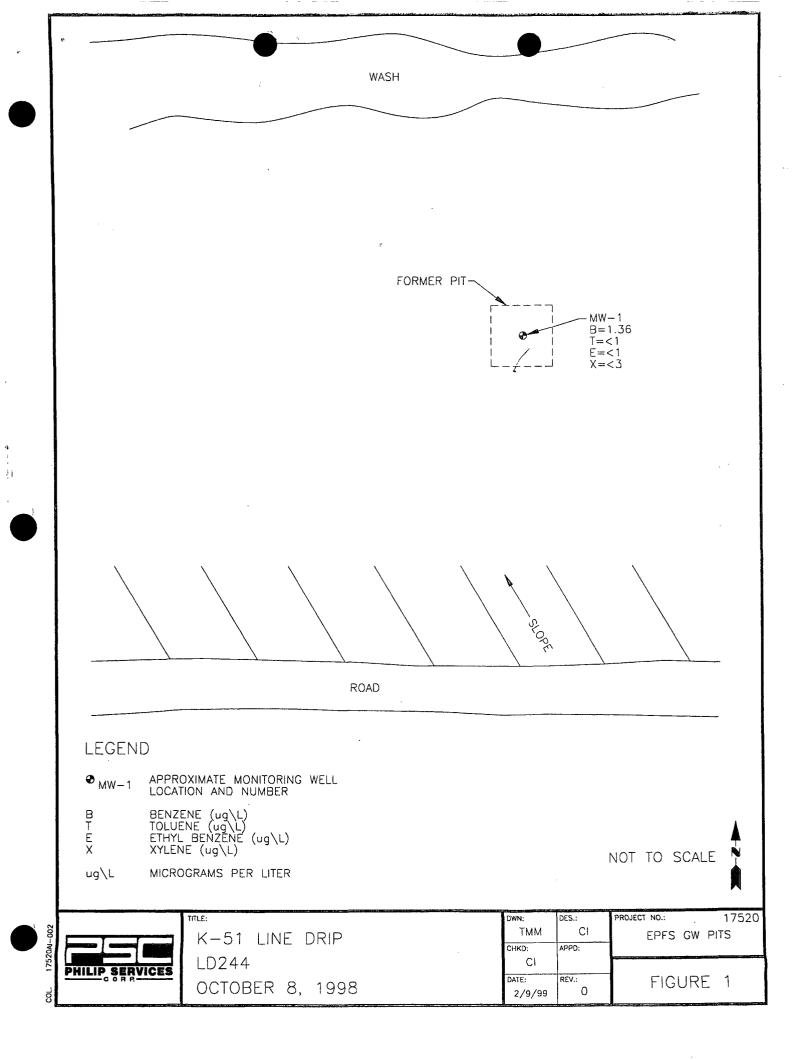


TABLE 1

EPFS Groundwater Pits 1998 Groundwater Report

; ; ;;

39.00 26.00 Total BTEX = 66.8 4.21 = 3.00 = 2.09 Total Xylenes (PPB) 1.00 1.12 = 1.00 1.00 Ethyl Benzene (PPB) 6.85 1.00 1.00 11.90 Toluene (PPB) 1.36 |14.90| =5.76 16.70 (PPB) Benzene Sample 4 - 5th Quarter = Sample 4 - 6th Quarter = Sample 4 - 3rd Quarter Sample 4 - 4th Quarter Project Sample Date | MW#| 10/08/98 01/08/98 04/23/98 07/21/98 K-51 Line Drip K-51 Line Drip K-51 Line Drip K-51 Line Drip Site Name Meter/Line# LD244 LD244 LD244 LD244 Sample# 969086 980015 980313 980533

1998 GROUNDWATER ANALYTICAL



Well Number グルン	Instruments PH Meter Do Monitor Do Mo	7
☐ Development ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	el Pack Sill Gallons to be Removed All Removed	
-	Water Volume Calculation Initial Depth of Well (feet) 7200 Initial Depth of Well (feet) 7200 Initial Depth of Water (feet) 7219 Height of Water Column in Well (feet) 2219 Diameter (inches): Well 6 Gravel Pack Well Casing Cubic Feet Gallons Gravel Pack Drilling Fluids Total	
-	Water Vo Initial Depth of Initial Depth of Initial Depth of Height of Wate Diameter (inch Item Well Casing Gravel Pack Drilling Fluids	
Site Name K-5/ CINE DRIP	Stabilization of Indicator Parameters Other Centrifugal Submersible Submersible Submersible Submersible Other Centrifugal Submersible Other Other	
Site Name 16-5	Development Criteria Stabilization of Indicator Pa Other Centrifugal Submersible Submersible Dout Other	

