

Jan 17 1996



January 4, 1996

Mr. Jason Feingold
Sites Management Section
Vermont Department of
Environmental Conservation
103 South Main Street
Waterbury, VT 05671-0404

RE: Third 1995 Report - The Lucky Spot, Richmond, VT (Site #90-0548)

Dear Mr. Feingold:

Lincoln Applied Geology, Inc. (LAG) has performed weekly site visits and partial site monitoring of the Lucky Spot site located in Richmond, Vermont since free product was discovered in two wells during historical low water levels on September 22, 1995. The monitoring results continue to detect low to elevated levels of BTEX and MTBE contamination of ground water in excess of Vermont Ground Water Enforcement Standards (GWES). Manual bailing and the use of Soak Ease adsorbent bailers has removed about 0.25 gallons of free phase gasoline product prior to the fall ground water level increase.

As the recent ground water quality data and historical database indicate, a portion of the dissolved contaminant plume continues to migrate off-site in a southwesterly direction towards the Winooski River, away from the potential bedrock well water supply receptors. It is our opinion that the free product in MW-2 and MW-3 resulted from draining of residual product adsorbed to soils during the historical low water levels encountered this past summer, and is not indicative of a new gasoline release. We will return to the previous biannual schedule for water quality sampling of all monitor wells and update reporting, but will conduct quarterly ground water level and PID monitoring of all wells and limited water quality sampling of only wells MW-2, MW-3, and MW-5 in order to keep track of the ground water levels, possible free product, and contaminant plume migration.

Attached for your information and use are the following monitoring data summaries and interpretations:

- Table 1,** Ground Water Elevations/Free Product Thicknesses;
- Table 2,** Headspace PID Assays;
- Table 3,** Ground Water Quality Summary;
- Figure 1,** Ground Water Contour Map for December 7, 1995;
- Figure 2,** Water Quality Summary for December 7, 1995;
- Chart 1,** Water Level Trends;
- Chart 2,** Monitoring Well Headspace PID Trends;
- Chart 3,** BTEX Water Quality Trends;
- Chart 4,** MTBE Water Quality Trends; and

Mr. Jason Feingold
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Appendix A, December 7, 1995 Ground Water Quality Laboratory Reports.

Free Phase Product

As seen in **Table 1** free phase gasoline product was detected in MW-2 and MW-3 on September 22 and October 10, 1995. Previously, no free product had been detected in any of the monitoring wells since LAG commenced site monitoring in May 1993. The appearance of the free product is most likely the result of residual product draining from soils and coalescing when ground water levels declined to historical low levels this past summer. Since the October data was collected, ground water levels have risen considerably, and with this rise the presence of free product ceased. The seasonal ground water level fluctuations are readily apparent in **Chart 1**. As of the December 7th data set ground water levels were once again declining slightly. Through use of a Soak Ease adsorbent bailer in MW-2 and manual bailing of MW-3 a total of about 0.25 gallons of free phase gasoline product was recovered by October 10, 1995. No free product has been detected in any monitor wells since.

Ground Water Flow

As shown on the ground water contour map for December 7, 1995 included as **Figure 1**, ground water flow remains in a general southwesterly direction towards the Winooski River. The ground water gradient is very low at 0.003 feet/foot between MW-6 and MW-5. A small ground water mound apparent at MW-2 may be an artifact that has resulted from the presence of a Soak Ease adsorbent bailer in the well prior to monitoring the water level. The general ground water flow direction towards the Winooski River, the ultimate ground water discharge zone in the region, is similar to past ground water contour maps.

Monitoring Well Headspace

Headspace PID assays of the monitoring wells has continued, and the results are summarized in **Table 2**. Elevated PID levels have continued to be detected in MW-2 and MW-3, and occasionally in MW-7. Elevated PID levels in MW-2 and MW-3 are consistent with the presence of free product. Sporadic elevated levels in nearby MW-7 indicates that subsurface vapor phase contamination of the soils in the vadose (or unsaturated) zone is probably larger than the extent of residual adsorbed and free phase product contamination. Low to background (BG) PID levels were detected in MW-1, MW-4, MW-5, and also occasionally in MW-7. A trend graph of well headspace PID data presented as **Chart 2** shows the increase associated with the presence of free product in September and October and the recent PID level declines.



Mr. Jason Feingold
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Ground Water Quality

Ground water quality samples were collected from the seven monitoring wells and the Lucky Spot drilled well on December 7, 1995. Copies of the laboratory reports are presented in **Appendix A**. The ground water quality results are summarized and presented in **Table 3**, and ground water quality trend graphs for BTEX and MTBE are presented as **Charts 3** and **4**, respectively. Elevated BTEX concentrations in source area wells MW-2, MW-3, and MW-7 observed during the September low water period have remained unchanged in MW-2 and MW-7 and increased significantly in MW-3. Downgradient well MW-5 also showed a moderate increase from non detect (ND) to 615 parts per billion (ppb). However, the BTEX level in MW-5 is still much less than the 4,460 ppb detected on June 13, 1994. MTBE levels were greatest in MW-3 at 6,200 ppb, while MW-5 increased from ND to 310 ppb. The estimated areal distribution of the dissolved BTEX contaminants for December 7, 1995 is shown on **Figure 2**. The plume is similar to prior areal distributions over the past two years.

The Lucky Spot well was also sampled on December 7, 1995 and the results are included in both **Appendix A** and **Table 3**. No detectable levels of BTEX or MTBE contamination were found. Based on the previous very low contaminant levels, we do not believe the Lucky Spot water supply has been or will be adversely impacted by the residual gasoline contamination present on-site.

