Please note change of address:
P.O. Box 1760
205 Main Street
Brattleboro, VT 05302
~~214 Main Street~~
~~Brattleboro, VT 05301~~

TRI-STATE ENVIRONMENTAL CONSULTING

(802) 254-3677 (24 hrs.)
(802) 254-7630 (FAX)

FEB 01 1993

January 29, 1993

E. Matt Germon, Environmental Engineer
VT DEC SMS HMMD
103 South Main St./West Bldg.
Waterbury, VT 05671-0404

Re: Initial Site Investigation Nason Residence (Site #92-1328)

Dear Mr. Germon:

Please find enclosed the above-referenced report.

Should you have any questions please feel free to call me.

Sincerely,

Kirsten H. Jeppesen

Kirsten H. Jeppesen
Environmental Technician

Enclosure

cc: Lex Nason
Bill Murray

KHJ/dan

\284\germon.let

Branch Office:
25 Pinney Street, Ellington, CT 06029 (203) 875-2110 (24 hrs.)
Fax: (203) 875-8587 (24 hrs.)

Printed on 100% recycled paper.

Please note change of address:
P.O. Box 1760
205 Main Street
Brattleboro, VT 05302
~~21 Main Street~~
~~Brattleboro, VT 05301~~

(802) 254-3677 (24 hrs.)
(802) 254-7630 (FAX)

FEB 01 1993

January 29, 1993

Lex Nason
8 Timber Lane
Brattleboro, VT 05301

Re: Initial Site Investigation Report for the Nason Residence

Dear Mr. Nason:

Enclosed please find the above-referenced report for your review. Also enclosed you will find 2 forms requiring your signature upon approval of this report. Please sign one form and return it to us in the self addressed, stamped envelope provided for your convenience. The second copy is for your records.

As soon as we receive this form, a copy of the above-referenced report will be mailed to the receipients listed.

Should you have any questions please call me at 254-3677.

Sincerely,

Kirsten H. Jeppesen

Kirsten H. Jeppesen
Environmental Technician

Enclosures

cc: E. Matt Germon

KHJ/dan

\284\nason.let

Branch Office:
25 Pinney Street, Ellington, CT 06029 (203) 875-2110 (24 hrs.)
Fax: (203) 875-8587 (24 hrs.)

Printed on 100% recycled paper.

Initial Site Investigation
Nason Residence
Site #92-1328

Prepared for

Alexis and Rhoda Nason
8 Timber Lane
Brattleboro, Vermont 05301

January 25, 1993

Executive Summary

A 2,000 gallon underground storage tank (UST), used for #2 heating oil, was removed from the Nason site on November 13, 1992. Using a Thermo Environmental Instruments Model 580B Organic Vapor Meter (OVM) for organic volatiles detection, soils in the excavated pit were screened and found to be contaminated. These contaminated soils were excavated, stockpiled, and polyencapsulated on site. The extent of soil contamination was determined by screening with a OVM during excavation. At the request of the Vermont DEC, Hazardous Sites Management Section (SMS), three monitoring wells were drilled, developed, and sampled to determine the extent of groundwater contamination. Laboratory results show that all monitoring wells contained non-detectable levels of BTEX and only one well contained slight TPH contamination. TEC recommends no further action at this site. Site evaluation, sampling results, conclusions, and recommendations are presented in this report following the VT DEC SMS Initial Site Investigation guidelines.

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B. Site History 1
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A. Site Location Map
B. Site Sketch Map
C. Tank Pull Map
D. Monitoring Well Installation Logs
E. Groundwater Potentiometric Map
F. Laboratory Analysis Reports
G. Site Health and Safety Plan

I. Site Overview

A. Setting and Layout

The Nason Residence is the first property on the left as you turn onto Timber Lane from New England Drive, in Brattleboro, Vermont (Site Location Map, Appendix A). The property is bordered by Timber Lane to the east and private residential property to the west, north, and south (Site Sketch Map, Appendix B).

The underground storage tank (UST) removed from the site was located to the south of the house (Tank Pull Map, Appendix C).

B. Site History

According to Lex Nason, current owner of the site, the house was built approximately 30 to 35 years ago by Philip Dunham, a local dentist. The UST was apparently installed at the time the house was built. The Dunham's sold the property to a Mr. Stockwell who then sold it to Mr. Armento. The Nason's purchased the property from Mr. Armento in 1977.

C. Initial Sampling and Screening

One 2,000 gallon UST was excavated and removed on November 13, 1992 by Brown's Country Services of East Dover, Vermont. Upon removal, the tank was inspected by David Gagnon of TRI-S Environmental Consulting (TEC) and found to be heavily rusted and pitted on the bottom. On the same day soils in the tank excavation pit were screened by TEC, using a Thermo Environmental Instruments Model 580B Organic Vapor Meter (OVM), and found to be contaminated. The vertical and horizontal extent of contamination was believed to be defined and removed, except in the excavation closest to the house for fear of damaging the foundation. Ledge was encountered at approximately six feet. Approximately 1 yard of contaminated soil was excavated, polyencapsulated and stockpiled on site. The excavation pit was then backfilled with clean fill.

On January 11, 1993 three monitoring wells were installed and developed at the site by TEC and T&K Drilling (Monitoring Well Installation Logs, Appendix D). On January 13, 1993 these wells were developed, surveyed and sampled by TEC personnel. Groundwater elevations of each well were measured before sampling. Groundwater elevations were then calculated and a groundwater potentiometric map was developed (Appendix E).

According to the results, groundwater at the site flows in a southeasterly direction towards a small stream which runs through the property. The exact groundwater direction is difficult to determine due to the small area covered by the three monitoring wells.

The monitoring wells were purged and sampled by TEC on January 13, 1993. Locations of the sampling points are shown on the map in Appendix B. Samples were collected and preserved in accordance with State of Vermont sampling protocol. Samples were analyzed by EPA Methods 8020 for purgeable aromatics and 418.1 for Total Petroleum Hydrocarbons (TPH). Analysis of the samples was performed by Matrix Analytical Laboratories located in Hopkinton, Massachusetts. Results are summarized in the Groundwater Sampling Results table, below. Full laboratory reports are included as Appendix F.

