

JUN 8 1995



Precision Park ♦ North Springfield, Vermont 05150-0029 ♦ Tel.: 802 / 886 / 2261 ♦ Fax: 802 / 886 / 2260

A DVI Company

June 7, 1995

Mr. Richard F. Spiese, Site Manager
Hazardous Materials Management Division
Sites Management Section
103 South Main Street/West Building
Waterbury, Vermont 05671-0404

MM

Re: NYNEX Garage - Hartford, Vermont
Initial Site Investigation
SMS Site # ~~97-1783~~ 94-1738
DH 415015 ~~97-1783~~

Dear Richard:

On behalf of Messrs. Richard Ferdinando and Emile Bussiere, we are pleased to submit the enclosed Initial Site Investigation of petroleum contamination associated with a former underground storage tank at the NYNEX garage in Hartford, Vermont. Please feel free to contact us with any questions or comments.

Very truly yours,

DUFRESNE-HENRY, INC.

A handwritten signature in cursive script, appearing to read 'David', is written over the printed name.

F. David Deane, P.E.
Environmental Services

FDD/dim

Enclosure

cc Richard Ferdinando & Emile Bussiere

FERD0607.WP

Corporate Headquarters:
North Springfield, Vermont

Area Offices:
Greenfield, Massachusetts
Westford, Massachusetts
Portland, Maine

Manchester, New Hampshire
Montpelier, Vermont
Port Charlotte, Florida
Naples, Florida

Phase (check one)	Type (check one)
<input checked="" type="checkbox"/> Initial Site Investigation <input type="checkbox"/> Corrective Action Feasibility Investigation <input type="checkbox"/> Corrective Action Plan <input type="checkbox"/> Corrective Action Summary Report	<input type="checkbox"/> Work Scope <input checked="" type="checkbox"/> Technical Report <input type="checkbox"/> PCF Reimbursement Request <input type="checkbox"/> General Correspondence

**INITIAL
SITE INVESTIGATION**

**NYNEX Garage
off U. S. Route 5
Hartford, VT 05001**

**SMS Site #94-1738
UST Facility #913**

**A Facility Owned By:
Richard Ferdinando & Emile Bussiere
637 Chestnut St
Manchester, NH 03140-3518
(603) 669-3218
Contact: Mr. Richard F. Ferdinando**

**Prepared By:
Dufresne-Henry, Inc.
Precision Park
North Springfield, VT 05150
(802) 886-2261
Contact: F. David Deane, P.E.**

May 31, 1995

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EXECUTIVE SUMMARY

A problem with one of the 5,000 gallon gasoline tanks at the NYNEX Garage in Hartford, Vermont was first observed in March 1994. Nynex personnel performing daily sticking of the tanks began observing an excess amount of water in the tank. After excess water was twice removed from the tank, and returned, the tank was emptied of product on April 6, 1994. The remained empty of product until removal on December 12, 1994.

This Initial Site Investigation is completed in response to the discovery of gasoline contaminated soil during the Tank Closure Assessment. Two small holes were observed in the tank which was in poor condition. A peak PID reading of 197 ppm was observed with a Photovac MicroTIP HL-2000 (10.6 eV lamp calibrated with isobutylene). The water table was encountered at an 8' depth, and a slight sheen was observed on the soil and groundwater. The liquid level in the tank was observed to be at the same level as the groundwater. All soil excavated during the closure was backfilled. Pavement was not replaced.

On April 20, 1995 three groundwater monitoring wells were installed. Two wells were placed in the former tank location. The third well was placed in the apparent downgradient direction to the southeast of the former tank location. PID readings from soil boring samples did not indicate the presence of gasoline. The three monitoring wells were sampled and analyzed for VOC's by EPA Methods 602 and 8015. Only the sample from MW-1 contained any detectable dissolved gasoline indicator compounds; Total Xylenes at 4 ug/l. The State of Vermont enforcement standard for this compound is 400 ug/l. Field observations of the soil and groundwater analytical results suggests that any remaining soil or groundwater contamination is extremely limited in the immediate vicinity of the former tank. It is likely that what little gasoline was present at the time of the tank removal has undergone natural degradation or been highly diluted.

The nearest groundwater well is 1000' away from, and upgradient of the former tank location. The direction of groundwater flow indicates that impact to this well is highly unlikely. The nearest downgradient surface water is the Kilburn Brook, approximately 900 feet away. The lack of residual contamination identified at the site by this investigation indicates that there is very little likelihood that contamination from this site has or will ever travel as far as Kilburn Brook.