With regard to future work, we will return to the previous biannual schedule for water quality sampling of all monitor wells and update reporting. However, we will conduct quarterly ground water level and PID monitoring of all wells and limited water quality sampling of only wells MW-2, MW-3, and MW-5 in order to keep track of the ground water levels, possible free product, and contaminant plume migration. We await your approval to continue with this proposed schedule. We have tentatively scheduled the next quarterly monitoring and partial sampling event for March 1996.

If you have any questions or comments, please contact me or Alan Moore, P.E. at (802) 453-4384.

Sincerely,



William D. Norland
Hydrogeologist

WDN/smk
Enclosures
cc: William Sellinger
William Donovan



Lincoln Applied Geology, Inc.
Environmental Consultants

RD # 1 Box 710 • Bristol, Vermont 05443 • (802) 453-4384 • FAX (802) 453-5399

Project: The Lucky Spot
 Location: Richmond, Vermont

Table 1
 Site # 90-0548
 Sheet 1 of 2

Ground Water Elevation/Product Level (feet)

Data Point	TOC	3-30-95	9-22-95	10-2-95	10-10-95	10-16-95	10-27-95	11-2-95	11-6-95	11-13-95	11-21-95
MW-1	99.08	83.38	80.73	80.68	81.23	81.28	82.13	83.02	83.29	83.35	84.04
MW-2	100.00	83.32	80.55 ^{0.35}	80.80	81.25	81.30	82.20	83.04	83.29	83.33	84.02
MW-3	99.87	82.99	80.51 ^{0.03}	80.51	80.94 ^{0.02}	81.03	81.91	82.70	83.00	83.08	83.66
MW-4	94.60	83.40	81.42								
MW-5	99.02	82.77	79.99								
MW-6	100.17	83.22	80.66								
MW-7	100.26	82.93	80.43	80.45	80.88	80.93	81.86	82.59	82.97	83.09	83.64
Old Restaurant Well	102.15	83.69									

NOTES:

- 1 - Elevation datum assumed
- 2 - Reference elevation is elevation of top of PVC well casing
- Light Gray - Dry
- Dark Gray - Inaccessible
- Clear Cell - measurement NOT scheduled

Project: The Lucky Spot
 Location: Richmond, Vermont

Table 1
 Site # 90-0548
 Sheet 2 of 2

Ground Water Elevation/Product Level (feet)

Data Point	TOC	12-1-95	12-7-95								
MW-1	99.08	83.68	83.42								
MW-2	100.00	83.44	83.85								
MW-3	99.87	83.33	83.02								
MW-4	94.60		83.55								
MW-5	99.02		82.84								
MW-6	100.17		83.27								
MW-7	100.26	83.26	82.92								
Old Restaurant Well	102.15		84.05								

NOTES:

- 1 - Elevation datum assumed
- 2 - Reference elevation is elevation of top of PVC well casing
- Light Gray - Dry
- Dark Gray - Inaccessible
- Clear Cell - measurement NOT scheduled

Project: The Lucky Spot
 Location: Richmond, Vermont

Table 2
 Site # 90-0548
 Sheet 1 of 1

Photoionization Results (PID - ppm)

Data Point	9-22-95	10-2-95	10-10-95	10-16-95	10-27-95	11-2-95	11-6-95	11-13-95	11-21-95	12-1-95	12-7-95
MW-1	BG	0.4	28	0.4	0.2	BG	0.6	BG	BG	BG	BG
MW-2	58	160	SL	12.7	150	1440	120	72	SL	200	120
MW-3	14.0	12.0	24	1.6	170	755	60	38	68	60	9.0
MW-4	BG										BG
MW-5	BG										3.0
MW-6	BG										0.2
MW-7	BG	100	28	BG	68	BG	120	30	6.0	5.0	0.6
Old Rest. Well											BG

NOTES:

BG - Background

SL - Saturated Lamp

Dark Gray - Inaccessible

Clear Cell - measurement NOT scheduled

Ground Water Quality Results (ppb)

Data Point	12-29-93	2-18-94	3-11-94	6-13-94	6-22-94	7-8-94	9-15-94	3-30-95	9-22-95	12-7-95
MW-1	<6 2		<6 1	<6 <1			<6 <1	<6 <5	<6 <5	<6 <5
MW-2	1349 414		52 18	<6 18			<6 17	116 78	195 11	195 15
MW-3	5600 1060		180 29	<6 13			<120 108	6395 <2,500	1466 <140	29200 6200
MW-4	<6 3		<6 1	<6 <1			<6 <1	6 <5	<6 <5	<6 <5
MW-5	1102 604		1553 246	4460 450			325 174	465 241	<6 <5	615 310
MW-6	<6 3		<6 1	<6 1			<6 1	9 <5	<6 <5	<6 <5
MW-7	133 <2		63 1	<6 23			77 <1	30 <5	111 <5	110.5 <5
Lucky Spot Well	<6 2	<6 <1	<6 <1	7 <1	<6 <1	<6 <1	<6 <1	<6 <5	<6 <5	<6 <5
Scheiner Well										
Old Restaurant Well	<6 <1		<6 <1							
Trip Blank	<6 <1		<6 <1	<6 <1			<6 <1	<6 <5	<6 <5	<6 <5

NOTES:

MTBE in upper right corner of cell

BTEX in lower left corner of cell

< - Contaminant not detected at specified detection limit

Clear Cell - measurement NOT scheduled

Lucky Spot, Richmond, VT
Water Level Trends

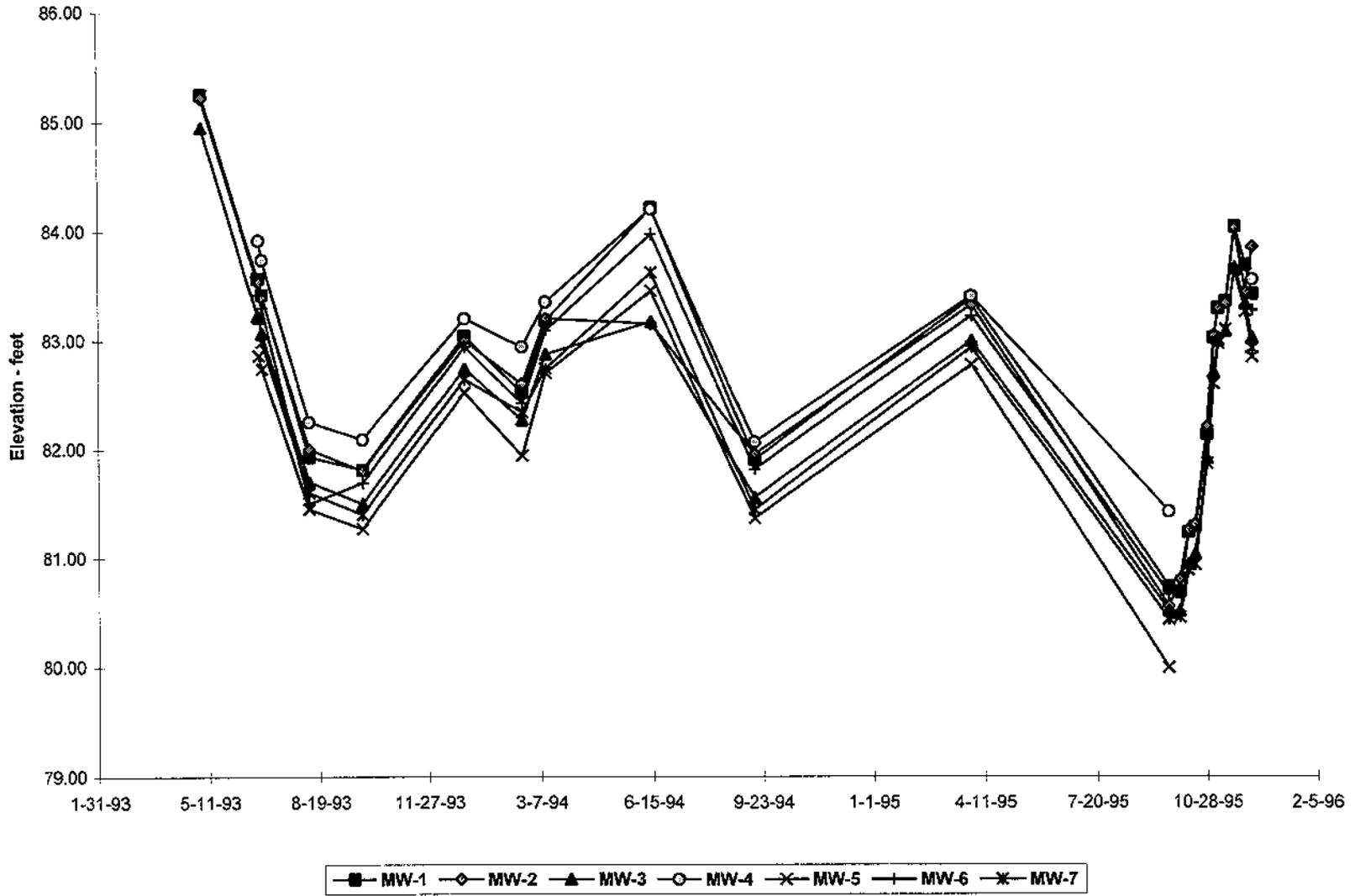


Chart 1

Lucky Spot, Richmond, VT
 Headspace PID Trends

