WehranEnviroTech

JUN 07 1993

Wehran Engineering Corporation
Andover Research Park
Six Riverside Drive, Suite 101
Andover, Massachusetts 01810-1121
Tel: 508-682-1980
Fax: 508-975-2065

June 1, 1993

Mr. Charles B. Schwer
Site Management Section
Department of Environmental Conservation
103 South Main Street, West Building
Waterbury, Vermont 05671-0404

RE: Site Investigation Activities
New England Telephone Company
Bellows Falls, Vermont (Site #92-1343)
Wehran Project No. 02501.10

Dear Mr. Schwer:

On behalf of our client, the New England Telephone Company (NET), Wehran Engineering Corporation is submitting the attached Site Investigation Report for the above referenced site.

If you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

WEHRAN ENGINEERING CORPORATION

Donald W. Podsen

Donald W. Podsen
Project Manager

DWP/wlm/004

Attachment

cc: M. LaRow, NET

WehranEnviroTech

Wehran Engineering Corporation
Andover Research Park
Six Riverside Drive, Suite 101
Andover, Massachusetts 01810-1121
Tel: 508-682-1980
Fax: 508-975-2065

May 27, 1993

Mr. Michael G. LaRow
New England Telephone Company
125 High Street Room 1006
Boston, Massachusetts 02110

RE: Site Investigation Activities
New England Telephone Company
Bellows Falls, Vermont (Site #92-1343)
WE Project No. 02501.10

Dear Mr. LaRow:

The purpose of this letter report is to document the results of the site investigation activities conducted at the New England Telephone facility located on Henry Street in Bellows Falls, Vermont (the site)(Figure 1). These activities were conducted due to the presence of soil which exhibited jar headspace concentrations of up to 20.6 parts per million volume per volume (ppm_v) using a photoionization detector during the removal of a 500 gallon diesel underground storage tank (UST) at the site in December, 1992.

Two USTs were removed from the northwest portion of the site on December 2, 1992. Tank Number 1 was a 500 gallon diesel fuel UST and Tank Number 2 was a 1,000 gallon No. 2 fuel oil UST (Figure 2). Documentation of the UST removals was provided by Wehran Engineering Corporation (Wehran) in an UST closure report submitted to the Vermont Department of Environmental Conservation (VT DEC) on December 8, 1992.

In accordance with the VT DEC approved Preliminary Work Plan prepared by Wehran on February 3, 1993, and revised on February 23, 1993, the following site investigation activities were conducted: 1) installed one soil boring; 2) field screened soil samples collected from the boring; 3) collected one soil sample for laboratory analysis; and 4) conducted vapor screening in two existing vadose zone monitoring wells.

On April 20, 1993, one soil boring (SB-2) was advanced by New Hampshire Boring, Inc. (Derry, New Hampshire) under Wehran supervision. The soil boring was

located to the east of the former 500 gallon diesel fuel UST (assumed downgradient side of the tank based on the location of the Connecticut River, approximately 610 feet to the east of the site)(Figure 2).

The soil boring was advanced with 4.25-inch inside diameter hollow stem augers to a depth of 26 feet below ground surface. Continuous split-spoon samples were collected with a 2-inch outside diameter, 24-inch long split-spoon sampler in accordance with American Society for Testing and Materials (ASTM) procedures. The number of blows required to drive the sampler 24-inches with a 140-pound weight falling freely from 30 inches (standard penetration test) was recorded as a measure of material density. Geologic descriptions were made immediately in the field and a detailed geologic log prepared in accordance with the Modified Burmister Soil Classification System (Attachment A). The split-spoon sampler was decontaminated between uses with a tap water and non-phosphate detergent wash, followed by a tap water rinse, deionized water rinse, methanol rinse, air dry, and final deionized water rinse.

The subsurface soils encountered in the borings from ground surface to a depth of 26 feet consisted primarily of loose to medium dense, brown, coarse to fine sand with variable portions of silt, clay, and gravel. The water table surface was not encountered.