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	Comments									
Dissolved	Oxygen	mg/L						25		
Conductivity Dissolved	umho/cm Oxygen		1433	1443	148%	248/ RBS	1851 082	1830 25		
	핌		623	7.16	730	245	7.80	822		
Temperature	ပ		10.5	411	211	9//	671	12,3		
Product Volume	Removed (gallons)	Cumulative Increment Cumulative								
Product	Removed	Increment								
/olume	emoved (gal)	Cumulative		50	0:01	(5.2	300	25.0		
Water Volume	Remov	Increment		5.0	2.3	5.0	5.0	50		
Ending Water	Depth	(teet)								
Intake	Depth	(feet)								
Removal	Rate	(gat/min)								
Development	Method	Bailer								
Develo	Met	Ритр								
	Time	-	9011	1113	6///	1135	1/3/	1/38		
	Date		9011 & 3-1	C/11 & 2-1	6/11 800-1	1-28	1-898 1/3/	1-8-28		

Developer's Signature 4 Comments

Date / P 98 Reviewer



SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980015
MTR CODE SITE NAME:	LD244	K-51 Line Drip
SAMPLE DATE TIME (Hrs):	1/8/98	1148
PROJECT:	Sample 4 3	rd Quarter
DATE OF BTEX EXT. ANAL.:	1/12/98	1/12/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:	•	/

RESULTS

PARAMETER	RESULT	UNITS	DF.	QUALIFI Q	ERS"	
BENZENE	5.76	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	2.09	PPB				
TOTAL BTEX	8	PP8				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at	103.0	% for this sample	All QA/QC was acceptable.
<pre>DF = Dilution Factor Used</pre>			

varrative:				
Approved By:	John Labour	Date:	1/21/48	
•	0	980015BTEXMonitorWell, 1/16/98	*	-

SAMPLE 4 37497P CHAIN OF CUSTODY RECORD

A 218

		Remarks		1-51 CINE ORID MW-1	TRID BUANK								Date/Time Received by: (Signature)	Date/Time Received by: (Signature)			Date Results Reported / by: (Signature)	
COSTODI MECONE		Sample Sample		x x x 10	S/ 4°C X					<i>/</i>			Relinquished by: (Signature)	Relinquished by: (Signature)	nature) / Date/Time Remarks:	5470 86/21	•	
	10 # 10 24	10. 1-8-95	Sample Number	15/0086								-	Date/Time Received by: (Signature)	Date/Time Received by: (Signature)	Date/Time Received for Laboratory by: (Signature)	11/aplus 1804	Carrier Pyone No.	
Project No.	Pilipa india	Samplers: (Signature) D	MITEN Date Time Comp. GRAB	MIR 1-89 1/48 X	MER 1- 893 X								ature)	July (July)	Relinquished by: (Signature)		Carrier Co:	Air Bill No.:

san juan rapro Form 71-5



• : ?i

Site Name K-5/ CINE DRID	1			Development Purging	Well Number / // W - / Meter Code 人ひスゲゲ
Development Criteria					
3 to 5 Casing Volumes of Water Removel	Water Vo	r Volume Calculation	ulation		Instruments
Stabilization of Indicator Parameters Other	Initial Depth of Well (feet)	Initial Depth of Well (feet) 73.00 Initial Depth to Water (feet)	1.90		
	Height of Wate.	Height of Water Column in Well (feet)_		1/4 02	Conductivity Meter
Methods of Development	Diameter (inche	(inches): Well	Grave	ick	Temperature Meter
Pump Bailer		Water Volume in Well	ne in Well	Gallons to be	Other D.O. CAC///c//5 /
Centrifugal X Bottom Valve	ltem	Cubic Feet	Gallons	Removed	
Submersible Double Check Valve	Well Casing		73	21.9	Water Disposal
Peristaltic Stainless-steel Kemmerer	Gravel Pack				KUTZ SEDAPRATOR
	Drilling Fluids				
Other	Total				

