

01/03/2000

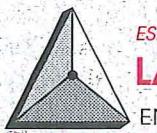
**CLIENT: SPIRITLAND STORE
ESTATE OF JANET SZCZESNY
HWY BB & D
TOWN OF ALMOND, WI**

**TITLE: Operating, Maintenance, Monitoring
and Optimization Report
January 1999 – December 1999**

PROJECT: 99-048

BRRTS NO: 03-50-001258

DATE: December 1999



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



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MS LISA GUTKNECHT
WDNR
5301 RIB MOUNTAIN DRIVE
WAUSAU WI 54401

RE: Spiritland Store OMMO Report

RECEIVED
JAN - 3 2000
WAUSAU DNR

December 30, 1999

LLA # 99-048

BRRTS # 03-50-001258

Dear Ms. Gutknecht:

Enclosed is the Operation, Maintenance, Monitoring and Optimization report for the Spiritland Store UST project at Hwy BB & D in the Town of Almond, Wisconsin.

Sincerely,
LAMPERT – LEE & ASSOCIATES

Janet Snedeker

Janet Snedeker
Project Manager

Jim Lindemann

Jim Lindemann
Hydrogeologist

JL/dd

Enclosure

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

RECEIVED
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WAUSAU DNR

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SECTION 1
DNR O&M REPORT FORMS

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: 1/1/99 To: 12/31/99 Days in period: 365
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, R+1, 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, 1659 Clark St Stevens Point WI 54487
 - c. Phone number: 715-344-3700
8. Consultant:
 - a. Company name: Lampert-Lee & Associates
 - b. Mailing address: 109168 Hwy 54 E
Wisconsin Rapids WI 54494
 - c. Phone number: 715-424-3131
9. Contaminants: Toluene, Ethylbenzene, Total Xylenes, Trimethylbenzenes, 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

GENERAL SITE INFORMATION, CONTINUED

SITE NAME AND REPORTING PERIOD:

Site name: The Estate of Janet Szczesny : Spiritland Store

Reporting period from: 1/1/99 To: 12/31/99 Days in period: 365

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).
 X 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).
 X 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 (\$): \$35,854.25
2. Implementation costs (design, capital and installation costs, excluding investigation costs) (\$): N/A
3. Total costs during the previous reporting period (\$): N/A
4. Total costs during this reporting period (\$): \$711
5. Total anticipated costs for the next reporting period (\$): Est \$5000
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: No
7. If close out is anticipated within 12 months, estimated costs for project closeout (\$): N/A

GENERAL SITE INFORMATION, CONTINUED

SITE NAME AND REPORTING PERIOD:

Site name: The Estate of Janet Szczesny: Spiritland Store

Reporting period from: 1/1/99 To: 12/31/99 Days in period: 365

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) Jim 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:

Jim Lindemann, Hydrogeologist, 12/30/99

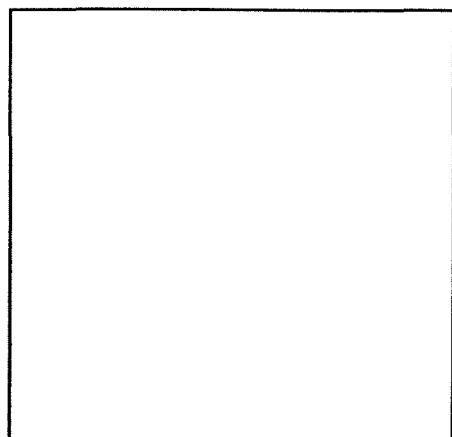
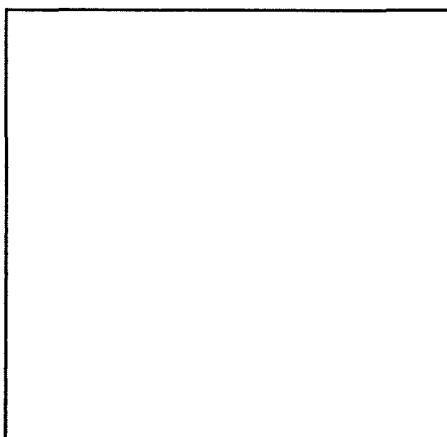
Scientists:

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, 12/30/99

Professional Seal(s), if applicable:



NATURAL ATTENUATION (PASSIVE BIOREMEDIATION) IN GROUNDWATER

SITE NAME AND REPORTING PERIOD:

Site name: The Estate of Janet Szczesny: Spirit Hand Store

Reporting period from: 1/1/99 To: 12/31/99 Days in period: 365

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; 87.35% (ES); 97.47% (PAL) in MW1
b. Percent reduction necessary to reach ch. NR 140 ES and PAL: 1
c. Maximum contaminant concentration level in any monitoring well ($\mu\text{g/L}$): 4900 $\mu\text{g/l}$

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): Yes

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

5. If the answer in 4. (above) is "expanding," is natural attenuation still the best option? (Y/N) If yes, explain: _____

6. Biodegradation parameters:

- a. Upgradient (or other site specific background) DO level (mg/L): 10.3
b. DO levels in the part of the plume that is most heavily contaminated (mg/L): 1

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.

NATURAL ATTENUATION (PASSIVE BIOREMEDIATION) IN SOIL

SITE NAME AND REPORTING PERIOD:

Site name: The Estate of Janet Szczesny: Spirit Hand Store

Reporting period from: 1/1/99 To: 12/31/99 Days in period: 365

A. EFFECTIVENESS EVALUATION:

1. Soil gas information in the soil that is most contaminated from a permanently installed gas probe(s) or water table monitoring well(s):

- Hydrocarbon levels (ppm, with an FID): SB-5, 13-15' (4/12/98): PID reading of 98 ppm
- Oxygen levels (percent): N/A
- Carbon dioxide levels (specify ppm, or percent): N/A
- Methane levels (ppm): N/A

2. Soil gas information in background (uncontaminated soil) from permanently installed gas probe(s) or water table monitoring well(s):

- Hydrocarbon levels (ppm, with an FID): _____
- Oxygen levels (percent): N/A
- Carbon dioxide levels (specify ppm, or percent): N/A
- Methane levels (ppm): N/A

3. List the results of the single boring that had the highest levels of soil contamination during the last round of soil sampling, and the date those samples were collected. Since soil borings are only drilled periodically, list the most recent data even if the data is prior to this reporting period. Since this data is used to assess progress based on the most recent soil sampling event, do not list data from prior sampling events.

- Total hydrocarbons. Specify if GRO and/or DRO. (mg/kg): (4/17/98) SB-5, 13-15' bgs: GRO - 632 mg/kg
- Specific compounds ($\mu\text{g}/\text{kg}$):
 - Benzene: ND
 - 1,2 Dichloroethane: ND
 - Ethylbenzene: ND
 - Toluene: ND
 - Total xylenes: ND

4. Is there any evidence that contaminants are leaching into groundwater? (Y/N):

If the answer is yes and if groundwater quality is not being monitored, explain:

YES

5. Is site closure a viable option within 12 months from the date of this form? (Y/N):

NO

6. Are there any modifications that can be made to the remediation to improve cost effectiveness? (Y/N) If yes, explain:

NO

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

- Well and soil sample location map.
- Cross sections showing the water table, soil sampling locations, screened intervals for gas probes or water table wells, geologic contacts, and any former excavation boundaries.
- Graphs of contaminant concentrations, oxygen, carbon dioxide and methane levels over time.
- Groundwater elevations table, if water table wells are present at the site.
- Table of soil contaminant chemistry.
- Table of soil gas readings.

N/A

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 |
| GRO (Gasoline Range Organics) | - | - | 15,100 | 12,000 | 15,000 | 16,000 | 15,000 |
| Lead (ug/l) | 15 | 1.5 | 25.4 | 7.53 | <1.4> | <2.0> | <1.8> |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | |
| | | (ug/l) | | (ug/l) | | | |
| Benzene | 5 | 0.5 | <25 | <10 | <25 | <70> | <25 |
| Ethylbenzene | 700 | 140 | 380 | 297 | 610 | 460 | 440 |
| Methyl - t - Butyl ether | 60 | 12 | <50 | <20 | <24 | <50 | <24 |
| Naphthalene | 40 | 8 | 180 | 124 | 210 | na | 220 |
| Toluene | 343 | 68.6 | 2,800 | 2,060 | 1800 | 1800 | 2400 |
| 1,2,4-Trimethylbenzene | 480 (1) | 96 (1) | 1,130 | 799 | <28 | 900 | 880 |
| 1,3,5-Trimethylbenzene | 480 (1) | 96 (1) | 367 | 335 | 280 | 350 | 310 |
| m&p-Xylene | 620 (1) | 124 (1) | 3,780 | 2,800 | 3500 | 3700 | 3400 |
| o-Xylene / Styrene | 620 (1) | 124 (1) | 1750 | 1320 | 1600 | 1300 | 1500 |
| Total BETX | | | 8735 | 6487 | 7535 | 7330 | 7765 |

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 | -/14/99 | 6/26/99 | 9/22/99 |
|-------------------------------|----------------------|-------------------------|---------|----------|---------|---------|---------|
| | | | 28,200 | 18,300 | 15,000 | 17,000 | 13,000 |
| GRO (Gasoline Range Organics) | - | - | | | | | |
| Lead (ug/l) | 15 | 1.5 | 188.0 | 69.7 | 9.6 | 5.6 | 12 |