Split-spoon soil samples were collected continuously during borehole advancement and field screened utilizing the headspace partitioning method. The tests were performed using a HNu photoionization detector (PID) equipped with a 10.2 electron volt lamp. The PID was calibrated at the start of the day with an isobutylene standard. No soil jar headspace readings were detected in any of the split-spoon samples.

The results of the soil jar headspace tests were compared to soil guideline concentrations provided in the VTDEC publication entitled Agency Guidelines for Petroleum Contaminated Soil and Carbon Media. This policy states that soils which exhibit a PID reading of 10 parts per million, volume per volume (ppm_v) or less at sites involving diesel or No. 2 fuel oil may be used as on-site backfill. Given that the PID

readings of the soil samples from the soil boring were none detected, all soil cuttings were used to backfill the soil boring.

One split-spoon soil sample was collected from a depth of 24 to 26 feet below ground surface and submitted for confirmatory laboratory analyses. The soil was transferred immediately from the split-spoon sampler into the appropriate sample containers, which were provided by the laboratory. The sample was analyzed by Alpha Analytical Laboratories of Westborough, Massachusetts for volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) in accordance with United States Environmental Protection Agency Methods 8020 and 418.1, respectively.

The analytical results indicated that no VOCs were detected above the laboratory's minimum detection limit (5 micrograms per kilogram), and a TPH concentration of 44 milligrams per kilogram was detected in the soil sample. The complete analytical results, including chain-of-custody and detection limits are provided in Attachment B.

Vapor screening of the two shallow vadose zone monitoring wells located adjacent to the existing 2,500 gallon dual use UST was also conducted. The vapor screening was performed by inserting the probe of the PID instrument into the monitoring wells immediately after opening the protective covers. No VOCs were detected by the PID in either monitoring well.

Based on the results of the current site investigation activities, the subsurface on the downgradient side of the former 500 gallon diesel UST does not appear to be impacted by significant concentrations of petroleum contamination (no VOCs detected by headspace screening or laboratory analysis and only 44 mg/kg TPH). As documented in Wehran's previously submitted tank closure report, residual contamination (jar headspace measurements of 18.4 and 20.6 ppm_v and TPH concentrations of less than 40 and 59 mg/kg) was detected in soils collected from the sidewalls and bottom of the 500 gallon diesel fuel tank excavation. Although approximately 15 cubic yards of soil was removed during the tank removal, additional soil excavation within this area was limited due to the adjacent building foundation, a concrete pad to a large air conditioner unit, and a driveway to the adjacent property. Based on the tank closure

report and the recently collected data, Wehran recommends no further investigation in the vicinity of the former 500 gallon diesel fuel UST.

Wehran appreciates the opportunity to provide NET with continuing services on this project. If you have any questions or require additional information, please contact Jeffrey Hamel or me.