Groundwater Sampling Results 1/13/93 for Nason Residence

Compound	LN-1	LN-2	LN-3	Field Blank	Dup of 2	Trip Blank
Benzene	MD	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND
Xylene	ND	ND	ND	ND	ND	ND
TPH	ND	0.1	ND	ND	ND	ND

Results measured in micrograms per liter (ug/l) — TPH measured in milligrams per liter(mg/l)
TPH = Total Petroleum Hydrocarbons — ND = Not Detectable
Blank = No data, Not analyzed — Dup of 2 = Duplicate of LN-2

D. Initial Risk Evaluation

Based on the laboratory analysis of water samples collected from the Nason site, contamination levels in the groundwater were found to be non-detectable for BTEX. TPH contamination was found to be 0.1 mg/l in the initial sample of well LN-2. A duplicate sample of the well which was taken for standard quality analysis/quality control samples resulted in a non-detectable reading for TPH in well LN-2. All buildings downgradient of the site within a half mile radius are serviced by the town water system. A few houses located upgradient of the site have their own drinking water wells. The other potential receptor in the immediate area is the small stream which runs through the Nason's front yard downgradient of the previous tank location. It seems unlikely that these receptors have been impacted by the presence of the UST because of the minimal contamination shown in the monitoring well sampling results and the limited amount of contaminated soil.

II. Conclusions

TEC makes the following conclusions:

- Soil screening with a OVM during UST excavation and removal showed detectable levels of organic vapors.

- Approximately one yard of contaminated soil was removed and stockpiled at the time of UST excavation.

- Soil screening with a OVM during monitoring well installation showed minimal levels of organic vapors (Monitoring Well Installation Logs, Appendix D).

- Upon sampling and analysis, BTEX contamination was not found in monitor wells LN-1, LN-2, or LN-3.

- Monitoring well LN-2 showed 0.1 mg/l TPH

- The Duplicate of monitoring well LN-2 showed non-detectable TPH levels

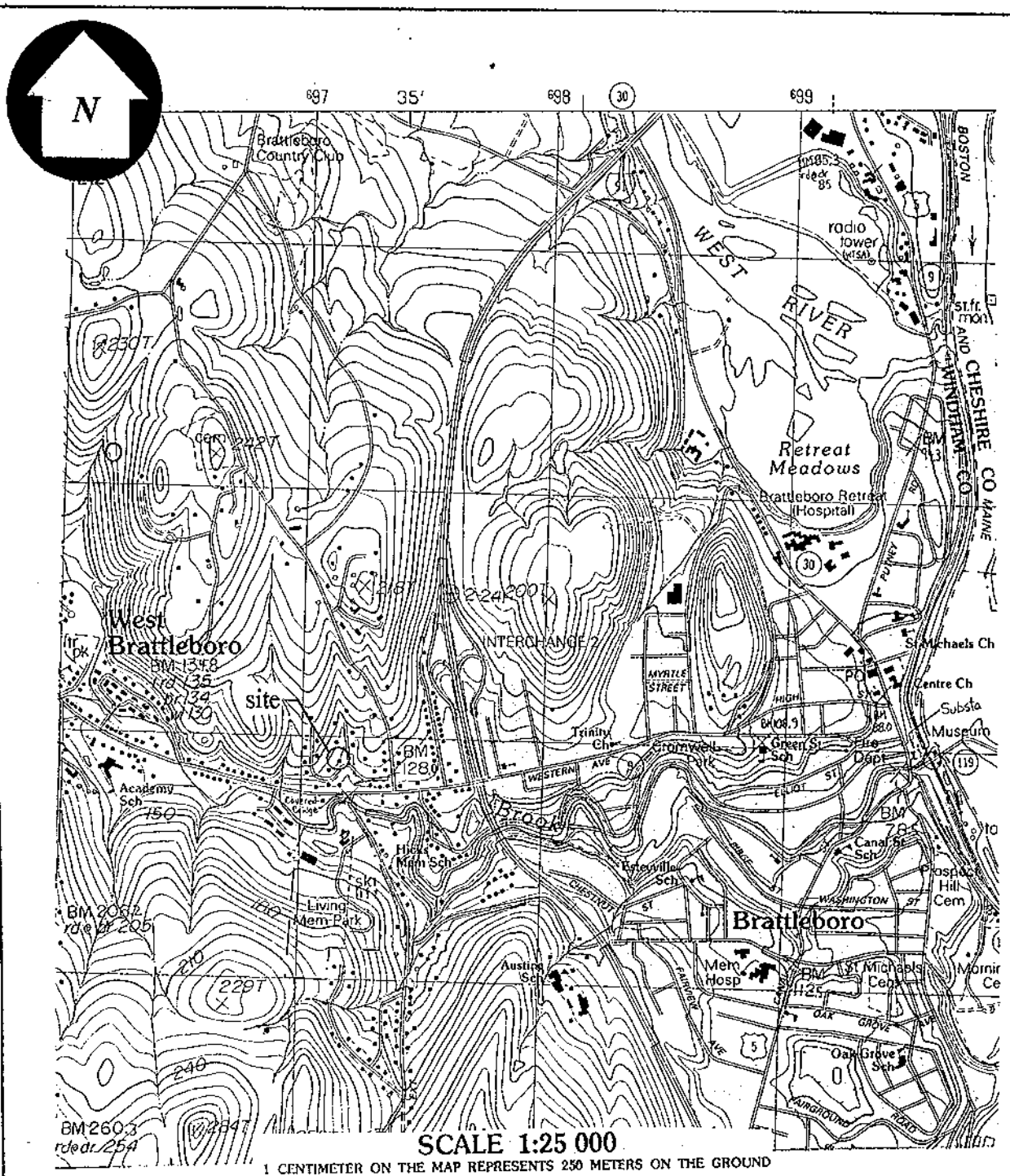
III. Recommendations

TEC recommends that the site be considered closed due to the absence of BTEX contamination and minimal TPH contamination found upon analysis of groundwater samples taken from the former UST area. Based on the analysis obtained, potential impacts due to contamination of sensitive receptors appear to be remote.

One yard of #2 heating oil contaminated soil has been polyencapsulated on site. Since the Nason's are in the process of selling their property, TEC proposes to dispose of these soils at the local landfill. The soil pile will be screened with a OVM, and sampled (composite) for method 418.1 (TPH) analysis. The results of this screening and sampling will be sent to the Vermont DEC Sites Management Section along with a letter requesting approval for landfill disposal at the Windham Solid Waste District Facility in Brattleboro, Vermont.