DETECTED VOLATILE ORGANIC COMPOUNDS

| | (ug/l) | (ug/l) | | | | | |
|--------------------------|---------|---------|-------|-------|------|------|------|
| Benzene | 5 | 0.5 | <25 | 10 | <25 | <85> | <25 |
| n-Butylbenzene | | | 209 | NA | NA | NA | NA |
| Ethylbenzene | 700 | 140 | 1140 | 623 | 340 | 540 | 470 |
| Isopropylbenzene | | | 203 | NA | NA | NA | NA |
| p-Isopropyltoluene | | | 106 | NA | NA | NA | NA |
| methyl - t - Butyl ether | 60 | 12 | <50 | <20 | <24 | <50 | <24 |
| Naphthalene | 40 | 8 | 296 | 157 | <78> | NA | 120 |
| n-Propylbenzene | | | 195 | NA | NA | NA | NA |
| Toluene | 343 | 68.6 | 3,580 | 1,190 | 800 | 1000 | 560 |
| 1,2,4-Trimethylbenzene | 480 (1) | 96 (1) | 1,990 | 1,210 | <28 | 570 | 500 |
| 1,3,5-Trimethylbenzene | 480 (1) | 96 (1) | 1,010 | 911 | 510 | 520 | 520 |
| m&p-Xylene | 620 (1) | 124 (1) | 4,260 | 2,340 | 1200 | 2000 | 1600 |
| o-Xylene / Styrene | 620 (1) | 124 (1) | 1810 | 825 | 400 | 580 | 340 |
| Total BETX | | | 7,235 | 4,988 | 2765 | 4205 | 2995 |

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 |
| GRO (Gasoline Range Organics) | - | - | ND | <50 | <15 | <15 | <16> |
| Lead (ug/l) | 15 | 1.5 | 8.8 | 4.78 | <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 |
| Ethylbenzene | 700 | 140 | ND | <1 | <0.55 | <0.54 | <0.55 |
| Methyl - t - Butyl ether | 60 | 12 | ND | <1 | <0.47 | <0.47 | <0.47 |
| Naphthalene | 40 | 8 | ND | <1 | <0.52 | NA | <0.52 |
| Toluene | 343 | 68.6 | ND | <1 | <0.79> | <1.8> | <0.52 |
| 1,2,4-Trimethylbenzene | 480 (1) | 96 (1) | ND | <1 | <0.55 | <0.79> | <0.55 |
| 1,3,5-Trimethylbenzene | 480 (1) | 96 (1) | ND | <1 | <0.52 | <0.52 | <0.52 |
| m&p-Xylene | 620 (1) | 124 (1) | ND | <1 | <2.5> | <1.5> | <1.0 |
| o-Xylene / Styrene | 620 (1) | 124 (1) | ND | <1 | <0.50 | <0.5 | <0.5 |

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 |
| GRO (Gasoline Range Organics) | - | - | ND | <50 | <15 | <15 | <15 |
| Lead (ug/l) | 15 | 1.5 | 3.8 | 1.59 | <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 |
| Ethylbenzene | 700 | 140 | ND | <1 | <0.55 | <0.54 | <0.55 |
| Methyl - t - Butyl ether | 60 | 12 | ND | <1 | <0.47 | <0.47 | <0.47 |
| Naphthalene | 40 | 8 | ND | <1 | <0.52 | NA | <0.52 |
| Toluene | 343 | 68.6 | ND | <1 | <0.79> | <1.6> | <0.52 |
| 1,2,4-Trimethylbenzene | 480 (1) | 96 (1) | ND | <1 | <0.55 | <0.55 | <0.55 |
| 1,3,5-Trimethylbenzene | 480 (1) | 96 (1) | ND | <1 | <0.52 | <0.52 | <0.52 |
| m&p-Xylene | 620 (1) | 124 (1) | ND | <1 | <2.5> | <1.2> | <1.0 |
| o-Xylene / Styrene | 620 (1) | 124 (1) | ND | <1 | <0.50 | <0.50 | <0.5 |

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 |
| GRO (Gasoline Range Organics) | - | - | ND | <50 | <15 | <15 | <15 |
| Lead (ug/l) | 15 | 1.5 | 3.1 | 2.07 | <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 |
| Ethylbenzene | 700 | 140 | ND | <1 | <0.55 | <0.54 | <0.55 |
| iMethyl - t - Butyl ether | 60 | 12 | ND | <1 | <0.47 | <0.47 | <0.47 |
| Naphthalene | 40 | 8 | ND | <1 | <0.52 | NA | <0.52 |
| Toluene | 343 | 68.6 | ND | <1 | <0.64> | <0.52 | <0.52 |
| 1,2,4-Trimethylbenzene | 480 (1) | 96 (1) | ND | <1 | <0.52 | <0.55 | <0.55 |
| 1,3,5-Trimethylbenzene | 480 (1) | 96 (1) | ND | <1 | <0.52 | <0.52 | <0.52 |
| m&p-Xylene | 620 (1) | 124 (1) | ND | <1 | <1.0 | <1.0 | <1.0 |
| o-Xylene / Styrene | 620 (1) | 124 (1) | ND | <1 | <0.50 | <0.50 | <0.5 |

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 |
| GRO (Gasoline Range Organics) | - | - | ND | <50 | <15 | <39> | <15 |
| Lead (ug/l) | 15 | 1.5 | 4.1 | 8.91 | <4.4> | <4.4> | <1.4 |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | |
| | | (ug/l) | (ug/l) | | | | |
| Benzene | 5 | 0.5 | ND | <0.5 | <0.50 | <1.5> | <0.5 |
| Ethylbenzene | 700 | 140 | ND | <1 | <0.55 | <0.54 | <0.55 |
| Methyl - t - Butyl ether | 60 | 12 | ND | <1 | <0.47 | <0.47 | <0.47 |
| Naphthalene | 40 | 8 | ND | <1 | 1.8 | NA | <0.52 |
| Toluene | 343 | 68.6 | ND | <1 | <0.52 | <1.6> | <0.52 |
| 1,2,4-Trimethylbenzene | 480 (1) | 96 (1) | ND | <1 | <0.55 | <0.55 | <0.55 |
| 1,3,5-Trimethylbenzene | 480 (1) | 96 (1) | ND | <1 | <0.52 | <1.4> | <0.52 |
| m&p-Xylene | 620 (1) | 124 (1) | ND | <1 | <1.0 | <1.5> | <1.0 |
| o-Xylene / Styrene | 620 (1) | 124 (1) | ND | <1 | <0.50 | <0.50 | <0.5 |

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 |
| GRO (Gasoline Range Organics) | - | - | 7,890 | 11,400 | 2,500 | 4,300 | 8,600 |
| Lead (ug/l) | 15 | 1.5 | 22.1 | 17.2 | 5.1 | <1.4 | <3.4> |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | |
| | | (ug/l) | (ug/l) | | | | |
| Benzene | 5 | 0.5 | <25 | <10 | <8.0> | <16> | <20 |
| n-Butylbenzene | | | 236 | NA | NA | NA | NA |
| Ethylbenzene | 700 | 140 | 380 | 487 | 96 | 130 | 490 |
| Methyl - t - Butyl ether | 60 | 12 | <50 | <20 | <4.7 | <4.7 | <19 |
| Naphthalene | 40 | 8 | 75 | 135 | <14> | <14> | 130 |
| Toluene | 343 | 68.6 | 576 | 1,340 | 51 | 36 | 1400 |
| 1,2,4-Trimethylbenzene | 480 (1) | 96 (1) | 544 | 736 | <5.5 | 270 | 490 |
| 1,3,5-Trimethylbenzene | 480 (1) | 96 (1) | 247 | 388 | 58 | 82 | 140 |
| m&p-Xylene | 620 (1) | 124 (1) | 1,670 | 1,980 | 290 | 410 | 1600 |
| o-Xylene / Styrene | 620 (1) | 124 (1) | 686 | 780 | 64 | 61 | 490 |
| Total BETX | | | 3337 | 4597 | 509 | 653 | 4000 |

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**

| Parameter | SAMPLE DATE: April 14, 1999 | | | | | | |
|------------------------|-----------------------------|--------|--------|--------|--------|--------|--------|
| | MW - 1 | MW - 2 | MW - 3 | MW - 4 | MW - 5 | MW - 6 | PZ - 1 |
| 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 |

| Parameter | SAMPLE DATE: June 29, 1999 | | | | | | |
|------------------------|----------------------------|--------|--------|--------|--------|--------|--------|
| | MW - 1 | MW - 2 | MW - 3 | MW - 4 | MW - 5 | MW - 6 | PZ - 1 |
| 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 |

| Parameter | SAMPLE DATE: September 22, 1999 | | | | | | |
|------------------------|---------------------------------|--------|--------|--------|--------|--------|--------|
| | MW - 1 | MW - 2 | MW - 3 | MW - 4 | MW - 5 | MW - 6 | PZ - 1 |
| 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 |

SECTION 3

CONTAMINANT DISTRIBUTION MAPS

Scale 1"=20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

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

◎ MW 6
1122.18(TC)
1122.59(GD)
<0.5

C.T.H.
"BB"

◎ MW 3
1125.61(TC)
1123.10(GD)
<0.5

MW 1
1123.00(TC)
1123.60(GD)
<25

MW 2
1122.76(TC)
1123.26(GD)
<25

PZ 1
1122.85(TC)
1123.29(GD)
<20

◎ MW 4
1125.86(TC)
1123.49(GD)
<0.5

SPIRITLAND STORE

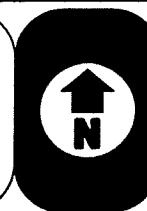
TANKS

C.T.H. "D"

J.A.B.-Dec 29, 1999, 13:38:10
MW 5
1122.16(TC)
1122.58(GD)
<0.5

ESP GROUP, INC.
LAMPERT-LEE
& ASSOCIATES

SPIRITLAND STORE
BENZENE DISTRIBUTION
MAP 9/22/99



DATE: DEC. 29, 1999

LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-H_BE

Scale 1"=20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

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

◎ MW 6
1122.18(TC)
1122.59(GD)
<0.55

C.T.H.

