ORIGINAL

RESULTS OF JANUARY 2002 GROUNDWATER SAMPLING EVENT

Tillamook Farmers Co-op
1920 Highway 101 North
Tillamook, Oregon
DEQ ECSIS No. 1410

Report Prepared For:

Tillamook Farmers Co-op
1920 Highway 101 North
Tillamook, Oregon 97141

Report Prepared By:

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29791 SW Kinsman Road
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April 12, 2002

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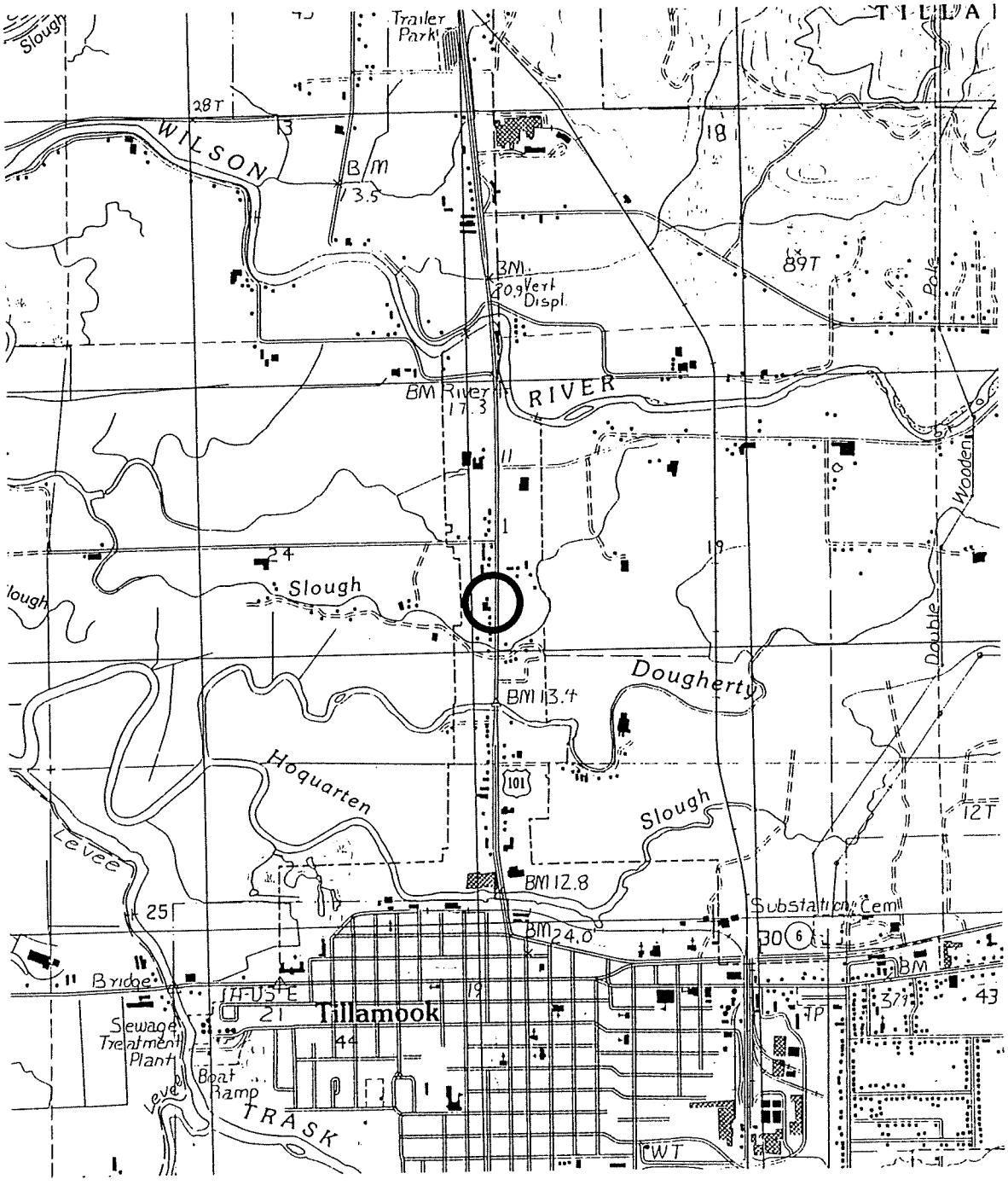
1.0 INTRODUCTION

On January 29, 2002, Bergeson-Boese & Associates, Inc. (BB&A) completed a groundwater monitoring event at the Tillamook Farmers Co-op (TFC) facility in Tillamook, Oregon. Eight (8) monitoring wells were sampled. Groundwater samples collected from those wells were analyzed for total petroleum hydrocarbons (TPH) as gasoline, dissolved and total lead, and gasoline-related volatile organic compounds (VOCs). The results of that monitoring event are presented in this report.

2.0 SITE INFORMATION

The subject facility, located at 1920 Highway 101 North in Tillamook, Oregon, is an operating retail service station and hardware store. The legal description of the subject property includes Tax Lots 1200, 1300, and 1500, as is located in Section 24, Township 1 South, Range 10 West, Tillamook County. A site location map is presented as **Figure 1**. The subject facility is bordered immediately to the north by vacant land (formerly the Tillamook Inn), to the east by Highway 101 North, to the south by a residence, and to the west by a large, open pasture. The residence to the south is located over 300 feet from the older (soon to be former) TFC facility.

Restaurants and commercial businesses are located on the east side of Highway 101, directly across from the subject facility. These include a McDonald's restaurant, Oil Can Henry's (an automotive service shop), an undeveloped lot used by a local car dealership (Ford), and a Pizza Hut restaurant. A vicinity map showing the location of the subject facility with respect to surrounding properties is provided in **Figure 2**.



SITE LOCATION

FIGURE 1

OREGON

SOURCE: USGS TOPOGRAPHIC QUADRANGLE
SERIES: 7.5 MINUTES, TILLAMOOK, OREGON

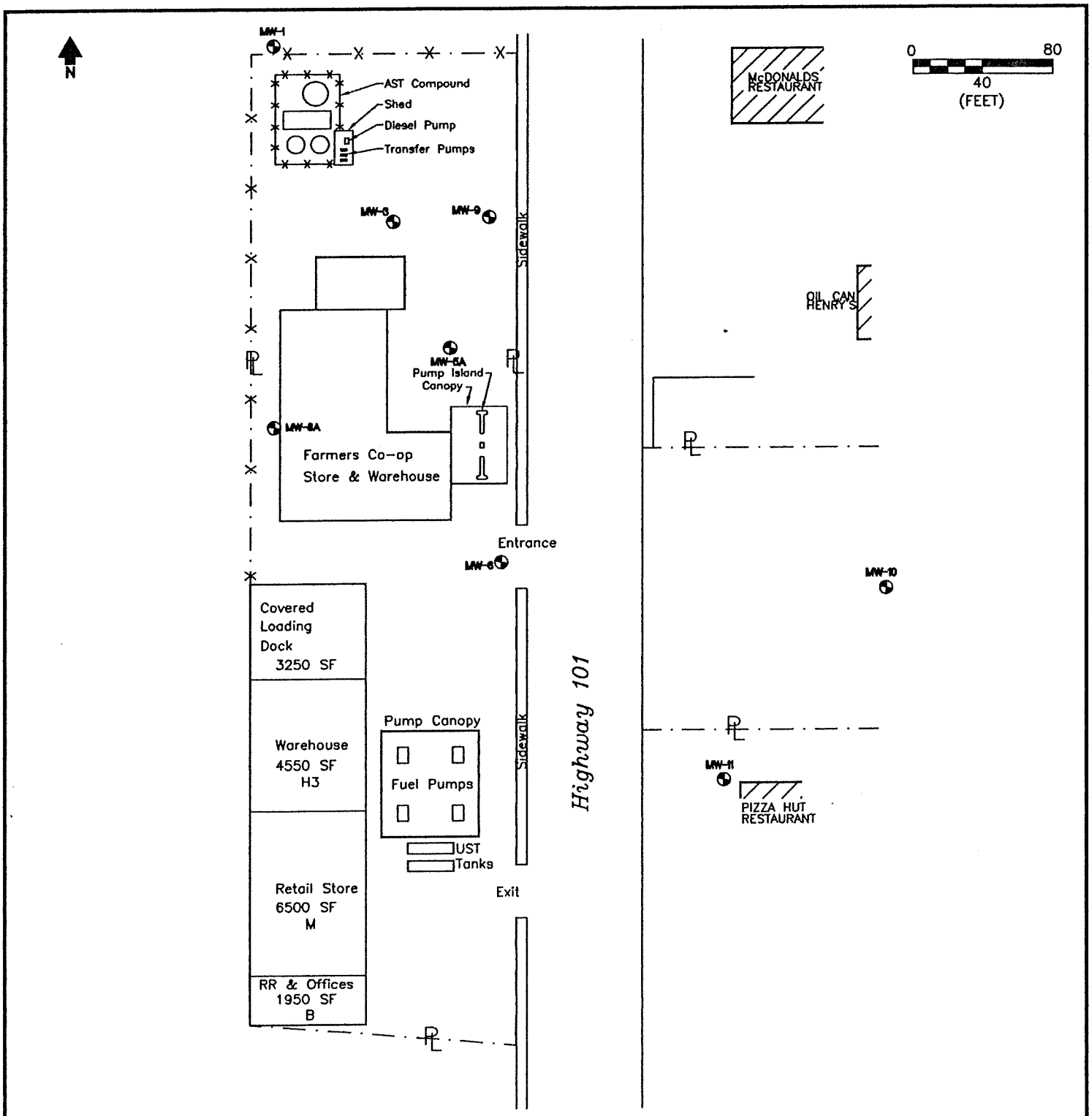
TILLAMOOK FARMERS COOP, 1920 Highway 101 N., Tillamook, OR

SITE LOCATION MAP

Bergeson–Boese & Associates, Inc.
Environmental Engineering

65 Centennial Loop
Eugene, Oregon 97401
(541) 484–9484

Job Code:	TFC01SI.97H
CADD File:	TFC01.DWG
Scale:	AS NOTED
Drawn:	ROBERT ROBINSON
Checked:	CHARLES SCHWARZ
Date:	6/10/98



LEGEND

- MW-11 — Monitoring Well Location and Identification Number
- Fence
- PL — Property Line

FIGURE 2

TILLAMOOK FARMERS CO-OP, 1920 Highway 101 N., Tillamook, OR

OLD FACILITY/NEW FACILITY WITH MONITORING WELL LOCATIONS

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Job Code:	TFC01SI.97H
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Scale:	1" = 80'
Drawn:	KATHRYN DAVIS
Checked:	STEVE OMO
Date:	04/03/02

The subject facility is owned by TFC. Facility information is summarized below:

Facility Name:	Tillamook Farmers Co-op
Facility Address:	1920 Highway 101 North Tillamook, Oregon 97141
DEQ ECSIS No.:	1410
Facility Contact:	Bill Hoyt Tillamook Farmers Co-op 1920 Highway 101 North Tillamook, Oregon 97141 (503) 842-4457

Historically, the retail fueling portion of the facility consisted of two (2) fuel islands, a diesel pump, and several above ground storage tanks (ASTs) located near the northwest corner of the property. The diesel pump is located next to the AST compound. Recently, the facility has expanded to the south to include properties formerly occupied by two (2) homes and a small market. Construction was recently completed for a new building, new fuel dispenser pumps and an underground storage tank battery, all south of the older facility. The new building, which includes an office, retail store, warehouse, and loading dock, was underlain by a vapor barrier as a precautionary measure. The new facilities (i.e., warehouse, office, retail store, and fuel station) are expected to be fully operational by April 22, 2002. At this time, demolition will begin at the older facility (i.e., store, warehouse, and fuel islands), and the area paved over.

