



SEP 20 1993

September 17, 1993

Mr. Charles B. Schwer  
Petroleum Sites Coordinator  
Vermont Department of  
Environmental Conservation  
103 South Main Street  
Waterbury, Vermont 05676

RE: Summary of Environmental Services Completed at Robinson's Quick Stop  
(Site #93-1356), Alburg, VT.

Dear Mr. Schwer:

Lincoln Applied Geology, Inc. (LAG) has completed several of the Phase I tasks outlined in our August 16, 1993 Scope of Work (SOW) for Robinson's Quick Stop (Robinson's), Route 2, Alburg, VT. (**Figure 1**). The investigation was initiated in response to your January 29, 1993 letter requesting definition of the extent, magnitude, and potential receptors of contamination found during the under ground storage tank (UST) removal. This letter summarizes the completed tasks along with our recommendations for ground water monitor well locations. The completed tasks include:

1. Identification of potential sensitive receptors.
2. Development of a regional and preliminary detailed site map including pertinent features and other potential sources of contamination.
3. Conductance of file reviews at the (VDEC) offices and Town office to obtain information on past property use of the site and surrounding areas, and
4. Completion of a detailed soil vapor survey on September 2, 1993 to determine the extent and magnitude of vapor phase contamination of the property.

Results of our current investigation indicate the existence of several potential receptors of the contamination. These potential receptors are the

Mr. Charles Schwer  
Page 2  
September 17, 1993

private drinking water wells surrounding Robinson's Quick Stop and the wetlands surrounding the site. The ultimate potential receptor of the contamination is the Richelieu River. Soil gas survey results demonstrated that Volatile Organic Compounds (VOC's) are present beneath the property, but at consistently low levels. No free floating gasoline product was detected in the trench between Robinson's and the S.B. Collins, Inc. (SBC) petroleum service station to the west as was reported by the VDEC (**Figure 3**).

LAG's recommendations for future activities at Robinson's include the installation of five monitor wells to establish the migration extent and magnitude of dissolved BTEX and MTBE, and to verify the presence of free floating gasoline on the property.

A site visit was made by a LAG hydrogeologist on August 27, 1993 to locate potential sensitive receptors, conduct a Town file review, and identify pertinent features on the site and in the surrounding area. **Figure 2** shows the current property owners in the area and the identified sensitive receptors. **Figure 3** shows the pertinent site features at a more detailed scale. The Robinson's shallow well, SBC deep bedrock well, and Hunter residence shallow well are identified as potential receptors of the contamination detected at Robinson's. The Jarvis shallow well was not identified as an immediate receptor of subsurface contamination because of its great distance from Robinson's. However, the Jarvis family did express concern about the contamination risk and requested that their well be sampled. As a result, LAG will sample this well along with the other receptors. The adjacent wetlands were checked for hydrocarbon seeps. A sheen was observed in one wetland east of the site (**Figure 2**). The drinking water wells and wetlands will be sampled along with the newly installed monitor wells after they are completed.

Town and Vermont Department of Environmental Conservation (VDEC) files for the area were reviewed to identify property use and any other potential sources of contamination within the immediate area of Robinson's. Records indicate that three parties have owned the property since 1970. Alburg Truck Stop, Inc. owned the property from 1970 to 1985. Prior to 1970 the property consisted of two separate parcels, and prior to 1966, the property consisted of three parcels. The property has been used as a gasoline station since at least 1970. Records indicate that the adjacent SBC Mobil station was built in 1992.

Prior use of the SBC property was residential. The USTs on the SBC property were also installed in 1992. Although the USTs and related piping must be



Mr. Charles Schwer  
Page 3  
September 17, 1993

considered a potential contaminant source, VDEC records do not indicate any petroleum leakage or spillage from this recently constructed facility.

A second site visit was made by the LAG hydrogeologist and technician on September, 1993 to conduct a soil gas survey. A copy of the Health and Safety plan (HASP) utilized for on-site work is included in **Appendix A**. The soil gas survey was conducted by drilling a small diameter hole to 3 feet below grade. A photoionization detector (PID) was inserted into the hole and the maximum reading was recorded. Forty-nine vapor points were drilled and assayed with the PID. **Figure 4** shows the location of each vapor point and **Table 4** contains the PID data obtained from each vapor point. Data results indicate that low levels of VOCs were detected with the PID near the gasoline UST's and throughout the property. Only two small areas have been delineated on **Figure 4** where PID assays were greater than 10 parts per million (ppm). The highest reading obtained was 20 ppm. Although the soil maps identify the presence of very fine textured wetland type soils (covington Silty Clay Loam and Kendaia Silt Loam) in the area, the soil gas survey identified the presence of at least 3 feet of variable textured fill material beneath the subject property.