"BB"

◎ MW 3
1125.61(TC)
1123.10(GD)
<0.55

470

490

424.23

1122.83

1123.21

1122.70

100

400

xx

SPIRITLAND STORE

◎ MW 4
1125.86(TC)
1123.49(GD)
<0.55

PZ 1
1122.85(TC)
1123.29(GD)

TANKS

C.T.H. - "D"

MW 5
1122.16(TC)
1122.58(GD)
<0.55

J.A.B.-Dec 29, 1999, 13:32:52



ESP GROUP, INC.
LAMPERT-LEE
& ASSOCIATES

SPIRITLAND STORE
ETHYLBENZENE DISTRIBUTION
MAP 9/22/99



DATE: DEC. 29, 1999

LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-H_ET

Scale 1" = 20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

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

◎
MW 6
1122.18(TC)
1122.59(GD)
<0.52

"BB"
C.T.H.

◎
MW 3
1125.61(TC)
1123.10(GD)
<0.52

1122.83

SPIRITLAND STORE

MW 2
1122.76(TC)
1123.26(GD)

120
MW 1
1123.00(TC)
1123.60(GD)

220

130

PZ 1
1122.85(TC)
1123.29(GD)

124.23

◎
MW 4
1125.86(TC)
1123.49(GD)
<0.52

1123.27

TANKS

1122.70

50

100

200

C.T.H. "D"

◎
MW 5
1122.16(TC)
1122.58(GD)
<0.52

J.A.B.-Dec 30, 1999, 08:23:40



ESP GROUP, INC.
LAMPERT-LEE
& ASSOCIATES

SPIRITLAND STORE
NAPHTHALENE DISTRIBUTION
MAP 9/22/99



DATE: DEC. 29, 1999

LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-H_NA

Scale 1"=20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

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

④
MW 6
1122.18(TC)
1122.59(GD)
<0.52

"BB"

④ MW 3
1125.61(TC)
1123.10(GD)
<0.52

1123.48

1122.83

SPIRITLAND STORE

PZ 1
1122.85(TC)
1123.29(GD)
1400

MW 2
1122.76(TC)
1123.26(GD)

560

MW 1
1123.00(TC)
1123.60(GD)
2400

2000

1000

500

22.70

1123.27

104.23

TANKS

④ MW 4
1125.86(TC)
1123.49(GD)
<0.52

C.T.H.

"D"

C.T.H.

"D"

④ MW 5
1122.16(TC)
1122.58(GD)
<0.52

J.A.B.-Dec 29, 1999, 13:18:25

ESP GROUP, INC.
LAMPERT-LEE
& ASSOCIATES

SPIRITLAND STORE
TOLUENE DISTRIBUTION
MAP 9/22/99



| |
|---------------------------|
| DATE: DEC. 29, 1999 |
| LLA # 98-033 |
| DRAWN BY: JIM BRASEL |
| REVIEWED BY: J. LINDEMANN |
| DWG. NO. A-8200-H_TO |

Scale 1"=20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

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

◎ MW 6
1122.18(TC)
1122.59(GD)
<1.07

C.T.H.
"BB"

◎ MW 3
1125.61(TC)
1123.10(GD)
<1.07

◎ MW 1
1123.00(TC)
1123.60(GD)
1190

MW 2
1122.76(TC)
1123.26(GD)

1020

PZ 1
1122.85(TC)
1123.29(GD)
630

◎ MW 4
1125.86(TC)
1123.49(GD)
<1.07

SPIRITLAND STORE

TANKS

1123.27

1124.23

1122.27

1000

500

1122.20

e

e

e

e

e

e

e

e

e

e

e

e

e

MW 5
1122.16(TC)
1122.58(GD)
<1.07

SPIRITLAND STORE
TRIMETHYLBENZENE DISTRIBUTION
MAP 9/22/99

ESP GROUP, INC.
LAMPERT-LEE
& ASSOCIATES

DATE: DEC. 29, 1999

LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-H_TR



J.A.B.-Dec 29, 1999, 13:48:47

Scale 1"=20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

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

◎ MW 6
1122.18(TC)
1122.59(GD)
<1.5

"BB"

◎ MW 3
1125.61(TC)
1123.10(GD)
<1.5

SPIRITLAND STORE

MW 1
1123.00(TC)
1123.60(GD)
4900

MW 2
1122.76(TC)
1123.26(GD)
1940

PZ 1
1122.85(TC)
1123.29(GD)
2090

◎ MW 4
1125.86(TC)
1123.49(GD)
<1.5

TANKS

C.T.H.

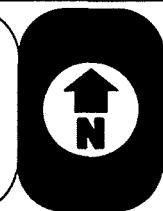
C.T.H. - "D"