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		Comments										
		Con						4				
	Dissolved	Oxygen	mg/L						52			
	Conductivity Dissolved	mp/oumn		1276	1335	8841	8841	9851	1509			
		핌		29%	65%	7.59	69%	277	28%			
	Temperature	ပ		8:81	021		271	154	8.31			`
	Product Volume	Removed (gallons)	Increment Cumulative									
	Produc	Removed	Increment									
	/olume	Removed (gal)	Cumulative		25	10.0	051	70.0	250			
	Water Volume	Remov	Increment		5.0	50	2.0	5.0	5.0			
	Ending Water	Depth	(teet)									
	Intake	Depth	(feet)									
	Removal	Rate	(gal/min)									
	Development	Method	Bailer									
3	Develo	Met	Pump									
		Time		7581	1403	8041	1415	1472	1430			
		Date		42398	423-18 1403	423-8 1408	423981415	48.8	423-98 1430			

Date 4-23-99 Reviewer

Developer's Signature $\overline{\mathcal{L}}$

Comments



SAMPLE IDENTIFICATION

· .	Field	ID		Lab ID		1
SAMPLE NUMBER:	N/A	1		980313		
MTR CODE SITE NAME:	LD24	44	К-	51 Line Drip		
SAMPLE DATE TIME (Hrs):	4/23/	/98		1440		
PROJECT:		Sample 4	4th Quarter			
ATE OF BTEX EXT. ANAL.:	4/29/	/98		4/29/98		
TYPE DESCRIPTION:	MW	-1		Water		
Field Remarks:	Parameter Control of C	RESULTS				
						SACIESSO Miss
PARAMETER	RESULT	UNITS		QUALIF		
			DF	Û		
BENZENE	16.7	PPB				
TOLUENE	11.9	РРВ				
ETHYL BENZENE	1.12	PPB				
TOTAL XYLENES	8.99	PPB				
TOTAL BTEX	39	PPB				
Surrogate Recovery was at _ = Dilution Factor Used		BTEX is by EPA Meth % for this sampl		was accept	able.	
ative:	·					
oved By:	ord .		Date:	5/6/98		

980313BTEXMW,5/6/98

SHAMPLE 4 ZIGHTS

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15 Company 5.9.98 600

A 265

CHAIN OF CUSTODY RECORD

san juan repro Form 7%-59 Received by: (Signature) Received by: (Signature) Remarks Date Results Reported / by: (Signature) Date/Time Date/Time Requested Analysis Remarks: Relinquished by: (Signature) Relinquished by: (Signature) 0180 86/42 Preservation Perhinds Type and No. of Sample Contain-Received for Laboratory by: (Signature) \<u>{</u> Date: 423-98 Received by: (Signature) Received by: (Signature) Sample Number 980313 MC #103HH Date/Time Date/Time Time Comp. GRAB 14TOP 4-23-78 1440 Relinquished by: (Signature) Relinquished by: (Signature) Samplers: (Signature) Date Air Bill No.: Carrier Co: Project No. MATRIX



Well Number MW > / Meter Code LO2fff		Instruments	M PH Meter	Conductivity Mater	X Temperature Meter	Other D.O. CHANKITS KIN		Water Disposal	KUTZ SEDARATOR			
Development Purging		Jeulation .	13.00	Well (feet) 7 43	C Gravel Pack	Water Volume in Well Gallons to be	et Gallons Removed	6.6 19.7				***************************************
	,	Water Volume Calculation	Initial Depth of Well (feet) 43.00	Height of Water Column in Well (feet)	Diameter (inches): Well & Gravel Pack	Water Vo	Item Cubic Feet	Well Casing	Gravel Pack	Drilling Fluids	Total	
Site Name K-5/ CINE ORLD	eria	3 to 5 Casing Volumes of Water Removel	Stabilization of Indicator Parameters Other		opment	Bailer	Sottom Valve	Double Check Valve	Stainless-steel Kemmerer			
Site Name	Development Criteria	X 3 to 5 Casing	Stabilization of Other		Methods of Development	dund (Centrifugal	Submersible	Peristallic		Other	

