Phase (check one)	Type (check one)
X Initial Site Investigation	Work Scope
Corrective Action Feasibility Investigation	X Technical Report
Corrective Action Plan	PCF Reimbursement Request
Corrective Action Summary Report	General Correspondence

INITIAL SITE INVESTIGATION

Brownington General Store
Main Street
Brownington Center, VT

SMS Site # 96-2039

Prepared For:

Mr. Carl Ruprecht
S.B. Collins, Inc.
P.O. Box 671
St. Albans, VT 05478
(802) 527-0116

Prepared By:

North Country Environmental Services, Inc.
100 Medway Street, Suite 403
Milford, MA 01757
(508) 634-9800
Contact: Peter F. Cook
NCES Project #: 1164

January 6, 1997

INITIAL SITE INVESTIGATION

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APPENDICES

EXECUTIVE SUMMARY

An Initial Site Assessment has been performed at the Browington General Store, Main Street, Brownington Center, Vermont (Site). The investigation was performed in order to define the degree and extent of soil and/or groundwater contamination as a result of a release of gasoline from two (2) underground storage tanks (UST's) removed from the site by North Country Environmental Services, Inc., (NCES) on July 29, 1996. A summary of the field activities conducted during the UST removal was described in the NCES - **Site Assessment at Brownington** report dated July 30, 1996 which was submitted to the State of Vermont - Department of Environmental Conservation. The report documented the removal and general condition of a 1,000 gallon UST and a 500 gallon UST, both formerly storing gasoline. The report also describes the presence of gasoline contamination based on olfactory observations and photoionization detector (PID) soil screening results. It was concluded that the gasoline contamination was likely the result of fuel delivery overfills and/or caused by failure in the dispenser or product lines based on the generally good condition of the UST's.

In order to investigate the potential impact to on-site soil and groundwater, three (3) soil borings were advanced and three (3) shallow groundwater monitoring wells were installed on the site on November 26, 1996. Soils were screened in the field for total organic vapor (TOV) by jar headspace method with a PID. Soil samples collected during the advancement of boring, MW-1 reported no significant readings for TOV. The soil sample collected from the 10-12 foot depth in boring, MW-2 reported a TOV reading of 11.0 parts per million (ppm). Soil samples collected during the installation of MW-3 resulted in TOV readings ranging from 36 ppm to 450 ppm. Groundwater was collected from each monitoring well on December 11, 1996 and analyzed for petroleum based volatile organic compounds (VOC's) and methyl tert-butyl ether (MTBE) by EPA Method 602. There were no detectable concentrations of VOC's or MTBE in the groundwater sample collected from MW-1, the field blank or the trip blank. MTBE was detected in the groundwater sample collected from MW-2 with a concentration of 46.4 micrograms per liter (ug/l). Benzene, toluene, ethylbenzene, xylenes and MTBE was detected in the groundwater sample collected from monitoring well, MW-3 with concentrations of 20.8, 92.0, 16.8, 110.0 and 142.0 milligrams per liter (mg/l), respectively.

Hydrogeologic conditions indicate groundwater to be present between 10 and 13.5 feet below grade. Groundwater was established to be traveling in a southwesterly direction towards Dutton Brook. The drinking water in the area is provided by private water supply wells. Tap water from the on-site well was sampled on December 11, 1996 and analyzed for petroleum VOC's by EPA Method 602. There were no VOC constituents detected in the tap water sample collected.

Dutton Brook and the private drinking water well which supplies the church and former rectory have been identified as potential receptors from the site gasoline release due to bulk groundwater flow. At the time of site reconnaissance, no evidence of oil sheen or adverse impact to the stream or stream bank was identified.

INTRODUCTION

It is the purpose of this report to outline the scope of work and results of an Initial Site Investigation which was performed at the property identified as the Brownington General Store, Main Street, Brownington Center, Vermont.

A UST closure assessment documenting the removal of two (2) gasoline tanks was conducted at the subject site on July, 29, 1996. The UST's were removed and the initial release noted by NCES in a letter report dated July 29, 1996 (Site Assessment at Brownington). It was concluded that the release was likely the result of product overfill and/or dispenser/product lines failure, as the UST's were in generally good condition with no visible leaks, cracks or failures.

Three (3) soil borings were advanced by Green Mountain Boring under the direct supervision of NCES personnel in order to evaluate the soil and groundwater conditions surrounding the former tank locations. Three (3) monitoring wells were installed in these boring locations. An additional monitoring well was noted on the site just west of the former UST's. This well was presumably used as a vapor monitoring well for the former UST's as it was approximately nine (9) feet in depth and did not intersect the groundwater table.

WORK PLAN

A preliminary investigation scope of work was developed by NCES based on the discussions with the Waste Management Division of the Vermont Department of Environmental Conservation (VT DEC). This preliminary scope of work and schedule was described in a NCES letter to the VT DEC dated October 21, 1996. The scope of work was slightly modified and approved by the VT DEC in follow-up telephone conversations with NCES personnel

The proposed scope of work had been presented in a letter to S.B. Collins, Inc., dated October 15, 1996. The scope of work was approved by S.B. Collins personnel following subsequent telephone conversations.

SITE DESCRIPTION

The release occurred on the southeastern portion of the Brownington General Store property which is located on the north side of Main Street in the village of Brownington Center. Refer to site maps which are included in Appendix A for site location reference.

The site consists of a two story wooden building, a wooden barn and a wooden garage, which is surrounded by asphalt and gravel driveway/parking areas and vegetated areas. The ground floor of the subject building is vacant and was formerly utilized as the Brownington General Store. The second floor is finished as a single family apartment and is currently occupied.

The land utilization in the vicinity of the subject parcel is primarily residential. Specifically, the site is bordered to the north by vacant land, to the west by a single family residence, to the east by the Town Clerks office and single family residences, and to the south by Main Street, a church and additional single family residences.

The site area topography is generally level with a gentle grade to the southwest. There are no delineated wetlands on the subject site. Portions of the land just north of the subject site are steeply graded/cut typical of gravel/stone mining activities.

There are no known underground utilities on the site. The electrical service and telephone service are located overhead. Drinking water is supplied to the site and adjacent properties by private drinking water wells.