◎ MW 5
1122.16(TC)
1122.58(GD)
<1.5

J.A.B.-Dec 29, 1999, 13:44:30

ESP GROUP, INC.
LAMPERT-LEE
& ASSOCIATES

SPIRITLAND STORE
XYLENE DISTRIBUTION
MAP 9/22/99



DATE: DEC. 29, 1999

LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-H_XY

SECTION 4

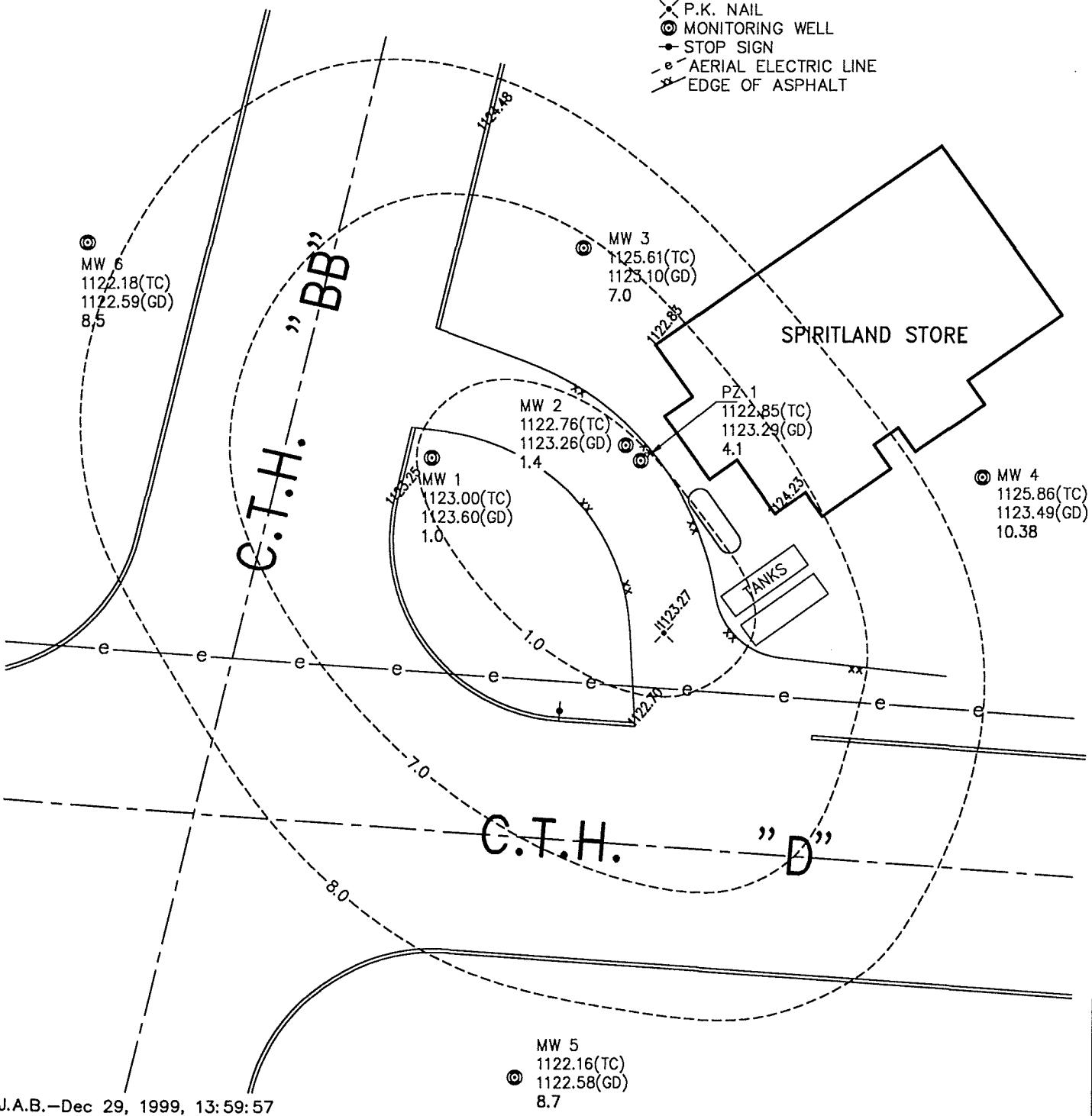
**DISSOLVED OXYGEN
DISTRIBUTION MAP**

Scale 1"=20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

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



J.A.B.—Dec 29, 1999, 13:59:57

 **LAMPERT-LEE
& ASSOCIATES**

SPIRITLAND STORE
DISSOLVED OXYGEN
DISTRIBUTION MAP 9/22/99



DATE: DEC. 29, 1999

LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-H_OX

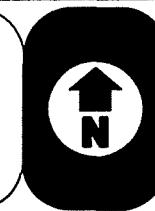
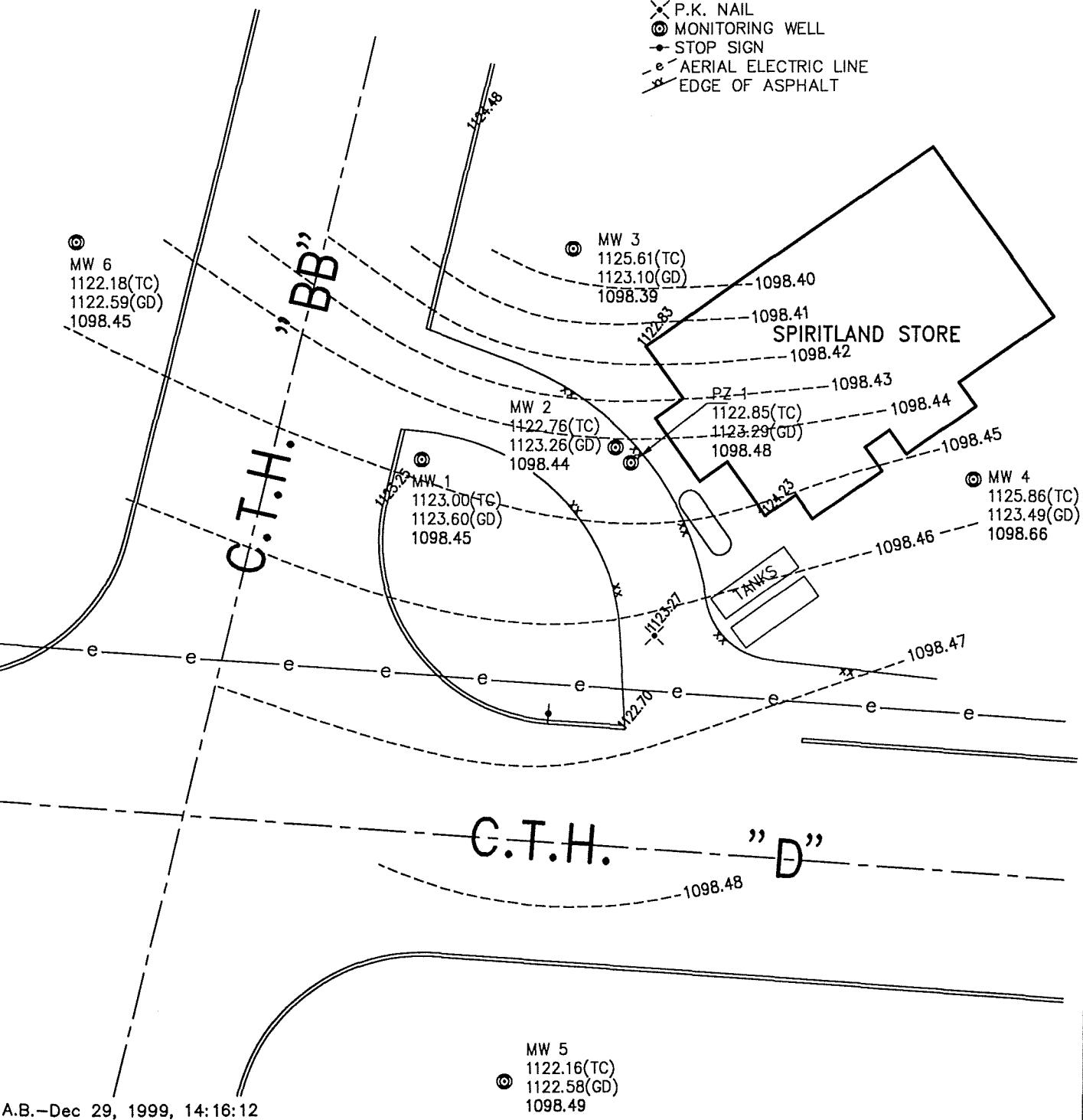
SECTION 5
GROUNDWATER CONTOUR MAPS

Scale 1"=20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

- ✖ P.K. NAIL
- ◎ MONITORING WELL
- STOP SIGN
- e AERIAL ELECTRIC LINE
- ✗ EDGE OF ASPHALT

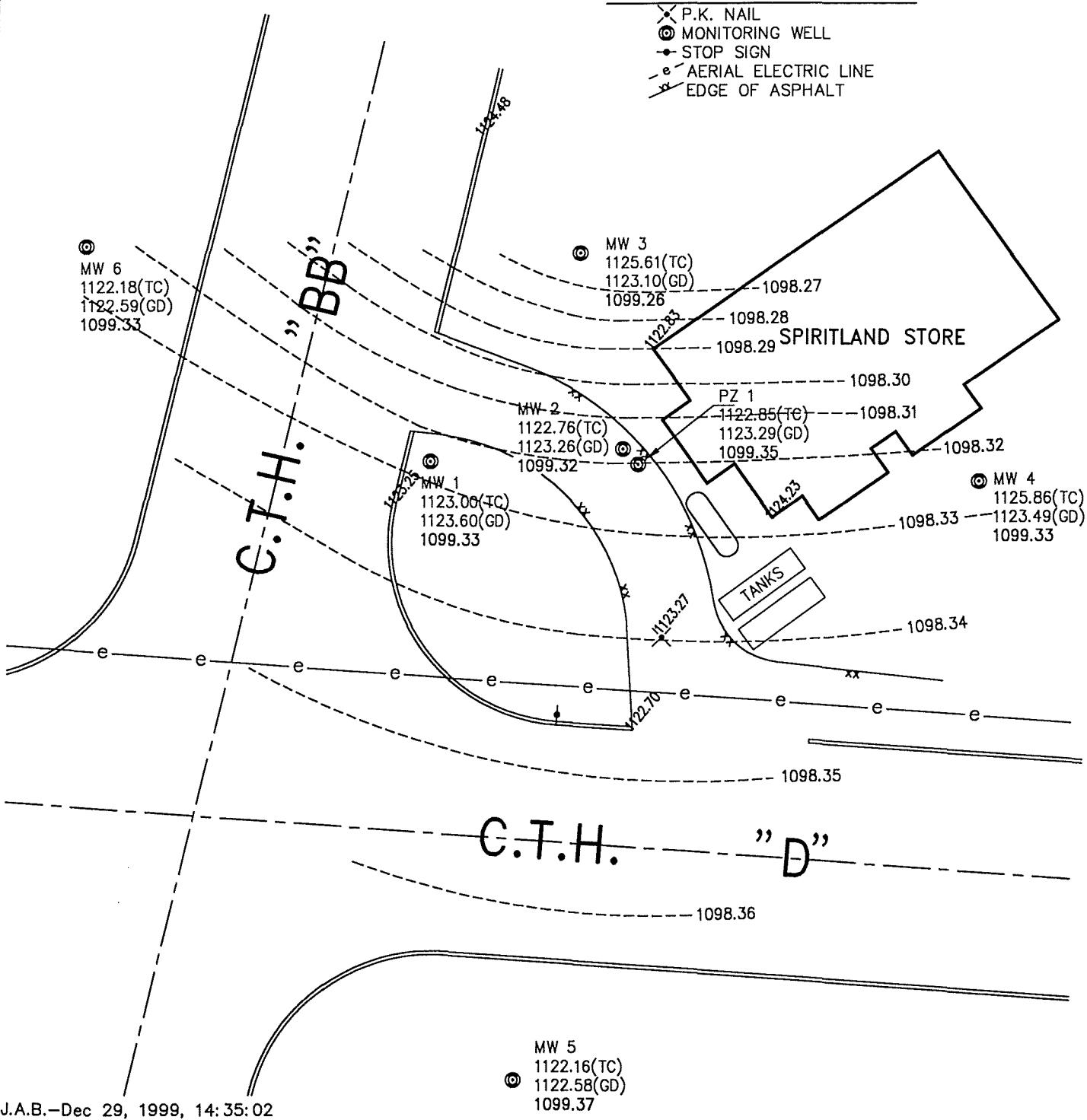


Scale 1"=20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

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



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 |
| MW1 | 1099.28 | 1099.06 | 1098.49 | 1098.45 | 1099.33 |
| MW2 | 1099.27 | 1099.06 | 1098.48 | 1098.44 | 1099.32 |
| MW3 | 1100.21 | 1099.01 | 1098.42 | 1098.39 | 1099.26 |
| MW4 | 1099.28 | 1099.06 | 1098.49 | 1098.46 | 1099.33 |
| MW5 | 1099.31 | 1099.10 | 1098.54 | 1098.49 | 1099.37 |
| MW6 | 1099.27 | 1099.05 | 1098.49 | 1098.45 | 1099.33 |
| PZ1 | 1099.30 | 1099.10 | 1098.51 | 1098.48 | 1099.35 |