**INITIAL SITE INVESTIGATION
NYNEX GARAGE
HARTFORD, VERMONT**

Introduction

The NYNEX Garage in Hartford, Vermont is located on the north side of Kline Drive a short distance east of U. S. Route 5. A site location map is included as Appendix A.

Dufresne-Henry, Inc. performed a Tank Closure Assessment at the site on December 12, 1994. The subject tank was one (1) 5,000 gallon gasoline underground storage tank (UST). Another 5,000 gallon UST remains in service.

Evidence of soil contamination was discovered at the water table along the side of the tank. The apparent extent of contamination exceeded the excavation limits of the available equipment. Odors observed at the time of removal, coupled with PID readings up to 197 ppm, indicated the gasoline tank and/or fittings were the source of contamination. The odor suggested that the gasoline was old and weathered. The water table was encountered at a depth of 8 feet. The water in the tank was at a comparable level. The excavation was backfilled pending additional investigation.

Work and Health and Safety Plans

An Expressway Notification Form was submitted to the State of Vermont Sites Management Section (SMS) along with the Tank Closure Assessment Report. By letter of January 3, 1994, the SMS requested that NYNEX, as the tank owner of record, have a site investigation performed. Dufresne-Henry prepared a Work Plan, and a Health and Safety Plan for the proposed activities at the site. Copies of these

documents will be found in Appendix B. In early March 1995, Dufresne-Henry received authorization from the facility owners, Messrs. Richard Ferdinando and Emile Bussiere, to proceed with the investigation. The remainder of this report describes the on-site activities and subsequent findings based on the Work Plan.

Site Description

The NYNEX Garage is located on the north side of Kline Drive, a few hundred feet east of U. S. Route 5. The site consists of the large garage, and fenced storage area at the north end of the building. Most of the site is paved or occupied by the building. A propane gas facility is located to the west and an indoor racket club to the east. The property to the south appears to be an office park. The land slopes gradually downward from Route 5, levels off 200' +/- easterly of the garage, and then drops gradually to the Kilburn brook. The Kilburn brook is approximately 900 feet to the east. The water supply for the garage is from the municipal system. There is reportedly an on-site septic located on the opposite side of the garage building from the storage tanks.

Site History

The history of the site is not completely known. The date of construction was not established but is assumed to be within the past 25 years.

NYNEX personnel were and are responsible for the operation of the vehicle fuel system which included two 5,000 gallon, single walled, steel UST's and two suction dispensers. Spill containment and overflow protection was added in 1993. The system was used to fuel the NYNEX service vehicle fleet in the Hartford area. Reportedly, daily records are kept of tank stickings.

According to Greg Tuthill of NYNEX, each tank usually contained about 1/2" of

water. The water depth was checked monthly with water sensitive paste. Following a fuel delivery on February 24, 1994, additional water was noticed. Initially it was suspected that there was water in the gasoline that had been delivered. About 100 gallons of water was pumped out by McIntyre Fuels on March 17. By March 31, there was again 2-1/2 inches, about 50 gallons, of water in the tank. On April 5, 1994 an additional 100 gallons of water was pumped from the tank. On April 6, 1994 3,480 gallons of product was pumped from the tank. No product was stored in the tank after that date. At the time of the removal on December 12, 1995 approximately 250 gallons (7-1/2") of liquid was pumped from the tank.

Based on the NYNEX reported reconciliation of fuel delivery and usage records there was very little if any gasoline lost from the tank. It is suspected that the holes observed at the time of the tank removal were below the water table, which is why the water accumulated in the tank. Thus the only gasoline which would have escaped would have been in the form of dissolved product in groundwater which may have flowed out of the tank during in response to fluctuations in the water table.

Other than the petroleum products noted above, additional hazardous materials used and stored at the garage likely include motor oil, waste oil, hydraulic oil, grease, antifreeze and other automotive fluids, cleaning products, and paint. These products are used in the daily maintenance of the NYNEX vehicles. While no specific effort was undertaken to document the storage location or use of these materials, no spills or releases were disclosed.

Monitoring Well Installation

Three (3) shallow groundwater monitoring wells were installed on April 20, 1995 by M & W Soils Engineering, Inc. of Charlestown, New Hampshire. All borings and well installations were under the field observation of Dufresne-Henry personnel. The wells are designated MW-1 through MW-3. Two wells were placed in the former

tank location. A third well was placed in the apparent downgradient direction from the tank location. A site sketch showing the well locations is included as Appendix C. Logs of the borings, and monitoring well installation reports are included in Appendix D.

