3R - 210

REPORTS

DATE: 2003



El Paso Field Services

San Juan Basin Pit Program Lat 3B-39 Line Drip Meter # LD146

Closure Report 2003

September 2003



614 Reilly Ave. Farmington, NM 87401

Table of Contents

Lat 3B-39 Line Drip Closure Report

Tables

Table 1 BTEX

Figures

Figure 1 - Site Location Map

Figure 2 - Geoprobe Hole Locations

Figure 3 - Groundwater Gradient Map

Figure 4 - BTEX Concentration Graph

Appendix A

Assessment Data

Appendix B

Monitor Well One Drilling Logs and Well Installation Logs

Appendix C

Geoprobe Data

Appendix D

Monitor Well Two and Three Drilling Logs and Well Installation Logs

Appendix E

2003 Analytical Data



EPFS GROUNDWATER SITES 2003 CLOSURE REPORT

Lat 3B-39 Line Drip Meter Code: LD146

SITE DETAILS

LEGAL DESCRIPTION:

Twn: 29N

9W Rng:

Sec: 10

Unit: M

NMOCD Haz Ranking: 40

Land Type: Fee

Operator: EPFS

PREVIOUS ACTIVITIES

Site Assessment:

1/94

Excavation:

1/95 (60 cy)

Soil Boring: 9/95

Monitor Well:

9/95

Geoprobe:

11/96

Additional MWs:

11/00

Downgradient MWs:

11/00

Replace MW:

Re-Excavation:

NA

Quarterly Initiated:

11/96

ORC Nutrient Injection:

NA

NA

PSH Removal Initiated:

Annual Initiated:

Quarterly Resumed: NA

SITE HISTORY AND CHARACTERIZATION

The Lat 3B-39 Line Drip site location is shown on Figure 1. Following the initial site assessment on January 9, 1995 the existing pit was excavated on January 23, 1995, to a depth of 12 feet beneath ground surface (bgs). Approximately 60 cubic yards of source material were removed and disposed of at the Tierra land farm. The headspace photoionization detector (PID) measurement of soil from the bottom of the excavation was 433 parts per million (ppm). Groundwater was not encountered in the excavation. Analytical data for the soil sample were as follows: Benzene: < 2.66 milligrams per kilogram (mg/kg); Toluene: 86.5 mg/kg; Ethyl benzene: 25.6 mg/kg; Total Xylenes: 281 mg/kg; Total BTEX: 394 mg/kg; and total petroleum hydrocarbons (TPH) by EPA Method 418.1: 6940 mg/kg. Analytical data reports are included in Appendix A.

Monitoring well, MW-1, was drilled and completed on September 11, 1995. A soil sample was collected from the depth interval at 28 to 30 feet bgs. The headspace PID reading of soil from the bottom of the borehole was 190 ppm. Soil analytical data for the sample were as follows: Benzene: < 2 mg/kg; Toluene: 8.9 mg/kg; Ethyl benzene: 13.2 mg/kg; Total Xylenes: 143 mg/kg; Total BTEX: 165 mg/kg; and TPH: 4270 mg/kg. Analytical data reports are included in Appendix B.

A groundwater sample was collected from MW-1 on September 26, 1995. Analytical data for the water sample were as follows: Benzene: 179 ppb; Toluene: 518 ppb; Ethyl benzene: 572 ppb; and Total Xylenes: 6100 ppb. Analytical data reports are included in Appendix B.

A Geoprobe® study was done on November 21, 1995. Figure 2 presents approximate probe hole locations). Water samples were collected from each of the three probe holes



EPFS GROUNDWATER SITES 2003 CLOSURE REPORT

Lat 3B-39 Line Drip Meter Code: LD146

and MW-1 and analyzed for BTEX compounds. Analytical results of the samples from the three probe holes were below NMWQCC standards for BTEX. Analytical data reports are included in Appendix C.

The site is located near the base of a sandstone ridge, with topographically higher areas to the north and an ephemeral wash (flowing east to west) located directly to the south (see Figure 1 for site topography). Surface water in the project area flows directly south towards the wash, and therefore any surface release would likely be transported in that direction. Also, groundwater flow in this region typically mimics local site topography, and therefore groundwater flow to the south/southwest across the site (towards the wash) would also be expected. For these reasons, two additional monitoring wells, MW-2 and MW-3, were drilled and completed to the south of MW-1 on November 21, 2000 (Figure 2). Water samples were collected on December 1, 2000, and analytical results of samples from both monitoring wells were below NMWQCC standards for BTEX compounds. Analytical data reports are included in Appendix D. Based on water level measurements from the three wells and recent survey data, the hydraulic gradient between the three wells is extremely flat (approximately 0.005 ft/ft) across the site.

Historical groundwater data from MW-1, MW-2 and MW-3 are included in Table 1. Figure 3 presents historical and current BTEX concentrations for MW-1. Previous analytical data reports (pre-2003) were submitted in prior annual reports, and therefore only analytical data and sampling forms for the three quarters of 2003 are included in this report. The following appendices are included: Appendix A, Excavation; Appendix B, MW-1 Well Logs/Completions and Analytical Data Reports; Appendix C, Geoprobe® Investigation; and Appendix D, MW-2 and MW-3 Well Logs/Completions and Analytical Data Reports.

SUMMARY OF 2003 ACTIVITIES

The first quarter groundwater sample from MW-1 was taken on January 27, 2003. The Benzene concentration was 8.4 ppb, Toluene was 1.9 ppb, Ethyl benzene was 239 ppb, and Total Xylenes were 593.8 ppb. The analytical data report is included in Appendix D. The second quarter sample for MW-1 was taken on April 27, 2003. Benzene and Toluene concentrations were below detection (ND), Ethyl benzene was 164 ppb, and Total Xylenes were 452 ppb. The analytical data report is included in Appendix E. The third quarter sample for MW-1 and closure samples for MW-2 and MW-3 were taken on June 16, 2003 (MW-1) and June 29, 2003 (MW-2 and MW-3). The third quarter sample for MW-1 was the fourth consecutive quarter with Benzene below the NMWQCC standard of 10 ppb.



EPFS GROUNDWATER SITES 2003 CLOSURE REPORT

Lat 3B-39 Line Drip Meter Code: LD146

Analytical data are as follows (Appendix E):

- MW-1: Benzene and Toluene were ND, Ethyl benzene was 58.6 ppb, and Total Xylenes were 137 ppb;
- MW-2: Benzene, Toluene, Ethyl benzene, and Total Xylenes were all ND; and
- MW-3: Benzene, Toluene, Ethyl benzene, and Total Xylenes were all ND.

SUMMARY TABLES AND GRAPHS

Table 1 presents historic to present BTEX analytical data for MW-1, MW-2, and MW-3. Figure 3 shows historic to present BTEX data graphically over time for MW-1.

SITE MAP

A site map (Figure 1) is included and shows the previous Geoprobe® and the temporary well point locations.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

Analytical data reports, well completion diagrams and geologic logs are appended for MW-1 (Appendix B) and MW-2/MW-3 (Appendix D).

DISPOSITION OF GENERATED WASTES

No wastes were generated at this site for 2003.

ISOCONCENTRATION MAPS

Isoconcentration maps were not generated for this site.



EPFS GROUNDWATER SITES 2003 CLOSURE REPORT

Lat 3B-39 Line Drip *Meter Code: LD146*

CONCLUSIONS

EPFS initially excavated approximately 60 cubic yards of source material in January 1995 from the former pit eliminating the majority of the source. Groundwater collected from MW-1 in September 1995 had a benzene level of 179 ppb. Over the next eight years benzene levels in groundwater continued to decline to below New Mexico Water Control Commission (NMWQCC) standards.

The beginning of four clean consecutive quarters began with the October 2002 quarterly sample and ended with the third quarter of 2003 (June 2003). MW-2 and MW-3 were sampled for closure on June 29, 2003. BTEX concentrations from both monitoring wells were non-detect (<0.5 μ g/l) for all BTEX compounds. Based on the last four consecutive quarters below NMWQCC standards EPFS requests final closure of this site

RECOMMENDATIONS

- > EPFS requests closure of this site.
- > Following approval for closure, MW-1, MW-2, and MW-3 will be abandoned in accordance with the approved the EPFS Monitoring Well Abandonment Plan.

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

State of New Mexico Energy Minerals and Natural Resources

Submit 1 copy to appropriate District Office and 1 copy to the Santa Fe Office

(Revised 3/9/94)

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

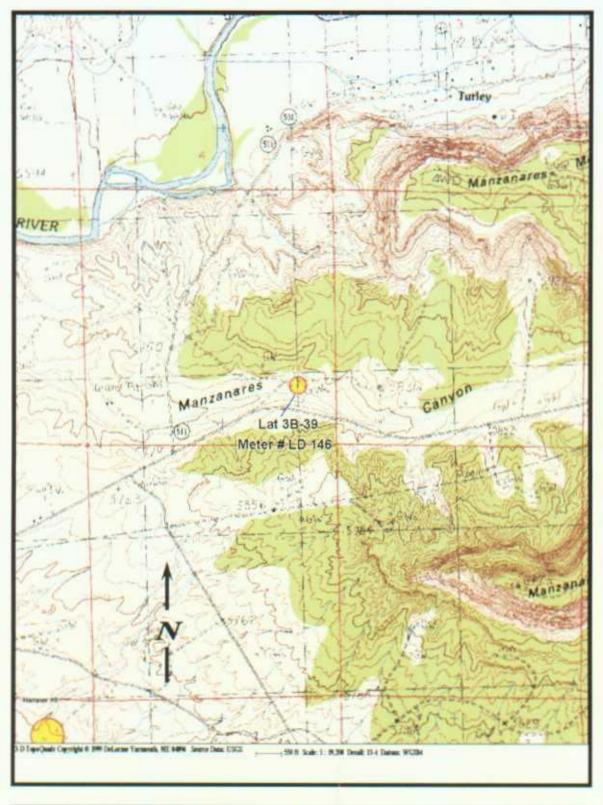
PIT REMEDIATION AND CLOSURE REPORT

Operator: El Paso Field Services	ר	Telepho:	ne: 505-599-2104					
Address: 614 Reilly Ave. Farmington, NM 87401	Address: 614 Reilly Ave. Farmington, NM 87401							
Facility Or: <u>Lat 3B-39 Lin Drip Meter # LD146</u> Well Name								
Location: Unit or Qtr/Qtr Sec M Sec 10 T 2	7N R 9W County San Juan (County,	New Mexico					
Pit Type: Separator Dehydrator (Other X (Line Drip)							
Land Type: BLM, State, Fee _X_ Other								
Pit Location: Pit dimensions: length <u>18 feet</u> , w. (Attach diagram) Reference: wellhead, other								
Footage from reference: 514 feet								
Direction from reference: 180 De	greesEast North X ofWest South							
Depth To Ground Water (Vertical distance from contaminants to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet to 99 feet Greater than 100 feet		(20 points) (10 points) (0 points) <u>20</u>					
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources.)			(20 points) (0 points) <u>0</u>					
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches.)	Less than 200 feet 200 feet to 1000 feet Greater than 1000 feet		(20 points) (10 points) (0 points) <u>20</u>					
R	ANKING SCORE (TOTAL POI	NTS):	40					

Date Remediation Start	ed: <u>1/23/1995</u> Date completed: <u>1/23/1995</u>
Remediation Method: (Check all appropriate	Excavation X Approx. cubic yards 60
sections.)	Landfarmed Insitu Bioremediation
	Other
Pamadiation Location:	Onsite Offsite <u>Tierra</u>
(i.e. landfarmed onsite,	
name and location of offsite facility)	Bloomfield, New Mexico
General Description of	Remedial Action: Soil was black first 3 feet turn gray, has strong hydrocarbon odor.
	·
Ground Water Encount	ered: No X Yes Depth Depth
Final Pit:	Sample location Composite from all four sides and center of pit
Closure Sampling: (if multiple samples,	Sample depth 12 feet
attach sample results and diagram of sample	Sample Date <u>1/23/1995</u> Sample time <u>1000</u>
locations and depths)	Sample 2 and <u>Arabit 1992</u> Sample same <u>1995</u>
	Sample Results
	Benzene(ppb) <2.66 mg/kg
	Total BTEX(ppb) 394 mg/kg
	Field headspace(ppm) 433 ppm
	TPH <u>6940 mg/kg</u>
Ground Water Sample:	Yes NoX (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 8/22/93	
	Printed Name
Signature Sum	and Title Scott Pope, Senior Environmental Scientist

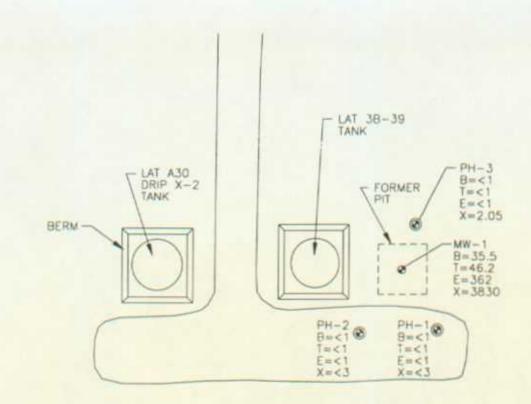
TABLE 1 BTEX
Lat 3B-39
Line Drip LD 146

			1460012	T4989-2	100	T4247-2	2			V1 1		146-0110 Li	1460107 Li		1460201 Li		1460008 La	1		1	990380	990247	990024 La	980770 Li	980551	971184 La	970809 Li	970413 La	970086 Li	960929	947551		Sample#	
	Lat 3B-39 Line Drip		Lat 3B-39 Line Drip	at 38-39 Line Drip	Lat 3B-39 Line Drip	at 3B-39 Line Drip	Lat 3B-39 Line Drip	at 3B-39 Line Drip	at 38-39 Line Drip	at 3B-39 Line Drip	at 38-39 Line Drip	at 3B-39 Line Drip	.at 3B-39 Line Drip	at 38-39 Line Drip		Site Name																		
-	July 29, 2003	The second secon	December 1, 2000	July 29, 2003	July 16, 2003	April 27, 2003	January 27, 2003	October 1, 2002	July 18, 2002	April 2, 2002	January 3, 2002	October 1, 2001	July 3, 2001	April 3, 2001	February 12, 2001	November 7, 2000	August 1, 2000	May 25, 2000	February 24, 2000	November 9, 1999	August 30, 1999	May 19, 1999	February 2, 1999	November 3, 1998	August 6, 1998	November 4, 1997	August 5, 1997	May 8, 1997	February 11, 1997	November 8, 1996	September 26, 1995	The state of	Sample Date	
ab.	ω		ы	2	+	3		1	**	+	1	1	**	et.	**	1	1	1	-+	**	**	1	1	1	*	nA.	-1	1	1	4	1		WW#	
20.5	ND		<0.5	ND	ND	ND	8.4	10	29	<10	11	<13	<0.5	22	<13	<25	<10	<0.5	30	-65	<10	7.13	7.92	23.3	9.45	35.5	12.8	23.7	36.8	42.7	179	l/gul	Renzene	
<0.5	NO		<0.5	ND	58.6	200	239	302	651	400	320	580	43	560	440	500	630	600	470	340	290	381	409	367	202	362	117	170	241	311	572	Пери	Frhyl Renzone	
40.5	ND		<0.5	NB	ND	ND	1.9	4	72	<10	<5.0	<13	2.3	12	<13	<25	<10	<0.5	25.0	21.0	54 0	14.9	21.0	16.9	13.4	46.2	18.2	10.9	<1	<1	518	нд/1	Tolmono	
0.5	ND		<0.5	ND	137	452	593	1059	3839	3000	2300	5000	3500	4300	3800	4500	5900	6800	5000	5900	6500	4630	7306	3650	1920	3830	1150	1420	2050	2490	6100	Hg/l	Total Yelones	



Lat 3B-39 Line Drip LD146 Site Location Map

Figure 1



WASH

HIGHWAY 64 BLOOMFIELD

LEGEND

APPROXIMATE PIEZOMETER ®PZ-1 LOCATION AND NUMBER

€ MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER

BENZENE (ug\L)
TOLUENE (ug\L)
ETHYL BENZENE (ug\L)
XYLENE (ug\L)

ug\L MICROGRAMS PER LITER NOT TO SCALE



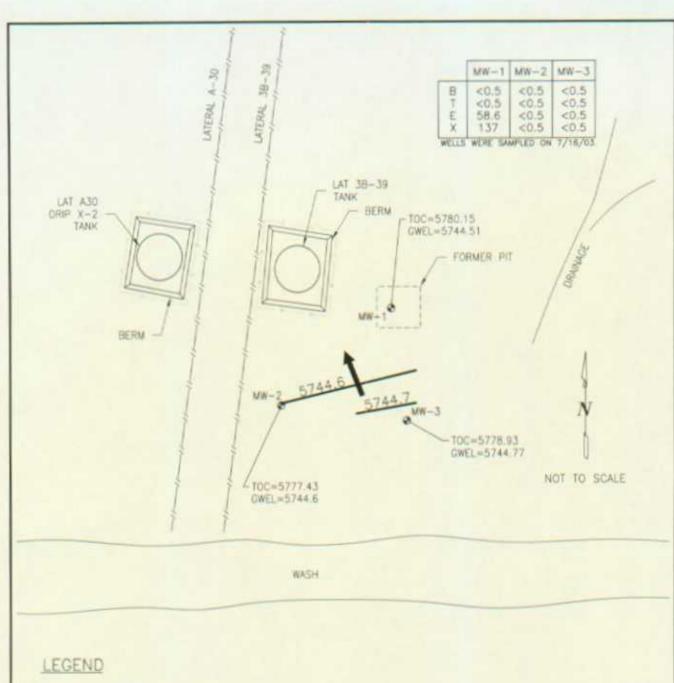


LAT 3B-39 LINE DRIP LD146

TMM	CC	11/10
ССС	APPO	1
DATE: 1/9/97	HEV.	

