Laboratory Results - Groundwater
Harmony Country Cooperative Spencer Bulk Facility, Spencer, WI

	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	Trimethylbenzenes (ug/L)	Naphthalene (ug/L)	MtBE (ug/L)	Lead (ug/L)	D.O. (mg/L)	Nitrates (mg/L)	Sulfates (mg/L)	Iron (mg/L)	GW Level (msl)
NR 140 ES	5	700	1000	10000	480	40	60	15					
NR 140 PAL	0.5	140	200	1000	96	8	12	1.5					
MW-1	*Top of Well Screen = 1298.78*			*Length of Well Screen = 15 feet*									TOC=1303.33
06-Jun-01	<0.10	<0.10	<0.10	<0.20	<0.30	<0.70	<1.1	<1.4	2.6			0	1292.85
02-Jul-01	<0.40	<0.40	<0.40	<0.70	<0.40	<0.21	<0.40						1293.25
11-Feb-01	<0.40	<0.40	<0.40	<0.90	<0.50		<0.40		0.4				1292.86
26-Feb-02										1.6	55	0	1291.92
MW-2	*Top of Well Screen = 1298.62*			*Length of Well Screen = 15 feet*									TOC=1301.62
06-Jun-01	1.00 feet of free product, no sample												1291.74*
02-Jul-01	4.89 feet of free product, no sample												1289.35*
11-Feb-01	2.34 feet of free product, no sample												1289.71*
MW-3	*Top of Well Screen = 1293.19*			*Length of Well Screen = 10 feet*									TOC=1301.00
06-Jun-01	**150**	91	70	330	240	38	<11	<1.4	0.4			1.8	1292.74
02-Jul-01	**710**	240	95	430	298	46	<8.0						1292.83
11-Feb-01	**940**	380	39	750	550		15		0.2				1291.53
26-Feb-02										<0.11	43	2.2	1291.61
MW-4	*Top of Well Screen = 1295.17*			*Length of Well Screen = 10 feet*									TOC=1299.92
06-Jun-01	**3200**	77	36	430	270	**110**	<110	<1.4	0.3			0	1292.32
02-Jul-01	**4900**	110	43	540	246	**71**	<20						1292.64
11-Feb-01	**3200**	<40	<40	229	100		<40		0.4				1291.37
26-Feb-02										<0.11	45	0.8	1291.48
MW-5	*Top of Well Screen = 1295.90*			*Length of Well Screen = 10 feet*									TOC=1300.30
11-Feb-01	<0.40	<0.40	<0.40	<0.90	<0.50		<0.40		2.2				1291.30
26-Feb-02										0.34	56	0	1291.61
MW-6	*Top of Well Screen = 1294.89*			*Length of Well Screen = 10 feet*									TOC=1299.47
11-Feb-01	**25**	<0.40	<0.40	<0.90	0.74		29		1.4				1291.10
26-Feb-02										0.53	28	0	1291.24

MtBE = methyl-tert-butyl-ether
D.O. = dissolved oxygen
TOC = top of casing elevation in feet mean sea level
GW Level = groundwater elevation in feet mean sea level
ES = Wisconsin Administrative Code NR 140 enforcement standard
PAL = Wisconsin Administrative Code NR 140 preventive action limit
Values in BOLD exceed ES concentration

Laboratory Results - PAHs - Groundwater
Harmony Country Cooperative Spencer Bulk Facility, Spencer, WI

All concentrations are in ug/L except for D.O. and Iron which are in mg/L.

