

3R - 79

REPORTS

DATE:

8/1996

**REPORT FOR SEMI-ANNUAL GROUNDWATER SAMPLING
MERIDIAN OIL INC. THOMAS NO. 1 LOCATION
BLOOMFIELD, NEW MEXICO**

August 1996

RECEIVED

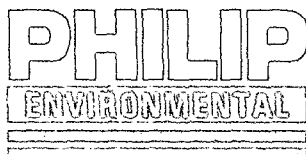
DEC 02 1996

Environmental Bureau
Oil Conservation Division

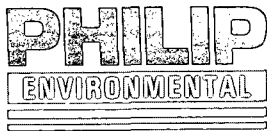
PREPARED FOR:

**MERIDIAN OIL INC.
FARMINGTON, NEW MEXICO**

Project 13164



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



Environmental Services Group
Southern Region

August 9, 1996

Project 13164

Mr. Craig A. Bock
Meridian Oil Inc.
3535 East 30th
Farmington, New Mexico 87401

**RE: Report for July, 1996, Semi-Annual Groundwater Sampling at the
Meridian Oil Inc. Thomas No. 1 Location, Bloomfield, New Mexico**

Dear Mr. Bock:

During October 1994, Philip Environmental Services Corporation (Philip) initiated a semi-annual groundwater sampling program at the Meridian Oil Inc. (MOI) Thomas No. 1 production well location (the site). The site is located in San Juan County, New Mexico, in the southwest corner of Section 20, Township 29 North, Range 11 West. A site map showing locations of the monitoring wells is presented in Figure 1.

Groundwater sampling included:

- Collecting depth-to-groundwater measurements.
- Purging a minimum of three well casing volumes and monitoring pH, conductivity, and temperature levels until stabilization occurred for monitoring wells 1 through 5.
- Collecting groundwater samples from each monitoring well and submitting the samples for laboratory analysis for benzene, toluene, ethylbenzene, and xylenes (BTEX) by U.S. Environmental Protection Agency (USEPA) Method 602.

METHODOLOGY

Groundwater sampling of the five monitoring wells at the site took place on July 15, 1996, and was completed July 16, 1996. Monitoring well MW-04 could not be found on the first day of sampling. A metal detector was used to locate the well, which was buried under several inches of soil. A 4-foot long piece of rebar was driven into the ground next to the well to a depth of approximately 18-inches, and painted with safety orange for ease of locating in the future.

Philip's field representative began sampling by taking a static depth-to-groundwater reading with an electronic water level indicator at each well site. In addition, the total depth of the well was measured using a weighted survey tape. Both measurements were taken at the same reference point, starting at the top of the well casing. The total linear feet of water in the well was then used to calculate the water volume in each well casing. At least three well casing volumes were removed from each well.



Page 2
Mr. Bock
August 9, 1996

Each well was purged and sampled using a pre-cleaned disposable bailer, with an approximate volume of one-liter.

Field water-quality measurements of pH, conductivity, and temperature were performed periodically during the purging of the well to ensure that the water sampled was representative of the ambient groundwater in the aquifer. Once the water quality parameters were stable and at least three well casing volumes had been removed, the groundwater was sampled by pouring groundwater from a disposable bailer directly into 40-milliliter glass containers with Teflon™ septum closures. All samples collected were preserved with hydrochloric acid, placed directly on ice, and transported via overnight service under strict chain-of-custody procedures to Zenon Environmental Laboratories. Each sample was analyzed for BTEX by USEPA Method 602. In addition to collecting samples from each well, a duplicate of MW-2 (identified as MW-52) was also analyzed.

All groundwater purged from each monitoring well was stored in 5-gallon buckets and transported, by hand, to a discharge storage tank at the site for disposal, as directed by MOI personnel.