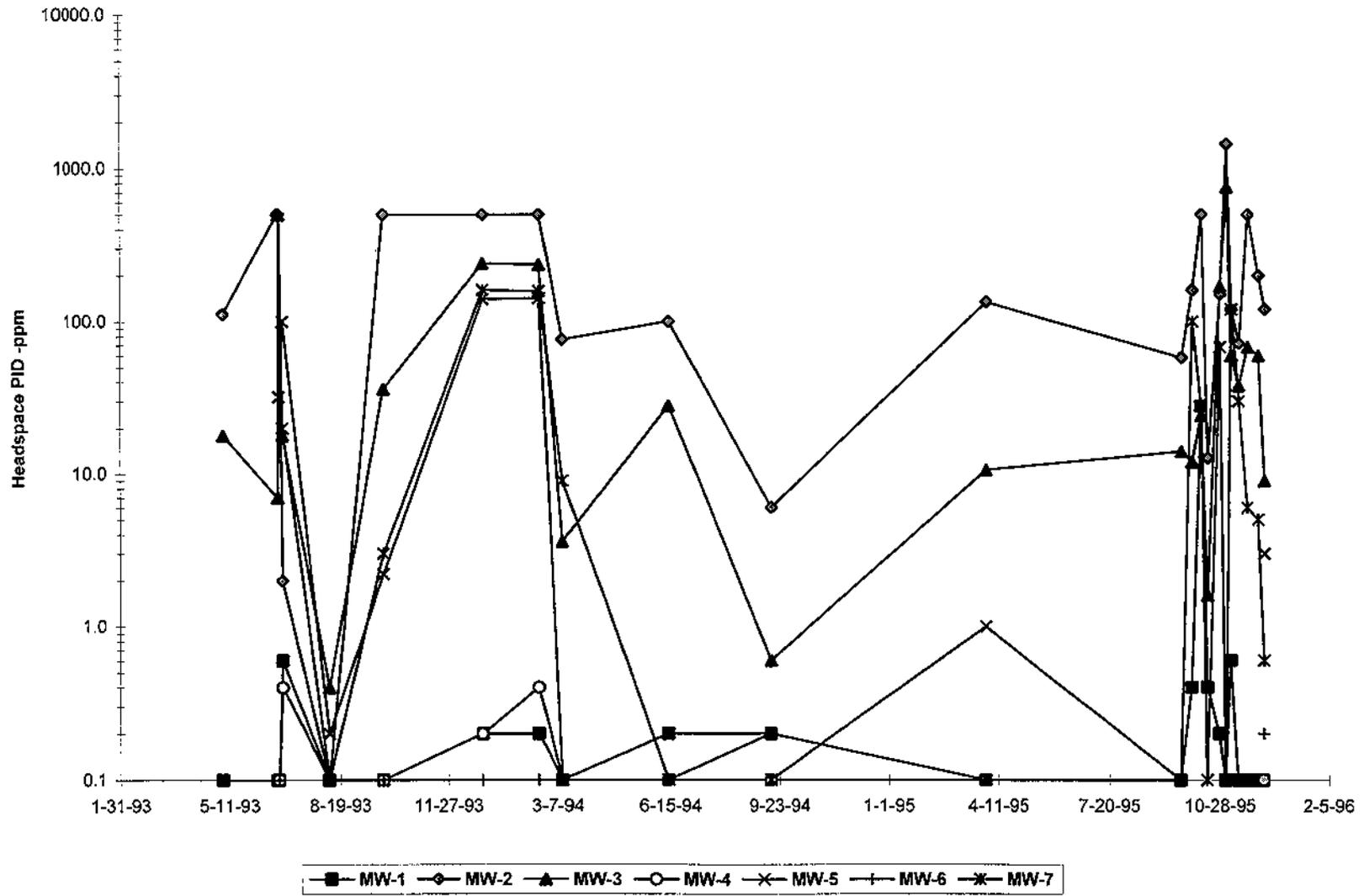


Chart 2

Lucky Spot, Richmond. VT
BTEX Water Quality Trends

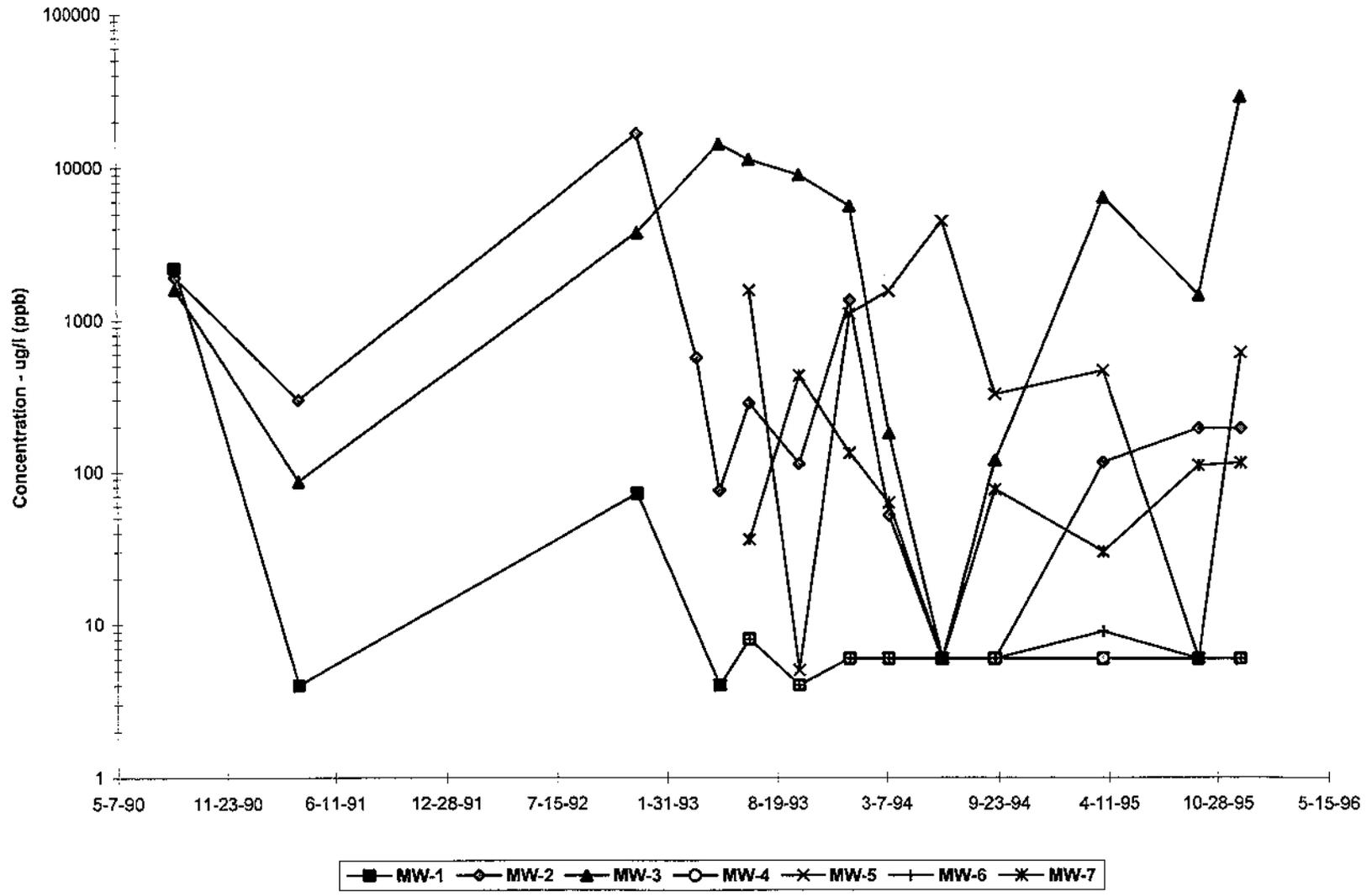


Chart 3

Lucky Spot, Richmond, VT