During boring advancement, split spoon soil samples were taken at various intervals depending on discovered and expected conditions. All samples were screened for the presence of Volatile Organic Compounds (VOC's) with a Photovac Micro-Tip HL-2000 photoionization detector (10.6 eV lamp, calibrated with isobutylene). In MW-1, PID readings ranging from 0 - 5.4 ppm were observed in samples when headspaced at ambient temperature. The highest reading was observed from the 7' - 9' sample. The water table was encountered at 8' depth. No visual or olfactory evidence of contamination was observed in the samples or on the drilling tools. In MW-2, PID readings of 0 ppm were observed in all samples. No odors or visual evidence of contamination were observed in any sample or on the tools. The water table was encountered at 8' depth. In MW-3, PID readings were also 0 ppm in all samples. Again, no odors or visual evidence of contamination were observed in the samples or on the drilling tools, and the water table was encountered at 8' depth.

A two-inch diameter PVC monitoring well was installed in each boring. Each well consists of 10' of .020" machine slotted screen. Each well was backfilled with clean silica sand to a point 4' +/- below the surface and a bentonite seal installed. The wells were protected at the ground surface by grouting in watertight aluminum monitoring well boxes.

Site Geology

Surficial geology at the site is published as littoral sediment (predominantly sand). Borings for MW-1 and MW-2 indicate that the site has been filled on the order of 15'. Native soils below the fill consist of olive brown silty fine sand. MW-3 is located close to the building and may have been affected by footing construction.

Published data indicates bedrock at the site is the Orfordville Formation. The Orfordville Formation is generally described as a greenstone and green chloritic schist. It is commonly interbedded with schistose felsite and quartz-feldspar-sericite schist and also with fine grained chloritic and biotitic gneiss. The depth to bedrock beneath the site is unknown. Bedrock was not encountered in the borings, nor were any outcroppings observed in the immediate vicinity.

Site Hydrogeology

The proximity of the Connecticut River to the east is presumed to control the regional direction of groundwater movement. The garage is located approximately 4,000 feet west of the river. The flow of the Connecticut River in this area is primarily to the south.

At the time that groundwater samples were obtained on April 24, 1995, the water levels in the wells ranged from 5.3 feet to 6.8 feet below the ground surface. The available data indicates the general direction of groundwater movement to be to the southeast. The gradient is shallow at approximately 0.03%.

Potential Receptors

The 1981 USGS quadrangle indicates 25+ structures within a one-half mile radius of the site. Of these, approximately 8 have on-site water wells. The remainder are on the municipal system. The nearest private water supply is a well located approximately 1000 feet from, and upgradient of, the former tanks. Based on the observed direction of groundwater flow, the nearest potential surface water receptor is the Kilburn brook approximately 900 feet to the east.

The Garage has a slab on grade foundation. All other buildings in the vicinity are upgradient or separated from the site by significant distances. No potential off site receptors were identified in the immediate vicinity.

Monitoring Well Sampling

The three Dufresne-Henry monitoring wells were sampled on April 24, 1995 following the standard protocols which accompanied our work plan. The sampling was performed by Dufresne-Henry personnel. Three well volumes were purged prior to drawing a sample. No free product was observed in any well. The refrigerated samples were sent to Eastern Analytical, Inc. of Concord, NH on April 24, 1995 via overnight service. The samples were analyzed for the VOC's by EPA Method 602 and 8015. A copy of the laboratory analytical report is included in Appendix E.

The sample from MW-1 was the only well which contained any detectable dissolved gasoline compounds; Total Xylenes at 4 ug/l. The State of Vermont enforcement standard for this compound is 400 ug/l.