I. Site Overview

A. Site Location Map



SCALE 1:25 000

1 CENTIMETER ON THE MAP REPRESENTS 250 METERS ON THE GROUND

CONTOUR INTERVAL 6 METERS

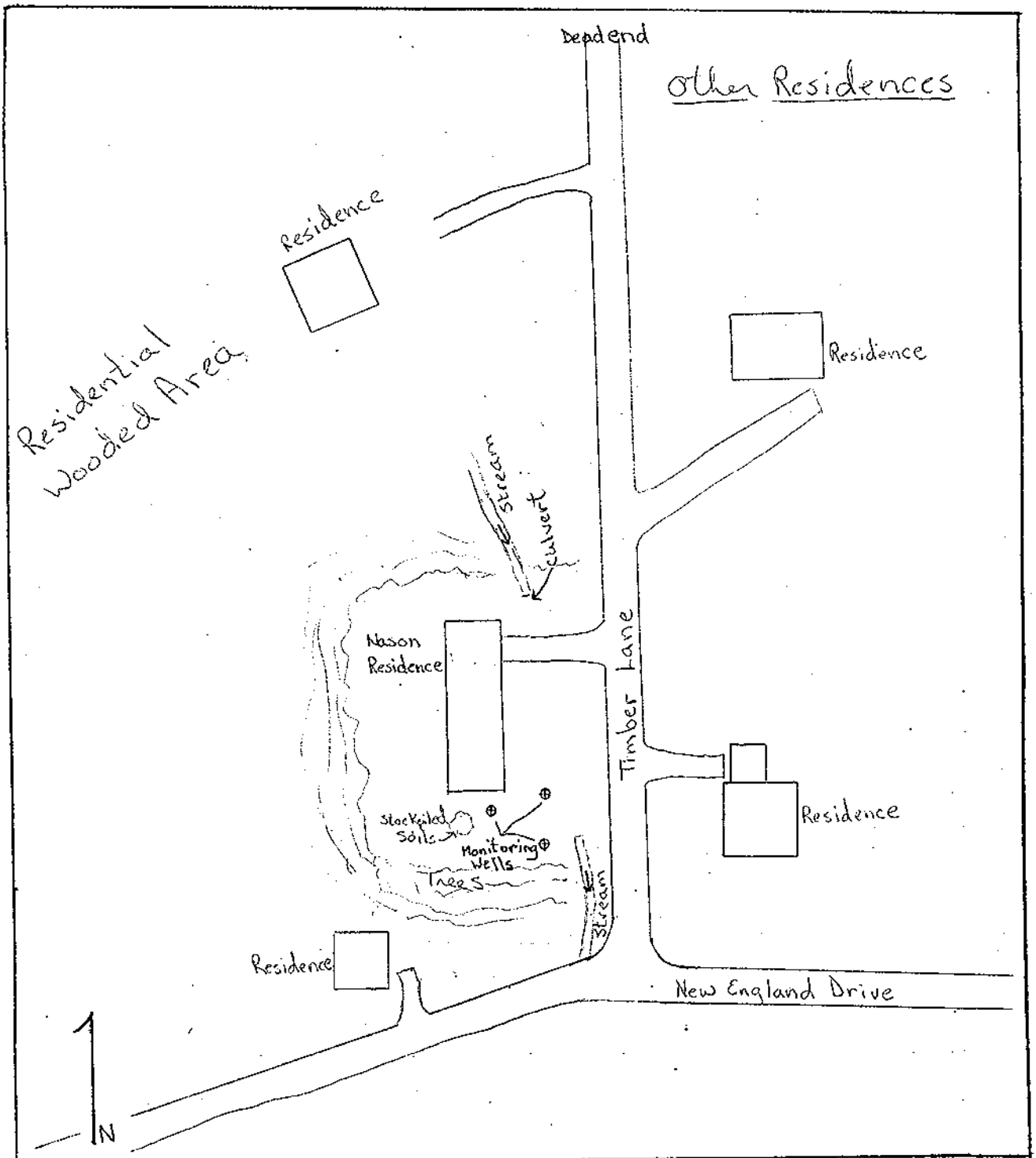
TRI-S INC
ENVIRONMENTAL CONSULTING

P.O. 1760
205 Main Street
Brattleboro, VT 05302

Nason Residence Site Location Map

Taken From: Brattleboro Vermont - New Hampshire
USGS 7.5 X 15 minute quadrangle
Provisional Edition 1984

