3R - 159

REPORTS

DATE:

1997

1997 GROUNDWATER ANALYTICAL

El Paso Natural Gas Company

PHASE II DRILLING – INITIAL WATER SAMPLING

CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT NUMBER	PROJECT NAME					TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	REQUESTED ANALYSIS						CONTRACT LABORATORY P. O. NUMBER
# 24324	Pit Closure Project							TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	
SAMPLERS: (Signature)			DATE: 4/10/97											REMARKS
LAB ID	DATE	TIME	MATRIX	FIELD ID										
970266	4/10	1100	B	DRC 33		1	B		X				25	TRIP BLANK
970267	4/10	1103	W	DRC 34		3	M		X				25	CLU #304 – 93788 (MW-1)
970268	4/10	1350	W	DRC 35		3	M		X				26	2C-22#3 LINE DRIP - LD104 (MW-1)

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	4/10/97 1544		Lauri Dean	4-11-97 11:20	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)
				4-11-97 1120	Marla Armenta

REQUESTED TURNAROUND TIME:
☐ ROUTINE ☐ RUSH

CARRIER CO.

BILL NO.:

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

505-599-2144 FAX: 505-599-2261

White - *Testing Laboratory* Canary - *EPNG Lab* Pink - *Field Sampler*

FM-08-0565 A (Rev. 05-94)

EL PASO FIELD SERVICES

4-24-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC34	970267
MTR CODE | SITE NAME:	93788	CLU #304
SAMPLE DATE | TIME (Hrs):	4/10/97	1103
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. | ANAL.:	4/11/97	4/11/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	21.0	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	11.5	PPB				
TOTAL XYLENES	116	PPB				
TOTAL BTEX	149	PPB				

The Surrogate Recovery was at 100 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: _____ Date: 4/16/97

970267,4/16/97

PHILIP ENVIRONMENTAL Well Development and Purging Data

☒ Development ☒ Purging Well Number MW-1

Serial No. WDPD- Page 1 of 1

Project Name GW PITS Project Manager C CHANCE Project No. 17520

Client Company EPFS Phase.Task No. 6003.77

Site Name CANYON LARGO UNIT #304 - 93788 Site Address

Development Criteria

- ☒ 3 to 5 Casing Volumes of Water Removal
- ☒ Stabilization of Indicator Parameters
- ☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 38' BGS

Initial Depth to Water (feet) 14' BGS

Height of Water Column in Well (feet) 14'

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		9	
Gravel Pack			
Drilling Fluids			
Total			45

Instruments

Serial No. (if applicable)

- ☒ pH Meter
- ☐ DO Monitor
- ☒ Conductivity Meter
- ☒ Temperature Meter
- ☐ Other

Water Disposal

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Comments
4/10/97	0946		X				10	10			12.9	6.63	351		
	1005						10	20			12.8	7.23	346		
	1023						10	30			12.9	7.37	356		
	1050						15	45			12.8	7.43	355		

Circle the date and time that the development criteria are met.

Comments 1ST BAILER WAS CLEAR, THE REST WERE MUDDY, REMOVED ALOT OF SILT/SAND. DID NOT BAIL WELL DRY. SLIGHT HC ODOR / SHEEN.

Developer's Signature(s) Date 4/10/97 Reviewer Date

Form A0101 Rev. 03/21/94

PHILIP ENVIRONMENTAL Water Sampling Data

Location No. MW-1

Serial No. WSD- _____ Group List Number _____

Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other _____ Date 4/10/97

Project Name EPFS GW PITS Project No. 17520

Project Manager C CHANCE Phase.Task No. 6003.77

Site Name CANYON LARGO UNIT #304 - 93788

Sampling Specifications

Requested Sampling Depth Interval (feet) _____

Requested Wait Following Development/Purging (hours) _____

Initial Measurements

Time Elapsed From Final Development/Purging (hours) _____

Initial Water Depth (feet) _____

Nonaqueous Liquids Present (Describe) _____

Water Quality/Water Collection

DO = Dissolved Oxygen; Cond. = Conductivity

Date	Time	Sampler Initials	Water Quality Readings				Water Collection Data					Notes (Explain in Comments Below)
			Temp. (°C)	pH	DO (mg/L)	Cond. (µmhos/cm)	Volume Removed (gallons)	Removal Rate (gal/min)	Pump Intake Depth (feet)	Bail	Final Water Depth (feet)	