	1-Methyl-naphthalene	2-Methyl-naphthalene	Anthracene	Benzo(b)-fluoranthene	Fluoranthene	Fluorene	Indeno(1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	GW Level
NR 140 ES			3000	0.2	400	400		40		250	
NR 140 PAL			600	0.02	80	80		8		50	
MW-1	*Top of Well Screen = 1298.78*			*Length of Well Screen = 15 feet*							TOC=1303.33
02-Jul-01	<0.19	<0.20	<0.036	<0.0052	0.065	<0.091	0.035	<0.21	<0.036	<0.036	1293.25
MW-2	*Top of Well Screen = 1298.62*			*Length of Well Screen = 15 feet*							TOC=1301.62
02-Jul-01	4.89 feet of free product, no sample										1289.35*
MW-3	*Top of Well Screen = 1293.19*			*Length of Well Screen = 10 feet*							TOC=1301.00
02-Jul-01	69	<0.20	0.16	0.041	4.3	8.2	0.029	**46**	9.4	15	1292.83
MW-4	*Top of Well Screen = 1295.17*			*Length of Well Screen = 10 feet*							TOC=1299.92
02-Jul-01	18	32	<0.036	<0.0052	0.21	<0.091	<0.017	**71**	0.51	<0.036	1292.64

TOC = top of casing elevation in feet mean sea level
GW Level = groundwater elevation in feet mean sea level
ES = Wisconsin Administrative Code NR 140 enforcement standard
PAL = Wisconsin Administrative Code NR 140 preventive action limit
Values in BOLD exceed ES concentration

TABLE 1 - Field Organic Vapor Analyses
Harmony Country Cooperative Spencer Bulk Facility, Spencer, WI

Depth (ft)	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6	GP-7	GP-8	GP-9	GP-10	GP-13	GP-14	GP-15	GP-16	GP-17
1	1	9	0	0	355	705	270	282	0	1100	1	1	1	>1.5Q	196
2															
3	140	14	7	0	57	325	383	356	1	72	0	1	2	>1400	675
4															
5	344	87	365	0	73	229	475	377	0	37	1	1	1	822	573
6															
7	413	72	57	0	40	277	459	287	2	639	1	1	64	780	>1100
8															
9	485	32	106	0	74	277	738		6	583	1	2	603	>1400	653
10															
11	459	75	5	0	35	102	535		26	41	1	3	23	160	518
12															
13					61	59	45		9	6		2		>1400	918
14															
15					0	0	0			2					
16															
	MW-1	MW-2	MW-3	MW-4	MW-7	MW-8									
1															
2															
3	6	453	391		0	0									
4															
5	0	523	274	0											
6					0	0									
7															
8		647	174	0	0	0									
9															
10	0	459	272												
11					0	0									
12															
13	0	515	59	0	0										
14															
15	0	591	33	0											
16															

All concentrations are in parts per million as isobutylene

The concentrations were measured on site in the soil headspace using a Thermo Environmental Modell 580S or 580B OVM (PID) calibrated to 250 ppm isobutylene

Q = instrument quenched

TABLE 3 - Laboratory Results - Soil
Harmony Country Cooperatives Spencer Bulk Facility, Spencer, WI

