

August 22, 1996

People • Science • Technology

Aug 26 10 21 AM '96

Mr. Chuck Schwer
Hazardous Materials Management Division
103 South Main Street / West Office
Waterbury, VT 05672-0404



WASTE MANAGEMENT
STONE ENVIRONMENTAL INC

Main Office:

58 East State Street
Montpelier, Vermont
05602 USA

Phone / 802. 229.4541

Fax / 802. 229.5417

E-mail / 7024683@mcimail.com

Re: Lamoille Union High School
SEI No: 96624

96 2022

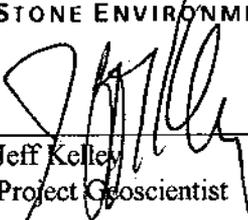
Dear Mr. Schwer:

Enclosed please find the our report on the initial site investigation at Lamoille Union High School. It is our understanding that the site has not yet been assigned a DEC Site Number.

If this report should generate any questions, please do not hesitate to call.

Sincerely yours,

STONE ENVIRONMENTAL INC



Jeff Kelley
Project Geoscientist

cnc:

Reviewed By:
g:\proj\96589\investrs\020896.ltr

Joe Kelly 202-6436
Southeast Regional Office:
206 Langston Mill Court
Raleigh, North Carolina
27606 USA
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Pacific Office:
45 Hunt Street
Dunedin, New Zealand
Phone / 64.3.454.4332
Fax / 64.3.477.1004

Phase (check one)	Type (check one)
<input checked="" type="checkbox"/> Initial Site Investigation <input type="checkbox"/> Corrective Action Feasibility Investigation <input type="checkbox"/> Corrective Action Plan <input type="checkbox"/> Corrective Action Summary Report <input type="checkbox"/> Operations and Monitoring Report	<input type="checkbox"/> Work Scope <input type="checkbox"/> Technical Report <input type="checkbox"/> PCF Reimbursement Request <input type="checkbox"/> General Correspondence

INITIAL SITE INVESTIGATION REPORT

Lamoille Union High School
 Route 15
 Hyde Park, VT

Facility ID # 2040
 SEI Project No. 96-624

Contact:
 Richard Smith
 Lamoille Union High School
 RD 1 Box 304
 Hyde Park, VT 05655
 phone / 802.888-4261

Prepared by:
 Stone Environmental, Inc.
 58 East State St
 Montpelier, VT 05602
 Phone / 802.229.4541
 fax / 802.229.5417
 Contact: Jeffrey Kelley, Project Geoscientist

August 22, 1996

EXECUTIVE SUMMARY

A 4,000 gallon gasoline underground storage tank was removed from Lamoille Union High School in Hyde Park, Vermont on June 26, 1996. The tank removal report submitted to the Vermont Department of Environmental Conservation, Sites Management Section (SMS) by Stone Environmental, Inc. (SEI) indicated that a release had occurred, probably due to two small holes on the tank's bottom.

On July 10, 1996 SEI performed an initial site investigation consisting of the advancement of 8 soil borings. The first boring (TW-1) encountered groundwater at approximately 8 to 9 feet below ground surface. Volatile organic compound (VOC) screening with a photoionization detector (VOC) indicated that the groundwater was impacted by the gasoline release. Therefore, a temporary monitoring well was installed in this and all subsequent borings except for TW-4 and TW-8. Soil samples were collected continuously from each boring using a vibratory drill rig operated by Adams Engineering. The head space of each of the soil samples was analyzed with a Photo Ionization Detector (10.6 eV lamp). Groundwater samples were also collected for EPA Method 8020 analysis from each well, and one saturated soil sample was analyzed from TW-8 in place of a groundwater sample.

Field soil screening and laboratory results indicate that both soil and groundwater contamination exist at the site. Benzene, toluene, ethylbenzene, and total xylene (BTEX) concentrations in groundwater ranged from 37,900 parts per billion in TW-1 to 354 parts per billion in SB-8. The extent of contamination was delineated by TW-7 to the west and TW-2 to the south. TW-3, which was located east of the tank pull area, had only 9.1 parts per billion of total xylenes in its groundwater sample.

The two on-site water supply wells were both sampled and were non-detect for all parameters analyzed. One of these wells, which serves as a back-up water supply well and is therefore not continually used, is located within 110 feet of the groundwater contaminant plume. There are no other nearby wells that appear to be at risk.

Based on the findings of this investigation it is our recommendation that a corrective action plan be developed for the site. A pilot test should be performed to determine if air sparging and soil vapor extraction are feasible at the site and at what radii of influence.

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1.0 INTRODUCTION

On June 26, 1996 Stone Environmental Inc. (SEI) supervised the removal of a 4,000 gallon gasoline underground storage tank at Lamoille Union High School in Hyde Park, Vermont (Figure 1). The findings of the tank removal prompted SEI to perform an initial site investigation at the property. This report consists of the findings of that investigation, which was performed on July 10, 1996.

2.0 SITE HISTORY

In our environmental assessment of the tank removal submitted July 1, 1996, we reported soil contamination in the tank excavation ranging from 2.4 parts per million (ppm) at the west side of the excavation at 6 feet below ground surface (bgs) to 1,100 ppm from the north side of the excavation at approximately 13.5 feet bgs. The highest reading (1,210 ppm) was recorded at the tank's suction line fitting. There were two "pea-sized" holes observed at the north end of the tank bottom. There was no free product observed in the excavation, nor was groundwater encountered.

