

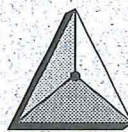
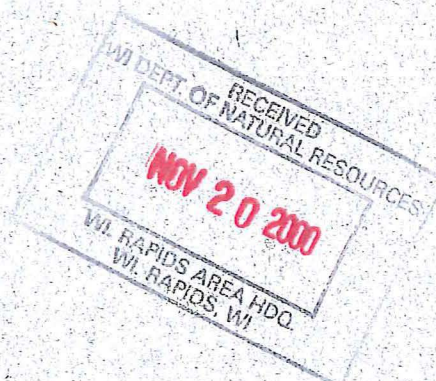
CLIENT: SPIRITLAND STORE
ESTATE OF JANET SZCZESNY
HWY BB & D
TOWN OF ALMOND, WI

TITLE: Operating, Maintenance, Monitoring
and Optimization Report
January 2000 – November 2000

PROJECT: 99-048

BRRTS NO: 03-50-001258

DATE: November 2000

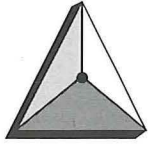


ESP GROUP, INC.

LAMPERT-LEE & ASSOCIATES

ENGINEERS • SURVEYORS • PLANNERS

10968 Highway 54 East • Wisconsin Rapids, WI 54494-8709
715-424-3131 or 715-344-0068 • FAX 715-423-8774



ESP GROUP, INC.

LAMPERT-LEE & ASSOCIATES

ENGINEERS • SURVEYORS • PLANNERS

10968 Highway 54 East • Wisconsin Rapids, WI 54494-8718

Wisconsin Rapids 715-424-3131

Stevens Point 715-344-0068

FAX 715-423-8774

email lampert@wctc.net

MR TOM HVIZDAK - HYDROGEOLOGIST
WDNR
473 GRIFFITH AVENUE
WISCONSIN RAPIDS WI 54494

November 17, 2000
LLA # 99-048
BRRTS # 03-50-001258

RE: Spiritland Store Annual Operation, Maintenance, Monitoring and Optimization Report

Dear Mr. Hvizdak:

Enclosed is the annual OMMO report for the Spiritland Store UST site. The results indicate that the contaminant plume is migrating downgradient and is now impacting monitoring well MW-6. Contaminants detected in MW-6 remain below their Enforcement Standards with the exception of naphthalene, which was detected at 110 ug/l.

It is thought that the contaminant plume has been present at the site for 10 years or more; however, it has not migrated far from the original release area. Although it appears that the contaminant plume is migrating slowly down gradient, the dissolved oxygen concentrations in the monitoring wells indicate that natural attenuation is taking place within the plume. Furthermore, there is no threat to public health in the direction of the plume expansion.

Therefore, we plan to continue monitoring the contaminant plume. Since the contaminant plume now impacts the downgradient monitoring well we are proposing to install one additional monitoring well further down gradient to effectively monitor the potential further expansion of the plume. We also will collect another round of samples to determine the status of the plume.

Please call if you have any questions.

Sincerely,

LAMPERT - LEE & ASSOCIATES

Janet Snedeker

Janet Snedeker
Project Manager

JS/dd

Enclosure

cc: Mr Robert McDonald, McDonald Law Office, PO Box 630, 1059 Clark Street,
Stevens Point, WI 54481

McDonald Law 99-048 UST Remediation - Spiritland 2000 OMMO RPT 111700

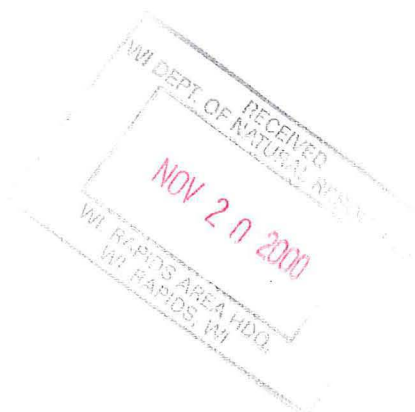


TABLE OF CONTENTS

DNR O&M Report Forms.....	Section 1
Groundwater Analytical Data Summary Tables.....	Section 2
Contaminant Distribution Maps	Section 3
Dissolved Oxygen Distribution Map.....	Section 4
Groundwater Contour Maps	Section 5
Groundwater Elevation Table	Section 6
Contaminant Concentration Graphs	Section 7
Contaminant Concentration versus Distance	Section 8
Most Recent Analytical Results.....	Section 9

SECTION 1

DNR O&M REPORT FORMS

OPERATION, MAINTENANCE, MONITORING
AND OPTIMIZATION REPORTING OF
SOIL AND GROUNDWATER REMEDIATION SYSTEMS

PURPOSE AND APPLICABILITY OF THIS FORM: Completion of this form is required under s. NR 724.13(e), Wis. Adm. Code. Use of this form is mandatory. Failure to submit this form as required is a violation of s. NR 724.13, Wis. Adm. Code, and is subject to the penalties in s. 144.99, Wis. Stats. This form must be submitted every six months for active soil and groundwater remediation projects and every twelve months for passive (natural attenuation) remediation projects that are regulated under the NR 700 series of Wis. Adm. Code. Specifically, for sites meeting any of the following criteria:

- Soil or groundwater remediation projects that report progress in accordance with s. NR 700.11(1), Wis. Adm. Code.
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.13(3), Wis. Adm. Code. (Note: s. NR 724.13(3) requires progress reports for operation and maintenance of active systems to be submitted every three months however the Department considers submittal of this form every six months to satisfy the requirements of the rules, unless otherwise directed by the Department on a site specific basis.)
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.17(3), Wis. Adm. Code. (Note: s. NR 724.17(3) requires progress reports every time that samples are collected however the Department considers submittal of this form every twelve months to satisfy the requirements of the rules for monitoring natural attenuation, unless otherwise directed by the Department on a site specific basis.)

Submittal of this form is not a substitute for reporting required by Department programs such as Wastewater or Air Management. Personally identifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by the Bureau for Remediation and Redevelopment.

Please refer to the instructions that are attached to the back of these forms starting on page INS-1. In all cases, when asked to "explain," those explanations are to be included on separate sheets of paper. Explanations must include a title that refers to the page and item number, for example: Page GI-2, C.1.a.

A. GENERAL INFORMATION:

1. Site name: The Estate of Janet Szczesny: Spiritland Store
2. Reporting period from: 11/1/2000 To: 11/17/00 Days in period: 321
3. Regulatory agency (enter DNR, DCOM, DATCP and/or other): DCOM
4. DNR issued site number: NCD UID #1258
5. State reimbursement fund claim number and fund name (if not applicable, enter NA): PECFA: 54909-9801-97
6. Site location:
 - a. DNR region and county: Western, Portage
 - b. Street address and municipality: HWY BB&D RT1 Box 197 Town of Almond
 - c. Township, range, section and quarter quarter section: SW 1/4 SE 1/4 Sec. 30, T21N, R9E
7. Responsible party:
 - a. Name: The Estate of Janet Szczesny
 - b. Mailing address: C/O Robert McDonald, McDonald Law Office
P.O. Box 630, 1059 Clark St. Stevens Point WI 54481
 - c. Phone number: 715-344-3700
8. Consultant:
 - a. Company name: Lampert - Lee & Associates
 - b. Mailing address: 10968 Hwy 54E
Wisconsin Rapids WI 54494
 - c. Phone number: 715-424-3131
9. Contaminants: Toluene, Total xylenes, Ethylbenzene, Trimethylbenzene, ^{Naphthalene} lead
10. Soil types (USCS or USDA): Richford loamy sand
11. Hydraulic conductivity (cm/sec): 10⁻³ cm/sec 12. Average linear velocity of groundwater (ft/yr): 4.35 ft/yr

OPERATION, MAINTENANCE, MONITORING
AND OPTIMIZATION REPORTING OF
SOIL AND GROUNDWATER REMEDIATION SYSTEMS

GENERAL SITE INFORMATION, CONTINUED

SITE NAME AND REPORTING PERIOD:

Site name: The Estate of Janet Szczesny: Spiritland Store
Reporting period from: 1/1/00 To: 11/17/00 Days in period: 321

A. GENERAL INFORMATION (CONTINUED):

13. If soil is treated ex situ, is the treatment location off site? (Y/N) If yes, give location: N/A

- a. DNR region and county: _____
b. Township, range, section and quarter quarter section: _____

B. REMEDIATION METHOD: Only submit pages that apply to an individual site. Check all that apply:

- ____ Groundwater extraction (submit a completed page GW-1).
____ Free product recovery (submit a completed page GW-1).
____ In situ air sparging (submit a completed page GW-2).
☒ Groundwater natural attenuation (submit a completed page GW-3).
____ Other groundwater remediation method (submit a completed page GW-4).
____ Soil venting (including soil vapor extraction and bioventing, submit a completed page IS-1).
☒ Soil natural attenuation (submit a completed page IS-2).
____ Other in situ soil remediation method (submit a completed page IS-3).
____ Biopiles (submit a completed page ES-1).
____ Landspreading/thinspreading of petroleum contaminated soil (submit a completed page ES-2).
____ Other ex situ soil remediation method (submit a completed page ES-3).

C. GENERAL EFFECTIVENESS EVALUATION FOR ALL ACTIVE SYSTEMS: If the remediation is active (not natural attenuation), complete this subsection.

1. Is the system operating at design rates and specifications? (Y/N): _____
If the answer is no, explain whether or not modifications are necessary to achieve the goal that was previously established in design.
2. Are modifications to the system warranted to improve effectiveness? (Y/N) If yes, explain: _____
3. Is natural attenuation an effective low cost option at this time? (Y/N): _____
4. Is closure sampling warranted at this time? (Y/N): _____
5. Are there any modifications that can be made to the remediation to improve cost effectiveness? (Y/N) If yes, explain: _____

D. ECONOMIC AND COST DATA TO DATE: \$35,854.25

1. Total investigation costs (\$): _____
2. Implementation costs (design, capital and installation costs, excluding investigation costs) (\$): N/A
3. Total costs during the previous reporting period (\$): \$7111
4. Total costs during this reporting period (\$): \$7288 (APPROX)
5. Total anticipated costs for the next reporting period (\$): \$8500
6. Are any unusual or one-time costs listed in the reporting periods covered by D.3., D.4. or D.5. above? (Y/N) If yes explain: yes
Installation of one downgradient monitoring well.
7. If close out is anticipated within 12 months, estimated costs for project closeout (\$): N/A

OPERATION, MAINTENANCE, MONITORING
AND OPTIMIZATION REPORTING OF
SOIL AND GROUNDWATER REMEDIATION SYSTEMS

GENERAL SITE INFORMATION, CONTINUED

SITE NAME AND REPORTING PERIOD:

Site name: The Estate of Janet Szczesny: Spiritland Store
Reporting period from: 1/1/00 To: 11/17/00 Days in period: 321

E. NAME(S), SIGNATURE(S) AND DATE OF PERSON(S) SUBMITTING FORM: Legibly print name, date and sign. Only persons qualified to submit reports under ch. NR 712 Wis. Adm. Code are to sign this form.

Registered Professional Engineers:

I (print name) _____, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature, title, P.E. number and date: _____

Hydrogeologists:

I (print name) James Lindemann, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

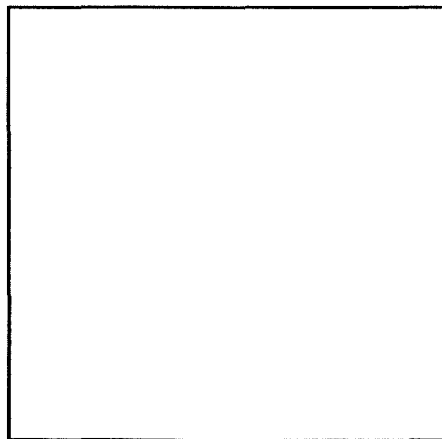
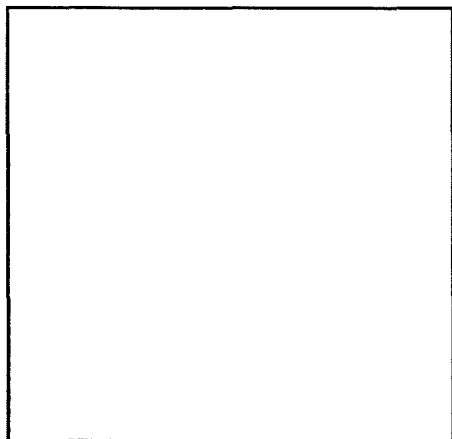
Signature, title and date:  , Hydrogeologist, 11/16/00

Scientists:

I (print name) Janet Snedeker, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature, title and date: Janet Snedeker, Project Manager, 11/17/00

Professional Seal(s), if applicable:



NATURAL ATTENUATION (PASSIVE BIOREMEDIATION) IN GROUNDWATER

SITE NAME AND REPORTING PERIOD:

Site name: The Estate of Janet Szczesny: Spiritland Store
Reporting period from: 1/1/00 To: 11/17/00 Days in period: 321

A. EFFECTIVENESS EVALUATION:

1. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in A.1.a.

