RESNA
Working to Restore Nature

82 South Street
Hopkinton, MA 01748
Phone # (508) 435-3400
FAX # (508) 435-3407

REPORT ON
LIMITED ENVIRONMENTAL SITE INVESTIGATION
at
New England Telephone Facility
Cross and Court Street
Middlebury, Vermont

February 4, 1994

Report prepared for:

New England Telephone
and Telegraph Company
125 High Street, RM 1006
Boston, Massachusetts 02110

Prepared by:
RESNA Industries Inc.

Douglas C. Morrison
Project Geologist

Andrew W. Bakinowski
Senior Project Manager

RESNA Job No. 310038.01

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LIMITED ENVIRONMENTAL SITE INVESTIGATION
at
New England Telephone
Cross and Court Street
Middlebury, Vermont

Prepared for:

New England Telephone

INTRODUCTION

New England Telephone contracted RESNA Industries Inc. (RESNA) to perform a Limited Environmental Site Investigation in accordance with the requirements of the Vermont Agency for Natural Resources (VTANR) at the New England Telephone facility located on Cross and Court Streets in Middlebury, Vermont (the Site). The purpose of the investigation was to determine if there has been a release or if there is a threat of a release of oil or hazardous materials to the environment at the Site.

The scope of this investigation included reviewing existing public information at the VTANR, Regional Office Division of Hazardous Waste and Town of Middlebury Public Offices; drilling soil borings; installing ground-water monitoring wells; collecting and submitting soil and ground-water samples for laboratory analysis; surveying well elevations; measuring depths to ground water; and evaluating ground-water flow and potential contaminant transport characteristics.

SITE DESCRIPTION

Site Location

The Site is located at the intersection of Cross and Court Streets in Middlebury, Vermont. The Site location relative to nearby physical and cultural features is shown on the Site Location Map, Plate 1. Site coordinates are latitude 44° 01' 30" north, longitude 73° 09' 50" west. Universal Transverse Mercator (UTM) coordinates are 647,150 meters west, 4,874,625 meters north. The Site comprises an area of approximately 26,136 square feet. Information regarding adjacent property use is shown on the Site Vicinity Map, Plate 2. The Generalized Site Plan, Plate 3 shows the location of the Site building, the approximate property lines, ground-water monitoring wells, and other selected site features.

Facility Description

The Site is currently occupied by New England Telephone. The building is a three-story, brick structure constructed on a concrete basement foundation. The area surrounding the front of the lot is a grassy area with the remaining portion of the property being paved with asphalt.

Water and sewer service to the Site are provided by the Town of Middlebury. The Site is heated with #2 fuel oil with its current above-ground tank located within the building structure.

Surrounding Properties

The Site is bounded by a Grand Union to the south, residential properties to the north and mixed residential and commercial properties across Court Street to the east. Abutting property information is illustrated on the Vicinity Map, Plate 2.

Topography and Drainage

The Site lies at an elevation of approximately 400 feet above Mean Sea Level and is essentially flat. Surface runoff from paved areas of the Site is directed towards the south section of the property. Regional surface water is directed towards the south-southwest following the course of Route 7.

Potential Migration Pathways and Sensitive Receptors

Potential mechanisms for the migration of oil and hazardous materials into the surrounding environment include ground-water flow and surface run-off. Potential subsurface conduits for contaminant transport include underground utility lines that serve the Site from Cross and Court Streets. The utilities on record with the Town of Middlebury were water, sewer, electric and telephone. Utility lines are typically placed in gravel-backfilled excavations, and if saturated, the gravel may serve as a high-permeability pathway for the subsurface transport of contaminants. If a surface release had occurred along the Site; on the side of the building it would have collected in the gravel around the fills of the USTs. The Town of Middlebury Water Department indicated that there were no public or private water supply wells within a 5,000 foot radius of the Site.

LOCATION HISTORY

Historical Property Ownership and Use

According to records on file at the Town of Middlebury Clerk's Office, the structure currently occupying the Site was constructed in 1955. The building has always been utilized by New England Telephone as an operations facility. Records prior to 1955 indicate the Site was owned by George Russell prior to New England Telephone. No other records of ownership were on file at the Clerk's Office. The Site is currently owned by New England Telephone and is utilized as a operations building.

Diesel UST and #2 Fuel Oil UST Removal

On May 5, 1993, Stearns and Wheler (S & W) of Bedford New Hampshire observed the closure of one the 330 gallon diesel UST and the 1,000 gallon #2 fuel oil UST on Site. Observations and analytical results with respect to the UST excavations, removal and abandonment are included in Appendix A (Stearns and Wheler report entitled *330 Gallon Diesel UST and 1,000 Gallon #2 Fuel Oil UST Closure Report, dated July 13, 1993.* According to the report, Interface Construction Services Inc. of Syracuse, N.Y. preformed the removal activities and subsequent disposal of the USTs. According to the report, the 330 gallon UST was observed to be in fair condition, with some pitting and rust but no holes. Background and headspace photoionization detector (PID) readings from the soils removed from the excavation ranged from 0.0 to 97 parts per million (ppm). Ground water possessing a slight sheen was encountered at a depth of approximately seven feet. The condition of the 1,000 gallon UST was noted to be in similarly fair condition. Soils from this excavation ranged from 0.0 to 192 ppm. Ground water, which appeared to be sheen free, was encountered at seven feet below grade.

Analytical results of soil and ground-water samples collected during the removal project indicated the presence of volatile petroleum hydrocarbons (5,000 to 10,000 parts per billion [ppb]) in the soil and none detected in the ground water.

File Review and Regulatory Information

RESNA's investigation included a review of information on file at the State of Vermont Department of Environmental Conservation Agency for Natural Resources (VTANR/DEC). According to the VTANR/DEC Hazardous Materials Division Active Sites List there are two sites (one being the Site itself) within a one-half mile radius of the subject Site.

VTANR/DEC Site #870057

The Texaco Station, located at 25 Court Street is currently listed as a site with UST Contamination. Remediation is reportedly on-going, along with quarterly ground-water monitoring requested by the VTANR/DEC.

RESNA's investigation also included a review of the state of VTANR/DEC Hazardous Materials Division (Spills) Data Base List. RESNA identified only one incident within 2,500 feet of the Site. This incident is summarized in Table 1 below.

TABLE 1
SUMMARY OF VTANR/DEC SPILLS DATA BASE LISTINGS FOR MIDDLEBURY, VERMONT

Facility Name & Address	Description	Date of Incident
39 Court Street	Fumes reported - Spill #870078	05/6/87

Source: VTANR/DEC spills data base listing reviewed October 27, 1993

The release at the Texaco Service Station, Site #870057, was limited to the property and is located hydraulically cross down gradient of the New England Telephone Facility. The report at 39 Court Street, Site #870078, was limited to fumes, no source was located.

FIELD INVESTIGATION

Site Safety Plan

RESNA conducted field work at the Site in accordance with RESNA Site Safety Plan No. 310038-1.SHP, dated October 11, 1993. The Site Safety Plan describes the basic safety requirements for the subsurface environmental investigation at the Site. The Site Safety Plan is applicable to personnel of RESNA and to subcontractors of RESNA. Personnel scheduled to work at the Site were briefed on the contents of the Site Safety Plan before work began, and a copy of the Site Safety Plan was kept at the work Site for reference by appropriate parties during the work. A RESNA geologist was the Site Safety Officer. A copy of the Site Safety Plan is found in Appendix D.

Soil Borings

A RESNA geologist was present at the Site on October 13 and 14, 1993 to observe drilling and monitoring well installation. The drilling and monitoring well installation were performed by Geosearch, Inc. (Geosearch) of Leominster, Massachusetts. Geosearch drilled four soil borings, into which were installed four monitoring wells designated MW-1, MW-2, MW-3 and MW-4.

The boring locations were selected to provide coverage in the vicinity of the former 330 gallon diesel UST and 1,000 gallon #2 fuel oil UST. All four wells were installed to provide coverage in the inferred upgradient and downgradient areas around the former USTs. All four wells yielded water upon completion.

TABLE 2
PID FIELD SCREENING RESULTS
New England Telephone
Cross and Court Street
Middlebury, Vermont

Sample Depth (feet)	Boring Identification			
	B-1	B-2	B-3	B-4
0-2	0.0	0.0	0.0	0.0
2-4	0.0	0.0	0.0	0.0
6-8	0.0	0.0	0.0	0.0
8-10	0.0	0.0	0.0	0.0
10-12	0.0	0.0	0.0	0.0

All results in parts per million (ppm).

Monitoring Well Installation

Monitoring wells MW-1, MW-2, MW-3 and MW-4 were installed in borings B-1, B-2, B-3 and B-4 respectively. The well locations are shown on Plate 3. The monitoring wells were constructed of 2-inch-diameter, threaded flush-joint, schedule 40 polyvinyl chloride (PVC) casing. A 10-foot section of 0.010-inch slotted screen was installed across the water-table surface in the wells to accommodate seasonal fluctuations in ground-water levels. A solid PVC riser was installed above the screens to just below ground surface in each of the three wells. A clean Ottawa sand (20 grade) filter pack was placed from the well bottom to about 1.5 feet above the screen. A one-foot-thick layer of bentonite chips was placed above the sand pack and saturated with tap water to promote hydration. Drill cuttings were used to fill the annular space above the bentonite layer. A concrete pad was then poured and the

wellheads were secured in aluminum utility boxes with steel aprons and water-resistant seals. Each well was also fitted with a locking cap on the top of the PVC riser to discourage unauthorized access. Monitoring well completion diagrams are included on the boring logs in Appendix B.

SOIL AND GROUND-WATER SAMPLING AND ANALYSIS

Soil Sampling and Analysis

Based on headspace readings detected during boring/monitoring well installation, soils collected just above or at the water table were submitted from each boring for analysis by Environmental Protection Agency (EPA) Methods 418.1 and EPA Method 8020. Results of these analyses indicated that no petroleum hydrocarbons were detected above the method detection limits.

Ground-Water Sampling and Analysis

A RESNA geologist purged and sampled monitoring wells MW-1, MW-2, MW-3 and MW-4 October 27, 1993. Following initial water level measurements, the geologist subjectively examined the water in the wells by lowering approximately half the length of a clean disposable polyvinyl chloride (PVC) bailer past the air/liquid interface to retrieve a sample. Prior to sampling, all monitoring wells were purged a minimum of three well volumes or until the pH and specific conductivity of the ground water stabilized. All monitoring well purging and sampling was conducted using clean, dedicated, disposable polyethylene bailers. Following water level recovery, ground-water samples were collected and placed in laboratory-cleaned 40-milliliter sealed septum-cap glass vials and plastic containers and placed in chilled storage. The RESNA geologist completed a chain of custody record in the field, which accompanied the samples to Eastern Analytical laboratories of Concord, New Hampshire. The ground-water samples were analyzed for Hazardous Substance List VOCs by EPA Method 602, modified to include methyl tert-butyl ether (MTBE). No VOCs were detected in any of the monitoring wells on Site. Table 3 summarizes the results of analysis

of the ground-water samples. Laboratory Certificates of Analysis and chain of custody records are included in Appendix C.

