3R - 176

REPORTS

DATE:

2003

3R176

elpaso Field Services

Certified Mail: #7002 0510 0000 0307 7497

February 26, 2004

RECEIVED

MAR 03 2004

Oil Conservation Division
Environmental Bureau

Mr. William C. Olson
New Mexico Oil Conservation Division
1220 St. Francis Dr.
Santa Fe, NM 87504

RE: 2003 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 24 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

EPFS has organized the 24 Annual Reports (Volumes 1, 2 and 3) by land type. Volume 1 contains Annual Reports for sites found on Federal land. Volume 2 contains Non Federal sites and Volume 3 contains sites on Navajo land. Of the 24 reports submitted, EPFS is requesting closure of one site located on Navajo lands (Jennepah #1). EPFS understands closure of groundwater sites on Navajo lands falls under jurisdiction of the Navajo Nation Environmental Protection Agency and original documents have been submitted to them for review. Other Navajo sites are included in the report for your information.

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

Sincerely,

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7002 0510 0000 0307 7473**
Mr. Bill Liesse, BLM – w / enclosures (federal sites only), **Certified Mail # 7002 0510 0000 0307 7466**

2003 ANNUAL GROUNDWATER REPORT
NAVAJO SITES VOLUME III

EL PASO FIELD SERVICES

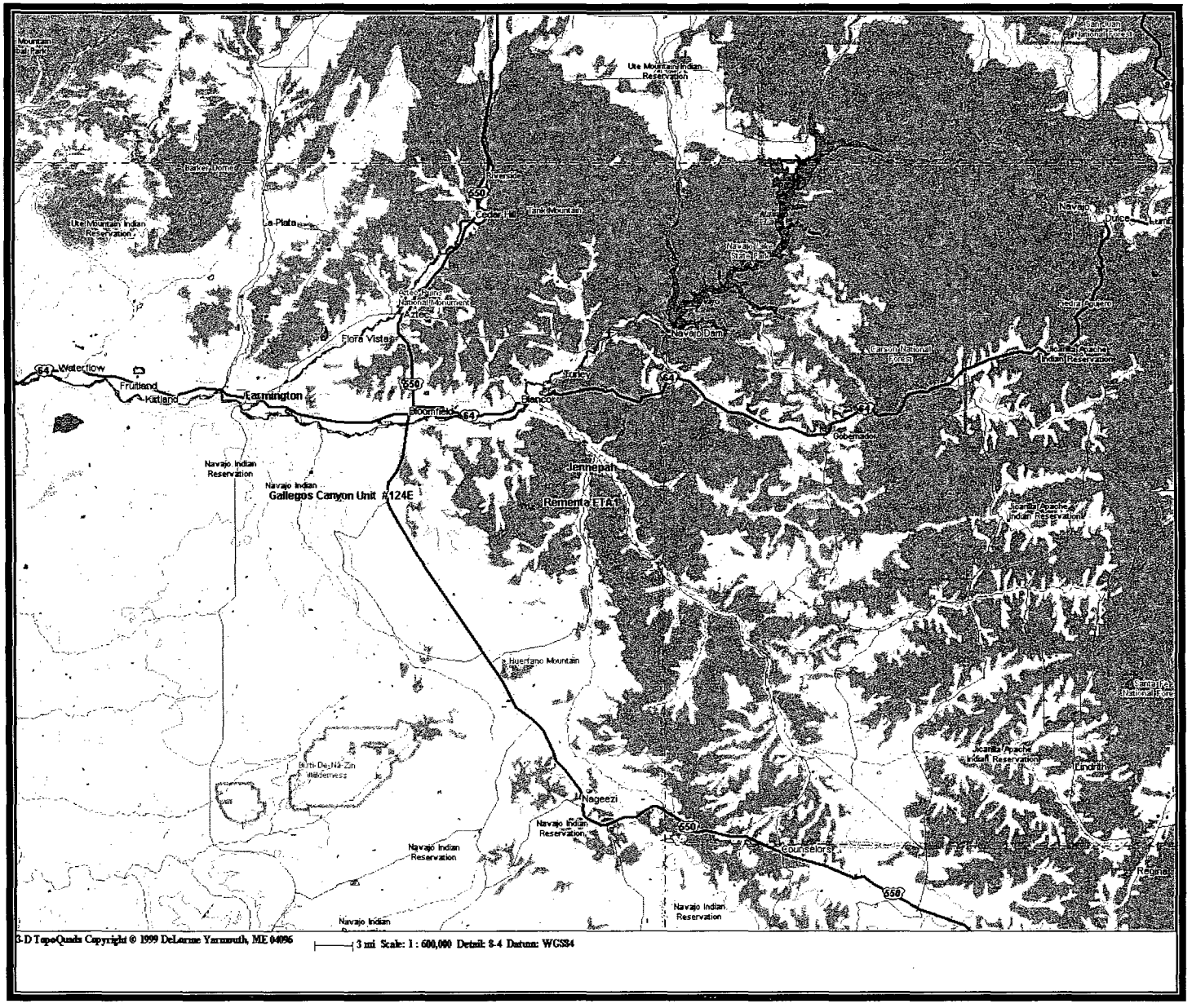
TABLE OF CONTENTS

METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
71816	Jennepah #1	28N	09W	36	H
95608	Gallegos Canyon Unit #124E	28N	12W	35	N

elpaso

MWH
MONTGOMERY WATSON HARZA

Navajo Groundwater Site Map



LIST OF ACRONYMS

B	benzene
btoc	below top of casing
E	ethylbenzene
EPFS	El Paso Field Services
ft	foot/feet
GWEL	groundwater elevation
ID	identification
MW	monitoring well
PSH	phase-separated hydrocarbons
NMWQCC	New Mexico Water Quality Control Commission
T	toluene
TOC	top of casing
NA	not applicable
NE	not established
NM	not measured
NMOCD	New Mexico Oil Conservation Division
NS	not sampled
ORC	oxygen-releasing compound
ppb	parts per billion