Sincerely,

WEHRAN ENGINEERING CORPORATION

Jeffrey A Hamel for

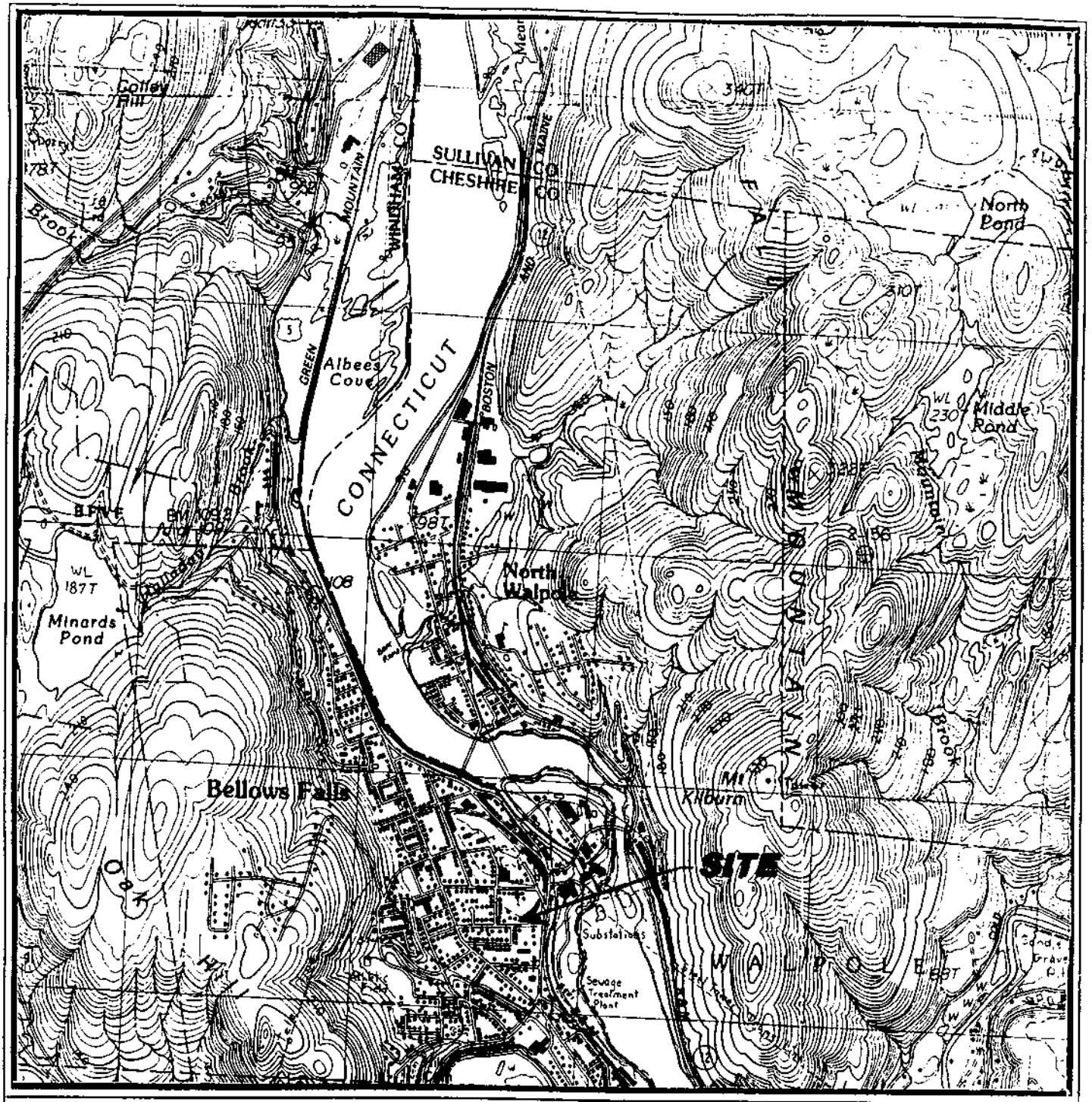
Donald W. Podsen
Project Manager

DWP/wlm/002

cc: J. Hamel - WE

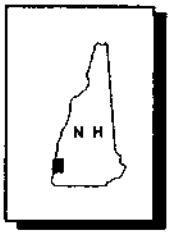
Attachments

Figure 1 - Site Location Map
Figure 2 - Site Plan
Attachment A - Soil Boring Log
Attachment B - Analytical Results - Soil Sample



BASE TAKEN FROM 1:25,000 USGS
TOPOGRAPHIC QUADRANGLE
BELLOWS FALLS, VERMONT-NEW HAMPSHIRE
PR1986

0 1 MILE



QUADRANGLE LOCATION

FIGURE 1

SITE LOCATION MAP

NEW ENGLAND TELEPHONE
HENRY STREET
BELLOW, FALLS, VERMONT

Wehran EnviroTech

WEHRAN PROJECT NO. 02501.10

ATTACHMENT A
SOIL BORING LOG

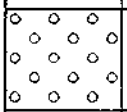
Wehran EnviroTech

LEGEND FOR BORING LOGS

PROJECT: NET, 3 Henry Street, Bellows Falls, VT

PROJECT NO.: 02501.10

BORING NO.: B-2

GRAPHIC SYMBOL	SOIL/ROCK CODE	DESCRIPTION OF SYMBOLS USED IN LITHLOGIC LOG COLUMN	SYMBOL or PATTERN	DESCRIPTION OF SYMBOLS USED IN WELL CONSTRUCTION AND SAMPLE SYMBOLS
		SAND	☒	Split Spoon Sample
		SAND & GRAVEL		
		GENERAL NOTES: 1. N-Value is the sum of the second and third blow counts recorded during standard penetration test. 2. HNu - HNu Model PI-101 Photoionization Detector equipped with a 10.2 eV lamp		