TABLE 3
RESULTS OF LABORATORY ANALYSIS OF GROUND-WATER SAMPLES
New England Telephone
Cross and Court Street
Middlebury, Vermont

Well Id. / Sample Id.	MW-1 W-8-MW1	MW-2 W-8-MW2	MW-3 W-8-MW3	MW-4 W-8-MW4
Benzene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND
MTBE	ND	ND	ND	ND

Results are reported in micrograms per liter (ug/l) = parts per billion (ppb).
Water samples were collected on October 28, 1993.
MTBE = Methyl-tert-butyl ether.
ND = Not detected above the Method Detection Limit (MDL) listed.
Sample designation: W-8-MW1
- W = Water sample
- 8 = Sample depth in feet below grade
- MW1 = Monitoring well number

SITE HYDROGEOLOGY

Ground-Water Elevation Measurement

RESNA surveyed the well locations and elevations relative to the first floor of the building on October 14, 1993. The elevation of the first floor was assigned an arbitrary datum elevation of 100.00 feet. The surveyed reference elevation of each well is a mark at the top of the PVC well casing, which is given in feet relative to the benchmark. Depths to ground water were measured to the nearest 0.01-foot using a Solinst electric water level indicator. Depths to ground water were then subtracted from the arbitrary well casing elevations to yield-ground water elevations. Depths to ground water and ground-water elevation data are presented in Table 4.

Ground-Water Flow Characteristics

A generalized map of ground-water conditions at the Site is presented on the Ground-Water Map, Plate 4. Ground water beneath the Site flows generally to the south-southwest. Depth to ground water at the Site is approximately seven to eight feet below grade and ground-water flow direction may be determined by the underlying unconfined aquifer beneath the Site.

TABLE 4
GROUND-WATER ELEVATION DATA
New England Telephone
Cross and Court Street
Middlebury, Vermont

Monitoring Well Number	Top of Casing Elevation	Depth to Ground Water	Ground-Water Elevation
MW-1	96.04	7.74	88.30
MW-2	96.51	8.25	88.26
MW-3	95.66	8.94	86.72
MW-4	96.25	7.28	88.97

Measurements are in feet. Elevations are relative to an arbitrary elevation of 100.00 feet
The wells were surveyed and gauged on October 14, 1993 by RESNA.
Casing elevation and depth to water are measured at top of casing, which is the highest point of the PVC riser.

SUMMARY AND CONCLUSIONS

From the data collected during this Phase I Investigation, RESNA has reached the following findings and conclusions:

(1) The structure currently occupying the Site was constructed in 1955. The Site has always been used as an operations facility by New England Telephone and is currently owned by New England Telephone.

(2) According to records on file with the VTANR/DEC Underground Storage Tank program, a 500 gallon #2 fuel oil UST was removed in April 1993. The UST has been replaced with an above ground storage tank located within the structure of the current building.

(3) On May 5, 1993, Stearns and Wheler (S & W) of Bedford New Hampshire observed the closure of one the 330 gallon diesel UST and the 1,000 gallon #2 fuel oil UST on Site. Observations and analytical results with respect to the UST excavations, removal and abandonment are included in Appendix A (Stearns and Wheler report entitled *330 Gallon Diesel UST and 1,000 Gallon #2 Fuel Oil UST Closure Report, dated July 13, 1993.* According to the report, Interface Construction Services Inc. of Syracuse, N.Y. preformed the removal activities and subsequent disposal of the USTs. According to the report, the 330 gallon UST was observed to be in fair condition, with some pitting and rust but no holes. Background and headspace photoionization detector (PID) readings from the soils removed from the excavation ranged from 0.0 to 97 parts per million (ppm). Ground water possessing a slight sheen was encountered at a depth of approximately seven feet. The condition of the 1,000 gallon UST was noted to be in similarly fair condition. Soils from this

excavation ranged from 0.0 to 192 ppm. Ground water, which appeared to be sheen free, was encountered at seven feet below grade.

Analytical results of soil and ground-water samples collected during the removal project indicated the presence of volatile petroleum hydrocarbons (5,000 to 10,000 parts per billion [ppb]) in the soil and none detected in the ground water.

(4) No PID readings were detected during the installation of MW-1 , MW-2 MW-3 and MW-4.

(5) No VOCs were detected in any of the ground-water samples.

(6) Depth to ground water at the Site is approximately seven to eight feet below grade. From surface topography and the on-Site borings, ground-water flow can be inferred towards the south southwest in the unconfined overburden that exists locally on-Site.

(8) The Town of Middlebury Water Department indicated there are no public or private water supply wells within 5,000 feet of the subject Site.

LIMITATIONS

This report was prepared in accordance with standards of environmental geologic practice generally accepted in Vermont at the time this investigation was performed. This investigation was conducted solely for the purpose of evaluating subsurface environmental conditions of the Site. No soil engineering or geotechnical references are implied or should be inferred. Evaluation of the geologic and environmental conditions at the Site for the purposes of this investigation was made from a limited number of observation points. Subsurface conditions may vary away from the data points available.

REFERENCES CITED

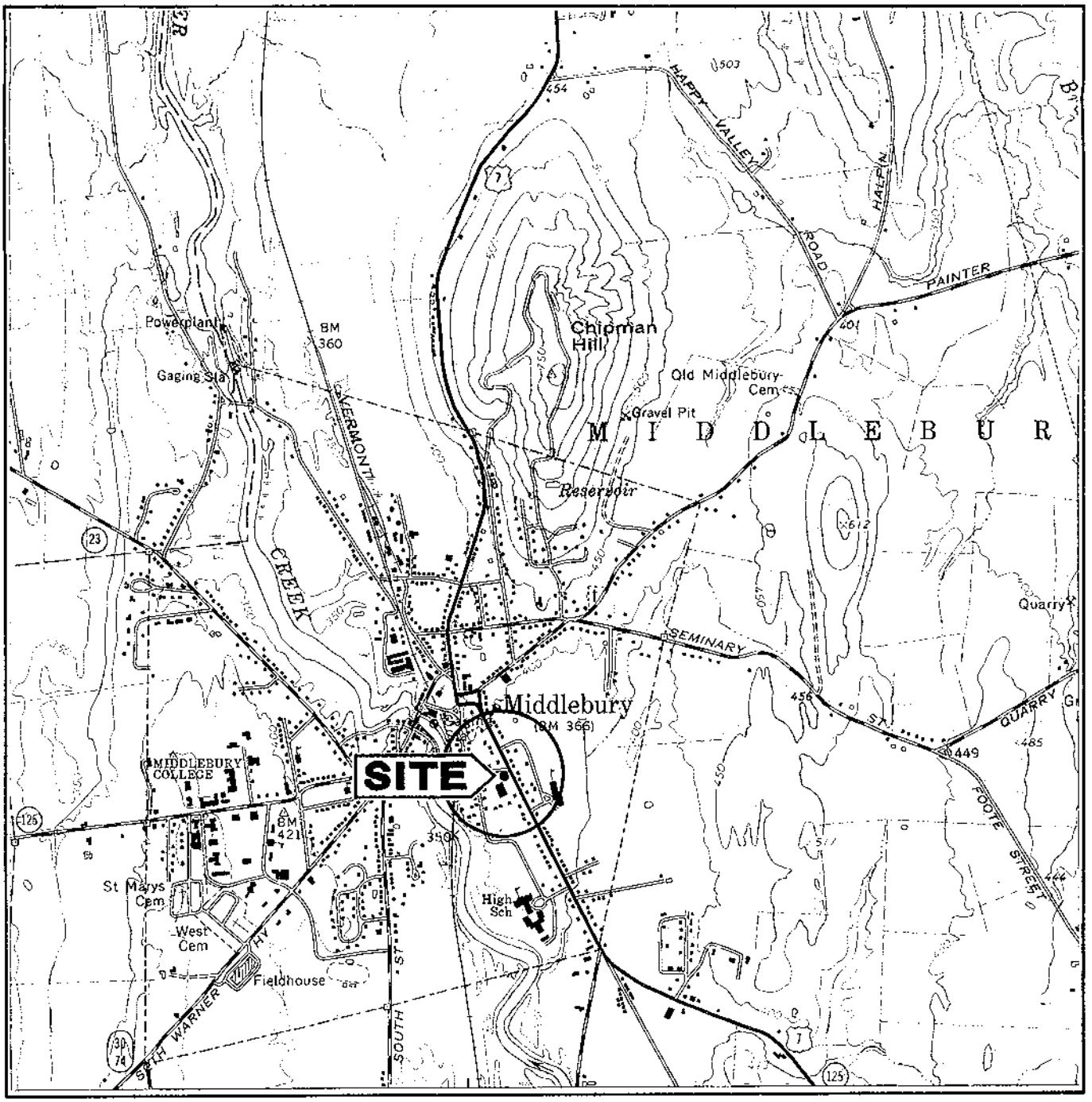
United States Geological Survey 7.5 x 15 minute topographic maps, Middlebury, Vermont

Vermont Agency of Natural Resources Department of Environmental Conservation, Hazardous Materials Management Division, Waterbury, Vermont. Files reviewed October 28, 1993.

Vermont Agency of Natural Resources, Hazardous Materials Management Division. *List of Active Hazardous Waste Sites* and *Spills Database* listing reviewed October 28, 1993.

Stearns and Wheler, *330 Gallon Diesel UST and 1,000 Gallon #2 Fuel Oil UST Closure Report,* Cross and Court Street, Middlebury, Vermont, July 13, 1993.

PLATES



Source: U.S. Geological Survey
7.5 Minute Quadrangle
Middlebury, Vermont

N

Approximate Scale

2000 0 2000 4000

Feet

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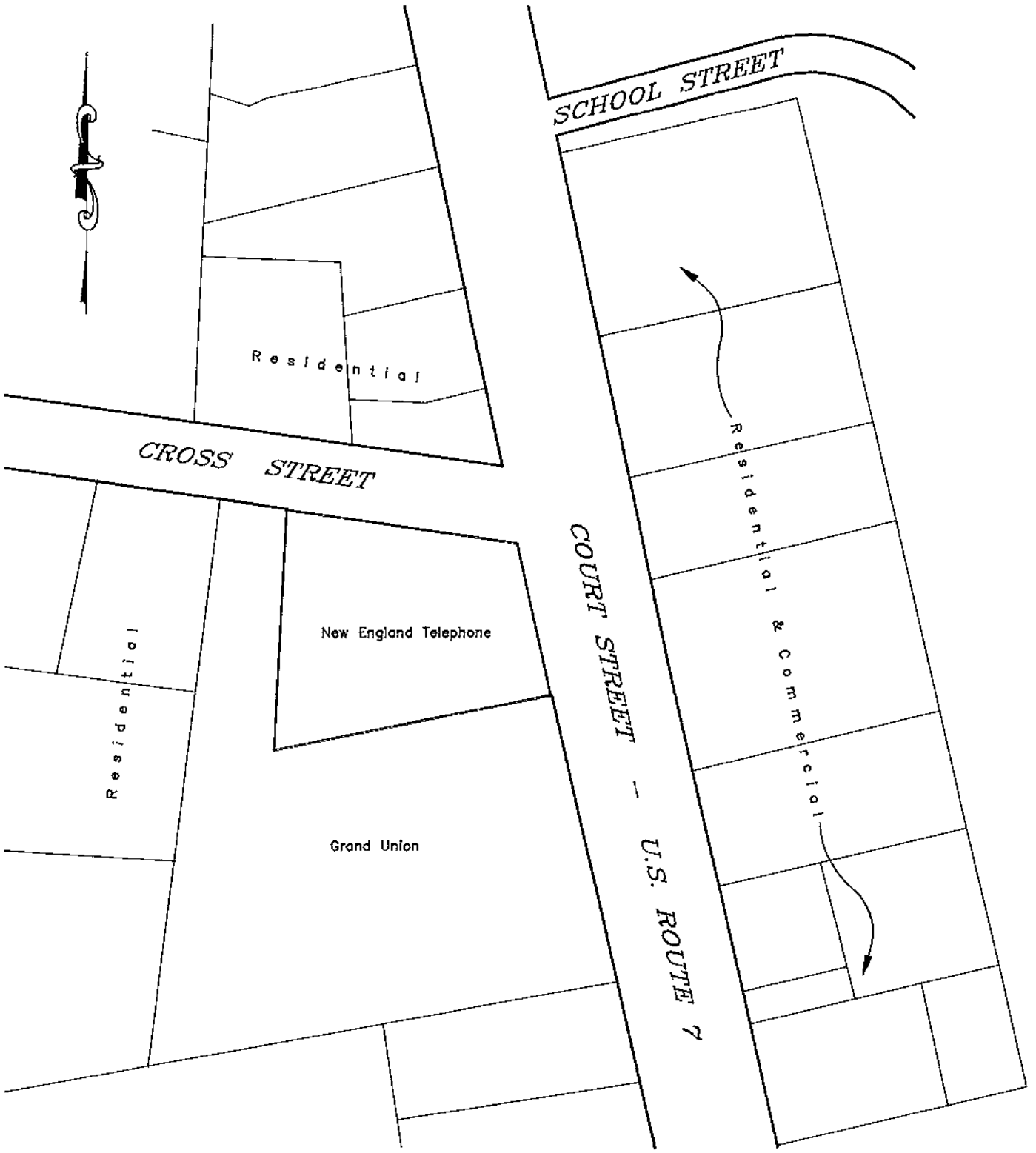
SITE LOCATION MAP