3.0 SOIL BORINGS

On July 10, 1996 Adams Engineering of Underhill, VT, under the supervision of SEI, advanced eight borholes at the site. The purpose of these soil borings was to better define the lateral and horizontal extent of soil contamination found during the UST removal, and to assess the potential impact to groundwater. The borehole locations are shown in Figure 2. Soil samples were collected continuously with Adam's vibratory drill rig, logged, split in discrete increments, and placed in ziplock® baggies. The head space of each sample was then analyzed for volatile organic compounds (VOCs) with a Mini RAE® PID. The PID was calibrated on site using 100 ppm isobutylene and was equipped with a 10.6 eV lamp. The soil boring logs and the VOC results are presented in Appendix A. Please note that, as depicted in the soil boring logs, SB-8 was not fully characterized and the 5 to 10 foot interval is not described in the log.

The first boring, TW-1, exhibited elevated VOC concentrations at approximately 7 feet bgs to 10 feet bgs. As groundwater was found to be at approximately 8 to 9 feet bgs, it was apparent that groundwater had been impacted by the release and the investigation therefore required the installation of temporary stainless steel monitoring wells. Temporary wells were installed in all borings except SB-4, which had a PID measured VOC concentration of 1,600 at the water table, and SB-8, due to time constraints. A sample of saturated soil was collected from SB-8 in place of a water sample. As SB-4 showed obvious contamination, another boring (TW-5) was advanced downgradient (north) to better delineate the plume's extent. Overall, SEI collected water samples from TW-1, TW-2, TW-3, TW-5, TW-6, and TW-7. Laboratory results are tabulated in Table 1, while a copy of the original laboratory result forms is included in Appendix B.

4.0 GEOLOGY AND HYDROGEOLOGY

In general, soils encountered during the investigation consisted of sands and loamy sands to approximately 2 to 5 feet bgs, then gravelly sand overlaying a silt loam layer to as deep as 15 feet bgs. The silt loam was generally found at about 7 feet bgs. Groundwater was encountered in the upper foot of the silt loam layer. The topography of the site is generally flat, sloping gently to the northwest where a steep bank is located approximately 350 feet from the tank pull area.

Figure 3 shows the direction of groundwater flow, which was calculated to be to the north/northwest. This flow direction is based on depth to groundwater measurements in some of the temporary wells, as all of the wells did not adequately recharge to their normal elevation after well development and sampling. The groundwater flow direction is consistent, however, with the topography of the site.

5.0 POTENTIAL RECEPTOR ASSESSMENT

A review of State of Vermont Water Supply well logs indicated that there were four wells within 0.5 miles of the school. Additionally, there are two water supply wells that serve the school. The primary well is located approximately 800 feet to the west of the tank pull area. The back-up well is located approximately 140 feet northeast of the tank pull area. Groundwater contamination may possibly be as close as 100 feet to the west of this well (near SB-4). The school does not have a basement, but the interior area closest to the tank pull area was screened for VOCs with the PID and none were detected above background levels. There is a tributary to the Lamoille River that is located approximately 330 feet directly downgradient (north/northwest). This tributary has not been sampled.

6.0 RESULTS AND CONCLUSIONS

It appears that the contamination discovered during the tank removal has migrated to the north in the groundwater, as the laboratory analyses suggest a plume extending from TW-1 to SB-8, with highest concentrations found between TW-1 and TW-5. The plume did not appear to have spread to the south or west, as TW-2 and TW-7 did not exhibit soil or groundwater contamination. TW-6, located approximately 110 feet to the north/northeast of the tank pull area, was also free of soil and groundwater contamination above detection limits. However, TW-3, located approximately 40 feet to the east of the tank area, showed xylenes at 9.1 parts per billion (ppb) which is below the state groundwater enforcement standard of 400 ppb. The field screening of this boring revealed slightly elevated VOC concentrations (9.1 ppm maximum at 8 feet bgs). Both water supply wells were non-detect for all 8020 parameters analyzed, however, the back-up supply well is located only 100 to 130 feet from the plume. Should this well ever be utilized, and according to the school it has been used in the past, its cone of depression could very well reach and draw off the contaminated plume.

Based on the findings of this investigation, it is our recommendation that a corrective action plan be developed to address the contamination present at the site. To this end, we recommend performing a pilot test of both air sparging and soil vapor extraction within the contaminated area at Lamoille Union High School. It is imperative that we measure the radius of influence for sparging within the upper 2 feet of the silt loam layer to ensure proper remedial design. Other remedial alternatives should also be explored. By remediating the area of soil affected by the release, the source of further groundwater contamination can be removed.