B. Site Sketch Map



TRI-S INC ENVIRONMENTAL CONSULTING

P.O. 1760
205 Main Street
Brattleboro, VT 05302

Nason Residence Site Sketch Map

DATE: 1/26/93

Drawn By: KHJ

C. Tank Pull Map

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
UNDERGROUND STORAGE TANK PROGRAM
TANK PULL FORM

TODAY'S DATE: 11/16/92

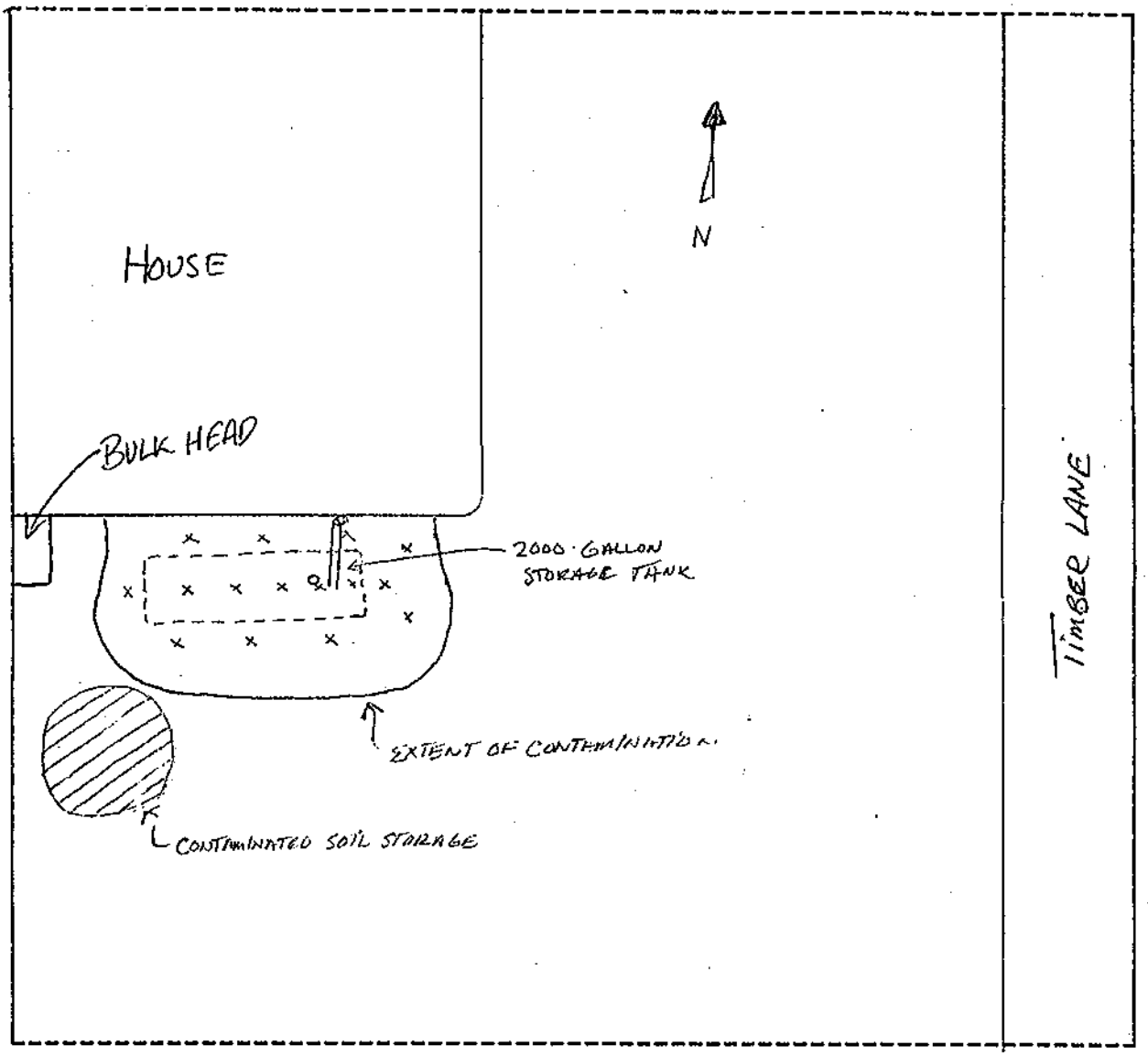
INSPECTOR: DAVID GAGNON, TRI-S

DATE OF REMOVAL: 11/13/92

BUSINESS NAME: LEX NASON

SITE DIAGRAM

Show location of all tanks and distance to permanent structures, sample points, areas of contamination and any pertinent site information. Indicate North arrow and major street names or route number.



x = sampling location

D. Monitoring Well Installation Logs

TRI-S ENVIRONMENTAL CONSULTING
SOIL BORING / MONITORING WELL LOG

WELL NUMBER LN-1 SHEET No. 1 of 3

CLIENT Lex Nason
PROJECT NAME Nason site
PROJECT # 284
WELL LOCATION See enclosed Map
DRILLING CO. T+K Drilling
LOG BY Kirsten H. Jeppesen

DATE DRILLED 1/11/93
WELL TOP ELEV.
PVC ELEV.
GROUND ELEV.
DRILLER Alan Temmila

DRILLING METHOD HSA
TOTAL DEPTH OF WELL 9'
SCREEN DIA. 2" LENGTH 5'
RISER DIA. 2" LENGTH 4'
SLOT SIZE 10

DEPTH (FT)	SAMPLE No.	PEN/REC	DEPTH (FT)	BLOWS/6"	FIELD CLASSIFICATION AND REMARKS	FIELD TESTING	EQUIPMENT INSTALLED
					Brown, Fine to Coarse Sand and Silt Some Fine Gravel and Organic Matter		Flush Mounted Well Cap; Bentonite (Riser); Grade 1 Silica Sand Pack (Screen)
5		24"/12"	5'to7'	9-15 / 11-14	Brown, Fine to Coarse Sand, Fine to Coarse Gravel Some Silt	0.35	
					Brown, Fine to Coarse Sand, Silt, Gravel Some Cobbles	0.35	
10					Refusal at 9' Bedrock End of Boring		
15							
20							
25							
30							
35							
40							

NOTES:
1. FIELD TESTING PERFORMED USING A THERMO ENVIRONMENTAL INSTRUMENTS INC. ORGANIC VAPOR METER (OVM), MODEL 580B. METER RESPONSE IN PPM.
2. ND INDICATES NON-DETECTABLE CONTAMINANT CONCENTRATIONS ON OVM.
3. SAMPLES COLLECTED USING A SPLIT SPOON SAMPLER UNLESS OTHERWISE INDICATED.
4. SPLIT SPOON SAMPLER HAS A 2" DIAMETER AND IS DRIVEN USING A 140 LB. HAMMER FALLING 30 INCHES
5. HSA = HOLLOW STEM AUGER
   AR = AIR ROTARY

TRI-S ENVIRONMENTAL CONSULTING
SOIL BORING / MONITORING WELL LOG

WELL NUMBER LN-2 SHEET No. 2 of 3

CLIENT Lex Nason
PROJECT NAME Nason site
PROJECT # 284
WELL LOCATION See enclosed Map
DRILLING CO. T+K Drilling
LOG BY Kirsten H. Jeppesen

DATE DRILLED 1/11/93
WELL TOP ELEV.
PVC ELEV.
GROUND ELEV.
DRILLER Alan Temmila

DRILLING METHOD HSA
TOTAL DEPTH OF WELL 9.5'
SCREEN DIA. 2" LENGTH 5'
RISER DIA. 2" LENGTH 4'
SLOT SIZE 10

DEPTH (FT)	SAMPLE No.	PEN/REC.	DEPTH (FT)	BLOWS/6"	FIELD CLASSIFICATION AND REMARKS	FIELD TESTING	EQUIPMENT INSTALLED
					Brown, Fine to Coarse Sand and Silt Some Gravel		Flush Mounted Well Cap; Bentonite (Riser); Grade 1 Silica Sand Pack (Screen)
5		24"/18"	5'-7'	9-15	Cobble		
				25-38	Brown, Fine to Coarse Sand and Silt Some Gravel and Organic Matter	0.25	
10					Refusal - Bedrock End of Boring		
15							
20							
25							
30							
35							
40							