New England Telephone
Cross & Court Streets
Middlebury, Vermont

PLATE
1

3100381V



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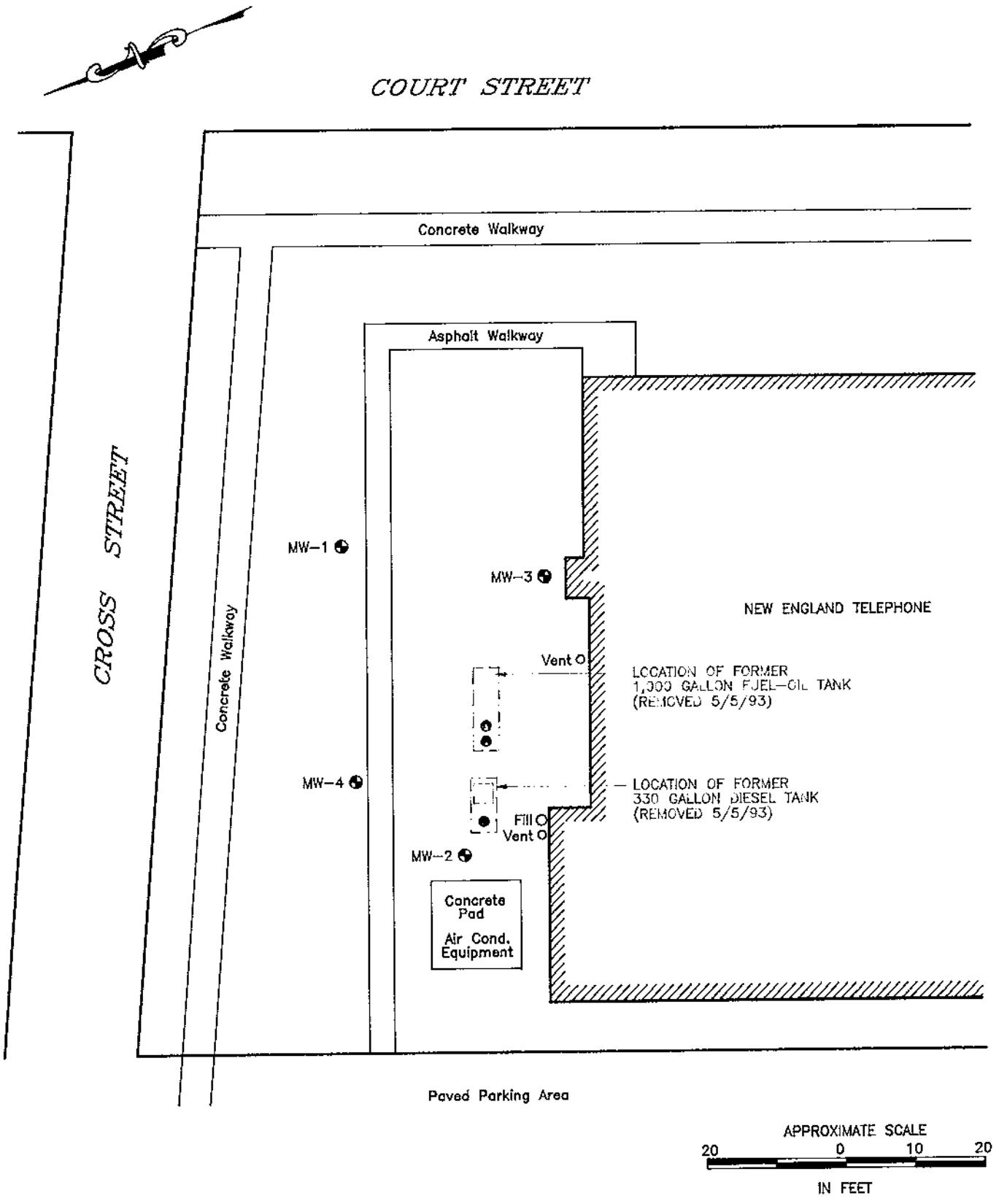
SITE VICINITY MAP

New England Telephone
Cross & Court Streets
Middlebury, Vermont

PLATE
2

310038IS



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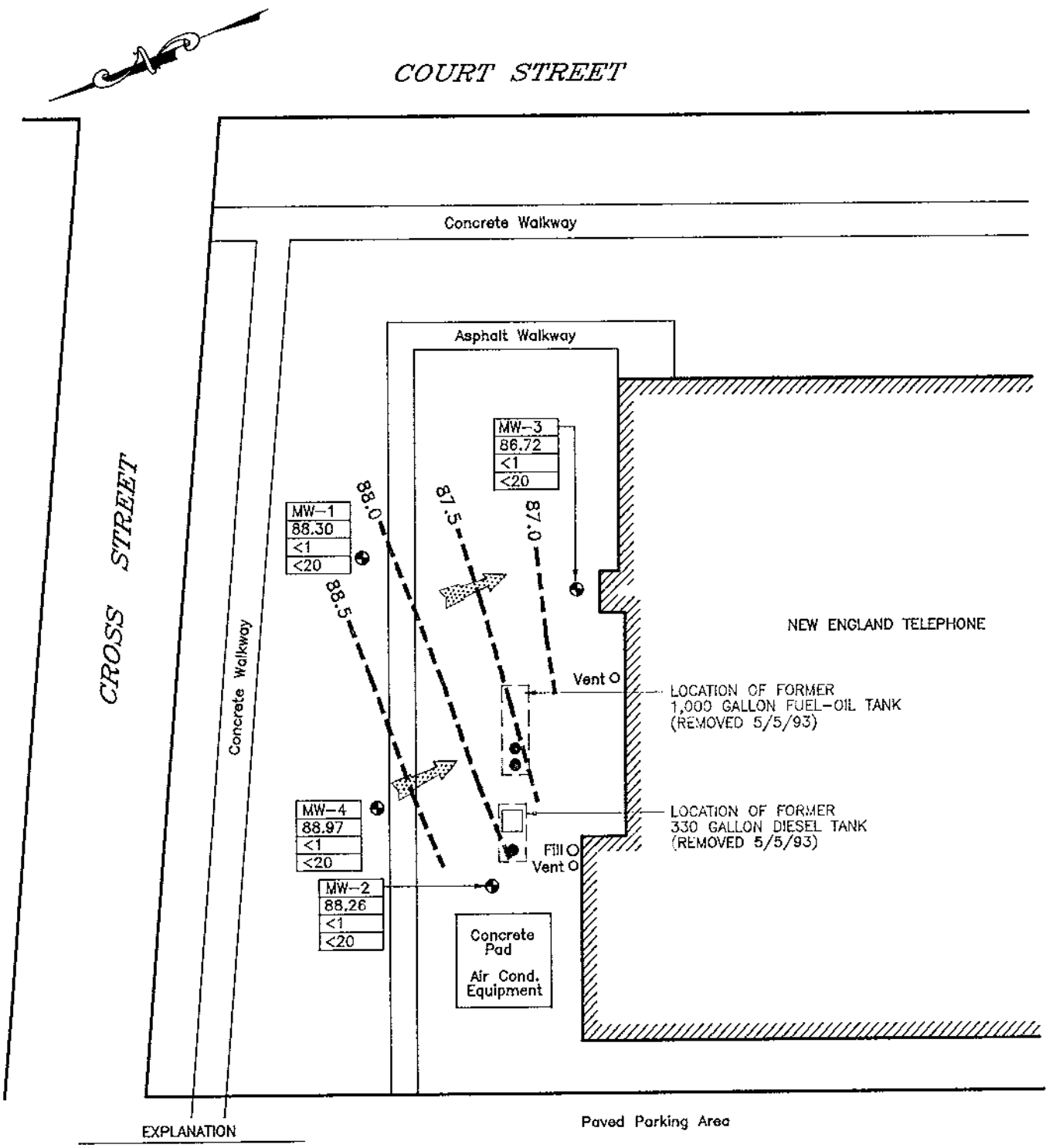
GENERALIZED SITE PLAN

New England Telephone
Cross & Court Streets
Middlebury, Vermont

PLATE
3

3100381A



EXPLANATION

- Monitoring well
- MW-1 — Well number
- 88.30 — Ground-water elevation
- <1 — Total BTEX concentration in parts per billion (ppb)
- <20 — MTBE concentration in ppb
- < — Less than the stated detection limit
- Approximate direction of ground-water flow
- 88.5 — Ground-water equipotential

APPROXIMATE SCALE

20 0 10 20

IN FEET

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GROUND-WATER MAP

New England Telephone
Cross & Court Streets
Middlebury, Vermont

PLATE 4

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APPENDIX A

STEARNS & WHELER TANK REMOVAL OBSERVATION AND CLOSURE REPORT

Stearns & Wheler

ENVIRONMENTAL
ENGINEERS & SCIENTISTS

July 13, 1993

State of Vermont
Department of Environmental Conservation
Underground Storage Tank Program
103 South Main Street
Waterbury, Vermont 05671 - 0404

RE: 330 Gallon Diesel UST Removal
1,000 Gallon #2 Fuel Oil UST Removal
Closure Report
New England Telephone Facility (4772-06)
Court Street
Middlebury, Vermont

Dear Sirs:

The above referenced tank removals were observed by Stearns & Wheler under the direction of the Owner, New England Telephone. Stearns & Wheler was responsible for the observation of the tank site prior to excavation; observation of the excavation of the tank itself which included the condition of the extracted tank (signs of wear, rust, corrosion, leaks etc.); observation of the soil around and beneath the tank after the extraction of the tank; obtaining field screenings of the soil and observation of backfilling procedures once the tank had been removed. The Contractor under agreement with New England Telephone for the extraction and subsequent disposal of a 330 and 1,000 gallon tank was Interface Construction Services, Inc. of Syracuse, New York.