DJECT: NO.L EPFS GW PITS

FIGURE 2

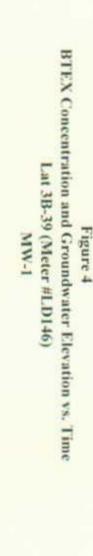


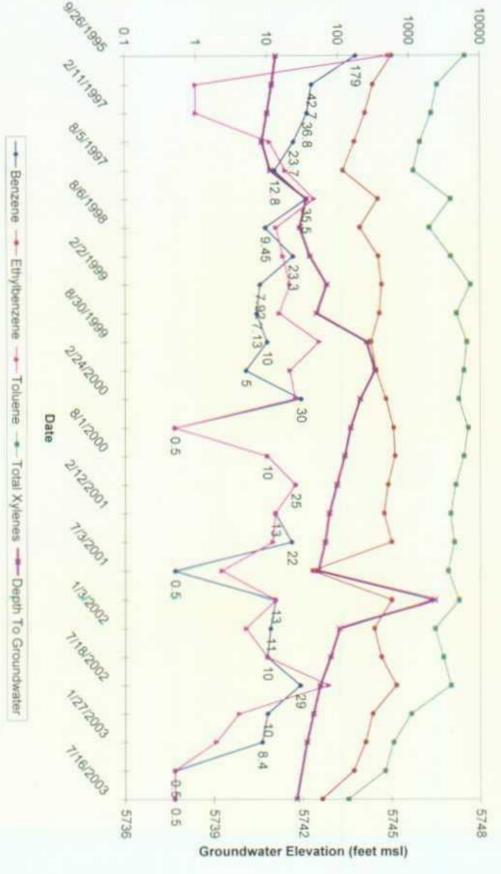
⊗ _{MW-1}	Approximate Monitoring W Location and Number	/ell	
	Fence Line	5746	Potentiometric Surface
-11-11-	Pipe Line		(Approximate & Assumed Where Dashed)
В	Benzene (µg/L)	\rightarrow	Direction of Groundwater Flow (Estimated)
T	Toluene (µg/L)	1	Groundwater Elevation
E	Ethylbenzene (µg/L)	GWEL	(FT Above Mean Sea Level Unless Noted Otherwise)
×	Total Xylenes (µg/L)	TOC	Top of Casing

LATERAL 3B-39, LD146 JULY, 2003 GROUNDWATER SITES EL PASO FIELD SERVICES

FIGURE 3

BTEX Concentration (µg/l)





FIELD PIT SITE ASSESSMENT FORM

<u></u>	
GENERAL	Meter: NA Location: Lar 3B-39 Operator #: NA Operator Name: EPNG P/L District: Bloomfield Coordinates: Letter: M Section to Township: 29 Range: 9 Or Latitude Longitude Pit Type: Dehydrator Location Drip: Line Drip: Other: Site Assessment Date: 1/9/94 Area: 10 Run: 53
	NMOCD Zone: (From NMOCD Maps) Inside Outside Land Type: BLM (1) State (2) Fee (3) Indian
	Depth to GroundwaterLess Than 50 Feet (20 points)☒ (1)50 Ft to 99 Ft (10 points)☐ (2)Greater Than 100 Ft (0 points)☐ (3)
ASSESSMENT	Wellhead Protection Area: Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction?, or; Is it less than 200 ft from a private domestic water source? (1) YES (20 points) (2) NO (0 points)
SITE ASS	Horizontal Distance to Surface Water Body Less Than 200 Ft (20 points) (1) 200 Ft to 1000 Ft (10 points) (2) Greater Than 1000 Ft (0 points) (3)
	Name of Surface Water Body Manzanares Canyon (Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks,
	Irrigation Canals,Ditches,Lakes,Ponds) Distance to Nearest Ephemeral Stream (1) < 100'(Navajo Pits Only):
	TOTAL HAZARD RANKING SCORE: 40 POINTS
	TOTAL HAZARD RANKING SCORE:TO POINTS
	Remarks: Redline Book-Inside Vulnerable Zone Tapo- I side
REMAR	Pi+ "run sheer" says pit in Seclb. Is in 10 as verified by rape & Redline book
RE	

FIELD PIT REMEDIATION/CLOSURE FORM

VI.	<u> </u>	Meter: <u>N/A</u> Location: <u>LAT 3B-39</u>
TENERAL		Coordinates: Letter: <u>A</u> Section <u>/e</u> Township: <u>29</u> Range: <u>9</u>
1 E	5	Or Latitude Longitude
		Date Started: 1-23-95 Run: 10 53
ODCEDVATIONS	SERVATIONS	Sample Number(s): <u>MK 330</u> Sample Depth: <u>U</u> Feet Final PID Reading <u>4.3.3</u> PID Reading Depth <u>W</u> Feet
ETET OB	1	Yes No Groundwater Encountered □ 区 Approximate DepthFeet
CITOR	SUNE	Remediation Method : Excavation Onsite Bioremediation Backfill Pit Without Excavation
15	חדט	Soil Disposition: Envirotech Other Facility Name:
		Pit Closure Date: 1-23-95 Pit Closed By: BET
DEWAPKS	NEWRINDS	Remarks: soil was Black 1st 3t Turn gray 14as Strong Hyorocarbon odor
		Signature of Specialist: Marya Xillian
		(SP3191) 03/16/94



FIELD SERVICES LABORATORY ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

LD14	Field ID	Lab ID
SAMPLE NUMBER:	MK 330	946589
MTR CODE SITE NAME:	LAT. 38-39 Line Drip	N/A
SAMPLE DATE TIME (Hrs):	1-23-95	1000
SAMPLED BY:	N/	A Phase I
DATE OF TPH EXT. ANAL.:	1-28.95	1-28-95
DATE OF BTEX EXT. ANAL.:	1/28/95	1/28/95
TYPE DESCRIPTION:	16	Dark Brown fine sond

RESULTS

PARAMETER	RESULT	UNITS		QUALIFIE	RS	
			DF	Q	M(g)	V(ml)
BENZENE	42.66	MG/KG	0,53121		2.51	20
TOLUENE	86.5	MG/KG				
ETHYL BENZENE	25.6	MG/KG				
TOTAL XYLENES	281	MG/KG			+	1
TOTAL BTEX	394	MG/KG				
TPH (418.1)	6940	MG/KG			o.380	28
HEADSPACE PID	4/33	PPM				
PERCENT SOLIDS	92.5	%		Marie Control		

TERCENT SULIDS	1 74.3	1 70 1	ESPACE NO	A STATE OF S	
	TPH is by EPA Met	hod 418,1 and BTEX is by EPA	Method 8020		
he Surrogate Recovery was at arrative:	86.6	% for this sample	All QA/QC w	as acceptable.	
DF = Dilution Factor Used					
Approved By:	1		Date:	2-72-85-	

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp. 4000 Monroe Road Farmington, New Mexico 87401

(606) 326-2262 FAX (606) 326-2388

Elevation		
Well Location \$1 GWL Depth	0, T29, R9	, M
Installed By A	ona hue	
Date/Time Started	09/11/95	0830
Date/Time Completed	09 111195	1230

80			
0	Borehe Well # Page_		
Project Name	EPNG	P.75	
Project Number	14509	Phase (000-77
Project Location	LAT	38-39	
On-Site Geologist	<u> </u>	1 Kriller	
Personnel On-Site	<u>~~</u> ,	Donahu J	Johnson 2.70hn
Contractors On-Sit	е		
Client Personnel C	n-Site		

Depths in Reference to Ground S	Surface			F		_	Top of Protective Casing Top of Riser	
ttem	Material	Depth			\square		Ground Surface	+ 2,5 _O_
Top of Protective Casing]	=				
Bottom of Protective Casing Top of Permanent Borehole Casing								
Bottom of Permanent Borehole Casing								
Top of Concrete								
Bottom of Concrete	Cement							
Top of Grout	Slurry	5	-					
Bottom of Grout	Shurry 4 mich Schedult	19						
Top of Well Riser	40 PVC Hinch schedule	+2.5						
Bottom of Well Riser	40 PVC 4 inch .010 inch slotted schodule	24 34 34						
Top of Well Screen	40 PVC	39		oχο	XOX XOX	d	Top of Seal	_19
Bottom of Well Screen Top of Peltonite Seal	Enviroplug No 8 Bentonte	19		0X 0X 0X	XX XX	þ		
Bottom of Peltonite Seal	1)	21		XX		-1	Top of Gravel Pack	<u> </u>
Top of Gravel Pack	CSSI 1020 Silvica Sand	2					Top of Screen	24
Bottom of Gravel Pack	11	39						
Top of Natural Cave-In		39						
Bottom of Natural Cave-In		41				4		1
Top of Groundwater		31				4	Bottom of Screen	39
Total Depth of Borehole		41		<u> </u>	Astria.	3	Bottom of Borehole	_ _

Comments:

Geologist Signature

Jeffrey Kindley

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL

4000 Monroe Road Farmington, New Mexico 87401 (505) 326-2262 FAX (505) 326-2388

. .. _.. _ .. . _ _ .. .

Elevation	
Borehole Location	10, T29, R9, M
GWL Depth	
Logged By Jet	f W. Kindley
Drilled By	Mike Donahue
Date/Time Started	09/11/95 0830
Data/Time Completed	04/11/95 1230

770	•				
Ş	Borehole #		BH-1		
\checkmark	Well #				
	Page	l	of	T	

Project Name	EPNG Pits			
Project Number	14509	Phase	6000.77	
Project Location	LAT	<u> 36-3</u>	9	

Well Logged By	Jeff W. Kindley		
Personnel On-Site	M. Donahue,	2. Johnson	J. Johns
Contractors On-Site		-	·
Client Personnel On-Site			

Drilling Method 4 1/4 ID HSA
Air Monitoring Method PID, CGI

	_		Sample			Depth	Α:	Monitor	ina	Drilling Conditions
Depth	Sample		Type &	Sample Description	USCS	Lithology Change		Inits: PP	_	& Blow Counts
(Fect)	Number	Interval	•	Classification System: USCS	Symbol		_			a 5.5 532.15
(Feet) 0 5 10 15 15	Number	Interval	Recovery (inches)	Classification System: USCS Back Fill +0 12'	Symbol	(feet)	вг	ВН	S	
20 20 25 	1	13-25	길.	SW, DKBR SAND, coarse grained, moist, medium dense, hydroconbon odor			4		F2 81	0902 23 bbws per Foot
30 	2	18-3 0	17.0	S,A A.					190	• water on rods at 31 feet.
35	3	33-35 38-40	·	Not able to collect sample witable to collect sample.					NS	09 28 20 6 lows on Foot

Comments: Groundwater encountered at 31 feet. Sample collected From 28 to 30 feet (DWK, 61). Boring terminated at 41 feet and minimum.

Geologist Signature On Luy Known

PHI	MENTAL
Comple	Tuna



Water Sampling Data Location No. _____ Group List Number ☐ Groundwater ☐ Surface Water ☐ Other Date $\frac{9}{\lambda} \frac{1}{6} \frac{9}{9}$ Project Name EPNG PITS Project No. 1450q Project Manager CM Chance Phase.Task No. 6003 Site Name Lat 3B-39 Line Orio QM-510-T29-R9 **Sampling Specifications Initial Measurements** Requested Sampling Time Elapsed From Final Development/Purging (hours) . 5 hc Depth Interval (feet) Requested Wait Following Initial Water Depth (feet) 36.32 Development/Purging (hours) Nonaqueous Liquids Present (Describe) None (Product Dies Water Quality/Water Collection DO = Dissolved Oxygen; Cond. = Conductivity Water Quality Readings Water Collection Data Final Pumo Water Notes Cond. Volume Intake Removal Sampler Temp. DΩ (umbos/ Rate Depth Depth (Explain in Removed Date Time Initials (feet) (°C) ρH (mg/L) cm) (gallons) (gal/min) (feet) Comments Below) Container Type: G = Clear Glass; A = Amber Glass; P = Plastic; V = VOA Vial (Glass); O = Other (Specify) Sample Containers Preservatives: H = HCl; N = HNO₃; S = H₂SO₄; A = NaOH; O = Other (Specify); -- = None Cooled Field During Filtered Container Analytical Collection Parameter List Comments Number Preserved Type Volume (mL) Yes Yes BLEX HKL Y°C CMC 120 40 1615h TDS CMCIDD Filter Type _ Chain-of-Custody Form Number EPNG CDC Comments GW had no visible product taslight odor when sampled Sample sent

TO EPNG lab Date 9/26/9 5 Reviewer ____ Date ____ Signature _

Form A0202 Rev. 02/24/94

PHILIP W	'ell D	evelo	pme	nt a	nd Pı	ırging	Well Development and Purging Data	Development Purging		Well Number MW ~	- MW	/
se S	Serial No. WDPD-	ģ		') }	_				Page of
Project Name <u>EP</u> A	EPNG PIT	7			P.	oject Manaç	Project Manager CMC	hanse		Proj	Project No	14509
Client Company EPNS	PNG							1		Pha	se.Task N	Phase. Task No. 6003 .77
Site Name Lat 38 -39	8-39	13.4	Drip			Site Address	1	QM-SID-TA	29- R	9		
Development Criteria	eria Volumes of	Water Re	moval	la. ≱	/ater Vol i itial Depth	Water Volume Calculation Initial Depth of Well (feet)	ulation ₃t) <u>41.3)′ TOR</u>	TOR	l lng	Instruments		Serial No. (If applicable)
Other				도 <u>코</u>	itial Depth eight of W	Initial Depth to Water (feet) Height of Water Column in V	Initial Depth to Water (feet) 3. TOR Height of Water Column in Well (feet)	TOR	_	DO Monitor	. 0	
Methods of Development	opment			. <u>D</u>	ameter (in	Diameter (inches): Well	Gravel Pack	Pack	· _	(Z) Conductivity Meter	ity Meter	
m	Bajler	/elve		<u> </u>		Water V	Water Volume in Well	Gallons to be	_	Temperature Meter	ure Meter	
Submersible C	Doúble Check	Doúble Check Valve	ě	1	Item	Cubic Feet	t Gallons			Other		
☐ Peristaltic ☐	☐ Stainless	Stainless-steel Kemmerer	nmerer	ग≨	Well Casing		3.25 x5	16.28		2.	-	
Other				<u> </u>	Drilling Fluids		5 2 5	0 26			2	
Water Removal Data	ata			<u> </u>	Total			71.28				
	Development Method	Removal Rate	Intake Depth	Ending Water Depth	Water Volu	Water Voluma Removed (gallons)	Product Volume Bamayed (gallons)	Temperature		Conductivity	Dissolved Oxygen	
Date Time	=	(gal/min)		(feet)	Increment	Cumulative	Increment Cumulative	n P	PH	(umhos/cm) X / Da d	(mg/L)	Comments
9/26/95 1449					5	5		68.1	7.21	1.56		Br. v. si)+4
1459					ک ک	7.5		66.4	7.18	1.30		
و موکرا					2.5	10		66.6	6.50	1.61	-	Much less sile, Br
طددا					ه. لا	2.هز		69.8	464	97.1		Et br, clsilty
1248				37.35	2.4	15		70.5	6.98	1.17		'
								-				
Circle the date and time that the development criteria are met.	at the develop	oment criteri	a are met.					•				
Comments Product eller	0)0100	اهنيسا	initial hail & Bailed day.	* Bail	ed dey.	(Afrec	(Afrac 7.5 gal, 10 gal).	1	AIS Ham	15 min	te recharge	cae. Bailed des
afie, 12 Sanl. B	ailed dry	4 times		sa LSA	الزلما الع	let wel	removing 15 Apl. Will let well recharge & sample	Sample	الجمين	water death taken	at h ta	Kan after Samplin
Developer's Signature(s)	(s)							_ Date _4/	20/05	Rev	Reviewer	Date
To the part of the	I							_	•		-	

Rev. 03/21/94

K, .



FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT - Water

SAMPLE IDENTIFICATION

SAMPLE NUMBER:

947551

FIELD ID:

CMC120

MTR CODE:

LD146

SAMPLE DATE:

09-26-95

SAMPLE TYPE:

W(MW)

SITE NAME:

at. 3B-39 Line Drip

PROJECT:

Phase II MW

DATE OF BTEX ANALYSIS:

FIELD COMMENTS:

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT	ΟÚ	ALIFIER	WQCC LIMIT PPB
TDS - TOTAL DISSOLVED SOLIDS (PPM)	546			None
BENZENE (PPB)	179	0	(x 10)	.10
TOLUENE (PPB)	518	D	(x10)	740
ETHYL BENZENE (PPB)	572	D	(X10)	750
TOTAL XYLENES (PPB)	6,100	DI,	D (x20)	620
SURROGATE % RECOVERY			Allowed Rang 80 to 120 %	- I

Approved By: John Jatal 9-3-95
Date

CHAIN OF CUS		DECUES EU ANALTUIS	- S				
mpany \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	CONTRACT LABORATORY P. O. NUMBER				NAME	PROJECT	CT NUMBER
mpany \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\							
	Page ofofof	AIN OF CUSTODY RECORD	유	2	Almor!	Gas Comp	Natural

PROJECT NUMBER	PROJECT NAME				_		ם	10010	ANIAI VO	5		CONTRACT LABORATORY P. O. NUMBER	MBER
# 24324	Pit Closure Project			BER IERS	: 		1	0.0	יובשטבט ובט אואאני טו	ļ °	L		
SAMPLERS: (Signatura)			$\frac{9}{8}$	AL NUM ONTAIN	TYPE		EX 8020 ———	PID			ENCE		2
LAB ID	DATE TIME	MATRIX	FIELD ID	TOT OF C		EPA	BT EPA	LAB	291		SEQU #		REMARKS
947 548	9/26/1510	Water (CMC118	W	₹		<		<		-	Lat L-4D L	ine Drie LD174
947 549	NA		MCH8121	 	8		/				_	Trip Blank	
947550	13/5		MC119	W	D		<u> </u>	,	<			Dup	
947 551	S1914	Water	M(IDD	W	2		<u><</u>		<u> </u>		رو	3B-39	Line Orizo LD146
	1/27/15	54/45h	4										
		/							,				
				1	F	2							
	-				1	4	a	95	1				
								y	/	_	<u> </u>		
RELINQUISHED BY: (Signature)	jnature)	JS DATE/TIME	RECEIVED BY: (Signature)	ignuture)				SHED BY	RELINQUISHED BY: (Signature)	, °	į	DATE/TIME 34'	RECEIVED BY: (Signature)
(and U		1/26/95 11	E				Ken	9	7	M	1	9/2495 9:05	
RELINQUISTED BY: (Signature)	pneture)	DATE/TIME	RECEIVED BY: (Signature)	ignature)			MELINOU	ISHED B	RELINQUISHED BY: (Signature)			DATE/TIME	RECEIVED OF LABORATORY BY: (Signalure)
REQUESTED TURNAROUND TIME: ROUTINE RUSH CARRIER CO.	JSH		SAMPLE RECEIPT REMARKS	REMARKS						RESULTS	AESULTS & INVOICES TO: P	FIELD SERVICEL PASO NATURE P. O. BOX 4990	FIELD SERVICES LABORATORY EL PASO NATURAL GAS COMPANY P. O. BOX 4990
BILL NO.:			CHARGE CODE							505-599-2144	-2144	FARMINGTON	, NEW MEXICO 87499



FIELD SERVICES LABORATORY ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	SAMITLE	IDLIVITICA	HON			
	Fiel	d ID		Lab ID		
SAMPLE NUMBER:	9WK 61	1	947	443		ĺ
MTR CODE SITE NAME:	LD 146		T	3B - 39		
SAMPLE DATE TIME (Hrs):	09-11-95	5	1	715		
PROJECT:	Phase II I	Drilling				
DATE OF TPH EXT. ANAL.:	9-12-9	5	9/12	195 md	r 9/20/9	6
DATE OF BTEX EXT. ANAL.:	9/12/9	15	9	115/95		
TYPE DESCRIPTION:	VG '		Light bri	own sand &	Clay	
Field Remarks:			l		1	
		RESULTS				
PARAMETER	RESULT	UNITS	DF	QUALIF	IERS M(g)	V(ml)
BENZENE	42	MG/KG	4	D		
TOLUENE	8.9	MG/KG	4	D	·	
ETHYL BENZENE	13.R	MG/KG	4	D		
TOTAL XYLENES	143	MG/KG	4	D		
TOTAL BTEX	165	MG/KG	4	D		
TPH (418.1)	4270	MG/KG			2.03	28
HEADSPACE PID	190	PPM				
PERCENT SOLIDS	942	%				
The Surrogate Recovery was at Narrative:	TPH is by EPA Method	418.1 and BTEX is by El			able.	
ATI Results	for mod &	2015 atta	dud (3850).		, <u></u> -
Dilution Factor Used						
approved By:	> 		Date:	9-18	2-95	
.pp.0700 57.			Date			



CHAIN OF COSTODY RECORD

			******					`				11c	14	14			
BILL NO.:	CARRIER CO	REQUESTED NOUTINE	-	Info@BB	E	RELINQUIS						2445	phhl	2443	LAB ID	SAMPLERS	PROJECT NUMBER
	ğ	REQUESTED TURNAROUND TIME:	10	SHED BY: (S	\$ X	RELINQUISHED BY: (Signature)						24/74/2 Stille	<u>ુ</u> ઉત્તાાર્થિક	<u> </u>	BATE	SAMPLERS: (Signature)	NUMBER
		OUND TIME:	<u></u>	ignature)	mall.	gnature)								2180	彩	mille.	PROJECT NAME Pit Closu
					3 0	ν Ψ'						5011	Solt	50iL	MATRIX		NAME losure
CI		g		DATE/IME À	09 11195 1830							JWK 63	JW K 62	JWK61	SAMPLEN	DATE:	PROJECT NAME Pit Closure Project # 24324
CHARGE CODE		SAMPLE RECEIPT REMARKS		HEGEIVED BY: (SI	/ Luchi	RECEIVED BY: (Signature)									/BER	1995	•
		REMARK		(Signature)		mature)								-	TOT OF C	AL NUME	BER ERS
		0)			Lella	ر						76	16	76		SAMPLE TYPE	
												<	5	<	TF EPA	PH 418.1	
				BELVIO		RELINO					 _		1	\	BT EPA	EX 8020	REC
				REYNOUISHED BY: (Signature)	di	RELINQUISHED BY: (Signature)											REQUESTED ANALYSIS
				ť: (Signatı		r: (Signatu											ANALY
505-599-2144	<u>.</u>	RESUL		re)	add	re)						5	0	190	(18gg)	St.	SIS
9-2144		TS & INVO										57	56	55	Ħ	8⊒5	
	P. O. BOX 4990	RESULTS & INVOICES TO: FIELD SERVICES LABORATORY	the by	DATE		DATE/TIME RECEIVED BY: (Signature)						18-20 lost DRIP LD107	18-52 LINE DRIP LDISO	28-30 fast 60146	REMARKS		CONTRACT LABORATORY P. O. NUMBER

J8-0565A (Rev. 03-94)

White - Testin

tory Canary - EPNG Lab Pink - Field Sampler

SITE ACTIVITIES

21-Feb-97

Meter/Line #: LDi46

Location/Line #: Lat 3B-39 Line Drip

MW#:

Depth to GW:

Depth to Product:

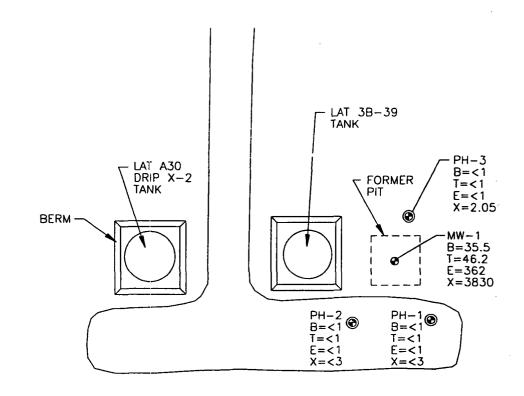
Product Thickness:

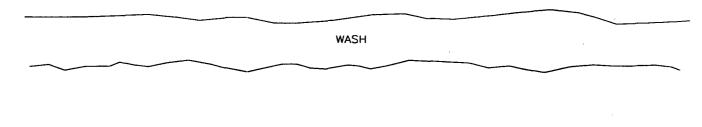
Date: 11/18/96

Activity: Geoprobe

Comments: Collect GW samples from 3 probe holes. Could not install piezos due to

depth of water and geology.





HIGHWAY 64 BLOOMFIELD

LEGEND

⊕PZ-1 APPROXIMATE PIEZOMETER LOCATION AND NUMBER

⊕ MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER

BENZENE (ug\L)
TOLUENE (ug\L)
ETHYL BENZENE (ug\L)
XYLENE (ug\L) BTEX

ug\L MICROGRAMS PER LITER NOT TO SCALE





LAT 3B-39 LINE DRIP LD146

DWN: TMM CHKD:	DES.: CC APPD:	PROJECT NO.: 17520 EPFS GW PITS
СС		
DATE: 1/9/97	REV.:	FIGURE 2





FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC263	948026
MTR CODE SITE NAME:	LD146	Lat 3B-39 Line Drip
SAMPLE DATE TIME (Hrs):	11/21/96	900
PROJECT:	Geo	probe
DATE OF BTEX EXT. ANAL.:	11/28/96	11/28/96
TYPE DESCRIPTION:	PH1	Water

Field Remarks:			

RESULTS

PARAMETER	RESULT	UNITS	DF	QUALIFII	ERS	
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	РРВ				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	<6	PPB				·

-BTEX is by EPA Method 8020 -

		D. D. io by El Allionion	5020	
The Surrogate Recovery was at DF = Dilution Factor Used	95.7	% for this sample	All QA/QC was acceptable.	
Narrative:				

 SEIFESO Natural Gas Company

A 2334

CHAIN OF CUSTODY RECORD

Project No.	Project Name	lame	Project Name		Type		Requested Analysis		
Samplers: (Signature)	ature)	7		Date: /	S o	nolie			
		and a		11/21/96	Sample	Spinitoe in the second		Remarks	
)ka O	le Time	Comp. GRAB		Sample Number	Contain- ers	$\mathcal{X} / \mathcal{V}$			
96/12/11	- 96/1	1	TRIP BLANK	ANK	_	× 24/20	15	RIP RLANK	
948026	0000		598 JWJ	~	76	X	/Hd		*
948027	2460		CMC 267		~	>	CH3		
948028	155		CMC265		U	×	CHO	7	
948029	1400		JMC 266		3%	×	2	- TRK 2B Diox-1	(0//53
							<u>}</u>	TRONG Prod. od	+ial from Pine
948030	1425		CMC267		B	X	P23	(slightodor, reached) (a.
948031	1935		CMCALR		ત	×	PZ3	(5 trong odor, 18011) -/	1
948032	0151		CMCS69		6	X	PH		
1						*			
-				(Jans	7.5				
				₩					
						ě			
-									
		,							
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ر ر (The state of the s		1/21/96 1700						
Relinquished by: (Signature)	(Signature)		Date/Time	Received by: (Signature)		Relinquished by: (Signature)	ignature)	Date/Time Received by: (Signature)	nre)
Merch	Lelio	1	112256 1355					11-22-96/355-70/00, B.	Whente
Relifiquished by: (Signature)	(Signature)		Date/Time	Received for Laboratory by: (Sig	by: (Signature)	Date/Time	Remarks:	-	
Carrier Co:				Carrier Phone No.	ne No.		Date Results Repo	Date Results Reported / by: (Signature)	
Air Bill No.:								-	
							*		sen luan repro Form 71-55 A





FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Fiel	d ID		Lab ID		
SAMPLE NUMBER:	CMC	264		948027		
MTR CODE SITE NAME:	LD.	146	Lat 3	3B-39 Line Di	rip	
SAMPLE DATE TIME (Hrs):	11/2	1/96		945		
PROJECT:		Geop	orobe			
DATE OF BTEX EXT. ANAL.:	11/2	18/96		11/29/96		
TYPE DESCRIPTION:	PI	H2	<u> </u>	Water] -
Field Remarks:						
		RESULTS			-	
PARAMETER	RESULT	UNITS	DF	QUALIFII Q	ERS	
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	<6	PPB	<u> </u>			
The Surrogate Recovery was at DF = Dilution Factor Used	92.5	-BTEX is by EPA Method % for this sample		was accepta	able.	
Narrative:						

948027.XLS,12/3/96

Approved By: Jaller



	100			•	_	•				-
16397	EPFS		GW PITS		Type	\ \ '	Analysis			
Samplers: (Signature)	Irre)	200		Date:	Sample	enbiulose ionerieses		Remarks		
% 0	Time	Comp. GRAB		Sample Number	Contain- ers	\sqrt{N}				
96/12/11	- 94	1	TRIP BLANK	ANK	_	X 24/24	1	RIP BLANK		1
048026	0000		CMC 263	8	ત્	\ \ \	/Hd	La+38-39	LD 146	7
948027	ठभेर	//	CMC 267		~	×	CH4			
948028	1155	<i>/</i>	CMC265		1	×	CHA	2		7
948029	1400		JMC 266		3	×	R	- TRK 20 Origh	K-1 (0/5)	
							<u>}</u>	TRON	pto tial trop pin	_
948030	1425		CMCA67		B	X	PZA	2 (slightador, reacted w)(14,	_
948031	1935		CMC 268		ત	×	PZJ		75H/	т.
948032	0151		CM(269		d	×	НА			1
										_
				Mary 1	17.5					
				*						_
						4				
										1
										_
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ر بر اح	7		00/1 96/18/11					-		
Relinquished by: (S	by: (Signature)		Date/Time	Received by: (Signature)		Relinquished by: (Signature)	ature)	Date/Time Received by: (Signature)	: (Signature)	_
Mora L	relia	//	1/2256 1355					11-22-96/355-10 Mas le	2 Uneute	
Reinfquished by: (Signature)	Signature)	-	Date/Time	Received for Laboratory by: (Signature)	signature)	Date/Time	Remarks:			
							3			
Carrier Co:				Carrier Phone No.	one No.		Date Results Report	Date Results Reported / by: (Signature)		
Air Bill No.:									san juan repro Form 71-55 A	٦∢





FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Fie	eld ID		Lab ID		
SAMPLE NUMBER:	CM	C265		948028]
MTR CODE SITE NAME:	LD	146	Lat	3B-39 Line D	rip]
SAMPLE DATE TIME (Hrs):	11/:	21/96		1155		
PROJECT:		Geo	prob <u>e</u>		90	
DATE OF BTEX EXT. ANAL.:	11/:	29/96	<u>.</u>	11/29/96		
TYPE DESCRIPTION:	P	Н3		Water	·	
Field Remarks: _		RESULTS				
PARAMETER	RESULT	UNITS	DF	QUALIF Q	ERS	
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	2.05	PPB		<u>.</u>		
TOTAL BTEX	2.05	РРВ				
TI 0	0.4.4	-BTEX is by EPA Metho				
The Surrogate Recovery was at	94.4	_% for this sample	e All QA/Q(was accept	able.	

Approved By: July Lough Date: 12/4/96

EI FESO Natural Bas Company CHAIN OF CUSTODY RECORD

Droiost No										
7	TIPITO TO T	_	VLID IT		Туре		\ \	/ Requested Analysis	sted	. T. T. i.
nature		7		Date:	S and	\	uoj,			- -
	3	Š		11/21/96	of Sample	JPINAS P	_1	\ \ \	Remarks	
		-			Contain-	**	TQ.	\ \x		
Dale	Time Cor	Comp. GRAB		Sample Number	sua .		KY XY	\ \ \	-	
96/12/11	1	1	TRIP BLANK	ANK	H I	() #/ _T	*		TRIP BLANK	
048026	0900	>	CMC 263		૮		\		PHI La+3B-39 LD146	9
948027	<i>उ</i> 460	//	CMC 267		~		×			
048028	1155	<u>/</u>	CMC265		d		×		CHJ	-
948029	1400		JMC 266		38		X ×		PRI TRK 20 Diox-1	55/07
									> STRONG Pod. odor. Pot.	tial free Plad
948030	1425		CMCA67		Q		×		PZZ (slintrodor, reached w/ the) (@
948031	1435		CMCALR		d		×		(Strong odor, reacted -/	<i>H</i> (τ)
948032	1510		CM(269		4		×			
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1 Janes	le.		1356 1355						11-22-96/355-Marle (Grante
Relifiquished by: (Signature)	nature)		Date/Time	Received for Laboratory by: (Signature)	ignature)	Da	Date/Time	Remarks:		
				_						
Carrier Co:				Carrier Pho	Phone No.			Date Results	Date Results Reported / by: (Signature)	
Air Bill No.:				4						
I				:						san luan raoro Form 71-55 A
										=

Philip Services Corporation 4000 Monroe Road

Farmington, New Mexico 87401 4505) 326-2262 FAX (505) 326-2388

		Page _	_/_ of	1
Project Name ${\cal E}$	PFS	Drilli	ng	
Project Number 62			t Code	
Project Location Z	AT :	3B-39	Line	Drip
On-Site Geologist	Don	Fern	11	i
Personnel On-Site	AMY			LeFebre
Contractors On-Site		5-		
Client Personnel On-Site	JONE			

Well#

Elevation

Well Location

L: S: T: R:

GWL Depth

Installed By

Danny Padilla

Date/Time Started //-2/-00 /: 30 P.M.
Date/Time Completed //-2/-00 3:00 P.M.