SITE HISTORY

Although there was no written record available regarding the date of site development, telephone interviews were conducted Brownington Center officials. It was reported by Reg Alexander, Town Clerk's Office, that the property was constructed approximately 1900. It was also reported that the building has been utilized as a country store for at least the past 70 years. The UST's which were removed from the site in July, 1996, were known to have been installed in 1967 by S. B. Collins, Inc.

At the time of the Initial Site Investigation, no hazardous products were observed outside of the subject building, with the exception of small cans of motor oil and gasoline located in the garage area and utilized by the apartment occupant. There was visual evidence of an aboveground tank located in the basement of the building presumably used for #2 heating fuel storage.

SOIL BORING ADVANCEMENT AND MONITORING WELL INSTALLATION

Three (3) soil borings were advanced at the site on November 26, 1996 as outlined in the approved scope of work. The borings were advanced by Green Mountain Boring under the direct supervision of NCES personnel. The borings were advanced to establish site soil characteristics, collect samples for on-site screening, and to install groundwater monitoring wells.

All borings were advanced utilizing a truck mounted hydraulic rotary drill rig utilizing continuous flight 4.25 inch ID hollow stem augers. All down hole drilling equipment and tools were decontaminated prior to use to prevent potential cross contamination. These borings were advanced in the overburden soils to depths ranging from approximately 17 to 22 feet below grade. Copies of all soil boring logs are available in Appendix C.

All three (3) boring locations were completed as groundwater monitoring wells following the soil boring advancement in order to determine groundwater elevations across the work area and also to collect groundwater samples for analytical testing. MW-1 was placed in a gravel area approximately 10 feet north of the former UST excavation. MW-2 was placed in the asphalt parking area approximately 15 feet to the south of the former UST excavation. MW-3 was placed approximately 50 feet to the southwest of the former UST excavation. The locations of all soil borings and monitoring wells are presented on the Site Map in Appendix A.

All monitoring wells were constructed of 2 inch ID schedule 40 PVC pipe with flush threads and end caps. The screen sections of each well were constructed of .020-inch slotted, 2 inch ID schedule 40 PVC pipe with flush threads. The well screen in each well was installed to intercept the elevation of the upper level groundwater. The annular space was filled with washed silica sand to a level approximately two feet above the well screen following placement of the riser pipe and screen section of each well,. A two foot bentonite seal was then installed above the sand pack. The remainder of the annular space was then filled with natural materials. Watertight roadway boxes were placed at grade and sealed with concrete to complete installation. The table below outlines the monitoring well construction details.

MONITORING WELL CONSTRUCTION DETAILS

Well Number	Date Installed	Total Depth	Well Screen Location
MW-1	11/26/96	19.0 feet	9.0 - 19.0 feet
MW-2	11/26/96	19.0 feet	9.0 - 19.0 feet
MW-3	11/26/96	18.0 feet	8.0 - 18.0 feet

During the advancement of soil borings on the site, soil samples were collected from each location utilizing 24 inch long by 2 inch ID split spoon samplers. Split spoon samples were collected at five foot intervals or strata change utilizing the Standard Penetration Test Method. Following all sampling, each split spoon was decontaminated in the field with an alconox solution and deionized water. The standard blow counts per 6 inch penetration are listed on the Soil Boring Logs in Appendix C. All soil samples were classified in the field in accordance with the Modified Burmister Soil Classification System. Please refer to the Soil Boring Logs for the detailed soil characteristics at each sampling location.

All soil samples collected from the borings were screened in the field for the presence of TOV by jar headspace method utilizing a pre-calibrated HNu Photoionization Detector, Model PI 101. The table on the following page outlines the results of the TOV field tests.

SOIL SCREEN TOV RESULTS

Boring Location	Sample Depth	TOV Result
MW-1	0 feet - 2 feet	0.2 ppm
	5 feet - 7 feet	0.2 ppm
	10 feet - 12 feet	0.4 ppm
	15 feet - 17 feet	0.2 ppm
	Refusal at 20 feet	No sample recovery
MW-2	0 feet - 2 feet	0.2 ppm
	5 feet - 7 feet	0.2 ppm
	10 feet - 11 feet	11.0 ppm
	15 feet - 17 feet	1.5 ppm
	20 feet - 22 feet	0.6 ppm
MW-3	0 feet - 2 feet	36.0 ppm
	5 feet - 7 feet	56.0 ppm
	10 feet -11 feet	355.0 ppm
	11 feet - 12 feet	450.0 ppm
	Refusal at 18 feet	No sample recovery

Notes: 1. HNu calibrated with isobutylene on-site prior to use.
2. TOV results expressed as ppm (v/v benzene).

As outlined in the above table, detectable TOV results were recorded from each boring location. Significant results were recorded from MW-3. The highest TOV was recorded from 10 feet -12 feet at MW-3.

MONITORING WELL SAMPLING

Groundwater samples were collected from the three (3) NCES installed on-site monitoring wells on December 11, 1996. The depth to groundwater and total well depth was measured to the nearest 0.01 foot with an ORS Interface Probe prior to sample collection. The groundwater depth measurement, as well as a description of the odor and appearance of the groundwater was logged in the field. No unusual color, odor, or oil sheen was noted from the groundwater samples collected from monitoring wells MW-1 or MW-2. A strong odor of gasoline and a heavy sheen was noted in the groundwater sample collected form monitoring well, MW-3. A minimum of three (3) well volumes of groundwater was removed from each well prior to sampling. Each well was then allowed to recharge prior to sample collection.

All groundwater samples collected from the site were properly packaged and preserved pending delivery to GeoLabs, Inc., Rockland, Massachusetts, for analysis under a signed chain of custody. The tap water from the apartment on the second floor of the site building was also sampled and delivered to the laboratory for analysis. Specifically, the tap water and samples from each well were analyzed for petroleum VOC's and MTBE by EPA Method 602.

A trip blank prepared by the laboratory and a field blank prepared by NCES personnel using distilled water in a fresh single-use bailer was also analyzed by EPA Method 602. The results of the groundwater analysis reported no petroleum VOC constituents above a detection limit of 5.0 ug/l in the sample collected from monitoring well MW-1. MTBE was detected in the groundwater sample collected from MW-2 with a concentration of 46.4 ug/l. No petroleum VOC's, above a detection limit of 5.0 ug/l, were recorded in this sample. Benzene, toluene, ethylbenzene, xylenes and MTBE was detected in the groundwater sample collected from MW-3 with concentrations of 20.8, 92.0, 16.8, 110.0 and 142.0 mg/l, respectively. Copies of the laboratory reports are available in Appendix D.