- a. Contaminant: Total xylenes in mw-2
b. Percent reduction necessary to reach ch. NR 140 ES and PAL: ES: 81.55% PAL: 96.31%
c. Maximum contaminant concentration level in any monitoring well ($\mu\text{g/L}$): 3360 $\mu\text{g/L}$

2. Aquifer parameters:

- a. Hydraulic conductivity (cm/sec): 10^{-3} cm/sec.
b. Groundwater average linear velocity (ft/yr): 4.35 ft/yr

3. Is there a downgradient monitoring well that meets ch. NR 140 standards (Y/N): No

4. Based on water chemistry results, is the plume expanding, stabilized or contracting: Expanding

5. If the answer in 4. (above) is "expanding," is natural attenuation still the best option? (Y/N) If yes, explain: Yes. Can't take any other action + no threat to public health.

6. Biodegradation parameters:

- a. Upgradient (or other site specific background) DO level (mg/L): 12.3
b. DO levels in the part of the plume that is most heavily contaminated (mg/L): 2.7

7. Is site closure a viable option within 12 months from the date of this form? (Y/N): No.

8. Are there any modifications that can improve cost effectiveness? (Y/N) If yes, explain: No.

9. Have groundwater table fluctuations changed the contaminant level trends over time? (Y/N) If yes, explain: No

10. Has the direction of ground water flow changed during the reporting period? (Y/N) If yes, approximate change in degrees: No

B. ADDITIONAL ATTACHMENTS: Attach the following to this form:

- Groundwater contour map.
- Groundwater contaminant distribution map (may be combined with contour map).
- When contaminants are aerobically biodegradable, attach a dissolved oxygen in groundwater map (dissolved oxygen may be combined with the contaminant data on a single map).
- Graph of contaminant concentrations versus time for the contaminant listed in A.1.a. (above) for the monitoring point with the greatest level of contamination.
- Graph of contaminant concentrations versus distance.
- Groundwater contaminant chemistry table.
- Groundwater biological parameters.
- Groundwater elevations table.

SECTION 2

**GROUNDWATER ANALYTICAL DATA
SUMMARY TABLES**

**SPIRITLAND STORE UST
GROUNDWATER SAMPLES
ANALYTICAL RESULTS: MW1**

Parameter	Enforcement Standard	Preventive Action Limit	7/31/98	10/21/98	4/14/99	6/29/99	9/22/99	4/24/00	10/18/00
GRO (Gasoline Range Organics)	-	-	15,100	12,000	15,000	16,000	15,000	11,000	4,700
Lead (ug/l)	15	1.5	25.4	7.53	<1.4>	<2.0>	<1.8>	<7>	<1.8>
VOLATILE ORGANIC COMPOUNDS									
	(ug/l)	(ug/l)							
Benzene	5	0.5	<25	<10	<25	<70>	<25	<40	<25
Ethylbenzene	700	140	380	297	610	460	440	420	130
Methyl - t - Butyl ether	60	12	<50	<20	<24	<50	<24	<38	<50
Naphthalene	40	8	180	124	210	na	220	220	120
Toluene	343	68.6	2,800	2,060	1800	1800	2400	710	160
1,2,4-Trimethylbenzene	480 (1)	96 (1)	1,130	799	<28	900	880	870	420
1,3,5-Trimethylbenzene	480 (1)	96 (1)	367	335	280	350	310	330	130
m&p-Xylene	620 (1)	124 (1)	3,780	2,800	3500	3700	3400	2700	930
o-Xylene / Styrene	620 (1)	124 (1)	1750	1320	1600	1300	1500	740	<50>
Total BETX			8735	6487	7535	7330	7765	4610	1295

NOTE: Lab data is presented in same units as lab analytical results.

*mg/l - milligrams/liter (ppm)

**ug/l - micrograms/liter (ppb)

ND - not detected

n/a - not analyzed

-- not sampled

(1) Total Xylenes

Compound detected above PAL if in **BOLD**

 - compound detected above ES

**SPIRITLAND STORE UST
GROUNDWATER SAMPLES
ANALYTICAL RESULTS: MW2**

Parameter	Enforcement Standard	Preventive Action Limit	7/31/98	10/21/98	4/14/99	6/26/99	9/22/99	4/24/00	10/18/00
GRO (Gasoline Range Organics)	-	-	28,200	18,300	15,000	17,000	13,000	15,000	14,000
Lead (ug/l)	15	1.5	188.0	69.7	9.6	5.6	12	<2.4	7.5
TECTED VOLATILE ORGANIC COMPOUNDS									
	(ug/l)	(ug/l)							
Benzene	5	0.5	<25	10	<25	<85>	<25	<25	<25
n-Butylbenzene			209	NA	NA	NA	NA	NA	NA
Ethylbenzene	700	140	1140	623	340	540	470	810	810
Isopropylbenzene			203	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene			106	NA	NA	NA	NA	NA	NA
Methyl - t - Butyl ether	60	12	<50	<20	<24	<50	<24	<24	<50
Naphthalene	40	8	296	157	<78>	NA	120	170	180
n-Propylbenzene			195	NA	NA	NA	NA	NA	NA
Toluene	343	68.6	3,580	1,190	800	1000	560	960	510
1,2,4-Trimethylbenzene	480 (1)	96 (1)	1,990	1,210	<28	570	500	630	550
1,3,5-Trimethylbenzene	480 (1)	96 (1)	1,010	911	510	520	520	450	410
m&p-Xylene	620 (1)	124 (1)	4,260	2,340	1200	2000	1600	2700	2900
o-Xylene / Styrene	620 (1)	124 (1)	1810	825	400	580	340	520	460
Total BETX			7235	4988	2765	4205	2995	5015	4705

NOTE: Lab data is presented in same units as lab analytical results.

*mg/l - milligrams/liter (ppm)

**ug/l - micrograms/liter (ppb)

ND - not detected

n/a - not analyzed

- - not sampled

(1) Totals

Compound detected above PAL if in **BOLD**

 - compound detected above ES

**SPIRITLAND STORE UST
GROUNDWATER SAMPLES
ANALYTICAL RESULTS: MW3**

Parameter	Enforcement Standard	Preventive Action Limit								
			7/31/98	10/21/98	4/14/99	6/29/99	9/22/99	4/24/00	10/18/00	
GRO (Gasoline Range Organics)	-	-	ND	<50	<15	<15	<16>	<15	<15	
Lead (ug/l)	15	1.5	8.8	4.78	<1.4	<1.4	<1.4	<1.4	<1.4	
VOLATILE ORGANIC COMPOUNDS										
	(ug/l)	(ug/l)								
Benzene	5	0.5	ND	<0.5	<0.50	<0.5	<0.5	<0.5	<0.51	
Ethylbenzene	700	140	ND	<1	<0.55	<0.54	<0.55	<0.55	<0.51	
Methyl - t - Butyl ether	60	12	ND	<1	<0.47	<0.47	<0.47	<0.47	<1.0	
Naphthalene	40	8	ND	<1	<0.52	NA	<0.52	<0.52	<0.52	
Toluene	343	68.6	ND	<1	<0.79>	<1.8>	<0.52	<1.4>	<0.51	
1,2,4-Trimethylbenzene	480 (1)	96 (1)	ND	<1	<0.55	<0.79>	<0.55	<0.90>	<0.52	
1,3,5-Trimethylbenzene	480 (1)	96 (1)	ND	<1	<0.52	<0.52	<0.52	<0.52	<0.54	
m&p-Xylene	620 (1)	124 (1)	ND	<1	<2.5>	<1.5>	<1.0	<3.0>	<1.2	
o-Xylene / Styrene	620 (1)	124 (1)	ND	<1	<0.50	<0.5	<0.5	<0.5	<0.50	

NOTE: Lab data is presented in same units as lab analytical results.

*mg/l - milligrams/liter (ppm)

**ug/l - micrograms/liter (ppb)

ND - not detected

n/a - not analyzed

-- not sampled

(1) Total Xylenes

Compound detected above PAL if in **BOLD**

 - compound detected above ES

**SPIRITLAND STORE UST
GROUNDWATER SAMPLES
ANALYTICAL RESULTS: MW4**

Parameter	Enforcement Standard	Preventive Action Limit							
			7/31/98	10/21/98	4/14/99	6/29/99	9/22/99	4/24/00	10/18/00
GRO (Gasoline Range Organics)	-	-	ND	<50	<15	<15	<15	<15	<15
Lead (ug/l)	15	1.5	3.8	1.59	<1.4	<1.4	<1.4	<1.4	<1.4
VOLATILE ORGANIC COMPOUNDS									
	(ug/l)	(ug/l)							
Benzene	5	0.5	ND	<0.5	<0.50	<0.50	<0.5	<0.5	<0.51
Ethylbenzene	700	140	ND	<1	<0.55	<0.54	<0.55	<0.55	<0.51
Methyl - t - Butyl ether	60	12	ND	<1	<0.47	<0.47	<0.47	<0.47	<1.0
Naphthalene	40	8	ND	<1	<0.52	NA	<0.52	<0.52	<0.52
Toluene	343	68.6	ND	<1	<0.79>	<1.6>	<0.52	<1.1>	<0.51
1,2,4-Trimethylbenzene	480 (1)	96 (1)	ND	<1	<0.55	<0.55	<0.55	<0.55	<0.52
1,3,5-Trimethylbenzene	480 (1)	96 (1)	ND	<1	<0.52	<0.52	<0.52	<0.52	<0.54
m&p-Xylene	620 (1)	124 (1)	ND	<1	<2.5>	<1.2>	<1.0	<2.7>	<1.2
o-Xylene / Styrene	620 (1)	124 (1)	ND	<1	<0.50	<0.50	<0.5	<0.5	<0.50

NOTE: Lab data is presented in same units as lab analytical results.

*mg/l - milligrams/liter (ppm)

**ug/l - micrograms/liter (ppb)

ND - not detected

n/a - not analyzed

-- not sampled

(1) Total Xylenes

Compound detected above PAL if in **BOLD**

 - compound detected above ES

**SPIRITLAND STORE UST
GROUNDWATER SAMPLES
ANALYTICAL RESULTS: MW5**

Parameter	enforcement Standard	Preventive Action Limit							
			7/31/98	10/21/98	4/14/99	6/29/99	9/22/99	4/24/00	10/18/00
GRO (Gasoline Range Organics)	-	-	ND	<50	<15	<15	<15	<15	<17>
Lead (ug/l)	15	1.5	3.1	2.07	<1.4	<1.4	<1.4	<1.4	<1.4
VOLATILE ORGANIC COMPOUNDS									
	(ug/l)	(ug/l)							
Benzene	5	0.5	ND	<0.5	<0.50	<0.50	<0.5	<0.5	<0.51
Ethylbenzene	700	140	ND	<1	<0.55	<0.54	<0.55	<0.55	<0.51
Methyl - t - Butyl ether	60	12	ND	<1	<0.47	<0.47	<0.47	<0.47	<1.0
Naphthalene	40	8	ND	<1	<0.52	NA	<0.52	<0.52	<0.52
Toluene	343	68.6	ND	<1	<0.64>	<0.52	<0.52	<0.76>	<0.51
1,2,4-Trimethylbenzene	480 (1)	96 (1)	ND	<1	<0.52	<0.55	<0.55	<0.55	<1.5>
1,3,5-Trimethylbenzene	480 (1)	96 (1)	ND	<1	<0.52	<0.52	<0.52	<0.52	<0.54
m&p-Xylene	620 (1)	124 (1)	ND	<1	<1.0	<1.0	<1.0	<2.4>	<1.2
o-Xylene / Styrene	620 (1)	124 (1)	ND	<1	<0.50	<0.50	<0.5	<0.5	<0.50

NOTE: Lab data is presented in same units as lab analytical results.