 MTBE Water Quality Trends

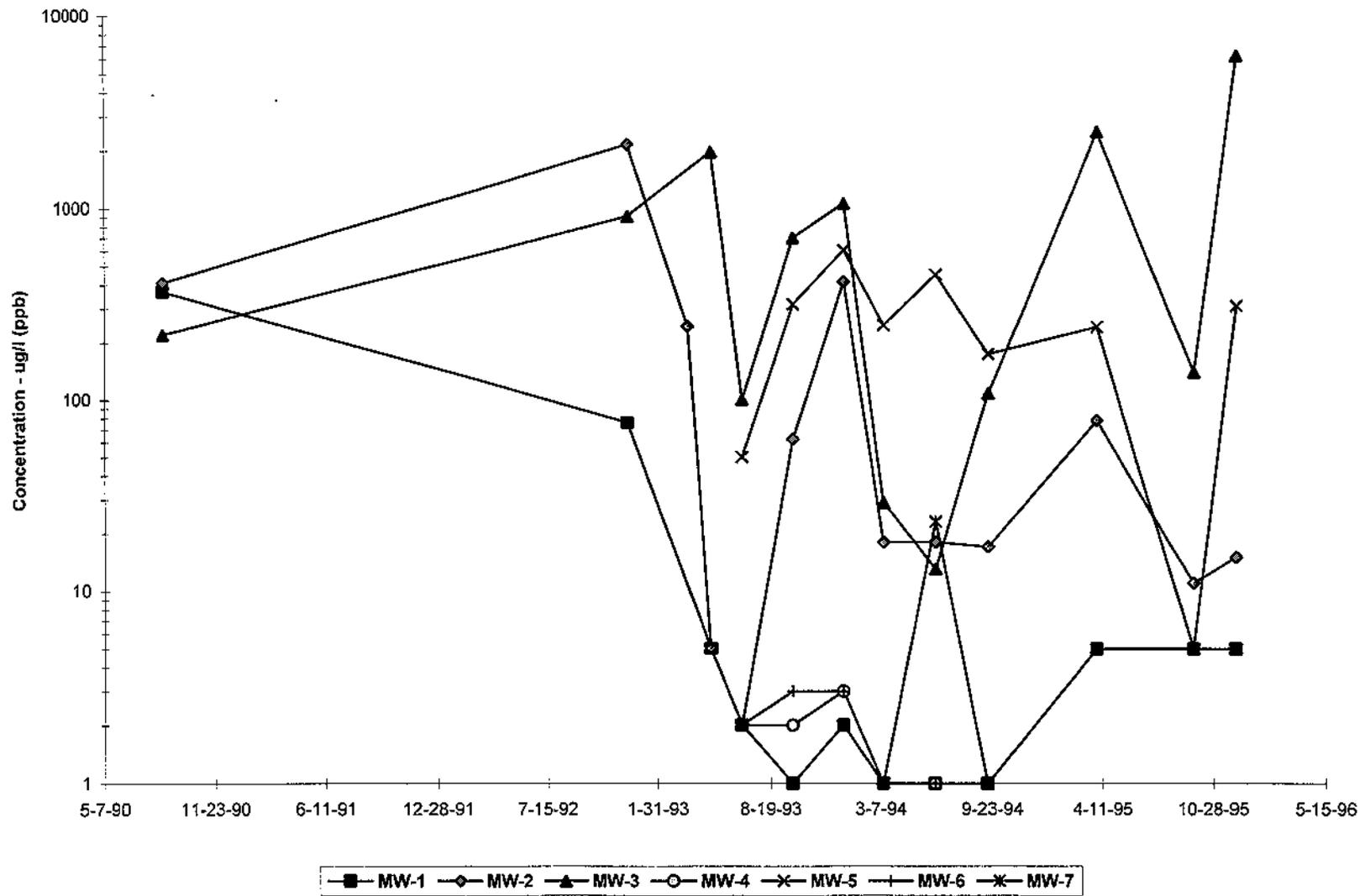
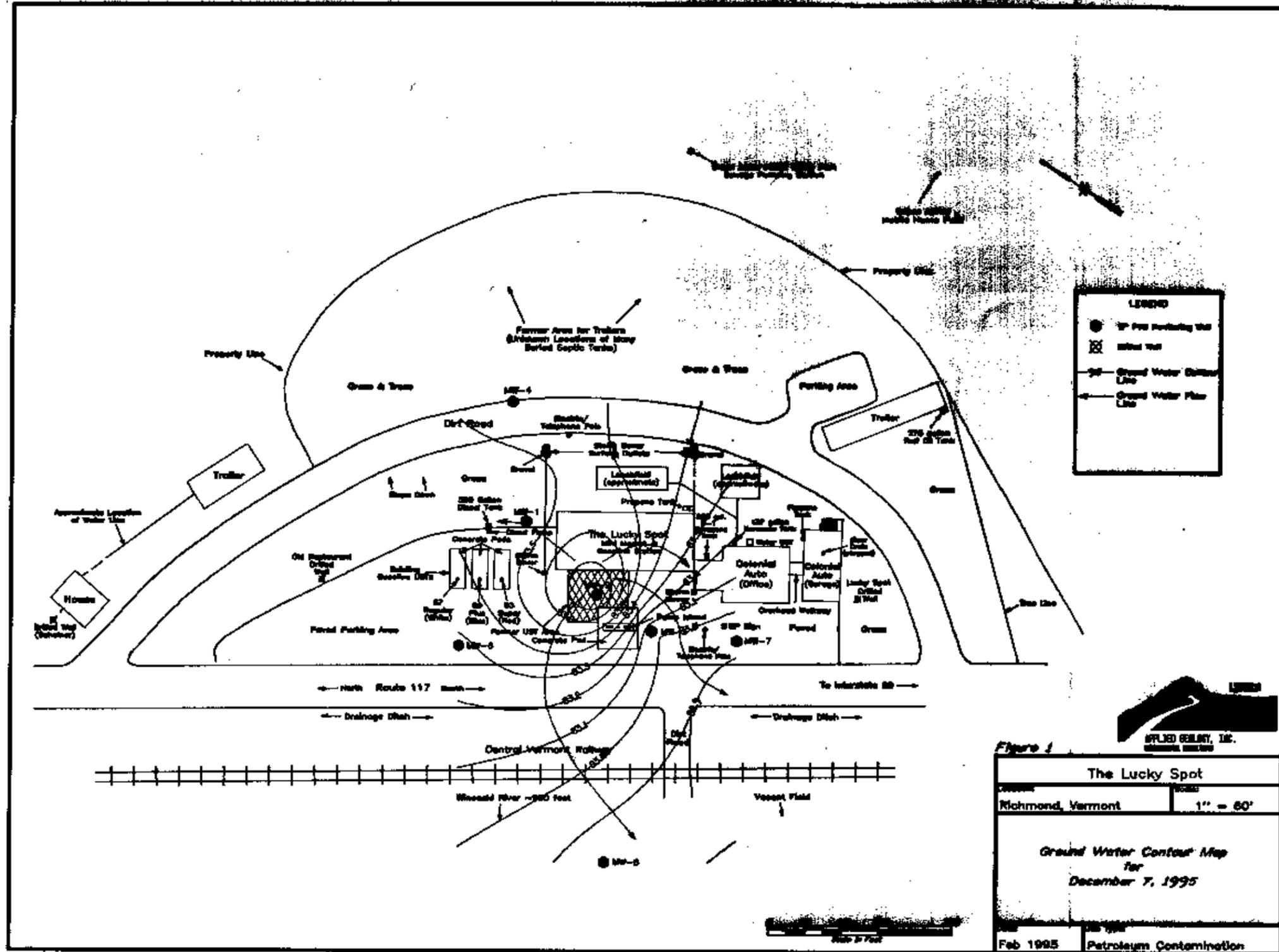
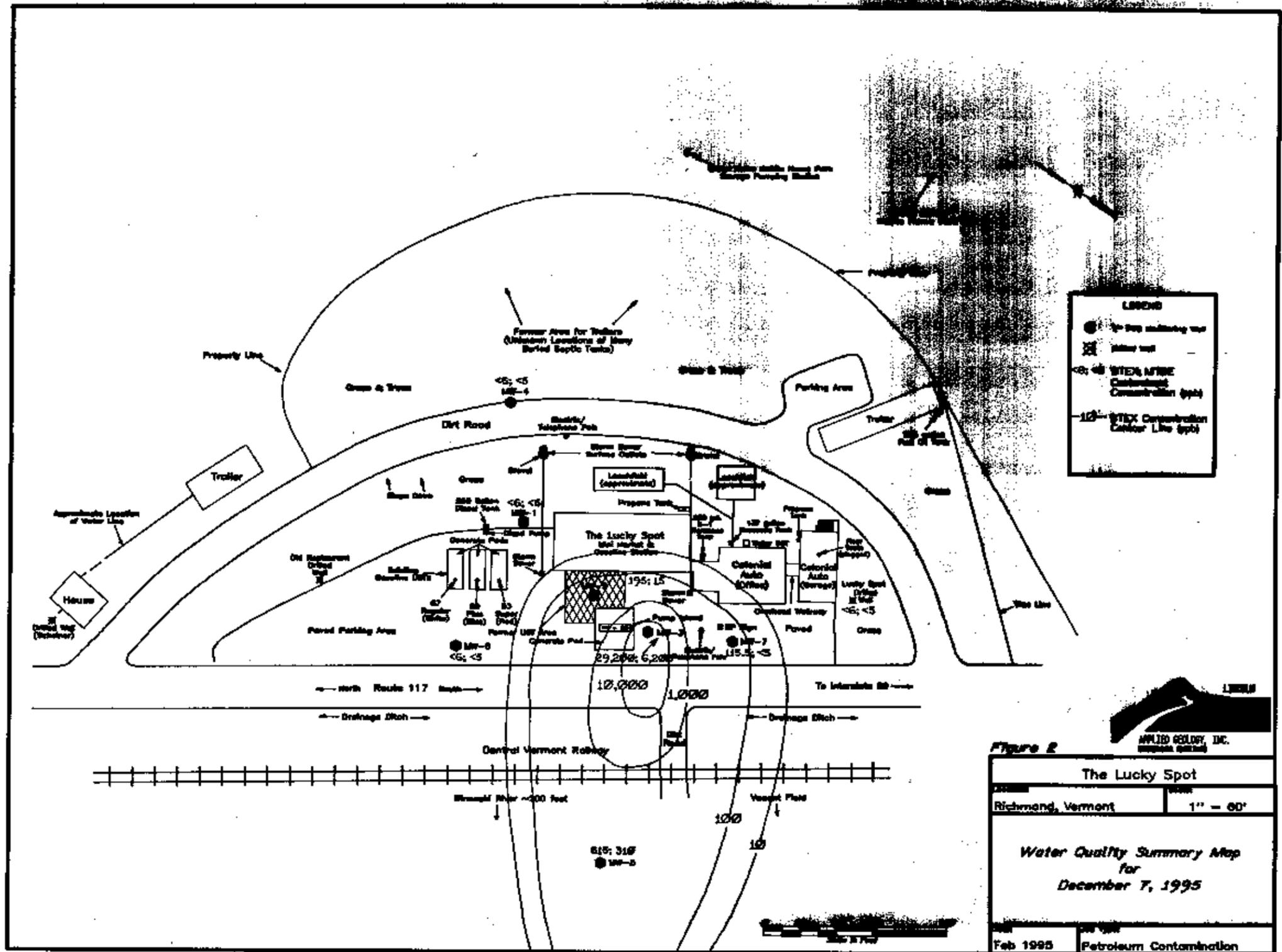