RESULTS

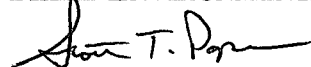
Laboratory results indicated BTEX compounds present in the samples collected from MW-2, and MW-3. Of the the BTEX compounds detected, benzene in MW-02 was the only detected compound above New Mexico Water Quality Control Commission (WQCC) standards. The results from the semi-annual sampling are presented in Table 1, along with historical data from previous sampling events. Table 2 presents the final field measurements of groundwater elevations and field data collected during this sampling event, as well as limited data provided by MOI for previous sampling events. A copy of the original laboratory report is included as Attachment A. Field documentation of purging and sampling data is included in Attachment B.

Figure 1 also presents groundwater elevations and contours for the current sampling event. This map was derived from a base map provided to Philip by MOI.

If you have any questions, or require additional information, please do not hesitate to contact Scott T. Pope of Philip at (505) 326-2262.

Respectfully submitted,

PHILIP ENVIRONMENTAL SERVICES CORPORATION



Scott T. Pope
Geologist

TABLE 1

BTEx RESULTS FROM GROUNDWATER SAMPLING

MERIDIAN OIL INC.

THOMAS NUMBER 1

Location	Date	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes µg/L
MW-1	07/15/96	<0.10	0.10	<0.10	<0.20
	01/10/96	ND (1.0)	ND (1.0)	ND (1.0)	ND (2.0)
	07/10/95	1.9	ND (1.0)	2.2	ND (2.0)
	01/04/95	<0.3	<0.3	<0.3	<0.9
	10/20/94	<0.3	<0.3	<0.3	<0.9
	06/15/93	ND	ND	ND	ND
	09/01/92	ND	ND	ND	ND
	11/01/91	ND	ND	ND	ND
MW-2	07/15/96	150	<5.0	22	110
	01/10/96	390	ND (10.0)	64	395
	07/10/95	400	ND (10.0)	47.0	324
	01/04/95	448	8.3	48.0	340
	10/20/94	556	<0.3	79.4	569
	06/15/93	660	420	130	2,540
	12/07/92	850	291	98	912
	11/13/92	3.00	484	164	1,190
	10/28/92	1,230	570	113	2,750
	09/15/92	251	64	23	397
	09/01/92	251	64	23	346
	11/01/91	600	2,800	400	8,100
	08/31/91	800	2,800	400	8,100
	08/18/91	10	750	750	620
MW-3	07/15/96	<1.0	57	8.0	33
	01/10/96	ND (25.0)	1200	88	470
	07/11/95	ND (10.0)	620	61	273
	01/04/95	122	2,700	155	1,322
	10/20/94	521	10,900	455	4,040
	06/15/93	ND	7,800	780	7,100
	12/08/92	25.6	1,560	570	1,720
	11/13/92	117	4,270	980	9,850
	10/28/92	266	11,400	1,120	6,640
	09/15/92	ND	8,220	ND	3,630
	09/01/92	ND	8,220	ND	ND
	11/01/91	1,500	30,000	2,000	36,000

TABLE 1
BTEX RESULTS FROM GROUNDWATER SAMPLING
MERIDIAN OIL INC.
THOMAS NUMBER 1

CONTINUED

Location	Date	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes µg/L
MW-3	08/31/91	1,500	30,000	2,000	38,000
	08/18/91	10	750	750	820
MW-4	07/16/96	<1.0	0.10	<0.10	0.2
	01/10/96	ND (1.0)	ND (1.0)	3.6	15.4
	07/10/95	ND (1.0)	ND (1.0)	ND (1.0)	1.3
	01/04/95	<0.3	<0.3	<0.3	<0.5
	10/20/94	<0.3	<0.3	<0.3	<0.9
	06/15/93	ND	ND	ND	ND
	09/04/92	ND	ND	ND	ND
	11/01/91	ND	ND	ND	ND
MW-5	07/16/96	<0.10	<0.01	<0.10	<0.20
	01/10/96	ND (1.0)	ND (1.0)	ND (1.0)	ND (2.0)
	07/11/95	13.0	6.1	3.7	9.0
	01/04/95	<0.3	<0.3	<0.3	<0.9
	10/20/94	<0.3	<0.3	<0.3	<0.9
	06/15/93	9.7	ND	ND	ND
	09/01/92	ND	ND	ND	ND
	11/01/91	ND	ND	ND	ND
Trip Blank	10/20/94	<0.3	<0.3	<0.3	<0.9
MW-52	7/15/96	160	<5.0	26	130
(Duplicate)	01/10/96	330	ND (25.0)	55	310
	07/10/95	490	71.0	79.0	448
	01/04/95	294	44.0	33.0	238
	10/20/95	610	<0.03	72.0	555
µg/L = micrograms per liter				ND = Not Detected	
BTEX Analysis by USEPA Method 8020				(1.0) Detection Limit in µg/L	