µg/L	micrograms per liter
X	total xylenes

EPFS GROUNDWATER SITES
2003 ANNUAL GROUNDWATER REPORT

GCU #124E
Meter Code: 95608

SITE DETAILS

Legal Description:	**Town:**	28N	**Range:**	12W	**Sec:** 35	**Unit:**	N
NMOCD Haz Ranking:	20	**Land Type:**	Navajo	**Operator:**	Amoco Production		

PREVIOUS ACTIVITIES

Site Assessment:	Jan/95	**Excavation:**	Oct/95 (196 cy)	**Soil Boring:**	Mar/98
Monitor Well:	Jun/98	**Geoprobe:**	NA	**Additional MWs:**	*
Downgradient MWs:	*	**Replace MW:**	NA	**Quarterly Initiated:**	Jun/98
ORC Nutrient Injection:	NA	**Re-Excavation:**	NA	**PSH Removal Initiated:**	Apr/99
Annual Initiated:	NA	**Quarterly Resumed:**	NA		

* Attempts were made in November 2000 to install additional wells that resulted in dry holes.

SUMMARY OF 2003 ACTIVITIES

MW-1: Quarterly free-product removal and water level monitoring was performed in 2003. The passive skimmer was removed in January and replaced in July 2003. This well was redeveloped in May 2003 in an attempt to increase free-product recovery.

Site-Wide Activities: No other activities were performed at this site during 2003.

SITE MAP

A site map is attached as Figure 1.

SUMMARY TABLES AND GRAPHS

- Product removal data from 2003 are summarized in Table 1.
- Historical analytical data and free-product removal data from MW-1 are presented graphically in Figures 2 and 3, respectively.
- Field documentation is presented in Attachment 1.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this site during 2003.

DISPOSITION OF GENERATED WASTES

All phase-separated hydrocarbons were disposed of at the EPFS Kutz Separator located in Bloomfield, New Mexico.

ISOCONCENTRATION MAPS

No isoconcentration maps were generated for this site. However, the attached site map presents the depth to water and product removal data collected during 2003.

CONCLUSIONS

- Free-product recovery efforts at MW-1 resulted in the removal of approximately 0.024 gallons of free-phase hydrocarbons during 2003, bringing the cumulative total volume recovered to date to approximately 19 gallons.