Wehran EnviroTech

BORING/WELL NO. B-2

SHEET 1 OF 1

PROJECT: 3 Henry Street, Bellows Falls, VT (4711-07)
CLIENT: New England Telephone
CONTRACTOR: New Hampshire Boring

PROJECT NO: 32501.10
RIG: Mobil B-47

GS ELEV:
N-S COORD:
E-W COORD:
WL REF ELEV.
DATE STARTED: 04/20/93
DATE FINISHED: 04/20/93
OPERATOR: M. D'Amboise
GEOLOGIST: J. Hayes

GROUNDWATER DATA (feet)

DATE	GW DEPTH	GW ELEV	INTAKE
4/20/93	None	Encount.	

	CASING	SAMPLE	TUBE	CORE
TYPE	HSA	SS		
DIAM.	4.25" ID	2" OD		
WEIGHT		140 lbs.		
FALL		30"		

WELL CONSTRUCT	DEPTH (feet)	SAMPLE NUMBER	SAMPLE & TYPE	RECOVERY (inches)	N-VALUE	LOG	PID	FIELD DESCRIPTION (Modified Burmister Methodology)	REMARKS
		S-1		10	11		0	Medium dense, medium brown, coarse to fine SAND, little Silt, trace medium to fine Gravel, trace Clay, moist to wet	
		S-2		4	5		0	Loose, medium brown, coarse to fine SAND and medium to fine GRAVEL, little Silt, trace Clay, moist	
	5	S-3		4	6		0	Loose, medium brown SILT, little coarse to fine Sand, trace medium to fine Gravel, trace Clay, moist	
		S-4		6	16		0	Medium dense, medium brown SILT and fine SAND, trace coarse to medium Sand, trace coarse to fine Gravel, trace Clay, moist	
		S-5		15	6		0	Loose, light brown to medium brown, fine SAND, trace Silt, moist	
	10	S-6		18	17		0	Medium dense, loose, light brown to medium brown, fine SAND, trace Silt, moist	
		S-7		18	25		0	Medium dense, loose, light brown to medium brown, fine SAND, trace Silt, moist	
		S-8		20	33		0	Dense, light brown, coarse to fine SAND, trace coarse to fine Gravel, trace Silt, moist	
	15	S-9		15	52		0	Very dense, light brown, coarse to fine SAND, trace medium to fine Gravel, trace Silt, moist, iron staining	
		S-10		20	18		0	Medium dense, medium brown, medium to fine SAND, little coarse Sand, trace Silt, moist	
	20	S-11		22	19		0	Medium dense, medium brown, medium to fine SAND, little coarse Sand, trace Silt, moist	
		S-12		22	22		0	Medium dense, medium brown, medium to fine SAND, trace Silt, moist	
	25	S-13		20	25		0	Medium dense, medium brown, medium to fine SAND, trace Silt, moist	
								END OF BOREHOLE AT 26 FEET BELOW GRADE BACKFILLED BORING WITH DRILL CUTTINGS	

ATTACHMENT B
ANALYTICAL RESULTS - SOIL SAMPLE

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

CERTIFICATE OF ANALYSIS

Client: Wehran Engineering
Address: 3-20 Chace Mill 1 Mill Road
Burlington, VT 05401
Attn: Jeff Hamel
Project Number: 02501-10
Site: NET

Laboratory Job Number: L9303201
Invoice Number: 51979
Date Received: 23-APR-93
Date Reported: 07-MAY-93
Delivery Method: Fed ex