TABLE 2

MONITORING WELL SAMPLING

GROUNDWATER ELEVATIONS AND WATER QUALITY FIELD MEASUREMENTS

Location	Date	Elevation feet MSL	pH	Conductivity μ mhos/cm	Temperature °F	Gallons Removed
MW-1	7/15/96	5,371.76	7.04	2,160	64.0	5.0
	01/10/96	5,372.04	7.18	3,960	48.0	5.0
	07/10/95	5,372.05	7.05	2,790	62.0	2.5
	01/04/95	5,371.72	6.96	2,120	45.5	2.5
	10/20/94	5,371.95	6.81	2,280	58.7	2.0
MW-2	7/15/96	5,371.23	NR	NR	NR	5.0
	01/10/96	5,371.40	NR	NR	NR	4.0
	07/10/95	5,371.23	NR	NR	NR	4.0
	01/04/95	5,371.02	6.95	2,160	44.8	1.5
	10/20/94	5,371.26	6.64	2,460	66.4	2.5
	10/28/92	*5,370.54	7.20	2,200	68.0	10.0
	11/13/92	*5,370.48	6.97	2,250	61.0	5.0
MW-3	7/15/96	5,371.11	6.95	1,610	73.8	3.0
	01/10/96	5,371.29	7.43	4,640	47.1	2.0
	07/11/95	5,371.21	7.08	2,160	62.6	1.25
	01/04/95	5,371.01	5.35	2,640	43.4	2.0
	10/20/94	5,371.26	2.86	2,970	61.7	2.5
	10/28/92	*5,371.08	7.12	2,450	68.0	10.0
	11/13/92	*5,371.00	7.03	2,300	56.3	5.0
MW-4	7/16/96	5,370.98	7.20	1,470	70.9	3.0
	01/10/96	5,371.15	7.52	2,770	47.1	2.0
	07/10/95	5,370.98	7.11	1,840	59.0	2.0
	01/04/95	5,370.80	6.97	2,350	43.0	2.0
	10/20/94	5,370.04	6.92	4,160	53.4	2.0
MW-5	7/15/96	5,370.47	7.02	1,290	58.6	3.0
	01/10/96	5,370.54	7.44	3,190	47.8	2.0
	07/11/95	5,370.38	7.11	1,840	59.0	2.0
	01/04/95	5,370.31	6.97	2,350	43.0	2.0
	10/20/95	5,370.55	6.92	4,160	53.4	2.0