330 GALLON DIESEL TANK

Background

The diesel tank was pulled on Wednesday, May 5, 1993. The weather was cloudy with scattered showers, with temperatures in the 50's. The diesel tank was located off the north side of the NET building, as shown on the site diagram. The tank was reported to contain diesel fuel. The age of the tank was reported by NET to be approximately 16 years old with no reported capacity.

Tank Description

The UST was visually observed to be in fair condition. There were visual signs of rust and pits, but no holes were noted. Pictures of the tank, site location, tank condition, and excavation are attached at the end of this report.

Two Commerce Drive
Bedford, New Hampshire 03110
(603) 622-5838 Fax (603) 622-6549

Cazenovia, New York Danen, Connecticut
Bedford, New Hampshire Tampa, Florida

Soil Description

The soil from the immediate excavation consisted of sandy loam. A slight odor was noted from soil at the base of the excavation. Groundwater was encountered at approximately 7 feet. A sheen was noted.

Field Screening

A Photovac Micro Tip MP-100 Photoionization Detector ™ (PID) was used for field screening purposes. The unit was calibrated on May 5, 1993 at 7:00 am with Isobutylene prior to field screening. Screenings ranged from 0 ppm to 59 ppm. A jar headspace test reading of soil from the west side of the excavation was 97 ppm.

1,000 GALLON #2 FUEL OIL TANK

Background

The fuel oil tank was pulled on Wednesday, May 5, 1993. The weather was cloudy with scattered showers, with temperatures in the 50's. The fuel oil tank was located off the north side of the NET building, as shown on the site diagram. The tank was reported to contain #2 fuel oil. The age of the tank was reported by NET to be approximately 37 years old with a capacity of 1,000 gallons.

Tank Description

The UST was visually observed to be in fair condition. There were visual signs of rust and pits, but no holes were noted. Pictures of the tank, site location, tank condition, and excavation are attached at the end of this report.

Soil Description

The soil from the immediate excavation consisted of sandy loam. A slight odor was noted from soil at the base of the excavation. Groundwater was encountered at approximately 7 feet. No sheen was noted.

Field Screening

A Photovac Micro Tip MP-100 Photoionization Detector ™ (PID) was used for field screening purposes. The unit was calibrated on May 5, 1993 at 7:00 am with Isobutylene prior to field screening. Screenings ranged from 0 ppm to 77 ppm. A jar headspace test reading of soil from the east side of the excavation was 192 ppm.

Laboratory Results

Three soil samples and one water sample were taken from the excavation. The sample results from Eastern Analytical, Inc. of Concord, New Hampshire are attached.

Summary

The laboratory results for Benzene, Toluene Ethylebenzene and Total Xylenes for soil samples 7150-J, 7150-L and 7150-M were less than the 10 ug/kg detection limit. The laboratory results for TPH for sample 7150-J were less than the detection limit of 500 ug/kg in all ranges. The results for TPH for samples 7150-L and 7150-M were less than the 500 ug/kg detection limit in the C_4 - C_{10} range. The results for sample 7150-L in the C_{11} - C_{16} range was 5,000 ug/kg. The results for sample 7150-M in the C_{11} - C_{16} was 10,000 ug/kg.

If there are any questions on this report or the accompanying attachments, please feel free to call me directly.

Very truly yours,

STEARNS & WHELER, INC.

Peter P. Burnell
Project Manager

PPB/mm/ 7150

Attachments

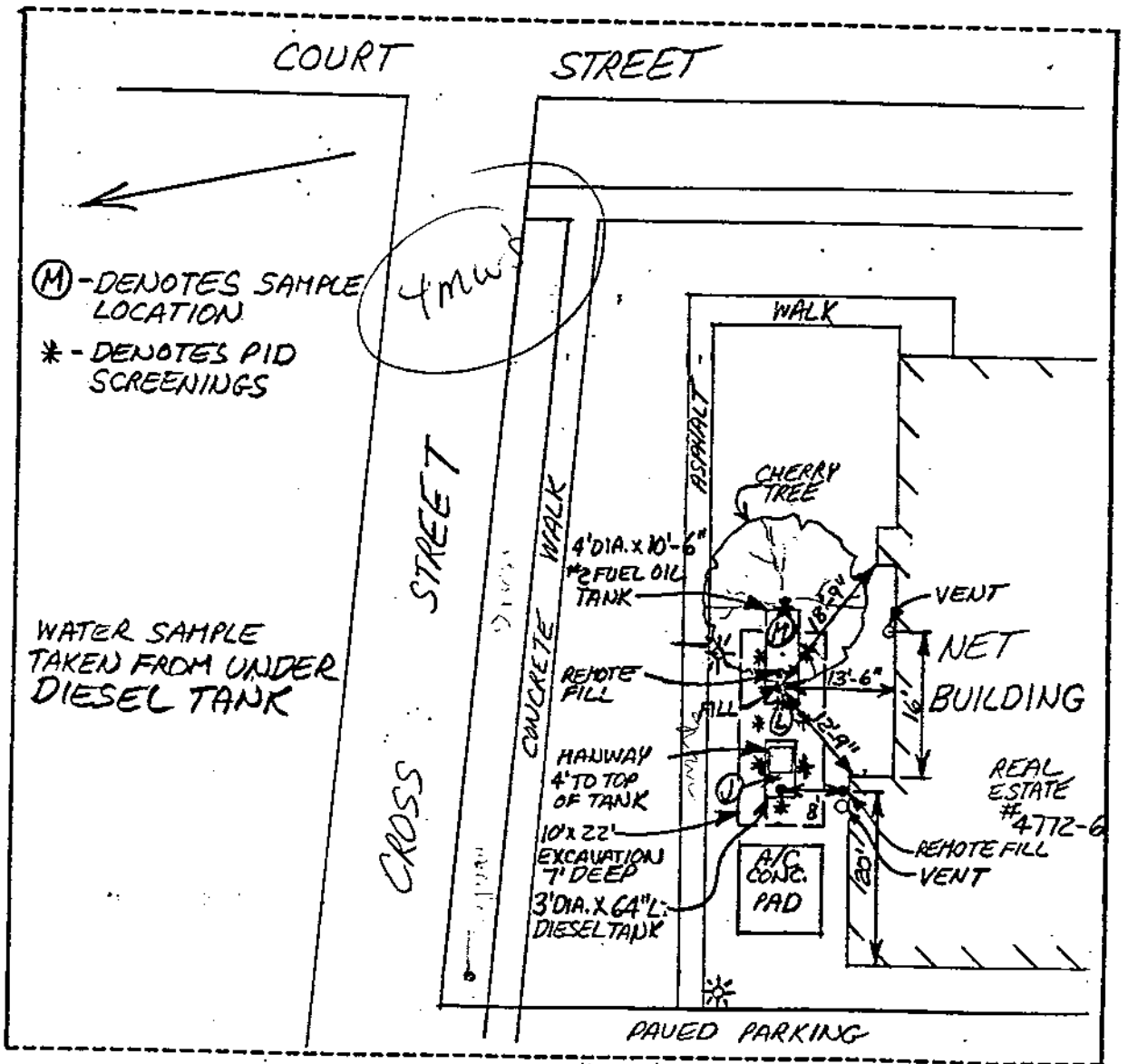
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
UNDERGROUND STORAGE TANK PROGRAM
TANK PULL FORM

TODAY'S DATE: 5/7/93 INSPECTOR: JERRY BORONSKI

DATE OF REMOVAL: 5/5/93 BUSINESS NAME: NEW ENGLAND TELEPHONE

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.



SCALE: 1"=20'

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
UNDERGROUND STORAGE TANK PROGRAM
103 SOUTH MAIN STREET
WATERBURY, VERMONT 05671-0404
(802) 244-8702

Date of Removal: 5/5/93 Date of Assessment: 5/5/93
Person & Company Doing Assessment: JERRY BOROWSKI - STEARNS & WHEELER
Telephone Number: 603-622-5838

Business Name Where Tank(s) Located: NEW ENGLAND TELEPHONE
Number of Employees: N/A.
Street Address & Town/City: CROSS ST., MIDDLEBURY, VT.

Owner of Tank(s): NEW ENGLAND TELEPHONE
Address: 125 HIGH ST. ROOM 1006
Town/City: BOSTON, MA. 02110
Contact Person: MIKE LAROW
Phone Number: 617-743-6824

UST Facility ID Number:

Tank #	Product	Size	Condition
1	DIESEL	330 GAL.	FAIR
2	#2 FUEL OIL	1000 GAL.	FAIR
3			
4			

Reason for Tank Removal (check one): ☐ abandoned ☐ routine replacement ☐ tank or piping leaking ☒ liability

Replacement Tank(s)? ☐ yes ☒ no Number of Replacement Tanks: _____
DEC UST Permit(s) Obtained? ☒ yes ☐ no
DEC-Permitted Tank(s) Still On-Site? ☐ yes ☒ no Number of Tanks: _____
Out of Service Tank(s) On-Site? ☐ yes ☒ no Number of Tanks: _____
Heating Oil Tank(s) On-Site? ☐ yes ☒ no No. of Tanks: _____ Size(s): _____

Any Waste Pumpage? ☐ yes ☐ no Estimated Volume: 10 GALS.
Transported By: INTERFACE SERVICES, INC.

Size of Excavation (ft²): 220 ± Depth: 8' Soil Type: SANDY LOAM
Concentrations Detected with PID: Peak = 767 Average = 40
Type of PID: PHOTOVAC MICROTIP MP-100
Number of Readings (please put locations on attached drawing): 9
Calibration Info. (date, time, type of gas): 5/5/93 7:00AM ISOBUTYLENE 100ppm

Free Phase Product Encountered? ☐ yes ☒ no Approx. Amount: _____
Cont. Soils Stockpiled? ☒ yes ☐ no Amount (yd³): 10
Cont. Soils Backfilled? ☐ yes ☒ no Amount (yd³): _____

Groundwater Encountered? ☒ yes ☐ no Depth to Groundwater: 7'
Monitoring Wells Installed? ☐ yes ☒ no Number: ____ Screen Depth: _____

On-Site Drinking Well? ☐ yes ☒ no (if yes: ☐ rock ☐ gravel ☐ spring)
Public Water Supply Well(s) Within ½ Mile? ☐ yes ☒ no
Distance to nearest: _____
Private Water Supply Well(s) Within ½ Mile? ☐ yes ☒ no How Many? _____

Samples Collected for Laboratory Analysis? ☒ yes ☐ no How Many? 4
(check all that apply: ☒ soil ☒ groundwater ☐ drinking water)