Item	Material	Depth (feet)		Top of Protective Casi	ng
Top of Protective Casing				Top of Riser	
Bottom of Protective Casing				Ground Surface	_0_
Top of Permanent Borehole Casing		-		_	
Bottom of Permanent Borehole Casing					
Top of Concrete			1 1 1		
Bottom of Concrete					
Top of Grout	74 Centonite				
Bottom of Grout	1.	15.8'			
Top of Well Riser	2" Sch 40 PVC	4 3			
Bottom of Well Riser	2" PVC	19.5		•	
Top of Well Screen	0.010 SCREEN	19.5	000 000	Top of Seal	15.8'
Bottom of Well Screen		34.5	004 004		
Top of Peltonite Seal		15.8"	000 000		
Bottom of Peltonite Seal		17.8	000	Top of Gravel Pack	<u>/7,8'</u> 19.5`
Top of Gravel Pack	10-20 SAND	17.8'		Top of Screen	19.5
Bottom of Gravel Pack	. ~	34.5		SCREEN IS	CILTED
Top of Natural Cave-In				ا 🗸 لاا	
Bottom of Natural Cave-In					
Top of Groundwater		28.2		Bottom of Screen	34.5 35.
Total Depth of Borehole		35'		Bottom of Borehole	<u>35. '</u>

Comments:	·	
	·	
	Geologist Signature	

KECUKI	J UF	2082	UKFA	PLUKATION			•		Boren	-11/
-		menta	il Serv	ices Corporation					Well# Page	1 of 1
4000 Monroe							-0-0			
Farmington, N					Project		EPFS		ng	
(505) 326-226	2 FAX (505) 326	-2388		•	Number	6280			Cost Code
					Project	Location	LAT	36	3-3	9 Line Drip
Elevation					Well Lo	gged By				
Borehole L	ocation.	1 SW.	ر (1،	MW-1	Personn	nel On-Site				
GWL Dep	th				Contrac	tors On-Si	e	None		
Logged By	y	Don F	ernald		Client P	ersonnel C	n-Site			
Drilled By		Danny	Padilla							
Date/Time	Starte	d 12	35 F	M 11-21-00	Drilling I	Method	Hollov	v Ster	n Aug	er
Date/Time	Comp	leted /	1:30 1	H 11-21-00	Air Mon	itoring Met	hod	PID		
			· · · · ·			-	,			
			Sample			Depth	7-	ID		
Depth	Sample	Sample	Type &	Sample Description	USCS	Lithology		Monitor	ring	Drilling Conditions
(Feet)	Number	Interval	Recovery	Classification System: USCS	Symbol	Change	ىد ا	nite:-NE	70	& Blow Counts
			(inches)			(feet)	BZ	вн	S	
5				Initiated sampling @ 15' bgs.						·
20		X	14"	Dark yellowish-orange fine grained zilty sand. Dry			2.6			
		Х	18"	Dark rellowish-orange fine grained silly Sand (moist)			5.1			

Dark yellowish-orange fine grained silty sand (very moist)

Dark yellowish-orange fine grained silty sand (water)

Terminated boring
@ 35' bgs = converted
to MW-3

Comments:

25

30

35

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Geologist Signature

3.6

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J:\Z Misc folders\Drilling\1-40ft

Sample	Of well	7	Commen	Circle lhe do						•	-	9	2-01-0	Dale	Water R		D-Other	Pump Cen Subr	Methods	O Other	Develop Z Stabili	Sile Nam	Client Co	Project N	Tirrice Ba	U
Sampled 13T	is Slanatui	2017-L	Comments AFTer	Circle the date and time that the development criteria are met.			-	1.					NAS	Ilme	Water Removal Data		ullic	e u	s of Deve	er	Development Criteria Doto 5 Casing Volumes of Water Removal Stabilization of Indicator Parameters	Sile Name LA	Client Company	Project Name FDFS		
/3Tex	ssignature(s) Sallors Tot	م المعمد م	er B	hal the deve		1							×	Development Melhod Fump Boiler	ata		□ Stainless-steel Kemmerer	Battom Valve Double Check Valve	opment		eria Numes of 1 Idicator Pa	<u> </u>	2 2	11 /\		
_	2102	100	Bailing	lopineni crili										Removal Rate [gal/min]			-steel Ken	Valve Check Va			Water Rem Frameters	77 (1	Field	(l)	Serial No. WDPD-	Number_/
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	Men	mith	Approx inc										.	Water (repling		[, Driệt	Ora Well		Dic.	Init	(941)	C.C.C.	3		2
	Bailed Dryle	4	X121										2	lucement Canadalive .	-		Drilling Fluids Total	Well Casing Gravel Pack		ight of ½/c inteler (int	iter Volui					
	ンプノベ	Pallon	.75										7					2.42 Chalc ree	Waler Va	rter Colun ches): We	Water Volume Calculation Initial Depth of Water (feet)	Sile Addı		Project N		Development D Furging
	D ale /	increments finished	Gallons		1				-				_	Removed (gallon)				0.88X3	Waler Volume in Well	Height of Mater Column in Well (leet) Diameter (inches): Well 🔑 🍊 Gravet	ration:	Sile Address Kinya	5	Project Manager L,SA		
	Recove	renTS.	Bailes										571	only (°C)	4	K	7	13 2.69	Gallons	Siavel Pack	28.20			!	•	WELL DEVELOPMENT AND PURGING DATA
• • •	90 750	linishe	88 20						-			- 	5,79	DH	1		0	SZG	lo be	2		Jen Jahn	- 1	ממיאו	1	EVELC
Ç	Reviewship Lau Date 12	d cle	ell Dix										0000	humpos(cm)		25.5		☑ Other	, cor	00	Instruments P pH Meter	, N.	-			PMEN
.· .:	1 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Cleaning Sill	57.11		-		• * * •		-					cm) Oxygen (mg/t)	1	Scomotor)isposal	☑ Temperature Meter	Conductivity Meler	DO Monitor	ents Meter	Co		_ Proj		IT AND
NEWFORMYP	1	'	muddy					<u> </u>	igg		-	1964	7813			L		Meler	ł	,	Seric		se,Task No	ect No.	Page .	Pur
F:\NEWFORM\PE_ADIDI.DOF	400 8 5 5 5 C	n T o										× 10013	C18 10 0	Comments		Sloom 1.01d		Hydex	Hydras		Serial No. (II applicable)		Phase. Task No. 350002	Project No. 62900219	- to -	GING (
1/31/84	-	out of sotton	STacted					<u> </u>				00	र्	- <u>- </u>		11/11					opticable]		002	219	×	DATA

Philip Services Corporation

4000 Monroe Road Farmington, New Mexico 87401 (505) 326-2262 FAX (505) 326-2388

Date/Time Completed

	Page		of _/
Project Name EPFS	Dril	lina	•
Project Number 62820 21		st Code	
Project Location <u>LAT</u> 3		59	

Well#

Elevation				
Well Location L	: S:	T:		_
GWL Depth	o' bas			_
Installed By		Padillo	<u> </u>	
	7			_
Date/Time Started	11-21-	00 /	10:30 1	u

11-21-00

On-Site Geologist

Personnel On-Site

Contractors On-Site

Wove

Client Personnel On-Site

Vove

Depths in Reference	e to Ground Surface	[
Item	Material	Depth (feet)	F	7	Top of Protective Casi	ng
Top of Protective Casing					Top of Riser	
Bottom of Protective Casing					Ground Surface	_0
Top of Permanent Borehole Casing	-					
Bottom of Permanent Borehole Casing						
Top of Concrete						
Bottom of Concrete						
Top of Grout						
Bottom of Grout		15.9'			,	
Top of Well Riser		0				
Bottom of Well Riser		20'				
Top of Well Screen	0.010	20'	000	000	Top of Seal	15.9
Bottom of Well Screen	, ,	35'	000	∞		
Top of Peltonite Seal	34" bentonite	15.9'	000			
Bottom of Peltonite Seal	£1	18.4'	000	000	Top of Gravel Pack	18.4
Top of Gravel Pack	10-20	18.4'			Top of Screen	20.0
Bottom of Gravel Pack	10-20	317'				
Top of Natural Cave-In					,	
Bottom of Natural Cave-In					•	
Top of Groundwater		29.8'			Bottom of Screen	35
Total Depth of Borehole		35.		Verifica.	Bottom of Borehole	35

Comments:		•
		•
·		
	Geologist Signature	9

Philip Environmental Serv 4000 Monroe Road	ices Corporation					Page	of	
Farmington, New Mexico 87401 (505) 326-2262 FAX (505) 326-2388			Name Number Location	6280		ng - 39	Cost Code Line Drip	
Elevation Borehole Location SE of Formal Second Formal Se	00 · 8: 10 AM	Personr Contrac Client P Drilling I	gged By nel On-Site tors On-Sit ersonnel C Method itoring Met	e on-Site Hollov	None W Ster PID		Fernald Idilla, ityan Let NE er	<u>e 6</u> 1
Depth Sample Sample Type & (Feet) Number Interval Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air	Monitor nits: #E	ing	Drilling Conditions & Blow Counts	
	Initiated Sampling 15' bgs Dark yellowish orange fine grained silty sand. Dry Dark yellowish orange fine grained silty sand Dry Dark yellowish orange fine grained silty sand Dry Dark yellowish orange			2.3				
30	Dark Yellowish- orange fine silty-sand (moist)							
- X 9"	Dark yellowish-orange fine silty-sand (wet) water @-23'bgs			8.0				
40	Boring terminated @ 35 bgs. converted to MW-2							

Geologist Signature

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42	

Well Number MW 02

Development

Development

WELL DEVELOPMENT AND PURGING DATA

Serial No. (If applicable)	Instruments	Water Volume Calculation	Water Vo	Development Criteria
	Son Jana Co.	sile Address Reral Son Jana Co.	(771/07)	Sile Name LAT 313 39 (LD/46)
Phase.Task No.350002			Field Services	Client Company EL paso Field Services
Project No. 629 06 219		Project Manager L. SA kinn	Develop ment	Project Name EDES well Develop ment
Page			<u>fD</u>	BANKANIA Serial No. WDPD

☐ Peristallic ☐ Stainless-steel Kemmerer	Ð	🗆 Centritugal 🛛 Bottom Valve	Pump Boller	Methods of Development		O Other	G Stabilization of Indicator Parameters	図の 5 Casing Volumes of Water Removal	Development Criteria
Drilling Fluids	Gravel Pack	Well Casing	Hem		Diameter (in	Height-of-Water Column in Well (lea	Initial Depth to Water (feet)	Initial Depth	Water Volu
		Well Casing 5.13 0.83 x 3	Cubic Feel Gallons	Water Volume in Well	Diameler (inches): Well 2" Grav	aler Column	ı lo Water (fe	of Well (fee	Water Volume Calculation
		0.83 x 3	Gallons	क्षा ता भवा	2" Grav	in Well (led			ilion ,

.	Water Disposal	2 2 2	
	Cl Other	R	7
Hydac	A Temperature Meter	Removed	llons -
Hydas	(i) Conductivity Meter	Well Gallons to be	Well
-	□ DO Monilor	ell (leel) S./3	ADE) eel) lle
Hydas	A pH Meter	1000 CS	رياد
Serial No. (If applicable)	Instruments se	4	~

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Water Removal Data	ioval Da	ā													
	,	Developmen Melhod	pmep)	Removol Rate (gal/inki)	Inlake Depth Ending [feet] Water Depth 		Mater Voh	Waler Volume Removed (gallons)	Product Volume Removed (gallen)	(sollon)	femperature ["C]	Н	Conductivity [mmhox/cm]	(1/gm) Oxygen jmg/1)	Comment
Dale	Ilme	rump bailer	Boiler				hicramoul	Considers	ncionion Cumidive	undolive				,	· · ·
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Circle the date and time that the development criteria are met.	and lime the	I lhe	GVOIC	pment crite	na ore mel						1			. <u>:-</u>	

F:\NEWFORM\PE_A0I01.DOF

Comments AFTer Bailing

increments ADDPD 3 GA

Dry 1545. 1615 water Lavel 34.36

Date 12-01-00

Reviewe Will Date 124/00

Deited well Dry-Sterted ADDing possesse water in 5 gallon

Sampled B- 17 Tex 1625

Developer Signature (s)



Technical Report for		
Montgomery Watson		
EPFS San Juan Basin Groundwater Site		
Accutest Job Number: T4989		
Report to:		
Report to: El Paso lynn.benally@elpaso.com		



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Total number of pages in report: 9

Ron Martino Laboratory Manager

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Accutest Laboratories

Sample Summary

Montgomery Watson

EPFS San Juan Basin Groundwater Site

Job No:

T4989

Sample Number	Collected Date	Time By	Received	Matr. Code		Client Sample ID
T4989-1	07/29/03	06:20 MJH	07/30/03	AQ	Ground Water	LAT3B-39 MW-3
T4989-2	07/29/03	07:10 MJH	07/30/03	AQ	Ground Water	LAT3B-39 MW-2
T4989-3	07/29/03	06:00 MJH	07/30/03	AQ	Trip Blank Water	290703TB01

Report of Analysis

Page 1 of 1

Client Sample ID: LAT3B-39 MW-3

Lab Sample ID:

T4989-1

Matrix:

AQ - Ground Water

DF

1

Date Sampled: 07/29/03

Method:

SW846 8021B

Date Received: 07/30/03

Percent Solids: n/a

Project:

EPFS San Juan Basin Groundwater Site

Analytical Batch Prep Date Prep Batch

Run #1

File ID KK005559.D Analyzed 08/04/03

By

BC

n/a

n/a

GKK296

Run #2

Purge Volume

5.0 ml

Run #1

Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units C)
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
460-00-4	4-Bromofluorobenzene	89%		64-1219	%
98-08-8	aaa-Trifluorotoluene	80%		71-1219	%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: LAT3B-39 MW-2

Lab Sample ID:

T4989-2

Matrix:

AQ - Ground Water

Method:

SW846 8021B

Date Sampled: 07/29/03

Date Received: 07/30/03

Percent Solids: n/a-

Project:

EPFS San Juan Basin Groundwater Site

File ID KK005562.D DF 1

Analyzed By 08/04/03 BC Prep Date n/a

Prep Batch

Analytical Batch

n/a

GKK296

Run #1 Run #2

Purge Volume

Run #1

Run #2

5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units Q	
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
460-00-4	4-Bromofluorobenzene	95%		64-121%	ó
98-08-8	aaa-Trifluorotoluene	92%		71-121%	Ś

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = Indicates \ analyte \ found \ in \ associated \ method \ blank$

Report of Analysis

Ву

ВČ

Page 1 of 1

Client Sample ID: 290703TB01

File ID

5.0 ml

Lab Sample ID:

T4989-3

Matrix:

AQ - Trip Blank Water

DF

1

SW846 8021B

Date Sampled: 07/29/03

Date Received: 07/30/03

Prep Date

n/a

Percent Solids: n/a

Method: Project:

EPFS San Juan Basin Groundwater Site

Analyzed

08/04/03

Prep Batch n/a

Analytical Batch **GKK296**

Run #1 Run #2

Purge Volume

KK005558.D

Run #1

Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene	ND ND ND ND ND ND	1.0 1.0 1.0 3.0 1.0 2.0	ug/l ug/l ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries 4-Bromofluorobenzene	Run# 1	Run# 2	Limits 64-121%
98-08-8	aaa-Trifluorotoluene	85 %		71-121%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary Job Number: T4989

Page 1 of 1

Account:

MWHSLCUT Montgomery Watson

Project:

EPFS San Juan Basin Groundwater Site

ł		
	Sample	
	GKK296-B	S

File ID KK005555.D1

DF

Analyzed By 08/04/03 BC Prep Date n/a

Prep Batch

Analytical Batch

GKK296 n/a

The QC reported here applies to the following samples:

Method: SW846 8021B

T4989-1, T4989-2, T4989-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.6	103	74-119
100-41-4	Ethylbenzene	20	20.0	100	82-115
108-88-3	Toluene	20	20.0	100	77-116
1330-20-7	Xylenes (total)	60	60.8	101	79-115
95-47-6	o-Xylene	20	20.3	102	78-114
	m,p-Xylene	40	40.6	102	79-116
CAS No.	Surrogate Recoveries	BSP	Li	mits	
460-00-4	4-Bromofluorobenzene	101%	64-	121%	
98-08-8	aaa-Trifluorotoluene	102%	71-	121%	

Method Blank Summary Job Number: T4989

Page 1 of 1

Account:

MWHSLCUT Montgomery Watson

Project:

EPFS San Juan Basin Groundwater Site

Sample GKK296-MB

DF File ID KK005557.D1

Analyzed 08/04/03

Ву BC

Prep Date n/a

Prep Batch

Analytical Batch

n/a

GKK296

The QC reported here applies to the following samples:

Method: SW846 8021B

T4989-1, T4989-2, T4989-3

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	1.0	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
108-88-3	Toluene	ND	1.0	ug/l
1330-20-7	Xylenes (total)	ND	3.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
	m,p-Xylene	ND	2.0	ug/l
CAS No.	Surrogate Recoveries		Limi	ts
460-00-4	4-Bromofluorobenzene	94%	64-12	21%
98-08-8	aaa-Trifluorotoluene	86%	71-12	1%

Matrix Spike/Matrix Spike Duplicate Summary
Job Number: T4989

Page 1 of 1

Account:

MWHSLCUT Montgomery Watson

Project:

EPFS San Juan Basin Groundwater Site

The QC reported here applies to the following samples:

Method: SW846 8021B

T4989-1, T4989-2, T4989-3

CAS No.	Compound	T4989-1 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	ND ND ND ND ND ND	20 20 20 60 20 40	17.0 17.7 17.6 53.5 17.9 35.6	85 89 88 89 90	16.6 -17.2 17.1 51.7 17.2 34.5	83 86 86 86 86	2 3 3 4 3	64-124/16 64-123/14 64-120/13 66-118/18 65-119/20 66-120/14
CAS No. 460-00-4 98-08-8	Surrogate Recoveries 4-Bromofluorobenzene aaa-Trifluorotoluene	MS 90% 80%	MSD 92% 82%	T49 899 809	-	Limits 64-1219 71-1219	-		