Container Type: G = Clear Glass; A = Amber Glass; P = Plastic; V = VOA Vial (Glass); O = Other (Specify)

Sample Containers

Preservatives: H = HCl; N = HNO_3; S = H_2SO_4; A = NaOH; O = Other (Specify); — = None

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
EPA 8020 BTEX	3	G/VV	40		X	Y	X		DRC 34 - MW-1
"	1	"	"				X		DRC 33 - TRIP BLANK

Filter Type _____ Chain-of-Custody Form Number _____

Comments * PLEASE REFER TO WELL DEVELOPMENT + PURGING DATA FORM.

Signature _____ Date 4/10/97 Reviewer _____ Date _____

Form A0202 Rev. 02/24/94

El Paso Natural Gas Company

A 2473

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis				Remarks
	OJITO PIPELINE			BTXE	GENERAL CHEMISTRY	8260 RCRA METALS		
Samplers: (Signature) Dennis Bird	Date: 6-3-97							

MATRIX	Date	Time	Comp.	GRAB	Sample Number								
WATER	6-3-97	1257		X	970521	5-2	4°C	X	X	X		CANYON CARGO UNIT #304 MC 93788
WATER	6-3-97	—		X	—	5-1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	6-3-97 1758				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	6/4/97 Date/Time 0730	Remarks:	
		Marlon Hoppe			

Carrier Co:	Carrier Phone No.	Date Results Reported / by: (Signature)
Air Bill No.:		

EL PASO FIELD SERVICES

6-18-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT PROJECT CLOSURE

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970521
MTR CODE | SITE NAME:	93788	Canyon Largo Unit #304 MW-1
SAMPLE DATE | TIME (Hrs):	6/3/97	1257
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. | ANAL.:	6/6/97	6/7/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	6.06	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	1.41	PPB				
TOTAL BTEX	7.47	PPB				

The Surrogate Recovery was at 90.4 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: _____ Date: 6/16/97

970521,6/10/97

EL PASO FIELD SERVICES

6-18-97

Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970521
DATE SAMPLED:	06/03/97
TIME SAMPLED (Hrs):	1257
SAMPLED BY:	N/A
MATRIX:	Water
METER CODE:	93788
SAMPLE SITE NAME:	Canyon Largo Unit #304
SAMPLE POINT:	MW-1

FIELD REMARKS: _____

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	8.2	Units	06/04/97
Alkalinity as $C0_3$	0.0	PPM	06/04/97
Alkalinity as $HC0_3$	719	PPM	06/04/97
Calcium as Ca	118	PPM	06/04/97
Magnesium as Mg	26	PPM	06/04/97
Total Hardness as $CaC0_3$	402	PPM	06/04/97
Chloride as Cl	35	PPM	06/04/97
Sulfate as $S0_4$	1,750	PPM	06/04/97
Fluoride as F	1.2	PPM	06/04/97
Nitrate as $N0_3$-N	<1.1	PPM	06/04/97
Nitrite as $N0_2$-N	<1.1	PPM	06/04/97
Ammonium as NH_4^+	<0.6	PPM	06/04/97
Phosphate as PO_4	<1.1	PPM	06/04/97
Potassium as K	4.4	PPM	06/04/97
Sodium as Na	1120	PPM	06/04/97
Total Dissolved Solids	3,250	PPM	06/04/97
Conductivity	4,150	umhos/cm	06/04/97
Anion/Cation %	7.1%	%, <5.0 Accepted	06/10/97

Lab Remarks:

Reported By: _____ Approved By: _____ Date: 6/16/97

EL PASO FIELD SERVICES

7-21-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	970521
SAMPLE DATE:	06/03/97
SAMPLE TIME (Hrs):	1257
SAMPLED BY:	N/A
MATRIX:	Water
METER CODE:	93788
SAMPLE SITE NAME:	Canyon Largo Unit #304
SAMPLE POINT:	MW-1

REMARKS: _____

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<.029	0.100
BARIUM	0.27	1.00
CADMIUM	<0.0002	0.010
CHROMIUM	0.039	0.050
LEAD	0.012	0.050
MERCURY	<0.0002	0.002
SELENIUM	<0.005	0.050
SILVER	0.0011	0.050

NOTE: The sample results have been corrected for volume adjustment associated with Method 3015.

