03-57-002801
and 02-57-001682
Reedsburg Cleaners

VIERBICHER ASSOCIATES, INC.

September 13, 2001

Mr. Randy Maas
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Re: Reedsburg Cleaners
349 E. Main Street, Reedsburg
BRRTS # 03-57-002801
02-57-001682

Dear Mr. Maas:

We have prepared the following status report for the Reedsburg Cleaners site. This status report covers the period from June 2001 through August 2001.

Drilling Activities

On July 16, 2001, soil boring SB-1 and piezometer P-2 were installed according to our workplan. We could not gain access to the property west of the Dairyland Veterinary Service; therefore, that monitoring well was not installed. We feel that proposed monitoring well location is now unnecessary.

SB-1 was installed in between the sidewalk and N. Locust Street (see Figure 2). SB-1 was drilled down to 3.3 feet, where competent sandstone was encountered. No laboratory soil samples were collected in SB-1.

P-2 was installed in the northeast corner of the Cenex property (see attached map). The well screen for P-2 was completed at 40 feet. Competent sandstone was encountered at 18 feet.

Groundwater Sampling Activities

On July 24, 2001, groundwater levels were measured in all site wells and some nearby monitoring wells (see Table 1). Also on July 24, 2001, P-2 was developed and then sampled for volatile organic compounds (VOC). Laboratory results show that only chloromethane was detected at 6.3 ug/L. This compound may be attributed to laboratory interference or organic interaction with the sample preservative (HCL).

On August 13, 2001, groundwater levels were measured again. Also on August 13, 2001, the eight site wells and seven off-site wells were sampled. Groundwater samples were analyzed for all or some of the following parameters: VOC, nitrogen, sulfate, chloride, and methane. The laboratory results are summarized in Table 2. Several field parameters (dissolved oxygen, conductivity, etc.) were also collected during sampling activities. These results are summarized in Table 3.

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Groundwater contaminated with petroleum compounds exceeding the NR 140 enforcement standards (ES) was found in the following wells: MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7 (MSA), MW-8 (MSA), and MW-3 (Gade). Groundwater contaminated with chlorinated solvents exceeding the NR 140 ES was found in the following wells: MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7 (MSA), and MW-8 (MSA). No VOC compounds were detected in the following wells: P-1, P-2, P-8 (MSA), MW-3P (Gade), and MW-9 (Gade).

On August 10, 2001, Resource Engineering Associates, Inc. measured groundwater levels in five monitoring wells and two piezometers at the Coop Country Partners, 306 E. Main Street. Groundwater samples were also collected that day and analyzed for VOC. No chlorinated solvents were detected within these seven wells. Petroleum compounds were not detected within MW-1, the well closest to Reedsburg Cleaners.

A water table contour map, Figure 3, was prepared from the August 10 & 13, 2001 groundwater elevations. The map shows that groundwater flows southwest, directly towards the Coop Country Partners site.

Future Activities

We feel the extent of soil and groundwater contamination has been adequately characterized. Based on the groundwater sampling of several piezometers completed in the sandstone (P-1, P-2, P-8, MW-3P, MW-4A, & MW-5A), we feel that chlorinated solvents have not migrated downward into the sandstone. We do not intend to collect another round of groundwater samples until after the remedial investigation report and remedial action options report have been completed.

We intend to conduct slug tests in several monitoring wells on September 18, 2001. Once this data has been obtained we shall complete the investigation report.

If you have any questions or disagree with our recommendations, please feel free to give me a call at (608) 233-5800.

Sincerely,
VIERBICHER ASSOCIATES, INC.