3.0 HYDROGEOLOGIC SETTING

The subject facility is situated at an elevation of approximately 10 feet above mean sea level.[1] Tillamook Bay lies approximately 2.5 miles to the west of the site. Hall Slough, which is tidally influenced, is located approximately 400 feet south of the old facilities, and approximately 150 feet south of the new southern property line. The Wilson River lies approximately 0.45 miles to the north/northwest of the site. The site topography, although essentially level, has a slight dip to the north. The subject facility is also elevated approximately three (3) feet above the adjoining pasture along its western boundary.

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[1] From USGS Tillamook 7.5' quadrangle topographic map.

The subject facility, and neighboring properties along Highway 101, appear to have been constructed upon a layer of gravel fill. Subsurface investigations performed by Neil Shaw indicate that the facility is underlain by a 30 to 60 inch layer of crushed rock. Neil Shaw reported encountering soft, low permeability clayey silt beneath that layer. Heterogeneous rocky fill material is thought to extend to the north of the site, onto the former Tillamook Inn property. Native soils described as low permeability silt were found on property to the south of the facility and in the pasture to the west.

In March 1998, BB&A collected soil samples from several push probe borings drilled at the subject facility and also off-site, on the east side of Highway 101. A surficial layer of sandy gravel was encountered in 11 of the 13 borings that were completed. The thickness of that layer ranged from negligible to over three (3) feet. On the east side of Highway 101, the average thickness of the gravel layer was approximately two (2) feet. The gravel layer is potentially a controlling factor for contaminant migration given that the water table at the site has been measured at depths of less than 0.5 feet below land surface (BLS).

Eight (8) shallow monitoring wells were installed at the facility by Neil Shaw in October 1993. Depth-to-water measurements were collected from several of those wells by BB&A in October 1997 and April 1998. Those measurements, and measurements collected as part of subsequent monitoring events, have indicated the presence of a groundwater mound located to the north of the facility's fuel island with groundwater flowing radially outward from that location.

4.0 GROUNDWATER ANALYTICAL RESULTS

4.1 Water Table Measurements

Depth-to-water measurements were obtained on January 29, 2002, prior to collecting groundwater samples. The depth to groundwater was not measured in monitoring well MW-6 since a riser pipe had temporarily been added to the top of the monitoring well during recent construction activities. The top of the temporary riser pipe has not been surveyed; therefore, the groundwater elevation was not determined for monitoring well MW-6. Monitoring well MW-6 will be surveyed at during the next sampling event (April 2002). A copy of the field data log listing those measurements is provided in **Appendix A**. Those measurements were subtracted from established reference elevations to determine the water table elevations (presented in **Table 1**).

A water table elevation contour map for the site, based upon those measurements, is presented in **Figure 3**. As shown, it appears that the direction of groundwater flow on January 29, 2002, was radially outward from a groundwater mound which is centered near monitoring wells MW-3 and MW-5A. The pattern of groundwater flow observed in January 2002 is similar to that observed in previous monitoring events.

Table 1. Water Table Elevations
Tillamook Farmers Co-op

Depth to water measurements collected on January 29, 2002.
Elevations referenced to mean sea level.
Reference elevations established on north side of well casing rim.
NM = Not measured.

Monitoring Well ID	Reference Elevation	Depth to Water	Water Table Elevation
MW-1	7.27	0.80	6.47
MW-3	9.27	0.68	8.59
MW-5A	9.10	0.51	8.59
MW-6	8.74	NM	NM
MW-7	Decommissioned		
MW-8A	10.76	3.68	7.08
MW-9	8.98	1.41	7.57
MW-10	10.83	1.59	9.24
MW-11	11.65	3.28	8.37

4.2 Results of Groundwater Sample Analyses

The site monitoring wells were purged on January 29, 2002. All of the wells were purged using a peristaltic pump. Free product was not observed in any of the monitoring wells. All of the wells were sampled using disposable bailers with the exception of monitoring well MW-8A which was sampled using the peristaltic pump. In the future, the peristaltic pump will be used for both purging and sampling, with the lowest flow setting used when sampling.

Samples obtained for dissolved lead analysis were field filtered using a 0.45 micron filter. In addition to dissolved lead and total lead, the samples collected on January 29, 2002 were also analyzed for gasoline-range petroleum hydrocarbons and volatile organic compounds (VOCs).

N

0 50
25
(FEET)

MW-1
(6.47)

TAX LOT 1200

P4

6.50

7.00

7.50

8.00

8.50

9.00

MW-3
(8.59)

MW-9
(7.57)

P5

P3

P1

MW-5A
(8.59)

TILLAMOOK
FARMERS
CO-OP

MW-8A
(7.08)

P2

HIGHWAY 101

P6

P10

P7

P13

P8

MW-10
(9.24)

MW-6

P9

P12

P11

MW-7
(DECOMMISSIONED)

NEW FACILITY

MW-11
(8.37)

LEGEND

(7.08)	Groundwater Elevation at Well
8.00	Groundwater Elevation Contour Line Feet Above Mean Sea Level Dashed Where Inferred
	Inferred Direction of Groundwater Flow
MW-5A	Monitoring Well Location and Identification Number
P1	March 1998 Push Probe Location and Identification Number
NM	Not Measured

FIGURE 3

TILLAMOOK FARMERS CO-OP, 1920 Highway 101 N., Tillamook, OR

GROUNDWATER ELEVATION CONTOUR MAP, January 29, 2002

Bergeson-Boese & Associates, Inc.
Environmental Engineering
65 Centennial Loop
Eugene, Oregon 97401
(541) 484-9484

Job Code:	TFC01SI.97H
CADD File:	TFC01.DWG
Scale:	1" = 50'
Drawn:	KATHRYN DAVIS
Checked:	STEVE OMO
Date:	04/10/02

All of the groundwater samples were analyzed at Pacific Northwest Laboratories (PNL) in Eugene, Oregon. Four (4) of the groundwater samples were analyzed for both total and dissolved lead according to EPA Method 7421. Analyses for gasoline-range petroleum hydrocarbons were conducted using the NWTPH-Gx method. Analyses for VOCs were conducted according to EPA Method 8260B. A copy of the laboratory report issued by PNL is provided in **Appendix B.**

The results of the analyses for TPH as gasoline, dissolved lead, total lead and VOCs are presented below in **Table 2.** Results for dissolved gasoline, MTBE, benzene, naphthalene, and lead are also given on **Figure 4.** Gasoline-range petroleum hydrocarbons were not detected in monitoring wells MW-1, MW-10, and MW-11. Gasoline was detected in monitoring wells MW-3, MW-5A, MW-6, MW-8A, and MW-9 at concentrations ranging from 1.3 to 130 parts per million (ppm). Monitoring wells MW-5A and MW-9 contained the highest concentrations of gasoline, at 130 and 15 ppm, respectively.

In January 2002, benzene concentrations in monitoring wells MW-3, MW-5A, MW-6, MW-8A, and MW-9 ranged from 39 parts per billion (ppb) in MW-3 to 17,000 ppb in monitoring well MW-5A. Concentrations of MTBE were detected in monitoring wells MW-3, MW-5A, MW-8A, and MW-9 at concentrations ranging from 1.3 to 730 ppb. The highest concentration of MTBE was detected in monitoring well MW-5A.

In January 2002, total lead concentrations detected in monitoring wells MW-3, MW-5A, MW-6, and MW-8A ranged from below the method-reporting limit (MRL) of 2 parts per billion (ppb) in monitoring well MW-3 to 54 ppb in monitoring well MW-8A. Dissolved lead concentrations in those water samples ranged from below the MRL (2 ppb) in monitoring wells MW-3, MW-6, and MW-8A, to 11 ppb in monitoring well MW-5A.

Table 2. Groundwater Analytical Results for Gasoline, Dissolved Lead, and VOCs

Samples collected on January 29, 2002.
NWTPH-Gx concentrations reported in mg/L (ppm), all other concentrations in µg/L (ppb).
(<5) = not detected at method-reporting limit given in parentheses.

Parameter	Monitoring Well Samples								Lab Blank
	MW-1	MW-3	**MW-5A**	MW-6	MW-8A	MW-9	MW-10	MW-11	
Gasoline (NWTPH-Gx)	(<0.25)	1.3	**130**	11	3.8	15	(<0.25)	(<0.25)	(<0.25)
Total Lead	NA	(<2)	31	15	**54**	NA	NA	NA	(<2)
Dissolved Lead	NA	(<2)	**11**	(<2)	(<2)	NA	NA	NA	(<2)
Methyl tertiary butyl ether	(<1)	1.3	**730**	(<1)	150	280	(<1)	(<1)	(<1)
1,2-Dichloroethane	(<1)	(<1)	(<25)	(<1)	(<1)	(<1)	(<1)	(<1)	(<1)
1,2-Dibromoethane	(<1)	(<1)	(<25)	(<1)	(<1)	(<1)	(<1)	(<1)	(<1)
Benzene	(<1)	39	**17,000**	42	1,600	1,900	(<1)	(<1)	(<1)
Toluene	(<1)	18	**27,000**	17	68	710	(<1)	(<1)	(<1)
Ethylbenzene	(<1)	41	**3,000**	390	80	500	(<1)	(<1)	(<1)
Xylenes	(<1)	170	**24,000**	1,600	560	2,100	(<1)	(<1)	(<1)
Naphthalene	(<5)	15	**800**	150	38	140	(<5)	(<5)	(<5)
iso-Propylbenzene	(<1)	3.8	**120**	44	4	32	(<1)	(<1)	(<1)
n-Propylbenzene	(<1)	9.4	**280**	80	5.5	64	(<1)	(<1)	(<1)
1,2,4-Trimethylbenzene	(<1)	96	**2,700**	750	150	660	(<1)	(<1)	(<1)
1,3,5-Trimethylbenzene	(<1)	34	**1,100**	270	57	170	(<1)	(<1)	(<1)