MSL = mean sea level

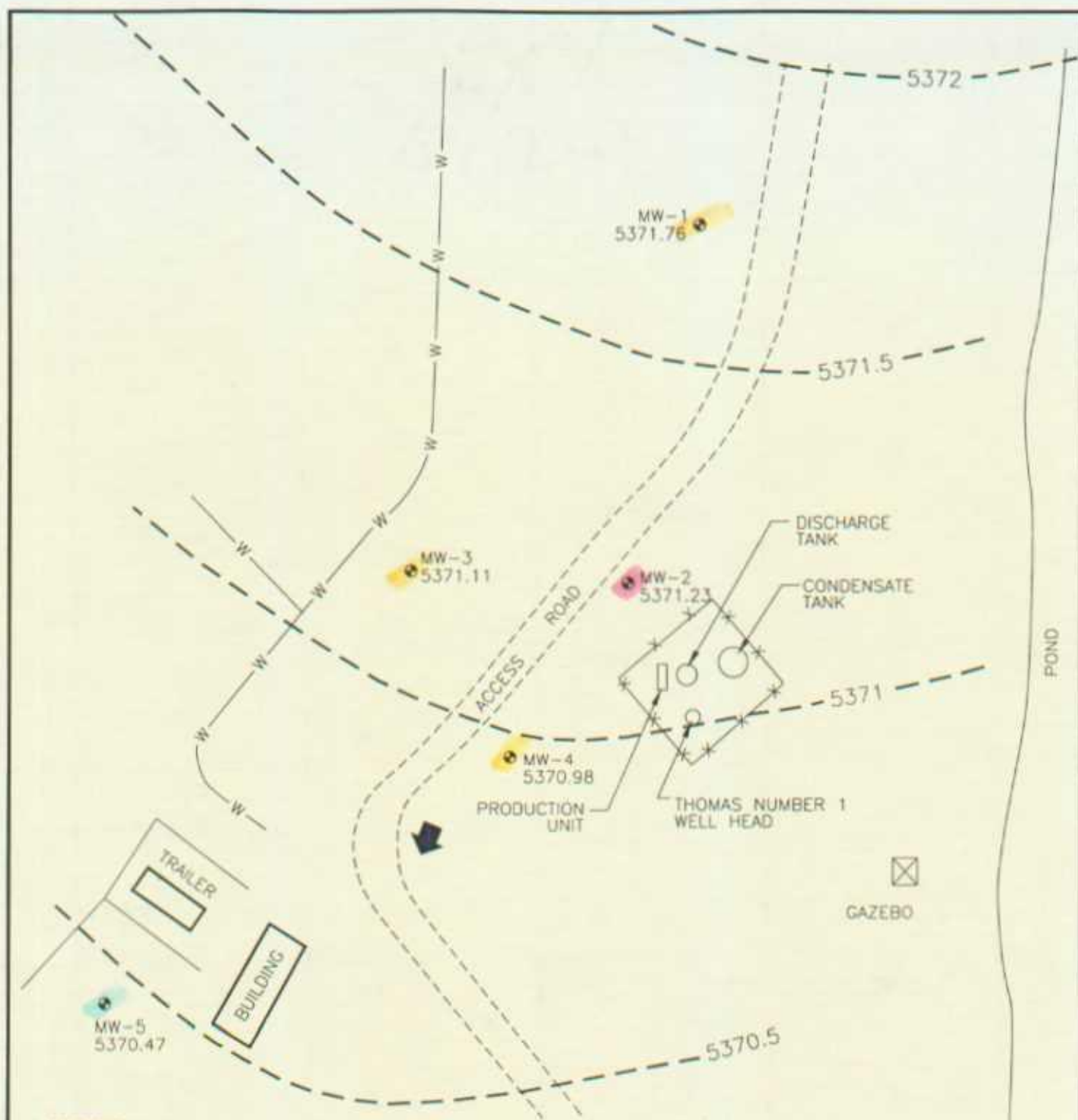
 μ mhos/cm = micromhos per centimeter

°F = degrees Fahrenheit

NR = No Reading

pH, conductivity, and temperature are final measurements prior to sampling.

*Philip assumes the reference point on these measurements to be the top of the well pipe.



LEGEND

- W— 8" WATER LINE
- MW-5 5370.54 MONITORING WELL LOCATION, NUMBER AND GROUNDWATER ELEVATION
- x x x FENCE
- 5372 GROUNDWATER ELEVATION CONTOURS
- ➔ GROUNDWATER FLOW

0 80
FEET



TITLE:
Meridian Oil Inc.,
Thomas Number 1
Well Site

SCALE	1"=80	DATE	
DWN:	TMM		
DES:			
CHKD:			
APPD:		8/6/96	

PROJECT NO: 13164
MERIDIAN OIL INC.