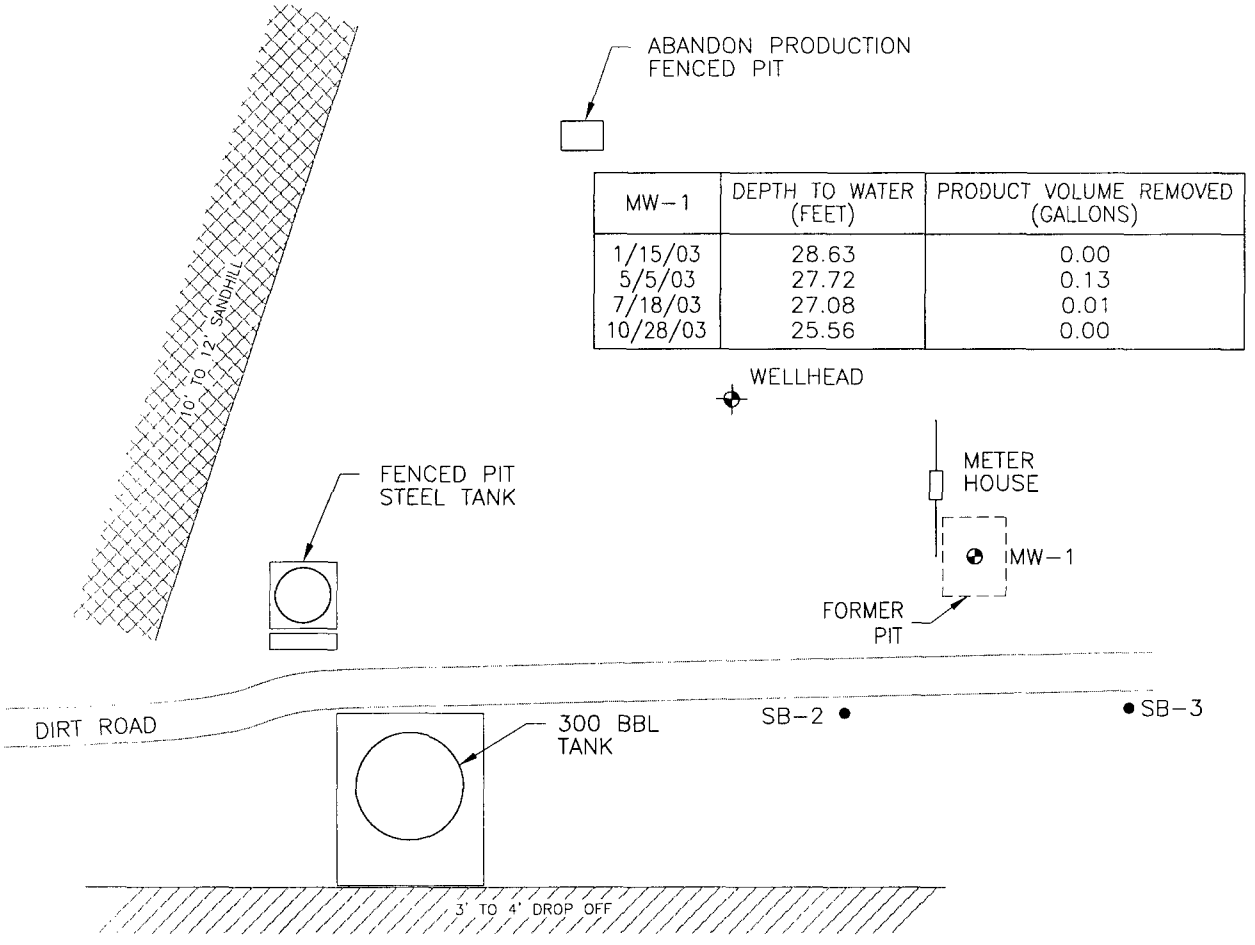
- Redevelopment of MW-1 in May did not result in any significant increase in free-product recovery.

RECOMMENDATIONS

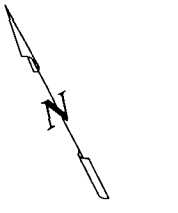
- EPFS will evaluate passive free-product removal methodologies (i.e., hand bailing, passive skimmers, or hydrocarbon-absorbent material socks) and frequencies for most efficient free-product removal from MW-1 during 2004.

- When free-product removal is completed at MW-1, this well will be sampled annually until BTEX constituents approach federal and NMOCD standards. Sampling will then continue on a quarterly basis until BTEX concentrations are below federal and NMOCD standards for three and four consecutive quarters, respectively.