A E

CHAIN OF CUSTODY# 290703mv41

MACCUTEST	10165 Harwin Drive, Ste. 150, Houston, TX 77036 TEL. 713-271-4700 FAX: 713-271-4770	FED-EX Tracking # 835603)57079	Bottle Order Control #
		Accutest Quote #	Accutest Job #
Laboratories		:	
Clent / Reporting Information	Project Information	Reque	Requested Analysis Matrix Codes
1	Project Name		DW - Drinking Water
0561721HIM	NB26/ WOUNDE		GW - Ground Water
Address 614 La Maria	Street Smunus		vvv - Water
			SW - Surface Water

S - X (Preserved where applicable	Preserved with		Seal #	Custody Seal #			Received by:		Date Time	Relinquished by:
1	A decembed by	Date Time:			shed by	Relinquished by			Received by:		Oate Aime	Relinduished y:
N		2300			erec ey	2		i i	great of.	1200	729	
	1		uding couner delivery.	ssion, including o	s change posse	on time sample	Sample Custody must be documented below each time samples change possession, incl	y must be docur	Beceived by		Des	Relinquisco
					·						Emergency & Rush T/A data available V/A LabLink	mergency & Rush T/A
							Commercial "A" = Results Only	ommercial A				
	-		T					1	· · ·			Other
1404								Full Tier 1				2 Day EMERGENCY
00%	1						•	Reduced Tier 1				3 Day EMERGENCY
					mat	☐ EDD Format		Commercial "A" Commercial "B"	8 8 		Approved By: / Date:	10 Day STANDARD 5 Day RUSH
	Comments / Remarks				nation	Data Deliverable Information					umaround Time (Business Days)	_
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			.,	7		7	2	o mo was	7.29.63/10		0-01 W 18-88-10	2 Latze
				¥		2	wb 2	37	0190 80 42.1		3-39 MW-3	(A)38-39
LAB USE ONLY			_	RACORE	12SO4 NORE NBHSO4	HCI NEOH PINO3	Matrix bottles	Time Sampled By	Date Ti	MEOH Vial#		Sample #
WP - Wipe			<u> </u>	kottles	of preserved	Number		tion	Collection	* AWWDS	Field ID / Point of Collection	Accutest
SOL - Other Solid			_					se Order #	Client Purchase Order #		1 There	Sampler's Name ///
LIQ · Other Liquid			<u>~</u>						{		21.10.665	800
01.0			-						Fax #		1	Phone #
SL - Słudge									Project #	E-mail	Mon	Project Contact
SO · Soil			-			•	0816		Ç	87467	ton UM	tremina
SW - Surface Water			-	1	1	Jaco	Hourians	12	2	75	elly thre	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Japem - MAN							1001	1	Street			Address /

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_	TI	148	3	

SAMPLE RECEIPT LOG

JOB#: ТЧ9	19	DATE/TIME RECE	EIVED:	-30-0	3 00	700	
CLIENT:				INITIALS:	EJ		
3. Y N Sample rec 5 Y N Sample volu 7 X N Chair of Cu 8 Y Chair of Survey Server	ircle "Y" for yes an eived in undamag eived with proper pume sufficient for a stody matches sa al received intact a al received intact a	ed condition. 2. pH. analysis. 6. mple IDs on conta	Y N Sampl Y N Sampl Y N Sampl iners. t on cooler.	es received version of the received in	or explanation vithin temp. ra proper contain ith chain of cu	nge. ners.	
SAMPLE or FIELD ID	BOTTLE #	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH
	1-2	7-29-03		2×40ml	BIE A	1(2)3,4,5,6	U, <2, >12, NA
2	(-2				BIEX	123,4,5,6	U, <2, >12, HA
3	1	1		1×40ml	BIZK	1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,8	U, <2, >12, NA
						1,2,3,4,5,8	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
			·			1,2,3,4,5,6	U, <2, >12, NA
	·		4			1,2,3,4,5,6	U, <2, >12, NA
			5/			1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
		5				1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
			·			1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
/						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5, 6	IJ, <2, >12, NA
LOCATION: WI: Walk-In PRESERVATIVES: 1: Non	_	4: H2SO4 5: NAOH		Freezer			
pH of waters checked exclusion of soils N/A	uding volatiles	- نــــ					
Delivery method: Courie		ATTROHED		COOLER TEMP	<u>5.8</u> (COOLER TEN	
Method of sample disp	posal: (circle one)	Accutest dispos	sal Hold	Return to C	Client	Fo	m: SM012

Form: SM012



CHAIN OF CUSTODY # 290703mn41

10165 Harwin Drive, Ste.

150, Houston, TX 77036 FED.EX Tracking # Bottle Order Control # B 35603) 57079 Bottle Order Control # Rest.com Accutest Quote # Accutest Job #
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				•	TEL.	TEL. 713-271-4700 FAX: 713-271-4770)0 FAX: 7	13-271-47		3760°	ンケン	Z					
	Laboratories					B.W.W.W	www.accutest.com	3		Accutest Quote #			Accutest Job #	# doL 1			
	Client / Reporting Information			4.	P	Project Information	9					22	Requested Analysis	Analysis			Matrix Codes
Company Name Will	14 (E) Pas	Ċ	Project Nam	Naine	1/1/2m		9							_		Q D	DW - Drinking Water GW - Ground Water
Address (0/4	Loilly Aux	,	Street		1/1	una	as										ww - Water
CIN	MO SUBS	404CS	City			State		ľ								- St	SW - Surface Water SO - Soil
Project Contact	10 01	I	Project #	#										,			SL - Sludge
Phone #	Center	2	Fav #														01 · Qi
B	55982170	Oc.	ex.						1.0	<u>^</u>						Ė	LIQ - Other Liquid
Sampler's Name	MIXex		Client P	Client Purchase Order #	4					Ź						<u></u>	SOL - Other Solid
Accutest Sample #	Field: ID / Point of Collection	# AMMUS		Collection	<u> </u>	<u>.</u>	humber o	Serve		<u></u>				·		<u> </u>	WP - Wipe
		MEOH Viai #	_	i	Ву мали	bottles &	HRN HRN H25	NO Nai	BIC		-	T		+	1	+	LAB USE ONLY
			CACACA C		2 2			+		\	+	1	1	╀	†	+	
*	なるしくっとのと		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		100 P	- ($\frac{1}{1}$			1	╁		1	╀	1	+	
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					-										Ç		
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					-		_							_		-	
	Turnaround Time (Business Days)				-	Data Delivera	hle Information							<u>-</u>			
Day STANDARD)ate:		Commercial "A"	γ.	0	☐ EDD Format							V Delilelik			
☐ 3 Day EMERGENCY	NCY		 - -	Commercial '8'	<u> </u>					Т					1		
2 Day EMERGENCY	NCY		 -	C Full Tier 1						Т	ļ		į				
Other			-							Ť							
			 	Commerc	Commercial "A" = Results Only	ults Only				Τ							
Emergency & Ki	Emergency & Rush I/A Gata available VIA Labilinx		Sample (Custody must b	e documented	below each tim	e samples cha	ange possessi	on, including	ounier deliver	¥						
Relinquished by Anna		1/24/05 12 00	Received by:	ved by: Relinquished by 2			Relinquished t	ų				Date Time:	Received by:	by:			
Relinguished W		Date Jime:	Received by:				Relinquished by	×			Da	Date Time:	Received by:	by:			
Relinquished by:		Date Time:	Received by:				Custody Seal #	#		Preser	Preserved where applicable	ocable	□ <u>°</u>	-		Temp.	

DATA VALIDATION WORKSHEET (Page 1 of 2)

Analytical Method/Analytes: _	SW-846 8021B (BTEX)	Sample Collection Date(s):	07/29/03
Laboratory: _	Accutest	MWH Job Number: _	EPC-SJRB (Groundwater)
Batch Identification: _	T4989	Matrix:	Water
MS/MSD Parent(s) ^(a) : _	T4989-01	Field Replicate Parent(s):	None
Validation Complete: _	Bon Bytto	(Date/Signature)	

Foot				Hits		
Notes	Site ID	Sample ID	Lab. ID	(Y/N)	Quals.	Comments
None	Lat 3B-39	MW-3	T4989-01	N		. ~
None	Lat 3B-39	MW-2	T4989-02	N		
None	Trip Blank	290703TB01	T4989-03	N		
						·
<u></u>						

DATA VALIDATION WORKSHEET (Page 2 of 2)

Analytical Method: _	SW-846 8021B (BTEX)	MWH Job Number:	EPC-SJRB (Groundwater)
Laboratory:	Accutest	Batch Identification:	T4989

Validation Criteria						
Sample ID	Lat 3B-39 MW-3	Lat 3B-39 MW-2	290703TB 01			
Lab ID	T4989-01	T4989-02	T4989-03			
Holding Time	А	Α	Α			
Analyte List	A	Α	Α			
Reporting Limits	A	A	Α			
Trip Blank	A	Α	Α			
Equipment Rinseate Blanks	N/A	N/A	N/A			
Field Duplicate/Replicate	N/A	N/A	N/A			
Surrogate Spike Recovery	A	Α	Α			
Initial Calibration	N	N	N			
Initial Calibration Verification (ICV)	N	N	N			
Continuing Calibration Verification (CCV)	N	N	N			
Laboratory Control Sample (LCS)	A	A	Α			
Laboratory Control Sample Duplicate (LCSD)	N	N	N			
Method Blank	A	A	Α			T
Matrix Spike/Matrix Spike Dup. (MS/MSD)	A	N/A	N/A			
Retention Time Window	N	N	N			
Injection Time(s)	N	N	N			
Hardcopy vs. Chain-of-Custody	A	Α	Α			
EDD vs. Hardcopy	N	N	N			
EDD vs. Chain of Custody	N	N	N			

(a) List QC batch identification if different than Batch ID

A indicates validation criteria were met

A/L indicates validation criteria met based upon Laboratory's QC Summary Form

X indicates validation criteria were not met

N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample

N/R indicates data not available for review

NOTES:



CHAIN OF CUSTODY# 290703mv41

Date Time:

Received by:

Preserved where applicable

WELL DEVELOPMENT AND SAMPLING LO

	,	0.0_			-		Tr-C	lient:	mw	'H
Location:		3-39 _{Well N}					•		Sampling	-
Project Mana										70s pc
					_ Produc	t Thickness	·	<u></u> N	Measuring I	Point <u>FOC</u>
Water Colun	nn Heigh	14-503	Well Dia.	<u>2"</u>						<u> </u>
Sampling M	ethod:	Submersible l	Pump 🗆	Centrifug	al Pump [☐ Peristal	ic Pun	np 🔲	Other []	
		Bottom Valve	Bailer [Double (Check Val	ve Bailer 🗀] Sta	inless	s-Steel Ken	nmerer 🗆
Criteria: 3 t	o 5 Casi	ng Volumes of	Water F	Removal	Sabiliza	ation of Indic	ator F	Param	eters 🔲 (Other
Gal/ft x f	t of water		Gallons	Water Volum		Ounces			Galoz	to be removed
4-503	x./L		× 3			Objects			276	03
Time	рΗ	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol E			Comments/
(military)		(umhos/cm)	(°C)	(millivolts)	(mg/L)	(NTU)	(ga	al.)		Flow rate
0637	671	564	140				2	2	ches	4
	736	572	147				5	z		
	742	556	148				78	3_		
<u> </u>	752	530	152				<u>-7</u> _	4	ton &	31the wortenson
	752	539	152				10		well	s briling sken
0656	740	579	149				_//	<u>0</u>	well	has bull dy
										
<u></u>								 .		<u> </u>
										
								.		
							-			
Final: Time	рH	sc	Temn	Eh-ORP	D.O.	Turbidity	Fem	ous	Vol Evac.	Comments/Flow rate
		579	149				-			wellbeilddau
0050										THURSDELLA SICE
COMMENT	rs:		,							
INSTRUMEN	NTATION	l: pH	Meter C	3		Tempe	rature	Mete	er 🔀	
		DOM	lonitor []		. 5			r 🖸	
Mata Pi-		Conductivity	Meter D	<u> </u>				٠		
Water Dispo	1 7		Çar	nnle Time	6711	<u>> вт</u> г	-Y 1771	W		Ikilinih, 🗇
_										
	ations [-		itrate	Nitrite	∐ Amr				NM WQCC Metals
Total Phospl MS/MSD					Name/Tin	LJ ne				Ц _ тв <i>210003.TB:0</i> 0(

WELL DEVELOPMENT AND SAMPLING LOS

Project No:	3000	20. <u>0</u>	Projec	t Name: 🕰	IBE	ground	LeC lient	mwH
Location: 4	2+3B-	32 Well N	10: M	W-3		Devel	opment 🗌	Sampling 🗹
Project Man	ager/	MIN		_ Date <u>_ 2</u>	.29-03	Start Tim	ne <i>O53</i> 9	2:Weather R 605
Depth to W	ater_35	4.20 Dep	th to Pro	duct	_ Produc	ct Thickness	3	Measuring Point <u>Tac</u>
Water Colur	mn Height	4.058	Well Dia.	ZH	_	,		
Sampling M	Aethod:	Submersible	Dumn □	Centrifuo	al Puma l	7 Peristal	ic Sump F	Other -
Sampang W							_	ss-Steel Kemmerer
Criteria: 31	to 5 Casin	g Volumes of	Water F	Removal	Sabiliza	ation of India	cator Parar	neters Other
Gal/ft x f	ft of water			Water Volum		Ounces		Gal 62 to be removed
4.058	X-16	×	Gallons			Ounces		24903
Time (military)	pН	SC (umhos/cm)	Temp (°C)	Eh-ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac.	. Comments/
0603	684	584	173					·
32.5	715	513	158				5 Z	
	717		154	-			72	
0614	725	511	15				84	wellhoo boildas
Dolla	743	510	150				<u>88 </u>	wellhow boild by
								
								
		 .						
	· ·						-	

		·						
Final:								
Time	pН	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Voi Evac. Comments/Flow rate
Blollo	743	510	15°					88 well beileddy
COMMENT	TS:							
INSTRUME	NTATION:		Meter K			Tempe		er 🔀 er 🔲
	4	Conductivity	Meter \$	 a			UIN	CI [_]
Water Dispo	. —	utz						
Sample ID _	Let3B	-39 mw	글 San	nple Time _	062	<u> </u> ВТІ	≅X 🛣 V	OCs Alkilinity
TDS []	Cations 🔲	Anions [☐ Ni	itrate 🔲	Nitrite	☐ Amn	nonia 🔲	TKN NM WQCC Metals
Total Phosp	horus 🔲	******						
MS/MSD		BD		BD	Name/Tin	ne		TB <i>290703T&\$</i> /



CHAIN OF CUSTODY:

USIOD	CUSIODY#160703 MV & J	Pol
0, Houston, TX 77036	0, Houston, TX 77036 FED-EX Tracking # Bottle	Bottle Order Control #
X: 713-271-4770	836557900627	
st.com	Accutest Quote #	Accutest Job #

C Temp.	□ <u>ģ</u>	applicable	Preserved where applicable				Seal #	Custody Seal #	o				Received by:	Rece 5	Date Time:			Relinquished by:
	A nacared by	<u>'</u>					and of	4					1	ω				3
								2						600		7.		
	Received by:	Date Time:	Sample Custody must be documented below each time samples change possession, including counier delivery.	Iding counie	ion, inclu	possess	shed by	e samples chan Relinquished by	w each tin	ented belo	be docum	lody must	Sample Cus Received by:	Rece	Date Time:		Såmpler:	Relinquished Jr
																Emergency & Rush T/A data available VIA LabLink	& Rush T/A dat	mergency
									Only	Commercial "A" = Results Only	rcial "A"	Comme						<u> </u>
	<u> </u>											777					ERGENCY	1 Day EMERGENCY
												Full Tier 1	30				ERGENCY	2 Day EMERGENCY
											Tier 1	Reduced Tier 1					ERGENCY	☐ 3 Day EMERGENCY
						-] 	☐ EDD Format	_		B. ∀.	Commercial 'A' Commercial 'B'	00		ale.	opproved by a pale.	5 Day RUSH	
	Comments / Remarks	C					nation	ble Inform	Data Deliverable Information	Da					of c	lumaround lime (Business Days)	- 1	10 Day 8
	4																	
	-					_		_			_							
	,									_				_	_			
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									-									
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				X					_	C	mu we	<u> </u>	7-16-03 0700			1607037302	16070	
				×				<u> </u>	22	w/s	74	L	7.16.08 1210	L		35 MW-1	LAT313-39	
LAB USE ONLY				/:	MECH	NaHSO	H2SO4	NaOH HNO3	Bg ⊆ HCI	Matrix bottles	Sampled	Time	Date	MEOH Vial#	<u>***</u>			
WP - Wipe				37]8	preserved Bottl	r of prese	Number of	Н		Ш	Collection	3	# WWWINS	S.	Field ID / Point of Collection	Fie	Accutest Sample #
SOL - Other Solid				٤							*	hase Orde	Client Purchase Order #			Mare	Sampler's Name Watter	ampier's Nar
LIQ - Other Liquid				<u> </u>									Fax #			8612 5	5 559	505
10 - 10 Bons - 7s													ojav. n			relly	n Bene	rue
SO - Soil								_	()	0		6	No.	12	がんの	on WIN	1501	Project Contact
SW - Surface Water								ام	ロハ engy 1	2	<u>z</u> 	_	1	ζ ρ	Zip	State	,	City
WW - Water				· .				}	2	ground water	202	J.	Street			's Ave	Rell	(0/4
GW - Ground Water							ľ	خ	Basin		an Juan					reso	72/7	MUL
Matrix Codes DW - Drinking Water	Requested Analysis	Reque						8	Project Information	Projec		Tie .	Project Name			Clent / Reporting Information	/ _	Company Name
	Accurest Job #		. Cuoia *	Acutes			E COE	www.accutest.com	WWW.			-				Laboratories	Lat	
		<u> </u>	836557900629	_	70	271-47	X: 713	0 FA	-271-47	TEL. 713-271-4700 FAX: 713-271-4770	-							
	Bottle Order Control #	┙.	FED-EX Tracking #	_	ָבָהָנָהָ (נְבָּהָנָהָ (Haus	; ; (Drive (10165 Harwin Drive, Ste. 150. Houston, TX 77036	10165	(