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		Development	Removal	Intake		Water Volume	olume	Product	Product Volume	Temberature		Conductivity	Discolved	
Date Tir	Time	Method	Rate	Depth			d (dal)	Removed (gallons)		2	7	Davidacin'ily	Contract	
	Pump	Bailer	(gal/min)	(feet)	(leet)	Incre	Cumulative Increment Cumulative	Increment	Cumulative	Ò	i i			Comments
11 86-12-6	1/1					ĺ			2	2/9	7.63	10/2	TIB/L	
71.911/	20					5	1			61.7	7	7/6/		
7018	1	1				7,0	0,0			000	18.	1205		
1.52-18 11:	94					NON	00			187	729	1221		
7-21-78 1203	2 2					20%	157			AA	177	127/		
12-1-98 12.	0	_				50	280			187	12/2	11/1/2		
7-21-80 1218	81	_				102	25.6			101	11/1	118/1	76	
							27.0			(6.2)	4	1200	4,7	
_		-			1							,		
	-	1											,	

Developer's Signature W

Comments

Date 7-21, 98 Reviewer



SAMPLE IDENTIFICATION

Field ID	Lab ID
N/A	980533
LD244	K-51 Line Drip
7/21/98	1230
Sample 4 5	ith Quarter
7/27/98	7/27/98
MW-1	Water
	N/A LD244 7/21/98 Sample 4 5 7/27/98

RESULTS

PARAMETER	RESULT	UNITS		QUALIFI	ERS	
			DF	<u> </u>		
BENZENE	14.9	РРВ				
TOLUENE	6.85	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	4.21	PPB				
TOTAL BTEX	26.0	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at	94.4	% for this sample	All QA/QC was acceptable.
DF = Dilution Factor Used		_	

Varrative:			
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Ammarrad D	A Tal	76016	

980533BTEXMW,7/29/98



SAMPLE IDENTIFICATION

	O7 11911 221					The state of the last of the state of
	Fie	eld ID		Lab ID		
SAMPLE NUMBER:		I/A		980534		
MTR CODE SITE NAME:	LD	244	К	-51 Line Drip)	
SAMPLE DATE TIME (Hrs):	7/2	21/98		1230		
PROJECT:		Sample 4 5	oth Quarter			
DATE OF BTEX EXT. ANAL.:	7/2	27/98		7/27/98		
TYPE DESCRIPTION:	MW-1	Field Dup		Water		
Field Remarks:				<u> </u>		
		RESULTS				
PARAMETER	RESULT	UNITS	DF	OUALIF O	IERS	
BENZENE	14.1	PPB				
TOLUENE	5.60	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	3.22	PPB				
TOTAL BTEX	22.9	PPB				
he Surrogate Recovery was at F = Dilution Factor Used	94.2	BTEX is by EPA Method% for this sample		C was accept	able.	
arrative:						
)					

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A 2373

CHAIN OF CUSTODY RECORD

(-5/ CINE DRIP MW-1 Received by: (Signature) Received by: (Signature) Remarks Date Results Reported / by: (Signature) Date/Time Date/Time Requested Analysis Relinquished by: (Signature) Relinquished by: (Signature) 4°C Type and No. of Sample Contain-ers Received for Laboratory by: (Signature) B હ ennis Brad Date: 7-21.98 Received by: (Signature) Received by: (Signature) 980534 980533 Sample Number 40 # 20244 721-87 172 Date/Time Date/Time Time Comp. GRAB Project Name MAR 7-249 1230 MICH 721-18 130 Relipquished by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature) Sund, Samplers: (Signature) MATTON Date Air Bill No.: Carrier Co: Project No.



4

				Development	Well Number
Site Name K-5/ CLUE ORLD		-	X	Purging	Meter Code LD744
Development Criteria					
3 to 5 Casing Volumes of Water Removel	Water Vo	Water Volume Calculation	ulation 3.00		Instruments
Other	Initial Depth to Height of Wate	Initial Depth to Water (feet) 13.03 Height of Water Column in Well (feet)	3.03 (feet) 9	46	DO Monitor Conductivity Meter
Methods of Development	Diameter (inch	(inches): Well # Gravel Pack	Gravel Pac	×	Temperature Meter
Pump Bailer		Water Volume in Well	ne in Well	Gallons to be	Other
Centrifugal	Item	Cubic Feet	Gallons	Removed	
a)	Well Casing		9.9	. 861	Water Disposal
Peristaltic Stainless-steel Kemmerer	Gravel Pack				KOTZ SEPARATOR
	Drilling Fluids				
Other	Totaí				
Water Removal Data					