- Following approval for closure by both the Navajo Nation EPA and NMOCD, all monitoring wells will be removed according to the approved EPFS Monitoring Well Abandonment Plan.



MW-1	DEPTH TO WATER (FEET)	PRODUCT VOLUME REMOVED (GALLONS)
1/15/03	28.63	0.00
5/5/03	27.72	0.13
7/18/03	27.08	0.01
10/28/03	25.56	0.00



0 60

SCALE: 1"=60'

LEGEND

⊕ MW-1	Approximate Monitoring Well Location and Number
•	Dry 2000 Borehole

gallegos124_03.dwg

GALLEGOS CANYON UNIT 124E,
METER 95608
2003

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 1

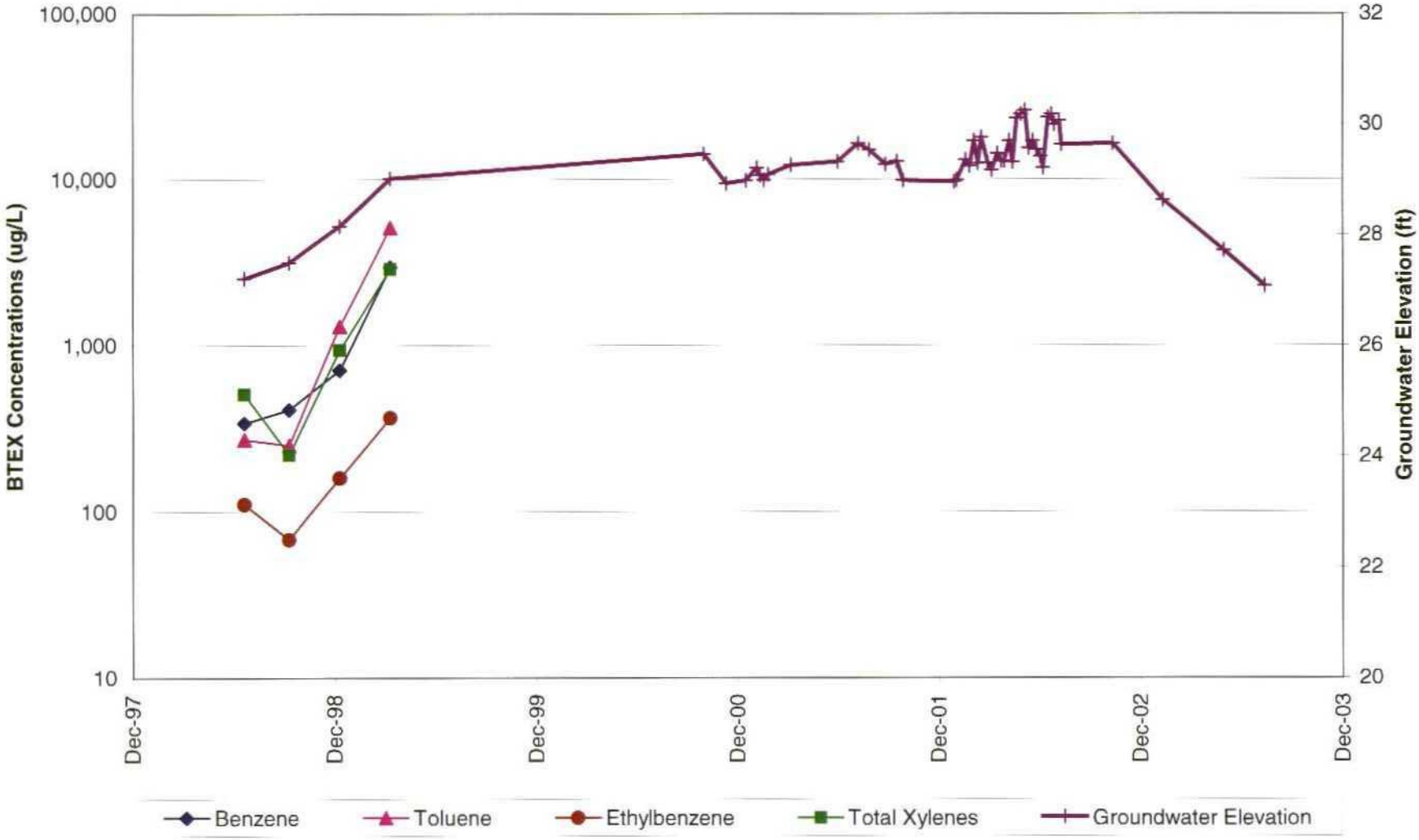
TABLE 1

SUMMARY OF FREE-PRODUCT REMOVAL DURING 2003
GCU #124E (METER #95608)