WELL DEVELOPMENT AND SAMPLING LOS

Project No:							Client:	MWH	
		3-39well 1		_			-	Sampling 🔀	
Project Man	ager	MIN		_ Date	-16-0	3 Start Tim	ne <u>///</u>	Weather 9	5+
								Measuring Point	
Nater Colu	mn Heigh	1572	Well Dia.	411	<u></u>				
\	A = Ab = d =	0	D [7	04-6	at Dunia E	7 Dorietali	:. D [J. O	
sampling N		Submersible	•	_			-	ı Otner ⊔ s-Steel Kemmere	. .
Criteria: 3	to 5 Casir	ng Volumes o	f Water F	Removal 🔀	Sabiliza	ation of Indic	ator Paran	neters 🔼 Other	orbeildy
		<u> </u>		Water Volun				······································	
	ft of water		Gallons		(Ounces		Gal/oz to be	
5-727			71×			Tral. (alth	Val Fires	11-15	
Time (military)	pН	SC (umhos/cm)	Temp (°C)	Eh-ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)		ments/ v rate
1129	644	974	130					chea	3
	1048	888	209				Z		
	1,48	877	20'				3		
	65%	859	202				4.25	well is be	I haderen
	650	924	199				4.75		
	657	788	191				525		
	000	769	188				5.75	clean	
1157	674	771	192				625	well bou	ddam
			,						
									
n al: Time	рΗ	sc	Temn	Eh-ORP	D.O.	Turbidib	Ferrous Iron	Vol Evac Com	monts/Elow rate
1157		771	192		<i>D.</i> 0.	raibiaity	-	125 A	ments/Flow rate
116 /	<u> </u>							<u> </u>	er eseeva
COMMEN									
OMMEN	13	·				<u>.</u>			· · · · · · · · · · · · · · · · · · ·
NSTRUME	NTATION	·· pri	Meter §	<u> </u>		Tempe		er 🔀	
		DO N Conductivity	Monitor L Meter√	<u> </u>			Othe	er 🗌	
Vater Dispo	osal 2	UTZ							
•			U-/Sar	nole Time	12.10	RTE	X RV V	OCs Alkilinity	, m
							· ·		
DS [] (⊔ N	itrate 🔲	Nitrite		nonia [_]	IKN LI NM W	QCC Metals
- 4 - 1 Db	horus 🔲					1 1		1 1	

PRODUCT RECOVERY/WATER LEVEL DATA

Martin J. Nee PO Box 3861 Farmington, NM 87499-3861 (505)334-2791 (505)320-9675cell

Project Name_	San Juan Basin Ground Water	Project No.	30001.0
Project Manager	MJN		
Client Company	MWH	Date	July 16, 2003
Site Name	Lat 3B 39	_	

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1	1111	-	35.64	-	-
MW-2		-	32.83	-	•
MW-3		-	34.16	_	-
		<u> </u>			
				ļ	
		-		 	

Comments

Sampled MW-1 for BTEX

Signature: Martin J. Nee Date: July 16, 2003	Signature:	Martin J. Nee	Date:	July 16, 2003	
--	------------	---------------	-------	---------------	--

DATA VALIDATION WORKSHEET (Page 1 of 2)

Analytical Method/Analytes:	SW-846 8021B (BTEX)	Sample Collection Date(s):	07/16/03
Laboratory: _	Accutest	MWH Job Number:	EPC-SJRB
		<u>-</u>	(Groundwater)
Batch Identification:	T4891	Matrix:	Water
MS/MSD Parent(s) ^(a) : _	None	Field Replicate Parent(s):	None
Validation Complete:	By Botton	7-28-03	
		(Date/Signature)	

Engt	1			ITito		T
Foot	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Onole	Comments
Notes		Sample ID			Quals.	
1	Lat 3B-39	MW-1	T4891-01	Y		Ethylbenzene @ 58.6 µg/l
			1			Xylenes, total @ 137 μg/l
						m,p-Xylenes @ 137 μg/l
1	Trip Blank	160703TB02	T4891-02	Y		Toluene @ 0.62 T μg/l
			<u> </u>			
· · · · · · · · · · · · · · · · · · ·			<u> </u>			
				ļ		
						· · · · · · · · · · · · · · · · · · ·

DATA VALIDATION WORKSHEET (Page 2 of 2)

Analytical Method:	SW-846 8021B (BTEX)	MWH Job Number:	EPC-SJRB (Groundwater)
Laboratory:	Accutest	Batch Identification:	T4891

Validation Criteria						
Sample ID	Lat 3B-39 MW-1	160703TB 02				
Lab ID	T4891-01	T4891-02				
Holding Time	Α	Α				
Analyte List	Α	Α				
Reporting Limits	A	Α		•		
Trip Blank	A ¹	A ¹				
Equipment Rinseate Blanks	N/A	N/A				
Field Duplicate/Replicate	N/A	N/A			ĺ	
Surrogate Spike Recovery	A	Α				
Initial Calibration	N	N				
Initial Calibration Verification (ICV)	N	N				
Continuing Calibration Verification (CCV)	N	N				
Laboratory Control Sample (LCS)	A	Α				
Laboratory Control Sample Duplicate (LCSD)	N	N				
Method Blank	А	Α				
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A				-
Retention Time Window	N	N				
Injection Time(s)	N	N				
Hardcopy vs. Chain-of-Custody	A	Α				
EDD vs. Hardcopy	N	N				
EDD vs. Chain of Custody	N	N				

(a) List QC batch identification if different than Batch ID

A indicates validation criteria were met

A/L indicates validation criteria met based upon Laboratory's QC Summary Form

X indicates validation criteria were not met

N indicates data review were not a project specific requirement

N/A indicates criteria are not applicable for the specified analytical method or sample

N/R indicates data not available for review

NOTES:

- 1) The following compounds were detected in the trip blank (160703TB02):
 - a) Toluene @ 0.62 T µg/l, analyte not detected in associated sample, no data qualified.

PRODUCT RECOVERY/WATER LEVEL DATA

Martin J. Nee PO Box 3861 Farmington, NM 87499-3861 (505)334-2791 (505)320-9675cell

Project Name_	San Juan Basin Ground Water	Project No.	30001.0
Project Manager	MJN	·	
Client Company	MWH	Date	July 16, 2003
Site Name	Lat 3B 39	·	

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1	1111	-	35.64	-	-
MW-2		-	32.83	-	-
MW-3		-	34.16	-	-
			- · · - · ·		

Comments

Sampled MW-1 for BTEX

Signature:	Marlin J. Nee	Date:	July 16, 2003	



reconical Report for
Montgomery Watson
EPFS San Juan Basin Groundwater Site

Accutest Job Number: T4891

Report to:

El Paso

lynn.benally@elpaso.com

ATTN: Lynn Benally

Total number of pages in report: 8



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino Laboratory Manager

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Accutest Laboratories

Sample Summary

Montgomery Watson

EPFS San Juan Basin Groundwater Site

Job No:

T4891

Sample Number	Collected Date	l Time By	Received	Matr Code		Client Sample ID	
T4891-1	07/16/03	12:10 MN	07/17/03	AQ	Ground Water	LAT3B-39 MW-1	
T4891-2	07/16/03	07:00 MN	07/17/03	AQ	Ground Water	160703TB02	

Accutest Laboratories

Report of Analysis

By

JH

Page 1 of 1

Client Sample ID: LAT3B-39 MW-1

Lab Sample ID:

T4891-1

Matrix:

AQ - Ground Water

DF

5

Date Sampled: Date Received: 07/17/03

07/16/03

Method:

SW846 8021B

Percent Solids: n/a

n/a

Project:

EPFS San Juan Basin Groundwater Site

Analyzed

07/24/03

Prep Date

n/a

Prep Batch **Analytical Batch** GKK290

Run #1 Run #2

Purge Volume

KK005496.D

File ID

5.0 ml

Run #1 Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene	ND ND 58.6 137 ND 137	5.0 5.0 5.0 15 5.0	ug/l ug/l ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	82% 87%		64-121% 71-121%

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID: 160703TB02

Lab Sample ID:

T4891-2

Matrix:

AQ - Ground Water

DF

1

Date Sampled: 07/16/03

SW846 8021B

Date Received: 07/17/03

Method:

Percent Solids: n/a

Project:

EPFS San Juan Basin Groundwater Site

Prep Date

Analytical Batch Prep Batch

Run #1

File ID KK005493.D

Analyzed 07/24/03

Ву JH

n/a

n/a

GKK290

Run #2

Purge Volume

Run #1

5.0 ml

Run #2

Purgeable Aromatics

CAS No. 71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Compound	Result	RL	Units	Q
108-88-3 100-41-4	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene	ND 0.62 ND ND ND	1.0 1.0 1.0 3.0 1.0	ug/l ug/l ug/l ug/l ug/l	J
CAS No.	m,p-Xylene Surrogate Recoveries	ND Run# 1	2.0 Run# 2	ug/l Lim	its
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	88% 91%			21% 21%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary

Job Number: T4891

Account: Project:

MWHSLCUT Montgomery Watson

EPFS San Juan Basin Groundwater Site

Sample GKK290-BS

File ID DF KK005488.D1

aaa-Trifluorotoluene

Analyzed 07/24/03

By JH Prep Date n/a Prep Batch n/a **Analytical Batch**

Page 1 of 1

GKK290

The QC reported here applies to the following samples:

Method: SW846 8021B

T4891-1, T4891-2

98-08-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.6	98	74-119
100-41-4	Ethylbenzene	20	20.1	101	82-115
108-88-3	Toluene	20	19.6	98	77-116
1330-20-7	Xylenes (total)	60	59.1	99	79-115
95-47-6	o-Xylene	20	19.3	97	78-114
	m,p-Xylene	40	39.9	100	79-116
CAS No.	Surrogate Recoveries	BSP	Li	mits	
460-00-4	4-Bromofluorobenzene	101%	64	-121%	

99%

71-121%

Method Blank Summary Job Number: T4891

Account: Project:

MWHSLCUT Montgomery Watson

EPFS San Juan Basin Groundwater Site

Sample DF Ву Analytical Batch File ID Analyzed Prep Date Prep Batch GKK290-MB KK005489.D1 GKK290 07/24/03 JH n/a n/a

The QC reported here applies to the following samples:

Method: SW846 8021B

Page 1 of 1

T4891-1, T4891-2

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
CAS No.	Surrogate Recoveries		Limi	ts	
460-00-4	4-Bromofluorobenzene	93%	64-12	21%	
98-08-8	aaa-Trifluorotoluene	94%	71-12	1%	

Matrix Spike/Matrix Spike Duplicate Summary Job Number: T4891

Page 1 of 1

MWHSLCUT Montgomery Watson Account: Project: EPFS San Juan Basin Groundwater Site

T4890-2 KK005490.D1 07/24/03 JH n/a n/a GKK290
--

The QC reported here applies to the following samples:

Method: SW846 8021B

T4891-1, T4891-2

CAS No.	Compound	T4890-2 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	19.1	96	20.6	103	8	64-124/16
100-41-4	Ethylbenzene	ND	20	19.1	96	20.1	101	5	64-123/14
108-88-3	Toluene	ND	20	18.6	93	19.9	100	7	64-120/13
1330-20-7	Xylenes (total)	ND	60	56.3	94	59.2	99	5	66-118/18
95-47-6	o-Xylene	ND	20	18.3	92	19.4	97	6	65-119/20
	m,p-Xylene	ND	40	37.9	95	39.8	100	5	66-120/14
CAS No.	Surrogate Recoveries	MS	MSD	T48	90-2	Limits			
460-00-4	4-Bromofluorobenzene	91%	88%	87%	ó	64-1219	6 ,		
98-08-8	aaa-Trifluorotoluene	94%	94%	89%	, 5	71-1219	6		



CHAIN OF CUSTODY#160703 mv p2

Refinquished by:	3	Relinquished by:	Relinquished Ampier:		Emergency & Rush T/A data available V/A LabLink		Other	□ 1 Day EMERGENCY	LI 2 Day EMERGENCY	LI 3 DBY EMERGENCY	5 Day RUSH	Tumaround Time (Bus					1607037802	1-4138-35 MW-1	+	Accutest Field ID / Point of Collection	Sampler's Made Made	305 539 2178	Lynn Benelly		Ferminaten MM	614Reilly	MWH / EL 1250	Company Name Company Name	Laboratories	ACCUTEST.
Date Time.		\Box	16.03 / 60								Caro	Park.							WEOH Visi #	# AMMUS				E-mail	/04/な			วก		
Received by:	ω	Received by:	Received by:	Sample Custody must be documented below each une samples change possession, including		Commercial "A" = Results Only				C Nedoced (in)	Commercial 'B'						11 000 mm 000 8-91-2	7-16-8 1210 mm w/s 2 2 Z	# Date Time Sy Matrix bottles 2	Collection	Client Purchase Order #	78X #		Project #	AT 14 7 3 Ban 3 S	Ground water	San Joan Basin	Project Name Project Name	"MAM"	10165 Harwin Drive, TEL. 713-271-47
Custody Seal #	4	Relinquished by:	Reinquished by	ne samples change possession, including cou							EUU Format	Data Deliverable Information					×		HADH HINGS HZSOM NONE NaHSO MECH BNOOR	lumber of preserved Bottles	الح	~			<u>ر</u>	}	25.	ion	www.accutest.com	uston, TX 77036 3-271-4770
Preserved where applicable		Date Time:	77703	ing counter activery.							1																	Requ	Accutest Quote #	FED-EX Tracking # 93657700629
Solver Temp.	4	Received by	Received by		2	2/)			0 1	160	Comments / Remarks			72	1												Requested Analysis	Accutest Job #	Battle Order Cantral #
nφ.																		Jan	LAB USE ONLY	WP · Wipe	SOL Other Solid	LIQ - Other Liquid	IO - 10	SL - Sludge	SO - Soil	ww - Water	GW - Ground Water	Matrix Codes Dw - Drinking Water		

题山			•	
MA	CCI	JT	ES	T.

SAMPLE RECEIPT LOG

OB#: T48	71	DATE/TIME RECE	EIVED:	7-17	103 E)	0900		
CLIENT: E P	ARD			INITIALS:	<u> 2)</u>			
3. Y N Sample rec	eived in undamag eived with proper ume sufficient for istody matches sa al received intact a	ped condition. 2.// pH. 4./ analysis. 6./ ample IDs on conte	YN Samp YN Samp YN Samp aners. It on cooler.	les received v le received in	or explanation within temp. re proper conta ith chain of cu	ange. iners.		
SAMPLE or FIELD ID	BOTTLE#	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH	
	1-2	7-16-03	1	2X Um (VREP	1,8,3,4,5,6	U, <2, >12, MA	
2				yomi		12,3,4,5,6	U, <2, >12, NA	
						1,2,3,4,5,6	.U, ≤2,>12, NA	
						1,2,3,4,5,6	IJ, €2, >12, NA	
	·					1,2,3,4,5,6	U, <2, >12, NA	
				4	7/	1,2,3,4,5,6	U, <2, >12, NA	
				7	<u></u>	1,2,3,4,5,6	Ü, <2, >12, NA	
	•		L			1,2,3,4,5,6	U, <2, >12, NA	
						1,2,3,4,5,6	U, <2, >12, NA	
					·.	1,2,3,4,5,6	U, <2, >12, NA	
					÷.	1,2,3,4,5,6	U, <2,>12, NA	
						1,2,3,4,5,6	U, <2, >12, NA	
						1,2,3,4,5,6	U, <2, >12, NA	
. :						1,2,3,4,5,6	U, <2, >12, NA	
. : /						1,2,3,4,5,6	U, <2, >12, NA	
						1,2,3,4,5,6	U, <2, ≥ 12, NA	
LOCATION: WI: Walk-In VR: Volatile Refrig. SUB: Subcontract EF: Encore Freezer PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: Other Comments:								
pH of waters checked excluding volatiles H of soils N/A								
Delivery method: Courie Tracking#	FED-	EX ATTHCHEW	·. · · · · · · · · · · · · · · · · · ·	COOLER TEMP	<u>5.0°C</u>	COOLER TEN		
Method of sample disp	oosal: (circle one)	Accutest dispos	sal Hold	Return to C	lient	For	m: SM012	



Montgomery Watson

EPFS San Juan Basin GS

San Juan Basin

Accutest Job Number: T4247

Report to:

El Paso

lynn.benally@elpaso.com

ATTN: Lynn Benally

Total number of pages in report: 8

hear

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino Laboratory Manager

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Accutest Laboratories

Sample Summary

Montgomery Watson

Job No:

T4247

EPFS San Juan Basin GS Project No: San Juan Basin

Sample Number	Collected Date	l Time By	Received	Matr Code		Client Sample ID
T4247-1	04/27/03	07:00 MN	04/29/03	AQ	Trip Blank Water	27040301 TB
T4247-2	04/27/03	13:40 MN	04/29/03	AQ	Ground Water	GWLAT3B-39 MW-1

Report of Analysis

Ву

BC

Page 1 of 1

Client Sample ID: 27040301 TB

Lab Sample ID:

T4247-1

Matrix:

AQ - Trip Blank Water

n/a

Date Sampled: 04/27/03

Method:

SW846 8021B

Date Received: 04/29/03

Project:

Percent Solids: n/a

EPFS San Juan Basin GS

DF

1

Analyzed

04/30/03

Prep Date

Prep Batch

n/a

Analytical Batch GKK266

Run #1 Run #2

Purge Volume

KK005098.D

Run #1

5.0 ml

File ID

Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	1.0	ug/l
108-88-3	Toluene	ND	1.0	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
1330-20-7	Xylenes (total)	ND	3.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
	m,p-Xylene	ND	2.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%		64-121%
98-08-8	aaa-Trifluorotoluene	100%		71-121%

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID: GWLAT3B-39 MW-1

Lab Sample ID:

T4247-2

Matrix:

Project:

AQ - Ground Water

Method:

SW846 8021B EPFS San Juan Basin GS Date Sampled: 04/27/03

Date Received: 04/29/03

Percent Solids: n/a

•	File ID	DF	Analyzed	Bv	Prep Date	Prep Batch	Analytical Batch
				J	op	op 2	i ariary trous waters
D #1	KKUUE1UJ D	1	04/20/02	$\mathbf{p}_{\mathbf{C}}$	7/0	7/0	CVV2cc

Run #1 KK005102.D 04/30/03 BC n/a n/a GKK266 Run #2 KK005103.D 5 04/30/03 BC n/a GKK266 n/a

Purge Volume

Run #1 5.0 ml

Run #2 5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units Q	
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene	ND ND 164 ^a 452 ^a ND 452 ^a	1.0 1.0 5.0 15 1.0	ug/l ug/l ug/l ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	104% 103%	104% 104%	64-121% 71-121%	

⁽a) Result is from Run# 2

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Blank Spike Summary Job Number: T4247

Account:

MWHSLCUT Montgomery Watson

Project:

GKK266-BS

EPFS San Juan Basin GS

KK005096.D1

Sample DF File ID

Analyzed 04/30/03

Prep Date Ву ВČ n/a

Prep Batch

Analytical Batch

Page 1 of 1

GKK266 n/a

The QC reported here applies to the following samples:

Method: SW846 8021B

T4247-1, T4247-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
0.10110.	compound	ш _б , .	-6/ ·	7.0	
71-43-2	Benzene	20	20.2	101	74-119
100-41-4	Ethylbenzene	20	20.3	102	82-115
108-88-3	Toluene	20	20.3	102	77-116
1330-20-7	Xylenes (total)	60	61.3	102	79-115
95-47-6	o-Xylene	20	19.9	100	78-114
	m,p-Xylene	40	41.4	104	79-116
CAS No.	Surrogate Recoveries	BSP	Liı	mits	
460-00-4	4-Bromofluorobenzene	95%	64-	-121%	
98-08-8	aaa-Trifluorotoluene	96%	71-	-121%	

Method Blank Summary
Job Number: T4247
Account: MWHSLCUT Montgomery Watson

Project:

EPFS San Juan Basin GS

Sample GKK266-MB

File ID DF KK005097.D1

Analyzed 04/30/03

Ву BC Prep Date n/a

Prep Batch

Analytical Batch

Page 1 of 1

n/a

GKK266

The QC reported here applies to the following samples:

Method: SW846 8021B

T4247-1, T4247-2

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	1.0	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
108-88-3	Toluene	ND	1.0	ug/l
1330-20-7	Xylenes (total)	ND	3.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
	m,p-Xylene	ND	2.0	ug/l
CAS No.	Surrogate Recoveries	Limits		
460-00-4	4-Bromofluorobenzene	95%	64-12	21%
98-08-8	aaa-Trifluorotoluene	94%	71-12	21%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: T4247

Account:

MWHSLCUT Montgomery Watson

Project:

EPFS San Juan Basin GS

Sample File	ID DF	Analyzed ·	By	Prep Date	Prep Batch	Analytical Batch
1 -	05104.D5	04/30/03	ВČ	n/a	n/a	GKK266
T4247-2MSD KK0	05105.D5	04/30/03	BC	n/a	n/a	GKK266
T4247-2 KK0	05102.D1	04/30/03	BC	n/a	n/a	GKK266
T4247-2 KK0	05103.D5	04/30/03	BC	n/a	n/a	GKK266

The QC reported here applies to the following samples:

Method: SW846 8021B

T4247-1, T4247-2

CAS No.	Compound	T4247-2 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	ND 164 ^a ND 452 ^a ND 452 ^a	100 100 100 300 100 200	102 264 102 755 103 652	102 100 102 101 103 99	101 267 101 761 102 659	101 103 101 103 102 103	1 1 1 1 1	64-124/16 64-123/14 64-120/13 66-118/18 65-119/20 66-120/14
CAS No. 460-00-4 98-08-8	Surrogate Recoveries 4-Bromofluorobenzene aaa-Trifluorotoluene	MS 99% 99%	MSD 98% 99%	T42 104 103		T4247-2 104% 104%	64	mits -121% -121%	

⁽a) Result is from Run #2.



www.accutest.com	10165 Harwin Drive, Stc. 150, Houston, TX 77036 FED.EX Tracking # B35663757638 Bottle Order C	CHAIN OF CUSTODY # 270403 muo
Acculesi Quale #	835663757633	A# 27040
Accuriest Job #	Bottle Order Control #	3mvol

5 Company of	Relinquished by:	Relinquished by:	More	Relinquished by Sampler		Emergency & Rush T/A data available V/A LabLink	•	Other	□ 1 Day EMERGENCY	L 2 Day EMERGENCY	LL 3 Day EMERGENCY	•	□ 5 Day RUSH		Turnaround Time (Business Days) B 10 Day STANDARD Approved B D 5 Day RUSH	1.1	1.1 1									2 0 C J 3		00C7	Name 7 STANDARD RUSH	Name 17 SOLINATION IN THE STANDARD IN STANDARD	Name 7 Name 7 RUSH	Name 7 SO. Warne 7 RUSH
	Date Time:	Date Time:	42000	Date Time:		VIA LabLink							Approved By: / Date:	iusiness Days)					/		ガシン	173	WEOH Wal #	of Collection SUMMA #	100	8/10/)	Transi	1	m 8 m	M	M
Source of	3. Received by	Received by:		Received by:	Sample Custody must be documented below		Commercial "A" = Results Only		☐ TRRP13		☐ Reduced Tier 1	Commercial '8"	C Commercial 'A*								4/20/03 1340 mo was	42703 0000 MM WQ	Date Time By Matrix	Collection	Client Purchase Order#		Fax#	Project # Carbond us to			City	Street City
Casard Com.	Custody Seal #	Relinquished by:	2	Relinquished by	w each lime samples change possession.		Only					!	☐ EDD Format	Data Deliverable Information									HCI HAIOH HAIOH HAIOH MAHEOH MECH	Number of preserved Bott				uster			State	2010
Libert and and abhandant	Presented where applicable	Date Time:	4-29-03	Date Time:OK35	including couner delivery.								4119								×	×	excos	لىل	7 ₂	. <u>×</u>	1					
4.	3	Resident by:	03 2 11111111	OKS Received by // MV/////////////////////////////////		5.							ı	Comments / Remarks			174															
4.00	Code: Temp		•																				LAB USE ONLY	WP - Wipe	SOL - Other Solid	LIQ - Other Liquid	01 - Ož	SL - Słudge	\$0 - Soil	SW: Surface Water		MAN - Maler

Site Visit

Martin J. Nee PO Box 3861 Farmington, NM 87499-3861 (505)334-2791 (505)320-9675cell

Project Name_	San Juan Basin Ground Water	Project No.	30001.0
Project Manager	MJN	 	
Client Company	MWH	Date	4-27-03
Site Name	Lat 3B 39		

Well	Time	<u>-</u> -			Dissolved Oxygen
MW-1	0944	-	-	-	1.13

Comments

Signature:	Marlin J. Nee	Date:	May 9, 2003	

PRODUCT RECOVERY/WATER LEVEL DATA

Martin J. Nee PO Box 3861 Farmington, NM 87499-3861 (505)334-2791 (505)320-9675cell

Project Name_	San Juan Basin Ground Water	Project No.	30001.0	
Project Manager	MJN	<u></u>		
Client Company	MWH	Date	4-27-03	
Site Name	Lat 3B 39			_

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1	1248	-	35.48	-	-
MW-2		-	32.67	-	_
MW-3		-	33.99	-	-
			ļ		
					<u> </u>

Comments

Cionatura	Marker a Nan	Data	April 27, 2002	
Signature.	Marlin J. Nee	Date.	April 27, 2003	

WELL DEVELOPMENT AND SAMPLING LOG

	Project No: .	300	01.0	Projec	t Name: 🗲	en Ti	unk	Client:	mo	UH	
	Location: 4	st3B	- <i>39</i> Well I	No:	w-1		Devel	opment 🗖	Samplin	g [3]	
-	Project Mana	ager _//	NTN		_ Date <u>4</u>	-27-0	≦ Start Tim	ne <u>1248</u>	Weather_	PC 505	
	Depth to W	ater 3	548 Den	th to Pro	duct	_ Produc	t Thickness	,	7 Measurina	Point TOC	
	Water Colur	nn Heiahi	587	Well Dia	411						
	Sampling M		Submersible	-	_	•					
	Criteria: 31		Bottom Valve og Volumes o							nmerer (1) Other <i>on beilds</i>	4
	l				Water Volum						7
	l L	t of water		Gallons			Ounces			to be removed	_
	-65×5			<u> 32 ×</u>			T	\ <u>\</u>	//-	Commental Comments	
	Time (military)	рН	SC (umhos/cm)	Temp (°C)	Eh-ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)		Comments/ Flow rate	
	1300	723	1200	ZZ°					elec	er	{
		721	990					2			
		711	980					3			
		674	1060	218				4	turn	in gren	
		699	1210	213				45	will	13 balined	xion
		702	890	212				5		0	
		703	880	21'				55			
		700	840	208				575			
-		702	860	207				6			
	1340	201	850	195				625	Wel	bileddy	_
							 .		will	during	{
									semp	pli.	
											<u> </u>
											
	Final:				1		 	Ferrous	·		
	Time	рН					Turbidity	Iron		Comments/Flow ra	te
	1340	201	850	195	- 				625	-	
											
	COMMENT	rs:									
					·						[
į											
	INSTRUMEN	NTATION:	.pH	Meter 🔽	<u> </u>		Temper		r 🖾		7
		•	DO M Conductivity	onitor 🏿	<u> </u>			Othe	r 🗆 ـ		
	Water Dispos			MEGE IX							
	Sample ID 2	, ,		_/ Sam	 ple Time _	1340	BTE	X ⊠ VO	OCs 🔲 All	kilinity 🔲	
1	TDS 🔲 C	ations 🔲	Anions] Nit	trate 🔲	Nitrite	☐ Amm	onia 🔲	TKN 🔲 1	NM WQCC Metals	
	Total Phosph									<u> </u>	
	•	-	BD		BD N	lame/Tim	e			тв <i>2704030</i>	



CHAIN OF CUSTODY キュフロダロミ m ハロー

TUDICU	T to Jotosiio	
Houston, TX 77036 (: 713-271-4770	Houston, TX 77036 FED-EX Tracking # Bottle C	Bottle Order Control #
	Accutest Quote #	Acres lob #

ACC Call		10165 Harwin Drive, S TEL. 713-271-470 www.a	10165 Harwin Drive, Ste. 150, Houston, TX 77036 FED-EX Tracking # TEL. 713-271-4700 FAX: 713-271-4770 835663757023 www.accutest.com Accutest Quote #	pking # 10375 lote #	E50.		Bottle Order Control # Acculest Job #		
Lat		E'MAMA	ccutest.com Accutest Qu	*	1000		*		
			•						
mpany Name		Project Information	2		2	Requested Analysis	ži.		Matrix Codes
I		Project Name	, ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;				_		DW - Drinking Water
1/01/2 410/12		ľ							GW - Ground Water WW - Water
State 10 M	なしない。	City State							SW - Surface Water
Mrs		Project# Syrund us to	et						St - Studge
505 599 21	X	Fax#							OI - Oil LIQ - Other Liquid
noter's Name M Nea		Client Purchase Order #	٤>						AIR - Air
Field ID / Poi	# AMMUS	Collection	Number of preserved Bottles						SOL - Other Solid
	MEOH Vial#	Date Time Sampled Matrix bottles &	NOOPE						LAB USE ONLY
27040301 78		SON NW DOCO				 		4	
1-m W 68-88 147 000		412163 1340 MA WB 1 1	X						
					1				
						-			
	-								
						-			
						-			
				-	-				
Turnaround Time (Business Days)		Data Delivera	No Information			_	<u> </u>		
DARD	е:	Commercial "A"	☐ EDD Format			Comments / Remarks	Remarks		
5 Day RUSH		Commercial "B"							
2 Day EMERGENCY		Reduced Tier 1							
1 Day EMERGENCY		☐ TRRP13							
(40)		Commercial "A" = Results Only							
ergency & Rush T/A data available V/A LabLink									
nquished by Sampler: 0	_	Received by: Retinquished by:	e samples change possession, including couner de Relinquished by		Date Time:	Bassined by			
Mon	1000		2			2			
		Received by:	Reinquished by:	ģ	Date Time:	Received by:	"		
equising of:	Date Time: Ru	Received by:	Custody Seal # Pr	Preserved where applicable	plicable	On log		Cooler	Cooler Temp.

Product Recovery and Well Observation Data

Project Name: Sen Tusun Besun	Project No:	2200013	
Project Manager: Nec	Date:	1-27-03	
Client Company: MWH			
Site Name: Ladaratom Art.		_	
LAT 3B-39			

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	<i>300</i>	3530	NA	4135	0	0	We only
MW-1 MW-2 MW-3		35 ³⁰ 32 ⁵²⁵ 33 ⁸²	NA		0	a	we only we only no only
nw3		3382	NA		0	0	nzonly
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							·

OMMENTS: Sempled	mw-1	see	other	Lora	1
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\bigcap			1-27	_	

	Project No:	220	9013	Projec	ct Name: 🗲	SonTue	Bosin	_ Client	mwH_	
	Location:	<u> 436-</u>	32 Well i	No: _ <i></i>	10-1		Devel	opment 🗆	Sampling 🗹	
			,		-				Weather Clean 505	
	Depth to W	ater <u></u> 35	Dep	th to Pro	duct <u>NA</u>	Produc	t Thickness	NA	Measuring Point TOC	
	Water Colum	nn Heigh	1 <u>605</u>	Well Dia	4	-				
Ī			Submersible	Pump 🗆	Centrifua	al Pumo [7 Peristali	tic Pumo [Other 🕅	_
	~ .							-	ss-Steel Kemmerer	-
	Criteria: 3 t	o 5 Casi	ng Volumes o				ition of India	cator Parar	neters 🗷 Other	
	Gal/ft x f	t of water	·	Gallons	Water Volum		Ounces		Gal/oz to be removed	
	6,05x.	65		3-93					11-8	
	Time (military)	рН	SC (umhos/cm)	Temp (°C)	Eh-ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)	. Comments/ Flow rate	
	- 74	77.	- r6n	118					- Corey	
	1336	175	570	168				- 5		
	1352	680	567	152					grey	ı
	1336	687	5/3	147				675	Chun W/Llxt	
	1407	696	520	14 4				75	S/1+	
	<u></u>	705	470	142			•	938		١
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	Final:			_				Ferrous		1
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	<u> 14/3</u>	705	770	140					1 gay Beller Aug	Ţ
	COMMENT]
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	INSTRUMEN	NOITATION	: Hα	Meter E	7		Tempe	rature Mete	er 2	1
			DÓ M	lonitor 🛭	3				er 🗌	۱
	Water Dispo	an 1	Conductivity	Meter [4	-					
				Whan	nnle Time	1413	· prr	: Y F2 V	OCs Alkilinity	
	-								· -	
	TDS C					NITTIE		nonia 📙	TKN NM WQCC Metals	١
	Total Phospi MS/MSD				BD!	Name/Tim				



DATA VALIDATION WORKSHEET (Page 1 of 2)

Analytical Method/Analytes:	SW-846 8021B (BTEX)	Sample Collection Date(s):	01/27/03
Laboratory:	APCL	MWH Job Number:	EPC-SJRB
- -			(Groundwater)
Batch Identification: _	03-01361	Matrix:	Water
MS/MSD Parent(s) ^(a) :	None	Field Replicate Parent(s):	None
Validation Complete: \(\alpha \)	Ban Bittar	3-3-03	
		(Date/Signature)	_