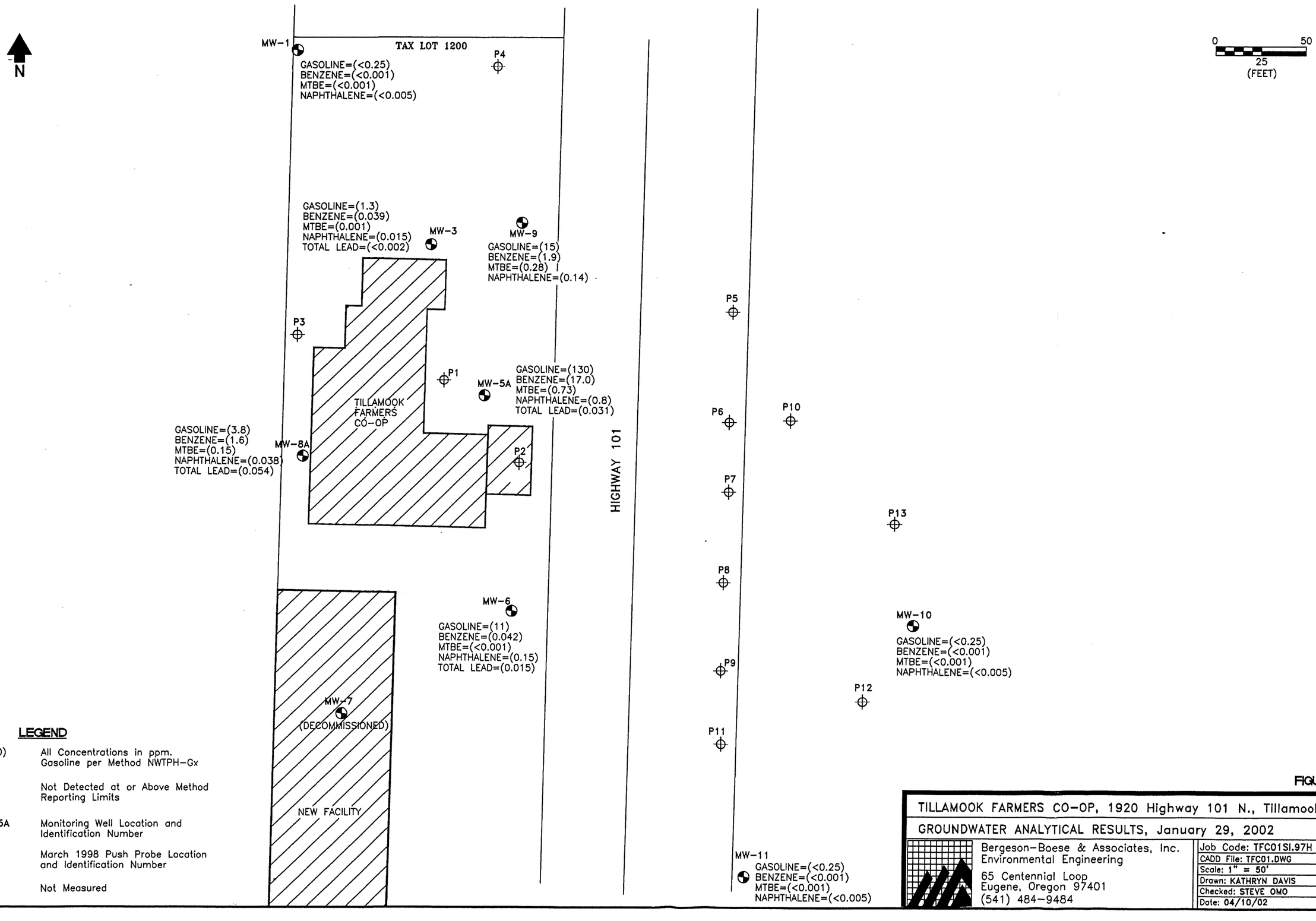

FIGURE 4

TILLAMOOK FARMERS CO-OP, 1920 Highway 101 N., Tillamook, OR

GROUNDWATER ANALYTICAL RESULTS, January 29, 2002

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Job Code:	TFC01SI.97H
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Scale:	1" = 50'
Drawn:	KATHRYN DAVIS
Checked:	STEVE OMO
Date:	04/10/02

5.0 EVALUATION OF ANALYTICAL RESULTS

5.1 Contaminant Plume Evaluation

The analytical results for dissolved gasoline in groundwater for samples collected on January 29, 2002 are plotted on **Figure 5**. The dissolved gasoline plume is inferred to extend to the southeast from monitoring well MW-5A. The configuration of the dissolved gasoline plume has not changed substantially since quarterly groundwater monitoring was instituted in June 2000.

The inferred extent of the benzene plume in January 2002 is shown in **Figure 6**. The data for benzene indicates a source area in the vicinity of monitoring well MW-5A, where benzene was detected at a concentration of 17,000 ppb. The inferred extent of the MTBE plume is shown in **Figure 7**. The highest concentrations of MTBE have been detected in monitoring well MW-5A. The source of the MTBE release also appears to have been in the vicinity of monitoring well MW-5A.

The historical groundwater analytical results for monitoring wells MW-1, MW-3, MW-5, MW-5A, MW-6, MW-7 (decommissioned), MW-8A, MW-9, MW-10, and MW-11 are summarized in **Appendix C**. As shown in **Figures 8** and **9**, concentrations of dissolved benzene and MTBE have remained relatively stable in monitoring wells MW-3, MW-6, MW-8A, and MW-9 since quarterly groundwater monitoring was resumed at the site in June 2000. In monitoring well MW-5A, concentrations of benzene and MTBE have decreased since peaking in July 2001.

5.2 Comparison of Groundwater Contaminant Concentrations with RBCs

Contaminant concentrations in groundwater were compared to the risk-based concentrations (RBCs) established by DEQ to be protective of human health (Appendix A, *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites*). More specifically, **Table 3** compares January 2002 contaminant concentrations from monitoring well MW-5A with the occupational RBCs established for groundwater exposure pathways. *Groundwater ingestion* and *tapwater ingestion and inhalation* exposure pathways are not considered applicable for this site, since there are no on-site water wells or use of groundwater. Based on the comparison in **Table 3**, the contaminants-of-concern (COCs) are benzene, naphthalene, and 1,3,5-trimethylbenzene (TMB). The concentration of benzene detected in monitoring well MW-5A exceed occupational groundwater RBCs for *volatilization to outdoor air*, *vapor intrusion into buildings*, and *groundwater in excavation*. Benzene concentrations in monitoring wells MW-8A and MW-9 also exceeded RBCs for *vapor intrusion into buildings*, and *groundwater in excavation*.

N

0 50
25
(FEET)

MW-1
(<0.25)

TAX LOT 1200

P4

MW-3
(2.5)

(15)
MW-9

P5

P3

P1

MW-5A
(130)

100

10

1

P6

P10

TILLAMOOK
FARMERS
CO-OP

MW-8A
(3.8)

P2

HIGHWAY 101

P7

P13

P8

MW-6
(11)

MW-10
(<0.25)

P9

P12

MW-7
(DECOMMISSIONED)

P11

NEW FACILITY

MW-11
(<0.25)

LEGEND

(120)	Dissolved Gasoline Concentrations at Well per NWTPH-Gx Method units in parts per million, (ppm)
ND	Not Detected at or Above Method Reporting Limits
-10 PPM-	Concentration Contour Line units in parts per million, (ppm)
MW-5A	Monitoring Well Location and Identification Number
P1	March 1998 Push Probe Location and Identification Number
NM	Not Measured

FIGURE 5

TILLAMOOK FARMERS CO-OP, 1920 Highway 101 N., Tillamook, OR

INFERRED EXTENT OF DISSOLVED GASOLINE, January 29, 2002

Bergeson-Boese & Associates, Inc.
Environmental Engineering

65 Centennial Loop
Eugene, Oregon 97401
(541) 484-9484

Job Code:	TFC01SI.97H
CADD File:	TFC01.DWG
Scale:	1" = 50'
Drawn:	KATHRYN DAVIS
Checked:	STEVE OMO
Date:	04/10/02

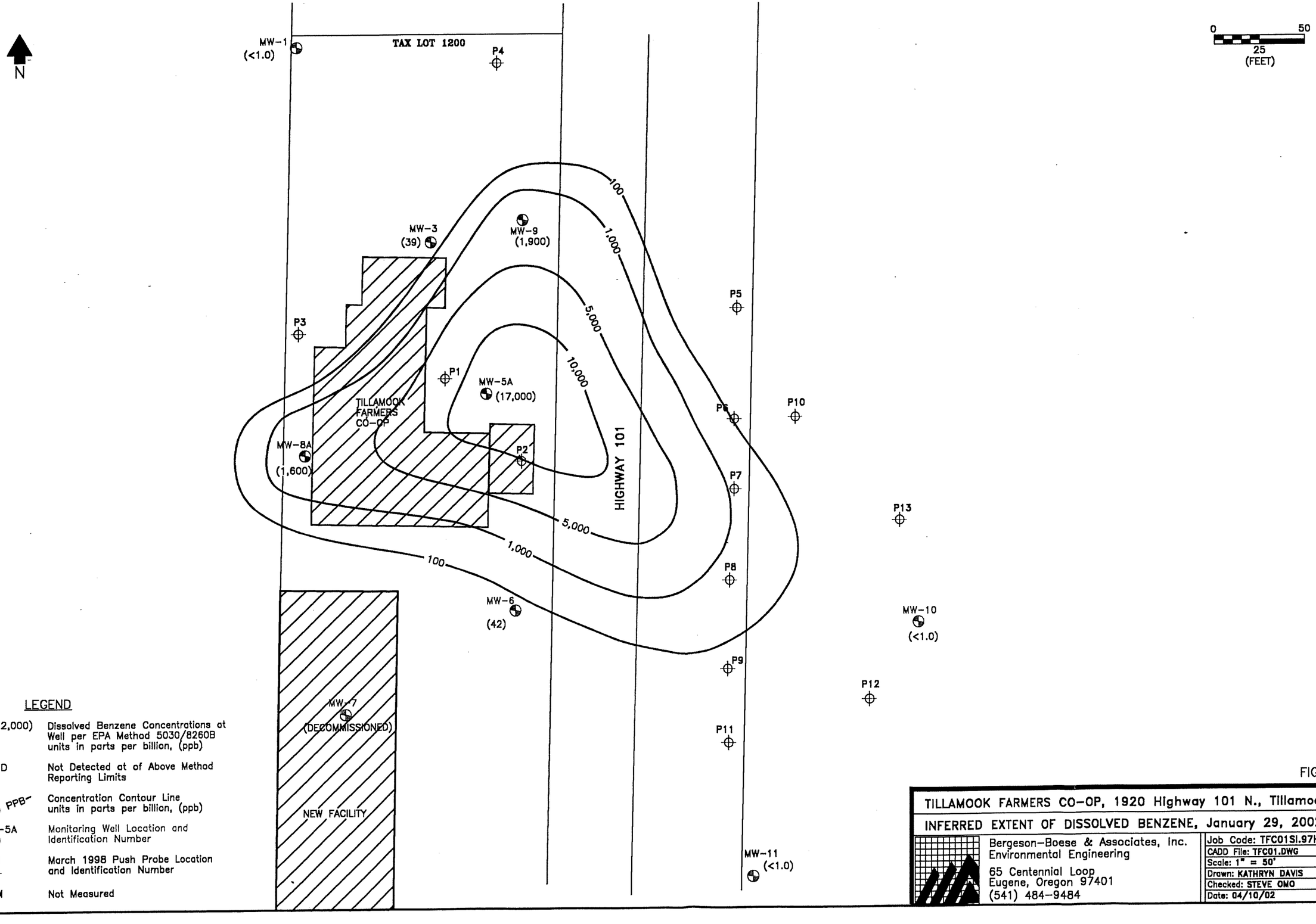

FIGURE 6

TILLAMOOK FARMERS CO-OP, 1920 Highway 101 N., Tillamook, OR

INFERRED EXTENT OF DISSOLVED BENZENE, January 29, 2002

Bergeson-Boese & Associates, Inc.
Environmental Engineering
65 Centennial Loop
Eugene, Oregon 97401
(541) 484-9484