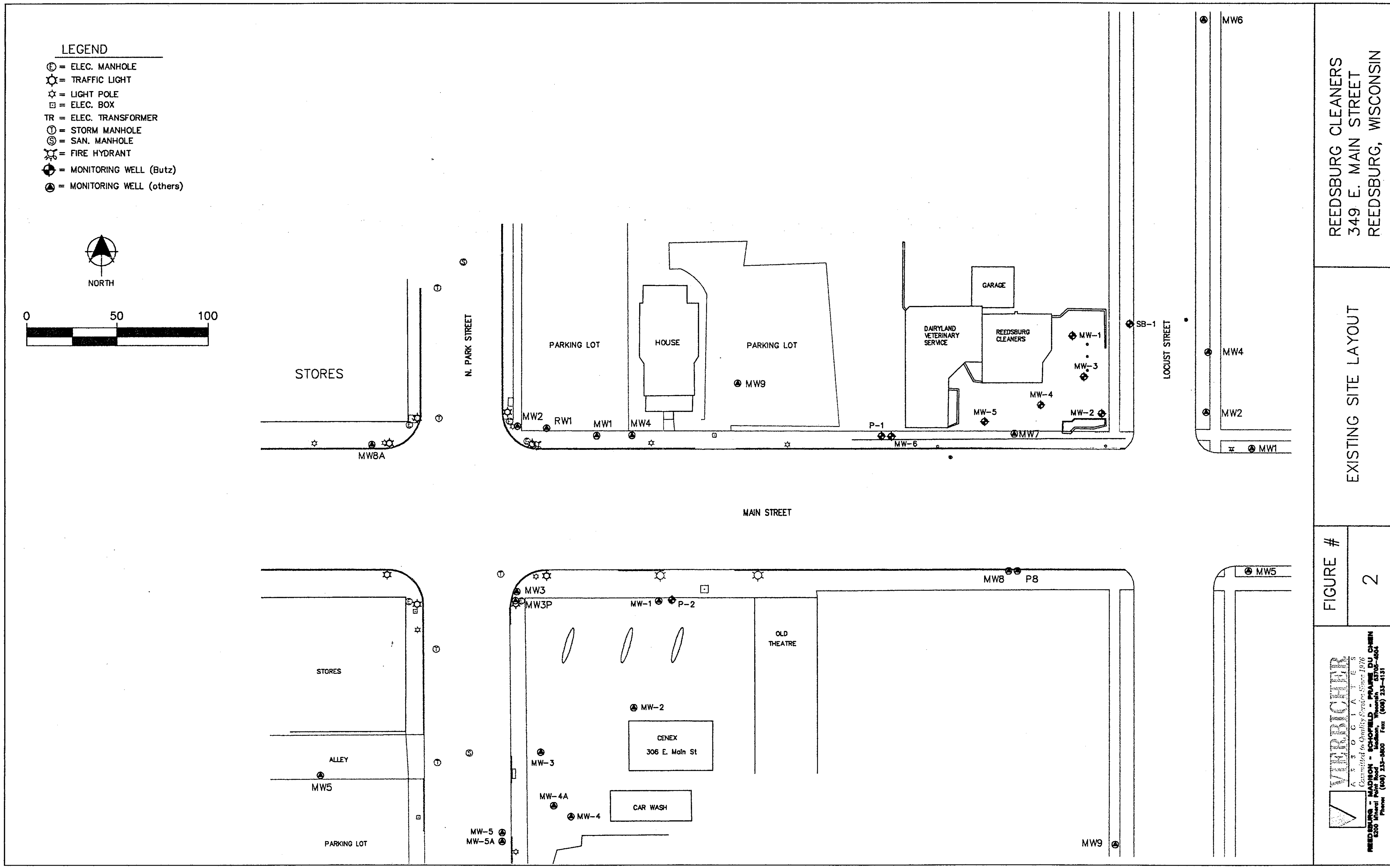
Joel L. Janssen
Hydrogeologist

JLJ/las

cc: Wayne Butz

Attachments:

Figure 2	Existing Site Layout
Figure 3	Water Table Contour Map - August 13, 2001
Table 1	Groundwater Elevation Data
Table 2	Groundwater Analytical Results
Table 3	Groundwater Field Parameters