Foot	Site			Hits		
Notes	ID	Sample ID	Lab. ID	(Y/N)	Quals.	Comments
1	GW	Coldiron Com A#1 MW-1	03-01361-01	Y		Benzene @ 27.8 μg/l
						Ethylbenzene @ 35.0 µg/l
					UB	Toluene @ 1.4 µg/l
						o-Xylene @ 46.8 μg/l
					В	m/p-Xylene @ 130 µg/l
1	GW	Lat 3B-39 MW-1	03-01361-02			Benzene @ 8.4 µg/l
					:	Ethylbenzene @ 239 µg/l
				ļ	UB	Toluene @ 1.9 µg/l
						o-Xylene @ 6.8 μg/l
:					В	m/p-Xylene @ 587 μg/l
1	GW	Trip Blank (2) 03	03-01361-03			Toluene @ 0.5 T μg/l
		<u> </u>				m/p-Xylene @ 1 μg/l
			·			
						
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Analytical Method: SW-846 8021B (BTEX) MWH Job Number: EPC-SJRB (Groundwater)

Laboratory: APCL Batch Identification: 03-01361

			-	 	 	·
Validation Criteria						
Sample ID	Coldiron Com A#1 MW-1	Lat 3B-39 MW-1	Trip Blank (2) 03			
Lab ID	03-01361- 01	03-01361- 02	03-01361- 03			
Holding Time	Α	Α	Α			
Analyte List	Α	Α	А			
Reporting Limits	Α	Α	Α			
Method Blank	A	A	Α		-	
Trip Blank	Ai	A ¹	A ¹			
Equipment Rinseate Blanks	N/A	N/A	N/A			
Field Duplicate/Replicate	N/A	N/A	N/A			
Initial Calibration	N	N	N			
Initial Calibration Verification (ICV)	N	N	N			
Continuing Calibration Verification (CCV)	Α	Α	Α			
Laboratory Control Sample (LCS)	Α	Α	Α			
Laboratory Control Sample Duplicate (LCSD)	N	N	N			
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A			
Surrogate Spike Recovery	Α	Α	Α			
Retention Time Window	N	N	N			
Injection Time(s)	N	N	N			
Hardcopy vs. Chain-of-Custody	Α	Α	Α			
EDD vs. Hardcopy	N	N	N			
EDD vs. Chain of Custody	N	N	N	 		

(a) List QC batch identification if different than Batch ID

A indicates validation criteria were met

A/L indicates validation criteria met based upon Laboratory's QC Summary Form

X indicates validation criteria were not met

N indicates data review were not a project specific requirement

N/A indicates criteria are not applicable for the specified analytical method or sample

N/R indicates data not available for review

NOTES:

- 1) The following analytes were detected in the trip blank:
 - a) Toluene @ $0.5T \mu g/L$, qualify all sample concentrations less than or equal to $2.5 \mu g/L$ with a "UB" flag and all sample concentrations greater than $2.5 \mu g/L$ with a "B" flag.
 - b) m/p-Xylene @ 1.0 μ g/L, qualify all sample concentrations less than or equal to 5 μ g/L with a "UB" flag and all sample concentrations greater than 5 μ g/l with a "B" flag.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Submitted to:

Montgomery Watson Harza Attention: Brian Buttars

10619 South Jordan Gateway

Salt Lake City UT 84095

Tel: (801)617-3200 Fax: (801)617-4200

APCL Analytical Report

Service ID #: 801-031361

Collected by: M. Hee

Collected on: 01/27/03

Received: 01/29/03

Extracted: N/A

Tested: 01/29-30/03

Reported: 02/06/03

Sample Description: Water

Project Description: 220013

San Juan River Basin

Analysis of Water Samples

				I	Analysis Result	
Component Analyzed	Method	Unit	PQL	Cold Iron Com A #1 03-01361-1	LAT3B-39 03-01361-2	Trip Blank (2)03 03-01361-3
втхе						
Dilution Factor				1	1	1
BENZENE	8021B	$_{\mu}\mathrm{g/L}$	0.5	27.8	8.4	< 0.5
ETHYLBENZENE	8021B	$\mu g/L$	0.5	35.0	239	< 0.5
TOLUENE	8021B	$_{\mu}\mathrm{g/L}$	0.5	1.4	1.9	0.5J
O-XYLENE	8021B	$_{\mu}\mathrm{g/L}$	0.5	46.8	6.8	< 0.5
M,P-XYLENE	8021B	$_{\mu}\mathrm{g/L}$	1	130	587	1

PQL: Practical Quantitation Limit.

MDL: Method Detection Limit.

CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit.

"-": Analysis is not required.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Lau

Laboratory Director

Applied P & Ch Laboratory

CADHS ELAP No.: 1431

CI-0984 D004 N 03-1361 b

Page: 1 of 1

J: Reported between PQL and MDL.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710Tel: (909) 590-1828 Fax: (909) 590-1498

Submitted to:

Montgomery Watson Harza Attention: Brian Buttars 10619 South Jordan Gateway Salt Lake City, UT 84095

Tel: (801)617-3200 Fax: (801)617-4200

APCL QA/QC Report

Service ID #: 801-031361

Collected by: M. Hee

Collected on: 01/27/03 Sample description:

Water

Project: San Juan River Basin /220013

Analysis of Water

801-031361QC

Received: 01/29/03

Tested: 01/29-30/03

Reported: 02/18/03

	Analysis	CCV	CCV	M-Blank	Conc.	SP Level	LCS	MS	MSD	MS/MSD	Contro	l Limit
Component Name	Batch #	$(\mu_{\rm g}/{ m L}$)	%Rec		Unit		%Rec	%Rec	%Rec	%RPD	%Rec	%Diff
втхе												
Benzene	03G1243	100	93	N.D.	$_{\mu}\mathrm{g/L}$	18.0	87	86	90	5	68-130	31
Toluene	03G1243	100	99	N.D.	$_{\mu}\mathrm{g/L}$	70.0	88	86	89	4	66-133	33
Ethylbenzene	03G1243	100	101	N.D.	$\mu g/L$	18.0	92	91	93	2	65-134	35
m/p-Xylene	03G1243	200	94	N.D.	$\mu g/L$	70.0	88	85	87	2	65-134	35
o-Xylene	03G1243	100	95	N.D.	$\mu g/L$	25.0	85	89	88	1	65-134	35

Notation:

ICV - Initial Calibration Verification

CCV - Continuation Calibration Verification

LCS - Lab Control Spike MS - Matrix Spike

MSD - Matrix Spike Duplicate ICS - Interference Check Standard

MD - Matrix Duplicate

N.D. - Not detected or less than PQL

CCB - Continuation Calibration Blank

M-blank - Method Blank SP Level - Spike Level %Rec - Recovery Percent

%RPD - Relative Percent Differences %Diff - Control Limit for %RPD ICP-SD - ICP Serial Dilution N.A. - Not Applicable

Respectfully submitted,

Regina Kirakozova,

Associate QA/QC Director Applied P & Ch Laboratory

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 8021B

Client Name:

Montgomery Watson Harza

Contract No:

Lab Code:

APCL

Case No: Project ID:

San Juan River Basin

SAS No: Project No: SDG Number: 220013 Sample Matrix:

031361 Water

Batch No:

03G1243

, 	Client	Lab	S1	TOT
#	Sample No	Sample ID	% #	OUT
1		03G1243-LCS-01	83	0
2		03G1243-LSD-01	83	0
3	TRIP BLANK (2)03	03-1361-3	86	0
4	10723-TW06-GW01	03-1357-4MS	82	0
5	10723-TW06-GW01	03-1357-4MSD	82	0
6	COLD IRON COM A #1	03-1361-1	113	0
7	LAT3B-39	03-1361-2	129	0
8		03G1243-MB-02	89	0
9				
10				
11				
12				
13				
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16				
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25			****	

QC Control Limit

S1 = 4-BROMO-FLUOROBENZENE (PID)

66-133

Column to be used to flag recovery values:

* - Values outside of contract required QC Limits

D - Surrogate diluted out

I - Matrix Interference



13760 Magnolis Ave. Chino CA 91710 Tri: (909) 590-1828 Fax: (909) 590-1498

Submitted to:

Montgomery Watson Harza Attention: Brian Buttars

10619 South Jordan Gateway

Salt Lake City UT 84095

Tel: (801)617-3200 Fax: (801)617-4200

APCL Analytical Report

Service ID #: 801-031361

Collected by: M. Hee

Collected on: 01/27/03

Received: 01/29/03

Extracted: N/A

Tested: 01/29-30/03

Reported: 02/06/03

Sample Description: Water

Project Description: 220013

San Juan River Basin

Analysis of Water Samples

				1	Analysis Result	
Component Aualyzed	Method	Unit	PQL	Cold Iron Com A #1 03-01361-1	LAT3B-99 03-01361-2	Trip Blank (2)03 03-01361-3
BTXE						
Dilution Factor				1	1	1
BENZENE	8021B	$_{\mu}{ m g}/{ m L}$	0.5	27.8	8.4	< 0.5
ETHYLDENZENE	8021B	$\mu g/L$	0.5	35.0	239	< 0.5
TOLUENE	8021B	μg/L	0.5	1.4	1.9	0.5 J
O-XYLENE	8021B	μg/L	0.5	46.8	6.8	< 0.5
M.P-XYLENE	8021B	μg/L	1	130	587	1

PQL: Practical Quantitation Limit.

MDL: Method Detection Limit.

CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit.

"-": Analysis is not required.

CADHS ELAP No.: 1431

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted

Dominic Lau

Laboratory Director

Applied P & Ch Laboratory

J: Reported between PQL and MDL.

CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

Chain of Custody ID 12103

Contract El Paso Corp., San Jaun River Basin

Notes:															
≺ z															
Record?			•	B N O	3	1/2/03			No.		7	1600 h p	3	5C-3C-1 vol	9
Discrepancies Between			San	1600 hes	16	23	-8E	_	her	Shar	Ĺ	1800hr		1-27-03	発し
NOTES:	Time	Date			Š	\ffiliatio	Received by/Affiliation	Recei					iliation	Relinquished by/Affiliation	
4 Unbroken on Sample Y N NA	ğ		9		iez=JA	Jaquez=	, ¹¹	Wellhead Faucet=WF Hydropunch=HP	Wellhead Faucet	Wei Hyd	iger=HA	Hand Auger=HA		WW - Wastewater	WG- Ground Water
3 Present on Sample Y N NA	SF SF	North Flare Pit=NF South Flare Pit=SF San, luan River Plant=S I		: Sites=G\	Location IDs: Groundwater Sites=GW Bisti=BI	Locatio Groundv	ŞP	Submersible Pump=SP Bladder Pump=BP Bailer=B	Submersible Pump Bladder Pump=BP Bailer=B		(b) Sampling Technique: Composite=C Grah=G	(b) Sampling Ted Composite=C	anks	AA – Air WQ – Trip Blank/ Equipment Blanks	(*) Matrix: SO – Soil W/S – Surface Water
Package N NA			$\parallel \parallel$												
7 N NA NA						-		-							
1 Present on Outer Package															
COC Tape Was:															
Notes:															
Y S														-	
6 Received Within Holding Times															
Notes:		, W	_{	-											
Y															
5 Properly Preserved		1		1410				_							
Notes: N								×						2 (2)03	THIP Blend
(Improperly Sealed)							′	TO X	3		1-2703		mut		LAT3B-39
4 Received Broken/I eaking								X OW	ω	111/4	1-2763		mw-1	A#	Ed icon Com
Notes:				Anior					Matri	Time	Date	Depth Interval (ft)	Sample ID		Location ID
2 Ambient or Chilled				ns US					χ ^(a)	Coli	Goll			(print clearly)	
1 Shipped or hand delivered Notes:			PA 30	EPA 3	Metai 10B & V-846	A 160.	846 80 SM 232			ectec	ested			Nee	Sampler's Name //
SAMPLES WERE:				0.00	s 7470A 6010B			que (b)		ı	l			120013	Number_
LABORATORY USE ONLY		Ö	ALYSES REQUESTED	SES RE	ANALY			Γ-	-				'	uttars	MWH Contact Brian Buttars Project
	2								1			,	•	FAX (801) 617-4200	MWH Phone (801) 617-3200 FAX (801) 617-4200
Page of of	Page]		

Applied P & Ch Labora 13760 Magnolia Ave., Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Receiving Checklist

APCL ServiceID: Client Name/Project: Montgrey Western
1. Sample Arrival
Date/Time Received 1/29103 0930 Date/Time Opened 1/29103 0930 By (name): Paul Kon Custody Transfer: Client Colden State UPS US Mail OFedEx APCL Empl:
2. Chain-of-Custody (CoC)
With Samples?
3. Shipping Container/Cooler
Cooler Used? # of Cooled by: Cooled by: Blue Ice Dry Ice None Temp °C
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler). Cooler Custody Seal? Absent Intact Tampered?
4. Sample Preservation
☐ pH <2 ☐ pH >12 If Not, pH = Preserved by: ☐ Client ☐ APCL ☐ Third Party
5. Holding-time Requirements
☐ pH 24hr ☐ BACT 6/24hr ☐ Cr ^{VI} 24hr ☐ NO ₃ 48hr ☐ BOD 48hr ☐ Cl ₂ ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP ☐ HT Expired? ☐ Client notified?
6. Sample Container Condition
☐ Intact? ☐ Broken? ☐ Documented? Number:
Type:
Caps tight? Air Bubbles? Anomaly?
Labels: Unique ID? Date/Time Preserved?
7. Turn Around Time Not Marked
8. Sample Matrix
☐ Drinking H₂O☑ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: ☐ Other: ☐ Unknown☐ Ground H₂O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown
9. Pre-Login Check List Completed & OK?
Received/Checked by: Part Date: 29 Jan 2003 Time: 7:35 a.m.
Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710 Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

$03\text{-}01361\ (0984\text{-}1017)\ (2721900\text{-}1017)$

01/29/03

Pa	FU.	1: G	ener	ai in	iorma	tion
_	_			. •	NT	

	Company Information	Name:	Montgomery Watson Harza					
		Address:	10619 South Jordan Gateway , Salt Lake City , UT 84095					
	Project Information	Project Description:	San Juan River Basin					
			Hill AFB					
		Project #:	1166121.061609					
	Billing Information	P.O. #:						
		Bill Address:	10619 South Jordan Gateway ,Salt Lake City ,UT 84095					
		Lab Project ID:	1999_0746					
		Client Database #:	04					
	Receiving Information	Who Received Sample?	Paul Kou					
		Receiving Date/Time:	01/29/03 0930					
ı		COC No.						
	Shipping Information	Shipping Company	Express					
		Packing Information:	Cooler/Ice Chester					
		Cooler Temperature:	4.2 °C					
	Container Information	Container Provider:	Client					
	Sampling Information	Sampling Person:						
		Sampling Company:	Client					
	Turn-Around-Time Opti	on:	Rush 5 working day(s)					
	QC Option:		QC and Surro. Rep.					
	Disposal Option:		Not specify					

Part 2: Sample Information

Seq.	Sample ID (on COC)	-	APCL Sample ID	Matrix			-	**	Condition G, L, B			Composite Group	TAT Days	
1	Cold Iron Com A #1	BTXE	03-01361-1	W	V	С	40	2	G	012703	N	0	7	
2	LAT3B-39 >	BTXE	03-01361-2	W	v	C	40	2	G	012703	N	0	7	
3	Trip Blank (2)03,	BTXE	03-01361-3	w	V	C	40	1	G	012703	N	0	7	

Part 3: Analysis Information

est Items:	■ 8021B	BTXE .				
Scq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	BTXE	
1	Cold Iron Corn A #1	BTXE	03-01361-1	w	х	0.
2	LAT3B-39	BTXE	03-01361-2	w	x	
3	Trip Blank (2)03	BTXE	03-01361-3	w	x	. 🖽

Login By _	En-Yu Paul Kou
Check By	17)(

CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

Chain of Custody ID 12103

Contract El Paso Cop., San Jaun River Basin

LABORATORY_

Project Number 220013 MWH Contact Brian Buttars Phone (801) 617-3200 FAX (801) 617-4200 **HAN** (n) Matrix: Sampler's Name 22 SO - Soil WS - Surface Water MA 136-36 ron (om なったから Location Relinquished by/Affiliation WW - Wastewater WQ - Trip Blank/ Equipment Blanks (print clearly) AA - Air とうり 4# 20(5) -27-03 -28-03 Tental T Sample mut ō 1860hro Interval (ft) Depth (b) Sampling Technique: Composite=C 1600 he Grab=G Hand Auger=HA 1238 **Date Collected** 111/4 1413 Not Case Time Collected Submersible Pump=SP Bladder Pump=BP Hydropunch=HP Wellhead Faucet=WF \mathcal{E} Matrix (*) 3 Sampling Technique (b) Received by/Affiliation メ -88-03 BTEX SW-846 8021B Alkalinity SM 2320B 126/03 TOS USEPA 160.1 Bisti=BI Location IDs:
Groundwater Sites=GW Jaquez=JA NM WQCC Metals SW-846 6010B & 7470A ANALYSES REQUESTED Cations SW-846 6010B <u> 600 h ro</u> 83 C Anions USEPA 300.0 Nitrate USEPA 300.0 North Flare Pit=NF South Flare Pit=SF San Juan River Plant=SJ Nitrite USEPA 300.0 Date Time Air BIII No. \$36381674459 Discrepancies Between Sample Labels and COC Racord? 1 Present on Outer Package 5 Properly Preserved 4 Received Broken/Leaking 4 Unbroken on Sample 3 Present on Sample 2 Unbroken on Outer COC Tape Was: 6 Received Within 3 Temperature 2 Ambient or Chilled 1 Shipped or hand delivered SAMPLES WERE: LABORATORY USE ONLY Notes: Notes: Package Notes: Notes: Notes: **Holding Times** (Improperly Sealed) Notes: ž Z