Job Code:	TFC01SI.97H
CADD File:	TFC01.DWG
Scale:	1" = 50'
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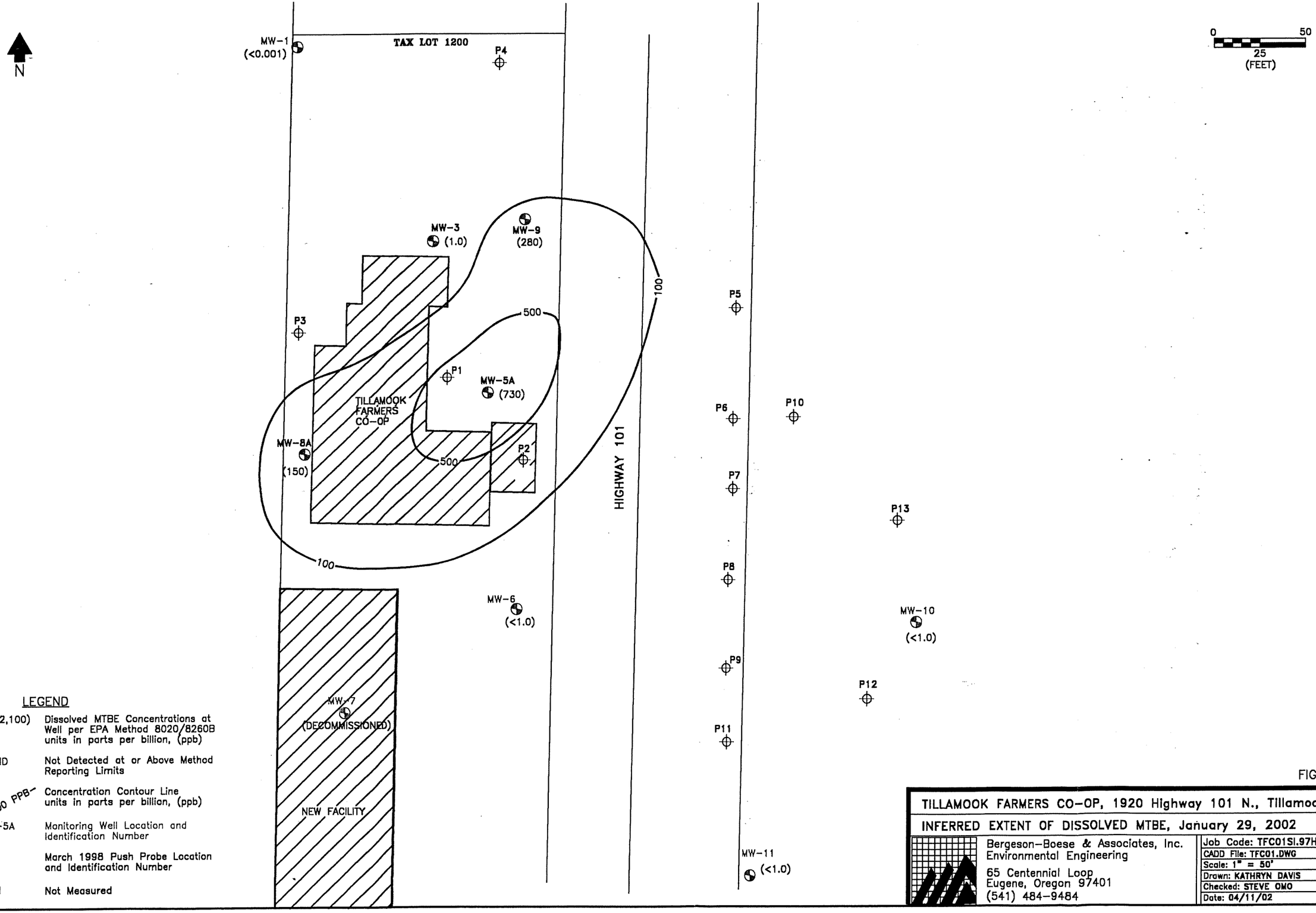
Date:	04/10/02



LEGEND

(2,100)	Dissolved MTBE Concentrations at Well per EPA Method 8020/8260B units in parts per billion, (ppb)
ND	Not Detected at or Above Method Reporting Limits
100 PPB	Concentration Contour Line units in parts per billion, (ppb)
MW-5A	Monitoring Well Location and Identification Number
P1	March 1998 Push Probe Location and Identification Number
NM	Not Measured

FIGURE 7

TILLAMOOK FARMERS CO-OP, 1920 Highway 101 N., Tillamook, OR

INFERRED EXTENT OF DISSOLVED MTBE, January 29, 2002

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Job Code:	TFC01SI.97H
CADD File:	TFC01.DWG
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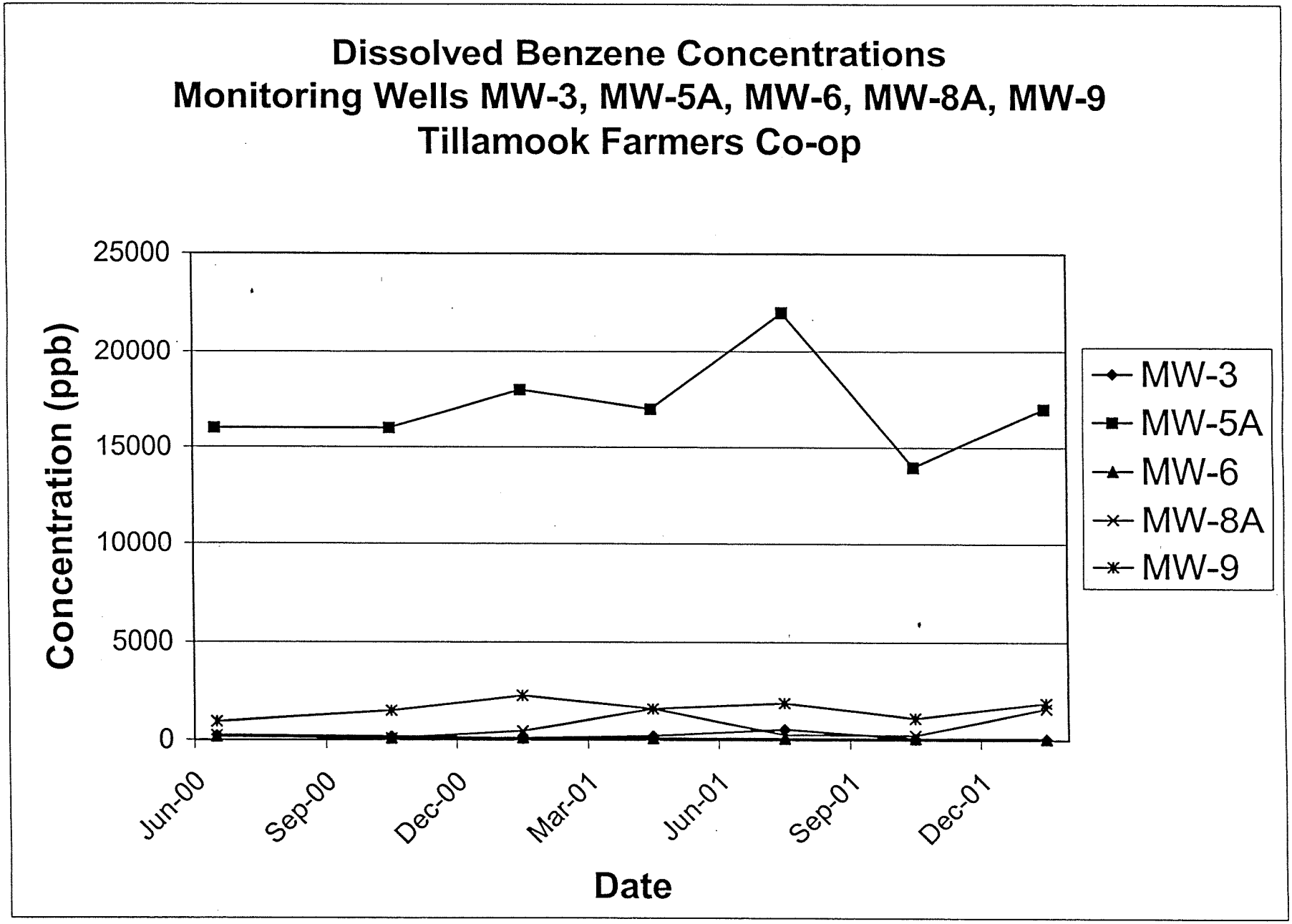
Date:	04/11/02


Dissolved Benzene Concentrations
Monitoring Wells MW-3, MW-5A, MW-6, MW-8A, MW-9
Tillamook Farmers Co-op
Concentration (ppb)
25000
20000
15000
10000
5000
0
Jun-00
Sep-00
Dec-00
Mar-01
Jun-01
Sep-01
Dec-01
Date
MW-3
MW-5A
MW-6
MW-8A
MW-9

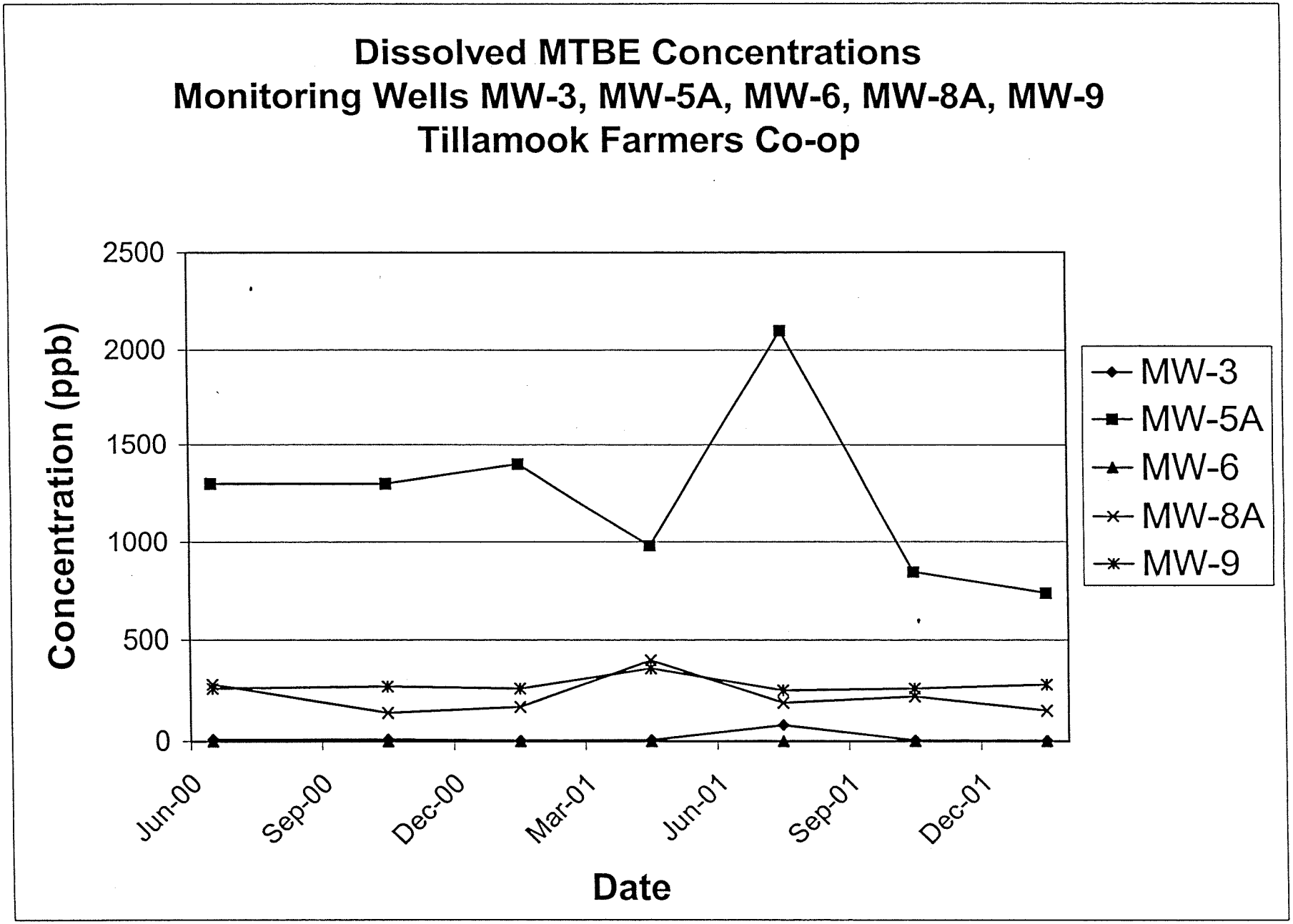

Dissolved MTBE Concentrations
Monitoring Wells MW-3, MW-5A, MW-6, MW-8A, MW-9
Tillamook Farmers Co-op
Concentration (ppb)
2500
2000
1500
1000
500
0
Jun-00
Sep-00
Dec-00
Mar-01
Jun-01
Sep-01
Dec-01
Date
MW-3
MW-5A
MW-6
MW-8A
MW-9