*mg/l - milligrams/liter (ppm)

**ug/l - micrograms/liter (ppb)

ND - not detected

n/a - not analyzed

-- not sampled

(1) Total Xylenes

Compound detected above PAL if in **BOLD**

 - compound detected above ES

**SPIRITLAND STORE UST
GROUNDWATER SAMPLES
ANALYTICAL RESULTS: MW6**

Parameter	Enforcement Standard	Preventive Action Limit							
			7/31/98	10/21/98	4/14/99	6/29/99	9/22/99	4/24/00	10/18/00
GRO (Gasoline Range Organics)	-	-	ND	<50	<15	<39>	<15	260	3,000
Lead (ug/l)	15	1.5	4.1	8.91	<4.4>	<4.4>	<1.4	<1.4	<1.4
VOLATILE ORGANIC COMPOUNDS									
	(ug/l)	(ug/l)							
Benzene	5	0.5	ND	<0.5	<0.50	<1.5>	<0.5	<1.1>	<5.1
Ethylbenzene	700	140	ND	<1	<0.55	<0.54	<0.55	2.8	130
Methyl - t - Butyl ether	60	12	ND	<1	<0.47	<0.47	<0.47	<0.47	<10
Naphthalene	40	8	ND	<1	1.8	NA	<0.52	7.5	110
Toluene	343	68.6	ND	<1	<0.52	<1.6>	<0.52	8	30
1,2,4-Trimethylbenzene	480 (1)	96 (1)	ND	<1	<0.55	<0.55	<0.55	22	270
1,3,5-Trimethylbenzene	480 (1)	96 (1)	ND	<1	<0.52	<1.4>	<0.52	7.7	34.0
m&p-Xylene	620 (1)	124 (1)	ND	<1	<1.0	<1.5>	<1.0	47	430
o-Xylene / Styrene	620 (1)	124 (1)	ND	<1	<0.50	<0.50	<0.5	25	130

NOTE: Lab data is presented in same units as lab analytical results.

*mg/l - milligrams/liter (ppm)

**ug/l - micrograms/liter (ppb)

ND - not detected

n/a - not analyzed

-- not sampled

(1) Total Xylenes

Compound detected above PAL if in **BOLD**

 - compound detected above ES

**SPIRITLAND STORE UST
GROUNDWATER SAMPLES
ANALYTICAL RESULTS: PZ1**

Parameter	Enforcement Standard	Preventive Action Limit	7/31/98	10/21/98	4/14/99	6/29/99	9/22/99	4/24/00	10/18/00
GRO (Gasoline Range Organics)	-	-	7,890	11,400	2,500	4,300	8,600	910	1,400
Lead (ug/l)	15	1.5	22.1	17.2	5.1	<1.4	<3.4>	<1.4	<1.4
VOLATILE ORGANIC COMPOUNDS									
	(ug/l)	(ug/l)							
Benzene	5	0.5	<25	<10	<8.0>	<16>	<20	<2.5	<5.1
n-Butylbenzene			236	NA	NA	NA	NA	NA	NA
Ethylbenzene	700	140	380	487	96	130	490	34	75
Methyl - t - Butyl ether	60	12	<50	<20	<4.7	<4.7	<19	<2.4	<10
Naphthalene	40	8	75	135	<14>	<14>	130	14	27
Toluene	343	68.6	576	1,340	51	36	1400	39	59
1,2,4-Trimethylbenzene	480 (1)	96 (1)	544	736	<5.5	270	490	66	94
1,3,5-Trimethylbenzene	480 (1)	96 (1)	247	388	58	82	140	22	19
m&p-Xylene	620 (1)	124 (1)	1,670	1,980	290	410	1600	95	170
o-Xylene / Styrene	620 (1)	124 (1)	686	780	64	61	490	11	34
Total BETX			3337	4597	509	653	4000	181.5	343.1

NOTE: Lab data is presented in same units as lab analytical results.

*mg/l - milligrams/liter (ppm)

**ug/l - micrograms/liter (ppb)

ND - not detected

n/a - not analyzed

-- not sampled

(1) Total Xylenes

Compound detected above PAL if in **BOLD**

 - compound detected above ES

**WATER SAMPLING RESULTS - NATURAL ATTENUATION
SPIRITLAND STORE**

	SAMPLE DATE: April 14, 1999						
	MW - 1	MW - 2	MW - 3	MW - 4	MW - 5	MW - 6	PZ - 1
Parameter							
Dissolved Oxygen (ppm)	0.68	0.65	1.50	10.61	9.63	1.12	1.08
Redox potential	110	145	230	185	185	150	140
pH	7.30	7.42	7.55	7.99	7.40	7.28	7.94
Conductivity	680	750	520	750	630	1260	610
Temperature (C)	10.0	9.8	9.3	9.5	9.5	10.0	9.9

	SAMPLE DATE: June 29, 1999						
	MW - 1	MW - 2	MW - 3	MW - 4	MW - 5	MW - 6	PZ - 1
Parameter							
Dissolved Oxygen (ppm)	3.4	3.52	3.65	10.99	10.8	6.38	5.7
Redox potential	185	165	185	170	175	165	165
pH	7.82	7.73	7.88	7.68	7.70	7.7	7.8
Conductivity	540	560	410	510	560	810	480
Temperature (C)	9.9	9.5	8.9	9	9.3	9.5	9.5

	SAMPLE DATE: September 22, 1999						
	MW - 1	MW - 2	MW - 3	MW - 4	MW - 5	MW - 6	PZ - 1
Parameter							
Dissolved Oxygen (ppm)	1	1.4	7.00	10.38	8.7	8.5	4.1
Redox potential	195	155	160	150	215	195	155
pH	7.62	7.58	7.8	7.69	7.80	7.39	7.7
Conductivity	620	670	480	540	480	1360	620
Temperature (C)	11.9	11.2	10.7	10.8	11.6	11.9	11.3

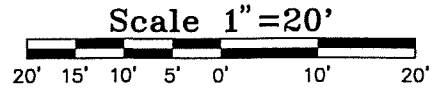
	SAMPLE DATE: April 24, 2000						
	MW - 1	MW - 2	MW - 3	MW - 4	MW - 5	MW - 6	PZ - 1
Parameter							
Dissolved Oxygen (ppm)	0.65	2.06	2.09	10.66	9.02	1.51	3.55
Redox potential	240	230	265	215	245	240	230
pH	6.50	6.5	6.7	7	6.60	6.4	6.5
Conductivity	590	600	460	530	460	1380	530
Temperature (C)	10.0	9.9	9.3	9.4	9.4	9.8	9.9

	SAMPLE DATE: October 18, 2000						
	MW - 1	MW - 2	MW - 3	MW - 4	MW - 5	MW - 6	PZ - 1
Parameter							
Dissolved Oxygen (ppm)	3.9	2.7	7.1	12.3	12.2	5.1	5.0
Redox potential	NM	NM	NM	NM	NM	NM	NM
pH	NM	NM	NM	NM	NM	NM	NM
Conductivity	550	720	460	480	420	880	580
Temperature (C)	12.0	11.4	10.8	10.6	11.7	11.8	11.4

NM: Not Measured

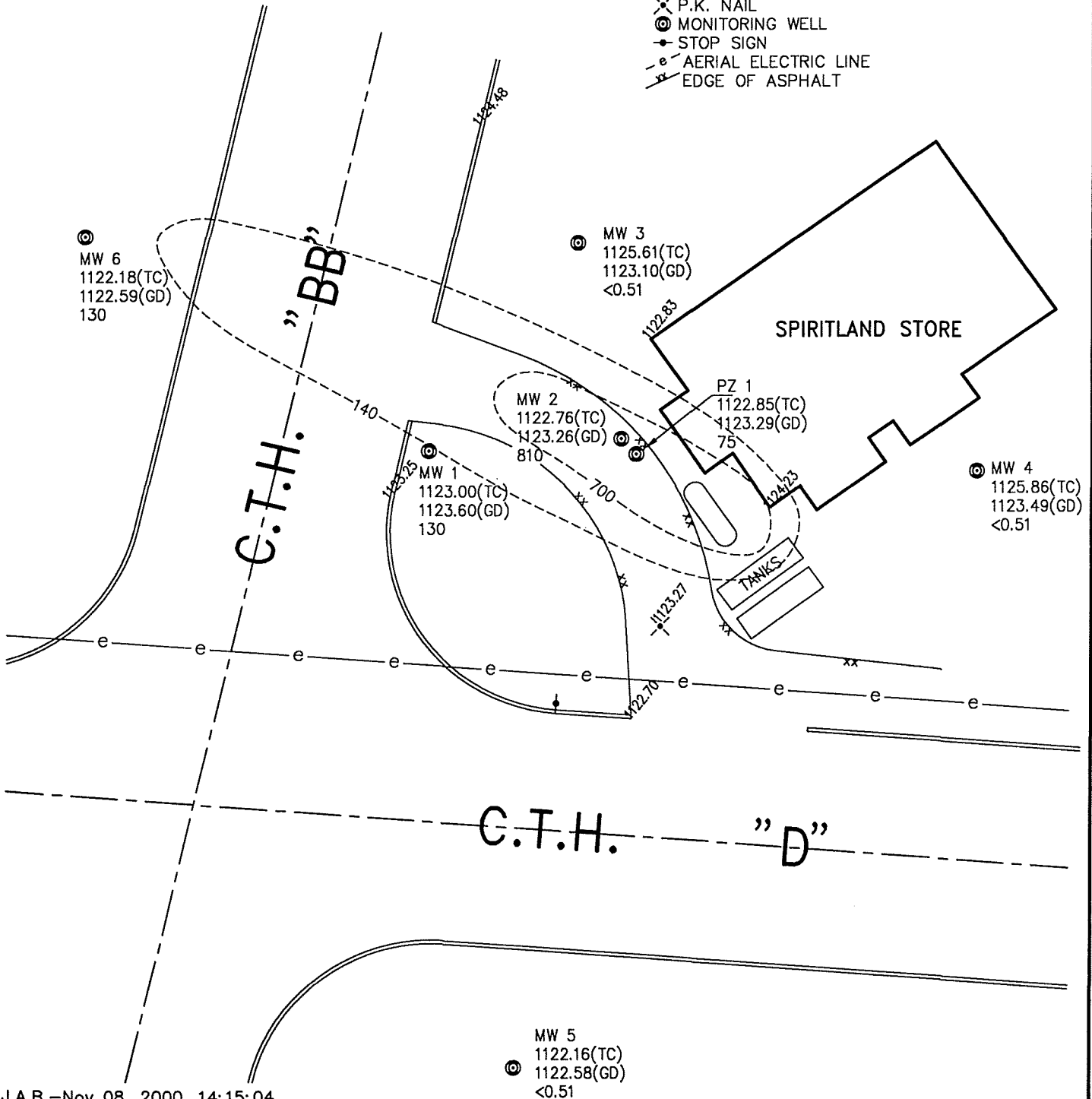
SECTION 3

CONTAMINANT DISTRIBUTION MAPS



LEGEND:

- ✕ P.K. NAIL
- ⊙ MONITORING WELL
- STOP SIGN
- e- AERIAL ELECTRIC LINE
- xx EDGE OF ASPHALT



J.A.B.—Nov 08, 2000, 14:15:04



ESP GROUP, INC.
**LAMPERT-LEE
& ASSOCIATES**

SPIRITLAND STORE
ETHYLBENZENE DISTRIBUTION
MAP 10/18/00



DATE: NOV. 8, 2000

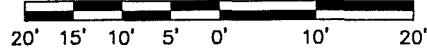
LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