Location	Depth (ft)	Date	GRO	DRO	Lead	MtBE	Benzene	Toluene	Ethylbenzene	M/P Xylene	O-Xylene	1,3,5-TMB	1,2,4-TMB	Naphthalene
SS-1	0.5	13-May-97	4500	38000										
GP-1	5	04-May-99	1100	970		<2.1	<7.0>	8.3	***14***	***30***	***13***	9.1	25	
GP-2	4	04-May-99	230	340		<1.1	<1.2	<0.88	<1.2	<2.4	<1.1	<2.5>	<3.1>	
GP-3	2	04-May-99	55	290		<0.0047	**6.5**	0.92	0.81	2.5	0.66	0.54	<0.0055	
GP-3	12	04-May-99	<1.1>	<2.6		<0.021	0.14	<0.018	<0.024	<0.047	<0.023	<0.025	<0.024	
GP-4	2	04-May-99	<0.69	<2.6		<0.021	<0.024	<0.018	<0.024	<0.047	<0.023	<0.025	<0.024	
GP-4	12	04-May-99	<0.69	<2.6		<0.021	<0.024	<0.018	<0.024	<0.047	<0.023	<0.025	<0.024	
GP-5	4	04-May-99	53	22		<0.021	0.97	0.57	<0.063>	<1.0>	<0.065>	<0.053>	<0.069>	
GP-5	16	04-May-99	<0.69	<2.6		<0.021	<0.024	<0.018	<0.024	<0.047	<0.023	<0.025	<0.024	
GP-6	3	04-May-99	600	85		<0.42	**6.7**	11	***9.8***	21	5.7	7.2	22	
GP-6	16	04-May-99	<0.69	<2.6		<0.021	<0.024	<0.018	<0.024	<0.047	<0.023	<0.025	<0.024	
GP-7	16	04-May-99	<0.69	<2.6		<0.021	<0.056>	<0.018	<0.024	<0.047	<0.023	<0.025	<0.024	
GP-8	3	04-May-99	200	680		<0.42	**3.4**	3	2.9	8.5	3.6	2	5.4	
GP-9	10-12	06-May-99	<0.70>	<2.6		<0.021	0.096	<0.018	<0.024	<0.047	<0.023	<0.025	<0.024	
GP-10	6-8	06-May-99	<1.0>	<2.6		<0.011	<0.0086>	<0.0059	<0.0059	<0.011	<0.012	<0.0059	0.019	<0.01
GP-12	6-8	06-May-99	150	48		<0.21	1.0	3.8	2.4	5.2	1.6	1.6	4.7	
GP-13	10-12	06-May-99	<0.69	<2.6		<0.21	<0.24	<0.18	<0.24	<0.47	<0.23	<0.25	<0.24	
GP-14	10-12	06-May-99	<0.69	<2.6		<0.21	<0.24	<0.18	<0.24	<0.47	<0.23	<0.25	<0.24	
GP-15	8-10	06-May-99	25	<2.6		<0.013	0.039	0.091	0.13	0.098	<0.033>	0.14	0.086	0.3
GP-16	8-10	06-May-99	180	1500		<0.053	1.4	0.43	2.3	5.2	0.78	1.7	3.9	1.9
GP-17	6-8	06-May-99	6500	1800		<11	***54***	***250***	***110***	***320***	***130***	***76***	***210***	
MW-6	2-4	31-Jan-02			7.0									<0.016
B-1	2-4	31-Jan-02			41.2									***24***
B-2	2-4	31-Jan-02			8.5									***3.3***
B-3	2-4	07-Jul-03	9400			<3.4	***25***	***380***	***180***	***750***	***300***	***150***	***520***	***76***
B-4	2-4	07-Jul-03	95			<0.025	<0.025	0.081	0.18	0.51	0.19	0.48	0.66	0.09
B-5	2-4	07-Jul-03	31			<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.21	0.065	<0.026
B-6	2-4	07-Jul-03	1000			<0.34	**3.3**	18	***18***	***57***	***22***	***12***	40	***9.4***
NR 746	Table 1						8.5	38	4.6	42*	42*	11	83	2.7
NR 746	Table 2						1.10							
NR 720	GRCLs		100	100			0.0055	1.5	2.9	4.1*	4.1*			

All concentrations are in mg/Kg.

< = below the detection limit

< > = between detection limit and quanitfication limit

Blank = not analyzed

NR 746 Table 1 values are concentrations indicative of free phase petroleum product