Table 3. Groundwater Risk-Based Concentrations

Occupational groundwater RBCs from DEQ September 1999 guidance document.
All concentrations in µg/L, parts per billion.
NA = not applicable.
(>S) = This groundwater RBC exceeds the limit of solubility. Concentrations in excess of this value indicate that free product might be present.
(=S) = Not a RBC. This contaminant cannot create an unacceptable risk by this pathway.
Shading where concentration exceeds RBC.

Contaminants-of-Concern	January 2002 Groundwater Analytical Results for MW-5A	Groundwater Exposure Pathways				
		Ingestion	Volatilization to Outdoor Air	Vapor Intrusion Into Buildings	Tapwater Ingestion and Inhalation	Groundwater in Excavation
Total Lead	31	15	NA	NA	NA	NA
Dissolved Lead	11					
MTBE	730	20	51,000,000 (=S)	51,000,000 (=S)	20	240,000
1,2-Dichloroethane (EDC)	(<25)	1.4	4,200	1,700	0.32	280
1,2-Dibromoethane (EDB)	(<25)	0.0015	1,100	830	0.0014	8.6
Benzene	17,000	4.3	5,800	1,200	1.0	820
Toluene	27,000	8,900	530,000 (=S)	530,000 (=S)	1,000	30,000
Ethylbenzene	3,000	4,400	170,000 (=S)	170,000 (=S)	1,800	45,000
Xylenes	24,000	89,000	180,000 (=S)	180,000 (=S)	2,000	55,000
Naphthalene	800	890	31,000 (=S)	31,000 (=S)	8.7	240
iso-Propylbenzene	120	440	30,000 (=S)	30,000 (=S)	100	1,800
n-Propylbenzene	280	440	14,000 (=S)	14,000 (=S)	100	1,600
1,2,4-Trimethylbenzene	2,700	2,200 (>S)	260 (=S)	260 (=S)	23	260 (=S)
1,3,5-Trimethylbenzene	1,100	2,200	50,000 (=S)	18,000	23	630

6.0 SUMMARY AND RECOMMENDATIONS

A groundwater monitoring event was completed on January 29, 2002. The results of the groundwater sampling conducted at that time are summarized below:

- Eight (8) monitoring wells were sampled as part of the January 2002 sampling event. Those samples were analyzed for gasoline-range petroleum hydrocarbons, total and dissolved lead, and VOCs.

- In January 2002, depth to groundwater at the site ranged from 0.51 feet below land surface (BLS) in monitoring well MW-5A to 3.68 feet BLS in monitoring well MW-8A. Depth to groundwater measurements collected at the time of sampling indicate that there is a groundwater mound in the vicinity of monitoring wells MW-3 and MW-5A and that groundwater flow is radially outward from that area.

- Analyses of the January 2002 groundwater samples revealed detected TPH as gasoline at concentrations ranging from 1.3 ppm in monitoring well MW-3 to 130 ppm in monitoring well MW-5A. Gasoline was not detected in samples collected from monitoring wells MW-1, MW-10, and MW-11. The highest concentrations of benzene (17,000 ppb) and MTBE (730 ppb) were detected in samples collected from monitoring well MW-5A.

- Elevated concentrations of gasoline and BTEX compounds in the groundwater sample collected from monitoring well MW-5A suggest the presence of free product in that area of the site (i.e., near the fuel island).

- The primary groundwater COC at the site appears to be benzene which is present at concentrations exceeding RBCs for the *volatilization to outdoor air, vapor intrusion into buildings*, and *groundwater in excavation* exposure pathways. Other potential COCs include naphthalene and 1,3,5-trimethylbenzene.

The next quarterly groundwater monitoring event will be performed in April 2002. No changes in monitoring parameters are recommended.

7.0 LIMITATIONS

The professional services of Bergeson-Boese & Associates, Inc. have been rendered using the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental consulting firms practicing in this or similar locations. No other warranty express or implied is made.

Groundwater samples were analyzed to identify and delineate surface and subsurface impact in areas most likely to have been impacted by releases and spills of petroleum products. The results of their analyses only indicate the presence or absence of petroleum hydrocarbons and hazardous constituents in those discrete sample locations. Analytical data from the laboratory samples should only be considered as indicators of site conditions and not a guarantee of the absence of petroleum hydrocarbons and hazardous constituents in areas not sampled.

The conclusions presented in this report are based only on the observations made during field investigation and data provided by others. The accuracy of these findings is based upon the accuracy of data and information provided by others. The findings of this assessment should not be considered as scientific certainties, but rather as professional opinion based upon selected and limited data.

If you have any questions concerning the information contained in this report, please do not hesitate to contact us.

Sincerely,
Bergeson-Boese & Associates, Inc.

Stephen M. Omo
Project Manager,

Randall J. Boese, RG
Senior Hydrologist

APPENDIX A

Field Data

rgeson-Boese & Associates, Inc.
Centennial Loop • Eugene, Oregon 97401

GROUNDWATER SAMPLING FIELD DATA

D	X
When diameter of well (in inches) is:	The volume per linear foot (in gallons) is:
2	0.163
4	0.650
6	1.470

PROJECT: TFC #151. 97H
DATE: 1-29-02
SAMPLER: RLB

ERALIZED EQUATION IS: $A = \pi r^2$; $V = \pi r^2 \cdot \frac{7.48\ gal}{ft^3}$ • height of water; V = X • h = gallons

MONITORING WELL		TIME		WELL DEPTH (WD) FROM TOP OF PVC (FEET)	DEPTH TO WATER (DTW) FROM TOP OF PVC (FEET)	H = TD - DTW (FEET)	PURGE VOLUME REQUIRED V = h·X·3	TEMP (°C)	COND. CORRECTED TO 25 °C	GAL	REMARKS (i.e., total volume purged, clarity of water, recharge rate)
NO.	WELL DIAMETER (INCHES)	START	END								
1	2"			9.94	0.80	9.14	4.46	PUMPED DRY		4	CLEAR W/ ALGAE
3	2"			7.75	0.68	7.07	3.45	—	~	4	CLOUDY THEN CLEAR
5A	2"			8.87	0.51	8.36	4.08	—	~	5	CLEAR/CLOUDY
6	2"			8.03	—			PUMPED DRY		2	GRAY - ODOR
8A	3/4"			10.80	3.68	7.12	3/4" WELL	PUMPED DRY		1	GRAY
9	2"			9.12	1.41	7.71	3.77	—	~	4	CLEAR
10	2"			9.81	1.59	8.82	4.01	—	~	4	CLEAR
11	2"			9.98	3.28	6.7	3.27	—	~	15	CLEAR

MW-10

1-29-02

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
1055	2.5	45.5	6.83	2.12	CLEAR
1056	3.0	46.0	6.85	1.9	CLEAR
1057	3.5	46.2	6.88	1.9	CLEAR
1058	4.0	46.1	6.86	1.9	CLEAR

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

MW-11

1-29-02

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
1000	5	47.1	6.7	6.08	CLEAR
1012	10	48.2	6.9		CLEAR
1024	15	47.7	6.6		CLEAR

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

MW-1

1-29-02

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
1138	2	47.1	6.45	.330	CLEAR, HAS ALGAE
1140	3	47.6	6.41	.331	CLOUDY
1142	4	47.7	6.39	.331	PUMPED DRY

COMMENTS (i.e., sample odor. well recharge time & percent, etc.)

MW-3

1319

1-29-02

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
1321	2	48.4	6.2		CLOUDY 1ST GALLON
1323	3	49.1	6.6		CLEAR
1325	4	49.2	6.7		CLEAR, HAS ODOR

COMMENTS (i.e., sample odor. well recharge time & percent, etc.)

DISSOLVED & TOTAL LEAD

MW-5A

1-29-02

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
1445	2	44.4	6.30	.731	CLEAR
1447	3	43.7	6.29	6.67	CLOUDY
1449	4	43.3	6.29	654	CLOUDY
1451	5	43.7	6.30	645	CLOUDY

COMMENTS (i.e., sample odor. well recharge time & percent, etc.)

DISSOLVED AND TOTAL LEAD

MW-6

1-29-02

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
1350	1	50.2	6.7		CLOUDY
1352	2	50.5	6.8		CLOUDY - ODOR & SHEEN

COMMENTS (i.e., sample odor. well recharge time & percent, etc.)

DISSOLVED AND TOTAL LEAD

MW-8A

1-29-02

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
1525	1 GAL	49.7	7.02		DARK GRAY 1ST GAL, THEN CLR

COMMENTS (i.e., sample odor. well recharge time & percent, etc.)

PUMPED DRY IN 1.5 GALLONS

DISSOLVED & TOTAL LEAD

MW-9

1-29-02

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	4	[illegible]	[illegible]	[illegible]	CLEAR

COMMENTS (i.e., sample odor. well recharge time & percent, etc.)

APPENDIX B

Laboratory Report and Chain-of-Custody Document

Pacific Northwest Laboratories

Environmental Analysis

65 Centennial Loop
Eugene, Oregon 97401

(541) 484-4493
Fax: (541) 484-4188

29791 SW Kinsman Road
Wilsonville, Oregon 97070

(503) 570-9436
Fax: (503) 570-0384

www.bergeson-boese.com

February 7, 2002

Tillamook Farmers Coop
Attn: Bill Hoyt
1920 Highway 101 North
Tillamook, OR 97141

RE: PNL Report Number: 3558
Client Project Code: TFC01SI.97H

Please find enclosed the report prepared for the laboratory analyses you requested.

The samples were received under a chain-of-custody. Soil samples analyzed using NWTPH methods are reported as dry weight. For all other methods results are reported as received.

Please contact us at the above address or phone number to obtain additional sample containers and coolers.

Thank you for selecting Pacific Northwest Laboratories for your analytical needs. We look forward to serving you in the future.