NOTES:
1. FIELD TESTING PERFORMED USING A THERMO ENVIRONMENTAL INSTRUMENTS INC. ORGANIC VAPOR METER (OVM), MODEL 580B. METER RESPONSE IN PPM.
2. ND INDICATES NON-DETECTABLE CONTAMINANT CONCENTRATIONS ON OVM.
3. SAMPLES COLLECTED USING A SPLIT SPOON SAMPLER UNLESS OTHERWISE INDICATED.
4. SPLIT SPOON SAMPLER HAS A 2" DIAMETER AND IS DRIVEN USING A 140 LB. HAMMER FALLING 30 INCHES
5. HSA = HOLLOW STEM AUGER
   AR = AIR ROTARY

TRI-S ENVIRONMENTAL CONSULTING
SOIL BORING / MONITORING WELL LOG

WELL NUMBER LN-3 SHEET No. 3 of 3

CLIENT Lex Nason
PROJECT NAME Nason site
PROJECT # 284
WELL LOCATION See enclosed Map
DRILLING CO. T+K Drilling
LOG BY Kirsten H. Jeppesen

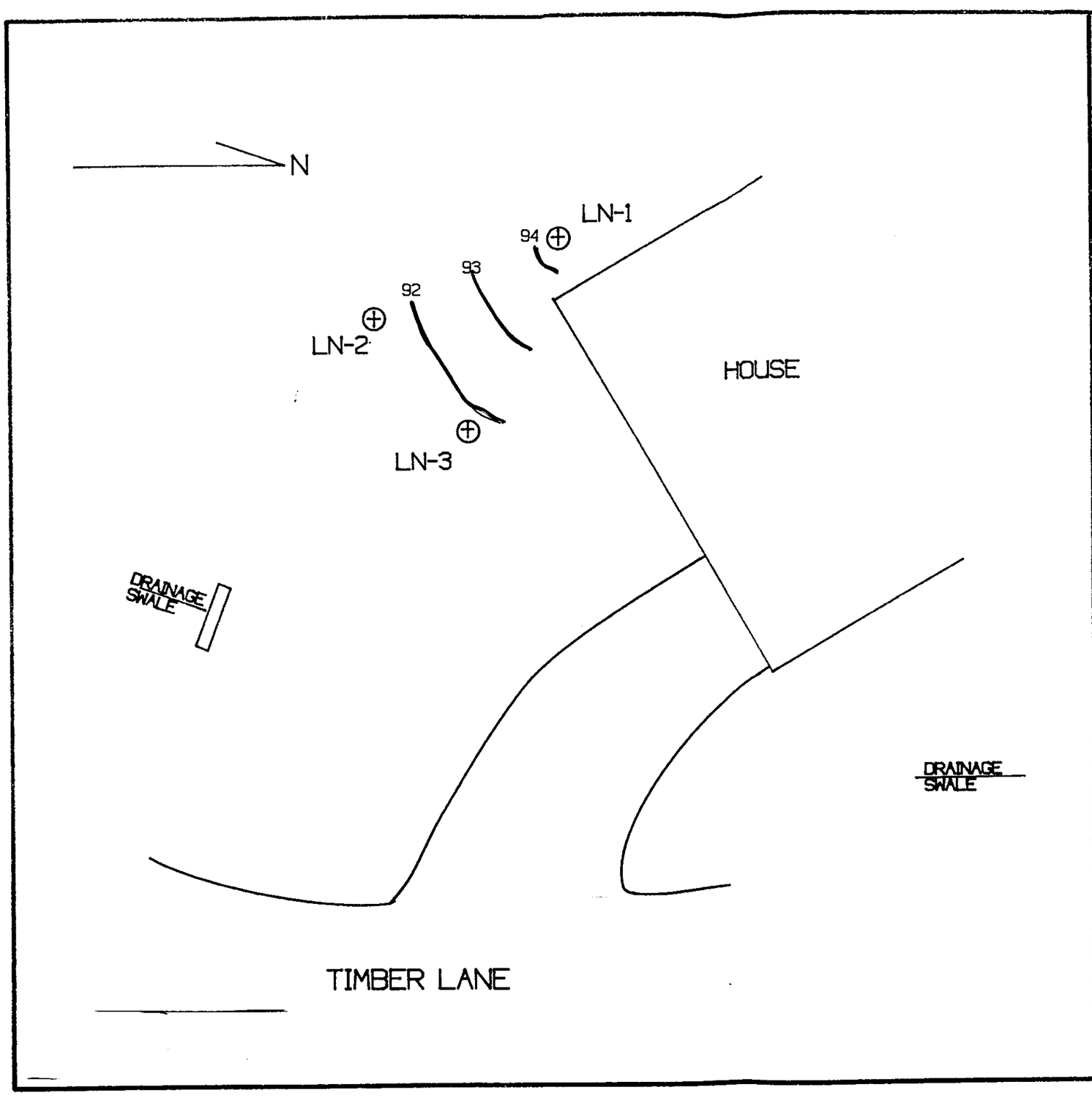
DATE DRILLED 1/11/93
WELL TOP ELEV.
PVC ELEV.
GROUND ELEV.
DRILLER Alan Temmila

DRILLING METHOD HSA
TOTAL DEPTH OF WELL 10'
SCREEN DIA. 2" LENGTH 7'
RISER DIA. 2" LENGTH 3'
SLOT SIZE 10

DEPTH (FT)	SAMPLE No.	PEN/REC.	DEPTH (FT)	BLOWS/6"	FIELD CLASSIFICATION AND REMARKS	FIELD TESTING	EQUIPMENT INSTALLED
					Brown, Coarse to Fine Sand and Silt Some Gravel and Organic Matter		Flush Mounted Well Cap
							Bentonite
							Grade 1 Silica Sand Pack
5		24"/8"	5'-7'	2-5 2-1		0.3	
10					End of Boring		
15							
20							
25							
30							
35							
40							

NOTES:
1. FIELD TESTING PERFORMED USING A THERMO ENVIRONMENTAL INSTRUMENTS INC. ORGANIC VAPOR METER (OVM), MODEL 580B. METER RESPONSE IN PPM.
2. ND INDICATES NON-DETECTABLE CONTAMINANT CONCENTRATIONS ON OVM.
3. SAMPLES COLLECTED USING A SPLIT SPOON SAMPLER UNLESS OTHERWISE INDICATED.
4. SPLIT SPOON SAMPLER HAS A 2" DIAMETER AND IS DRIVEN USING A 140 LB. HAMMER FALLING 30 INCHES
5. HSA = HOLLOW STEM AUGER
   AR = AIR ROTARY