SITE GEOLOGY

Based on an inspection of the soil samples obtained by split spoon at the site during the advancement of soil borings, the upper surficial geology at the site consists of a mixture of medium to fine silty sand and gravel, coarse sand, some small stones and glacial till. Detailed descriptions of soil samples from each boring are contained in the soil boring logs available in Appendix B.

Bedrock on the site has been identified as part of the Gile Mountain Formation according to published Bedrock Geology Maps for the State of Vermont. This formation consists of quartz-muscovite phylite or schist.

SITE HYDROGEOLOGY

Groundwater at the site has been measured to be present at depths which range from approximately 11.20 feet at MW-1, to approximately 13.05 feet below grade at MW-2. In addition to the groundwater depth measurements, the wellhead elevation of each monitoring well was established utilizing a surveying level, and the location of each well was established with reference to the site. This information was collected to establish the upper level groundwater flow across the site. From the triangulation of the groundwater elevation from three on-site wells, the groundwater has been identified to be flowing in a southwesterly direction. The data utilized to calculate the groundwater flow direction is presented in the following table.

WELLHEAD ELEVATION AND GROUNDWATER DEPTH MEASUREMENTS

Well Number	Wellhead Elevation	Depth to Groundwater	Groundwater Elevation
MW-1	99.25 feet	11.20 feet	88.05 feet
MW-2	99.04 feet	13.05 feet	85.99 feet
MW-3	98.55 feet	12.70 feet	85.85 feet

Notes:

1. Measurements taken on December 11, 1996.
2. Ground elevations surveyed relative to an arbitrary reference datum of 100.00 feet.

POTENTIAL RECEPTORS

As part of this initial investigation, an assessment of relevant sensitive receptors at the subject site was evaluated. This receptor assessment included public and private water supplies, surface waters, wetlands, sensitive ecological areas, outdoor and indoor air, enclosed spaces, and utilities.

On the basis of site reconnaissance and conversation with local officials, a minimum of three private drinking water supply wells are located within 250 feet of the subject site. Specifically, one (1) private artesian well is located on the subject site. One (1) private artesian well is located on the south side of Main Street, approximately 200 feet south-southwest of the site, which supplies the church and adjacent residence (former rectory), and one (1) private artesian well is located to the west of the subject site which services the abutting residence. In addition to the drinking water supply wells, Dutton Brook is located approximately 180 feet west and downgradient of the site (topographically and hydraulically) and flows in a southerly direction.

Ambient air screenings were performed with a photoionization detector during the advancement of soil borings on the site. Elevated total organic vapor (TOV) readings were recorded from boring MW-3. NCES personnel did not have access to the site building basement during the investigation to determine if elevated TOV readings were present.

The private drinking water supply well for the subject site is located to the north of the site building and upgradient of the release. The location of the drinking water well for the adjacent residence is also located upgradient. Dutton Brook and the well which supplies the church and former rectory have been identified as potential receptors from the site gasoline release due to bulk groundwater flow. At the time of site reconnaissance, no evidence of oil sheen or adverse impact to the stream or stream bank was identified.

CONCLUSION

In accordance with the request by the Vermont DEC, an Initial Site Assessment has been performed at the Brownington General Store, specifically in the location of the former gasoline UST's to the east of the site building located on Main Street in Brownington Center, Vermont. The investigation was performed in response to the discovery of gasoline contaminated soil during UST removal operations on July 29, 1996.

In order to investigate the potential impact to on-site soil and groundwater, three (3) soil borings were advanced and three (3) shallow groundwater monitoring wells were installed on the site on November 26, 1996. Soils were screened in the field for TOV by jar headspace method with a properly calibrated PID. Groundwater was collected and analyzed from each of the new monitoring wells for VOC's with MTBE by EPA Method 602 along with a sample of tap water from the on-site private drinking water well.