	Comments									
Dissolved	Oxygen	mg/L						2.5		
Conductivity Dissolved	ma/oumm		4381	1366	6381	16h1	18861	1442		
	Hd		7.13	728	7.37	452	39%	7.66		
Temperature	ပ		161	721	170	2.9/	891	791		
Product Volume	Removed (gallons)	Cumulative								
Product	Removed	Cumulative Increment Cumulative								
/olume	Removed (gal)	Cumulative		50	0.0	150	70.0	250		
Water Volume	Remov	Increment		50	50	5.0	5.0	50		
Ending Water	Depth	(teet)								
Intake	Depth	(feet)								
Removal	Rate	(gal/min)								
Development	Method	Bailer								
Develo	Met	Pump								
	Time		1/39	1145	1152	1159	1205	1215		
	Date		86-8-01	82-01	10-P-91	10-49	18.5° 8°	16-89 1215		

Date 10 - 8.78 Reviewer

Developer's Signature

Comments



SAMPLE IDENTIFICATION

· .	Field	I ID	Lab	מו	
SAMPLE NUMBER:	N/.	Α	980	696	
MTR CODE SITE NAME:	LD2	44	K-51 Li	ne Drip	
SAMPLE DATE TIME (Hrs):	10/8	7/98		26	
PROJECT:		Sample 4 6	th Quarter		
DATE OF BTEX EXT. ANAL.:	10/1:	2/98	10/1	2/98	
TYPE DESCRIPTION:	MM	/-1	Wa	ter	
Field Remarks:			allocation of programming and an advantage of the control of the c	AND	
		RESULTS			u
PARAMETER	RESULT	UNITS	OF .	UALIFIERS 0	
BENZENE	1.36	РРВ			
TOLUENE	<1	PPB			
ETHYL BENZENE	<1	PPB			
TOTAL XYLENES	<3	PPB			
TOTAL BTEX	1.36	PPB			
ne Surrogate Recovery was at == Dilution Factor Used	100.9	BTEX is by EPA Method % for this sample	All QA/QC was	acceptable.	
arrative:					
, , ,)			/	

Date:



SAMPLE IDENTIFICATION

·	Field	ID		Lab ID		
SAMPLE NUMBER:	N/.	Д		980697		
MTR CODE SITE NAME:	LD2	44	K	(-51 Line Drip		
SAMPLE DATE TIME (Hrs):	10/8	/98		1226		
PROJECT:		Sample 4	6th Quarter			
DATE OF BTEX EXT. ANAL.:	10/1:	2/98		10/12/98		ı
TYPE DESCRIPTION:	MW-1 Fi	eld Dup		Water	-1	
Field Remarks:		RESULTS		MITTORITY CLEAN AND AND AND AND AND AND AND AND AND A	arrestronomores es so suscess	
Trad to select well seed place and the selection in report to an inches			ton Foot deployed as Their	and an early artifactive field sources the visco	Constantinument to constant	
PARAMETER	RESULT	UNITS	DF	✓ QUALIF	IERS	
BENZENE	1.44	РРВ				
TOLUENE	<1	РРВ				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	РРВ				
TOTAL BTEX	1.44	PPB				
The Surrogate Recovery was at		BTEX is by EPA Meth % for this sampl		C was accept	able.	
Jarrative:						
rpproved By:	0 aldu 98069	7BTEXMW,10/14/9	Date:	10/15/9	i (

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CHAIN OF CUSTODY RECORD

Project Name	AMCUT#ON	£.	Туре			Requested Analysis			
Samplers: (Signature)	Pint.	Date: 10-8-99	No.	Publich Bupind	974			Remarks	
Date Time Comp. GRAB	Chair	Sample Number	Sample Contain- ers	Se Y Se Y					
X 7531 1830 1870		A80876	7/3	X Joh		1	5/ WAT	1-1111 MM	
WARRING TOX X		980Ka7	7-5	X		K	5/ CLAB	FISTOL	01.21
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	<i>'</i>								
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					v. 11				1
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		Relinquished	Relinquished by: (Signature)		Date/Time	Received by: (Signature)	
Well was const	07/1 1/201								ľ
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		Refinquished	Relinquished by: (Signature)		Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)		10/ Date/Time	3,7	Remarks:			and all along the second second
Carrier Co:		Carlier Pho	or Phone No.			e Results Report	Date Results Reported / by: (Signature)		
Air Bill No									
								san juan rapro Form 71-55 A	71-55 A