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9303201-01	B2S1	Bellows Falls

Authorized by: Scott McLean - Laboratory Director

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9303201-01 B2S1 **Date Received:** 23-APR-93
Sample Matrix: SOIL **Date Reported:** 07-MAY-93
Condition of Sample: Satisfactory **Field Prep:** None
Number & Type of Containers: 1 Glass,1 Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Solids, Total	94.	%	0.10	3	2540B		28-Apr
Hydrocarbons, Total	44.	mg/kg	40.	1	418.1	03-May	04-May
Aromatic Volatile Organics				1	8020	29-Apr	29-APR
Benzene	ND	ug/kg	5.0				
Toluene	ND	ug/kg	5.0				
Ethylbenzene	ND	ug/kg	5.0				
Xylenes	ND	ug/kg	5.0				
1,2-Dichlorobenzene	ND	ug/kg	5.0				
1,3-Dichlorobenzene	ND	ug/kg	5.0				
1,4-Dichlorobenzene	ND	ug/kg	5.0				
Chlorobenzene	ND	ug/kg	5.0				
Methyl tert butyl ether	ND	ug/kg	5.0				

Comments: * Complete list of References found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE DUPLICATE ANALYSIS

Laboratory Job Number: L9303201

Parameter	Value 1	Value 2	RPD	Units
Hydrocarbons, Total	DUPLICATE for sample(s) 01			
	10000	9400	10	mg/kg

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE SPIKE ANALYSES

Laboratory Job Number: L9303201

Parameter	% Recovery
Hydrocarbons, Total	SPIKE for sample(s) 01
	92

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE MS/MSD ANALYSIS

Laboratory Job Number: L9303201

Parameter	MS %	MSD %	RPD
Volatile Organics Spike Recovery by GC MS/MSD for sample(s) 01			
1,1-Dichloroethene	81	82	1
Trichloroethene	80	91	13
Chlorobenzene	85	90	6
Benzene	89	96	8
Toluene	79	73	8
Ethylbenzene	77	86	11

ALPHA ANALYTICAL LABS
ADDENDUM I
REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1986.

3. Standard Methods for Examination of Water and Waste Water. APHA-AWWA-WPCF. 17th Edition. 1989.

ALPHA
Analytical Laboratories, Inc.

Eight Walkup Drive
Westborough, MA 01581-1019
508-898-9220 FAX 508-898-9193

CHAIN OF CUSTODY RECORD and ANALYSIS REQUEST RECORD

No. 19648

Sheet 1 of 1

Company Name: Weston Engineering	Project Number: [illegible] P.O. Number:	Project Name/Location: NRD / Bellows Falls	Date Received in Lab: 4/23
Company Address: [illegible]	Phone Number: 508/460-1530 FAX No.:	Project Manager: Jeff Hooper	Alpha Lab Number: (Lab use only) 9303201

Container Codes: P = Plastic V = Vial C = Cube G = Glass A = Amber Glass B = Bacteria Container O = Other

MATRIX / SOURCE CODES: MW = Monitoring Well, RO = Runoff, O = Outfall, W = Well, LF = Landfill, L = Lake/Pond/Ocean, I = Influent, E = Effluent, DW = Drinking Water, R = River Stream, S = Soil, SG = Sludge, B = Bottom Sediment, X1 = Other, X2 = Other

ALPHA Lab # (Lab Use Only)	Sample I.D.	Containers (number/type)	Matrix / Source	Method Preserve. (number of containers): Unpres.	Ice	Nitric	Sulfuric	HCl	Other	Solubles - F.F.	Sampling Date	Sampling Time	Analysis Requested
3201	~~MW~~ 12,251	1 G, 1V	WI		/						4-22	[illegible]	EPA 8240 and EPA 418.1

by Fedex

Sampler's Signature	Affiliation	Date	Time
Jeffrey J Hooper	Weston Eng	4/22/93	[illegible]

ADDITIONAL COMMENTS:

NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	Jeffrey J Hooper	Cohnson	4/23	11:25 am
2				
3				
4				