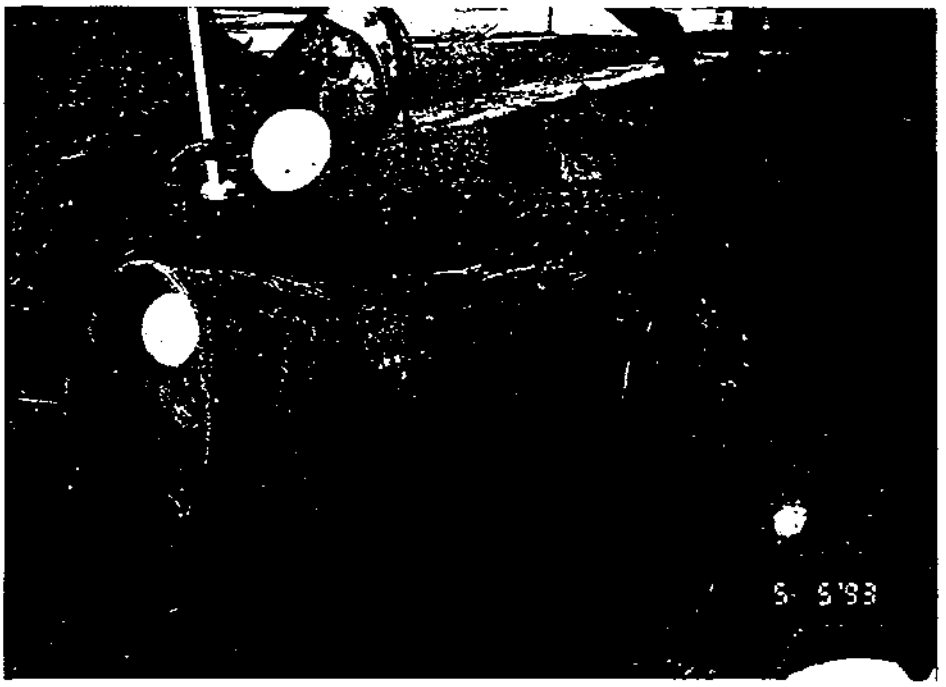
Receptors Affected (check all that apply):
☐ soil ☐ residential; # of houses/people: _____
☐ groundwater ☐ surface water; name/type of water body: _____

Signature of Owner or Authorized Representative: _____
Date: _____
Signature of Person Performing Site Assessment: Jerry Borowski
Date: 5/7/93

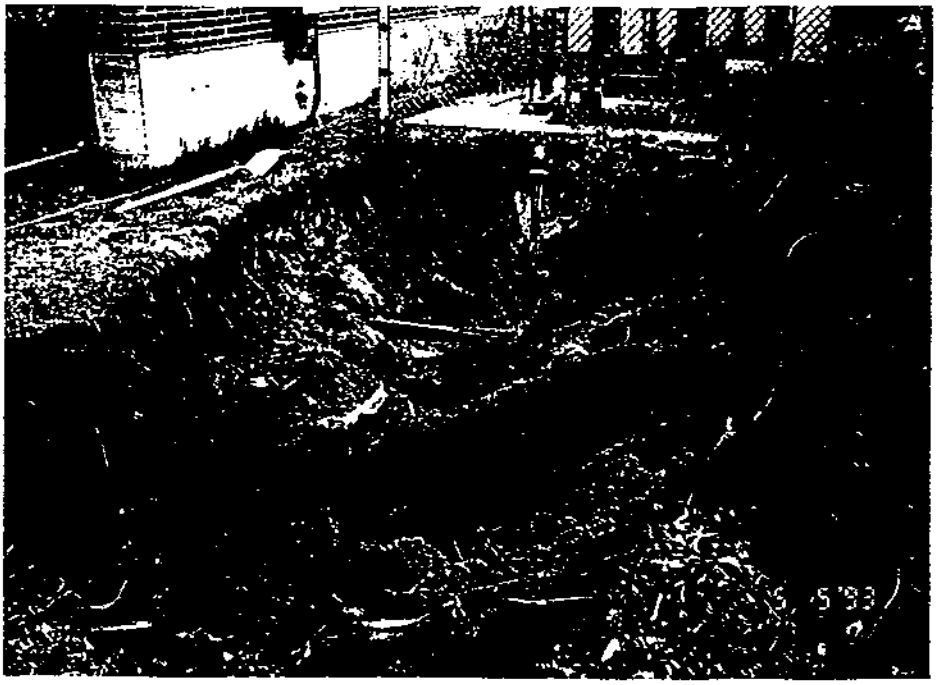
*** ATTACH OBSERVATIONS, CONCLUSIONS, AND DRAWING ON A SEPARATE PAGE ***

White - DEC File Copy Yellow - DEC File Copy Pink - Owner Copy

330 GALLON DIESEL TANK

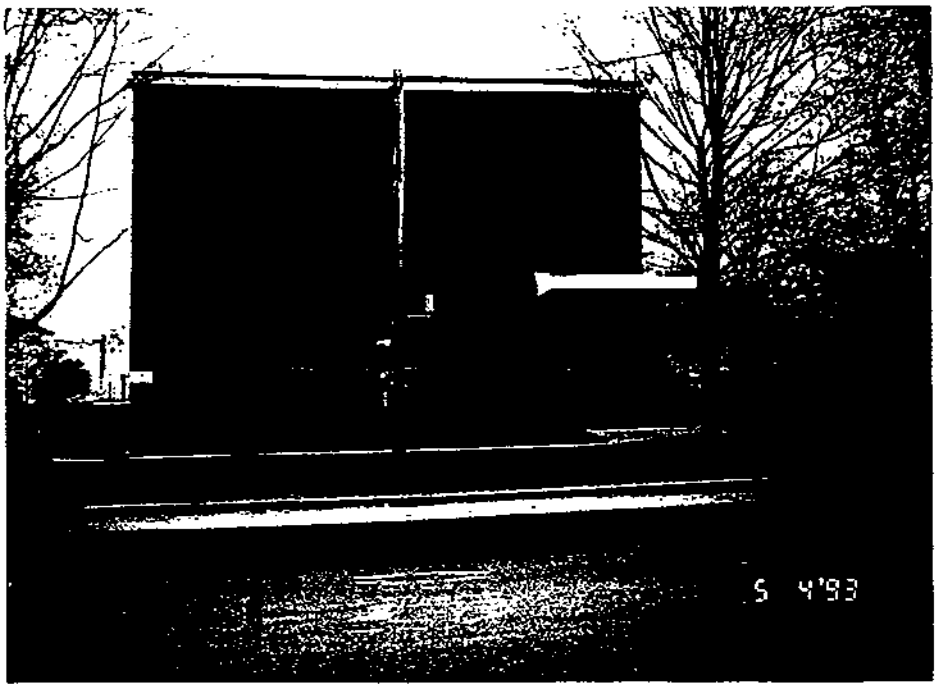


1,000 GALLON FUEL OIL TANK

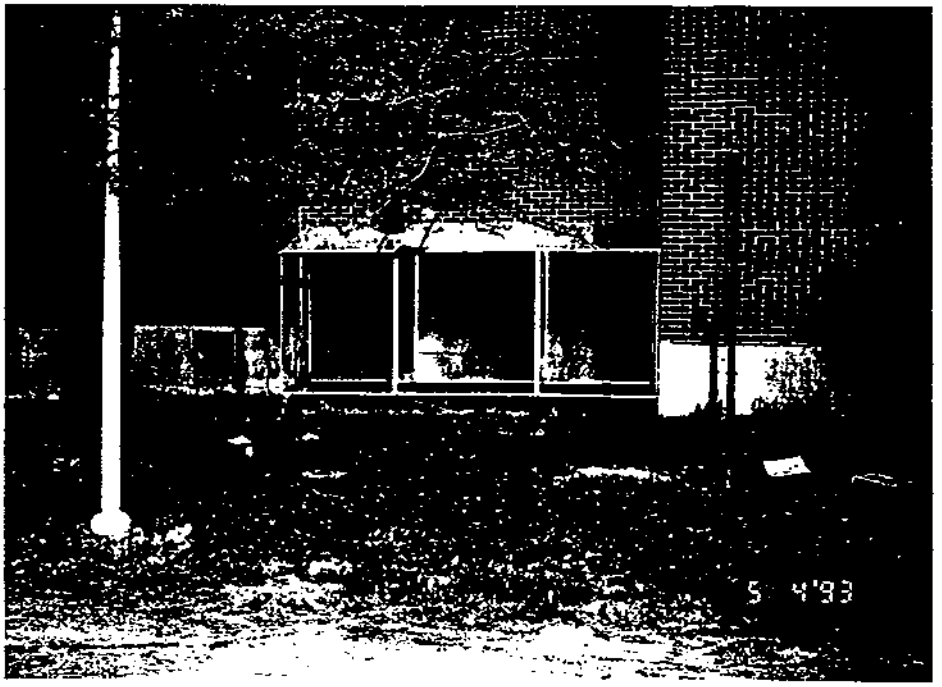


FILL PIPE FOR 1000 GAL. TANK IN FOREGROUND
FILL PIPE FOR 330 GAL. TANK IN BACKGROUND

GROUNDWATER AT BASE OF 330 GALLON DIESEL TANK
(SHEEN NOTED)



NET BUILDING
COURT ST. & CROSS ST. – MIDDLEBURY, VT.



TANKS & PIPING BEFORE EXCAVATION

Eastern Analytical, Inc. 130 Hall St., Concord, NH 03301 (603) 228-0525

May 25, 1993

Jerry Borowski
Stearns & Wheler
Two Commerce Drive
Bedford, N.H. 03110

Subject: Laboratory Report

Eastern Analytical, Inc. ID #: 5998 SWH
Client Identification: #7150/NET Stowe & Middlebury
Sample Quantity/Type: 1 aqueous, 10 soil
Date Received: 6 May, 1993

Dear Mr. Borowski:

Enclosed, please find the laboratory report for the above identified project. All analyses were subjected to rigorous quality control measures to assure data accuracy.

The following standard abbreviations and conventions apply throughout all Eastern Analytical, Inc. reports:

- < = "Less than" followed by the detection limit
- TNR = Testing Not Requested
- ND = None detected, no established detection limits

If you have any questions regarding the results contained within, please feel free to directly contact me, the department supervisor, or the analytical chemist who performed the testing in question.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

William Brunkhorst
Lab Director

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 5998 SWH

Client: Steams & Wheler
Client Designation: **#7150/NET Stowe & Middlebury**

Sample Qty/Type: 8 soil, 1 aqueous
Date Received: May 6, 1993

Hazardous Substance List Volatile Organic Compounds

Sample ID:	7150-L	7150-M	7150-2	
Matrix:	Soil	Soil	Aqueous	
Date of Analysis:	5/17/93	5/17/93	5/15/93	
Units:	µg/kg	µg/kg	µg/L	EPA
Analyst:	LB	LB	LB	Method
Dilution Factor:	1	1	1	
Chloromethane	< 100	< 100	< 10	8240
Bromomethane	< 100	< 100	< 10	8240
Vinyl Chloride	< 100	< 100	< 10	8240
Chloroethane	< 100	< 100	< 10	8240
Methylene Chloride	< 10	< 10	< 2	8240
Carbon Disulfide	< 10	< 10	< 2	8240
1,1-Dichloroethene	< 10	< 10	< 2	8240
1,1-Dichloroethane	< 10	< 10	< 2	8240
Trans-1,2-Dichloroethene	< 10	< 10	< 2	8240
Cis-1,2-Dichloroethene	< 10	< 10	< 2	8240
Chloroform	< 10	< 10	< 2	8240
1,2-Dichloroethane	< 10	< 10	< 2	8240
1,1,1-Trichloroethane	< 10	< 10	< 2	8240
Carbon Tetrachloride	< 10	< 10	< 2	8240
Bromodichloromethane	< 10	< 10	< 2	8240
1,2-Dichloropropane	< 10	< 10	< 2	8240
Trans-1,3-Dichloropropene	< 10	< 10	< 2	8240
Trichloroethene	< 10	< 10	< 2	8240
Dibromochloromethane	< 10	< 10	< 2	8240
1,1,2-Trichloroethane	< 10	< 10	< 2	8240
Cis-1,3-Dichloropropene	< 10	< 10	< 2	8240
2-Chloroethylvinylether	< 10	< 10	< 2	8240
Bromoform	< 10	< 10	< 2	8240
Tetrachloroethene	< 10	< 10	< 2	8240
1,1,2,2-Tetrachloroethane	< 10	< 10	< 2	8240
Acetone	< 500	< 500	< 50	8240
2-Butanone (MEK)	< 100	< 100	< 10	8240
Vinyl Acetate	< 100	< 100	< 10	8240
4-Methyl-2-Pentanone (MIBK)	< 100	< 100	< 10	8240
2-Hexanone	< 100	< 100	< 10	8240
Benzene	< 10	< 10	< 1	8240
Toluene	< 10	< 10	< 1	8240
Ethylbenzene	< 10	< 10	< 1	8240
Total Xylenes	< 10	< 10	< 1	8240
Chlorobenzene	< 10	< 10	< 1	8240
Styrene	< 10	< 10	< 1	8240
Volatile Petroleum Hydrocarbons (C4-C7)	< 500	< 500	TNR	8015
(C8-C10)	< 500	< 500	TNR	8015
(C11-C16)	**5,000**	**10,000**	TNR	8015