Sincerely,

Pacific Northwest Laboratories

Dean Bautz, Laboratory Coordinator

Enclosure

Pacific Northwest Laboratories
65 Centennial Loop
Eugene, Oregon 97401
(541) 484-4493 Fax: 484-4188

LABORATORY REPORT

PNL REPORT NUMBER:	3558
CLIENT:	Tillamook Farmers Coop
CLIENT PROJECT CODE:	TFC01SI.97H
SITE LOCATION:	1920 Highway 101 North Tillamook, Oregon
ITEMS ANALYZED:	8 water samples
DATE SAMPLES COLLECTED:	January 29, 2002
DATE ANALYSIS COMPLETED:	February 5, 2002
DATE SAMPLE DISCARDED:	March 5, 2002

METHOD: **NWTPH-Gx**
Results and Method Reporting Limits (MRL) presented in mg/L (ppm)
ND = Compound not detected

Sample I.D.	Result	MRL
MW-1	ND	0.25
MW-3	1.3	
MW-5A	130	
MW-6	11	
MW-8A	3.8	
MW-9	15	
MW-10	ND	0.25
MW-11	ND	0.25
LAB BLANK	ND	0.25

Surrogate Recoveries
(4-Bromofluorobenzene)

Sample I.D.	Percent	Acceptance Limits
MW-1	105	50-150
MW-3	111	
MW-5A	129	
MW-6	127	
MW-8A	132	
MW-9	130	
MW-10	124	
MW-11	121	
LAB BLANK	110	

Analyst

PNL REPORT NUMBER: 3558

METHOD: **Total Metals**
Results and Method Reporting Limits (MRL) presented in mg/L (ppm)
ND = Analyte not detected

		MW-3		MW-5A		MW-6	
ANALYTE	METHOD	Result	MRL	Result	MRL	Result	MRL
Lead	7421	ND	0.002	0.031		0.015	

		MW-8A		LAB BLANK	
ANALYTE	METHOD	Result	MRL	Result	MRL
Lead	7421	0.054		ND	0.002

Analyst

METHOD: **Dissolved Metals**
Results and Method Reporting Limits (MRL) presented in mg/L (ppm)
ND = Analyte not detected

		MW-3		MW-5A		MW-6	
ANALYTE	METHOD	Result	MRL	Result	MRL	Result	MRL
Lead	7421	ND	0.002	0.011		ND	0.002

		MW-8A		LAB BLANK	
ANALYTE	METHOD	Result	MRL	Result	MRL
Lead	7421	ND	0.002	ND	0.002

Analyst

PNL REPORT NUMBER: 3558

METHOD: **Volatile Organic Compounds per EPA Method 5030 / 8260B**
Results and Method Reporting Limits (MRL) presented in ug/L (ppb)
ND = Compound not detected

COMPOUND	MW-1 Result	MW-1 MRL	MW-3 Result	MW-3 MRL	MW-5A Result	MW-5A MRL
Methyl-tert-butylether (MTBE)	ND	1.0	1.3		730	
1,2-Dichloroethane (EDC)	ND	1.0	ND	1.0	ND	25
1,2-Dibromoethane (EDB)	ND	1.0	ND	1.0	ND	25
Benzene	ND	1.0	39		17000	
Toluene	ND	1.0	18		27000	
Ethylbenzene	ND	1.0	41		3000	
Xylenes (total)	ND	1.0	170		24000	
Isopropylbenzene	ND	1.0	3.8		120	
n-Propylbenzene	ND	1.0	9.4		280	
1,3,5-Trimethylbenzene	ND	1.0	34		1100	
1,2,4-Trimethylbenzene	ND	1.0	96		2700	
Naphthalene	ND	5.0	15		800	

COMPOUND	MW-6 Result	MW-6 MRL	MW-8A Result	MW-8A MRL	MW-9 Result	MW-9 MRL
Methyl-tert-butylether (MTBE)	ND	1.0	150		280	
1,2-Dichloroethane (EDC)	ND	1.0	ND	1.0	ND	1.0
1,2-Dibromoethane (EDB)	ND	1.0	ND	1.0	ND	1.0
Benzene	42		1600		1900	
Toluene	17		68		710	
Ethylbenzene	390		80		500	
Xylenes (total)	1600		560		2100	
Isopropylbenzene	44		4.0		32	
n-Propylbenzene	80		5.5		64	
1,3,5-Trimethylbenzene	270		57		170	
1,2,4-Trimethylbenzene	750		150		660	
Naphthalene	150		38		140	

(Continued on following page.)

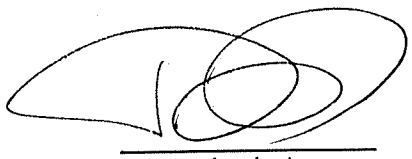
PNL REPORT NUMBER: 3558

METHOD: **Volatile Organic Compounds per EPA Method 5030 / 8260B**
Results and Method Reporting Limits (MRL) presented in ug/L (ppb)
ND = Compound not detected

COMPOUND	MW-10 Result	MW-10 MRL	MW-11 Result	MW-11 MRL	LAB BLANK Result	LAB BLANK MRL
Methyl-tert-butylether (MTBE)	ND	1.0	ND	1.0	ND	1.0
1,2-Dichloroethane (EDC)	ND	1.0	ND	1.0	ND	1.0
1,2-Dibromoethane (EDB)	ND	1.0	ND	1.0	ND	1.0
Benzene	ND	1.0	ND	1.0	ND	1.0
Toluene	ND	1.0	ND	1.0	ND	1.0
Ethylbenzene	ND	1.0	ND	1.0	ND	1.0
Xylenes (total)	ND	1.0	ND	1.0	ND	1.0
Isopropylbenzene	ND	1.0	ND	1.0	ND	1.0
n-Propylbenzene	ND	1.0	ND	1.0	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0	ND	1.0	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0	ND	1.0	ND	1.0
Naphthalene	ND	5.0	ND	5.0	ND	5.0

Surrogate Recoveries (percent)

Sample I.D.	DBFM	TOL	BFB
LAB BLANK	100	95	102
LCS	98	98	104
MW-1	94	97	102
MW-3	99	99	100
MW-5A	97	93	112
MW-6	96	98	106
MW-8A	100	100	107
MW-9	105	105	110
MW-10	100	96	96
MW-11	100	97	99



Analyst

QC Limits

DBFM	= Dibromofluoromethane	76-114
TOL	= Toluene-d8	88-110
BFB	= 4-Bromofluorobenzene	86-115

Pacific Northwest Laboratories

65 Centennial Loop
Eugene, Oregon 97401
Fax: (541) 484-4188

CHAIN OF CUSTODY RECORD

Client/Company: Jorgeson Logging
Project Manager: Randall J. Loose
Project Code: TFC#ST. 97H
Collected By: TYCE PEDERSEN

Site Location: Tillamook Farmers Co-op
Site Address: 1920 Hwy. 101 N
Billing Address: Tillamook, OR.
P.O.No.:
Phone/Fax No.:

Lab Project Number: 3558

Samples Refrigerated: (Yes) No
Samples in Proper Containers: (Yes) No
RUSH: Yes (No)

COMMENTS:

ANALYSES TO BE PERFORMED

	SAMPLE I.D.	DATE	TIME	MATRIX: SOIL	MATRIX: WATER	MATRIX: OTHER	NUMBER OF CONTAINERS	NWTPH-HCID OR EQWMDOE	NWTPH-Gasoline-x OR EQWMDOE	NWTPH-Diesel-x OR EQWMDOE	Volatile Organics EPA 624/8240/8260	BTEX/BTEXN EPA 602/8020	MTBE/EDB/EDC EPA 8260	PAH GC/MS SIM OR EQ	PCBs 608/8080	Flashpoint EPA 1010	Semi-Volatile Organics EPA 625/8270	Lead 7421 TOTAL & Dissolved TCLP Metals (3)/(8)/1311	131	BTEX (8260)	REMARKS
1	MW-1	1-29	1155		X		3		✓											✓	
2	MW-3	1-29	1328		X		5		✓									✓		✓	BTEX + ADDITIVES
3	MW-5A	1-29	1510		X		5		✓									✓		✓	
4	MW-6	1-29	1425		X		5		✓									✓		✓	
5	MW-8A	1-29	1600		X		5		✓									✓		✓	
6	MW-9	1-29	1240		X		3		✓											✓	
7	MW-10	1-29	1103		X		3		✓											✓	
8	MW-11	1-29	1030		X		3		✓											✓	
9																					
10																					
11																					
12																					
13																					
14																					

LEAD IS BOTH TOTAL & DISSOLVED

Add 4 @ 15 Filter Fee.

RELINQUISHED BY:	COMPANY	DATE / TIME	RECEIVED BY:	COMPANY	DATE / TIME
Tyce Pedersen	FBB&A	1-30-02 0830		PNL	1/30/02 8:35
RELINQUISHED BY:	COMPANY	DATE / TIME	RECEIVED BY:	COMPANY	DATE / TIME
RELINQUISHED BY:	COMPANY	DATE / TIME	RECEIVED BY:	COMPANY	DATE / TIME

