



July 28, 2004

AUG 3 8 47 AM '04

WASTE MANAGEMENT DIVISION

Mr. Mike Morissette
Vermont Agency of Transportation
133 State Street-Administrative Building
Montpelier, Vermont 05633-5001

RE: Former AOT Manchester Garage
Manchester, Vermont
Site Status Report - May 2004

Dear Mr. Morissette:

Lincoln Applied Geology, Inc. (LAG) has compiled this letter report detailing quarterly monitoring and water sampling performed on May 26, 2004, at the above referenced Site located on Routes 11 and 30 in Manchester, Vermont (see **Figure 1**).

Review of the May 2004 water quality results indicates that various petroleum constituents continue to exceed the Vermont Department of Environmental Conservation (VDEC), Ground Water Quality Enforcement Standards (GQES) in MW-1.

Enclosed for your information and use are the following:

- Table 1** Ground Water Elevations;
- Table 2** Photoionization Detector Results;
- Table 3** Ground Water Quality Results;
- Figure 1** General Location Map;
- Figure 2** Site Sketch; and
- Appendix A** Water Quality Laboratory Reports for May 26, 2004.

Ground Water Elevations

On May 26, 2004, ground water level measurements from MW-1, MW-3 and one recovery well were obtained using an electronic interface probe capable of measuring 0.01 feet of free-floating petroleum product. MW-2 was not located, therefore, it was not sampled. The well has most likely been destroyed during winter plowing. The data collected are summarized on **Table 1**. No free-floating petroleum product was detected. The depth to ground water ranged between 3.89 feet (RW-1) and 5.35 feet (MW-3) below ground surface (bgs) across the Site. A site sketch is included as **Figure 2**.

Well Headspace Monitoring

A 10.0 eV PID was utilized to screen the headspace gases of each of the

Mr. Mike Morissette
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monitoring wells and the recovery well for volatile organic compounds (VOCs). The PID data we summarized on **Table 2**. Review of the data shows elevated PID assays below detectable limits [0.1 parts per million (ppm)] within all sampled wells.

Ground Water Quality Results

On March 26, 2004, water quality samples were collected from MW-1 and MW-3 using disposable polyethylene bailers. The collected samples were stored and delivered on ice, to Green Mountain Laboratories, Inc. in Middlesex, Vermont, for analyses via EPA Method 8021B and 8100 (TPH DRO) for petroleum compounds. The water quality results are summarized on **Table 3**. Copies of the laboratory reports are included as **Appendix A**.

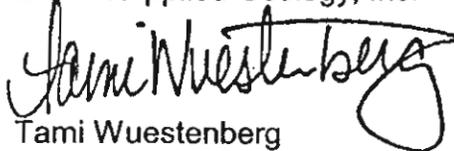
Review of **Table 3** and **Appendix A** indicates that elevated concentrations of petroleum contaminants are present in MW-1. Vermont Ground Water Quality Enforcement Standards (GQES) were exceeded for 1,3,5-Trimethylbenzene, 1,2,4-Trimethylbenzene and Naphthalene. Ethylbenzene and total Xylenes were detected below GQES.

Conclusions

MW-1 reports contamination levels above GQES.

If you have any questions or concerns with regard to any of the information provided, please do not hesitate to contact me or Steven LaRosa, Chief of Operations, at (802) 453-4384.

Sincerely,
Lincoln Applied Geology, Inc.



Tami Wuestenberg
Environmental Scientist

TW/kg
Enclosures

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Lincoln Applied Geology, Inc.
Environmental Consultants

Ground Water Elevation/Product Level (feet)

Data Point	Total Depth	05/26/04
MW-1	15.30	5.30
MW-2		
MW-3	8.75	5.35
RW-1	8.90	3.89

Notes:
1 - Elevation given in feet below ground surface
Light Grey Cell = DRY
Dark Grey Cell = Inaccessible

Ground Water Quality Results (ppb)

Data Point	Compound	*GQES	05/26/04
MW-1	Benzene	5	<2
	Toluene	1,000	<2
	Ethylbenzene	700	43
	Xylenes	10,000	51
	1,3,5-Trimethylbenzene	4	6.8
	1,2,4-Trimethylbenzene	5	340
	Naphthalene	20	53
	MTBE	40	<10
	BTEX		<98
MW-2	Benzene	5	
	Toluene	1,000	
	Ethylbenzene	700	
	Xylenes	10,000	
	1,3,5-Trimethylbenzene	4	
	1,2,4-Trimethylbenzene	5	
	Naphthalene	20	
	MTBE	40	
	BTEX		
MW-3	Benzene	5	<1
	Toluene	1,000	<1
	Ethylbenzene	700	<1
	Xylenes	10,000	<3
	1,3,5-Trimethylbenzene	4	<2
	1,2,4-Trimethylbenzene	5	<2
	Naphthalene	20	<5
	MTBE	40	<5
	BTEX		<6
MW-4	Benzene	5	
	Toluene	1,000	
	Ethylbenzene	700	
	Xylenes	10,000	
	1,3,5-Trimethylbenzene	4	
	1,2,4-Trimethylbenzene	5	
	Naphthalene	20	
	MTBE	40	
	BTEX		