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TABLE 1
Groundwater Laboratory Results 7/10/96

Sample ID	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Chlorobenzene	MTBE
TW-1	7400	19000	1700	9800	37900	ND	5800
TW-2	ND	ND	ND	ND	ND	ND	ND
TW-3	ND	ND	ND	9.1	9.1	ND	ND
TW-5	810	10000	1400	12200	24410	ND	500
TW-6	ND	ND	ND	ND	ND	ND	ND
TW-7	ND	ND	ND	ND	ND	ND	ND
SB-8 (saturated soil)	ND	ND	55	299	354	ND	ND
TAP WATER	ND	ND	ND	ND	ND	ND	ND
PRODUCTION WELL	ND	ND	ND	ND	ND	ND	ND
VTGWES	5	2420	680	400	nps	100	40

NOTES: all results in parts per billion

ND = non-detect

tap water = primary supply well

production well = back-up supply well

VTGWES = State of Vermont Groundwater Enforcement Standard

nps = no published standard

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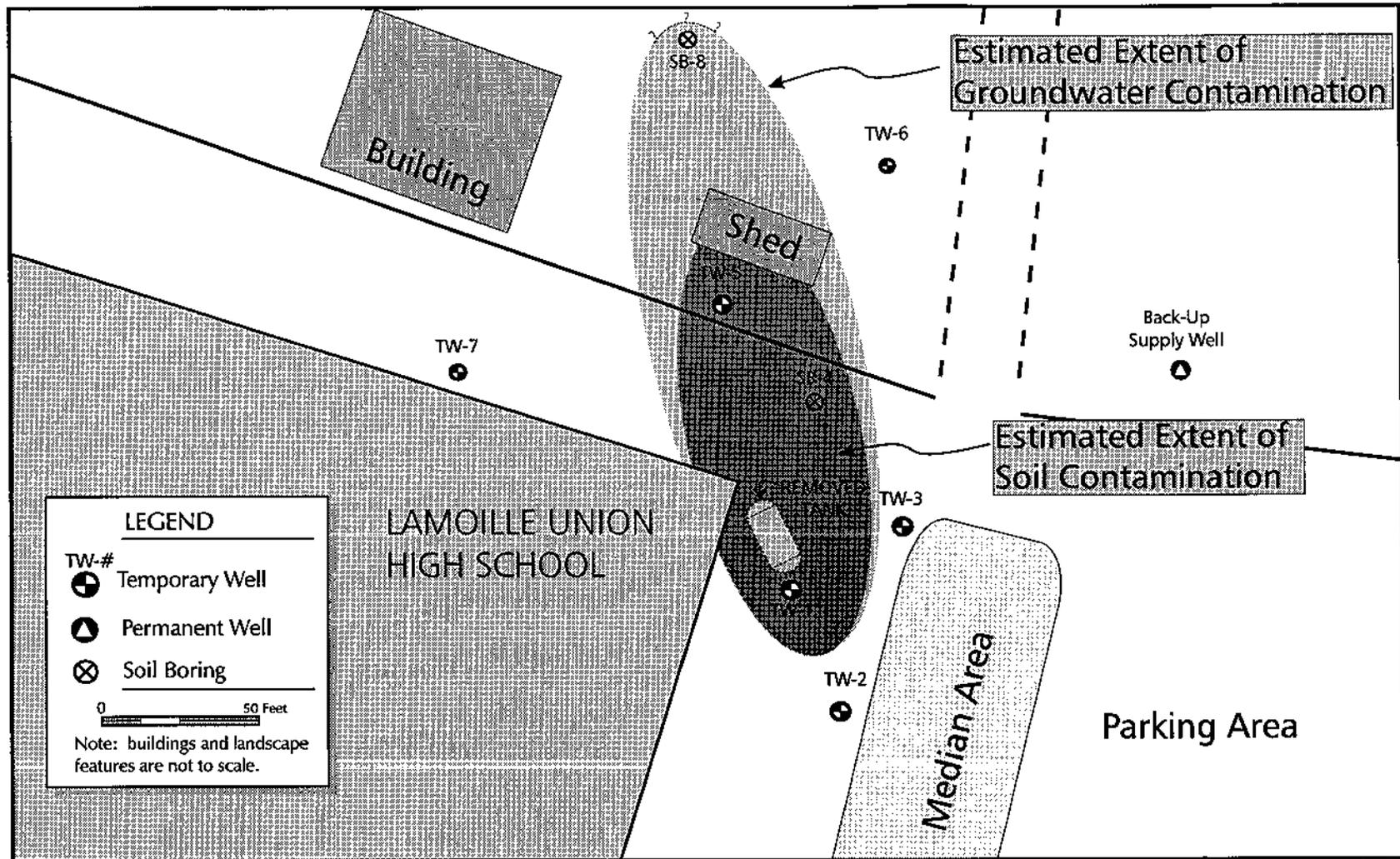


FIGURE 2: SITE MAP
 Lamoille Union High School
 Hyde Park, Vermont



Source: Stone Environmental Survey 7-10-96
 g:\proj\96-624\survey2.cdr
 int: 8-16-96 dMc