E. Groundwater Potentiometric Map



GROUNDWATER POTENTIOMETRIC MAP FOR JANUARY 13, 1993

LEX NASON PROPERTY
8 TIMBER LANE
BRATTLEBORO, VERMONT

LEGEND

⊕ LN-1 MONITORING WELL LN-1

—94— GROUNDWATER ELEVATION OF 94 FEET

WELL	GW ELEV.
LN-1	94.37
LN-2	91.42
LN-3	91.74

SCALE 1"=20'

0 20 40 60 FEET

PREPARED BY:
TRI-S ENVIRONMENTAL CONSULTING, INC.
205 MAIN STREET; P.O. BOX 1760
BRATTLEBORO, VT 05301

F. Laboratory Analysis Reports

MATRIX

ANALYTICAL DATA SUMMARY

RECEIVED JAN 21 1993

Report Date:	01/18/93
Account:	TRI-S Environmental Consulting
Address:	P.O. Box 1760 Brattleboro, VT 05302 802-254-3677
Project Manager:	
Project Name:	Lex Nason (284) (1-14-93)
Project No.:	284

Lab Sample No.'s:

30140330-001 30140330-002 30140330-003 30140330-004 30140330-005
30140330-006 30140330-007

Reviewed by

Stephen DiMattei
Quality Assurance Officer

Lab Certifications

EPA ID: No. MA059
Connecticut: No. PH 0515
Florida: QA Plan No. 900437G
Maine: Reciprocity
Massachusetts: No. 313
New Hampshire: No. 24190-A,B
New York: ELAP No. 11116
Rhode Island: Reciprocity

RECEIVED JAN 21 1993

Matrix Analytical, Inc.
106 South Street
Hopkinton, MA 01748
1 800 3-MATRIX

FINAL REPORT

Client Information

Account:	TRI-S Environmental Consulting	Project Name:	Lex Nason (284) (1-14-93)
Address:	P.O. Box 1760	Project Number:	284
	Brattleboro, VT 05302	Project Manager:	
		Sampler Name:	TRI-S Environmental

Sample Information

Lab ID:	30140330-001	Date Sampled:	01/13/93 10:32
Client Id:	LN1-11393-284	Date Received:	01/14/93 : 0
Matrix:	Water	Date Reported:	01/18/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
VOLATILE ORGANICS						
Benzene	ND	ug/l	1	8020	db	01/15/93
Chlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
Ethylbenzene	ND	ug/l	1	8020	db	01/15/93
MTBE	ND	ug/l	5	8020	db	01/15/93
Toluene	ND	ug/l	1	8020	db	01/15/93
Xylene	ND	ug/l	1	8020	db	01/15/93
HYDROCARBON ANALYSIS						
Total Petroleum Hydrocarbon (IR)	ND	mg/l	0.1	418.1	ja	01/15/93
SURROGATE STUDIES - VOLATILES						
Bromofluorobenzene (602/8020)	89	Percent			db	01/15/93

Matrix Analytical, Inc.
106 South Street
Hopkinton, MA 01748
1 800 3-MATRIX

RECEIVED JAN 2 1 1993

FINAL REPORT

RECEIVED JAN 2 1 1993

Client Information

Account:	TRI-S Environmental Consulting	Project Name:	Lex Nason (284) (1-14-93)
Address:	P.O. Box 1760	Project Number:	284
	Brattleboro, VT 05302	Project Manager:	
		Sampler Name:	TRI-S Environmental

Sample Information

Lab ID:	30140330-002	Date Sampled:	01/13/93 10:24
Client Id:	LN2-11393-284	Date Received:	01/14/93 : 0
Matrix:	Water	Date Reported:	01/18/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
VOLATILE ORGANICS						
Benzene	ND	ug/l	1	8020	db	01/15/93
Chlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
Ethylbenzene	ND	ug/l	1	8020	db	01/15/93
MTBE	ND	ug/l	5	8020	db	01/15/93
Toluene	ND	ug/l	1	8020	db	01/15/93
Xylene	ND	ug/l	1	8020	db	01/15/93
HYDROCARBON ANALYSIS						
Total Petroleum Hydrocarbon (IR)	0.1	mg/l	0.1	418.1	ja	01/15/93
SURROGATE STUDIES - VOLATILES						
Bromofluorobenzene (602/8020)	97	Percent			db	01/15/93

Matrix Analytical, Inc.
106 South Street
Hopkinton, MA 01748
1 800 3-MATRIX

FINAL REPORT

RECEIVED JAN 21 1993

Client Information

Account: TRI-S Environmental Consulting
Address: P.O. Box 1760
Brattleboro, VT 05302

Project Name: Lex Nason (284) (1-14-93)
Project Number: 284
Project Manager:
Sampler Name: TRI-S Environmental

Sample Information

Lab ID: 30140330-003
Client Id: LN3-11393-284
Matrix: Water

Date Sampled: 01/13/93 10:18
Date Received: 01/14/93 : 0
Date Reported: 01/18/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
VOLATILE ORGANICS						
Benzene	ND	ug/l	1	8020	db	01/15/93
Chlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
Ethylbenzene	ND	ug/l	1	8020	db	01/15/93
MTBE	ND	ug/l	5	8020	db	01/15/93
Toluene	ND	ug/l	1	8020	db	01/15/93
Xylene	ND	ug/l	1	8020	db	01/15/93
HYDROCARBON ANALYSIS						
Total Petroleum Hydrocarbon (IR)	ND	mg/l	0.1	418.1	ja	01/15/93
SURROGATE STUDIES - VOLATILES						
Bromofluorobenzene (602/8020)	97	Percent			db	01/15/93

Matrix Analytical, Inc.
106 South Street
Hopkinton, MA 01748
1 800 3-MATRIX

FINAL REPORT

RECEIVED JAN 21 1993

Client Information

Account:	TRI-S Environmental Consulting	Project Name:	Lex Nason (284) (1-14-93)
Address:	P.O. Box 1760	Project Number:	284
	Brattleboro, VT 05302	Project Manager:	
		Sampler Name:	TRI-S Environmental

Sample Information

Lab ID:	30140330-004	Date Sampled:	01/13/93 09:00
Client Id:	LN4-11393-284	Date Received:	01/14/93 : 0
Matrix:	Water	Date Reported:	01/18/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
VOLATILE ORGANICS						
Benzene	ND	ug/l	1	8020	db	01/15/93
Chlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
Ethylbenzene	ND	ug/l	1	8020	db	01/15/93
MTBE	ND	ug/l	5	8020	db	01/15/93
Toluene	ND	ug/l	1	8020	db	01/15/93
Xylene	ND	ug/l	1	8020	db	01/15/93
HYDROCARBON ANALYSIS						
Total Petroleum Hydrocarbon (IR)	ND	mg/l	0.1	418.1	ja	01/15/93
SURROGATE STUDIES - VOLATILES						
Bromofluorobenzene (602/8020)	97	Percent			db	01/15/93