Chart 4





Appendix A

December 7, 1995
Ground Water Quality Laboratory Reports

Green Mountain Laboratories, Inc.

RR#3, Box 5210
Montpelier, Vermont 05602

Phone: (802) 223-1468

Fax: (802) 223-8688

LABORATORY RESULTS

CLIENT NAME:	Lincoln Applied Geology	REF #:	0368
ADDRESS:	RD1 Box 710 Bristol, Vermont 05443	PROJECT NO.:	not given
SAMPLE LOCATION:	Lucky Spot	DATE OF SAMPLE:	12/7/95
SAMPLER:	James Robideau	DATE OF RECEIPT:	12/7/95
		DATE OF ANALYSIS:	12/14/95-12/15/95
ATTENTION:	Bill Norland	DATE OF REPORT:	12/15/95

Pertaining to the analyses of specimens submitted under the accompanying chain of custody form, please note the following:

- Water samples submitted for VOC analysis were preserved with HCl. The trip blank was prepared by the client from reagent water supplied by the laboratory.
- Specimens were processed and examined according to the procedures outlined in the specified method.
- Holding times were honored.
- Instruments were appropriately tuned and calibrations were checked with the frequencies required in the specified method.
- Blank contamination was not observed at levels interfering with the analytical results.
- Continuing calibration standards were monitored at intervals indicated in the specified method. The resulting analytical precision and accuracy were determined to be within method QA/QC acceptance limits.
- The efficiency of analyte recovery for individual samples was monitored by the addition of surrogate analytes to all samples, standards, and blanks. Surrogate recoveries were found to be within laboratory QA/QC acceptance limits, unless noted otherwise.

Reviewed by:



Director, Chemical Services



Green Mountain Laboratories, Inc.

RD#1, Box 5210
Montpelier, Vermont 05602

Phone (802) 223-1468

Fax (802) 223-8688

LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-1
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1100
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95-12/15/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
Xylenes	3	ND
MTBE	5	ND

Surrogate % Recovery: 115%

ND = Not Detected.



Green Mountain Laboratories, Inc.

RD#1, Box 5210
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Phone (802) 223-1468

Fax (802) 223-8688

LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-2
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1150
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	11
Toluene	1	23
Ethylbenzene	1	21
Xylenes	3	140
MTBE	5	15

Surrogate % Recovery: 99.1%

ND = Not Detected.

DEC 1 1995

LABORATORY RESULTS

Green Mountain Laboratories, Inc.

RD#1, Box 5210
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Phone (802) 223-1468

Fax (802) 223-8688

LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-3
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1200
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/15/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	100	7300
Toluene	100	10000
Ethylbenzene	100	1900
Xylenes	300	10000
MTBE	500	6200

Surrogate % Recovery: 112%

ND = Not Detected.

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12/15/95

Green Mountain Laboratories, Inc.

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Montpelier, Vermont 05602

Phone (802) 223-1468

Fax (802) 223-8688

LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-4
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1115
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
Xylenes	3	ND
MTBE	5	ND

Surrogate % Recovery: 114%

ND = Not Detected.



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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-5
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1120
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	10	400
Toluene	10	45
Ethylbenzene	10	140
Xylenes	30	BPQL
MTBE	50	310

Surrogate % Recovery: 113%

ND = Not Detected.

BPQL=Below Practical Quantitation Limit

[Handwritten signature and date]
12/15/95

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Montpelier, Vermont 05602

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Fax (802) 223-8688

LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-6
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1130
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
Xylenes	3	ND
MTBE	5	ND

Surrogate % Recovery: 114%

ND = Not Detected.