APPENDIX C

Historical Groundwater Analytical Results

Tillamook Farmers Co-op

Datum: Mean Sea Level
Units = ug/L or ppb
= Not analyzed

Only detected compounds are listed.
-- = Not measured

GROUNDWATER DATA SHEETS

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-1	14-Oct-93	30-Dec-93	5-Apr-94	22-Jun-94	10-Oct-94	8-Jan-95	3-Apr-95	11-Jul-95	6-Oct-95
Groundwater Data									
Top PVC Elv.	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27
DTW	--	--	--	--	--	--	--	--	--
WTE	--	--	--	--	--	--	--	--	--
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline									
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE									
1,2-Dichloroethane									
1,2-Dibromoethane									
iso-Propylbenzene									
n-Propylbenzene									
1,3,5-Trimethylbenzene									
1,2,4-Trimethylbenzene									
Naphthalene									
Benzene	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	4	<0.5	2.0	0.8	<0.5	1.0	2.0	<0.5	1.0
Ethylbenzene	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	34	<1.5	2.0	3.0	<1.5	<1.5	2.0	<1.5	<1.5
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead									
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-1	22-Dec-95	10-Oct-97	17-Apr-98	16-Sep-98	29-Sep-98	6-Jan-99	22-Jun-00	18-Oct-00	30-Jan-01
Groundwater Data									
Top PVC Elv.	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27
DTW	--	0.38	1.98	5.40	--	1.98	2.66	1.53	1.34
WTE	--	6.89	5.29	1.87	--	5.29	4.61	5.74	5.93
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
TPH-G							<250	<250	<250
TPH-D									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE							<1	<1	<1
1,2-Dichloroethane							<1	<1	<1
1,2-Dibromoethane							<1	<1	<1
iso-Propylbenzene							<1	<1	<1
n-Propylbenzene							1.7	<1	<1
1,3,5-Trimethylbenzene							1.6	<1	<1
1,2,4-Trimethylbenzene							3.2	<1	<1
Naphthalene							<1	<5	<5
Benzene	<0.5			4.5		1.0	<0.5	<1	<1
Toluene	<0.5			7.4		3.7	<0.5	<1	<1
Ethylbenzene	<0.5			1.5		1.4	<0.5	<1	<1
Xylenes	<1.5			4.2		6.3	<0.5	<1	<1
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene							<1	<1	
Acenaphthene							<0.1	<0.1	
Fluorene							<0.1	<0.1	
Phenanthrene							<0.1	<0.1	
Anthracene							<0.1	<0.1	
Fluoranthene							<0.1	<0.1	
Pyrene							<0.1	<0.1	
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead							<2		
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-1	5-Apr-01	26-Jul-01	30-Oct-01	29-Jan-02					
Groundwater Data									
Top PVC Elv.	7.27	7.27	7.27	7.27					
DTW	2.20	3.04	3.55	0.80					
WTE	5.07	4.23	3.72	6.47					
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
TPH-G	<250	<250	<250	<250					
TPH-D									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE	1.0	1.3	1.9	<1					
1,2-Dichloroethane	<1	<1	<1	<1					
1,2-Dibromoethane	<1	<1	<1	<1					
iso-Propylbenzene	<1	<1	<1	<1					
n-Propylbenzene	<1	<1	<1	<1					
1,3,5-Trimethylbenzene	<1	<1	<1	<1					
1,2,4-Trimethylbenzene	<1	<1	<1	<1					
Naphthalene	<5	<5	<5	<5					
Benzene	<1	<1	1.6	1.6					
Toluene	<1	<1	1.4	1.4					
Ethylbenzene	<1	<1	<1	<1					
Xylenes	<1	<1	<1	<1					
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead									
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-3	14-Oct-93	30-Dec-93	5-Apr-94	22-Jun-94	10-Oct-94	8-Jan-95	3-Apr-95	11-Jul-95	6-Oct-95
Groundwater Data									
Top PVC Elv.	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27
DTW	--	--	--	--	--	--	--	--	--
WTE	--	--	--	--	--	--	--	--	--
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline									
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE									
1,2-Dichloroethane									
1,2-Dibromoethane									
iso-Propylbenzene									
n-Propylbenzene									
1,3,5-Trimethylbenzene									
1,2,4-Trimethylbenzene									
Naphthalene									
Benzene	2,800	1,500	2,600	3,000	1,100	81	660	500	260
Toluene	9,200	4,200	4,200	740	1,100	28	390	290	46
Ethylbenzene	920	710	710	930	270	18	250	37	<0.5
Xylenes	11,000	12,000	12,000	7,800	4,700	170	4,600	1,200	34
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead									
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-3	22-Dec-95	10-Oct-97	17-Apr-98	16-Sep-98	29-Sep-98	6-Jan-99	22-Jun-00	18-Oct-00	30-Jan-01
Groundwater Data									
Top PVC Elv.	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27	9.27
DTW	--	0.23	1.16	1.81	--	1.00	1.13	0.86	0.45
WTE	--	9.04	8.11	7.46	--	8.27	8.14	8.41	8.82
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline							5,300	3,400	1,600
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE							8.0	8.8	2.5
1,2-Dichloroethane							<1.0	<1.0	<1.0
1,2-Dibromoethane							<1.0	<1.0	<1.0
iso-Propylbenzene							14.0	9.8	5.7
n-Propylbenzene							28	20	13
1,3,5-Trimethylbenzene							110	79	54
1,2,4-Trimethylbenzene							310	270	180
Naphthalene							100	54	22
Benzene	780			1,100		130	240	180	79
Toluene	130			1,200		120	220	69	39
Ethylbenzene	100			370		65	280	99	57
Xylenes	430			2,500		420	1,600	540	310
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene							32	13	
Acenaphthene							0.11	<0.1	
Fluorene							0.20	<0.1	
Phenanthrene							0.12	<0.1	
Anthracene							<0.1	<0.1	
Fluoranthene							<0.1	<0.1	
Pyrene							<0.1	<0.1	
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead							2	9	<2
Total Lead								3	<2

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-3	5-Apr-01	26-Jul-01	30-Oct-01	29-Jan-02					
Groundwater Data									
Top PVC Elv.	9.27	9.27	9.27	9.27					
DTW	0.94	1.38	0.63	0.68					
WTE	8.33	7.89	8.64	8.59					
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline	4,400	6,500	2,500	1,300					
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE	5.0	79	2.0	1.3					
1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0					
1,2-Dibromoethane	<1.0	<1.0	<1.0	<1.0					
iso-Propylbenzene	9.0	12	6.9	3.8					
n-Propylbenzene	19	28	15	9					
1,3,5-Trimethylbenzene	82	80	48	34					
1,2,4-Trimethylbenzene	240	270	140	96					
Naphthalene	48	59	29	15					
Benzene	200	540	65	39					
Toluene	160	190	35	18					
Ethylbenzene	140	180	71	41					
Xylenes	870	650	250	170					
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead	6	<2	<2	<2					
Total Lead	5	9	<2	<2					

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-5	14-Oct-93	30-Dec-93	5-Apr-94	18-May-94	10-Oct-94	8-Jan-95	3-Apr-95	11-Jul-95	6-Oct-95
Groundwater data									
Top PVC Elv.	9.29	9.29	9.29	9.29	9.29	9.29	9.29	9.29	9.29
DTW	--	--	--	--	--	--	--	--	--
WTE	--	--	--	--	--	--	--	--	--
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline									
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE									
1,2-Dichloroethane									
1,2-Dibromoethane									
iso-Propylbenzene									
n-Propylbenzene									
1,3,5-Trimethylbenzene									
1,2,4-Trimethylbenzene									
Naphthalene									
Benzene	15,000	28,000	22,000	14,000	11,000	570	13,000	11,000	2,900
Toluene	16,000	35,000	30,000	19,000	12,000	560	14,000	11,000	3,100
Ethylbenzene	1,100	2,000	5,800	1,500	1,200	110	1,600	990	380
Xylenes	13,000	21,000	30,000	24,000	12,000	360	17,000	12,000	2,800
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead									
Total Lead									

Tillamook Farmers Co-op	Date of Monitoring Event								
MONITORING WELL MW-5	22-Dec-95	10-Oct-97	17-Apr-98	16-Sep-98	29-Sep-98	6-Jan-99			
Groundwater data									
Top PVC Elv.	9.29	9.29	9.29	9.29	9.29	9.29			
DTW	--	0.46	1.25	1.86	--	0.96			
WTE	--	8.83	8.04	7.43	--	8.33			
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline									
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE									
1,2-Dichloroethane							Well Decommissioned		
1,2-Dibromoethane							8-Jun-00		
iso-Propylbenzene									
n-Propylbenzene									
1,3,5-Trimethylbenzene									
1,2,4-Trimethylbenzene									
Naphthalene									
Benzene	23.0			7,500		3,700			
Toluene	89.0			8,300		5,500			
Ethylbenzene	<0.5			1,900		1,400			
Xylenes	1,900.0			11,000		7,000			
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead									
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-5A	22-Jun-00	18-Oct-00	30-Jan-01	5-Apr-01	26-Jul-01	30-Oct-01	29-Jan-02		
Groundwater Data									
Top PVC Elv.	9.10	9.10	9.10	9.10	9.10	9.10	9.10		
DTW	0.94	0.88	0.88	0.82	1.16	0.70	0.51		
WTE	8.16	8.22	8.22	8.28	7.94	8.40	8.59		
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline	110,000	110,000	110,000	120,000	120,000	120,000	130,000		
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE	1,300	1,300	1,400	980	2,100	840	730		
1,2-Dichloroethane	<1	<1	<1	<1	<1	<25	<25		
1,2-Dibromoethane	<1	<1	<1	<1	<1	<25	<25		
iso-Propylbenzene	130	82	83	110	110	120	120		
n-Propylbenzene	280	190	190	260	280	220	280		
1,3,5-Trimethylbenzene	1,100	950	890	1,200	1,300	930	1100		
1,2,4-Trimethylbenzene	3,000	2,700	2,400	2,900	2,700	2,700	2700		
Naphthalene	790	1,100	660	700	570	900	800		
Benzene	16,000	16,000	18,000	17,000	22,000	14,000	17,000		
Toluene	24,000	21,000	22,000	26,000	26,000	23,000	27,000		
Ethylbenzene	2,800	2,500	2,400	2,800	3,000	2,500	3,000		
Xylenes	23,000	18,000	17,000	21,000	18,000	24,000	24,000		
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene	310.0	320.00							
Acenaphthene	0.19	0.17							
Fluorene	0.20	0.14							
Phenanthrene	0.16	0.12							
Anthracene	<0.1	<0.1							
Fluoranthene	<0.1	<0.1							
Pyrene	<0.1	<0.1							
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead	5	5	5	10	5	18	11		
Total Lead		23	17	35	19	94	31		

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-6	14-Oct-93	30-Dec-93	5-Apr-94	22-Jun-94	10-Oct-94	8-Jan-95	3-Apr-95	11-Jul-95	6-Oct-95
Groundwater Data									
Top PVC Elv.	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74
DTW	--	--	--	--	--	--	--	--	--
WTE	--	--	--	--	--	--	--	--	--
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline									
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE									
1,2-Dichloroethane									
1,2-Dibromoethane									
iso-Propylbenzene									
n-Propylbenzene									
1,3,5-Trimethylbenzene									
1,2,4-Trimethylbenzene									
Naphthalene									
Benzene	2,300	1,400	1,500	180	100	150	520	200	10
Toluene	1,400	820	340	180	140	4,000	680	2,350	380
Ethylbenzene	1,500	2,000	2,300	2,000	1,900	12,000	1,800	2,900	230
Xylenes	180	21,000	17,000	17,000	14,000	51,000	15,000	2,400	8,900
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead									
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-6	22-Dec-95	10-Oct-97	17-Apr-98	16-Sep-98	29-Sep-98	6-Jan-99	22-Jun-00	18-Oct-00	30-Jan-01
Groundwater Data									
Top PVC Elv.	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74	8.74
DTW	--	0.92	1.88	--	--	2.26	2.05	1.93	2.77
WTE	--	7.82	6.86	--	--	6.48	6.69	6.81	5.97
NWTPH Methods	*Total Petroleum Hydrocarbons*								
Gasoline							28,000.0	33,000.0	75,000
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds*								
MTBE							<1	<1	<1
1,2-Dichloroethane							<1	<1	<1
1,2-Dibromoethane							<1	<1	<1
iso-Propylbenzene							18	53	170
n-Propylbenzene							51	110	390
1,3,5-Trimethylbenzene							990	340	1,100
1,2,4-Trimethylbenzene							2,500	1,100	3,000
Naphthalene							570	310	670
Benzene	250				150	210	170	86	110
Toluene	450				780	65	90	41	68
Ethylbenzene	1,100				26	1,400	2,100	860	1,800
Xylenes	5,300				1,800	5,800	7,800	2,900	6,700
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene							190	420	
Acenaphthene							0.28	0.88	
Fluorene							0.33	1.20	
Phenanthrene							0.47	1.80	
Anthracene							<0.1	0.60	
Fluoranthene							<0.1	0.24	
Pyrene							<0.1	0.35	
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead							2	3	<2
Total Lead								9	45

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-6	5-Apr-01	26-Jul-01	30-Oct-01	29-Jan-02					
Groundwater Data									
Top PVC Elv.	8.74	8.74	--	--					
DTW	2.35	2.18	--	--					
WTE	6.39	6.56	--	--					
NWTPH Methods	*Total Petroleum Hydrocarbons*								
Gasoline	31,000	18,000	31,000	11,000					
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds*								
MTBE	<1	<1	<1	<1					
1,2-Dichloroethane	<1	<1	<1	<1					
1,2-Dibromoethane	<1	<1	<1	<1					
iso-Propylbenzene	110	73	150	44					
n-Propylbenzene	230	150	330	80					
1,3,5-Trimethylbenzene	880	480	1,000	270					
1,2,4-Trimethylbenzene	2,300	1,600	2,600	750					
Naphthalene	470	280	470	150					
Benzene	79	73	68	42					
Toluene	41	36	43	17					
Ethylbenzene	1,200	780	1,300	390					
Xylenes	4,600	3,400	5,300	1,600					
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead	2	16	<2	<2					
Total Lead	9	150	26	15					