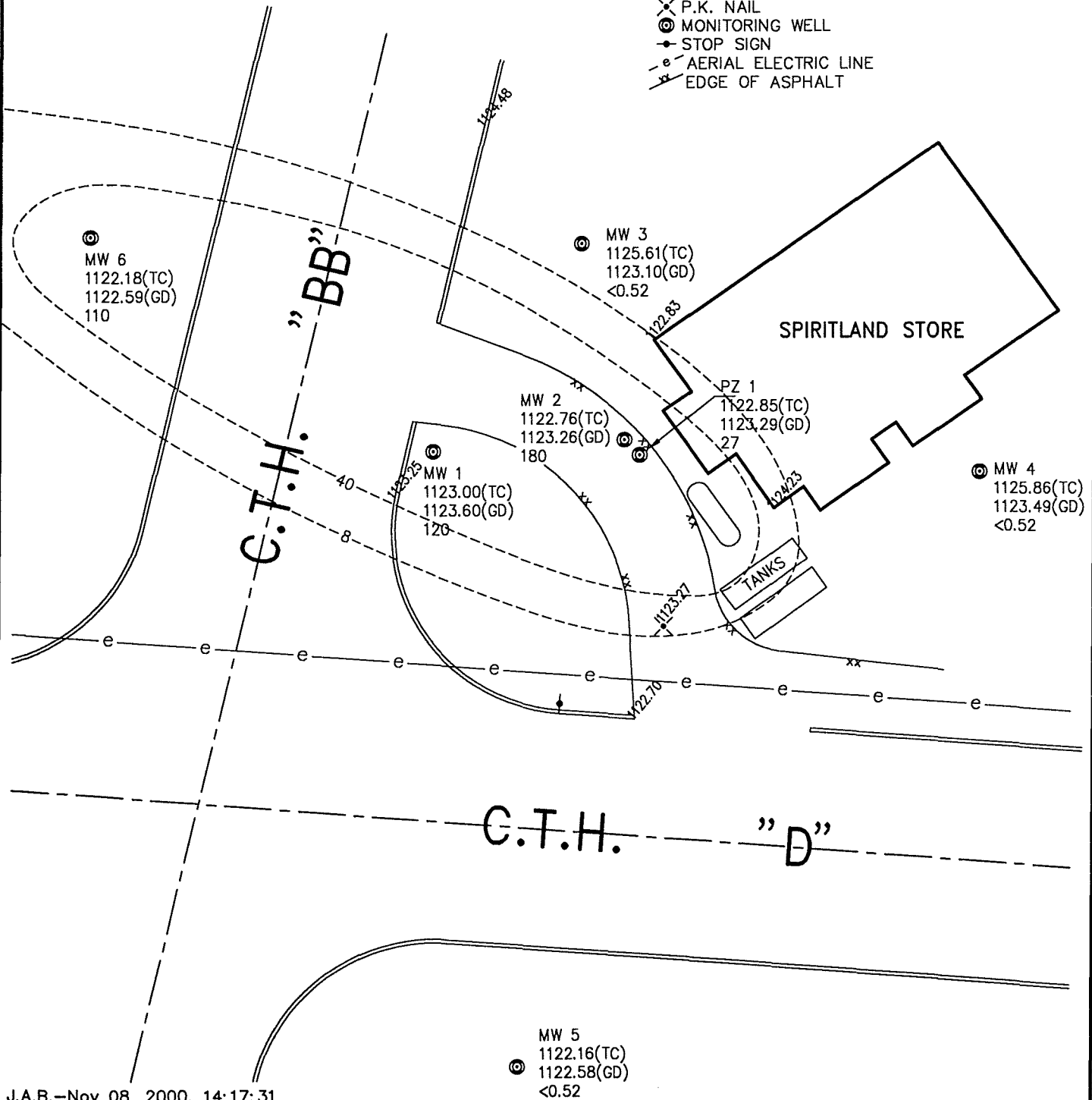
DWG. NO. A-8200-K_ET

Scale 1"=20'



LEGEND:

- ✕ P.K. NAIL
- ⊙ MONITORING WELL
- STOP SIGN
- e- AERIAL ELECTRIC LINE
- xx EDGE OF ASPHALT



J.A.B.-Nov 08, 2000, 14:17:31



ESP GROUP, INC.
**LAMPERT-LEE
& ASSOCIATES**

SPIRITLAND STORE
NAPHTHALENE DISTRIBUTION
MAP 10/18/00



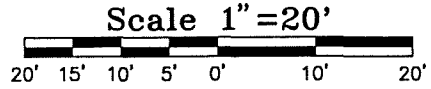
DATE: NOV. 8, 2000

LLA # 98-033

DRAWN BY: JIM BRASEL

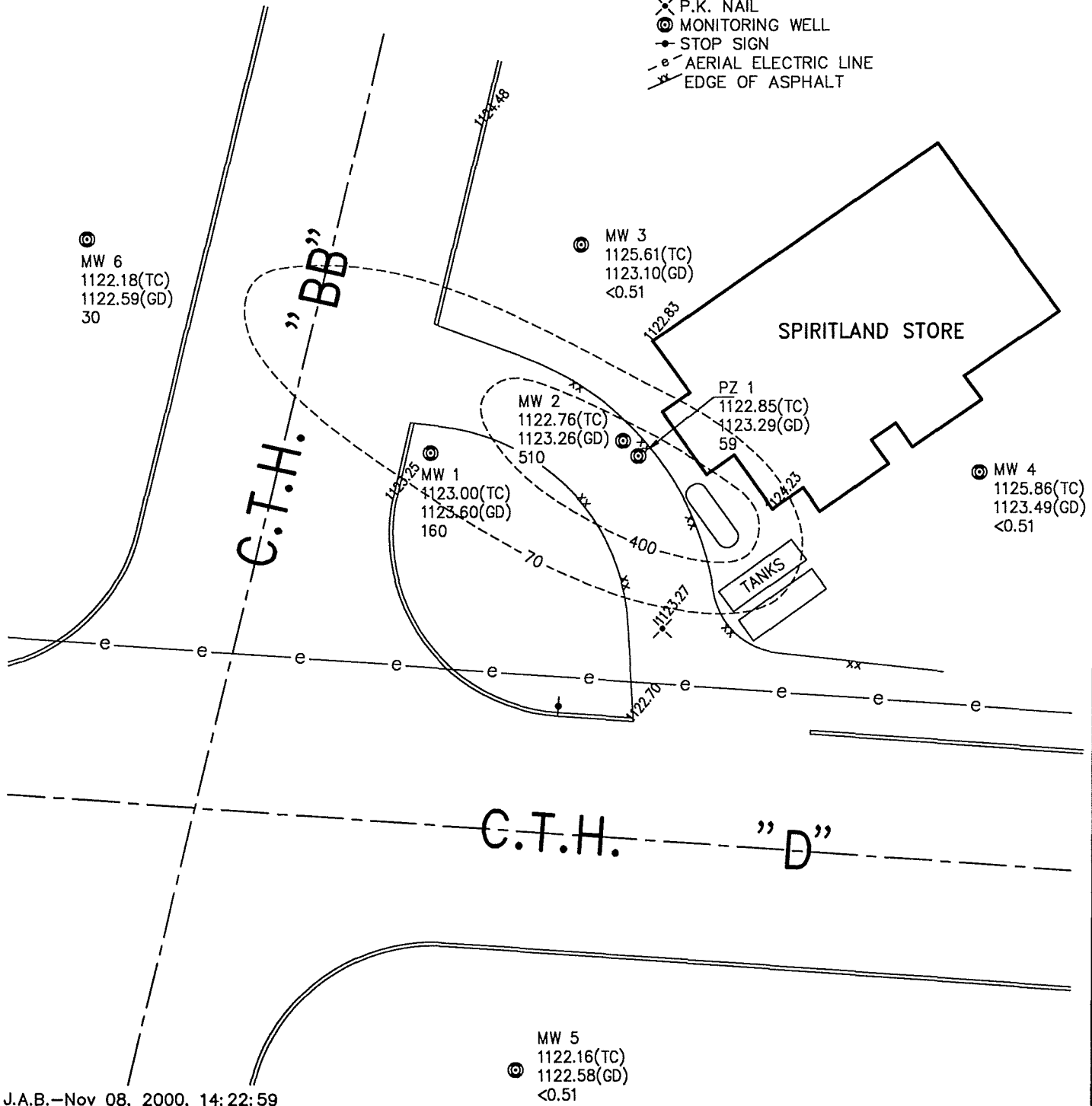
REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-K_NA



LEGEND:

- ✕ P.K. NAIL
- ⊙ MONITORING WELL
- STOP SIGN
- e- AERIAL ELECTRIC LINE
- xx EDGE OF ASPHALT



J.A.B.—Nov 08, 2000, 14:22:59



ESP GROUP, INC.
**LAMPERT-LEE
& ASSOCIATES**

SPIRITLAND STORE
TOLUENE DISTRIBUTION
MAP 10/18/00



DATE: NOV. 8, 2000

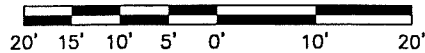
LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

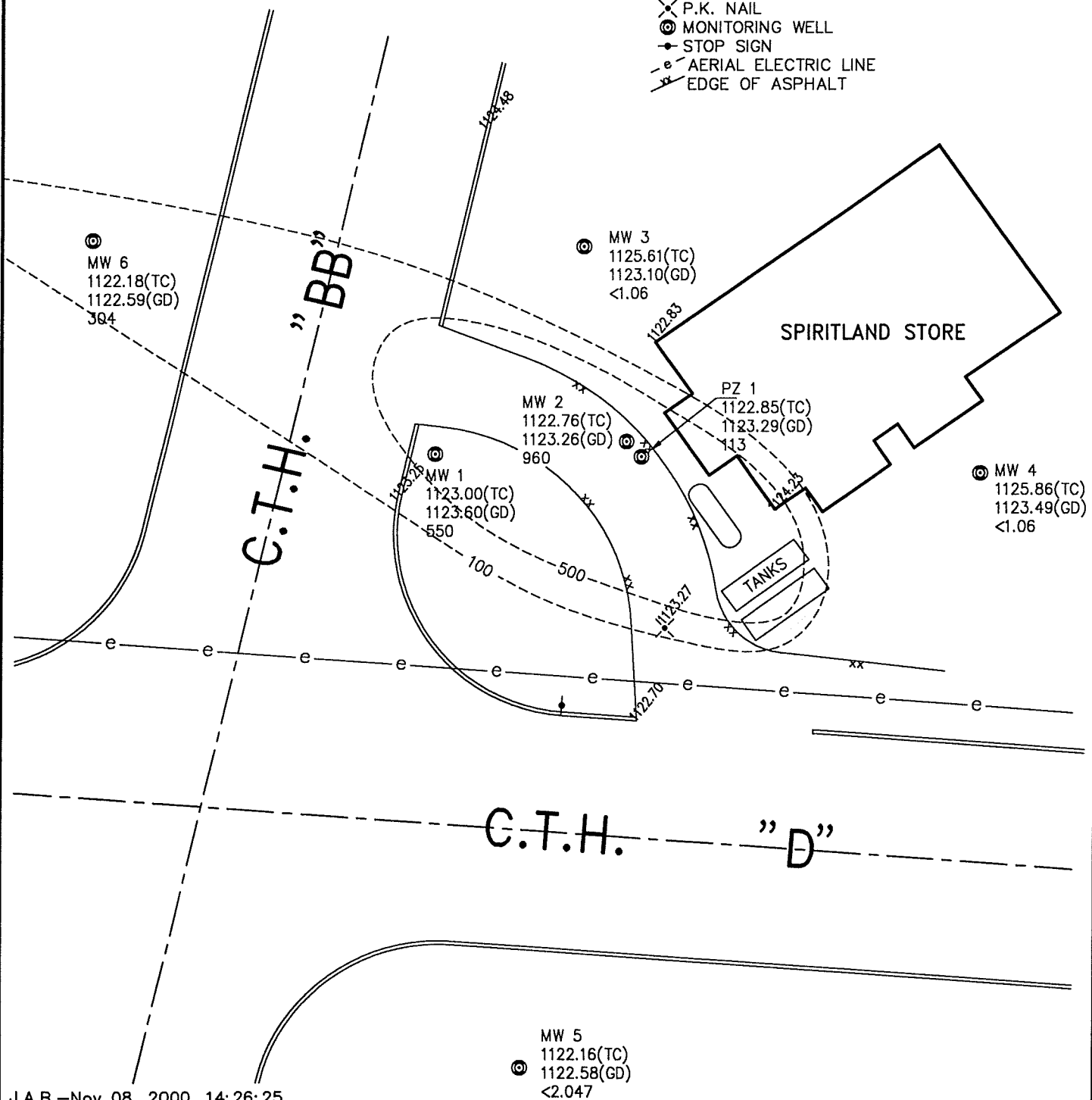
DWG. NO. A-8200-K_TO

Scale 1"=20'



LEGEND:

- ✕ P.K. NAIL
- ⊙ MONITORING WELL
- STOP SIGN
- e- AERIAL ELECTRIC LINE
- EDGE OF ASPHALT



J.A.B.—Nov 08, 2000, 14:26:25



ESP GROUP, INC.
**LAMPERT-LEE
& ASSOCIATES**

SPIRITLAND STORE
TRIMETHYLBENZENE DISTRIBUTION
MAP 10/18/00



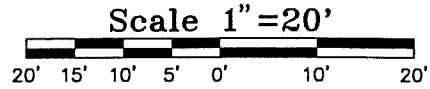
DATE: NOV. 8, 2000

LLA # 98-033

DRAWN BY: JIM BRASEL

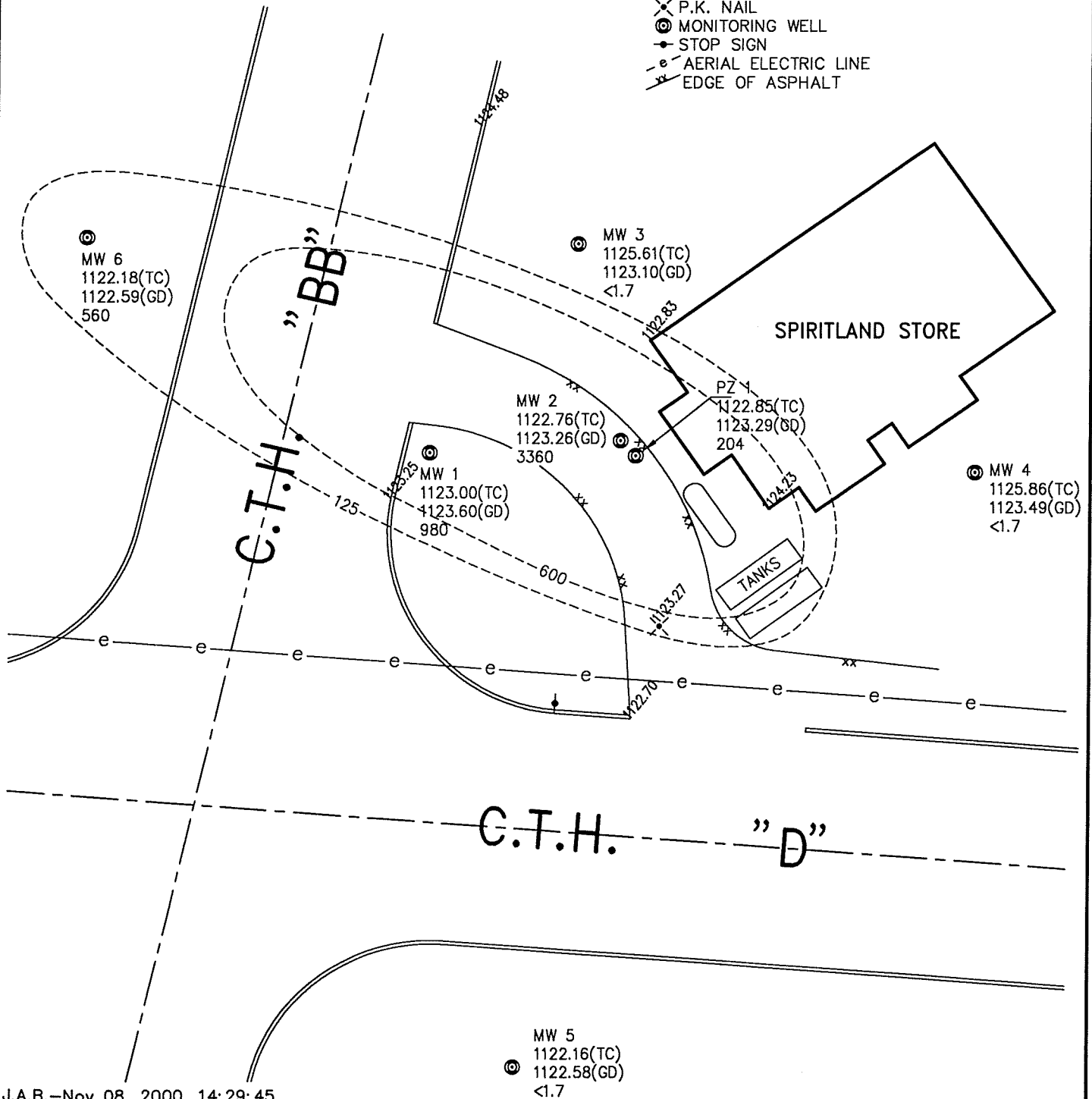
REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-K_TR



LEGEND:

- P.K. NAIL
- MONITORING WELL
- STOP SIGN
- AERIAL ELECTRIC LINE
- EDGE OF ASPHALT



J.A.B.—Nov 08, 2000, 14:29:45



ESP GROUP, INC.
**LAMPERT-LEE
& ASSOCIATES**

SPIRITLAND STORE
XYLENE DISTRIBUTION
MAP 10/18/00



DATE: NOV. 8, 2000

LLA # 98-033

DRAWN BY: JIM BRASEL

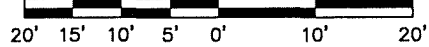
REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-K_XY

SECTION 4

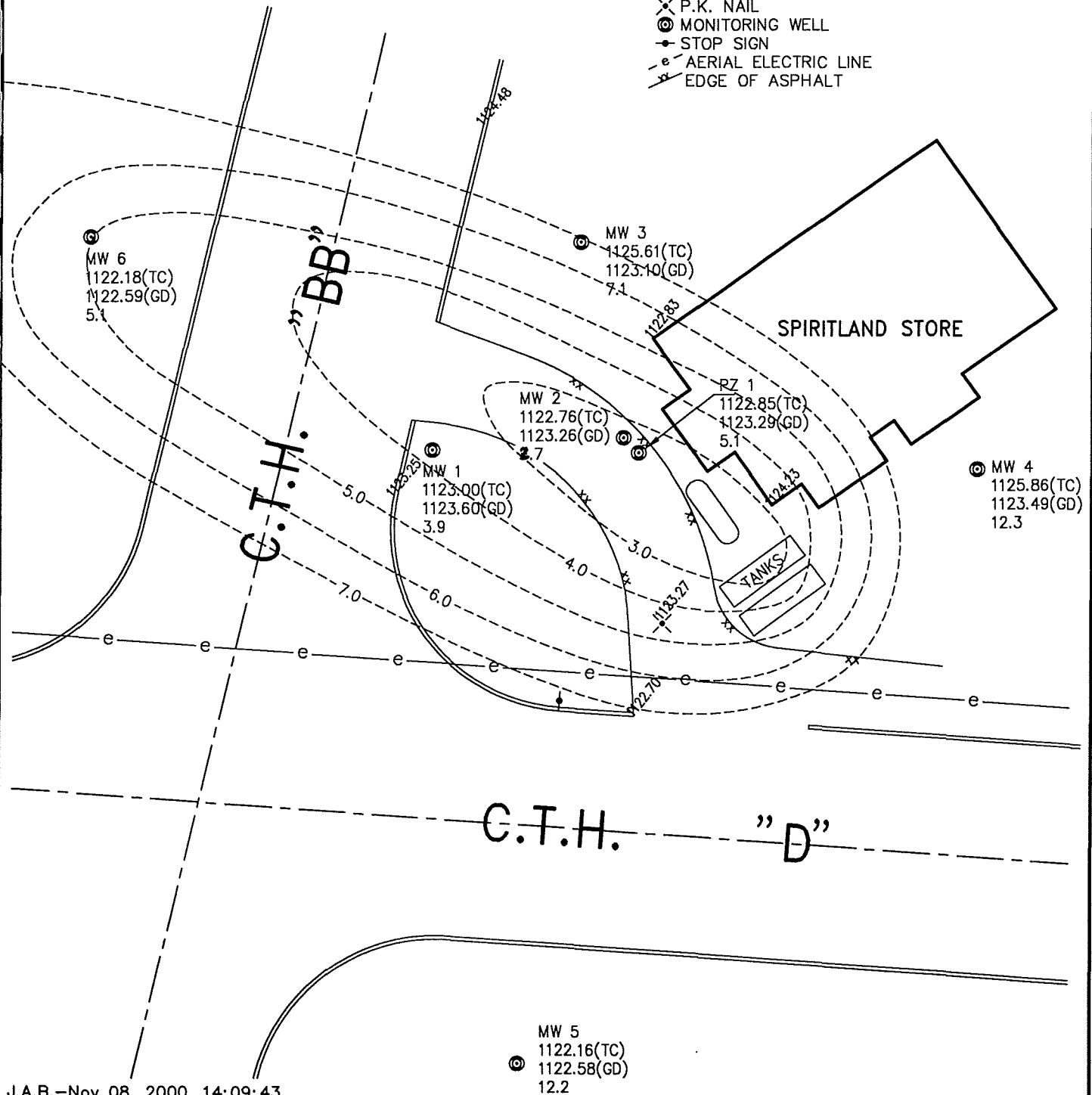
DISSOLVED OXYGEN DISTRIBUTION MAP

Scale 1"=20'



LEGEND:

- ✕ P.K. NAIL
- ⊙ MONITORING WELL
- STOP SIGN
- e- AERIAL ELECTRIC LINE
- EDGE OF ASPHALT



J.A.B.-Nov 08, 2000, 14:09:43



ESP GROUP, INC.
**LAMPERT-LEE
& ASSOCIATES**

SPIRITLAND STORE
DISSOLVED OXYGEN
DISTRIBUTION MAP 10/18/00



DATE: NOV. 8, 2000

LLA # 98-033

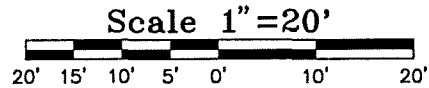
DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-K_OX

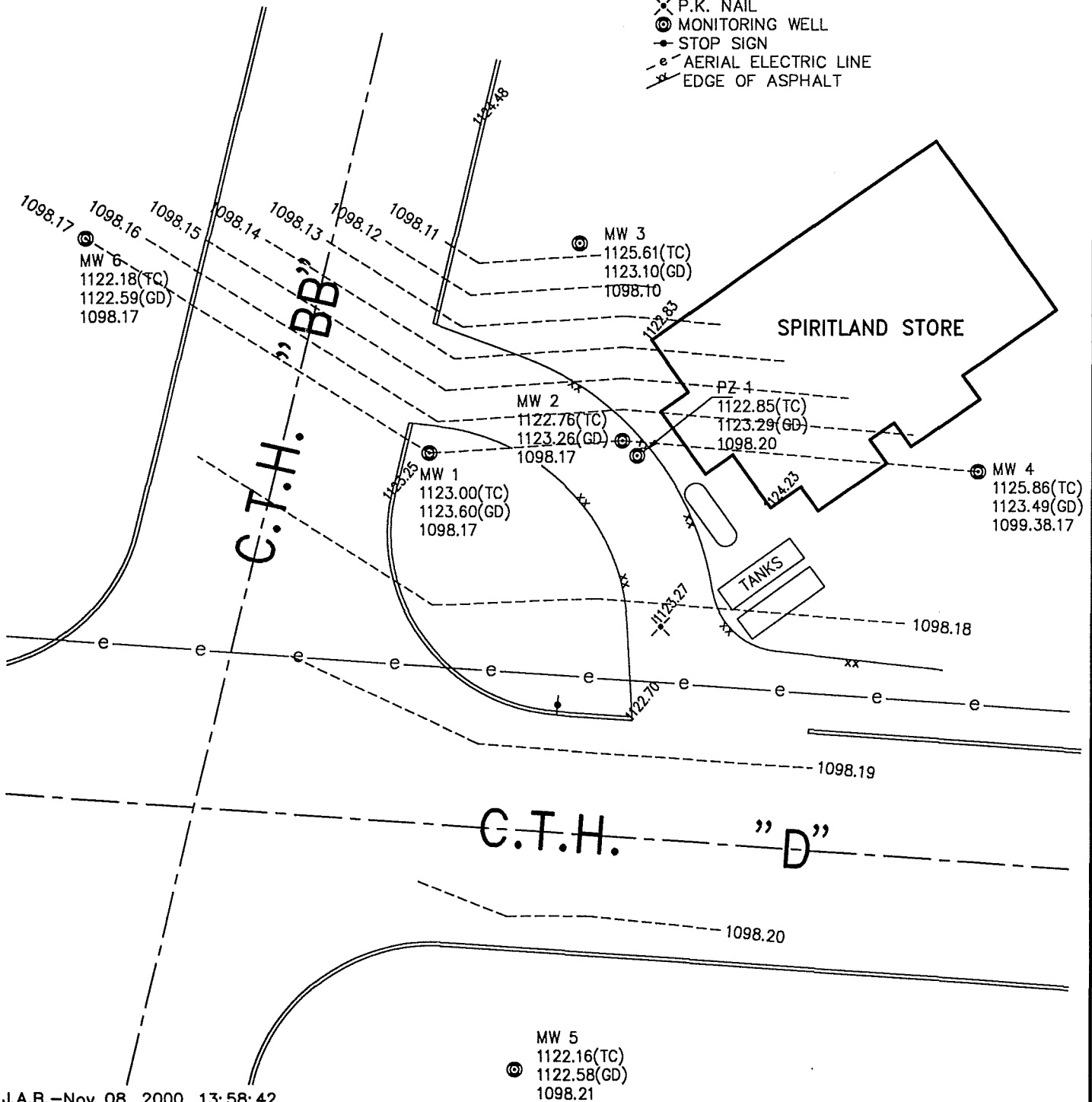
SECTION 5

GROUNDWATER CONTOUR MAPS



LEGEND:

- ✕ P.K. NAIL
- ⊙ MONITORING WELL
- STOP SIGN
- e- AERIAL ELECTRIC LINE
- x- EDGE OF ASPHALT



J.A.B.-Nov 08, 2000, 13:58:42



ESP GROUP, INC.
**LAMPERT-LEE
& ASSOCIATES**

SPIRITLAND STORE
GROUNDWATER CONTOUR
MAP 10/18/00



DATE: NOV. 8, 2000

LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-K_GW

SECTION 6

GROUNDWATER ELEVATION TABLE

SPIRITLAND STORE
Groundwater Elevations

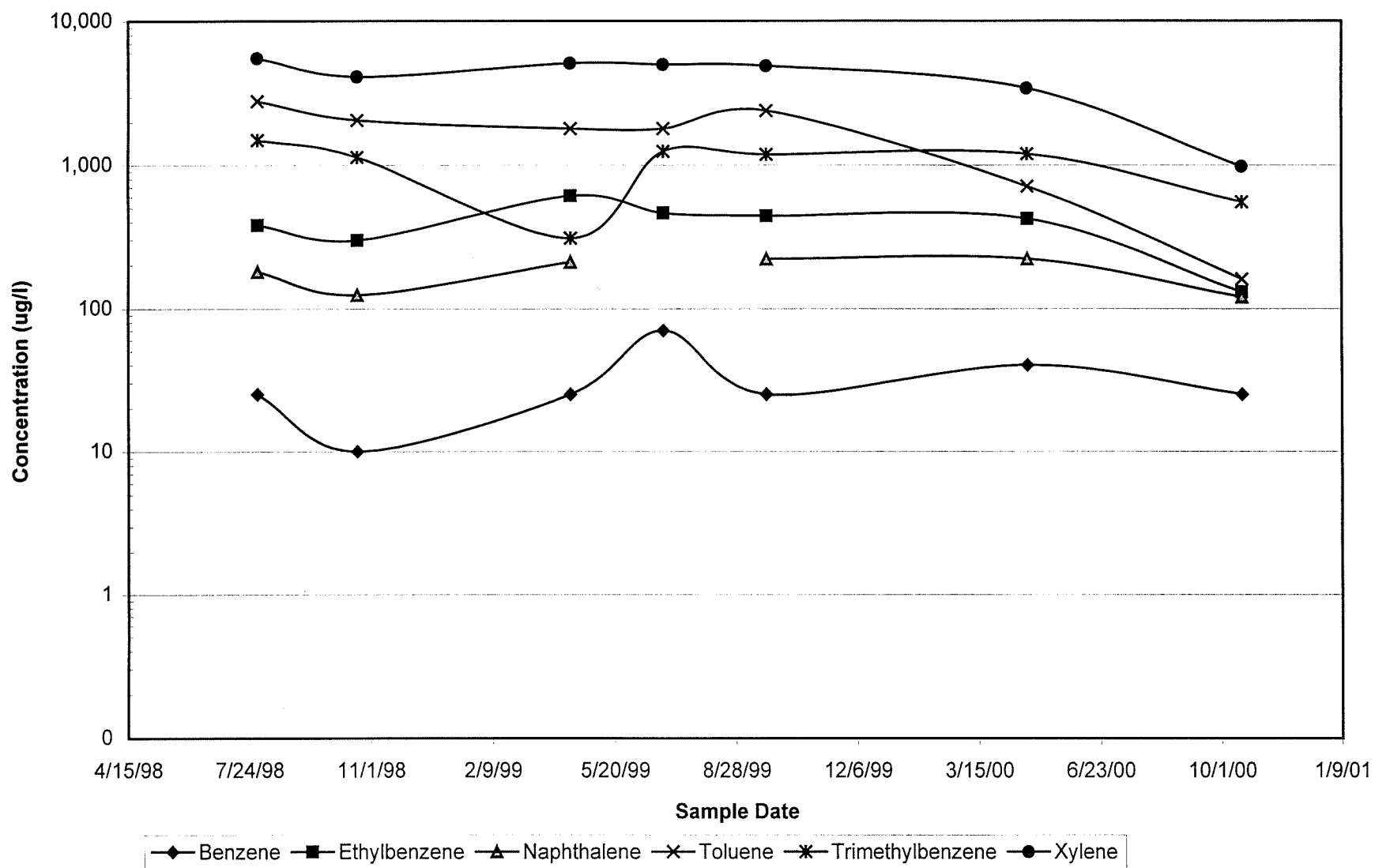
	Date						
	7/31/98	10/21/98	4/14/99	6/29/99	9/22/99	4/24/00	10/18/00
MW1	1099.28	1099.06	1098.49	1098.45	1099.33	1098.18	1098.17
MW2	1099.27	1099.06	1098.48	1098.44	1099.32	1098.16	1098.17
MW3	1100.21	1099.01	1098.42	1098.39	1099.26	1098.08	1098.10
MW4	1099.28	1099.06	1098.49	1098.46	1099.33	1098.16	1098.17
MW5	1099.31	1099.10	1098.54	1098.49	1099.37	1098.21	1098.21
MW6	1099.27	1099.05	1098.49	1098.45	1099.33	1098.17	1098.17
PZ1	1099.30	1099.10	1098.51	1098.48	1099.35	1098.19	1098.20

		Depth To Water						
	PVC Elev.	7/31/98	10/21/98	4/14/99	6/29/99	9/22/99	4/24/00	10/18/00
MW1	1123	23.72	23.94	24.51	24.55	23.67	24.82	24.83
MW2	1122.76	23.49	23.7	24.28	24.32	23.44	24.6	24.59
MW3	1125.61	25.4	26.6	27.19	27.22	26.35	27.53	27.51
MW4	1125.86	26.58	26.8	27.37	27.4	26.53	27.7	27.69
MW5	1122.16	22.85	23.06	23.62	23.67	22.79	23.95	23.95
MW6	1122.18	22.91	23.13	23.69	23.73	22.85	24.01	24.01
PZ1	1122.85	23.55	23.75	24.34	24.37	23.5	24.66	24.65