STONE ENVIRONMENTAL INC

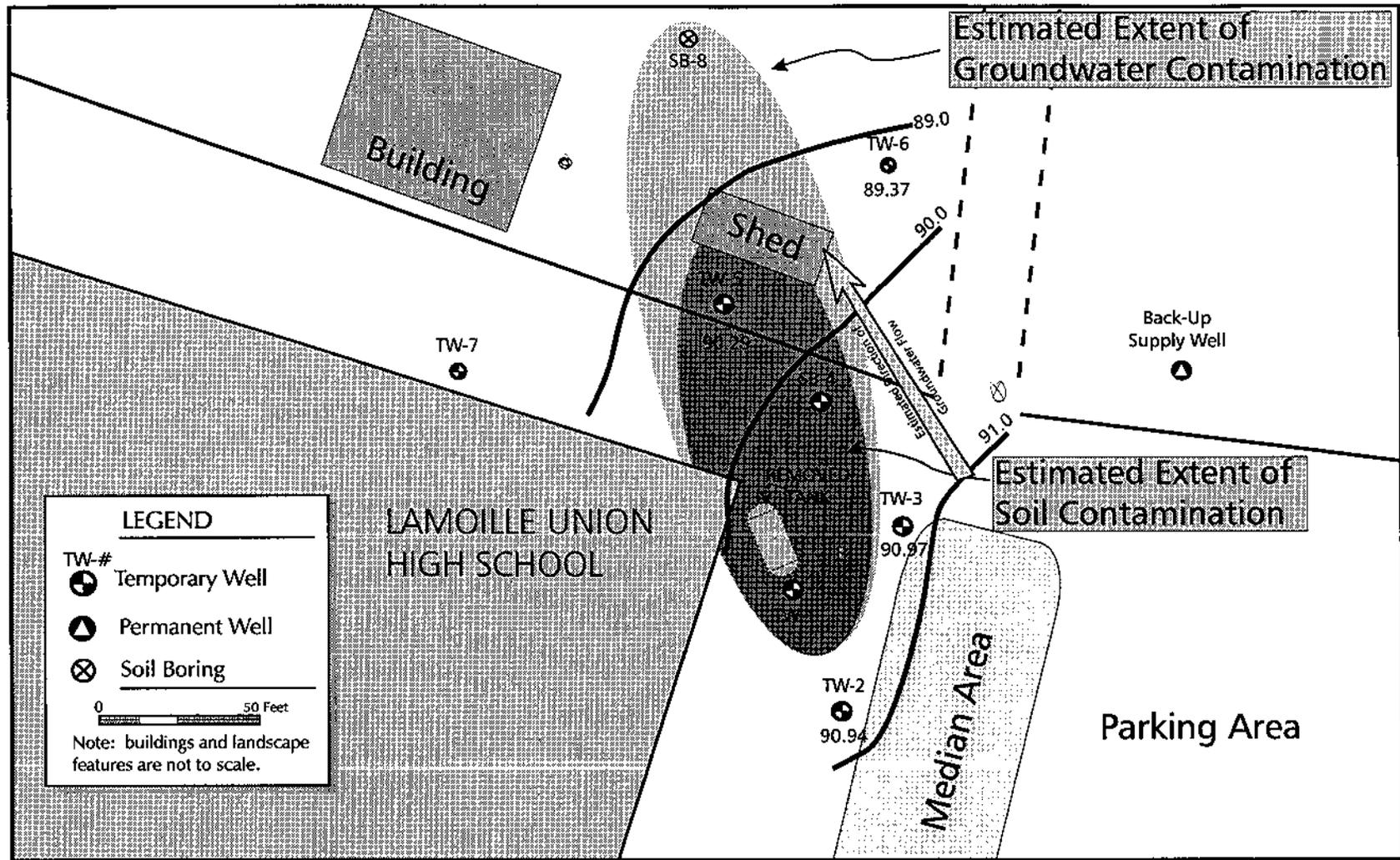


FIGURE 3: GROUNDWATER ELEVATION MAP
 Lamoille Union High School
 Hyde Park, Vermont



Source: Stone Environmental Survey-7-10-96
 g:\proj\96-624\GWCONTOUR.cdr
 int: 8-20-96 JK