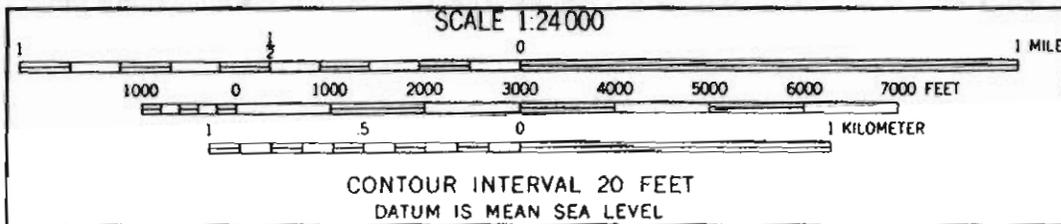
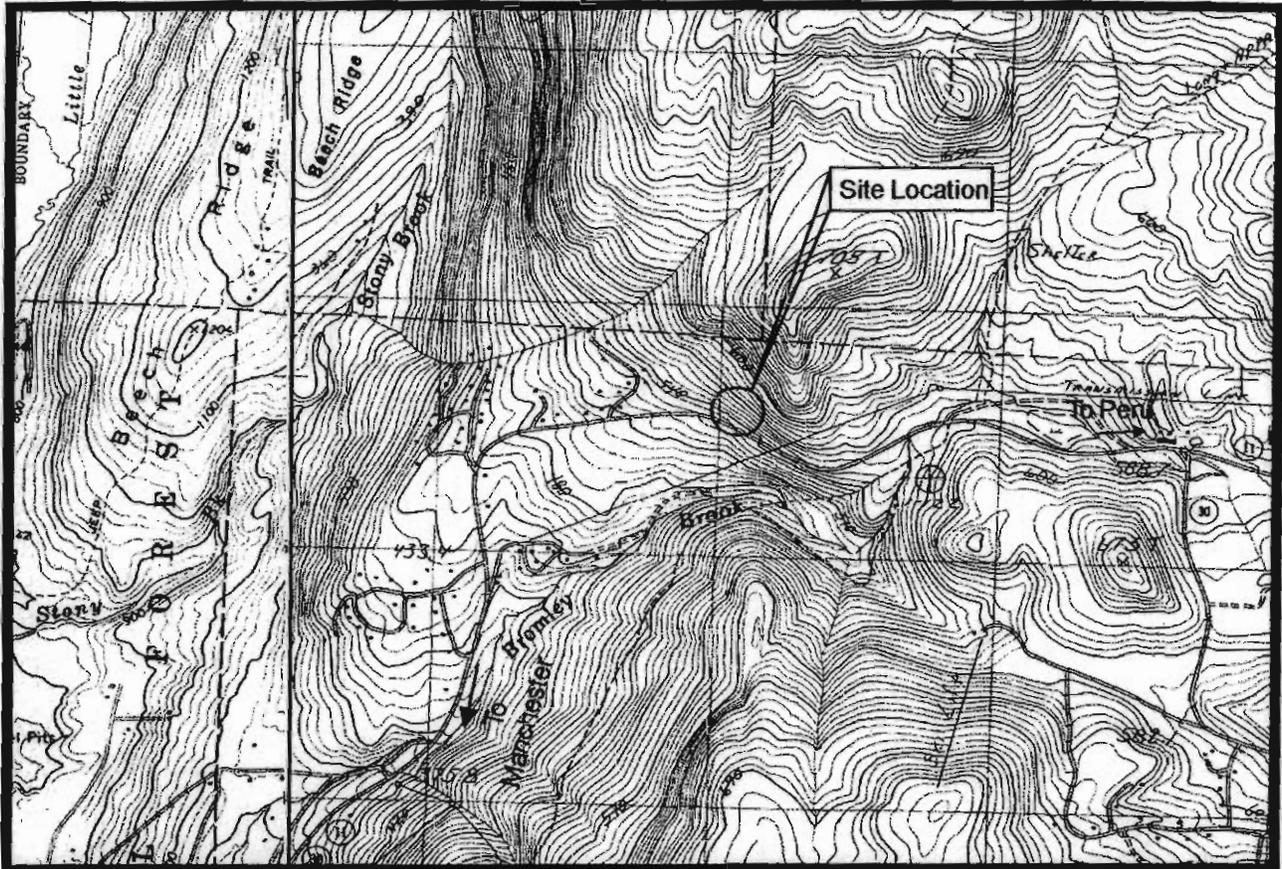
NOTES:

< - Contaminant not detected at specified detection limit

Figure 1

Vermont Agency of Transportation
Former Manchester Garage
Manchester, Vermont

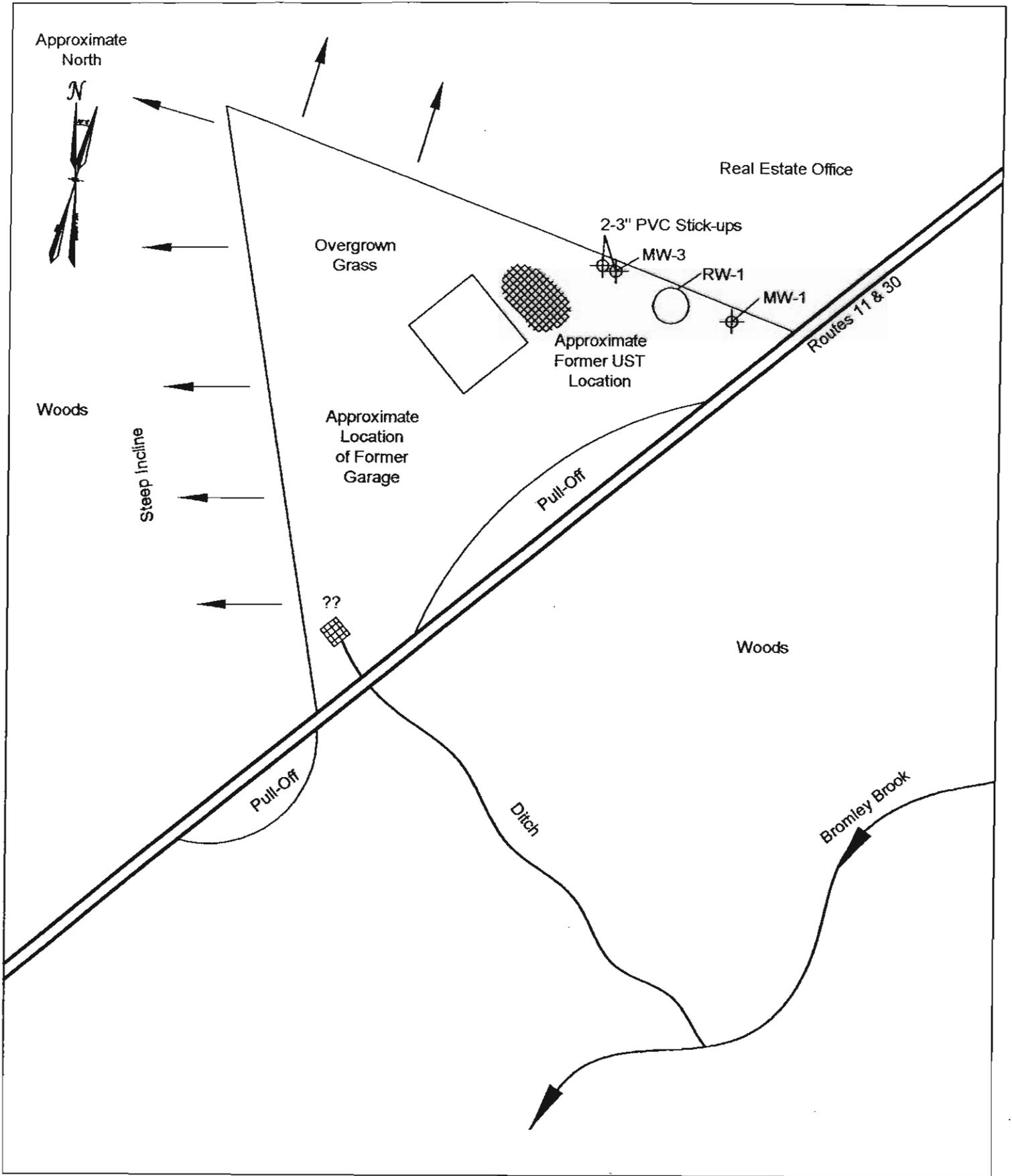
GENERAL LOCATION MAP



MANCHESTER, VT.
NE/4 EQUINOX 15' QUADRANGLE
43073-B1-TF-024
1968
QUADRANGLE LOCATION DMA 6370 II NE-SERIES V813

PERU, VERMONT
PROVISIONAL EDITION 1986
43072-B8-TM-024
QUADRANGLE LOCATION





NOT TO SCALE



Former Agency of Transportation Garage

MANCHESTER VERMONT

SITE SKETCH

DATE	JULY 2004
SURVEYOR	N/A
DRAWN	CDG
PROJECT #	2

Appendix A

Water Quality Laboratory Results
for
May 26, 2004

GREEN MOUNTAIN LABORATORIES, INC.