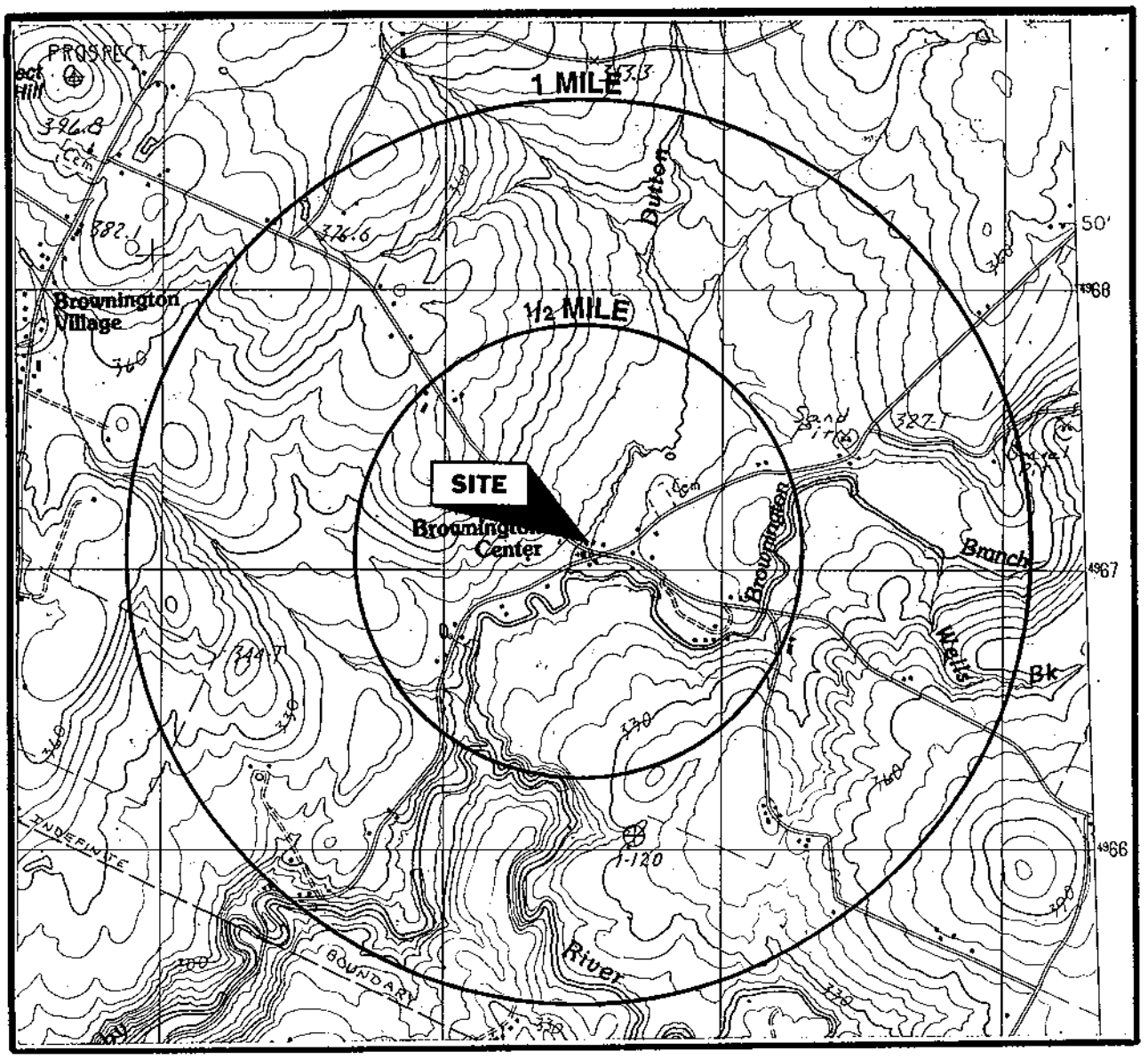
Soil screening results reported no significant readings of TOV from soil samples collected from boring, MW-1. A TOV reading of 11.0 was recorded for the 10 feet - 12 feet soil sample from boring, MW-2. TOV readings from soil samples collected from boring, MW-3 ranged from 36 ppm to 450 ppm. The analytical results from the trip blank, field blank, site tap water and groundwater samples collected from monitoring well, MW-1 reported no detectable compounds above the method detection limits for VOC's with MTBE. A MTBE concentration of 46.4 ug/l was detected in the groundwater sample collected from MW-2. Benzene, toluene, ethylbenzene, xylenes and MTBE were detected in concentrations of 20.8, 92.0, 16.8, 110.0, and 142.0 mg/l, respectively.

Hydrogeologic conditions indicate groundwater to be present between approximately 11 and 13.5 feet below grade, and that groundwater was established to be traveling in a southwesterly direction across the site.

Potential environmental receptors from the gasoline release, which have been identified as part of this investigation are limited to Dutton Brook and the private drinking water well which supplies the church and former rectory. The potential impact from this release is by via bulk groundwater flow. At the time of site reconnaissance, no evidence of oil sheen or adverse impact to the stream or stream bank was identified.

APPENDIX A

Site Maps



Brownington General Store
Main Street
Brownington Center, Vermont

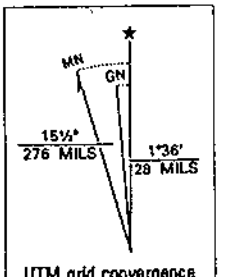
Locus Map

SCALE 1:25 000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

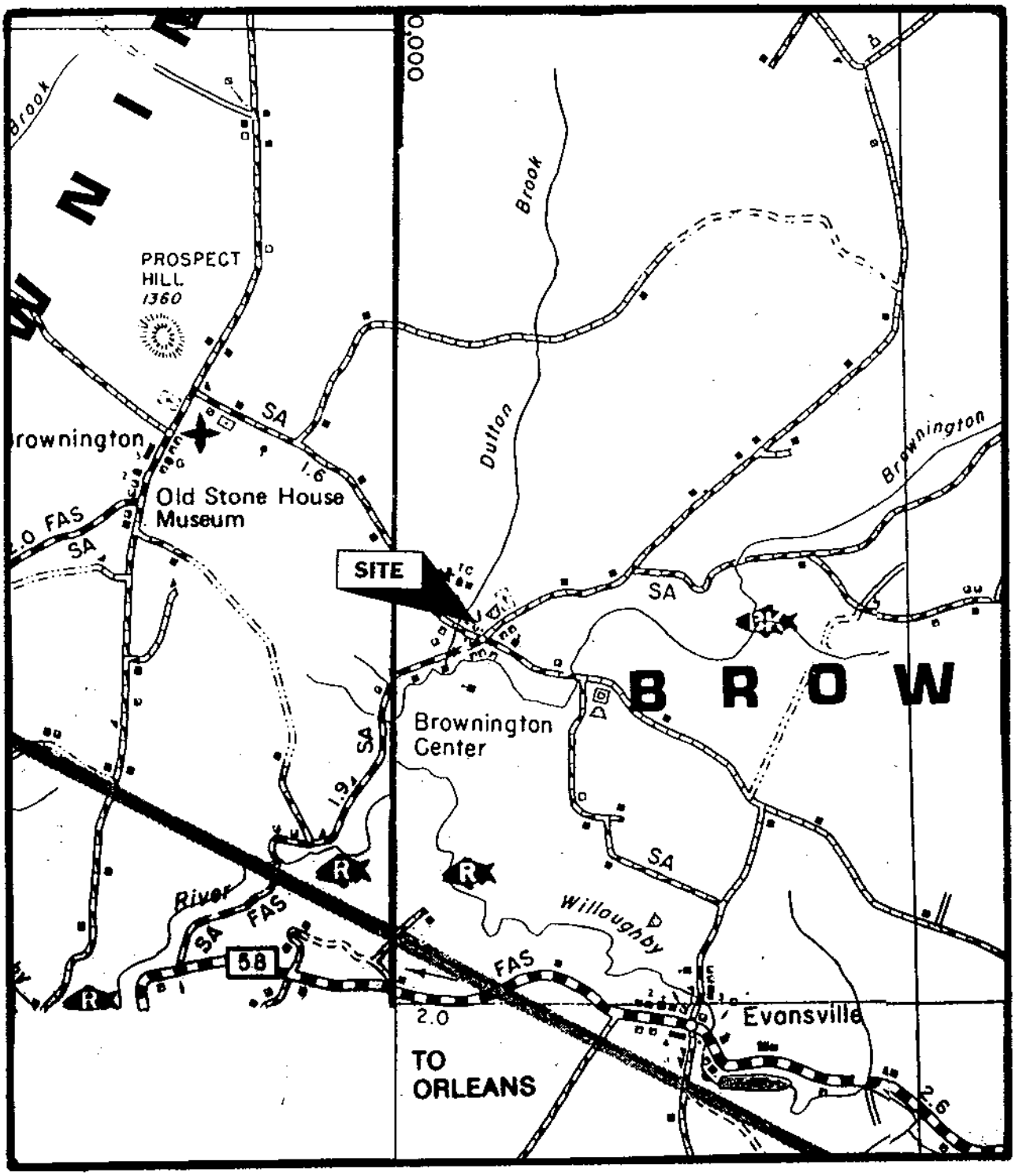
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER

DECLINATION DIAGRAM



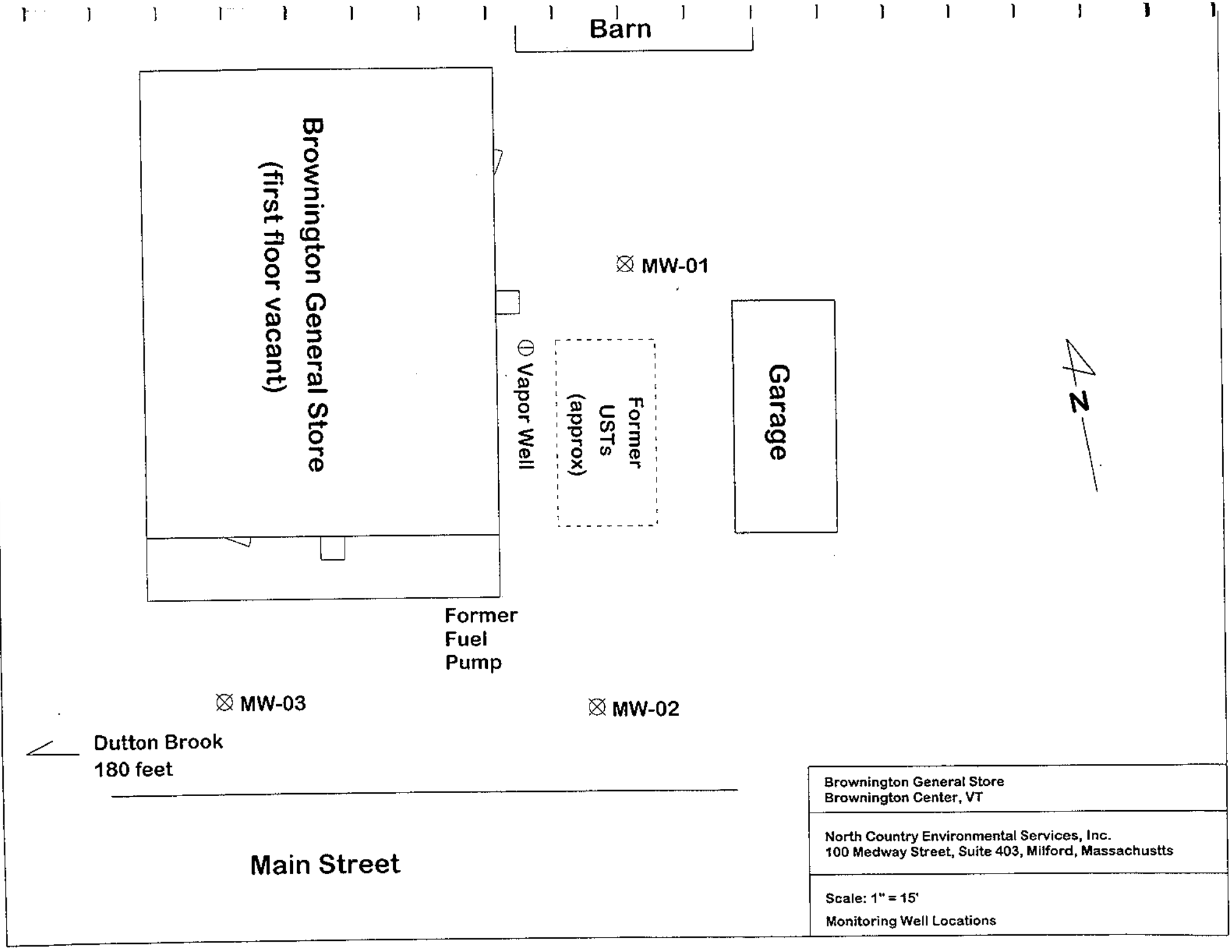
UTM grid convergence (GN) and 1987 magnetic declination (MN) at center of map
Diagram is approximate