LEGEND
= ELEC. MANHOLE
= TRAFFIC LIGHT
= LIGHT POLE
= ELEC. BOX
TR = ELEC. TRANSFORMER
= STORM MANHOLE
= SAN. MANHOLE
= FIRE HYDRANT
= MONITORING WELL (Butz)
= MONITORING WELL (others)
NORTH
0
50
100
STORES
N. PARK STREET
PARKING LOT
HOUSE
PARKING LOT
GARAGE
DAIRYLAND VETERINARY SERVICE
REEDSBURG CLEANERS
LOCUST STREET
MAIN STREET
MW6
MW4
MW2
MW1
MW5
SB-1
MW-1
MW-3
MW-4
MW-5
MW-2
MW7
MW-6
P-1
MW9
MW2
RW1
MW1
MW4
MW8A
MW3
MW3P
MW-1
P-2
MW8
P8
OLD THEATRE
STORES
ALLEY
MW5
PARKING LOT
MW-2
CENEX
306 E. Main St
MW-3
MW-4A
MW-4
CAR WASH
MW-5
MW-5A
MW9
REEDSBURG CLEANERS
349 E. MAIN STREET
REEDSBURG, WISCONSIN
EXISTING SITE LAYOUT
FIGURE #
2

LEGEND

- Ⓔ = ELEC. MANHOLE
- ☼ = TRAFFIC LIGHT
- ☼ = LIGHT POLE
- ⊡ = ELEC. BOX
- TR = ELEC. TRANSFORMER
- Ⓣ = STORM MANHOLE
- Ⓢ = SAN. MANHOLE
- = FIRE HYDRANT
- = MONITORING WELL (Butz)
- = MONITORING WELL (others)

NORTH

0 50 100

STORES

N. PARK STREET

MW8A

PARKING LOT

HOUSE

PARKING LOT

MW9 (880.41)

MW2 RW1 MW1 MW4

P-1

MW-6 (880.77)

GARAGE

DAIRYLAND VETERINARY SERVICE

REEDSBURG CLEANERS

(881.71) MW-1

(881.62) MW-3

(881.40) MW-4

(881.08) MW-5

(881.54) MW-2

(881.13) MW7

SB-1

LOCUST STREET

MW6

MW4

MW2

MW1

MAIN STREET

880.50

880

881

(880.80) MW8 P8

(879.59) MW3

MW3P

MW-1 (879.49)

P-2

879.50

OLD THEATRE

879

(878.99) MW-2

CENEX 306 E. Main St

MW-3 (878.97)

MW-4A

CAR WASH

MW-4 (878.88)

(878.84) MW-5

MW-5A

STORES

ALLEY

MW5

PARKING LOT

MW9

MW5

REEDSBURG CLEANERS
349 E. MAIN STREET
REEDSBURG, WISCONSIN

WATER TABLE CONTOUR MAP
August 13, 2001

FIGURE # 3

VIERBICHER ASSOCIATES
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TABLE 1
GROUNDWATER ELEVATION DATA
REEDSBURG CLEANERS

WELL ID	Top of Casing	July 24, 2001		August 13, 2001	
		Static Water Level	Groundwater Elevation	Static Water Level	Groundwater Elevation
MW-1	898.53	17.33	881.20	16.82	881.71
MW-2	898.97	17.80	881.17	17.43	881.54
MW-3	898.89	17.65	881.24	17.27	881.62
MW-4	898.06	17.00	881.06	16.66	881.40
MW-5	896.46	15.74	880.72	15.40	881.06
MW-6	894.66	14.33	880.33	13.89	880.77
P-1	894.50	14.52	879.98	13.35	881.15
P-2	890.80	11.32	879.48	10.39	880.41
MW-3 (Gade)	888.54	9.27	879.27	8.95	879.59
MW-3P (Gade)	888.47	9.36	879.11	9.08	879.39
MW-9 (Gade)	892.32	12.40	879.92	11.91	880.41
MW-6 (MSA)	900.85	18.95	881.90	18.08	882.77
MW-7 (MSA)	896.65	15.83	880.82	15.52	881.13
MW-8 (MSA)	896.58	16.08	880.50	15.78	880.80
P-8 (MSA)	896.67	16.62	880.05	15.65	881.02