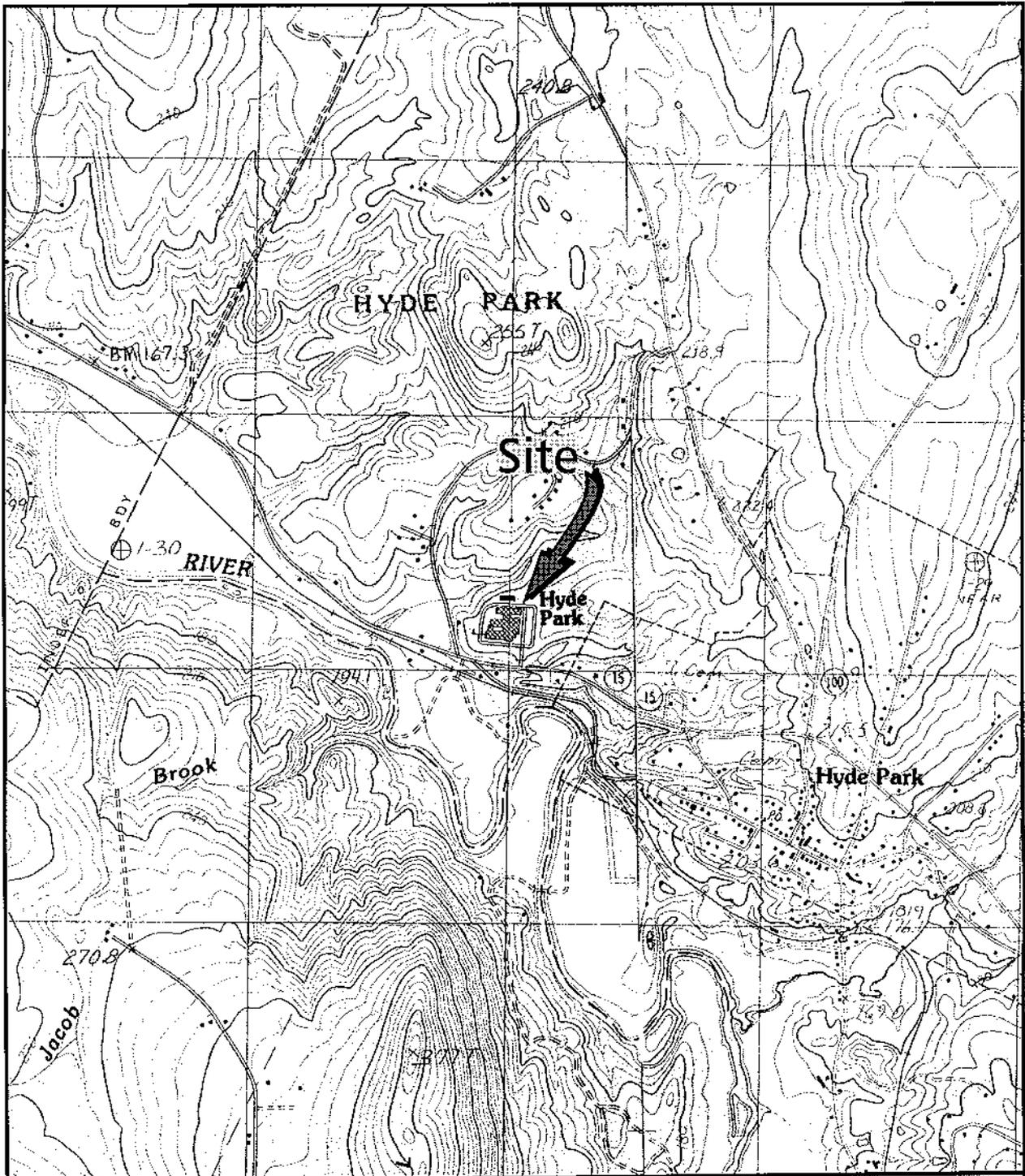
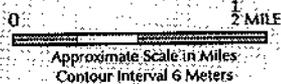


FIGURE 1: SITE LOCATION MAP
 Lamaille Union High School
 Hyde Park, Vermont



Source: Morrisville, VT Quadrangle, 7.5 Minute Series, 1:24,000 Scale, USGS 1986;
 Sterling Mtn., VT Quadrangle, 7.5 Minute Series, 1:24,000 Scale, USGS 1986
 g:\proj\96-624\site\map.cdr
 int: 07-17-96

STONE ENVIRONMENTAL INC

APPENDIX A

SOIL BORING LOGS

SOIL BORING LOG

SB-1

Lamoille UHS, Vermont

Date of Construction: 07-10-96

Logged by: Jeff Kelley

g:\proj\96-624\logplots\sb1.lpt

 **STONE ENVIRONMENTAL INC**

DEPTH (Feet)	WATER LEVEL	PID INTERVAL	PID READING (ppm)	SAMPLE INTERVAL	RECOVERY	GENERAL LITHOLOGY AND COMMENTS (based on field notes and geoscientist interpretation)
2						
1						
0			0.6			Gravelly Loamy Sand
-1			0.9			Fine Sandy Loam
-2			2.2			Gravelly Sand
-3						
-4						
-5			2.2			Silt Loam: wet
-6						
-7			155			
-8	▼		350			
-9			500			
-10			350			
-11						
-12			55			
-13			50			
-14						
-15						
-16						
-17						

SOIL BORING LOG

SB-2

Lamoille UHS, Vermont

Date of Construction: 07-10-96

Logged by: Jeff Kelley

g:\proj\96-624\logplots\sb2.lpt

 **STONE ENVIRONMENTAL INC**

DEPTH (Feet)	WATER LEVEL	PID INTERVAL	PID READING (ppm)	SAMPLE INTERVAL	RECOVERY	GENERAL LITHOLOGY AND COMMENTS (based on field notes and geoscientist interpretation)
2						
1						
0			1.6			Top Soil
-1			1.6			Loamy Sand
-2			1.8			Silt Loam
-3						Fine Sand
-4						Gravelly Sand
-5			2.6			
-6			2.1			
-7			2.2			Silt Loam: wet
-8			3.0			
-9						
-10			2.4			
-11						
-12			1.8			
-13			3.2			
-14			3.6			
-15						
-16						
-17						

SOIL BORING LOG

SB-3

Lamoille UHS, Vermont

Date of Construction: 07-10-96

Logged by: Jeff Kelley

g:\proj\96-624\logplot\sb3.lpt



DEPTH (Feet)	WATER LEVEL	PID INTERVAL	PID READING (ppm)	SAMPLE INTERVAL	RECOVERY	GENERAL LITHOLOGY AND COMMENTS (based on field notes and geoscientist interpretation)
2						
1						
0						
-1						Loamy Sand
-2						Sandy Loam: with stones
-3						
-4						
-5			1.8			Gravelly Sand
-6			2.2			
-7	▼		5.2			Silt Loam: wet
-8			9.5			
-9						
-10						
-11						
-12						
-13						
-14						
-15						
-16						
-17						