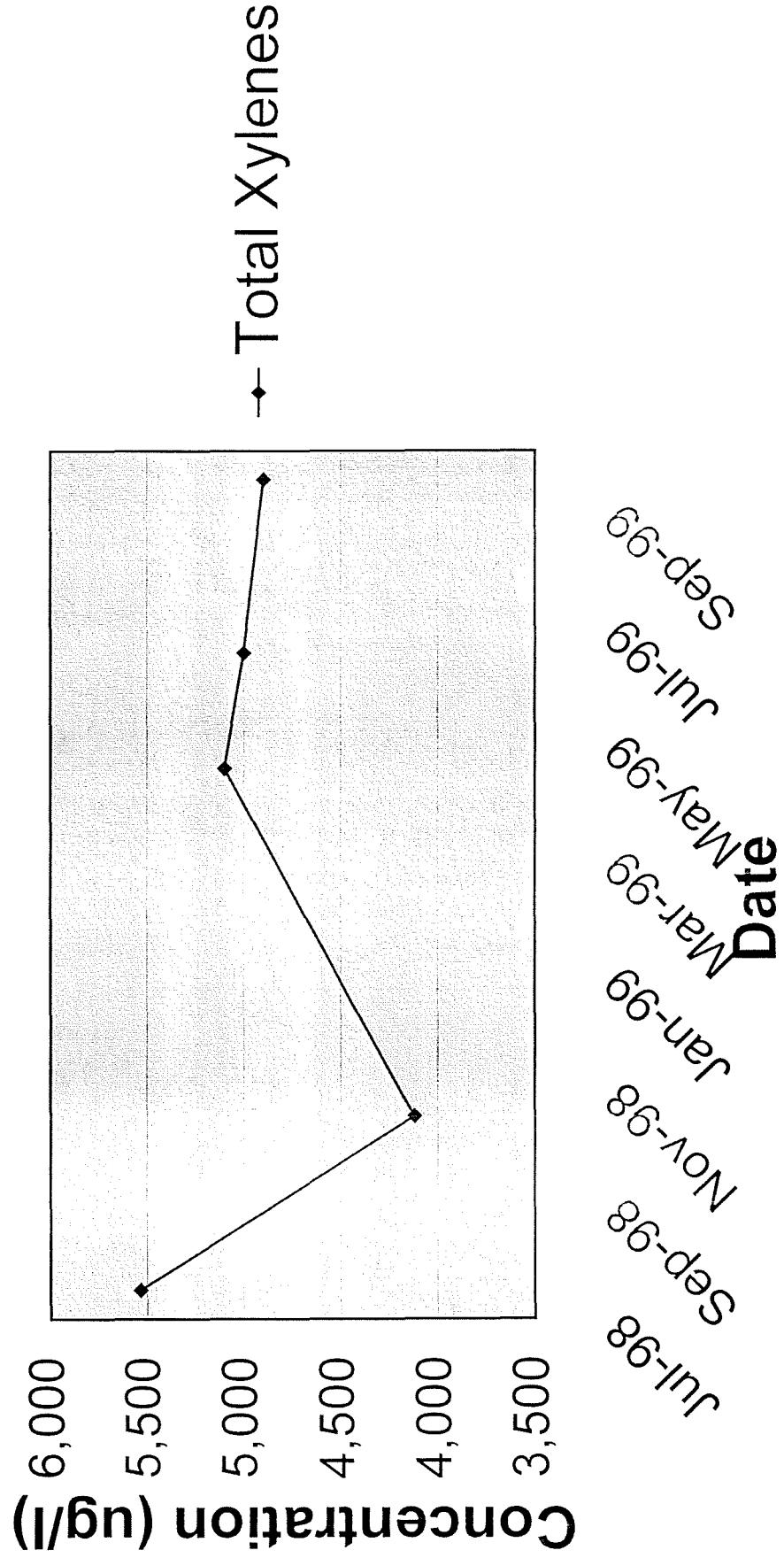
| | Depth To Water | | | | | |
|-----|----------------|---------|----------|---------|---------|---------|
| | PVC Ele | 7/31/98 | 10/21/98 | 4/14/99 | 6/29/99 | 9/22/99 |
| MW1 | 1123 | 23.72 | 23.94 | 24.51 | 24.55 | 23.67 |
| MW2 | 1122.76 | 23.49 | 23.7 | 24.28 | 24.32 | 23.44 |
| MW3 | 1125.61 | 25.4 | 26.6 | 27.19 | 27.22 | 26.35 |
| MW4 | 1125.86 | 26.58 | 26.8 | 27.37 | 27.4 | 26.53 |
| MW5 | 1122.16 | 22.85 | 23.06 | 23.62 | 23.67 | 22.79 |
| MW6 | 1122.18 | 22.91 | 23.13 | 23.69 | 23.73 | 22.85 |
| PZ1 | 1122.85 | 23.55 | 23.75 | 24.34 | 24.37 | 23.5 |