FIGURE 1. 0

ATTACHMENT A



Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 3105

Project Name <u>MOI THOMAS No. 2</u>		Type of Analysis and Bottle	
Project Number <u>13164</u> Phase Task <u>0077.77</u>		Total Number of Bottles	
Samplers <u>STP</u>		Type of Analysis and Bottle	
Laboratory		Name <u>Zenon</u>	
Location		Comments	
Sample Number (and depth)	Date	Time	Matrix
<u>MW-01</u>	<u>7/15/96</u>	<u>1215</u>	<u>WATER</u>
<u>MW-02</u>	<u>7/15/96</u>	<u>1345</u>	<u>WATER</u>
<u>MW-03</u>	<u>7/15/96</u>	<u>1545</u>	<u>WATER</u>
<u>MW-04</u>	<u>7/16/96</u>	<u>1120</u>	<u>WATER</u>
<u>MW-05</u>	<u>7/15/96</u>	<u>1715</u>	<u>WATER</u>
<u>MW-52</u>	<u>7/15/96</u>	<u>1350</u>	<u>WATER</u>

Relinquished by:

Signature <u>[Signature]</u>	Date <u>7/16/96</u>	Time <u>1445</u>
Signature <u>Amy Seaborn</u>	Date <u>9/10/17</u>	Time <u>12:00</u>

Received By:

Samples Iced: ☒ Yes ☐ No	Carrier: <u>FED Ex</u>	Airbill No. <u>7483873051</u>
Preservatives (ONLY for Water Samples)		
☐ Cyanide Sodium hydroxide (NaOH)		
☒ Volatile Organic Analysis Hydrochloric acid (HCl)		
☐ Metals Nitric acid (HNO3)		
☐ TPH (418.1) Sulfuric acid (H2SO4)		
☐ Other (Specify) _____		
☐ Other (Specify) _____		



5555 North Service Road
Burlington, Ontario, Canada L7L 5H7
Tel: (905) 332-8788
Fax: (905) 332-9169

Certificate of Analysis

CLIENT INFORMATION

Attention: Scott Pope
Client Name: Philip Environmental Inc.
Project: 13164
Project Desc: MOI Thomas No.1

Address: 4000 Monroe Road
Farmington, NM
87401

Fax Number: 505 326-2388

Phone Number: 505 326-2262

LABORATORY INFORMATION

Contact: Ada Blythe, B.Sc., C.Chem.
Project: AN960753
Date Received: 96/07/17
Date Reported: 96/07/25

Submission No.: 6G0487
Sample No.: 027103-027109

NOTES: *"-" = not analysed "<" = less than Method Detection Limit (MDL) "NA" = no data available*
LOQ can be determined for all analytes by multiplying the appropriate MDL X 3.33
Solids data is based on dry weight except for biota analyses.
Organic analyses are not corrected for extraction recovery standards except for isotope dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)

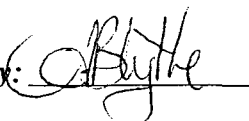
Methods used by Zenon are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Seventeenth Edition. Other methods are based on the principles of MISA or EPA methodologies.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at Zenon for a period of three weeks from receipt of data or as per contract.

COMMENTS:

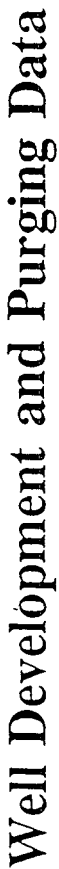
(1) The BFB recovery is not available due to dilution of sample.

These samples were analysed on 96/07/24 using EPA Method 602.