Based on our on-site observations coupled with the results of the soil gas survey, LAG recommends the installation of five additional monitor wells to evaluate the full extent and magnitude of contamination. **Figure 5** shows the locations of the proposed monitor wells. One well will be placed upgradient to verify ground water flow across the property. All other monitor wells will be placed in the areas of suspected contamination. Once all the new wells have been installed, a stadia survey will be conducted and a formal detailed site map will be produced. Ground water from the wells will be sampled for BTEX and MTBE. Upon completion of all work a summary report will be prepared including a recommendation for a corrective action plan, if warranted. Bimonthly monitoring of the new wells to collect liquid level and PID data will be conducted. Soak Ease bailers will be placed in any wells that contain free floating gasoline.

A cost estimate to complete this Phase I investigation was included in our August 16, 1993 SOW. If you have any questions or concerns with regard to this matter, please do not hesitate to call me at 453-4384. We look forward to

receiving your concurrence on our proposed monitor well array in the near future so that we may expedite our investigation.



Lincoln Applied Geology, Inc.  
Environmental Consultants

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

Mr. Charles Schwer  
Page 4  
September 17, 1993

Sincerely yours,

*Richard S. Vandenberg*

Richard S. Vandenberg  
Hydrogeologist

RV/tasp  
Enclosures  
cc: Bill Sellinger

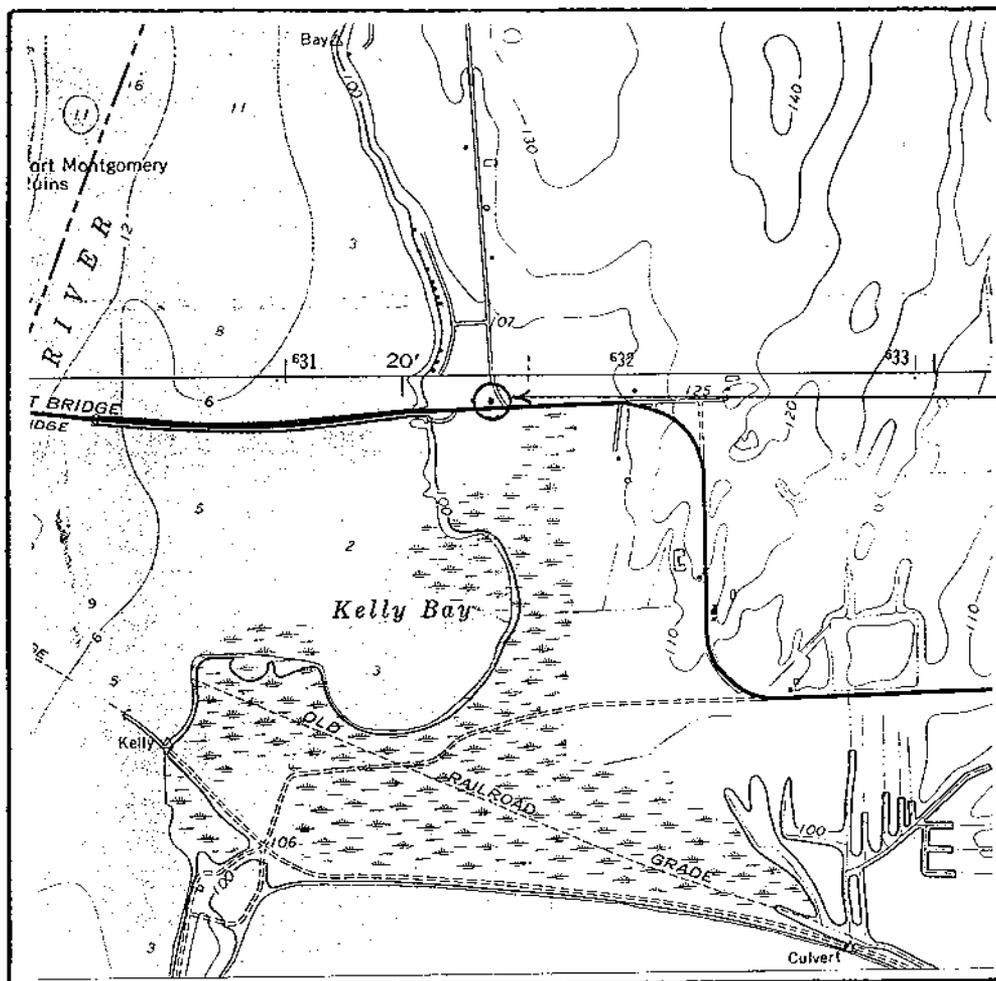


**Table 1****Robinson's Quick Stop  
Soil Vapor Survey Results**

Vapor Point #	Depth (feet)	Measurement
1	3.0	0.3
2	3.0	3.0
3	2.5	BG
4	2.5	0.2
5	2.5	0.2
6	2.5	0.2
7	2.5	0.2
8	2.5	BG
9	2.5	2.5
10	2.5	0.2
11	2.5	2.5
12	4.0	4.0
13	3.0	BG
14	3.0	6.0
15	3.0	7.0
16	2.5	20
17	3.0	20
18	3.0	BG
19	3.0	0.2
20	3.0	1.8
21	3.0	BG
23	3.0	BG
24	3.0	7.0
25	3.0	BG

26	3.0	BG
27	3.0	5.0
28	3.0	BG
29	3.0	BG
30	3.0	1.0
31	3.0	7.0
32	3.0	BG
33	3.0	2.8
34	3.0	11.8
35	3.0	1.8
36	3.0	1.8
37	3.0	12.0
38	3.0	0.3
39	3.0	BG
40	3.0	BG
41	3.0	1.0
42	3.0	0.2
43	3.0	BG
44	3.0	14.0
45	3.0	3.0
46	3.0	0.2
47	3.0	0.6
48	3.0	BG
49	3.0	BG

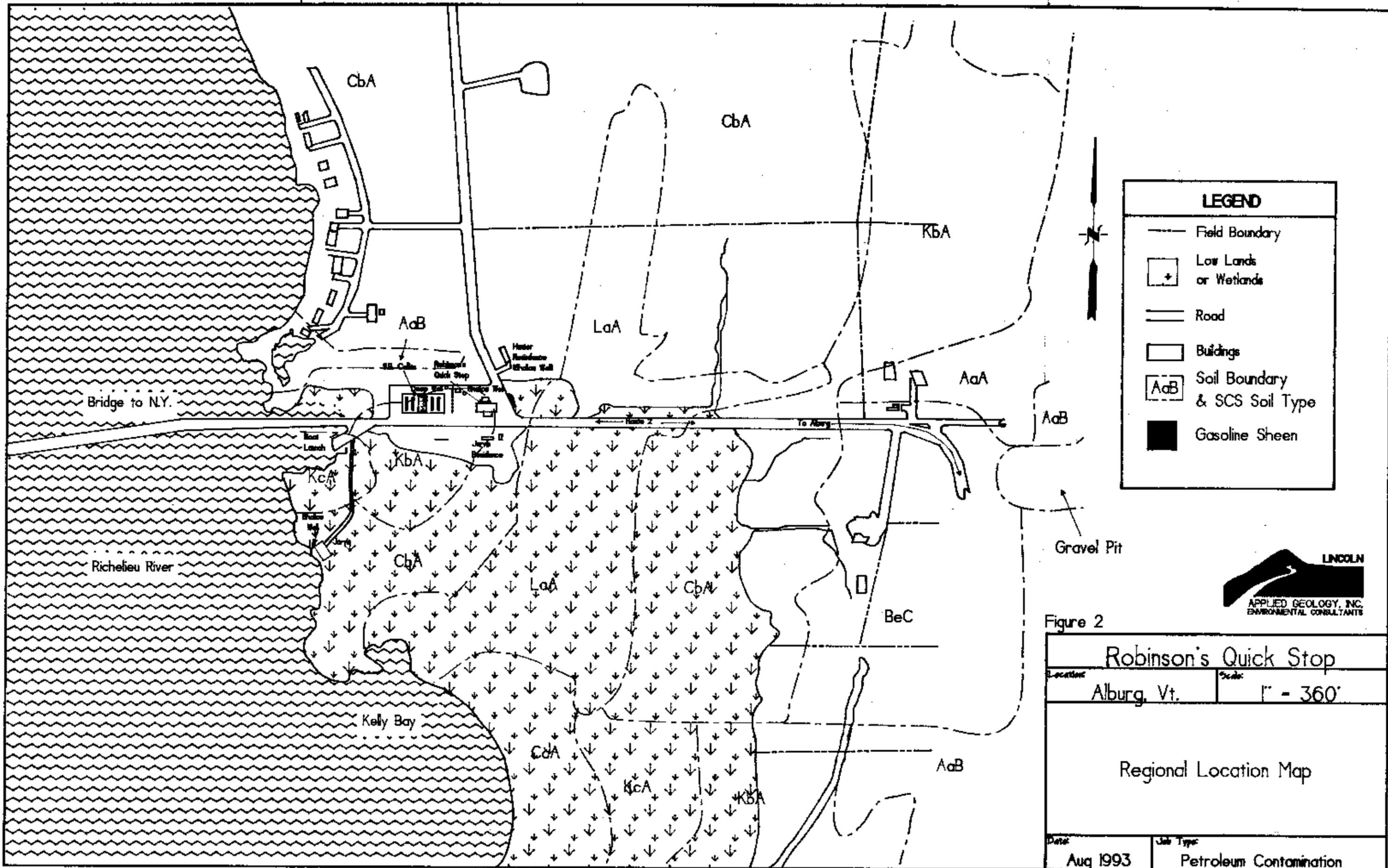
### Robinson's Quick Stop GENERAL LOCATION MAP