Approved By: Timothy Schaper, Organics Supervisor Timothy D. Schaper

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 5998 SWH

Client: Stearns & Wheler
Client Designation: **#7150/NET Stowe & Middlebury**

Sample Qty/Type: 8 soil, 1 aqueous
Date Received: May 6, 1993

Hazardous Substance List Volatile Organic Compounds

Sample ID:	7150-L	7150-M	7150-2	
Matrix:	Soil	Soil	Aqueous	
Date of Analysis:	5/17/93	5/17/93	5/15/93	
Units:	µg/kg	µg/kg	µg/L	EPA
Analyst:	LB	LB	LB	Method
Dilution Factor:	1	1	1	
Chloromethane	< 100	< 100	< 10	8240
Bromomethane	< 100	< 100	< 10	8240
Vinyl Chloride	< 100	< 100	< 10	8240
Chloroethane	< 100	< 100	< 10	8240
Methylene Chloride	< 10	< 10	< 2	8240
Carbon Disulfide	< 10	< 10	< 2	8240
1,1-Dichloroethene	< 10	< 10	< 2	8240
1,1-Dichloroethane	< 10	< 10	< 2	8240
Trans-1,2-Dichloroethene	< 10	< 10	< 2	8240
Cis-1,2-Dichloroethene	< 10	< 10	< 2	8240
Chloroform	< 10	< 10	< 2	8240
1,2-Dichloroethane	< 10	< 10	< 2	8240
1,1,1-Trichloroethane	< 10	< 10	< 2	8240
Carbon Tetrachloride	< 10	< 10	< 2	8240
Bromodichloromethane	< 10	< 10	< 2	8240
1,2-Dichloropropane	< 10	< 10	< 2	8240
Trans-1,3-Dichloropropene	< 10	< 10	< 2	8240
Trichloroethene	< 10	< 10	< 2	8240
Dibromochloromethane	< 10	< 10	< 2	8240
1,1,2-Trichloroethane	< 10	< 10	< 2	8240
Cis-1,3-Dichloropropene	< 10	< 10	< 2	8240
2-Chloroethylvinylether	< 10	< 10	< 2	8240
Bromoform	< 10	< 10	< 2	8240
Tetrachloroethene	< 10	< 10	< 2	8240
1,1,2,2-Tetrachloroethane	< 10	< 10	< 2	8240
Acetone	< 500	< 500	< 50	8240
2-Butanone (MEK)	< 100	< 100	< 10	8240
Vinyl Acetate	< 100	< 100	< 10	8240
4-Methyl-2-Pentanone (MIBK)	< 100	< 100	< 10	8240
2-Hexanone	< 100	< 100	< 10	8240
Benzene	< 10	< 10	< 1	8240
Toluene	< 10	< 10	< 1	8240
Ethylbenzene	< 10	< 10	< 1	8240
Total Xylenes	< 10	< 10	< 1	8240
Chlorobenzene	< 10	< 10	< 1	8240
Styrene	< 10	< 10	< 1	8240
Volatile Petroleum Hydrocarbons (C4-C7)	< 500	< 500	TNR	8015
(C8-C10)	< 500	< 500	TNR	8015
(C11-C16)	**5,000**	**10,000**	TNR	8015

Approved By: Timothy Schaper, Organics Supervisor Timothy P. Schaper

RESNA
Working To Restore Nature

APPENDIX B

BORING LOGS

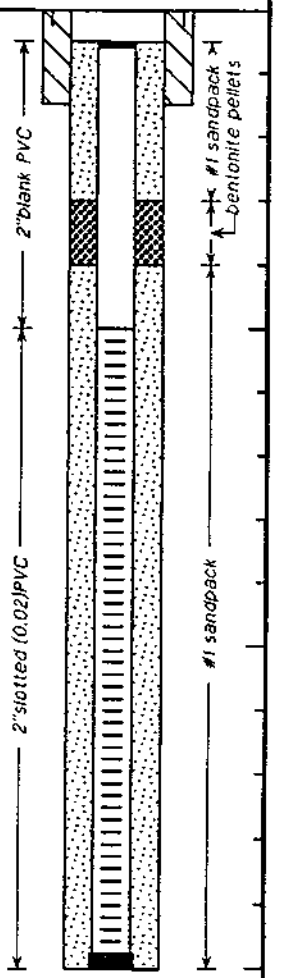
RESNA Industries Inc.
Working to Restore Nature

Log of Monitoring Well MW-1

PROJECT: *New England Telephone Phase I Assessment*	LOCATION: *Middlebury, Vermont*
PROJECT NO.: *310038.01*	SURFACE ELEVATION: *385+/- ft. MSL*
DATE STARTED: *10/13/93*	INITIAL H2o LEVEL: *7.0 ft. TOC*
DATE FINISHED: *10/13/93*	FINAL H2o LEVEL: *7.74 (10/27/93) ft. TOC*
DRILLING METHOD: *Hollow Stem Auger*	TOTAL DEPTH: *15 Feet*
DRILLING COMPANY: *GeoSearch*	GEOLOGIST/DRILLER: *Doug Morrison/ Tom Belsky*

DEPTH feet	SAMPLE NO.	BLOWS/FT.	PID (ppm) VALUES	PID (ppm) PROFILE 0–5	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
	SS-1	9	0			SM	Brown fine-grained sand with trace silt and clay.
	SS-2	--	--				
5	SS-3	22	0			CL	Red to gray clay.
	SS-4	24	0				Gray clay.
	SS-5	28	0				
10	SS-6	8	0				
	SS-7	4	0				
15							Botton of exploration at 15 feet.
20							

WELL DIAGRAM



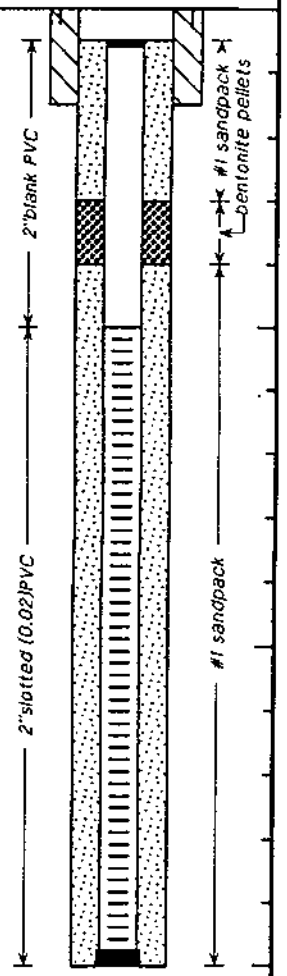
RESNA Industries Inc.
Working to Restore Nature

Log of Monitoring Well MW-2

PROJECT: *New England Telephone Phase I Assessment*	LOCATION: *Middlebury, Vermont*
PROJECT NO.: *310038.01*	SURFACE ELEVATION: *385+/- ft. MSL*
DATE STARTED: *10/14/93*	INITIAL H2o LEVEL: *8.0 ft. TOC*
DATE FINISHED: *10/14/93*	FINAL H2o LEVEL: *8.25 (10/27/93) ft. TOC*
DRILLING METHOD: *Hollow Stem Auger*	TOTAL DEPTH: *15 Feet*
DRILLING COMPANY: *GeoSearch*	GEOLOGIST/DRILLER: *Doug Morrison/ Tom Belsky*

DEPTH feet	SAMPLE NO.	BLOWS/FT.	PID (ppm) VALUES	PID (ppm) PROFILE 0 5	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
5	SS-1	TFF	0			SM	Brown fine-grained sand.
	SS-2	2	0				
	SS-3	4	0				
	SS-4	3	0			CL	Gray clay.
10	SS-5	2	0				
	SS-6	2	0				
	SS-7	2	0				
15							Botton of exploration at 15 feet.
20							

WELL DIAGRAM



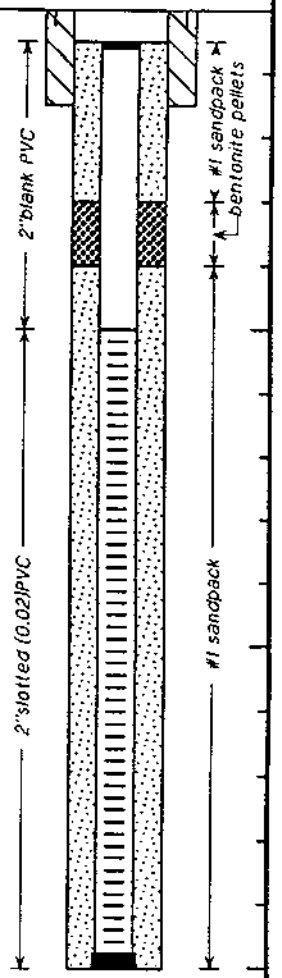
RESNA Industries Inc.
Working to Restore Nature

Log of Monitoring Well MW-3

PROJECT: *New England Telephone Phase I Assessment*	LOCATION: *Middlebury, Vermont*
PROJECT NO.: *310038.01*	SURFACE ELEVATION: *385+/- ft. MSL*
DATE STARTED: *10/14/93*	INITIAL H2o LEVEL: *7.5 ft. TOC*
DATE FINISHED: *10/14/93*	FINAL H2o LEVEL: *8.94 (10/27/93) ft. TOC*
DRILLING METHOD: *Hollow Stem Auger*	TOTAL DEPTH: *15 Feet*
DRILLING COMPANY: *GeoSearch*	GEOLOGIST/DRILLER: *Doug Morrison/ Tom Belsky*

DEPTH feet	SAMPLE NO.	BLOWS/FT.	PID (ppm) VALUES	PID (ppm) PROFILE 0 5	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
	SS-1	7	0			SM	Brown medium to fine-grained sand.
	SS-2	8	0				Fine brown sand with trace silt to brown clay
5	SS-3	8	0			CL	
	SS-4	10	0				Gray clay.
	SS-5	2	0				
10	SS-6	3	0				
	SS-7	2	0				
15							Botton of exploration at 15 feet.
20							