Summary and Recommendations

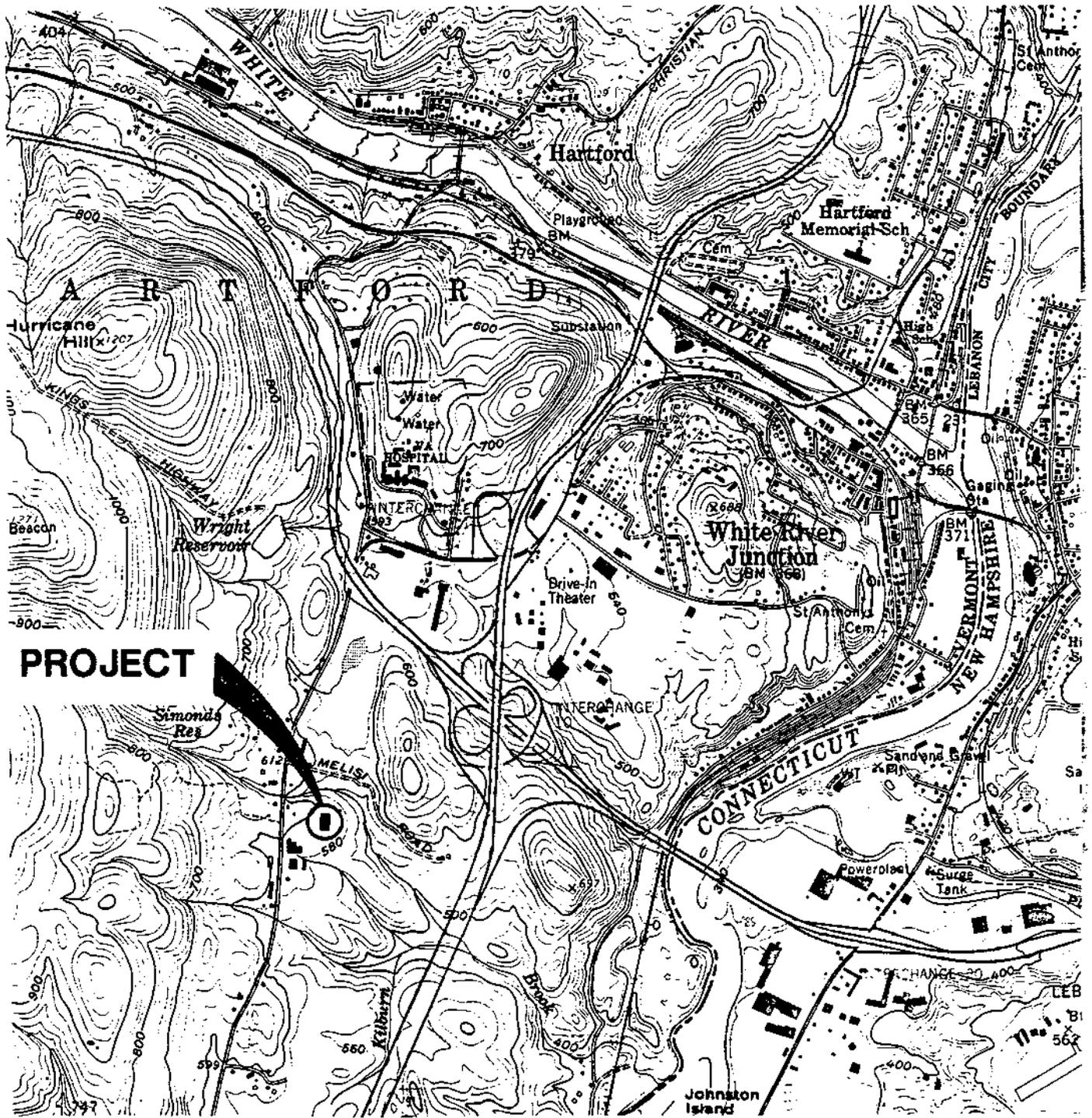
Use of a 5,000 gallon gasoline UST at the NYNEX garage in Hartford, Vermont was discontinued in April 1994 because of water ingress. Remaining product was pumped from the tank, and it remained empty of product until it was removed in December 1994. Upon removal, two holes were observed in the tank, and there was evidence of gasoline contamination in the form of PID readings up to almost 200 ppm and a sheen on the soil and groundwater. There was no free product observed.

To evaluate the extent and severity of the gasoline contamination, three (3) shallow groundwater monitoring wells were installed on the site and sampled. The drinking water supply serving the Garage is from the municipal system. Results from the boring program and the water quality sampling indicate very limited soil if any residual soil contamination, and no remaining regulatory significant impact to groundwater. Natural degradation and/or dispersion or dilution of the gasoline observed at the time of the tank pull appears to have occurred.

All buildings in the vicinity are slab on grade foundations. The only potential receptor downgradient of the former tank is the Kilburn brook (900' away). No compound above enforcement standards for the EPA methods 602 and 8015 were found. The potential for impact to the brook is negligible.