Site  
Location

Source: U.S.G.S. 7.5 min.  
Topo Series  
Rouses Point, VT - NY Quad

Scale: 1" = 2000'



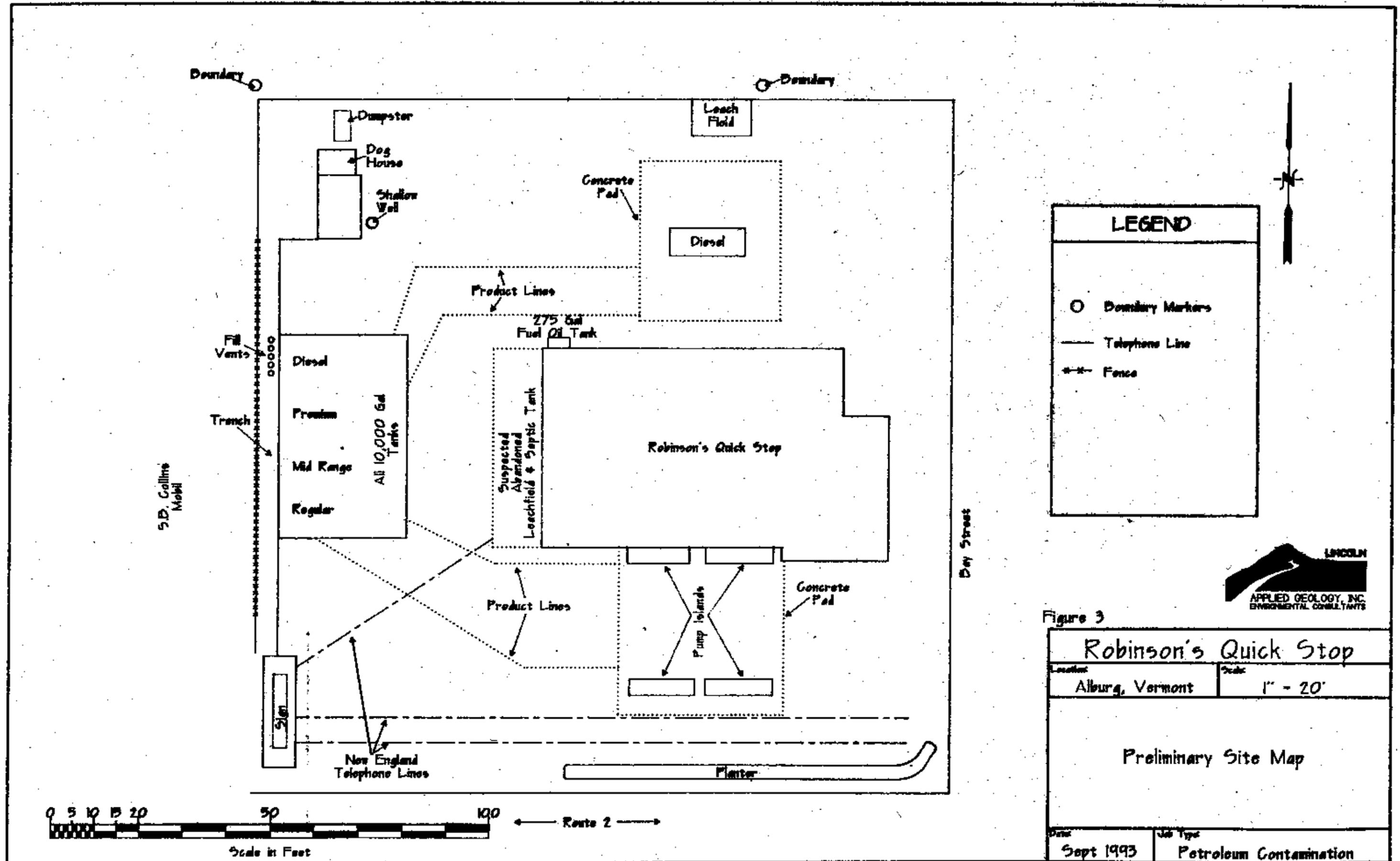
**LEGEND**

- Field Boundary
- ☐+ Low Lands or Wetlands
- == Road
- ▭ Buildings
- ☐AaB Soil Boundary & SCS Soil Type