SOIL BORING LOG

SB-4

Lamoille UHS, Vermont

Date of Construction: 07-10-96

Logged by: Jeff Kelley

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 **STONE ENVIRONMENTAL INC**

DEPTH (Feet)	WATER LEVEL	PID INTERVAL	PID READING (ppm)	SAMPLE INTERVAL	RECOVERY	GENERAL LITHOLOGY AND COMMENTS (based on field notes and geoscientist interpretation)
2						
1						
0			5.0			Asphalt
-1			45			Gravelly Sand
-2			32			Sand
-3			12.0			Fine to Medium Sand
-4						Gravelly Sand
-5			15.0			Gravelly Coarse Sand
-6			21.0			
-7	▼		1600			
-8			1300			Silt Loam: wet
-9			520			
-10						
-11						
-12						
-13						
-14						
-15						
-16						
-17						

SOIL BORING LOG

SB-5

Lamoille UHS, Vermont

Date of Construction: 07-10-96

Logged by: Jeff Kelley

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 **STONE ENVIRONMENTAL INC**

DEPTH (Feet)	WATER LEVEL	PID INTERVAL	PID READING (ppm)	SAMPLE INTERVAL	RECOVERY	GENERAL LITHOLOGY AND COMMENTS (based on field notes and geoscientist interpretation)
2						
1						
0			7.0			Loamy Sand
-1			5.7			Rock: some gray schist
-2			5.0			Loamy Sand
-3			6.0			Loamy Fine Sand
-4						Loamy Sand: dry
-5			8.0			
-6			63			
-7	▼		106			Loamy Fine Sand: dry, no odor
-8			160			Gravelly Sand: wet, gas odor
-9			1300			
-10						
-11						
-12						
-13						
-14						
-15						
-16						
-17						

SOIL BORING LOG

SB-6

Lamoille UHS, Vermont

Date of Construction: 07-10-96

Logged by: Jeff Kelley

g:\proj\96-624\logplots\sb6.lpt

 **STONE ENVIRONMENTAL INC**

DEPTH (Feet)	WATER LEVEL	PID INTERVAL	PID READING (ppm)	SAMPLE INTERVAL	RECOVERY	GENERAL LITHOLOGY AND COMMENTS (based on field notes and geoscientist interpretation)
2						
1						
0			4.8			Gravelly Loamy Sand
-1			4.7			Gravelly Sand
-2			5.1			Fine Sandy Loam Gravelly Coarse Sand
-3			3.5			
-4						
-5			3.0			Gravelly Sand
-6			3.5			Silt Loam
-7	▼		3.4			
-8			3.1			
-9						
-10						
-11						
-12						
-13						
-14						
-15						
-16						
-17						

SOIL BORING LOG

SB-7

Lamoille UHS, Vermont

Date of Construction: 07-10-96

Logged by: Jeff Kelley

g:\proj\96-624\logplots\sb7.lpt

 **STONE ENVIRONMENTAL INC**

DEPTH (Feet)	WATER LEVEL	PID INTERVAL	PID READING (ppm)	SAMPLE INTERVAL	RECOVERY	GENERAL LITHOLOGY AND COMMENTS (based on field notes and geoscientist interpretation)
2						
1						
0						Top Soil
-1		1.5				Coarse Sand
-2		3.3				Gravelly Coarse Sand
-3		4.2				
-4		3.0				Fine Sandy Loam
-5						
-6		3.2				Silt Loam
-7	▼	3.0				
-8		3.7				
-9		5.0				
-10		5.3				
-11		3.4				Gravelly Loamy Sand
-12		3.0				Silt Loam
-13		3.0				
-14		0.9				
-15		4.0				
-16						
-17						

SOIL BORING LOG

SB-8

Lamoille UHS, Vermont

Date of Construction: 07-10-96

Logged by: Jeff Kelley

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 **STONE ENVIRONMENTAL INC**

DEPTH (Feet)	WATER LEVEL	PID INTERVAL	PID READING (ppm)	SAMPLE INTERVAL	RECOVERY	GENERAL LITHOLOGY AND COMMENTS (based on field notes and geoscientist interpretation)
2						
1						
0			3.1			Gravelly Sand
-1			3.5			Gravelly Loamy Sand
-2			4.1			Gravelly Sand
-3			3.7			Sandy Loam
-4						
-5			2.4			No Data Available: Saturated soil sample collected at 8' bgs.
-6			4.0			
-7			4.9			
-8	▼		3.2			
-9						
-10						
-11						
-12						
-13						
-14						
-15						
-16						
-17						

APPENDIX B

LABORATORY RESULTS

GREEN MOUNTAIN LABORATORIES, INC.