Trip Blank

Matrix Analytical, Inc.
106 South Street
Hopkinton, MA 01748
1 800 3-MATRIX

FINAL REPORT

RECEIVED JAN 21 1993

Client Information

Account:	TRI-S Environmental Consulting	Project Name:	Lex Nason (284) (1-14-93)
Address:	P.O. Box 1760	Project Number:	284
	Brattleboro, VT 05302	Project Manager:	
		Sampler Name:	TRI-S Environmental

Sample Information

Lab ID:	30140330-005	Date Sampled:	01/13/93 10:26
Client Id:	LN5-11393-284	Date Received:	01/14/93 : 0
Matrix:	Water	Date Reported:	01/18/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
VOLATILE ORGANICS						
Benzene	ND	ug/l	1	8020	db	01/15/93
Chlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
Ethylbenzene	ND	ug/l	1	8020	db	01/15/93
MTBE	ND	ug/l	5	8020	db	01/15/93
Toluene	ND	ug/l	1	8020	db	01/15/93
Xylene	ND	ug/l	1	8020	db	01/15/93
HYDROCARBON ANALYSIS						
Total Petroleum Hydrocarbon (IR)	ND	mg/l	0.1	418.1	ja	01/15/93
SURROGATE STUDIES - VOLATILES						
Bromofluorobenzene (602/8020)	95	Percent			db	01/15/93

Duplicate of LN-2

Matrix Analytical, Inc.
106 South Street
Hopkinton, MA 01748
1 800 3-MATRIX

FINAL REPORT

RECEIVED JAN 21 1993

Client Information

Account:	TRI-S Environmental Consulting	Project Name:	Lex Nason (284) (1-14-93)
Address:	P.O. Box 1760	Project Number:	284
	Brattleboro, VT 05302	Project Manager:	
		Sampler Name:	TRI-S Environmental

Sample Information

Lab ID:	30140330-006	Date Sampled:	01/13/93 10:38
Client Id:	LN6-11393-284	Date Received:	01/14/93 : 0
Matrix:	Water	Date Reported:	01/18/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
VOLATILE ORGANICS						
Benzene	ND	ug/l	1	8020	db	01/15/93
Chlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	db	01/15/93
Ethylbenzene	ND	ug/l	1	8020	db	01/15/93
MTBE	ND	ug/l	5	8020	db	01/15/93
Toluene	ND	ug/l	1	8020	db	01/15/93
Xylene	ND	ug/l	1	8020	db	01/15/93
HYDROCARBON ANALYSIS						
Total Petroleum Hydrocarbon (IR)	ND	mg/l	0.1	418.1	ja	01/15/93
SURROGATE STUDIES - VOLATILES						
Bromofluorobenzene (602/8020)	94	Percent			db	01/15/93

Field Blank

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Hopkinton, MA 01748
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FINAL REPORT

RECEIVED JAN 21 1993

Client Information

Account:	TRI-S Environmental Consulting	Project Name:	Lex Nason (284) (1-14-93)
Address:	P.O. Box 1760	Project Number:	284
	Brattleboro, VT 05302	Project Manager:	
		Sampler Name:	

Sample Information

Lab ID:	30140330-007	Date Sampled:	01/13/93 :
Client Id:	QC-Report	Date Received:	01/14/93 : 0
Matrix:	Water	Date Reported:	01/18/93
Comment:	Water		

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
METHOD BLANK - VOLATILES						
Method Blank	ND	ug/l		8020/602		

METHOD SUMMARIES

Total petroleum hydrocarbons are performed by Fourier Transform Infrared Spectroscopy (FTIR) using BioRad FTS-7 system. Samples are extracted in freon and subsequently treated with silica gel (to remove vegetable/animal fats) before measurement. 10 and 100 mm sample cells are routinely used to provide necessary detection limits.

Volatile organic analysis is performed using H/P 5995 or 5970 GC/MS, Tekmar purge and trap, and ALS autosampler. Chromatography incorporates packed and megabore columns. Data reduction is performed on RTE 1000 and ChemStation systems. Tuning is based on BFB standards. Procedural guidelines follow EPA 624 or SW846 for all analyses. Aromatic volatiles listed in VOA 8020 are analyzed using GC/MS systems.

METHOD REFERENCES

1. Test Methods For Evaluating Solid Waste: Physical Chemical Methods. EPA SW 846. November 1986.
2. Methods For Chemical Analysis of Water and Wastes. EPA 600/4-79-200. Revised March 1983.
3. Standard Methods For Examination of Water and Wastewater. APHA-AWWA-WACF., 16th Edition. 1985.

CHAIN-OF-CUSTODY RECORD

CLIENT: T.R.I.-S. Environmental Consulting
ADDRESS: P.O. Box 1760
205 Main Street, Brattleboro, Vt. 05302
CLIENT CONTACT/PHONE: (802) 254-3677
PROJECT NAME: LEX NASON NO.: 284
LAB CONTACT: Michelle Higgins EXT. NO.:

ANALYSES REQUESTED: 8020 (GW) / TPH 418.1

IMPORTANT - INDICATE THE NUMBER OF BOTTLES PER SAMPLE IN THE SPACES BELOW

LAB ID (LAB USE ONLY)	SAMPLE ID / CLIENT DESCRIPTION	TYPE*	COLLECTION DATE	TIME	8020 (GW)	TPH 418.1	COMMENTS	TOTALS
	LN1 11393 - 284	GW	1/13/93	10:32	2	1		3
	LN2 11393 - 284			10:24	2	1		3
	LN3 11393 - 284			10:18	2	1		3
	LN4 11393 284			9:00	2	1		3
	LN5 11393 284			10:26	2	1		3
	LN6 11393 284			10:38	2	1		3
				TOTALS:	12	6		18 / 7

*TYPE: W = water; GW = groundwater; DW = drinking water; SW = surface water; S = soil; SED = sediment; SL = sludge; DS = drum sample; O = oil; WI = wipe; X = other (please describe)