Site Name	Monitoring Well	Removal Date	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Product Thickness (feet)	Volume of Product Removed (gallons)	Cummulative Volume of Product Removed (gallons)
GCU #124E	1	1/15/03	NA	28.63	0.00	0.00	18.98
GCU #124E	1	5/5/03	27.69	27.72	0.03	0.016	19.00
GCU #124E	1	7/18/03	27.06	27.08	0.02	0.008	19.00
GCU #124E	1	10/28/03	NA	25.56	0.00	0.00	19.00

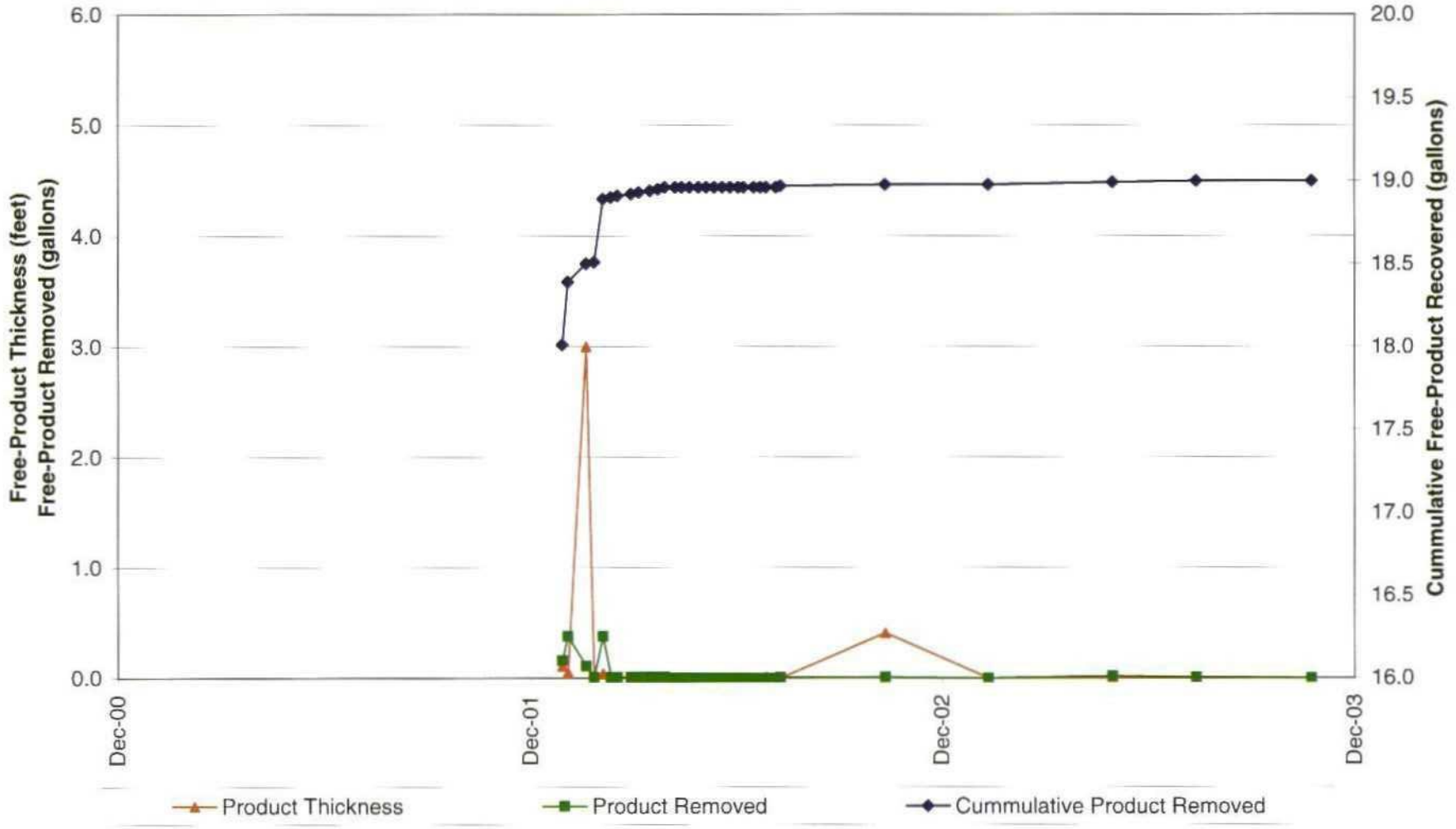
MW-1 was redeveloped in May 2003.
Skimmer removed in January 2003. Set new skimmer into well in July 2003.