- Gasoline Sheen



Figure 2

<b>Robinson's Quick Stop</b>	
Location	Scale
Alburg, Vt.	1" = 360'
Regional Location Map	
Date	Job Type
Aug 1993	Petroleum Contamination



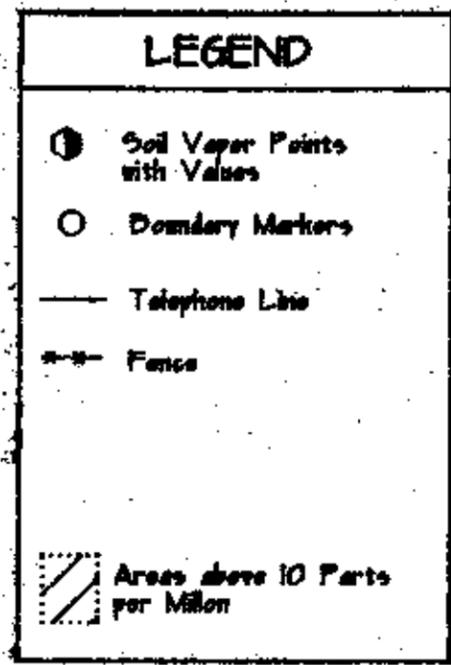
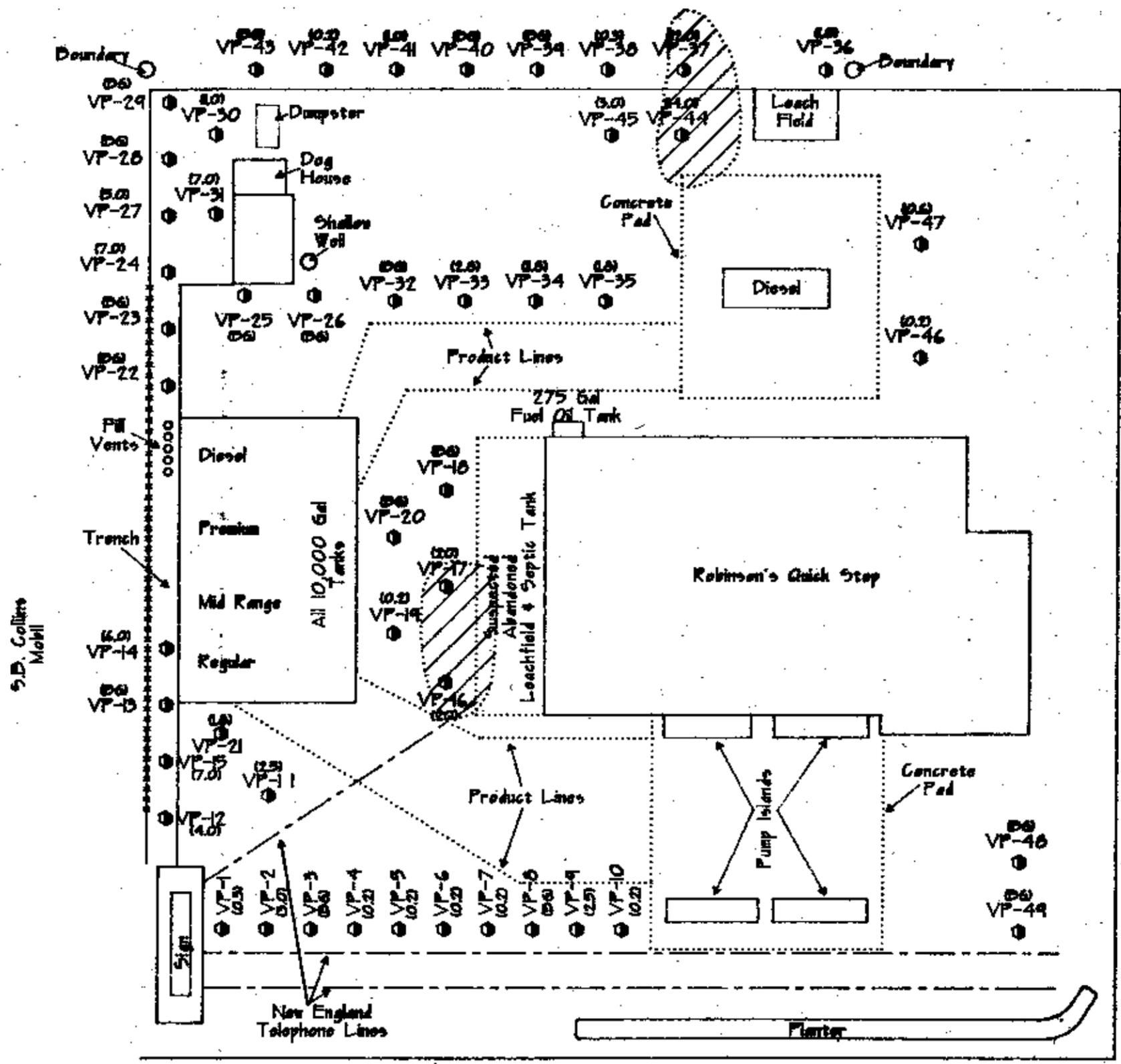