Based on these findings, no further investigations this site are warranted and we recommend that it be considered for SMAC designation.

APPENDIX A
SITE LOCATION MAP



PROJECT

SCALE
1:24,000

TAKEN FROM A USGS QUAD. SHEET FOR HANOVER, NH - VT
AERIAL PHOTOGRAPHY OBTAINED IN 1988

DH
Deere-Henry, Inc.
Precision Park
No. Springfield,
Vermont 05150
A DVI Company
Tel 18021886-2261 Fax 18021886-2260

HARTFORD,

**SITE LOCATION PLAN
SHOWING THE
NYNEX GARAGE
FERDINANDO PROPERTY**

VERMONT

Project No. 415015

Proj. Mgr. F.D.D.

Date APRIL '95

B

SL 1

APPENDIX B
SITE INVESTIGATION REQUEST
WORK PLAN
AND
HEALTH AND SAFETY PLAN



State of Vermont

RECEIVED
JAN - 5 1995

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
Hazardous Materials Management Division
103 South Main Street/West Office
Waterbury, Vermont 05671-0404
(802) 241-3888
FAX (802) 241-3296

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
Natural Resources Conservation Council
RELAY SERVICE FOR THE HEARING IMPAIRED
1-800-253-0191 TDD>Voice
1-800-253-0195 Voice>TDD

DUFRESNE-HENRY, INC

January 3, 1995

Jan Sherwin
NYNEX
125 High Street/Room 1006
Boston, MA 02110

*MIKE LARSON
NYNEX (617) 743-6024
Fernando (603) 669-3218*

RE: Petroleum contamination at NYNEX Garage, Hartford, VT
(Site #94-1738)

Dear Ms. Sherwin:

The Sites Management Section (SMS) has received a site expressway notification form as well as a site assessment report outlining the subsurface conditions for the above referenced site, submitted by Oscar Garcia of Dufresne-Henry on December 12, 1994. This report summarizes the degree and extent of contamination encountered during the assessment. The tank removed was a 5,000-gallon gasoline underground storage tank (UST) and was reportedly in poor condition. At least two holes were observed on the UST.

During the tank pull, soils screened at the water table had peak concentrations of 197 ppm as measured by a photoionization detector (PID). A sheen was noted on soils at the groundwater table encountered at approximately 9 feet below ground surface (bgs). All excavated soil was backfilled since the full extent of the contamination was unknown. An estimated 5 private drinking water wells are located within 1/2 mile of the site.

Based on the above information, the SMS has determined that additional work is necessary at the site in order to determine the severity of contamination present. Due to the possibility of contaminant impact to nearby receptors, the SMS is requesting that NYNEX retain the services of a qualified environmental consultant to perform the following:

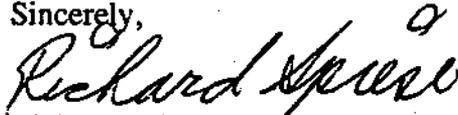
- Further define the degree and extent of contamination to the soil. This may be accomplished by obtaining soil borings, digging test pits, or performing a soil gas survey.
- Determine the degree and extent of contamination to groundwater. Since soil was found to contain evidence of contamination at the water table, a sufficient number of monitoring wells should be installed in locations which will adequately define the severity of contamination at the site. All groundwater samples taken should be analyzed for BTEX and MTBE compounds.
- Perform an assessment of the site to determine the potential for sensitive receptors to be impacted by the contamination. This should include basements of adjacent buildings, nearby surface water, and any public or private drinking water wells which are located within the vicinity of the site. If any water supplies appear at risk from this contamination, they should

be sampled and analyzed using EPA 8020.

- Determine the need for a long term treatment and/or monitoring plan which addresses the contamination present at the site. The need for such a plan should be based on the results of the above investigations.
- Submit to the SMS a summary report which outlines the work performed as well as providing conclusions and recommendations. Included should be detailed well logs, analytical data, a site map, an area map showing the location of any sensitive receptors, and a groundwater contour map.

The site expressway notification received was approved by the site owner since there appeared to be some confusion as to the liable party. As the operator and permittee of the UST removed, NYNEX is the potentially responsible party for the above referenced work. If you want this site to remain on the expressway program with Dufresne-Henry, then please notify the SMS within 15 days of your receipt of this letter. If not, please have your consultant submit a preliminary work plan and cost estimate or a site investigation expressway notification form within fifteen days of your receipt of this letter so that it may be approved prior to the initiation of onsite work. If you have any questions, please feel free to call.