NR 746 Table 2 are direct contact limits for the top four feet of soil

GRO = gasoline range organics

DRO = diesel range organics

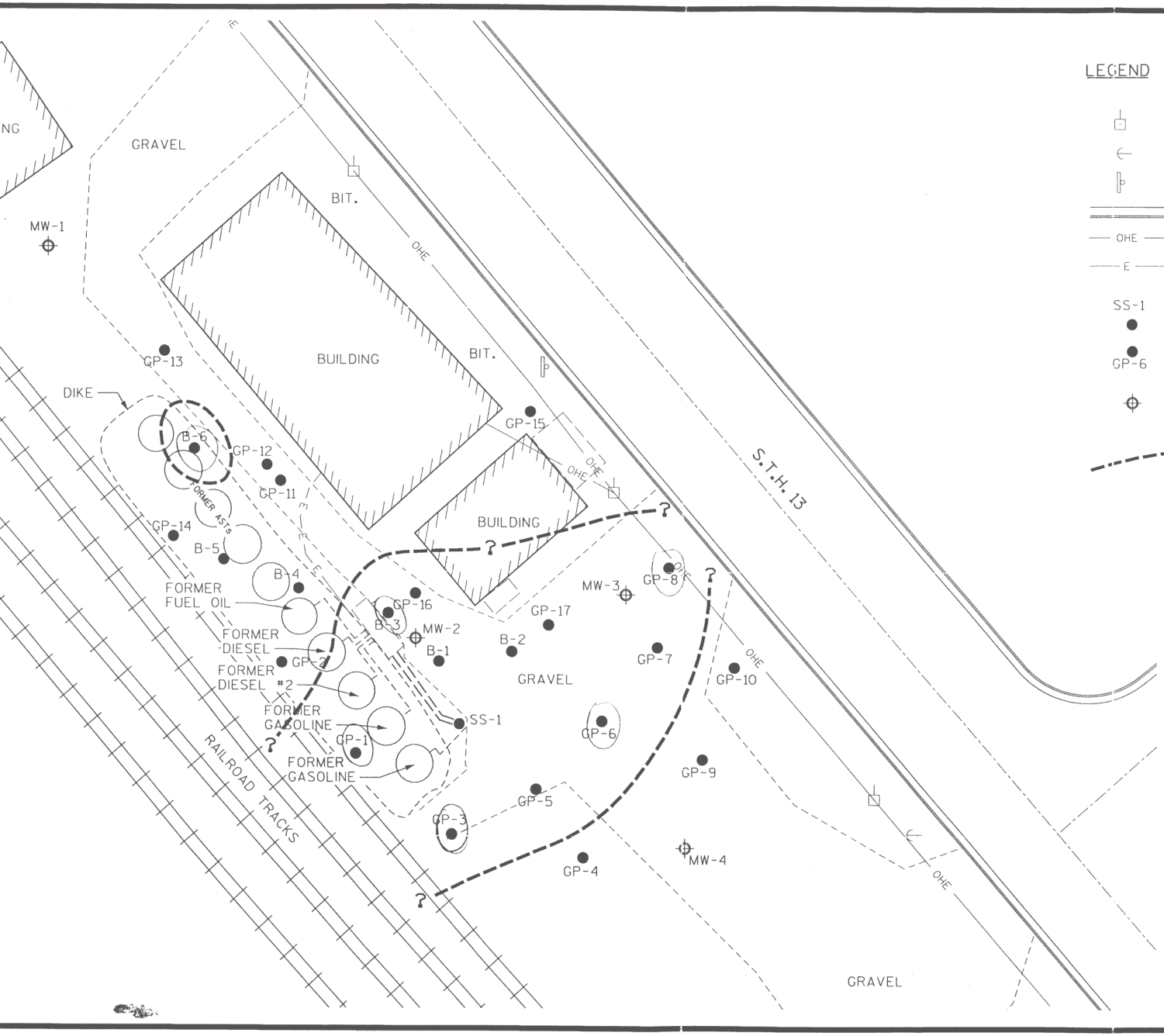
MtBE = methyl-tert-butyl ether

TMB = trimethylbenzene

* = limit is for total xylenes

Bold and italicized values exceed NR 746 Table 1 values

Bold only values exceed NR 746 Table 2 values



LEGEND

- POWER POLE
- POLE ANCHOR
- SIGN
- CURB & GUTTER
- OHE — OVERHEAD ELECTRIC
- E — UNDERGROUND ELECTRIC
- SS-1 — SITE ASSESSMENT SOIL SAMPLE
- GP-6 — GEOPROBE BORING
- MONITORING WELL
- APPROXIMATE EXTENT OF SOIL EXCEEDING NR 746 TABLE 1 OR TABLE 2 VALUES

NR 720 746 exceed.

High PID

O Direct Contact

N W E S

30 0 30

SCALE IN FEET

FIGURE 8

APPROXIMATE EXTENT OF SOIL EXCEEDING NR 746 TABLE 1 OR TABLE 2 VALUES

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CHECKED BY		SCALE	AS NOTED

SHEET ------ of ------
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