Figure 4

<b>Robinson's Quick Stop</b>	
Location	Scale
Alburg, Vermont	1" = 20'
<b>Soil Vapor Point Location Map</b>	
Date	Job Type
Sept 1993	Petroleum Contamination



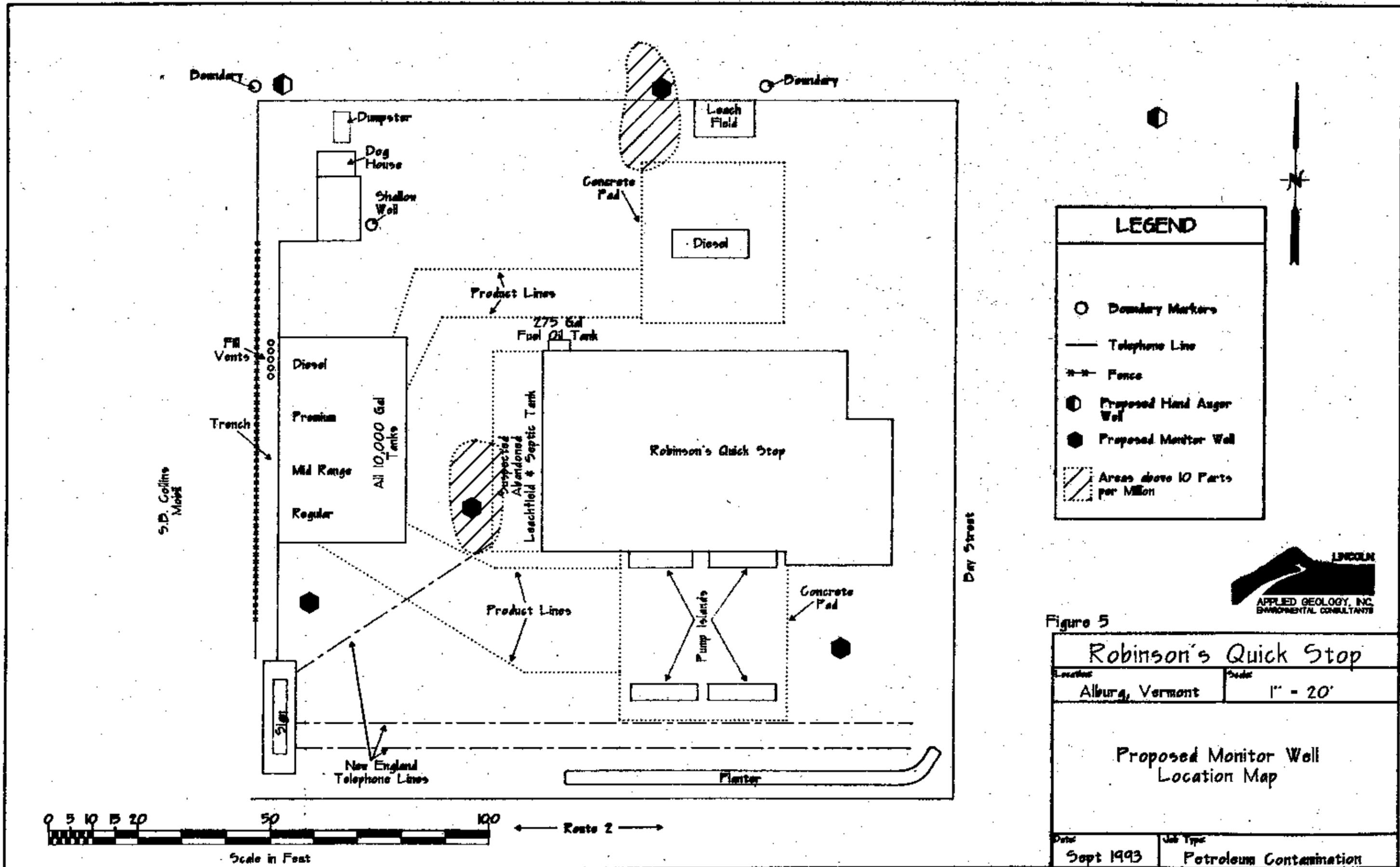


Figure 5

## APPENDIX A

Health and Safety Form (HASP)

## SITE HEALTH AND SAFETY PLAN

Site Name: Robinson's Quick Stop  
Date: August 26, 1993  
Site Address: Route 2, Alburg, VT.  
Project Manager: Richard S. Vandenberg, Lincoln Applied Geology, Inc.  
Client Contact: William Sellinger - Bradford Oil

Site and Project Description: Robinson's Quick Stop store has been identified as a potential source of subsurface petroleum contamination. Pursuant to Vermont regulations, a site investigation is being completed. Upon completion of the site investigation, a site monitoring and remediation may be required.

Site Health and Safety Information: Petroleum products of gasoline and diesel fuel have been reported to have leaked into the subsurface environment.

### Site Personnel Protection Requirements:

Activity	Level of Protection	Special Equipment Requirements
Ground Water Monitor Well Installation, Soil Vapor Study, Sample Collection and Monitoring. Installation of remediation system.	D	Work Clothes, steel toe shank boot; surgical gloves, hard hat