WELL DIAGRAM



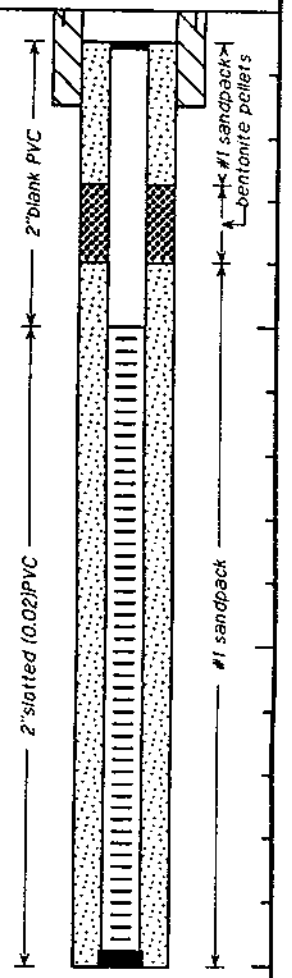
RESNA Industries Inc.
Working to Restore Nature

Log of Monitoring Well MW-4

PROJECT: *New England Telephone Phase I Assessment*	LOCATION: *Middlebury, Vermont*
PROJECT NO.: *310038.01*	SURFACE ELEVATION: *385+/- ft. MSL*
DATE STARTED: *10/14/93*	INITIAL H2o LEVEL: *7.5 ft. TOC*
DATE FINISHED: *10/14/93*	FINAL H2o LEVEL: *7.28 (10/27/93) ft. TOC*
DRILLING METHOD: *Hollow Stem Auger*	TOTAL DEPTH: *15 Feet*
DRILLING COMPANY: *GeoSearch*	GEOLOGIST/DRILLER: *Doug Morrison/ Tom-Belsky*

DEPTH feet	SAMPLE NO.	BLOWS/FT.	PID (ppm) VALUES	PID (ppm) PROFILE 0 5	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
	SS-1	--	0			SM	Brown medium to fine-grained sand.
	SS-2	--	0				Fine brown sand with trace silt to brown clay
5	SS-3	--	0			CL	
	SS-4	8	0				Gray clay.
	SS-5	--	0				
10	SS-6	--	0				
	SS-7	--	0				
15							Botton of exploration at 15 feet.
20							

WELL DIAGRAM



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APPENDIX C

LABORATORY CERTIFICATES OF ANALYSIS AND CHAIN OF CUSTODY DOCUMENTATION

Eastern Analytical, Inc. 130 Hall St., Concord, NH 03301 (603) 228-0525

November 3, 1993

Andy Bakinowski
Resna Industries
82 South Street
Hopkinton, MA 01748

Subject: Laboratory Report

Eastern Analytical, Inc. ID #:	7163 RES
Client Identification:	310038.01/NET VT
Sample Quantity/Type:	4 aqueous
Date Received:	28 October, 1993

Dear Mr. Bakinowski:

Enclosed, please find the laboratory report for the above identified project. All analyses were subjected to rigorous quality control measures to assure data accuracy.

The following standard abbreviations and conventions apply throughout all Eastern Analytical, Inc. reports:

- < = "Less than" followed by the detection limit
- TNR = Testing Not Requested
- ND = None detected, no established detection limits

If you have any questions regarding the results contained within, please feel free to directly contact me, the department supervisor, or the analytical chemist who performed the testing in question.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

William Brunkhorst
Lab Director

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7163 RES

Client: Resna Industries
Client Designation: **310038.01/NET VT**

Sample Qty/Type: 4 aqueous
Date Received: October 28, 1993

Hazardous Substance List Volatile Organic Compounds

Sample ID:	MW-1	MW-2	MW-3	MW-4	
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous	
Date of Analysis:	10/29/93	10/29/93	10/29/93	10/29/93	
Units:	µg/L	µg/L	µg/L	µg/L	
Analyst:	LB	LB	LB	LB	EPA Method
Benzene	< 1	< 1	< 1	< 1	602
Toluene	< 1	< 1	< 1	< 1	602
Ethylbenzene	< 1	< 1	< 1	< 1	602
Total Xylenes	< 1	< 1	< 1	< 1	602
Chlorobenzene	< 1	< 1	< 1	< 1	602
Styrene	< 1	< 1	< 1	< 1	602
MTBE	< 20	< 20	< 20	< 20	8015

Approved By: Timothy Schaper, Organics Supervisor

Eastern Analytical, Inc. 130 Hall St., Concord, NH 03301 (603) 228-0525

October 30, 1993

Andy Bakinowski
Resna Industries
82 South Street
Hopkinton, MA 01748

Subject: Laboratory Report

Eastern Analytical, Inc. ID #: 7062 RES
Client Identification: 310038.01/Cross & Court Street
Sample Quantity/Type: 4 soil
Date Received: 15 October, 1993

Dear Mr. Bakinowski:

Enclosed, please find the laboratory report for the above identified project. All analyses were subjected to rigorous quality control measures to assure data accuracy.

The following standard abbreviations and conventions apply throughout all Eastern Analytical, Inc. reports:

- < = "Less than" followed by the detection limit
- TNR = Testing Not Requested
- ND = None detected, no established detection limits

If you have any questions regarding the results contained within, please feel free to directly contact me, the department supervisor, or the analytical chemist who performed the testing in question.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

William Brunkhorst
Lab Director

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7062 RES

Client: Resna Industries
Client Designation: **310038.01/Cross & Court Street**

Sample Qty/Type: 4 soil
Date Received: October 15, 1993

Sample ID: / **Matrix:**	38 MW-1 Soil	38 MWS-2 Soil	38 MW-3 Soil	38 MW-4 Soil	Date of Analysis	Analyst	EPA Method
Organics: (mg/kg)							
Total Petroleum Hydrocarbons	<50	<50	<50	<50	10/25/93	JG	418.1

Approved By: Lorraine Olashaw, Inorganics Supervisor Lorraine Olashaw

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7062 RES

Client: Resna Industries
Client Designation: **310038.01/Cross & Court Street**

Sample Qty/Type: 4 soil
Date Received: October 15, 1993

Hazardous Substance List Volatile Organic Compounds

Sample ID:	38 MW-1	38 MW-2	38 MW-3	38 MW-4	
Matrix:	Soil	Soil	Soil	Soil	
Date of Analysis:	10/21/93	10/21/93	10/21/93	10/21/93	
Units:	µg/kg	µg/kg	µg/kg	µg/kg	EPA
Analyst:	L B	L B	L B	L B	Method
Benzene	< 10	< 10	< 10	< 10	8020
Toluene	< 10	< 10	< 10	< 10	8020
Ethylbenzene	< 10	< 10	< 10	< 10	8020
Total Xylenes	< 10	< 10	< 10	< 10	8020
Chlorobenzene	< 10	< 10	< 10	< 10	8020
Styrene	< 10	< 10	< 10	< 10	8020
MTBE	< 20	< 20	< 20	< 20	8015

Approved By: Timothy Schaper, Organics Supervisor Timothy Schaper

Environmental Services → EASTERN ANALYTICAL

Mobil Oil Corporation, Technical Service Laboratories

Chain of Custody Analysis Request

Please print. Instructions on reverse side correspond with numbered sections.

1 Consultant: REGNA IND Serv. Sta.#: 310038 01
Sampler: DOUG MORRISON Phone:
Location: CROSS & COURT ST MIDDLEBURY VT NET
Mobil Engineer: ANDREW BAKINOWSKI Phone:

2 REGNA INDUSTRIES
82 SOUTH ST
HOPKINTON, MA 01748
FAX 508-435-3407

3 Collection

Sample Identification		Date	Time	Grab	Composite	4 Matrix: Soil	Water	Other	Total # of Containers	5 Analyses Requested: TPH 418.1	8020 MTBE	6 Remarks
38 MW-1	(6-8)'	10/13	3:00			✓			2	X	X	
38 MW-2	(6-8)'	10/14	9:00			✓			2	X	X	
38 MW-3	(6-8)'	10/14	11:00			✓			2	X	X	
38 MW-4	(6-8)'	10/14	1:00			✓			2	X	X	

P.O.# 10378

7 Turnaround time requested, (please circle): Emergency, (Routine)
(Call to confirm Emergency turnaround time.)

Rush analyses results via:
Fax #: 508-435-3407 -or- Phone #: 508435 3400

8 -- This section MUST be signed each time the sample changes hands! --

Relinquished by:	Date	Time	Received by:	Date	Time
Douglas Morrison	10/15	2:25	Teresa Ouellette	10/15	2:25 p

9

Relinquished by:	Date	Time	Received for TSL by:	Date	Time

10 CONDITION OF SAMPLES UPON RECEIPT AT TSL:
Sample Temp:_____ Preserved?:_____ Damaged?:_____
Comments :

In case we have questions when the samples arrive, TSL should call:
Name:_____ Phone:_____
Send report to:_____

Mobil ...itus Mill Rd., Pennington, NJ 08534 (800)572-1354

...es: White & Yellow accompany samples to lab; Pink retained by ...onsultant.

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APPENDIX D

SITE SAFETY PLAN

RESNA
Working To Restore Nature

RESNA INDUSTRIES INC.
SITE SAFETY AND HEALTH PLAN
for
New England Telephone Sites

in Bennington, Vermont
in Vergennes, Vermont
in Middlebury, Vermont
in Montpieler, Vermont

RESNA Project No. 310037.01 through 310040.01

October 11, 1993

TABLE OF CONTENTS

RESNA
Working To Restore Nature

Job Name: New England Telephone Sites

Job Location: Monkton Road, Vergenennes, Vermont

Client Name: Peter Burnell

Project Number: 310037.01 Date: 10/11/93

Job Name: New England Telephone Sites

Job Location: Cross and Court Street, Middlebury, Vermont

Client Name: Peter Burnell

Project Number: 310038.01 Date: 10/11/93

Job Name: New England Telephone Sites

Job Location: School Street, Montpelier, Vermont

Client Name: Peter Burnell

Project Number: 310039.01 Date: 10/11/93

Job Name: New England Telephone Sites

Job Location: 126 Pleasant Street, Bennington, Vermont

Client Name: Peter Burnell

Project Number: 310040.01 Date: 10/11/93

SSP Prepared by: Douglas C. Morrison

Site Safety Officer: Tom Schmitz

This site safety and health plan (SSP) must be kept onsite and accessible to all onsite employees during all phases of site operations. General safe work practices are identified in the RESNA Injury and Illness Prevention Manual and apply to all RESNA work sites.

The provisions set-forth in this SSP shall apply to RESNA employees only. Field personnel may deviate from the safety provisions set forth in this SSP, but only to upgrade or increase the safety requirements. RESNA personnel may suspend work if unauthorized modifications to the safety provisions set forth in this SSP are made. If changes in site or working conditions require changes in safety procedures, appropriate amendments to this SSP will be provided by the RESNA project manager or supervisor, with the written approval of a RESNA branch safety officer or the RESNA Health and Safety Director.

FACILITY BACKGROUND

Each site is an active New England Telephone Garage or substation. Subsurface conntamination was found in May 1993 during tank removals. Due to the evidence of petroleum found during the tank removals, most likely diesel or fuel oil, site monitoring and soil boring installation activities will be performed. This safety plan is intended to cover these activities.

FACILITY CONTACT Mr. Peter Burnell (617) 743-1436

WORK PLAN

Task One: Soil boring installation.

Task Two: Montoring well installation.