SPECIAL PRICE QUOTE FOR THIS PROJECT? NO YES NUMBER:
SPECIAL INSTRUCTIONS / NOTES:
2 Day Rush

MATRIX ANALYTICAL USE ONLY

Samples: 1) were shipped / hand-delivered / ambient / chilled
2) were received preserved / unpreserved
3) were received intact / broken / leaking
4) were received within / past holding times
5) agreed with COC form / discrepancies were present
6) were sealed / not sealed with COC tape; tape was broken / intact
7) were in cooler sealed / not sealed with COC tape; tape was broken / intact

NOTES:

REUNQUISHED BY	RECEIVED BY	DATE	TIME	COMMENTS
[illegible signature]	Donna M. Scott	1/14/93	10:00 AM	
S.M.S.	Wm Anderson			
Wm Anderson				

SAMPLER'S INITIALS: SMS

MATRIX ANALYTICAL, INC.
100 South Street
Hopkinton, MA 01748
1 (800) 3-MATRIX

30140330-001

PAGE 1 OF 1

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G. Site Health and Safety Plan

SITE SPECIFIC HEALTH AND SAFETY PLAN

FOR

NASON TANK PULL

To be used in conjunction with all applicable sections of the Tri-S Programs and Procedures.

A. Site Description

Location: 8 Timber Lane, Brattleboro, Vermont

Special Hazards: none

See Section F, Major Contaminants, and Section G, Health and Safety Risks.

B. Objectives

General Summary: Determine the degree of groundwater contamination at this site. Install a minimum of at least one monitoring well from which to access soil and water samples. Develop a treatment, monitoring, and disposal plan for contaminated stockpiled soils. Perform a surrounding site assessment of area to determine possible contamination of adjacent (receptors) buildings and drinking water wells. And finally submit a summary report consisting of, detailed map, conclusions and further recommendations.

C. On-Site Organization

Project Team Leader/Tri-S Supervisor: David Gagnon

Site Health & Safety Officer: Paul Miller

Site Representative of Owner: Lex Nason

State DEC Officer: Chuck Schwer - 244-8702

Other State Representatives: n/a

US EPA Representative: n/a

Other Federal Agency Representatives: n/a

Local Agency Representatives: n/a

Health and Safety Plan

D. Emergency Telephone Numbers

Local Police: 254-2321

Local Fire: 254-4543

Local Ambulance: 254-2010

Tri-S Response: (203) 875-2110

State DEC Spills Division: (802) 244-8702

State DEC Hazardous Waste Division: (802) 244-8702

US EPA Region 1: (617) 860-4300

US EPA Hotline (24 hours): (617) 223-7265

National Response Center: 1 (800) 424-8802

Chemtrec: 1 (800) 424-9300

Local Poison Information Center: (802) 658-3456

State Police: 254-2382

Town Office: 254-4541

Local Hospitals: Brattleboro Memorial Hospital
9 Belmont Avenue, Brattleboro, 257-0341

Other Hospitals in Region: n/a

Directions to Hospital: From Mr. Nason's house you turn right on Timber Lane, then left at New England Drive, right at Orchard, right at Western Avenue first left, cross the covered bridge then left on Maple Street. Continue down mile and a half turn right on Belmont, hospital will be on left.

E. Pertinent Site History

Owner removed #2 fuel oil from underground storage tank (UST) approximately 5 years ago. Under contract to TRI-S the UST was removed on 11/13/92. Excavation around the UST revealed contaminated soils with volatile organic compounds (VOC) ranging from 10 to 75 ppm. Groundwater was encountered at a depth of approximately 6 feet. Only a minor sheen was noted. Soils encountered with VOC concentrations greater than 10 ppm were removed. Approximately 2-3 cubic yards of soil were removed and polyencapsulated onsite. Disposal of contaminated soils has yet to be determined. Based on information provided by TEC, the Department of Environmental Conservation (DEC) concluded that an additional investigation is necessary at this site.

F. Major Contaminants

#2 Heating Oil (Diesel)

G. Health & Safety Risks

The only known or suspected contaminant at this site is diesel in both the soils and groundwater. Diesel, primarily used as a fuel for automobiles and trucks, is moderately flammable when exposed to heat or flame and is incompatible with strong oxidizers. Water fog, chemical foam, dry chemical powder, or CO2 should be used to fight a diesel fire.

Symptoms following exposure include the following: prolonged or repeated dermal exposure causes severe irritation and cause skin tumors; ingestion can be harmful or fatal; inhalation can cause nose and throat irritation, central nervous system effects such as dizziness and loss of balance and coordination, unconsciousness, coma, respiratory failure and death; eye contact may cause moderate irritation and temporary smarting, but no permanent damage is expected. Should levels of diesel vapors reach sufficient levels, the vapors will act as an asphyxiant.

Action Levels: Ambient levels of total organic vapors will be monitored by the Tri-S Health and Safety Officer with a Thermo Environmental Model 508 Organic Vapor Meter capable of detecting organic vapors to 0.1 ppm and measured at the breathing zone. Any detectable levels above 10 ppm will require that Level C protection be utilized.

H. Tri-S Employee Training Assignments

Refer to Tri-S Employee Training Program

I. Equipment Assignment and Levels of Protection

All personnel will be assigned Level C protection including a half-face respirator with a North 7500-2 yellow organic cartridge should it be required on site. Level D protection will be utilized throughout all drilling operations or when there is potential for exposure to gasoline on site. All Tri-S field personnel have been trained to use Level C protection and will be provided the appropriate equipment. The level of personal protection will be determined by the on-site Tri-S Health and Safety Officer in accordance with Section G, Health and Safety Risks, above.

J. Medical Surveillance

Refer to Medical Surveillance segment of the Tri-S Health and Safety Plan

K. Air Monitoring

Ambient air will be monitored at breathing level with an organic vapor meter (Thermo Environmental Model 508) capable of reading total organic vapors as low as 0.5 ppm.

See Section G for specific air monitoring procedures.

L. Site Control and Security

Only personnel as designated by the Tri-S Health and Safety Officer will be allowed in the work zone. The work Zone will be identified by barricade tape and appropriate signage. An access walkway will be provided through the barricade tape.

M. Decontamination Procedures

Drill rig and augers will be steam-cleaned before and after each soil boring. All wells will be completed and cemented in place at completion of each boring. Any disposable personal protection equipment will be packaged for proper disposal.

Health and Safety Plan

N. Site Standard Operating Procedures

All personnel will utilize appropriate and prudent actions during all phases of work.

O. Contingency Plan

See Tri-S Contingency Plan