Certified by: 

Component	Client ID:	Method		Units	MDL	MW-01								MW-02		MW-03		MW-04		MW-05		MW-52	
	Zenon ID:	Blank	027103 96			027104 96		027104 96		027105 96		027106 96		027107 96		027108 96		027109 96					
	Date Sampled:	96/07/15	96/07/15			96/07/15	96/07/15	96/07/15	96/07/15	96/07/15	96/07/15	96/07/15	96/07/15	96/07/16	96/07/15	96/07/15	96/07/15	96/07/15					
	Duplicate																						
Benzene	0.1	<0.10	<0.10	ug/L		<0.10	<0.10	<0.10	150	<1.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	160				
Toluene	0.1	<0.10	0.10	"		0.10	0.10	0.10	<5.0	57	0.10	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<5.0					
Ethyl Benzene	0.1	<0.10	<0.10	"		<0.10	<0.10	<0.10	22	8.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	26					
Total xylenes	0.2	<0.20	<0.20	"		<0.20	<0.20	<0.20	110	33	0.20	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	130					
Surrogate Recoveries		102	104	%		102	102	102	(1)	(1)	(1)	102	104	(1)	104	104	(1)	(1)					
Bromofluorobenzene																							

ATTACHMENT B



Form A0101 Rev. 03/21/94



☐ Development
☒ Purging

Well Number

Mc-22

Page 7 of 1

Project Manager

Project No. 13164

NOT

Phase.Task No. 0077.77

Site Address Bloomfield: NM

Water Volume Calculation

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

Initial Depth of Well (feet) 7.25

Initial Depth to Water (feet) 2.92

Height of Water Column in Well (feet) 3.33

333

Diameter (inches): Well 2 Gravel Pack 2

pack

Pump
Bailey

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

☐ Other

Water Disposal

ON SITE IN TANK

[illegible]

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

Comments

No Readings Taken Due To Heavy Contamination And Seen On WATER

Developer's Signature(s)

Date 7/15/96

Reviewer S.T.P

Date 8/16/96



Well Development and Purging Data

Project Name MDI THOMAS NO. 1 Well Number MW-04 Page 1 of 1
Client Company MDI Project Manager S. DORF Project No. 13164
Site Name THOMAS NO. 1 Site Address BLOOMFIELD NM Phase Task No. 0077 .77

☐ Development
☒ Purging

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 227 4.39
Initial Depth to Water (feet) 2.67
Height of Water Column in Well (feet) 1.72
Diameter (inches): Well 2 Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>28</u>	<u>28</u>
Gravel Pack			
Drilling Fluids			
Total			<u>(28) .84</u>

Instruments

- Serial No. (if applicable) Oyster
☐ pH Meter
☐ DO Monitor
☒ Conductivity Meter Oyster
☒ Temperature Meter Oyster
☐ Other _____

Water Disposal

INTAKE ON SITE

Water Removal Data

Date	Time	Development Method	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Recovered (gallons)		Temperature (°C)	pH	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Comments
						Increment	Cumulative	Increment	Cumulative					
7/16/96	1035	X				.5	.5			23.5	6.97	1070		Gravel Silty
7/16/96	1040					.5	1.0			22.1	7.18	1450		
7/16/96	1048					.5	1.5			21.4	7.19	1470		Gravel Clear
7/16/96	1055					.5	2.0			21.7	7.19	1460		Gravel Clearing
7/16/96	1101					1.0	3.0			21.6	7.20	1470		Mostly Clear

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

Comments

Developer's Signature(s) [Signature] Date 7/16/96 Reviewer STP Date 8/6/96



Page 1 of 1

Water Disposal

Form A0101 Rev. 03/21/94



Water Sampling Data

Location No. MW-01Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 7/15/96Project Name THOMAS No. 1 Project No. 13161Project Manager S. POPE Phase/Task No. 0077. 77Site Name THOMAS No. 1

Sampling Specifications

Requested Sampling
Depth Interval (feet) TOP 30'
Requested Wait Following
Development/Purging (hours) NONE