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LABORATORY

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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-7
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1145
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	81
Toluene	1	12
Ethylbenzene	1	4.5
Xylenes	3	13
MTBE	5	ND

Surrogate % Recovery: 109%

ND = Not Detected.

 12/15/95

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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	Lucky Spot Well
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1135
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
Xylenes	3	ND
MTBE	5	ND

Surrogate % Recovery: 116%

ND = Not Detected.

012

LABORATORY RESULTS

Green Mountain Laboratories, Inc.

RD#1, Box 5210
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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	Trip
DATE SAMPLED:	12/7/95	TIME SAMPLED:	0700
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
Xylenes	3	ND
MTBE	5	ND

Surrogate % Recovery: 111%

ND = Not Detected.

②
L. G. G. 12/15/95

Appendix A

December 7, 1995
Ground Water Quality Laboratory Reports

Green Mountain Laboratories, Inc.

RR#3, Box 5210
Montpelier, Vermont 05602

Phone: (802) 223-1468

Fax: (802) 223-8688

LABORATORY RESULTS

CLIENT NAME:	Lincoln Applied Geology	REF #:	0368
ADDRESS:	RD1 Box 710 Bristol, Vermont 05443	PROJECT NO.:	not given
SAMPLE LOCATION:	Lucky Spot	DATE OF SAMPLE:	12/7/95
SAMPLER:	James Robideau	DATE OF RECEIPT:	12/7/95
		DATE OF ANALYSIS:	12/14/95-12/15/95
ATTENTION:	Bill Norland	DATE OF REPORT:	12/15/95

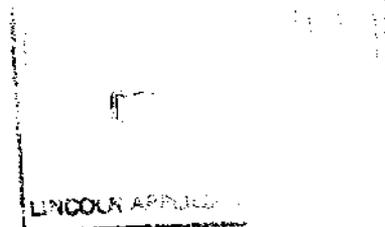
Pertaining to the analyses of specimens submitted under the accompanying chain of custody form, please note the following:

- Water samples submitted for VOC analysis were preserved with HCl. The trip blank was prepared by the client from reagent water supplied by the laboratory.
- Specimens were processed and examined according to the procedures outlined in the specified method.
- Holding times were honored.
- Instruments were appropriately tuned and calibrations were checked with the frequencies required in the specified method.
- Blank contamination was not observed at levels interfering with the analytical results.
- Continuing calibration standards were monitored at intervals indicated in the specified method. The resulting analytical precision and accuracy were determined to be within method QA/QC acceptance limits.
- The efficiency of analyte recovery for individual samples was monitored by the addition of surrogate analytes to all samples, standards, and blanks. Surrogate recoveries were found to be within laboratory QA/QC acceptance limits, unless noted otherwise.

Reviewed by:



Director, Chemical Services



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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-1
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1100
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95-12/15/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
Xylenes	3	ND
MTBE	5	ND

Surrogate % Recovery: 115%

ND = Not Detected.



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GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-2
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1150
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	11
Toluene	1	23
Ethylbenzene	1	21
Xylenes	3	140
MTBE	5	15

Surrogate % Recovery: 99.1%

ND = Not Detected.

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Green Mountain Laboratories, Inc.

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Montpelier, Vermont 05602

Phone (802) 223-1468

Fax (802) 223-8688

LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-3
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1200
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/15/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	100	7300
Toluene	100	10000
Ethylbenzene	100	1900
Xylenes	300	10000
MTBE	500	6200

Surrogate % Recovery: 112%

ND = Not Detected.

[Faint signature and stamp]

Green Mountain Laboratories, Inc.

RD#1, Box 5210
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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-4
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1115
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
Xylenes	3	ND
MTBE	5	ND

Surrogate % Recovery: 114%

ND = Not Detected.

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LABORATORY

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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-5
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1120
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	10	400
Toluene	10	45
Ethylbenzene	10	140
Xylenes	30	BPQL
MTBE	50	310

Surrogate % Recovery: 113%

ND = Not Detected.

BPQL=Below Practical Quantitation Limit

(Faint, illegible stamp or signature)

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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-6
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1130
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
Xylenes	3	ND
MTBE	5	ND

Surrogate % Recovery: 114%

ND = Not Detected.

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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	MW-7
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1145
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	81
Toluene	1	12
Ethylbenzene	1	4.5
Xylenes	3	13
MTBE	5	ND

Surrogate % Recovery: 109%

ND = Not Detected.

11/15/95

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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	Lucky Spot Well
DATE SAMPLED:	12/7/95	TIME SAMPLED:	1135
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
Xylenes	3	ND
MTBE	5	ND

Surrogate % Recovery: 116%

ND = Not Detected.

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LABORATORY RESULTS

GC/MS METHOD - BTEX (BENZENE, TOLUENE, ETHYLBENZENE, XYLENES) + MTBE

CLIENT NAME:	Lincoln Applied Geology	PROJECT CODE:	not given
PROJECT NAME:	Lucky Spot	GML REF.#:	368
REPORT DATE:	12/15/95	STATION:	Trip
DATE SAMPLED:	12/7/95	TIME SAMPLED:	0700
DATE RECEIVED:	12/7/95	SAMPLER:	James Robideau
ANALYSIS DATE:	12/14/95	SAMPLE TYPE:	Water

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
Xylenes	3	ND
MTBE	5	ND

Surrogate % Recovery: 111%

ND = Not Detected.

12/15/95