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
REEDSBURG CLEANERS

	Units	NR 140 PAL	NR 140 ES	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	P-1	P-2	P-2	P-2 (no HCL)
Date Sampled				8/13/01	8/13/01	8/13/01	8/13/01	8/13/01	8/13/01	8/13/01	7/24/01	8/13/01	8/13/01
Results:													
Nitrogen (Nitrate-Nitrite)	mg/L			0.095	0.077	0.12	0.12	0.14	0.69	3.9	---	4.2	---
Sulfate	mg/L			21	2.4	12	28	12	12	30	---	28	---
Chloride	mg/L			650	580	790	890	430	76	88	---	79	---
Methane	ug/L			3.3	15	4.1	2.6	3.2	1.9	0.55	---	<0.5	---
VOCs (Method 8260)													
Benzene	ug/L	0.5	5	1,700	14,000	5,300	1,300	1,440	190	<0.25	<0.25	<0.25	<0.25
Toluene	ug/L	200	1,000	14,000	29,000	24,000	11,000	11,700	650	<0.22	<0.22	<0.22	<0.22
Ethylbenzene	ug/L	140	700	1,400	3,000	2,000	1,200	470	130	<0.12	<0.12	<0.12	<0.12
Xylenes, total	ug/L	1,000	10,000	6,400	12,700	8,900	6,200	1,750	480	<0.52	<0.52	<0.52	<0.52
Trimethylbenzenes, total	ug/L	96	480	1,400	4,300	1,500	1,590	680	175	<0.26	<0.26	<0.26	<0.26
sec-Butylbenzene	ug/L	---	---	<110	<110	<110	<110	<110	<22	<0.22	<0.22	<0.22	<0.22
n-Butylbenzene	ug/L	---	---	<150	<150	<150	<150	<150	<29	<0.29	<0.29	<0.29	<0.29
Chloromethane	ug/L	0.3	3	<120	<120	<120	<120	<120	<24	<0.24	6.3	<0.24	<0.24
1,2-Dichloroethane	ug/L	0.5	5	<170	340 (J)	<170	<200	<200	<39	<0.39	<0.39	<0.39	<0.39
cis-1,2-Dichloroethene	ug/L	7	70	<500	<500	<500	<500	1,800	<100	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene	ug/L	---	---	<75	150 (J)	<75	<75	<75	<15	<0.15	<0.15	<0.15	<0.15
p-Isopropyltoluene	ug/L	---	---	<100	<100	<100	<100	<100	<20	<0.2	<0.2	<0.2	<0.2
Naphthalene	ug/L	8	40	<340	<340	<340	<340	<340	<68	<0.68	<0.68	<0.68	<0.68
n-Propylbenzene	ug/L	---	---	<90	430	<90	<90	<90	<18	<0.18	<0.18	<0.18	<0.18
Tetrachloroethene	ug/L	0.5	5	4,500	940	3,500	12,000	6,200	720	<0.25	<0.25	<0.25	<0.25
Trichloroethene	ug/L	0.5	5	<180	300 (J)	220 (J)	190 (J)	5,800	87 (J)	<0.36	<0.36	<0.36	<0.36

--- = not applicable/not tested
(J) = result was quantified between the LOD and the LOQ
Shading indicates exceedence of PAL