Sincerely,


Richard Spiese, Acting Supervisor
Sites Management Section

cc: Hartford Selectboard
DEC Regional Office
Oscar Garcia, Dufresne-Henry
Richard Ferdinando, Site Owner

RS:mmm/wp/941738

ATTACHMENT A
SCOPE OF SERVICES
SITE INVESTIGATION
NYNEX GARAGE
WHITE RIVER JUNCTION, VERMONT

1. Prepare site Health and Safety Plan (HASP).
2. Install three (3) groundwater monitoring wells at appropriate locations to further define the degree and extent of soil contamination. Wells will be installed in borings created with hollow stem augers, with split spoon samples taken at five (5) foot intervals or as directed by the Dufresne-Henry field inspector. During installation, soil samples will be screened using a Photovac Microtip PID with a 10.6 eV lamp. Wells will be of two-inch diameter flush joint PVC, and provided with a flush mount road box. In the unlikely event that monitoring well depth exceeds 20 feet, an adjustment in cost will be necessary.
3. Obtain groundwater samples from the three (3) groundwater monitoring wells and analyze the samples for BTEX and MTBE.
4. Perform a receptor assessment for properties in the area with particular attention to basements of adjacent buildings and water supply wells. There are no known water supplies in the vicinity. If such supplies are found, and sampling is deemed necessary, such analysis will be at additional cost.
5. Prepare a summary report including all results of the site investigation, and conclusions and recommendations regarding the need for long term treatment and/or monitoring.

Specifically excluded from this agreement is research into establishing fault or negligence on the part of any party for failure to service, operate or maintain the underground storage tank system at this facility.

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PROJECT: NYNEX GARAGE INITIAL SITE INVESTIGATION
JOB NO.: 415015

HEALTH AND SAFETY PLAN
FOR
INITIAL SITE INVESTIGATION
NYNEX
WHITE RIVER JCT., VERMONT

This Health and Safety Plan applies only to Dufresne-Henry, Inc. employees.

PROPOSED ON-SITE ACTIVITIES:

Installation of three (3) shallow groundwater monitoring wells, soil and groundwater sampling, decontamination.

PROPOSED DATE(S) OF WORK: Borings: April 20, 1995
Sampling: April 21, 1995 or week of April 24, 1995

ANTICIPATED WEATHER CONDITIONS: temperatures 30's - 50's, possible snow or rain, light wind.

PROPOSED SITE INVESTIGATION TEAM:

Personnel	Responsibilities
F. David Deane	Project Manager
Bruce Cox	Site Safety Officer
Bruce Cox/Oscar Garcia	Field Team Leader (Monitoring Wells/Sampling)
Richard Ferdinando/Greg Tuthill	Site Representative (Owner/NYNEX)
Richard Spiese	ANR Representative

All Dufresne-Henry, Inc. personnel arriving or departing the Site should check in and out with the Site Safety Officer. All Dufresne-Henry activities on-Site must be cleared through the Field Team Leader or Project Manager.

PROJECT: NYNEX GARAGE INITIAL SITE INVESTIGATION
JOB NO.: 415015

Background Information

Site Status: X Active Inactive Unknown

Site Description (Topography, on-site structures, vegetation, surrounding population, contaminated areas (if known)...Attach site plan)

The NYNEX is located on US Route 5 in White River Junction, VT. The site consists of a single building and paved road and parking area. The location of above ground and below ground utilities is not known at this time.

The area of known contamination is on the westerly side of the building. Additional details will be found below.

Dig Safe was contacted on April 6, 1995. The site is OK'd for April 10, 1995. The Dig Safe number is 951406286.

The Hartford Water & Sewer Department was contacted on April 14, 1995. There are no sewer lines on the property. The water lines will be checked.

Site History:

The history of the site is not known at this time.

Field Monitoring or Sampling Data From Previous Site work:

A Tank Closure Assessment was conducted at the site by Dufresne-Henry, Inc. on November 11, 1994 and December 5, 1994. The subject was one (1) 5,000 gallon gasoline UST. The tank was discovered to have two perforations. PID readings up to 197 ppm were observed from headspaced soil samples. Groundwater in the excavation had a light sheen. The excavation was backfilled pending further investigation.

No other site investigation work is known to exist.