27 Cross Road
Middlesex, Vermont 05602

Phone (802) 262-2004

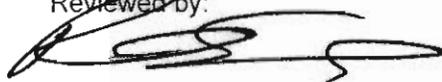
LABORATORY RESULTS

CLIENT NAME:	Lincoln Applied Geology	REFERENCE NO.:	667A
ADDRESS:	163 Revell Drive Lincoln, VT 05443	PROJECT NO.:	NA
SAMPLE LOCATION:	AOT Manchester	DATE OF SAMPLE:	05/26/2004
SAMPLER:	Tami Wuestenberg	DATE OF RECEIPT:	05/28/2004
ATTENTION:	Tami Wuestenberg	DATE OF ANALYSIS:	06/04-06/07/2004
		DATE OF REPORT:	06/08/2004

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.
- 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 analyte to all samples, standards, and blanks. Surrogate recoveries were found to be within laboratory QA/QC acceptance limits, unless noted otherwise.

Reviewed by:



Raul Sanchez
Chemical Services

ENTERED

LABORATORY RESULTS

GREEN MOUNTAIN LABORATORIES, INC.

27 Cross Road
Middlesex, Vermont 05602
Phone (802) 262-2004

LABORATORY RESULTS

GC/MS METHOD - 8260M

GML REF. # : 667A
SAMPLE ID: MW-1
ANALYSIS DATE: 06/07/2004
SAMPLE DATE: 05/26/2004
SAMPLE TYPE: WATER

<u>PARAMETER</u>	<u>PQL (ug/L)</u>	<u>RESULT (ug/L)</u>
Benzene	2	ND
Toluene	2	ND
Ethylbenzene	2	43
1,3,5-Trimethylbenzene	4	6.8
1,2,4-Trimethylbenzene	4	340
Xylenes	6	51
Naphthalene	10	53
MTBE	10	ND

Surrogate % Recovery: 91.9 %

ND = Not Detected
BPQL = Below Practical Quantitation Limit



GREEN MOUNTAIN LABORATORIES, INC.

27 Cross Road
Middlesex, Vermont 05602
Phone (802) 262-2004

LABORATORY RESULTS

GC/MS METHOD - 8260M

GML REF. # : 667A
SAMPLE ID: MW-3
ANALYSIS DATE: 06/04/2004
SAMPLE DATE: 05/26/2004
SAMPLE TYPE: WATER

<u>PARAMETER</u>	<u>PQL (ug/L)</u>	<u>RESULT (ug/L)</u>
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
1,3,5-Trimethylbenzene	2	ND
1,2,4-Trimethylbenzene	2	ND
Xylenes	3	ND
Naphthalene	5	ND
MTBE	5	ND

Surrogate % Recovery: 88.3 %

ND = Not Detected
BPQL = Below Practical Quantitation Limit

E. J. [Signature]

Green Mountain Laboratories, Inc.

27 Cross Road
Middlesex, Vermont 05602
Phone (802) 262-2004
www.greenmlabs.com

LABORATORY RESULTS

CLIENT NAME:	Lincoln Applied Geology	GML REFERENCE #:	667A
CLIENT ADDRESS:	163 Revell Drive	PROJECT NO.:	NA
	Lincoln, VT 05443	DATE OF SAMPLE:	05/26/2004
PROJECT NAME:	AOT Manchester	DATE OF RECEIPT:	05/28/2004
SAMPLER:	Tami Wuestenberg	DATE OF ANALYSIS:	06/07/2004
ATTENTION:	Tami Wuestenberg	DATE OF REPORT:	06/08/2004

Total Petroleum Hydrocarbons (TPH) by EPA Method 8015 DRO (mg/L - ppm)

Sample	PQL	TPH Results
MW-1	1.0	BPQL
MW-3	1.0	<1.0

PQL= Practical Quantitation Limit
BPQL = Below Practical Quantitation Limit

Reviewed by:



Raul Sanchez
Chemical Services