FIGURE 2
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
GCU #124E
MW-1



2003 GCU#124E.xls,GCU124E MW1

FIGURE 3
HISTORIC FREE-PRODUCT RECOVERY
GCU #124E
MW-1



2003 GCU#124E.xls, GCU124E PR1

ATTACHMENT 1

FIELD DOCUMENTATION

PRODUCT RECOVERY

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**	**October 28, 2003**
Site Name	**GCU 124 E**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1	**0743**	**-**	***25.56**	**-**	**-**
*** Water level not static, taken after pulling skimmer.**					

Comments
No product after pulling skimmer. No product in skimmer. Recovered 1 gallon water. Product globules on water level indicator. Raised skimmer 1.5 feet.

Martin J. Nee Date: October 28, 2003

Signature: _____ _____

PRODUCT RECOVERY

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**	**7-18-03**
Site Name	**GCU 124 E**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1	**1230**	**27.06**	**27.08**	**0.02**	**< 1oz**
final		**no**	**28.57**		**recovered approx 48 oz water**

Comments
Set new skimmer screen center at 27.00 feet beneath top of casing.

Signature: *Martin J. Nee* Date: July 18, 03

WELL DEVELOPMENT AND SAMPLING LOG

Project No: 30001-0 Project Name: San Juan Basin Client: MWH

Location: BCU124 Well No: MW-1 Development ☒ Sampling ☐

Project Manager M Hess Date 5-5-03 Start Time 1230 Weather Hot & Windy 80s

Depth to Water 27.72 Depth to Product 27.69 Product Thickness _____ Measuring Point TOC

Water Column Height 8.66 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer ☐ Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal ☐ Sabilization of Indicator Parameters ☐ Other _____

Gal/ft x ft of water	Water Volume In Well		Gal/oz to be removed
	Gallons	Ounces	
8.66 x .65	5.63 x 3		16.89

Time (military)	pH	SC (umhos/cm)	Temp (°C)	Eh-ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)	Comments/ Flow rate
							1	pulled product -
							-1	added 1gal H2O +
								2 lysol & surged
								well for approx 15min
1311	6.58	740	16.8				14	water is lightening
	6.86	550	15.6				15	
	6.97	570	15.4				16	
	6.99	580	15.4				18	
1334	6.99	570	15.7				19	light grey

Final:

Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow rate
1334	6.99	570	15.7					19	

COMMENTS: bailed 14 gallons of black nasty water until it started to clean up. Then took readings

INSTRUMENTATION: pH Meter ☒ _____ Temperature Meter ☒ _____

DO Monitor ☒ _____ Other ☐ _____

Conductivity Meter ☒ _____

Water Disposal Kutz

Sample ID No Sample Sample Time _____ BTEX ☐ VOCs ☐ Alkilinity ☐

TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Ammonia ☐ TKN ☐ NM WQCC Metals ☐

Total Phosphorus ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐

MS/MSD _____ BD _____ BD Name/Time _____ TB _____

PRODUCT RECOVERY

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**	**5/5/03**
Site Name	**GCU 124 E**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1	**1230**	**27.69**	**27.72**	**0.03**	**2 oz**
final		**no**	**28.5**		**recovered approx 1 gallon water**

Comments
Performed well development immediately following product recovery.

See well development log.

Signature: *Martin J. Nee* Date: May 5, 2003

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Delbert Beli
Client Company: MWH
Site Name: Gallegos 124E

Project No: 220013
Date: 1/15/03

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	1325	28.63	—	36.65	—	—	NO PRODUCT.

COMMENTS: (NO PRODUCT)
MW-1 - pulled skimmer and nothing in skimmer.
Skimmer very dirty + black.
Silty black material on probe.
Took skimmer back to office for replacement.

Signature: Delbert Beli
Date: 1/16/03