RR 3, BOX 5210
Montpelier, Vermont 05602

Phone (802) 223 - 1468

Fax (802) 223 - 8688

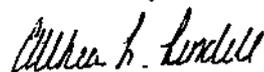
LABORATORY RESULTS

CLIENT NAME:	Stone Environmental, Inc.	REFERENCE NO.:	1006
ADDRESS:	58 E. State Street Montpelier, VT 05602	PROJECT NO.:	96624
SAMPLE LOCATION:	LUHS	DATE OF SAMPLE:	07/10/96
SAMPLER:	Kevin Brooker	DATE OF RECEIPT:	07/11/96
ATTENTION:	Jeff Kelley	DATE OF ANALYSIS:	07/17-07/22/96
		DATE OF REPORT:	07/23/96

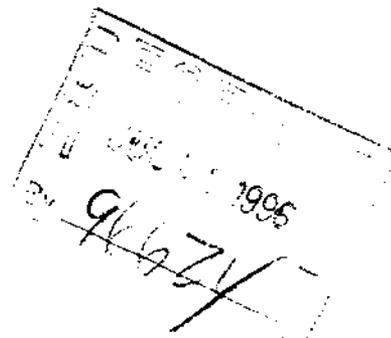
Pertaining to the analyses of specimens submitted under the accompanying chain of custody form, please note the following:

- 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:



Althea L. Lindell
Director, Chemical Services



GREEN MOUNTAIN LABORATORIES, INC.

RR 3, BOX 5210
Montpelier, Vermont 05602

Phone (802) 223 - 1468

Fax (802) 223 - 8688

LABORATORY RESULTS

GC/MS METHOD - EPA 8020

GML REF. #: 1006
STATION: SB-8
ANALYSIS DATE: 07/17/96
DATE SAMPLED: 07/10/96
SAMPLE TYPE: SOIL (77.80% DRY WT.)

PARAMETER	PQL (µg/kg)	Conc. (µg/kg)
Benzene	24	ND
Toluene	24	ND
Ethylbenzene	24	55
m+p-Xylene	48	230
o-Xylene	24	69
Chlorobenzene	24	ND
m-Dichlorobenzene	24	ND
p-Dichlorobenzene	24	ND
o-Dichlorobenzene	24	ND
MTBE	120	ND

Surrogate % Recovery: 97.0 %

ND = Not Detected

BPQL = Below Practical Quantitation Limits

GREEN MOUNTAIN LABORATORIES, INC.

RR 3, BOX 5210
Montpelier, Vermont 05602

Phone (802) 223 - 1468

Fax (802) 223 - 8688

LABORATORY RESULTS

GC/MS METHOD - EPA 8020

GML REF. # : 1006
STATION: TAP WATER
ANALYSIS DATE: 07/17/96
DATE SAMPLED: 07/10/96
SAMPLE TYPE: WATER

PARAMETER	PQL ($\mu\text{g/L}$)	Conc. ($\mu\text{g/L}$)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
m+p-Xylene	2	ND
o-Xylene	1	ND
Chlorobenzene	1	ND
m-Dichlorobenzene	1	ND
p-Dichlorobenzene	1	ND
o-Dichlorobenzene	1	ND
MTBE	5	ND

Surrogate % Recovery: 98.5 %

ND = Not Detected

BPQL = Below Practical Quantitation Limits

GREEN MOUNTAIN LABORATORIES, INC.

RR 3, BOX 5210
Montpelier, Vermont 05602

Phone (802) 223 - 1468

Fax (802) 223 - 8688

LABORATORY RESULTS

GC/MS METHOD - EPA 8020

GML REF. #: 1006
STATION: PRODUCTION WELL
ANALYSIS DATE: 07/17/96
DATE SAMPLED: 07/10/96
SAMPLE TYPE: WATER

PARAMETER	PQL ($\mu\text{g/L}$)	Conc. ($\mu\text{g/L}$)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
m+p-Xylene	2	ND
o-Xylene	1	ND
Chlorobenzene	1	ND
m-Dichlorobenzene	1	ND
p-Dichlorobenzene	1	ND
o-Dichlorobenzene	1	ND
MTBE	5	ND

Surrogate % Recovery: 94.1 %

ND = Not Detected

BPQL = Below Practical Quantitation Limits

GREEN MOUNTAIN LABORATORIES, INC.

RR 3, BOX 5210
Montpelier, Vermont 05602

Phone (802) 223 - 1468

Fax (802) 223 - 8688

LABORATORY RESULTS

GC/MS METHOD - EPA 8020

GML REF. # : 1006
STATION: TW-1
ANALYSIS DATE: 07/22/96
DATE SAMPLED: 07/10/96
SAMPLE TYPE: WATER

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	100	7400
Toluene	100	19000
Ethylbenzene	100	1700
m+p-Xylene	200	6600
o-Xylene	100	3200
Chlorobenzene	100	ND
m-Dichlorobenzene	100	ND
p-Dichlorobenzene	100	ND
o-Dichlorobenzene	100	ND
MTBE	500	5800

Surrogate % Recovery: 96.6 %

ND = Not Detected

BPQL = Below Practical Quantitation Limits

GREEN MOUNTAIN LABORATORIES, INC.