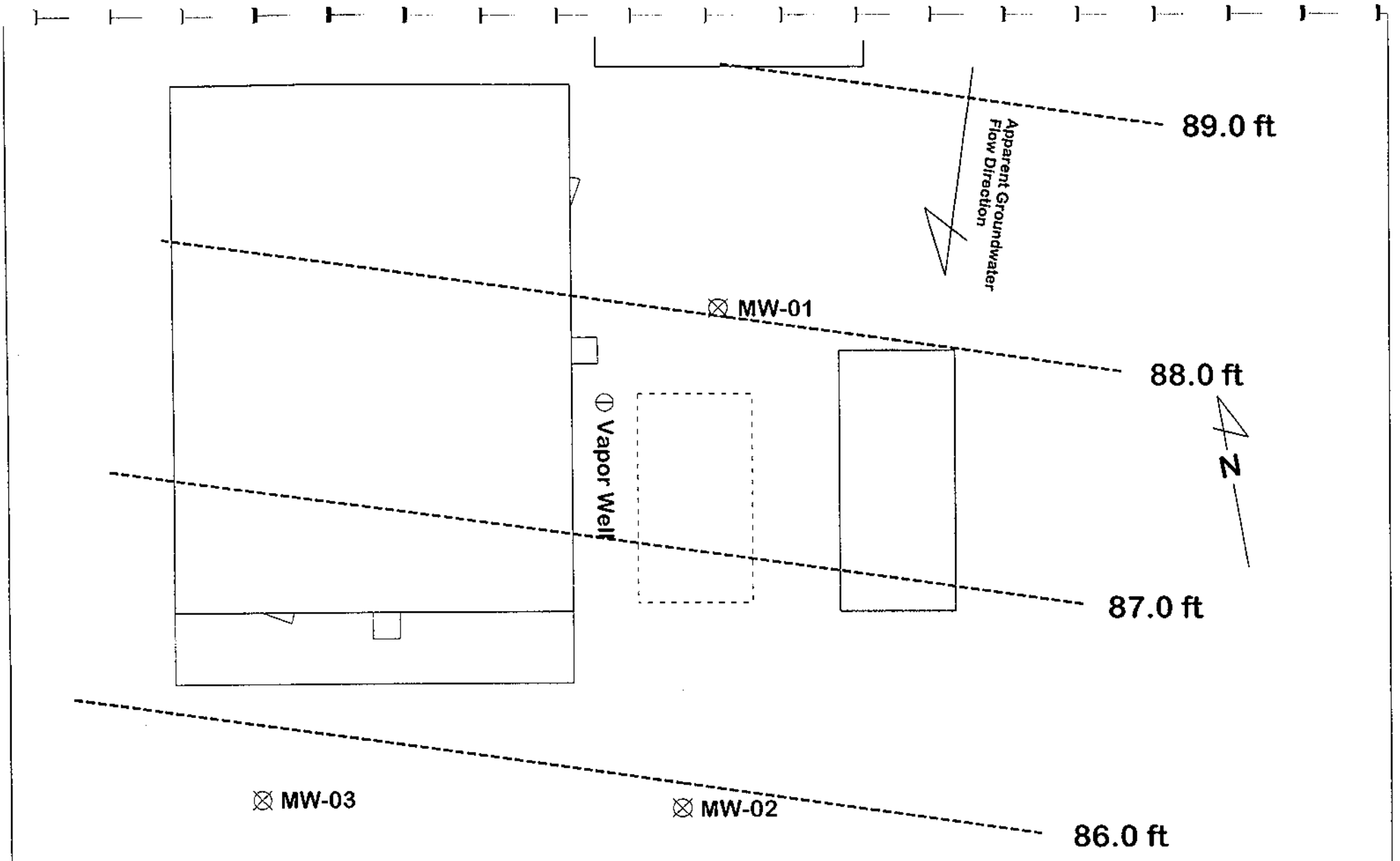
NORTH COUNTRY ENVIRONMENTAL SERVICES



Brownington General Store
Main Street
Brownington Center, Vermont

Area Map


Barn
Brownington General Store
(first floor vacant)
MW-01
Vapor Well
Former
USTs
(approx)
Garage
N
Former
Fuel
Pump
MW-03
MW-02
Dutton Brook
180 feet
Main Street
Brownington General Store
Brownington Center, VT
North Country Environmental Services, Inc.
100 Medway Street, Suite 403, Milford, Massachustts
Scale: 1" = 15'
Monitoring Well Locations



Brownington General Store
Brownington Center, VT

North Country Environmental Services, Inc.
100 Medway Street, Suite 403, Milford, Massachustts

Scale: 1" = 15'

Groundwater Flow Direction & Hydraulic Gradient

APPENDIX B

Soil Boring Logs

GREEN MOUNTAIN BORING

PO Box 218 ° East Barre, Vermont 05649 ° 802 476-5073

TO: North Country Environmental
11 Mill Street
Barre, VT 05641
Attn.: Mike McCarley
NCES #1164

PROJECT NAME: Brownington Center Store

LOCATION: Brownington Center, VT

GMB JOB #: 96-156

SHEET:	1
DATE:	11/26/96
HOLE #:	MW-1
LINE & STA.	
OFFSET:	none

Ground Water Observations				Surface Elev.:	
At 13' at 0 hours	Type	Augers	Split Spoon	Date Started:	11/26/96
	Size I.D.	4.25"	13/8"	Date Completed:	11/26/96
At at hours	Hammer Wt.		140#	Boring Foreman:	Ron Garneau
	Hammer Fall		30"	Inspector:	
				Soils Eng.:	

LOCATION OF BORING: As directed

Depth	Casing Blows Per Foot	Sample Depths From/To	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist.	Strata Change Elev.	Soil Identification	Sample No.	Sample Pen	Sample Rec.
		0'-2'	SS	2/5/5/6	dry		Medium sand and gravel	1	24"	13"
		5'-7'	SS	7/5/5/5	dry		Medium sand and small stones	2	24"	6"
		10'-12'	SS	108/28/17/9	dry/damp		Medium silty sand and gravel	3	24"	14"
		15'-17'	SS	16/27/100 for 6"	dry		Medium silty sand and gravel	4	24"	10'
		20'-22'	SS				Auger refusal at 19.5'			
							Installed well at 19'			
							Materials used			
							10' .020 screen			
							9' riser			
							1 set of caps			
							3 bags of sand			
							.5 bag of bentonite			
							1 curb box			

Ground Surface to 19.5' | Used 4.25" Augers: Then Installed well

SUMMARY: Earth Boring 19.5' Rock Coring Samples 4 **HOLE #** **MW-1**

GREEN MOUNTAIN BORING

PO Box 218 ° East Barre, Vermont 05649 ° 802 476-5073

TO: North Country Environmental
11 Mill Street
Barre, VT 05641
Attn.: Mike McCartey

PROJECT NAME: Brownington Center Store

LOCATION: Brownington Center, VT

GMB JOB #: 96-156

SHEET:	2
DATE:	11/26/96
HOLE #:	MW-2
LINE & STA.	
OFFSET:	none

Ground Water Observations			
At 15' at 0 hours	Type	Augers	Split Spoon
	Size I.D.	4.25"	13/8"
At at hours	Hammer Wt.		140#
	Hammer Fall		30"

Surface Elev.:	
Date Started:	11/26/96
Date Completed:	11/26/96
Boring Foreman:	Ron Garneau
Inspector:	
Soils Eng.:	