JOB HAZARD ANALYSIS AND SUMMARY

Chemical Hazards

Task(s)	Chemical	PEL/Ceiling/IDLH (soil,water,air,etc.)	Known Concentration	Signs/ Symptoms
1,2	Benzene	1/-/3,000 ppm	*Unknown <100 ppm*	Irritating to eyes, nose and respiratory system. Prolonged exposure may result in giddiness, nausea, staggering gait, fatigue or abdominal pain. Benzene is carcinogenic.
1,2	Toluene	100/500/10 ppm	*Unknown <100 ppm*	Prolonged exposure may cause fatigue, confusion, euphoria, dizziness, headached, and dilation of pupils.
"	Ethylbenzene	100/-/2,000 ppm	*Unknown <100 ppm*	Irritating to the eyes and mucous membranes. Prolonged exposure may result in headache, narcosis.
1,2	Xylene Isomers	100/300/1,000 ppm	*Unknown <100 ppm*	Irritating to eyes, nose and throat. Prolonged exposure may cause dizziness, excitement, drowsiness, staggering gait, vomiting.
1,2	MTBE	NA	*Not Analyzed*	

* Note: Known Concentrations are from soil screeing from tank removals in 1993.

Physical Hazards

Task(s)	Hazard	Mitigation Measure
Gauging, bailing, sampling	Chemical exposure, muscle and back strain, traffic through station, street and intersection	Monitor ambient air concentrations, be aware of traffic and equipment, and use proper lifting method.
Trenching, excavating, backfilling, and drilling.	Chemical exposure, trench collapse, muscle and back strain, heavy equipment operation, traffic through site and overhead hazard.	Monitor ambient air concentrations, do not enter unshored trench excavations over 4 feet below the ground surface, use proper lifting method, be aware of traffic and equipment and always wear a hard-hat.
Installation of above ground equipment	Muscle and back strain, traffic through site, and use of power tools.	Use proper lifting method, be aware of traffic and equipment, and wear protective clothing during all installation activities.

Fire and Explosion Hazards

List Flammable or Combustible materials on-site. Keep sources of ignition away from these materials.

Flammable (Flash Point < 100 °F)	Combustible (Flash Point < 200 °F)
Gasoline	Fuel Oil, Diesel

Type and Location of Fire Extinguishers (*Show on map for large projects*)

A fire extinguisher must be in the field vehicle at all times and must be periodically checked for readiness.

OTHER HAZARDS (CHECK IF APPLICABLE)

X	*NOISE*

Activities likely to generate noise exceeding 85 dB: Trenching, backfilling, drilling, system and installation.

Wear hearing protection during these activities.

X	*HEAT STRESS*

Symptoms:

Heat Cramps: Muscular pains and spasms.

Heat Exhaustion: Cool, pale, moist skin; heavy sweating; dilated pupils, headache nausea, dizziness, vomiting, near normal body temperature

Heat Stroke: Hot, red skin; very small pupils; high body temp., reduced sweating

Mitigation:

Cool place for breaks:
Air-conditioned building at the Site.

Take frequent breaks in shaded area. Unzip or remove PPE during breaks. Provide drinking water and/or electrolyte replacement drink. Record the time and duration of all breaks. Heat stroke victims must receive emergency medical care.

X	*HYPOTHERMIA/FROSTBITE*

Symptoms:

Hypothermia: Shivering, apathy, loss of consciousness, decreasing pulse and breathing rate.

Frostbite: White, then grayish yellow progressing to grayish blue skin; cold, numb part.

Mitigation:

Wear multilayer cold weather outfits covered by a wind resistant fabric. Take frequent breaks in a warm, sheltered area. Provide warm non-alcoholic drinks. For frostbite victims warm injured part gradually, do not rub! Warm hypothermia victims and transport to emergency medical care.

X	*UNDERGROUND/OVERHEAD UTILITIES*

	OTHER

Traffic conditions may be hazardous at this site. Use sawhorses with flashing lights and traffic cones at all times when gauging and sampling. Hardhats and reflective vests are required at all times.

EXPOSURE MONITORING

All sample results will be recorded in the RESNA exposure log. Log copies are filed in the job file, and in all site personnel's medical file and maintained in the job file. All sampling instruments will be calibrated per the manufacturers instructions on a daily basis.

* Note calibration gas and any unusual calibration settings in the "monitoring equipment" column.
** Include monitoring for health hazards, explosion hazards, etc.

Monitoring Equipment	Hazard Monitored	Sample Location	Sample Frequency	Action Level	Action
PID	Organic Vapors	Breathing zone	hourly or as needed	10 ppm	Go to level C
PID	Organic Vapors	Breathing zone	hourly or as needed	25 ppm	Discontinue work and Contact Project Manager

Identify sample locations on site map

PERSONAL PROTECTIVE EQUIPMENT

As a *minimum*, Level D protection is required on all RESNA work sites. *Level D includes: steel toed boots, safety glasses, reflective vest and a hard hat.* When Level C is required all personnel within the work site will wear the following: full faced respirator, steel toed boots, reflective vest and a hard hat. For each task on this project, identify additional protective garments as required, include the conditions under which the level of PPE would be modified for each task.

Task(s)	Condition	Personnel	Garment(s)
All	All	All	Level D
All	Above 10 ppm Action Level	All	Level C

SITE CONTROL AND COMMUNICATION SYSTEM

The buddy system must be used on all RESNA hazardous waste sites.

Site will be secured as follows:
Beware of traffic at all times and use caution.

Work Zones will be marked as follows:
Use sawhorses and traffic cones to mark work area.

Work Zones marked on site map _____ yes __X__ no *Check yes or no*

On-site communications: Radio ____ Verbal __X__ Hand Signals _X___ Other ____

Off-site communications: Radio ____ Telephone __X___ Other ____

The specific signal for an emergency is: Verbal

The specific signal for an evacuation is: Verbal

Evacuation assembly point is: Onsite: Service Garage Building
Offsite: Commercial and Residential properties surrounding the site

Evacuation route(s) marked on site map: yes _____ no __X__ *Check yes or no*

SANITATION AND DECONTAMINATION

Personnel Decontamination Procedure:

Rinse exposed skin with tap water, dispose of gloves when done.

Location of Wash Water: Supplied on site.

Location of Toilet: Inside Site building.

Location of Drinking Water: Supplied on site.

Location of Eyewash: Eyewash must be available in field vehicle.

Equipment Decontamination Procedure: Rinse equipment with distilled water and methanol; heavily contaminated equipment should be washed in Alconox and rinsed with distilled water.

Materials to be Disposed of as Hazardous Waste: Heavily contaminated protective clothing.

EMERGENCY RESPONSE

In case of an emergency the site safety officer must be notified. The site safety officer or his/her alternate will notify outside emergency response agencies (ER) as needed, the branch safety officer, and the project supervisor/manager. The branch safety officer will make any required reports to local, state, and federal agencies. Other emergency notifications will include the numbers on the following page:

AGENCY	*TELEPHONE NUMBER*
FIRE	911
POLICE	911
AMBULANCE	911
Southern Vermont Medical Center	1 (802) 447-5007
RESNA-HOPKINTON	508-435-3400 or 1-800-926-0803
New England Telephone Mr. Peter Burnell	(617)743-1436
VTDEC	(802) 244-8755 (800) 641-5005
STATE POLICE Emergency Hotline	1-802-442-5421
DIGSAFE	1-800-322-4844
RESNA ADMIN.	1(800) 926-0804, (510)440-3300
RESNA CORPORATE H & S	1-510-440-3409
POISON CONTROL	1-800-682-9211/232-2120
CHEMTREC	1-800-424-9300

Employees may only fight small fires which have not spread beyond the original source. Spills should be cleaned as outlined in the RESNA spill response procedure. Spills may be cleaned up by properly prepared personnel as follows:

Spilled Material	Neutralizer	PPE	Monitoring
Product	Speedy Dry or Absorbent Pad	Level D or C (see page 8)	PID
Methanol	will evaporate		

Emergency Medical Treatment

All RESNA field personnel must be CPR and first aid trained. At a minimum, personnel who inhale hazardous materials must be moved to fresh air. Personnel who are contaminated with hazardous materials by contact should rinse the area of contact for a minimum of 15 minutes. The site safety officer or his/her alternate will determine if injured personnel require further emergency medical attention.

Unusual first aid procedures: _____

Location of first aid kit: In field vehicle

Nearest emergency medical facility: Southern Vermont Medical Center

Directions from work site: To be filled in on site

Bennington, Vermont

Vergennes, Vermont

Middlebury, Vermont

Montpilier, Vermont

A Map MUST be attached which shows the route from the work site to the nearest emergency medical facility.

TRAINING AND MEDICAL SURVEILLANCE

This table shows the dates of latest training or medical surveillance as applicable to this project. Additionally, the site safety officer will maintain records of the daily "tailgate" safety meetings.

Personnel	40 Hr OSHA	8 Hr. Refresher	Physical	First Aid	CPR
D. Morrison	1/90	3/93	9/93	1/90	1/90
T. Schmitz	9/89	4/93	9/93	9/89	9/89

KEY SAFETY PERSONNEL AND RESPONSIBILITIES

All personnel working for RESNA at the job site are responsible for project safety. The operational and health and safety responsibilities of pertinent RESNA personnel are identified below.

Northern Regional Safety Officer: Ms. Karen Schriefels

The Regional Safety Officer is responsible for establishing and directing the RESNA Health and Safety program. In this capability she carries out policies of the Corporate Health and Safety Director, Alan Berg, with respect to SSPs and ensures that the requirements are implemented company-wide. The Corporate Health and Safety Director reports to the President, Mr. Micheal Wright. Ms. Schriefels can be reached at (510) 440-3409.

Branch Safety Officer: Mr. Andrew Bakinowski

The Branch Safety Officer is responsible for disseminating requirements with respect to SSPs, for monitoring training related to SSPs, and for submitting specified SSPs to the Corporate Safety Officer for approval. The Branch Safety Officer reports to the Corporate Safety Officer.

Project Manager: Mr. Tom Schimtz

The Project Manager is responsible for the provisions and submittal of this SSP to the Site Safety Officer (SSO) and for advising the SSO on health and safety matters. She/He has the authority to provide for the auditing of compliance with the provisions of this SSP, suspend or modify work practices, and to recommend disciplinary action for individuals who conduct does not meet the provisions presented in this SSP. The Project Manager is also responsible for ensuring that Medical Surveillance Exams and Training Programs are current for all personnel working on-site. The Project Manager reports to the Branch Safety Officer.

Site Safety Officer: Mr. Doug Morrison

The SSO is responsible for the dissemination of the information contained in this SSP to all RESNA personnel working at the job site, and to the responsible representative(s) of each subcontractor firm working for RESNA at the job site. The SSO is responsible for ensuring the following items are adequately addressed: Safety Supplies and Equipment Inventory; Accident/Incident Reporting Procedures; Decontamination/Contamination Reduction Procedures; General Safe Work Practices. The SSO has the authority to suspend work anytime he/she determines the safety provisions set forth in this SSP are inadequate to ensure worker safety. The SSO shall also inform the Project Manager of individuals whose conduct does not meet the safety provisions of this SSP. The Site Safety Officer reports to the Project Manager. An SSO or the alternate must be present during the field work operations.

SIGN OFF PAGE

I have read the Site Safety Plan and fully understand the hazards associated with the following job:

Traffic conditions may be hazardous at this site and working in the street. Use sawhorses with flashing lights and traffic cones at all times when gauging and sampling. Hardhats and reflective vests are required at all times.

I will comply with the minimum safety requirements set forth in the Site Safety Plan. I agree to notify the responsible employee of RESNA should any unsafe acts be witnessed by me while I am on this site.

Print Name	Signature	Date

Safety Plan approved by:

Andrew Bakinowski _____

Branch Safety Officer

_____

Project Supervisor