SECTION 7

MW-1 CONCENTRATION GRAPHS

Spiritland Store

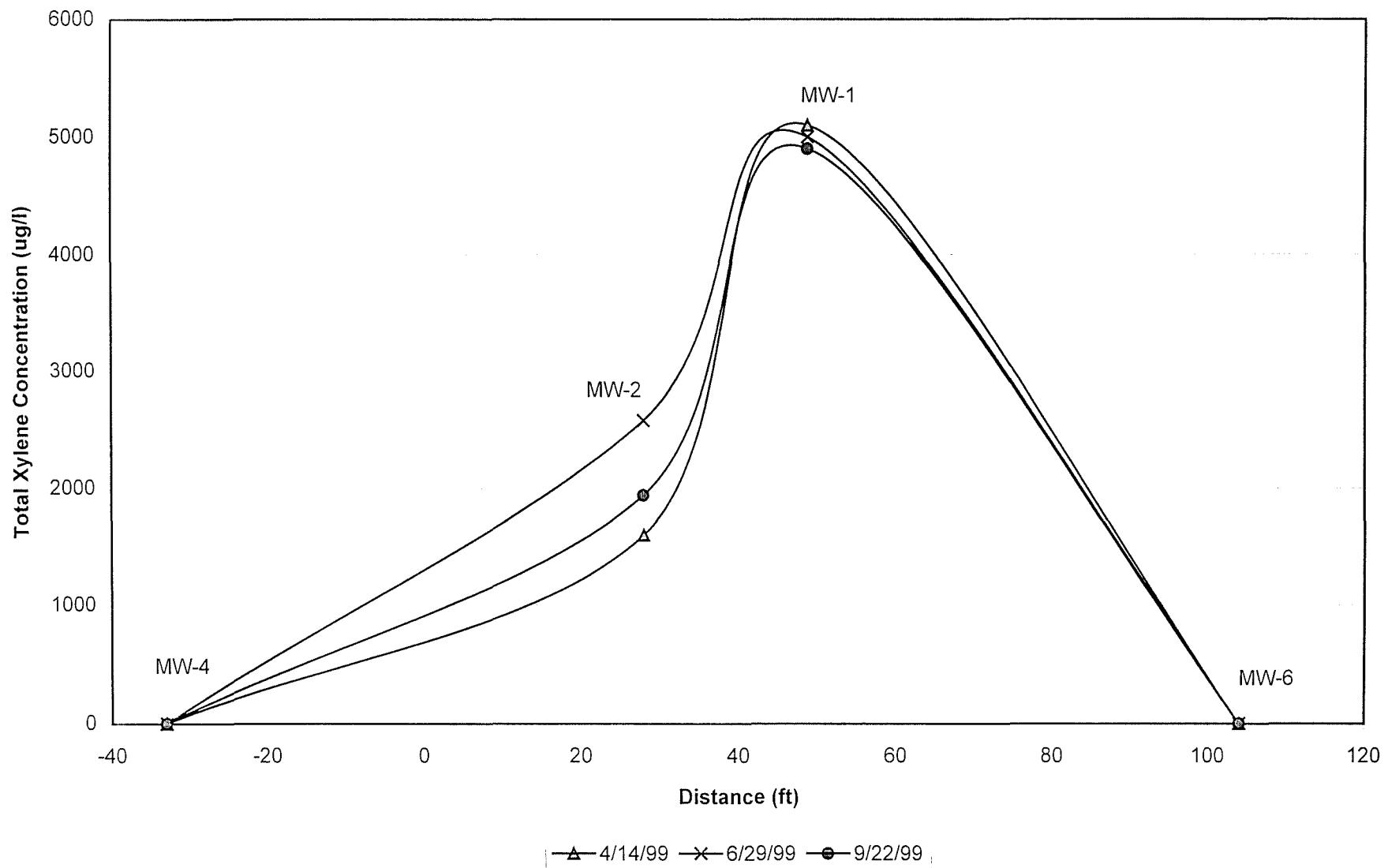
Total Xylenes: MW-1



SECTION 8

**CONTAMINANT CONCENTRATION
VERSUS DISTANCE**

Total Xylene Concentrations versus Distance from the Source



SECTION 9
GEOLOGIC CROSS SECTION

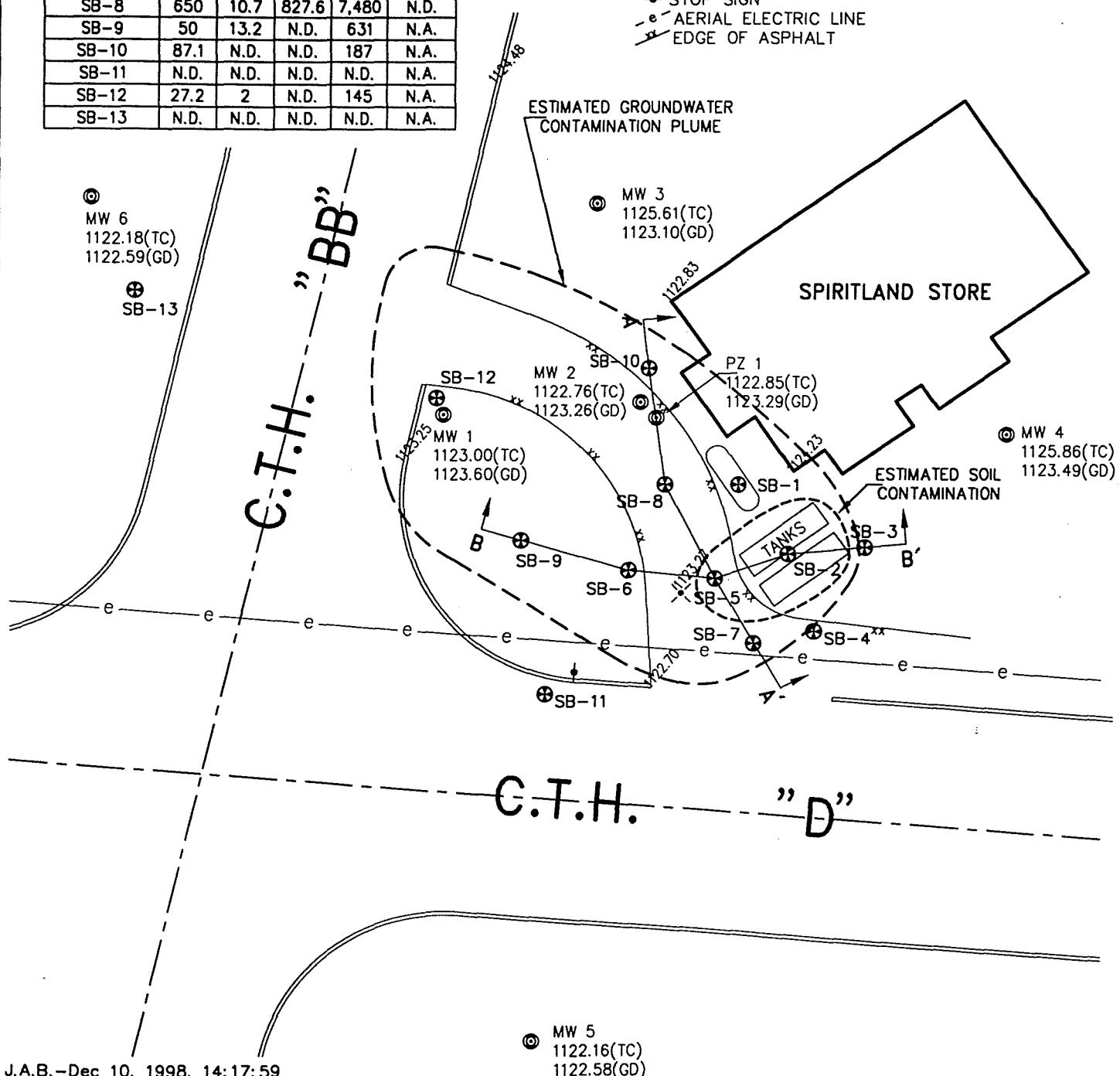
| SOIL BORING NUMBER | WATER Pb | WATER Nap | WATER Xyl | WATER GRO | SOIL GRO(S) |
|--------------------|----------|-----------|-----------|-----------|-------------|
| SB-1 | 2,030 | N.D. | 716 | 12,000 | N.D. |
| SB-2, 10-12 | 330 | N.D. | N.D. | 6,530 | 503 |
| SB-3, 12-14 | N.D. | N.D. | N.D. | N.D. | 24.5 |
| SB-4 | N.D. | N.D. | N.D. | N.A. | N.D. |
| SB-5, 13-15 | 330 | N.D. | N.D. | N.A. | 632 |
| SB-6 | 365 | 102 | 2,637 | 18,200 | N.D. |
| SB-7 | 17.9 | N.D. | N.D. | 178 | N.D. |
| SB-8 | 650 | 10.7 | 827.6 | 7,480 | N.D. |
| SB-9 | 50 | 13.2 | N.D. | 631 | N.A. |
| SB-10 | 87.1 | N.D. | N.D. | 187 | N.A. |
| SB-11 | N.D. | N.D. | N.D. | N.D. | N.A. |
| SB-12 | 27.2 | 2 | N.D. | 145 | N.A. |
| SB-13 | N.D. | N.D. | N.D. | N.D. | N.A. |