Initial Measurements

Time Elapsed From Final Development/Purging (hours) .25
Initial Water Depth (feet) 3.4
Nonaqueous Liquids Present (Describe) NA

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)		
			SEE WELL DEVELOPMENT AND PURGING DATA SHEET										

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

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
BTEX	2	G	40mL		X	H	X		1215

Filter Type Chain-of-Custody Form Number C.3105Comments Signature Sam T. Pope Date 7/15/96 Reviewer STP Date 8/6/96



Water Sampling Data

Location No. MW-2Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 7/15/96Project Name THOMAS No. 1Project No. 13164Project Manager S. POPEPhase/Task No. 0077.77Site Name THOMAS No. 1

Sampling Specifications

Requested Sampling Depth Interval (feet) TCP 3'Requested Wait Following Development/Purging (hours) NONE

Initial Measurements

Time Elapsed From Final Development/Purging (hours) 0.167Initial Water Depth (feet) 3.92Nonaqueous Liquids Present (Describe) SHEEN

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)
See WQI DEVELOPMENT AND PURGING DATA SHEET												

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

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
BTEX	3	G	40		X	H	X		1345
BTEX	3	G	40		X	H	X		DUPLICATE OF MW-02 (MW-52) 1350

Filter Type Chain-of-Custody Form Number C3105Comments Signature Scott T. PopeDate 7/15/96Reviewer STPDate 8/6/96



Water Sampling Data

Location No. MW-03

Serial No. WSD- _____

Group List Number MW-03Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other _____Date 1/5/96Project Name THOMAS NO. 1Project No. 13164Project Manager S. POPEPhase/Task No. 0077.77Site Name THOMAS NO. 1

Sampling Specifications

Requested Sampling

Depth Interval (feet) TOP 3'

Requested Wait Following

Development/Purging (hours) NONE

Initial Measurements

Time Elapsed From Final Development/Purging (hours) 16.2Initial Water Depth (feet) 2.53Nonaqueous Liquids Present (Describe) N/A

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	
			See Well Development AND Purging DATA Sheet								

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

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
BTEX	3	G	40		X	1+	X		1545

Filter Type N/AChain-of-Custody Form Number C 3105

Comments _____

Signature

S. T. Pope

Date

1/15/96Reviewer STP

Date

8/16/96



Water Sampling Data

Location No. MW-04Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 7/16/96Project Name THOMAS NO. 1Project No. 13164Project Manager S. POPEPhase/Task No. 0077. 77Site Name THOMAS NO. 1

Sampling Specifications

Requested Sampling

Depth Interval (feet) TOP 3'

Requested Wait Following

Development/Purging (hours) NONE

Initial Measurements

Time Elapsed From Final Development/Purging (hours) 33Initial Water Depth (feet) 2.67Nonaqueous Liquids Present (Describe) NONE

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 = HNO₃; S = H₂SO₄; 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	
BTEX	3	G	40		X	H	X		1120

Filter Type N/AChain-of-Custody Form Number C3105Comments Signature Sam T. PopeDate 7/16/96Reviewer STPDate 8/6/96



Water Sampling Data

Location No. MW-05Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 7/15/96Project Name THOMAS No. 1 Project No. 13164Project Manager S. POPE Phase/Task No. 0077.77Site Name THOMAS No. 2

Sampling Specifications

Requested Sampling

Depth Interval (feet) TOP 3'

Requested Wait Following

Development/Purging (hours) NONE

Initial Measurements

Time Elapsed From Final Development/Purging (hours) 08Initial Water Depth (feet) 3.97Nonaqueous Liquids Present (Describe) NONE

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)	
See Well Development And Purging Data Sheet												

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

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
<u>BTEX</u>	<u>2</u>	<u>G</u>	<u>40</u>		<u>X</u>	<u>14</u>	<u>X</u>		<u>1715</u>

Filter Type Chain-of-Custody Form Number 63105Comments Signature Scott T. Pope Date 7/17/96 Reviewer STP Date 8/6/96