RR 3, BOX 5210
Montpelier, Vermont 05602

Phone (802) 223 - 1468

Fax (802) 223 - 8688

LABORATORY RESULTS

GC/MS METHOD - EPA 8020

GML REF. # : 1006
STATION: TW-2
ANALYSIS DATE: 07/19/96
DATE SAMPLED: 07/10/96
SAMPLE TYPE: WATER

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
m+p-Xylene	2	ND
o-Xylene	1	ND
Chlorobenzene	1	ND
m-Dichlorobenzene	1	ND
p-Dichlorobenzene	1	ND
o-Dichlorobenzene	1	ND
MTBE	5	ND

Surrogate % Recovery: 101 %

ND = Not Detected

BPQL = Below Practical Quantitation Limits

GREEN MOUNTAIN LABORATORIES, INC.

RR 3, BOX 5210
Montpelier, Vermont 05602

Phone (802) 223 - 1468

Fax (802) 223 - 8688

LABORATORY RESULTS

GC/MS METHOD - EPA 8020

GML REF. #: 1006
STATION: TW-5
ANALYSIS DATE: 07/20/96
DATE SAMPLED: 07/10/96
SAMPLE TYPE: WATER

PARAMETER	PQL ($\mu\text{g/L}$)	Conc. ($\mu\text{g/L}$)
Benzene	100	810
Toluene	100	10000
Ethylbenzene	100	1400
m+p-Xylene	200	8300
o-Xylene	100	3900
Chlorobenzene	100	ND
m-Dichlorobenzene	100	ND
p-Dichlorobenzene	100	ND
o-Dichlorobenzene	100	ND
MTBE	500	500

Surrogate % Recovery: 102 %

ND = Not Detected

BPQL = Below Practical Quantitation Limits

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LABORATORY RESULTS

GC/MS METHOD - EPA 8020

GML REF. #: 1006
STATION: TW-6
ANALYSIS DATE: 07/20/96
DATE SAMPLED: 07/10/96
SAMPLE TYPE: WATER

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
m+p-Xylene	2	ND
o-Xylene	1	ND
Chlorobenzene	1	ND
m-Dichlorobenzene	1	ND
p-Dichlorobenzene	1	ND
o-Dichlorobenzene	1	ND
MTBE	5	ND

Surrogate % Recovery: 99.0 %

ND = Not Detected

BPQL = Below Practical Quantitation Limits

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Montpelier, Vermont 05602

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LABORATORY RESULTS

GC/MS METHOD - EPA 8020

GML REF. # : 1006
STATION: TW-3
ANALYSIS DATE: 07/20/96
DATE SAMPLED: 07/10/96
SAMPLE TYPE: WATER

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
m+p-Xylene	2	6.0
o-Xylene	1	3.1
Chlorobenzene	1	ND
m-Dichlorobenzene	1	ND
p-Dichlorobenzene	1	ND
o-Dichlorobenzene	1	ND
MTBE	5	ND

Surrogate % Recovery: 103 %

ND = Not Detected

BPQL = Below Practical Quantitation Limits

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LABORATORY RESULTS

GC/MS METHOD - EPA 8020

GML REF. #: 1006
STATION: TW-7
ANALYSIS DATE: 07/20/96
DATE SAMPLED: 07/10/96
SAMPLE TYPE: WATER

PARAMETER	PQL (µg/L)	Conc. (µg/L)
Benzene	1	ND
Toluene	1	ND
Ethylbenzene	1	ND
m+p-Xylene	2	ND
o-Xylene	1	ND
Chlorobenzene	1	ND
m-Dichlorobenzene	1	ND
p-Dichlorobenzene	1	ND
o-Dichlorobenzene	1	ND
MTBE	5	ND

Surrogate % Recovery: 102 %

ND = Not Detected

BPQL = Below Practical Quantitation Limits

Green Mountain Laboratories, Inc.

RR #3, box 5210
 Montpelier, VT 05602
 (802) 223-1468 • fax (802) 223-8688

ANALYSIS REQUESTED

Page
 of
 GML #

CLIENT NAME STONE
 ADDRESS 58 E-STATE Montpelier
 PROJECT NAME LUTS
 PROJECT NUMBER 96624
 PROJECT MANAGER Jeff Kelley
 SAMPLER Kevin Brooker

EPA 8020

1006

Sample Location	Date	Time	# of cont.	Pres.	Sample Type														REMARKS:
TAP WATER	7-10-96		2		Water	X													
Production Well	7-10-96		2		Water	X													
TW-1	7-10-96		2		Water	X													
TW-2	7-10-96		2		Water	X													
TW-3	7-10-96		2		Water	X													
TW-5	7-10-96		2		Water	X													
TW-6	7-10-96		2		Water	X													
TW-7	7-10-96		2		Water	X													
TW-8 SB-8	7-10-96		1		Soil	X													
SB-1 0-5/12-24"	7-10-96		1		Soil														HOLD
SB-1 0-5/24-36"	7-10-96		1		Soil														HOLD
SB-4 0-5/24-36"	7-10-96		1		Soil														HOLD
SB-8	7-10-96		1		Soil	X													HOLD

CHAIN OF CUSTODY RECORD

1) Relinquished by:	<i>[Signature]</i>	Received by:	<i>[Signature]</i>	Date/Time	7/11/96 11:00
2) Relinquished by:		Received by:		Date/Time	
3) Relinquished by:		Received by:		Date/Time	