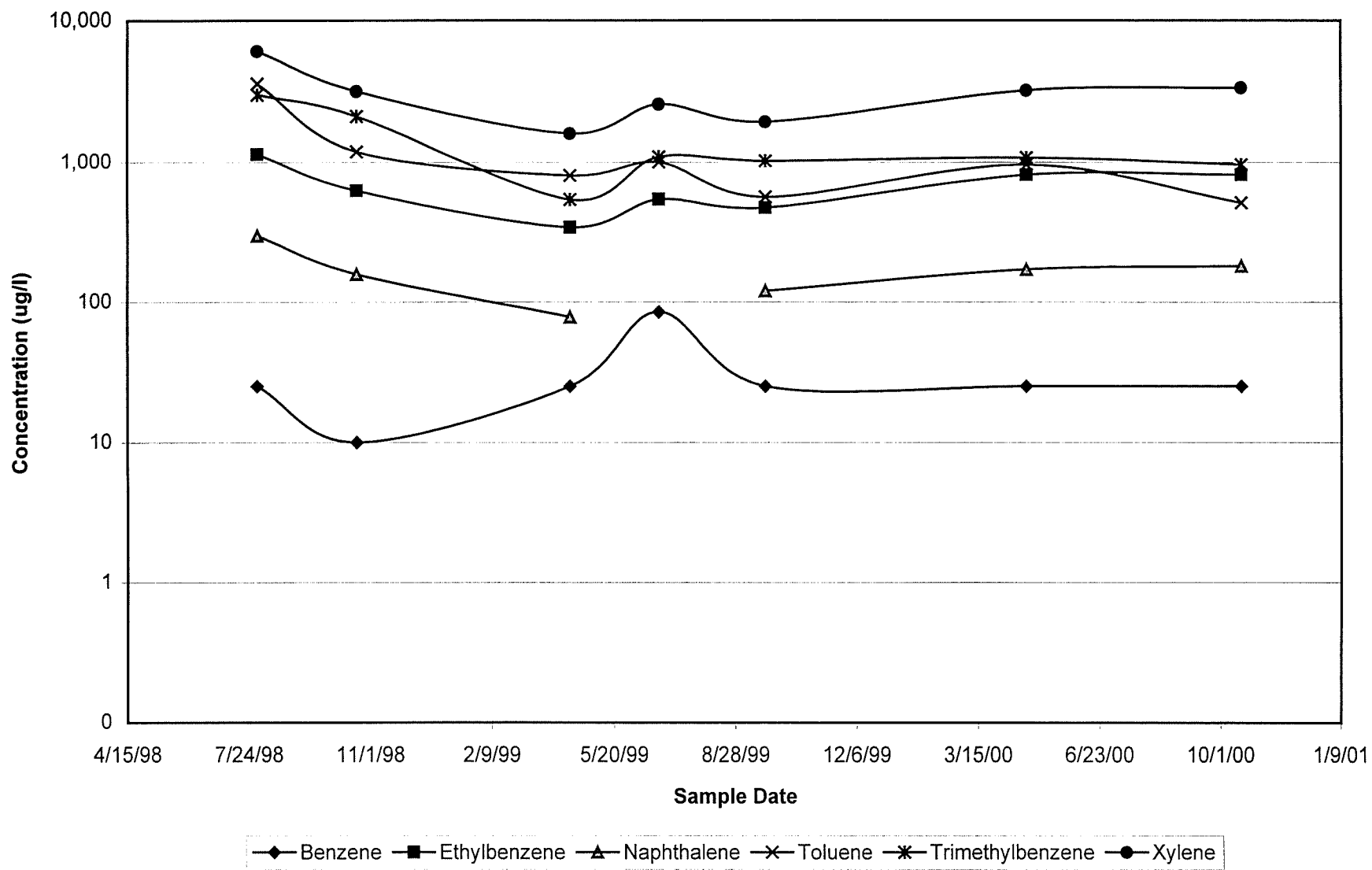
SECTION 7

CONTAMINANT CONCENTRATION GRAPHS

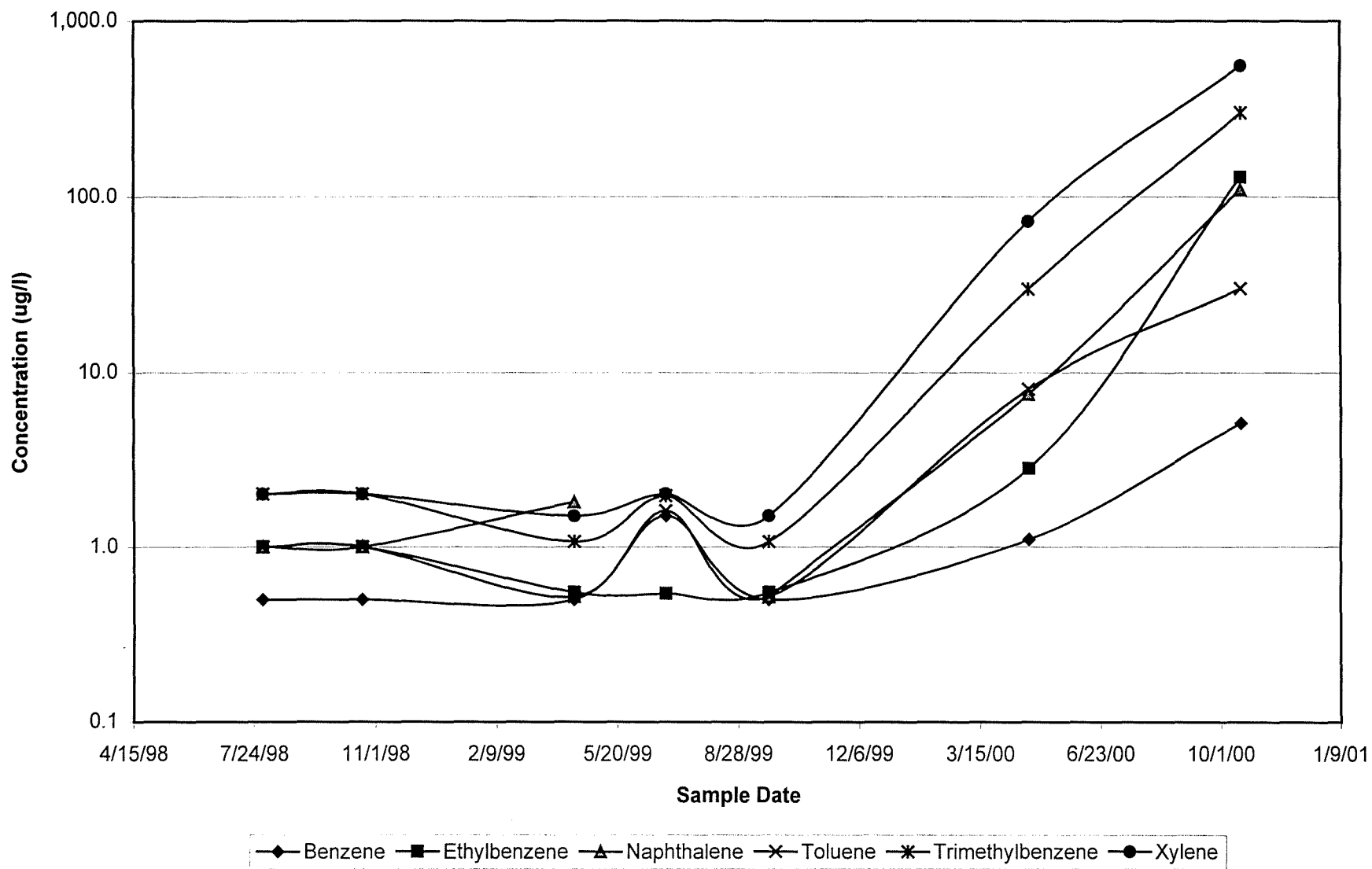
Contaminant Concentrations In MW-1



Contaminant Concentrations In MW-2



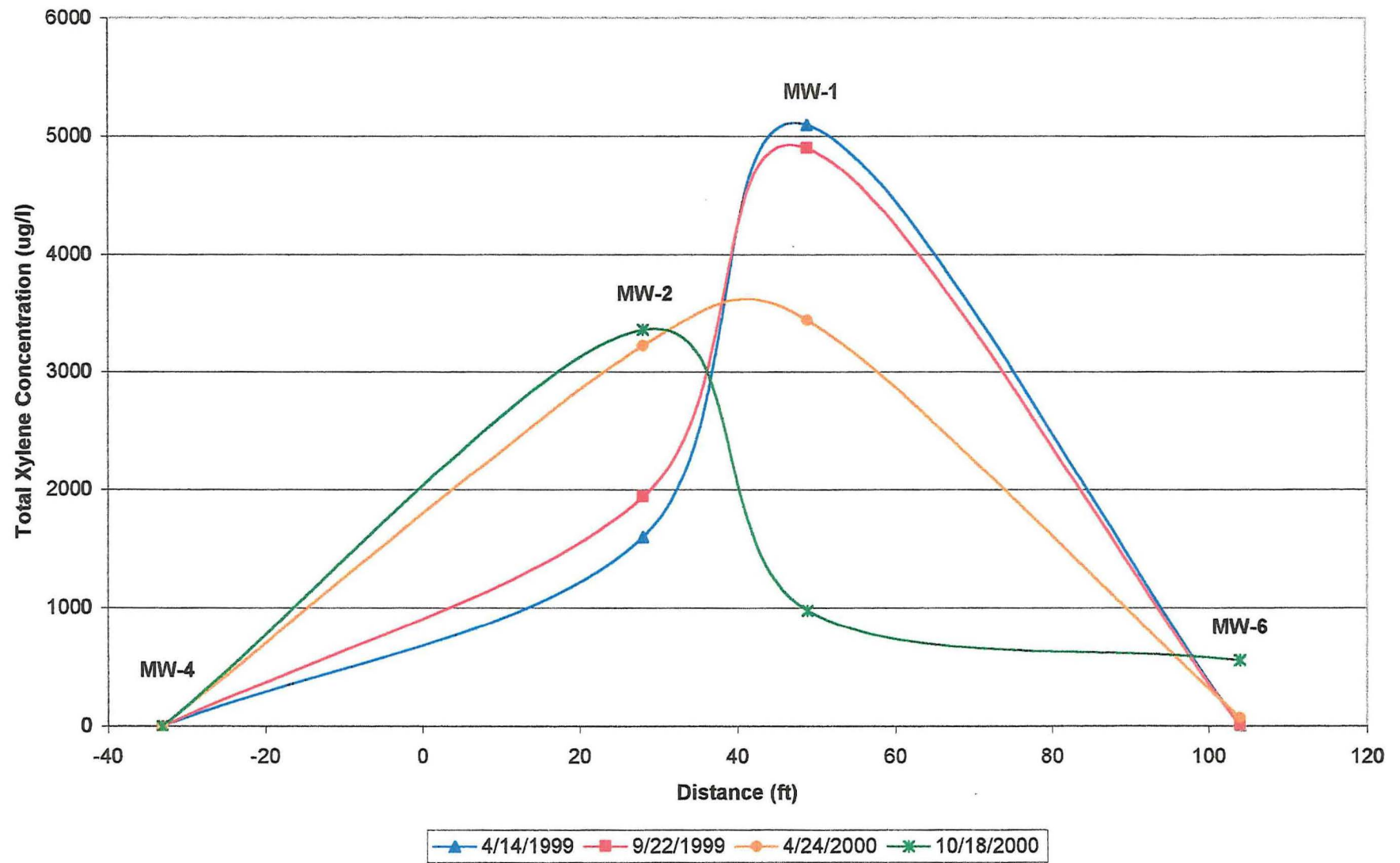
Contaminant Concentrations In MW-6



SECTION 8

**CONTAMINATION CONCENTRATION
VERSUS DISTANCE**

Total Xylene Concentrations versus Distance from the Source



SECTION 9

MOST RECENT ANALYTICAL RESULTS

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

PAGE: 1 NLS PROJECT# 57131

NLS CUST# 17365

Client: Lampert, Lee & Associates
Attn: Janet Snedeker
10968 Highway 54 East
Wisconsin Rapids, WI 54494

Project Description: Spiritland Store
Project Title: 99-048

Sample ID: MW1 NLS#: 243364
Ref. Line 1 of COC 46406 Description: MW1
Collected: 10/18/00 Received: 10/19/00 Reported: 10/31/00

Parameter	Result	Units	LOD	LOQ	Method	Analyzed Lab
Lead, dis. as Pb by ICP	< 1.8 >	ug/L	1.4	5.1	SW846 6010	10/30/00 721026460
PVOCs (water) by SW846 8020 + Naphthalene	see attached				SW846 8020	10/25/00 721026460
GRO (water)	4.7	mg/L	0.76	2.4	WI MOD GRO	10/25/00 721026460
Additional Comments: spike-103%, duplicate-107%, surrogate-116%						

Sample ID: MW2 NLS#: 243365
Ref. Line 2 of COC 46406 Description: MW2
Collected: 10/18/00 Received: 10/19/00 Reported: 10/31/00

Parameter	Result	Units	LOD	LOQ	Method	Analyzed Lab
Lead, dis. as Pb by ICP	7.5	ug/L	1.4	5.1	SW846 6010	10/30/00 721026460
PVOCs (water) by SW846 8020 + Naphthalene	see attached				SW846 8020	10/25/00 721026460
GRO (water)	14	mg/L	0.76	2.4	WI MOD GRO	10/25/00 721026460
Additional Comments: spike-103%, duplicate-107%, surrogate-124%						
High surrogate value is due to sample matrix. Peaks present after the GRO quantitation window.						

WIS. LAB CERT. NO. 721026460

PAGE: 2 NLS PROJECT# 57131

NLS CUST# 17365

NLS CUST# 17365

[illegible][illegible]

Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

ANALYTICAL REPORT

NLS CUST# 17365

Client: Lampert, Lee & Associates
Attn: Janet Snedeker
10968 Highway 54 East
Wisconsin Rapids, WI 54494

Project Description: Spiritland Store
Project Title: 99-048

Sample ID: MW5 NLS#: 243368
Ref. Line 5 of COC 46406 Description: MW5
Collected: 10/18/00 Received: 10/19/00 Reported: 10/31/00

[illegible]

Sample ID: MW6 NLS#: 243369
Ref. Line 6 of COC 46406 Description: MW6
Collected: 10/18/00 Received: 10/19/00 Reported: 10/31/00

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>	<u>Analyzed</u>	<u>Lab</u>
Lead, dis. as Pb by ICP	ND	ug/L	1.4	5.1	SW846 6010	10/30/00	721026460
PVOCs (water) by SW846 8020 + Naphthalene	see attached				SW846 8020	10/25/00	721026460
GRO (water)	3.0	mg/L	0.15	0.48	WI MOD GRO	10/25/00	721026460
Additional Comments: spike-103%, duplicate-107%, surrogate-133%							
High surrogate value is due to sample matrix. Peaks present after the GRO quantitation window.							

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

PAGE: 4 NLS PROJECT# 57131

Client: Lampert, Lee & Associates
Attn: Janet Snedeker
10968 Highway 54 East
Wisconsin Rapids, WI 54494

NLS CUST# 17365

Project Description: Spiritland Store
Project Title: 99-048

Sample ID: PZ NLS#: 243370
Ref. Line 7 of COC 46406 Description: PZ
Collected: 10/18/00 Received: 10/19/00 Reported: 10/31/00

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
Lead, dis. as Pb by ICP	ND	ug/L	1.4	5.1	SW846 6010	10/30/00	721026460
PVOCs (water) by SW846 8020 + Naphthalene	see attached				SW846 8020	10/25/00	721026460
GRO (water)	1.4	mg/L	0.15	0.48	WI MOD GRO	10/25/00	721026460
Additional Comments: spike-103%, duplicate-107%, surrogate-112%							

Sample ID: House NLS#: 243371
Ref. Line 8 of COC 46406 Description: House
Collected: 10/18/00 Received: 10/19/00 Reported: 10/31/00

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs by EPA 524.2	see attached				EPA 524.2	10/23/00	721026460

Sample ID: Trip Blank NLS#: 243372
Ref. Line 9 of COC 46406 Description: Trip Blank
Collected: 10/18/00 Received: 10/19/00 Reported: 10/31/00

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs by EPA 524.2	not analyzed				EPA 524.2	10/23/00	721026460

Values in brackets represent results greater than the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation".
Results greater than the LOQ are considered to be in the region of "Certain Quantitation".