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-7	14-Oct-93	30-Dec-93	5-Apr-94	22-Jun-94	10-Oct-94	8-Jan-95	3-Apr-95	11-Jul-95	6-Oct-95
Groundwater Data									
Top PVC Elv.	9.01	9.01	9.01	9.01	9.01	9.01	9.01	9.01	9.01
DTW	--	--	--	--	--	--	--	--	--
WTE	--	--	--	--	--	--	--	--	--
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline									
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE									
1,2-Dichloroethane									
1,2-Dibromoethane									
iso-Propylbenzene									
n-Propylbenzene									
1,3,5-Trimethylbenzene									
1,2,4-Trimethylbenzene									
Naphthalene									
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	2.0	<1.0	<0.5	<0.5	1.0	2.0	<0.5	<0.5	1.0
Ethylbenzene	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	5.0	8.0	<1.5	<1.5	2.0	3.0	<1.5	<1.5	3.0
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead									
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-7	22-Dec-95	10-Oct-97	17-Apr-98	16-Sep-98	29-Sep-98	6-Jan-99	22-Jun-00	18-Oct-00	30-Jan-01
Groundwater Data									
Top PVC Elv.	9.01	9.01	9.01	9.01	9.01	9.01	9.01	9.01	9.01
DTW	--	0.66	3.56	4.25	--	2.79	3.62	3.38	2.83
WTE	--	8.35	5.45	4.76	--	6.22	5.39	5.63	6.18
NWTPH Methods	*Total Petroleum Hydrocarbons*								
Gasoline							<250	<250	<250
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE							13	<1	1.3
1,2-Dichloroethane							<1	<1	<1
1,2-Dibromoethane							<1	<1	<1
iso-Propylbenzene							<1	<1	<1
n-Propylbenzene							<1	<1	<1
1,3,5-Trimethylbenzene							<1	<1	<1
1,2,4-Trimethylbenzene							<1	<1	<1
Naphthalene							<1	<5	<5
Benzene	<0.5			<1.0		1.0	<1	<1	<1
Toluene	<0.5			1.7		4.1	<1	<1	<1
Ethylbenzene	<0.5			<1.0		6.3	<1	<1	<1
Xylenes	<1.5			2.0		29.0	<1	<1	<1
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene							<0.1	<0.1	
Acenaphthene							<0.1	<0.1	
Fluorene							<0.1	<0.1	
Phenanthrene							<0.1	<0.1	
Anthracene							<0.1	<0.1	
Fluoranthene							<0.1	<0.1	
Pyrene							<0.1	<0.1	
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead							<2	<2	
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-7	5-Apr-01								
Groundwater Data									
Top PVC Elv.	9.01								
DTW	2.91								
WTE	6.10								
NWTPH Methods	*Total Petroleum Hydrocarbons*								
Gasoline	<250								
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE	3.8								
1,2-Dichloroethane	<1								
1,2-Dibromoethane	<1								
iso-Propylbenzene	<1		Well Decommissioned						
n-Propylbenzene	<1		09-Apr-01						
1,3,5-Trimethylbenzene	<1								
1,2,4-Trimethylbenzene	<1								
Naphthalene	<5								
Benzene	<1								
Toluene	<1								
Ethylbenzene	<1								
Xylenes	<1								
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead									
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-8	14-Oct-93	30-Dec-93	5-Apr-94	22-Jun-94	10-Oct-94	8-Jan-95	3-Apr-95	11-Jul-95	6-Oct-95
Groundwater Data									
Top PVC Elv.	--	--	--	--	--	--	--	--	--
DTW	--	--	--	--	--	--	--	--	--
WTE	--	--	--	--	--	--	--	--	--
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline									
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE									
1,2-Dichloroethane									
1,2-Dibromoethane									
iso-Propylbenzene									
n-Propylbenzene									
1,3,5-Trimethylbenzene									
1,2,4-Trimethylbenzene									
Naphthalene									
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.0
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	2.0
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene									
Acenaphthene									
Fluorene									
Phenanthrene									
Anthracene									
Fluoranthene									
Pyrene									
EPA Method 7421	Metals (ug/L or ppb)								
Dissolved Lead									
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-8A	22-Jun-00	18-Oct-00	30-Jan-01	5-Apr-01	26-Jul-01	30-Oct-01	29-Jan-02		
Groundwater Data									
Top PVC Elv.	10.76	10.76	10.76	10.76	10.76	10.76	10.76		
DTW	3.15	3.17	2.79	3.14	3.33	2.89	3.68		
WTE	7.61	7.59	7.97	7.62	7.43	7.87	7.08		
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline	1,900	770	1,500	4,900	830	710	3,800		
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE	280	140	170	400	190	220	150		
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1	<1		
1,2-Dibromoethane	<1	<1	<1	<1	<1	<1	<1		
iso-Propylbenzene	3.8	1.9	<1	2.3	1	1.0	4		
n-Propylbenzene	5.5	3.0	<1	3	2	2.0	5.5		
1,3,5-Trimethylbenzene	58	20	12	27	11	10	57		
1,2,4-Trimethylbenzene	110	48	21	78	21	18	150		
Naphthalene	17	11	6.1	19	8.6	9.2	38		
Benzene	240	84	460	1,600	260	230	1,600		
Toluene	16	1.3	110	480	49	8.0	68		
Ethylbenzene	20	10	19	72	10	7.7	80		
Xylenes	58	20	340	690	120	53	560		
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene	3.8	2.5							
Acenaphthene	<0.1	<0.1							
Fluorene	0.12	<0.1							
Phenanthrene	0.10	<0.1							
Anthracene	<0.1	<0.1							
Fluoranthene	<0.1	<0.1							
Pyrene	<0.1	<0.1							
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead	2	2	6	4	4	6	<2		
Total Lead		120	14	55	9	54	54		

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-9	16-Sep-98	6-Jan-99	22-Jun-00	18-Oct-00	30-Jan-01	5-Apr-01	26-Jul-01	30-Oct-01	29-Jan-02
Groundwater Data									
Top PVC Elv.	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98
DTW	1.95	1.47	1.95	1.40	1.46	1.67	1.34	1.54	1.41
WTE	7.03	7.51	7.03	7.58	7.52	7.31	7.64	7.44	7.57
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline			5,700	9,600	14,000	12,000	13,000	7,800	15,000
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE			260	270	260	360	250	260	280
1,2-Dichloroethane			<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane			<1	<1	<1	<1	<1	<1	<1
iso-Propylbenzene			18	20	34	21	26	19	32
n-Propylbenzene			51	64	78	48	66	40	64
1,3,5-Trimethylbenzene			160	240	190	170	210	120	170
1,2,4-Trimethylbenzene			420	770	820	570	800	430	660
Naphthalene			75	170	140	130	140	120	140
Benzene	1,400	3,200	940	1,500	2,300	1,600	1,900	1,100	1,900
Toluene	3,100	6,000	620	570	1,400	1,200	1,100	290	710
Ethylbenzene	710	1,000	330	430	560	400	450	300	500
Xylenes	4,000	5,300	2,000	2,500	2,900	2,400	2,900	1,700	2,100
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene			43	53					
Acenaphthene			<0.1	<0.1					
Fluorene			<0.1	<0.1					
Phenanthrene			<0.1	<0.1					
Anthracene			<0.1	<0.1					
Fluoranthene			<0.1	<0.1					
Pyrene			<0.1	<0.1					
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead			<2						
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-10	22-Jun-00	18-Oct-00	30-Jan-01	5-Apr-01	26-Jul-01	30-Oct-01	29-Jan-02		
Groundwater Data									
Top PVC Elv.	10.83	10.83	10.83	10.83	10.83	10.83	10.83		
DTW	4.36	5.01	4.05	3.62	5.67	5.34	1.59		
WTE	6.47	5.82	6.78	7.21	5.16	5.49	9.24		
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline	<250	<250	<250	<250	<250	<250	<250		
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE	<1	<1	<1	<1	<1	<1	<1		
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1	<1		
1,2-Dibromoethane	<1	<1	<1	<1	<1	<1	<1		
iso-Propylbenzene	<1	<1	<1	<1	<1	<1	<1		
n-Propylbenzene	<1	<1	<1	<1	<1	<1	<1		
1,3,5-Trimethylbenzene	<1	<1	<1	<1	<1	<1	<1		
1,2,4-Trimethylbenzene	<1	<1	<1	<1	<1	<1	<1		
Naphthalene	<1	<5	<5	<5	<5	<5	<5		
Benzene	<1	<1	<1	<1	<1	<1	<1		
Toluene	<1	<1	<1	<1	<1	<1	<1		
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1		
Xylenes	<1	<1	<1	<1	<1	<1	<1		
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene	<1	<1							
Acenaphthene	<0.1	<0.1							
Fluorene	<0.1	<0.1							
Phenanthrene	<0.1	<0.1							
Anthracene	<0.1	<0.1							
Fluoranthene	<0.1	<0.1							
Pyrene	<0.1	<0.1							
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead	<2								
Total Lead									

Tillamook Farmers Co-op	*Date of Monitoring Event*								
MONITORING WELL MW-11	22-Jun-00	18-Oct-00	30-Jan-01	5-Apr-01	26-Jul-01	30-Oct-01	29-Jan-02		
Groundwater Data									
Top PVC Elv.	11.65	11.65	11.65	11.65	11.65	11.65	11.65		
DTW	5.70	6.19	5.61	4.99	6.97	6.75	3.28		
WTE	5.95	5.46	6.04	6.66	4.68	4.90	8.37		
NWTPH Methods	*Total Petroleum Hydrocarbons (ug/L or ppb)*								
Gasoline	<250	<250	<250	<250	<250	<250	<250		
Diesel									
EPA Method 5030/8260B	*Volatile Organic Compounds (ug/L or ppb)*								
MTBE	<1	<1	<1	<1	<1	<1	<1		
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1	<1		
1,2-Dibromoethane	<1	<1	<1	<1	<1	<1	<1		
iso-Propylbenzene	<1	<1	<1	<1	<1	<1	<1		
n-Propylbenzene	<1	<1	<1	<1	<1	<1	<1		
1,3,5-Trimethylbenzene	<1	<1	<1	<1	<1	<1	<1		
1,2,4-Trimethylbenzene	<1	<1	<1	<1	<1	<1	<1		
Naphthalene	<1	<5	<5	<5	<5	<5	<5		
Benzene	<1	<1	<1	<1	<1	<1	<1		
Toluene	<1	<1	<1	<1	<1	<1	<1		
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1		
Xylenes	<1	<1	<1	<1	<1	<1	<1		
EPA Method 8270 GC/MS/SIM	*Polynuclear Aromatic Hydrocarbons (ug/L or ppb)*								
Naphthalene	<1	<1							
Acenaphthene	<0.1	<0.1							
Fluorene	<0.1	<0.1							
Phenanthrene	<0.1	<0.1							
Anthracene	<0.1	<0.1							
Fluoranthene	<0.1	<0.1							
Pyrene	<0.1	<0.1							
EPA Method 7421	*Metals (ug/L or ppb)*								
Dissolved Lead	<2								
Total Lead									