References:

Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994.

Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Method 7081, Barium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, EPA 600/4-91/010, USEPA, June, 1991.

Method 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.

Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Reported By: mde Approved By: John Faller Date: 7/7/97

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

Sample ID: 970521
Date Reported: 07/16/97

LABORATORY CONTROL SAMPLE

Analyte	Found Result (mg/L)	Known Value (mg/L)	% Recovery
Arsenic	0.031	0.032	97%
Barium	0.062	0.065	96%
Cadmium	0.0025	0.0024	104%
Chromium	0.0049	0.0048	103%
Lead	0.033	0.030	111%
Mercury	0.0043	0.0046	93%
Selenium	0.038	0.041	94%
Silver	0.0051	0.0043	118%

DUPLICATE ANALYSIS (mg/L)

Analyte	Original Sample Result	Duplicate Sample Result	% RPD
Arsenic	ND	ND	NA
Barium	ND	ND	NA
Cadmium	ND	ND	NA
Chromium	0.0052	0.0048	8.3%
Lead	ND	ND	NA
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	0.0024	0.0023	4.3%

SPIKE ANALYSIS (mg/L)

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	0.012	0.107	0.100	95.1%
Barium	0.018	0.960	1.00	94.2%
Cadmium	ND	0.0091	0.010	91.2%
Chromium	0.005	0.054	0.050	96.9%
Lead	ND	0.039	0.050	77.3%
Mercury	ND	0.0017	0.0020	84.5%
Selenium	ND	0.047	0.050	93.2%
Silver	0.0020	0.0509	0.050	97.8%

METHOD BLANK

Analyte	Found Result (mg/L)	Detection Level (mg/L)
Arsenic	ND	0.027
Barium	ND	0.019
Cadmium	ND	0.0002
Chromium	ND	0.004
Lead	ND	0.002
Mercury	ND	0.0002
Selenium	ND	0.011
Silver	ND	0.0005

ND: Not Detected at stated detection level. NA: Not Applicable.

Reported By: mh Approved By: [signature] Date: 7/17/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name CANYON LARGO UNIT #304

Meter Code 93788

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removed
☐ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 29.60
Initial Depth to Water (feet) 18.33
Height of Water Column in Well (feet) 11.27
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		7.4	22.3
Gravel Pack			
Drilling Fluids			
Total			

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O. CHEMETS KIT

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
6-3-97	1142										18.0	6.82	4270		
6-3-97	1152						5.0	5.0			16.8	7.17	4140		
6-3-97	1158						5.0	10.0			16.8	7.23	4030		
6-3-97	1205						5.0	15.0			16.8	7.31	4050		
6-3-97	1211						5.0	20.0			16.8	7.35	4040		
6-3-97	1218						5.0	25.0			16.8	7.39	4060		
6-3-97	1224						5.0	30.0			16.8	7.42	4080	0.5	

Comments

Developer's Signature Dennis Bird Date 6-3-97 Reviewer John Hall Date 9/14/97

SAMPLES 4 2ND QTR

El Paso Natural Gas Company

A 2084

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Samplers: (Signature)	Date
	MC # 93788	Dennis Bird	9-18-97

MATRIX	Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	Requested Analysis: BTXE				Remarks
WATER	9-18-97	1231		X	970999	G-1	4°C	X				CANYON LARGO UNIT #304 MW-1
WATER	9-18-97	—		X	—	G-1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	9/18/97 1717				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marsha Kappen	9/19/97 0730		

Carrier Co: | Carrier Phone No. | Date Results Reported / by: (Signature)

Air Bill No.:

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970999
MTR CODE | SITE NAME:	93788	Canyon Largo Unit #304
SAMPLE DATE | TIME (Hrs):	9/18/97	1231
PROJECT:	Sample 4 2nd Quarter	
DATE OF BTEX EXT. | ANAL.:	9/23/97	9/23/97
TYPE | DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS DF	Q		
BENZENE	3.91	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	1.62	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	6	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 97.3 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Laudi Date: 9/29/97

970999BTEXMW,9/25/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

[ ] Development
[X] Purging

Well Number MW-1

Meter Code 93788

Site Name CANYON LARGO UNIT #304

Development Criteria

[X] 3 to 5 Casing Volumes of Water Removel
[ ] Stabilization of Indicator Parameters
[ ] Other

Methods of Development

Pump		Bailer	
[ ]	Centrifugal	[X]	Bottom Valve
[ ]	Submersible	[ ]	Double Check Valve
[ ]	Peristaltic	[ ]	Stainless-steel Kemmerer

[ ] Other

Water Volume Calculation

Initial Depth of Well (feet) 27.60
Initial Depth to Water (feet) 18.32
Height of Water Column in Well (feet) 11.28
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		7.5	22.4
Gravel Pack			
Drilling Fluids			
Total			

Instruments

[X] pH Meter
[ ] DO Monitor
[X] Conductivity Meter
[X] Temperature Meter
[X] Other D.O. CHEMETS KIT

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative					
9-18-97	1114										18.6	7.42	4100		
9-18-97	1119						5.0	5.0			16.7	7.36	4050		
9-18-97	1125						5.0	10.0			16.1	7.45	4060		
9-18-97	1133						5.0	15.0			17.0	7.51	4080		
9-18-97	1139						5.0	20.0			16.1	7.46	4020		
9-18-97	1147						5.0	25.0			16.1	7.45	4010	1.0	

Comments

Developer's Signature Dennis Bird Date 9-18-97 Reviewer John Laeda Date 9/25/97

SAMPLE 4 3RD QTR.

El Paso Natural Gas Company

A 2165

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis				Remarks
	MC #93788			BTXE				
Samplers: (Signature) Dennis Bird	Date: 12-11-97							

MATRIX	Date	Time	Comp.	GRAB	Sample Number							
WATER	12/1/97	1134		X	971295	G-1	4°C	X				CANYON LARGO UNIT #304 MW-1
WATER	12/1/97	—		X	—	G-1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	12/1/97 1623				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marsha Hopper	12/13/97 0720		

Carrier Co: | Carrier Phone No. | Date Results Reported / by: (Signature)

Air Bill No.:

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971295
MTR CODE | SITE NAME:	93788	Canyon Largo Unit #304
SAMPLE DATE | TIME (Hrs):	12/11/97	1134
PROJECT:	Sample 4 3rd Quarter	
DATE OF BTEX EXT. | ANAL.:	12/15/97	12/15/97
TYPE | DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	7.50	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	2.74	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	10	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 106.6 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Labrie Date: 1/2/98

971295BTEXMW,12/16/97

EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name CANYON LARGO UNIT #304

Meter Code 93788

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removel
☐ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump		Bailer	
☐	Centrifugal	☒	Bottom Valve
☐	Submersible	☐	Double Check Valve
☐	Peristaltic	☐	Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 29.60
Initial Depth to Water (feet) 18.03
Height of Water Column in Well (feet) 11.57
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		7.6	22.9
Gravel Pack			
Drilling Fluids			
Total			

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O. CHEMETS KIT

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulative	Increment	Cumulative					
12-11-97	1047										9.9	6.61	4570		
12-11-97	1053						5.0	5.0			10.8	6.99	4610		
12-11-97	1100						5.0	10.0			10.6	7.09	4640		
12-11-97	1106						5.0	15.0			10.6	7.21	4600		
12-11-97	1112						5.0	20.0			10.7	7.30	4690		
12-11-97	1120						5.0	25.0			10.0	7.36	4800	0.5	

Comments

Developer's Signature Dennis Bird Date 12-11-97 Reviewer John Loudon Date 1/2/98