LOD = Limit of Detection
DWB = Dry Weight Basis

LOQ = Limit of Quantitation
NA = Not Applicable

ND = Not Detected
%DWB = (mg/kg DWB)/10000

Reviewed by:

Authorized by:

R. T. Krueger
Laboratory Manager

ANALYTICAL RESULTS: WISCONSIN DNR MODIFIED GRO METHOD

Page: 1

Customer: Lampert, Lee & Associates

Project Description: Spiritland Store Project Title: 99-048

Northern Lake Service Project Number: 57131

Sample: 243364 MW1 Collected: 18-OCT-00 Analyzed: 26-OCT-00

ANALYTE NAME	243364 MW1 ug/l	DILUTION FACTOR	LOD ug/l	LOQ ug/l
MTBE	ND	50	50	160
Benzene	ND	50	25	81
Toluene	160	50	26	81
Ethylbenzene	130	50	26	81
M/P-xylene	930	50	58	180
O-xylene	< 50 >	50	25	80
1,3,5-Trimethylbenzene	130	50	27	86
1,2,4-Trimethylbenzene	420	50	26	82
Naphthalene	120	50	26	82

Surrogate Recovery on 1,2,3-Trichlorobenzene = 101 %

Sample: 243365 MW2 Collected: 18-OCT-00 Analyzed: 26-OCT-00

ANALYTE NAME	243365 MW2 ug/l	DILUTION FACTOR	LOD ug/l	LOQ ug/l
MTBE	ND	50	50	160
Benzene	ND	50	25	81
Toluene	510	50	26	81
Ethylbenzene	810	50	26	81
M/P-xylene	2900	50	58	180
O-xylene	460	50	25	80
1,3,5-Trimethylbenzene	410	50	27	86
1,2,4-Trimethylbenzene	550	50	26	82
Naphthalene	180	50	26	82

Surrogate Recovery on 1,2,3-Trichlorobenzene = 96.0 %

Sample: 243366 MW3 Collected: 18-OCT-00 Analyzed: 26-OCT-00

ANALYTE NAME	243366 MW3 ug/l	DILUTION FACTOR	LOD ug/l	LOQ ug/l
MTBE	ND	1	1.0	3.2
Benzene	ND	1	0.51	1.6
Toluene	ND	1	0.51	1.6
Ethylbenzene	ND	1	0.51	1.6
M/P-xylene	ND	1	1.2	3.7
O-xylene	ND	1	0.50	1.6
1,3,5-Trimethylbenzene	ND	1	0.54	1.7
1,2,4-Trimethylbenzene	ND	1	0.52	1.6
Naphthalene	ND	1	0.52	1.6

Surrogate Recovery on 1,2,3-Trichlorobenzene = 102 %

ANALYTICAL RESULTS: WISCONSIN DNR MODIFIED GRO METHOD

Page: 2

Customer: Lampert, Lee & Associates

Project Description: Spiritland Store Project Title: 99-048

Northern Lake Service Project Number: 57131

Sample: 243367 MW4 Collected: 18-OCT-00 Analyzed: 26-OCT-00

ANALYTE NAME	243367 MW4 ug/l	DILUTION FACTOR	LOD ug/l	LOQ ug/l
MTBE	ND	1	1.0	3.2
Benzene	ND	1	0.51	1.6
Toluene	ND	1	0.51	1.6
Ethylbenzene	ND	1	0.51	1.6
M/P-xylene	ND	1	1.2	3.7
O-xylene	ND	1	0.50	1.6
1,3,5-Trimethylbenzene	ND	1	0.54	1.7
1,2,4-Trimethylbenzene	ND	1	0.52	1.6
Naphthalene	ND	1	0.52	1.6

Surrogate Recovery on 1,2,3-Trichlorobenzene = 105 %

Sample: 243368 MW5 Collected: 18-OCT-00 Analyzed: 26-OCT-00

ANALYTE NAME	243368 MW5 ug/l	DILUTION FACTOR	LOD ug/l	LOQ ug/l
MTBE	ND	1	1.0	3.2
Benzene	ND	1	0.51	1.6
Toluene	ND	1	0.51	1.6
Ethylbenzene	ND	1	0.51	1.6
M/P-xylene	ND	1	1.2	3.7
O-xylene	ND	1	0.50	1.6
1,3,5-Trimethylbenzene	ND	1	0.54	1.7
1,2,4-Trimethylbenzene	< 1.5 >	1	0.52	1.6
Naphthalene	ND	1	0.52	1.6

Surrogate Recovery on 1,2,3-Trichlorobenzene = 101 %

Sample: 243369 MW6 Collected: 18-OCT-00 Analyzed: 26-OCT-00

ANALYTE NAME	243369 MW6 ug/l	DILUTION FACTOR	LOD ug/l	LOQ ug/l
MTBE	ND	10	10	32
Benzene	ND	10	5.1	16
Toluene	30	10	5.1	16
Ethylbenzene	130	10	5.1	16
M/P-xylene	430	10	12	37
O-xylene	130	10	5.0	16
1,3,5-Trimethylbenzene	34	10	5.4	17
1,2,4-Trimethylbenzene	270	10	5.2	16
Naphthalene	110	10	5.2	16

Surrogate Recovery on 1,2,3-Trichlorobenzene = 96.0 %

ANALYTICAL RESULTS: WISCONSIN DNR MODIFIED GRO METHOD

Page: 3

Customer: Lampert, Lee & Associates

Project Description: Spiritland Store Project Title: 99-048

Northern Lake Service Project Number: 57131

Sample: 243370 PZ Collected: 18-OCT-00 Analyzed: 26-OCT-00

ANALYTE <u>NAME</u>	243370 PZ <u>ug/l</u>	<u>DILUTION</u> <u>FACTOR</u>	<u>LOD</u> <u>ug/l</u>	<u>LOQ</u> <u>ug/l</u>
MTBE	ND	10	10	32
Benzene	ND	10	5.1	16
Toluene	59	10	5.1	16
Ethylbenzene	75	10	5.1	16
M/P-xylene	170	10	12	37
O-xylene	34	10	5.0	16
1,3,5-Trimethylbenzene	19	10	5.4	17
1,2,4-Trimethylbenzene	94	10	5.2	16
Naphthalene	27	10	5.2	16

Surrogate Recovery on 1,2,3-Trichlorobenzene = 93.0 %

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis (Saturn 3)

Page: 1

Customer: Lampert, Lee & Associates

Project Description: Spiritland Store Project Title: 99-048

Northern Lake Service Project Number: 57131

Sample: 243371 House Collected: 18-OCT-00 Analyzed: 23-OCT-00

ANALYTE NAME	243371 House ug/L	DILUTION FACTOR	LOD ug/L	LOQ ug/L	MCL ug/L
Benzene	ND	1	0.32	1.0	5.0
Bromobenzene	ND	1	0.12	0.36	
Bromochloromethane	ND	1	0.31	0.98	
Bromodichloromethane	ND	1	0.26	0.84	
Bromoform	ND	1	0.24	0.76	
Bromomethane	ND	1	0.17	0.54	
n-Butylbenzene	ND	1	0.13	0.42	
sec-Butylbenzene	ND	1	0.10	0.33	
tert-Butylbenzene	ND	1	0.12	0.39	
Carbon Tetrachloride	ND	1	0.20	0.65	5.0
Chlorobenzene	ND	1	0.13	0.41	100
Chloroethane	ND	1	2.3	7.3	
Chloroform	ND	1	0.28	0.90	
Chloromethane	ND	1	0.33	1.1	
2-Chlorotoluene	ND	1	0.13	0.43	
4-Chlorotoluene	ND	1	0.12	0.40	
Dibromochloromethane	ND	1	0.26	0.82	
1,2-Dibromo-3-Chloropropane	ND	1	0.33	1.0	
1,2-Dibromoethane	ND	1	0.12	0.36	
Dibromomethane	ND	1	0.12	0.39	
1,2-Dichlorobenzene	ND	1	0.17	0.53	600
1,3-Dichlorobenzene	ND	1	0.40	1.3	
1,4-Dichlorobenzene	ND	1	0.13	0.42	75
Dichlorodifluoromethane	ND	1	0.12	0.39	
1,1-Dichloroethane	ND	1	0.36	1.2	
1,2-Dichloroethane	ND	1	0.14	0.44	5.0
1,1-Dichloroethene	ND	1	0.35	1.1	7.0
cis-1,2-Dichloroethene	ND	1	0.15	0.48	70
trans-1,2-Dichloroethene	ND	1	0.39	1.2	100
1,2-Dichloropropane	ND	1	0.15	0.46	5.0
1,3-Dichloropropane	ND	1	0.13	0.41	
2,2-Dichloropropane	ND	1	0.13	0.41	
1,1-Dichloropropene	ND	1	0.19	0.60	
cis-1,3-Dichloropropene	ND	1	0.10	0.33	
trans-1,3-Dichloropropene	ND	1	0.14	0.44	
Ethylbenzene	ND	1	0.14	0.44	700
Hexachlorobutadiene	ND	1	0.47	1.5	
Isopropylbenzene	ND	1	0.12	0.36	
p-Isopropyltoluene	ND	1	0.11	0.34	
Methylene chloride	ND	1	0.35	1.1	5.0
Naphthalene	ND	1	0.37	1.2	
n-Propylbenzene	ND	1	0.11	0.35	
Styrene	ND	1	0.11	0.36	100
ortho-Xylene	ND	1	0.12	0.37	
1,1,1,2-Tetrachloroethane	ND	1	0.11	0.34	
1,1,2,2-Tetrachloroethane	ND	1	0.12	0.40	
Tetrachloroethene	ND	1	0.11	0.36	5.0
Toluene	ND	1	0.37	1.2	1000
1,2,3-Trichlorobenzene	ND	1	0.37	1.2	
1,2,4-Trichlorobenzene	ND	1	0.35	1.1	70
1,1,1-Trichloroethane	ND	1	0.33	1.1	200
1,1,2-Trichloroethane	ND	1	0.11	0.36	5.0

ANALYTICAL RESULTS: GCMS 524.2 Safe Drinking Water Analysis (Saturn 3)

Page: 2

Customer: Lampert, Lee & Associates

Project Description: Spiritland Store Project Title: 99-048

Northern Lake Service Project Number: 57131

Sample: 243371 House Collected: 18-OCT-00 Analyzed: 23-OCT-00

ANALYTE <u>NAME</u>	243371 House <u>ug/L</u>	DILUTION <u>FACTOR</u>	LOD <u>ug/L</u>	LOQ <u>ug/L</u>	MCL <u>ug/L</u>
Trichloroethene	ND	1	0.34	1.1	5.0
Trichlorofluoromethane	ND	1	0.12	0.38	
1,2,3-Trichloropropane	ND	1	0.14	0.46	
1,2,4-Trimethylbenzene	ND	1	0.12	0.37	
1,3,5-Trimethylbenzene	ND	1	0.14	0.45	
Vinyl chloride	ND	1	0.17	0.55	0.20
meta,para-Xylene	ND	1	0.71	2.3	10000
MTBE	ND	1	0.29	0.93	

Surrogate Recovery on 4-Bromofluorobenzene = 94.0 %
Surrogate Recovery on 1,2-Dichlorobenzene-d4 = 92.0 %



NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298

Tel: (715) 478-2777 • Fax: (715) 478-3060

NO. 46406

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

Wisconsin Lab Cert. No. 721026460

RETURN THIS FORM WITH SAMPLES.

CLIENT <i>Estate of Janet Szczesny McDonald Law Office c/o Lampert-Lee & Assocs.</i>		DNR LICENSE	FID
ADDRESS <i>10968 Hwy 54E</i>		PROJECT TITLE <i>Spiritland Store</i>	
CITY <i>WISCONSIN RAPIDS WI</i> STATE <i>WI</i> ZIP <i>54494</i>		PROJECT NO. <i>99-048</i>	P.O. NO.
		CONTACT <i>Janet Snedeker</i>	PHONE <i>715 424-3131</i>

ITEM NO.	NLS LAB. NO.	SAMPLE ID	DNR ID	COLLECTION		SAMPLE TYPE	GRAB/COMP.	CONTAINER/PRESERVATIVE				COLLECTION REMARKS
				DATE	TIME			VIAL	TYPE	PRESERVATIVE		
1.	243364	MW1		10/18/00		GW	G	2	1			Filtered for Pb
2.	243365	MW2		"		GW	G	2	1			"
3.	243366	MW3		"		GW	G	2	1			"
4.	243367	MW4		"		GW	G	2	1			"
5.	243368	MW5		"		GW	G	2	1			"
6.	243369	MW6		"		GW	G	2	1			"
7.	243370	PZ		"		GW	G	2	1			"
8.	243371	HOUSE		"		DW	G	2				
9.	243372	TRIP BLANK										
10.												
1.												
2.												

SAMPLE TYPE:

SW=surface water
WW=wastewater
GW=groundwater

DW=drinking water
TIS=tissue
AIR=air

PROD=product
SOIL=soil
SED=sediment

describe others

CONTAINER

P = plastic
G = glass
V = glass vial
B = plastic bag

describe others

PRESERVATIVES & PREPARATION

NP = nothing added
S = sulfuric acid
N = nitric acid
Z = zinc acetate

OH = sodium hydroxide
HA = hydrochloric & ascorbic acid
H = hydrochloric acid

F = field filtered

COLLECTED BY (signature) <i>Janet Snedeker</i>	10/18/00	2:00 p.m.	CUSTODY SEAL NO. (IF ANY)	DATE/TIME
RELINQUISHED BY (signature) <i>Janet Snedeker</i>	10/18/00	4:00 p.m.		
RELINQUISHED BY (signature)	RECEIVED BY (signature)			DATE/TIME
SPATCHED BY (signature)	METHOD OF TRANSPORT			DATE/TIME

RECEIVED AT NLS BY (signature) <i>Karen Hyster</i>	DATE/TIME <i>10-19-00 15:15</i>	CONDITION <i>on ice</i>	TEMP.
SEAL INTACT ☐ YES ☒ NO	REMARKS & OTHER INFORMATION <i>11-20-00</i>		

IMPORTANT: 1. TO MEET REGULATORY REQUIREMENTS, THIS FORM **MUST** BE COMPLETED IN DETAIL AND INCLUDED IN THE SHIPPER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, **NOT** PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.

DUPLICATE COPY