Monitoring: During monitor well installation and installation of any subsurface remedial system monitor every 15 minutes with HNU PID in area of soil boring.

### Contingency:

PID	10 - 20 ppm	Monitor Continuously
PID	20 - 100 ppm	Upgrade to level C
PID	>100 ppm	Shut down activities and evacuate

Decontamination: Personnel protective equipment shall be rinsed and washed with Liquinox Soap solution, hands and face shall be washed in the same manner.

IMPORTANT PHONE NUMBERS

Local Police: (see State Police)

Fire Department: 796-3409

Ambulance: 796-3409

Local Hospital: Northwestern Medical Center, St. Albans

State Police: 796-3391

Safety Director: Steve Revell 453-4384 (office) 453-3122 (home)

Safety Officer(s): Richard Vandenberg 453-4384 (office) 453-4764 (home)

Project Manager: John Amadon - Lincoln Applied Geology, Inc. - 453-4384

Client Contact: Maynard Farr, Northern Petroleum - 748-8934

Directions to Hospital: Exit 19 on Route 89, follow Blue Hospital signs for approximately 1 mile.

Site Personnel:

*James W. Robideau*  
\_\_\_\_\_

James Robideau

\_\_\_\_\_

Donald Gale

\_\_\_\_\_

James Holman

*Richard Vandenberg*  
\_\_\_\_\_

Richard Vandenberg

\_\_\_\_\_

Subcontractor

\_\_\_\_\_

Subcontractor

Other Comments:

Site Manager \_\_\_\_\_

Safety Officer \_\_\_\_\_

This site \_\_\_ does x does not require a detailed site safety plan.