Scale 1" = 20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

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



J.A.B.-Dec 10, 1998, 14:17:59



ESP GROUP, INC.
LAMPERT-LEE
& ASSOCIATES

SPIRITLAND STORE
GEOLOGIC CROSS
SECTION



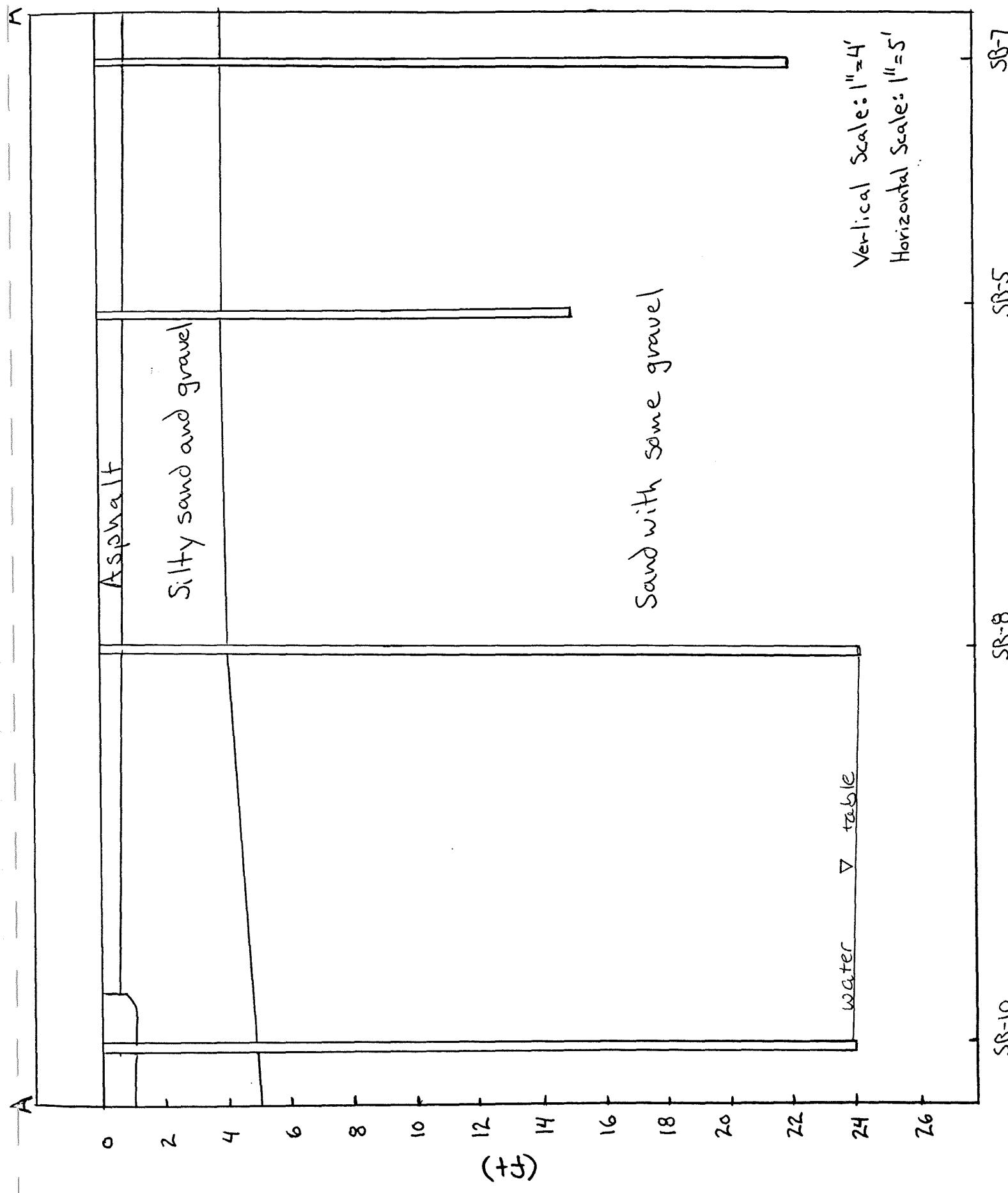
DATE: DEC. 10, 1998

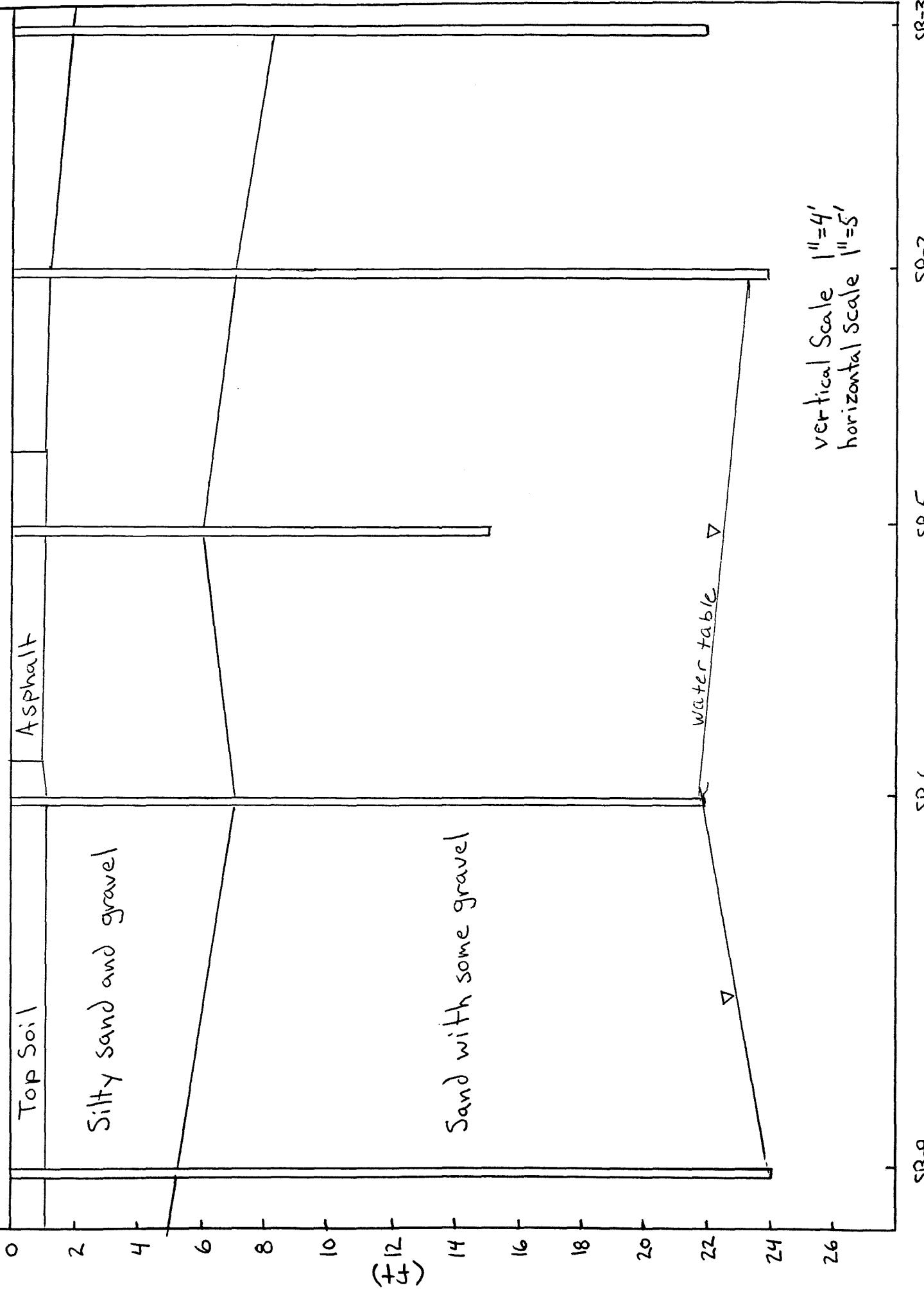
LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-G





SECTION 10

SOIL ANALYTICAL DATA

SUMMARY TABLES

SOIL SAMPLING RESULTS
SPIRITLAND

| Residual Contaminant LEVEL | SAMPLE DATE : April 17, 1998 | | | | | |
|-------------------------------|------------------------------|-----------|-----------|-----------|-----------|-----------|
| | SB-1 | SB-1 | SB-2 | SB-2 | SB-3 | SB-3 |
| Soil Boring Location | | | | | | |
| Sample Depth Below Surface | 12' - 14' | 20' - 22' | 10' - 12' | 18' - 20' | 12' - 14' | 20' - 22' |
| Analyte Parameter | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg |
| Lead | - | 1.5 | 3.3 | 9.77 | 3.43 | 2.75 |
| GRO | 100 | ND | ND | 503 | 181 | 24.5 |
| | ug/kg | ug/kg | ug/kg | ug/kg | ug/kg | ug/kg |
| Benzene | 5.5 | <26 | <26 | <209 | <28 | <26 |
| Bromobenzene | - | <26 | <26 | <209 | <28 | <26 |
| Bromo-chloromethane | - | <26 | <26 | <209 | <28 | <26 |
| Bromo-dichloromethane | - | <26 | <26 | <209 | <28 | <26 |
| Bromoform | - | <26 | <26 | <209 | <28 | <26 |
| Bromomethane | - | <26 | <26 | <209 | <28 | <26 |
| n-Butylbenzene | - | <26 | <26 | 7973 | 941 | 80 |
| sec-Butylbenzene | - | <26 | <26 | 2789 | 600 | 59 |
| tert-Butylbenzene | - | <26 | <26 | <209 | <28 | 46 |
| Carbon Tetrachloride | - | <26 | <26 | <209 | <28 | <26 |
| Chlorobenzene | - | <26 | <26 | <209 | <28 | <26 |
| Dibromo-chloromethane | - | <26 | <26 | <209 | <28 | <26 |
| Chloroethane | - | <26 | <26 | <209 | <28 | <26 |
| Chloroform | - | <26 | <26 | <209 | <28 | <26 |
| Chloromethane | - | <26 | <26 | <209 | <28 | <26 |
| 2-Chlorotoluene | - | <26 | <26 | <209 | <28 | <26 |
| 4-Chlorotoluene | - | <26 | <26 | <209 | <28 | <26 |
| 1,2-Dibromo-3-chloropropane | - | <26 | <26 | <209 | <28 | <26 |
| 1,2-Dibromoethane | - | <26 | <26 | <209 | <28 | <26 |
| Dibromomethane | - | <26 | <26 | <209 | <28 | <26 |
| 1,2-Dichlorobenzene | - | <26 | <26 | <209 | <28 | <26 |
| 1,3-Dichlorobenzene | - | <26 | <26 | <209 | <28 | <26 |
| 1,4-Dichlorobenzene | - | <26 | <26 | <209 | <28 | <26 |
| Dichlorodifluoromethane | - | <26 | <26 | <209 | <28 | <26 |
| 1,1-Dichloroethane | - | <26 | <26 | <209 | <28 | <26 |
| 1,2-Dichloroethane | - | <26 | <26 | <209 | <28 | <26 |
| 1,1-Dichloroethene | - | <26 | <26 | <209 | <28 | <26 |
| cis-1,2-Dichloroethene | - | <26 | <26 | <209 | <28 | <26 |
| trans-1,2-Dichloroethene | - | <26 | <26 | <209 | <28 | <26 |
| 1,2-Dichloropropane | - | <26 | <26 | <209 | <28 | <26 |
| 1,3-Dichloropropane | - | <26 | <26 | <209 | <28 | <26 |
| 2,2-Dichloropropane | - | <26 | <26 | <209 | <28 | <26 |
| 1,1-Dichloropropene | - | <26 | <26 | <209 | <28 | <26 |
| Di-isopropyl ether | - | <26 | <26 | <209 | <28 | <26 |
| Ethylbenzene | 2900 | <26 | <26 | 351 | 30 | <26 |
| Hexachlorobutadiene | - | <26 | <26 | <209 | <28 | <26 |
| Isopropylbenzene | - | <26 | <26 | 782 | 95 | <26 |
| p-Isopropyltoluene | - | <26 | <26 | 2222 | <28 | 85 |
| Methylene Chloride | - | 70 | <26 | 622 | 86 | <26 |
| Methyl-t-Butyl ether | - | <26 | <26 | <209 | <28 | <26 |
| Naphthalene | - | <26 | <26 | 9527 | 3917 | 65 |
| n-Propylbenzene | - | <26 | <26 | 2719 | 449 | 65 |
| 1,1,1,2-Tetrachloroethane | - | <26 | <26 | <209 | <28 | <26 |
| 1,1,2,2-Tetrachloroethane | - | <26 | <26 | <209 | <28 | <26 |
| Tetrachloroethene | - | <26 | <26 | <209 | <28 | <26 |
| Toluene | 1500 | <26 | <26 | <209 | <28 | <26 |
| 1,2,3-Trichlorobenzene | - | <26 | <26 | <209 | <28 | <26 |
| 1,2,4-Trichlorobenzene | - | <26 | <26 | <209 | 741 | <26 |
| 1,1,1-Trichloroethane | - | <26 | <26 | <209 | <28 | <26 |
| 1,1,2-Trichloroethane | - | <26 | <26 | <209 | <28 | <26 |
| Trichloroethene | - | <26 | <26 | <209 | <28 | <26 |
| Trichlorofluoromethane | - | <26 | <26 | <209 | <28 | <26 |
| 1,2,3-Trichloropropane | - | <26 | <26 | <209 | <28 | <26 |
| 1,2,4-Trimethylbenzene | - | <26 | <26 | 5515 | <28 | 28 |
| 1,3,5-Trimethylbenzene | - | <26 | <26 | 9164 | 1192 | 39 |
| Vinyl chloride | - | <26 | <26 | <209 | <28 | <26 |
| Isopropyl Ether | - | <26 | <26 | <209 | <28 | <26 |
| m&p-Xylene | (Total Xylene) 4100 | <26 | <26 | 214 | <28 | 31 |
| o-Xylene & Styrene | (Total Xylene) 4100 | <26 | <26 | 301 | 35 | <26 |