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
REEDSBURG CLEANERS

	Units	NR 140 PAL	NR 140 ES	MW-6 (MSA)	MW-7 (MSA)	MW-8 (MSA)	P-8 (MSA)	MW-3 (Gade)	MW-3P (Gade)	MW-9 (Gade)
Date Sampled				8/13/01	8/13/01	8/13/01	8/13/01	8/13/01	8/13/01	8/13/01
Results:										
Nitrogen (Nitrate-Nitrite)	mg/L			1	---	1.5	---	---	---	---
Sulfate	mg/L			13	---	28	---	---	---	---
Chloride	mg/L			85	---	1,300	---	---	---	---
Methane	ug/L			<0.5	---	26	---	---	---	---
VOCs (Method 8260)										
Benzene	ug/L	0.5	5	---	670	3,000	<0.25	6.3	<0.25	<0.25
Toluene	ug/L	200	1,000	---	3,800	3,700	<0.22	0.52 (J)	<0.22	<0.22
Ethylbenzene	ug/L	140	700	---	510	470	<0.12	43	<0.12	<0.12
Xylenes, total	ug/L	1,000	10,000	---	1,790	1,310	<0.52	48.5	<0.52	<0.52
Trimethylbenzenes, total	ug/L	96	480	---	780	540	<0.26	193	<0.26	<0.26
sec-Butylbenzene	ug/L	---	---	---	<110	<44	<0.22	2.7	<0.22	<0.22
n-Butylbenzene	ug/L	---	---	---	<150	<58	<0.29	9.3	<0.29	<0.29
1,2-Dichloroethane	ug/L	0.5	5	---	<200	<78	<0.39	<0.39	<0.39	<0.39
cis-1,2-Dichloroethene	ug/L	7	70	---	<500	<200	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene	ug/L	---	---	---	<75	<30	<0.15	8.9	<0.15	<0.15
p-Isopropyltoluene	ug/L	---	---	---	<100	<40	<0.2	1	<0.2	<0.2
Naphthalene	ug/L	8	40	---	<340	<140	<0.68	23	<0.68	<0.68
n-Propylbenzene	ug/L	---	---	---	<90	<36	<0.18	9.3	<0.18	<0.18
Tetrachloroethene	ug/L	0.5	5	---	14,000	62 (J)	<0.25	<0.25	<0.25	<0.25
Trichloroethene	ug/L	0.5	5	---	370 (J)	<72	<0.36	<0.36	<0.36	<0.36

--- = not applicable/not tested
(J) = result was quantified between the LOD and the LOQ
Shading indicates exceedence of PAL

TABLE 3
GROUNDWATER FIELD PARAMETERS
REEDSBURG CLEANERS

WELL	DATE	Temp °C	Conductivity ms/cm	Turbidity Ntu	TDS g/l	ORP mV	pH	Total Iron ppm	DO mg/l
MW-1	8/13/01	14.9	2.25	598	1.4	-152	6.9	10	0.45
MW-2	8/13/01	14.7	2	999+	1.4	-151	6.8	10	0.14
MW-3	8/13/01	14.5	2.91	999+	1.9	-139	6.8	10	0.2
MW-4	8/13/01	14.4	3.39	999+	2.2	-109	6.9	5	0.51
MW-5	8/13/01	14.7	1.82	999+	1.2	-207	7.19	5	0.16
P-2	8/13/01	12.05	0	965	0.3	199	6.5	5	0.88
MW-3 (Gade)	8/13/01	15.6	2.41	999+	1.5	-127	7.12	NT	0.72
MW-3P (Gade)	8/13/01	12.36	0.56	369	0.35	218	5.96	NT	1.24
MW-4 (Gade)	8/13/01	16.09	0.71	149	0.45	109	7.4	NT	4.22
MW-9 (Gade)	8/13/01	18.3	0.27	390	0.18	110	7.3	NT	3.90
MW-6 (MSA)	8/13/01	14.1	0.72	145	0.44	182	6.72	5	4.95
MW-7 (MSA)	8/13/01	14.3	2.84	191	1.8	-140	6.99	NT	0.24
MW-8 (MSA)	8/13/01	13.5	5.08	67.2	3.2	-153	6.97	10	0.3