LOCATION OF BORING: As directed

Depth	Casing Blows Per Foot	Sample Depths From/To	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist.	Strata Change Elev.	Soil Identification	Sample No.	Sample Rec.	Sample Pen
		0'-2'	SS	55/55/25/35	dry		Medium silty sand and gravel auger refusal at 4.5'	1	24"	10'
							MW-2B Auger refusal at 5'			
							MW-2C			
		5'-7'	SS	27/16/20/24	dry		Medium sand and gravel	1	24"	16"
		10'-12'	SS	60/23/10/16	dry		Coarse sand	2	24"	6"
		15'-17'	SS	15/14/20/20	dry		Glacial till	3	24"	19"
		20'-22'	SS	45/45/100 for 5"	wet		Medium sand	4	17"	13"
							Installed well at 15' Materials used			
							10' .020 screen			
							9' riser			
							1 set of caps			
							2 bags of sand			
							.5 bag of bentonite			
							1 curb box			

Ground Surface to 19' | Used 4.25" Augers: Then SS to 22' then installed well

SUMMARY: Earth Boring 22' Rock Coring Samples 5 **HOLE #** **MW-2**

GREEN MOUNTAIN BORING

PO Box 218 ° East Barre, Vermont 05649 ° 802 476-5073

TO: North Country Environmental
11 Mill Street
Barre, VT 05641
Attn.: Mike McCarley

PROJECT NAME: Brownington Center Store

LOCATION: Brownington Center, VT

GMB JOB #: 96-156

SHEET:	3
DATE:	11/26/96
HOLE #:	MW-3
LINE & STA.	
OFFSET:	none

Ground Water Observations			Surface Elev.:	
			Date Started:	11/26/96
	Type	Augers	Split Spoon	Date Completed: 11/26/96
At 14.5' at 0 hours	Size I.D.	4.25"	13/8"	Boring Foreman: Ron Garneau
	Hammer Wt.		140#	Inspector:
At at hours	Hammer Fall		30"	Soils Eng.:

LOCATION OF BORING: As directed

Depth	Casing Blows Per Foot	Sample Depths From/To	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist.	Strata Change Elev.	Soil Identification	Sample No. Rec.	Sample Pen	
		0'-2'	SS	11/13/42/20	dry		Medium to fine sand and gravel	1	24"	12"
		5'-7'	SS	21/15/20/32	dry		Medium to coarse sand and gravel	2	24"	13"
		10'-12'	SS	36/17/5/5	damp		Coarse sand	3	24"	10"
		15'-17'	SS	38/18/17/14	wet		Medium sand and gravel	4	24"	3"
							Auger refusal at 18'			
							Installed well at 18' Materials used			
							10' .020 screen			
							7.5' riser			
							1 set of caps			
							2 bags of sand			
							1 bag of bentonite			
							1 curb box			

Ground Surface to 18' | Used 4.25" Augers: Then Installed well

SUMMARY: Earth Boring 18' Rock Coring Samples 4 **HOLE #** **MW-3**

APPENDIX C

Analytical Reports

GeoLabs, Inc.

Environmental Laboratories

Phone: (617) 878-1346 Fax: (617) 871-7069

PREPARED FOR:	North Country Environmental Services, Inc. 100 Medway Street Suite 403 Milford, MA 01757 **Attn:** R. Mansfield
PROJECT ID:	NCES #1164 S.B. Collins-Brownington, VT.
GEOLABS CLIENT #:	1325-95
SAMPLE NUMBER:	49685-49690
DATE PREPARED:	December 19, 1996
PREPARED BY:	Lynda Davis
APPROVED BY:	Jim Chen 12-20-96 Jim Chen, Laboratory Director/Date

Location: 400 Hingham St.
Rockland, MA 02370

Mailing Address: PO Box 254
Accord, MA 02018

GEOLABS, INC.
P.O. BOX 254
ACCORD, MA 02018
(617) 878-1346

CLIENT NAME:	**NORTH COUNTRY ENV.**	PROJECT ID:	NCES #1164
SAMPLE TYPE:	GROUNDWATER	REPORT DATE:	12/19/96
COLLECTION DATE:	12/11/96	ANALYZED BY:	ZYZ 12/17/96
REC'D BY LAB:	12/13/96	EXTRACTION DATE:	N/A
COLLECTED BY:	CLIENT	DIGESTION DATE:	N/A

VOLATILE AROMATIC COMPOUNDS

SAMPLE NUMBER: 49685
SAMPLE LOCATION: MW-1

	RESULTS (ug/L)	DETECTION LIMIT (ug/L)
Benzene	ND	5.0
Toluene	ND	5.0
Ethylbenzene	ND	5.0
Xylenes	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
Chlorobenzene	ND	5.0
Methyl tert-butyl ether	ND	5.0

ND = NOT DETECTED

Method Reference:

EPA Method 8020 by 8240 (1) (GC/MS)

1) U.S. EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 1986, 3rd Edition.

GEOLABS, INC.
P.O. BOX 254
ACCORD, MA 02018
(617) 878-1346

CLIENT NAME:	**NORTH COUNTRY ENV.**	PROJECT ID:	NCES #1164
SAMPLE TYPE:	GROUNDWATER	REPORT DATE:	12/19/96
COLLECTION DATE:	12/11/96	ANALYZED BY:	ZYZ 12/17/96
REC'D BY LAB:	12/13/96	EXTRACTION DATE:	N/A
COLLECTED BY:	CLIENT	DIGESTION DATE:	N/A

VOLATILE AROMATIC COMPOUNDS

SAMPLE NUMBER: 49686
SAMPLE LOCATION: MW-2

	RESULTS (ug/L)	DETECTION LIMIT (ug/L)
Benzene	ND	5.0
Toluene	ND	5.0
Ethylbenzene	ND	5.0
Xylenes	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
Chlorobenzene	ND	5.0
Methyl tert-butyl ether	**46.4**	5.0

ND = NOT DETECTED

Method Reference:

EPA Method 8020 by 8240 (1) (GC/MS)

1) U.S. EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 1986, 3rd Edition.