SOIL SAMPLING RESULTS
SPIRITLAND

| Residual Contaminant | LEVEL | SAMPLE DATE : April 17, 1998 | | | |
|-----------------------------|---------------------|------------------------------|-----------|-----------|-----------|
| | | SB-4 | SB-4 | SB-5 | SB-6 |
| Soil Boring Location | | 12' - 14' | 18' - 20' | 13' - 15' | 18' - 20' |
| Sample Depth Below Surface | | | | | |
| ANALYTE PARAMETER | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg |
| Lead | 0.723 | 1.37 | 6.67 | 1.84 | |
| GRO | 100 | ND | ND | 632 | ND |
| | ug/kg | ug/kg | ug/kg | ug/kg | ug/kg |
| Benzene | 5.5 | <26 | <26 | <1259 | <25 |
| Bromobenzene | | <26 | <26 | <1259 | <25 |
| Bromochloromethane | | <26 | <26 | <1259 | <25 |
| Bromodichloromethane | | <26 | <26 | <1259 | <25 |
| Bromoform | | <26 | <26 | <1259 | <25 |
| Bromomethane | | <26 | <26 | <1259 | <25 |
| n-Butylbenzene | | <26 | <26 | 7922 | <25 |
| sec-Butylbenzene | | <26 | <26 | <1259 | <25 |
| tert-Butylbenzene | | <26 | <26 | <1259 | <25 |
| Carbon Tetrachloride | | <26 | <26 | <1259 | <25 |
| Chlorobenzene | | <26 | <26 | <1259 | <25 |
| Dibromochloromethane | | <26 | <26 | <1259 | <25 |
| Chloroethane | | <26 | <26 | <1259 | <25 |
| Chloroform | | <26 | <26 | <1259 | <25 |
| Chloromethane | | <26 | <26 | <1259 | <25 |
| 2-Chlorotoluene | | <26 | <26 | <1259 | <25 |
| 4-Chlorotoluene | | <26 | <26 | <1259 | <25 |
| 1,2-Dibromo-3-chloropropane | | <26 | <26 | <1259 | <25 |
| 1,2 Dibromoethane | | <26 | <26 | <1259 | <25 |
| Dibromomethane | | <26 | <26 | <1259 | <25 |
| 1,2-Dichlorobenzene | | <26 | <26 | <1259 | <25 |
| 1,3-Dichlorobenzene | | <26 | <26 | <1259 | <25 |
| 1,4-Dichlorobenzene | | <26 | <26 | <1259 | <25 |
| Dichlorodifluoromethane | | <26 | <26 | <1259 | <25 |
| 1,1-Dichloroethane | | <26 | <26 | <1259 | <25 |
| 1,2 Dichloroethane | | <26 | <26 | <1259 | <25 |
| 1,1 - Dichloroethene | | <26 | <26 | <1259 | <25 |
| cis-1,2- Dichloroethene | | <26 | <26 | <1259 | <25 |
| trans -1, 2-Dichloroethene | | <26 | <26 | <1259 | <25 |
| 1,2-Dichloropropene | | <26 | <26 | <1259 | <25 |
| 1,3-Dichloropropane | | <26 | <26 | <1259 | <25 |
| 2,2 Dichloropropene | | <26 | <26 | <1259 | <25 |
| 1,1 - Dichloropropene | | <26 | <26 | <1259 | <25 |
| Di-isopropyl ether | | <26 | <26 | <1259 | <25 |
| Ethylbenzene | 2900 | <26 | <26 | <1259 | <25 |
| Hexachlorobutadiene | | <26 | <26 | <1259 | <25 |
| Isopropylbenzene | | <26 | <26 | <1259 | <25 |
| p-Isopropyltoluene | | <26 | <26 | 1704 | <25 |
| Methylene Chloride | | <26 | <26 | <1259 | <25 |
| Methyl - t - Butyl ether | | <26 | <26 | <1259 | <25 |
| Naphthalene | | <26 | <26 | 13777 | 141 |
| n-Propylbenzene | | <26 | <26 | 1625 | <25 |
| 1,1,1,2-Tetrachloroethane | | <26 | <26 | <1259 | <25 |
| 1,1,2,2-Tetrachloroethane | | <26 | <26 | <1259 | <25 |
| Tetrachloroethene | | <26 | <26 | <1259 | <25 |
| Toluene | 1500 | <26 | <26 | <1259 | <25 |
| 1,2,3-Trichlorobenzene | | <26 | <26 | <1259 | <25 |
| 1,2,4-Trichlorobenzene | | <26 | <26 | <1259 | <25 |
| 1,1,1-Trichloroethane | | <26 | <26 | <1259 | <25 |
| 1,1,2-Trichloroethane | | <26 | <26 | <1259 | <25 |
| Trichloroethene | | <26 | <26 | <1259 | <25 |
| Trichlorofluoromethane | | <26 | <26 | <1259 | <25 |
| 1,2,3-Trichloropropene | | <26 | <26 | <1259 | <25 |
| 1,2,4-Trimethylbenzene | | <26 | <26 | 3665 | <25 |
| 1,3,5-Trimethylbenzene | | <26 | <26 | 7110 | <25 |
| Vinyl chloride | | <26 | <26 | <1259 | <25 |
| Isopropyl Ether | | <26 | <26 | <1259 | <25 |
| m&p-Xylene | (Total Xylene) 4100 | <26 | <26 | <1259 | <25 |
| o-Xylene & Styrene | (Total Xylene) 4100 | <26 | <26 | <1259 | <25 |

SOIL SAMPLING RESULTS
SPIRITLAND

| Residual Contaminant LEVEL | SAMPLE DATE: APRIL 23, 1998 | | |
|-------------------------------|-----------------------------|-----------|-----------|
| | SB-7 | SB-7 | SB-8 |
| Soil Boring Location | | | |
| Sample Depth Below Surface | 18' - 20' | 20' - 22' | 20' - 22' |
| ANALYTE PARAMETER | mg/kg | mg/kg | mg/kg |
| Lead | | 1.29 | 1.49 |
| GRO | 100 | ND | ND |
| | ug/kg | ug/kg | ug/kg |
| Benzene | 5.5 | <26 | <26 |
| Bromobenzene | - | <26 | <26 |
| Bromochloromethane | - | <26 | <26 |
| Bromodichloromethane | - | <26 | <26 |
| Bromoform | - | <26 | <26 |
| Bromomethane | - | <26 | <26 |
| n-Butylbenzene | - | <26 | <26 |
| sec-Butylbenzene | - | <26 | <26 |
| tert-Butylbenzene | - | <26 | <26 |
| Carbon Tetrachloride | - | <26 | <26 |
| Chlorobenzene | - | <26 | <26 |
| Dibromochloromethane | - | <26 | <26 |
| Chloroethane | - | <26 | <26 |
| Chloroform | - | <26 | <26 |
| Chloromethane | - | <26 | <26 |
| 2-Chlorotoluene | - | <26 | <26 |
| 4-Chlorotoluene | - | <26 | <26 |
| 1,2-Dibromo-3-chloropropane | - | <26 | <26 |
| 1,2 Dibromoethane | - | <26 | <26 |
| Dibromomethane | - | <26 | <26 |
| 1,2-Dichlorobenzene | - | <26 | <26 |
| 1,3-Dichlorobenzene | - | <26 | <26 |
| 1,4-Dichlorobenzene | - | <26 | <26 |
| Dichlorodifluoromethane | - | <26 | <26 |
| 1,1-Dichloroethane | - | <26 | <26 |
| 1,2 Dichloroethane | - | <26 | <26 |
| 1,1 - Dichloroethene | - | <26 | <26 |
| cis-1,2- Dichloroethene | - | <26 | <26 |
| trans-1, 2-Dichloroethene | - | <26 | <26 |
| 1,2-Dichloropropane | - | <26 | <26 |
| 1,3-Dichloropropane | - | <26 | <26 |
| 2,2 Dichloropropane | - | <26 | <26 |
| 1,1 - Dichloropropene | - | <26 | <26 |
| Di-isopropyl ether | - | <26 | <26 |
| Ethylbenzene | 2900 | <26 | <26 |
| Hexachlorobutadiene | - | <26 | <26 |
| Isopropylbenzene | - | <26 | <26 |
| p-Isopropyltoluene | - | <26 | <26 |
| Methylene Chloride | - | <26 | <26 |
| Methyl - t - Butyl ether | - | <26 | <26 |
| Naphthalene | - | <26 | <26 |
| n-Propylbenzene | - | <26 | <26 |
| 1,1,1,2-Tetrachloroethane | - | <26 | <26 |
| 1,1,2,2-Tetrachloroethane | - | <26 | <26 |
| Tetrachloroethene | - | <26 | <26 |
| Toluene | 1500 | <26 | <26 |
| 1,2,3-Trichlorobenzene | - | <26 | <26 |
| 1,2,4-Trichlorobenzene | - | <26 | <26 |
| 1,1,1-Trichloroethane | - | <26 | <26 |
| 1,1,2-Trichloroethane | - | <26 | <26 |
| Trichloroethene | - | <26 | <26 |
| Trichlorofluoromethane | - | <26 | <26 |
| 1,2,3-Trichloropropane | - | <26 | <26 |
| 1,2,4-Trimethylbenzene | - | <26 | <26 |
| 1,3,5-Trimethylbenzene | - | <26 | <26 |
| Vinyl chloride | - | <26 | <26 |
| Isopropyl Ether | - | <26 | <26 |
| m&p-Xylene | (Total Xylene) 4100 | <26 | <26 |
| o-Xylene & Styrene | (Total Xylene) 4100 | <26 | <26 |

Scale 1" = 20'

20' 15' 10' 5' 0' 10' 20'

LEGEND:

- ✖ P.K. NAIL
- ◎ MONITORING WELL
- STOP SIGN
- e- AERIAL ELECTRIC LINE
- x— EDGE OF ASPHALT

◎ MW 6
1122.18(TC)
1122.59(GD)

SB-13

"BB"

C.T.H.

◎ MW 3
1125.61(TC)
1123.10(GD)

SB-10

PZ 1
1122.85(TC)
1123.29(GD)

◎ MW 4
1125.86(TC)
1123.49(GD)

SB-12
MW 2
1122.76(TC)
1123.26(GD)

MW 1
1123.00(TC)
1123.60(GD)

SB-9

SB-6

SB-8

SB-1

TANKS

SB-2

SB-3

SB-5

SB-7

SB-4

SB-11

C.T.H.

"D"

J.A.B.-Dec 10, 1998, 14:04:10

◎ MW 5
1122.16(TC)
1122.58(GD)



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

SPIRITLAND STORE
MONITORING WELL &
SOIL BORING LOCATION MAP



DATE: DEC. 10, 1998

LLA # 98-033

DRAWN BY: JIM BRASEL

REVIEWED BY: J. LINDEMANN

DWG. NO. A-8200-E