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CLIENT NAME:	**NORTH COUNTRY ENV.**	PROJECT ID:	NCES #1164
SAMPLE TYPE:	WATER	REPORT DATE:	12/19/96
COLLECTION DATE:	12/11/96	ANALYZED BY:	ZYZ 12/17/96
REC'D BY LAB:	12/13/96	EXTRACTION DATE:	N/A
COLLECTED BY:	CLIENT	DIGESTION DATE:	N/A

VOLATILE AROMATIC COMPOUNDS

SAMPLE NUMBER: 49688
SAMPLE LOCATION: TAP

	RESULTS (ug/L)	DETECTION LIMIT (ug/L)
Benzene	ND	5.0
Toluene	ND	5.0
Ethylbenzene	ND	5.0
Xylenes	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
Chlorobenzene	ND	5.0
Methyl tert-butyl ether	ND	5.0

ND = NOT DETECTED

Method Reference:

EPA Method 8020 by 8240 (1) (GC/MS)

1) U.S. EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 1986, 3rd Edition.

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CLIENT NAME:	**NORTH COUNTRY ENV.**	PROJECT ID:	NCES #1164
SAMPLE TYPE:	GROUNDWATER	REPORT DATE:	12/19/96
COLLECTION DATE:	12/11/96	ANALYZED BY:	ZYZ 12/17/96
REC'D BY LAB:	12/13/96	EXTRACTION DATE:	N/A
COLLECTED BY:	CLIENT	DIGESTION DATE:	N/A

VOLATILE AROMATIC COMPOUNDS

SAMPLE NUMBER: 49689
SAMPLE LOCATION: FS1164

	RESULTS (ug/L)	DETECTION LIMIT (ug/L)
Benzene	ND	5.0
Toluene	ND	5.0
Ethylbenzene	ND	5.0
Xylenes	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
Chlorobenzene	ND	5.0
Methyl tert-butyl ether	ND	5.0

ND = NOT DETECTED

Method Reference:

EPA Method 8020 by 8240 (1) (GC/MS)

1) U.S. EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 1986, 3rd Edition.

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CLIENT NAME:	**NORTH COUNTRY ENV.**	PROJECT ID:	NCES #1164
SAMPLE TYPE:	WATER	REPORT DATE:	12/19/96
COLLECTION DATE:	12/11/96	ANALYZED BY:	ZYZ 12/17/96
REC'D BY LAB:	12/13/96	EXTRACTION DATE:	N/A
COLLECTED BY:	CLIENT	DIGESTION DATE:	N/A

VOLATILE AROMATIC COMPOUNDS

SAMPLE NUMBER: 49690
SAMPLE LOCATION: TRIP BLANK

	RESULTS (ug/L)	DETECTION LIMIT (ug/L)
Benzene	ND	5.0
Toluene	ND	5.0
Ethylbenzene	ND	5.0
Xylenes	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
Chlorobenzene	ND	5.0
Methyl tert-butyl ether	ND	5.0

ND = NOT DETECTED

Method Reference:

EPA Method 8020 by 8240 (1) (GC/MS)

1) U.S. EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 1986, 3rd Edition.

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LIMITATIONS & EXCLUSIONS

All the professional opinions presented in this report are based solely on the scope of work conducted and sources referred to in our report. The data presented by GeoLabs in this report was collected and analyzed using generally accepted industry methods and practices at the time the report was generated. This report represents the conditions, locations and materials that were observed at the time the work was conducted. No inferences regarding other conditions, locations or materials, at a later or earlier time may be made based on the contents of the report. No other warranty, express or implied is made.

This report was prepared for the sole use of our client. Portions of the report may not be used independent of the entire report.

All analyses were performed within required holding times, in accordance with EPA protocols and using accepted QA/QC procedures. The information contained in this report is, to the best of my knowledge, accurate and complete.

GeoLabs, INC.

ENVIRONMENTAL LABORATORIES
Location:
400 Hingham Street, Rockland, MA 02370
Mailing Address:
P.O. Box 254, Accord, MA 02018
(617) 878-1346 OFFICE (617) 871-7069 FAX

CHAIN OF CUSTODY

TURNAROUND SCHEDULE:
☐ RUSH ☒ STANDARD
CLIENT DUE DATE:
LAB CLIENT ID#:

GeoLabs Client: NorthCountry Env. Serv.
Address: 100 Medway St. Suite 403
Milford, MA 01757
Phone: 508-634-9800
Fax: 508-634-8259
Contact Name: R. Mansfield

CLIENT PROJECT INFORMATION:
Project Name/ID: NCES #1164
S.B. Collins - Brownington VT
Purchase Order #:
Sample Collector: R. Mansfield

COMMENTS:

page 1 of 1

ANALYSES REQUESTED

FIELD SAMPLE ID #	COLLECTION DATE	COLLECTION TIME	SOURCE/ LOCATION/ STATION	CONTAINER TYPE	CONTAINER #	MATRIX	COMP.	GRAB	PRES.	GEOLABS SAMPLE ID NUMBER	EPA 8020 w/ MTBE
MW1	12/11/96	15:30	GW in well MW1	V	2	GW		X	Y	49685	X
MW2			GW in well MW2		2	GW				49686	
MW3			GW in well MW3		2	GW				49687	
TAP			Tap water in res.		2	Tap water				49688	
FS1164			FS in basket		2	GW				49689	
Trip			Geolab Trip		2	Water				49690	

CONTAINER TYPE CODES: A = Amber B = Bag G = Glass P = Plastic V = VOA S = Sterile O = Other

MATRIX CODES: WW = Wastewater GW = Groundwater DW = DrinkingWater S = Soil O = Oil SL = Sludge OT = Other

PRESERVATIVE CODES 1 = Hcl 2 = HNO_3 3 = H_2SO_4 4 = $Na_2S_2O_3$ 5 = NaOH 6 = 4C 7 = Ascorbic Acid

RELINQUISHED BY: DATE/TIME R. Mansfield 12/13/96 9:45 AM

RECEIVED BY: DATE/TIME E. Connor 12-13-96 9:45 AM

RELINQUISHED BY: DATE/TIME E. Connor 12-13-96 3:15 PM

RECEIVED BY: DATE/TIME

RELINQUISHED BY: DATE/TIME

RECEIVED BY GeoLabs: DATE/TIME 12/13/96 1515