PROJECT: NYNEX GARAGE INITIAL SITE INVESTIGATION
JOB NO.: 415015

HAZARD REFERENCE

Waste Types:

Liquid Solid (soil) Sludge Vapor Unknown

Waste Characteristics:

Corrosive Ignitable Radioactive
 Volatile Toxic Reactive
 Unknown Other Persistent

Specific Substances of Greatest Concern (if known): Gasoline

Hazard Evaluation:

Task: Mon. Well Install. Low Medium High

Identification of Hazards: Gasoline.

Task: Decontamination Low Medium High

Identification of Hazards: Gasoline.

Task: Sampling Low Medium High

Identification of Hazards: Gasoline.

Task: Low Medium High

Identification of Hazards:

Other Physical Hazards: (weather, heavy equipment, site structures...)

Drill rig, traffic, weather.

SITE ACTIVITIES

Required Personal Protective Equipment (PPE)

<u>Task</u>	<u>Entry Level of Protection</u>	<u>Monitoring Equipment</u>	<u>Upgrade/Downgrade Contingency</u>
Well Install.	D	Photovac HL-2000 Explosimeter O ₂ meter H ₂ S meter	Upgrade to Level C with PID readings over 10 ppm for 5 minutes in breathing space.
Decon.	D	"	"
Sampling	D	"	"

Note: Breathing space PID readings of 50 ppm, explosimeter readings over 25% of the LEL, O₂ deficiency or enrichment, or H₂S readings will result in shutting down the job and consulting with State officials and the client.

PROJECT: NYNEX GARAGE INITIAL SITE INVESTIGATION
JOB NO.: 415015

Specific protective equipment for each level of protection is as follows:

Level C: Full Face Respirator w/appropriate cartridge (Willson T45)
Chemically Resistant Suit (Tyvek®)
Outer Rubber Slush Boots
Outer Chemically Resistant Gloves
Surgical Gloves
Hard Hat
Steel Toe/Shank Work Boots

Modified Level D: Chemically Resistant Suit (Tyvek®)
Outer Rubber Slush Boots
Outer Chemically Resistant Gloves
Surgical Gloves
Hard Hat
Steel Toe/Shank Work Boots
Safety Glasses or Face Shield

Level D: Work Clothes
Steel Toe/Shank Work Boots
Surgical Gloves
Hard Hat

Rationale for change in level of protection:

Upgrade to Level C with PID readings of 10 ppm or more for 5 minutes in the breathing space. PID readings over 50 ppm in the breathing space, explosimeter readings of over 25% of the LEL, O₂ deficiency or enrichment, or H₂S readings will result in shutting down the job and consulting with State officials and the client.

NO CHANGES TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE APPROVAL OF THE SITE SAFETY OFFICER OR PROJECT MANAGER.

Monitoring Procedures

Site Monitoring Equipment:

Photovac MicroTIP (Model HL-2000, 10.6 eV probe)
 Explosimeter
 Draeger Tube & Pump
 O₂ Meter
 Other: H₂S meter

Methods and Frequency of Monitoring:

Air space and soil samples: Photovac MicroTIP HL-2000.
Air space: explosimeter/O₂ meter/H₂S meter.

Frequency: Soil samples; as obtained.
Air; not to exceed every 15 minutes.

PROJECT: NYNEX GARAGE INITIAL SITE INVESTIGATION
JOB NO.: 415015

Decontamination and Disposal

Personnel Decontamination Procedure:

- X Level C: Slush boot and glove wash, slush boot and glove rinse, tape removal, outer glove removal, (cartridge change), slush boot removal, suit removal, inner glove removal.

- X Modified Level D: Slush boot and glove wash, slush boot and glove rinse, slush boot removal, suit removal, glove removal.

Equipment Decontamination:

The drill rig and tools will be decontaminated by steam cleaning prior to the start of work and between borings. The use of clean augers (not previously used on the job) will be permitted with washing of the bit in ALCONOX. All decontamination will be done on-site. Routine washing of split spoon samplers, etc will use water obtained at the site with disposal on-site.

Disposal Procedure for Investigation-Derived Materials:
(decon waste, disposables)

All decon waste and disposables will remain on-site.

PROJECT: NYNEX GARAGE INITIAL SITE INVESTIGATION
JOB NO.: 415015

SITE OPERATING PROCEDURES/SAFETY GUIDELINES

- ** Always observe the buddy system. Never enter or exit site alone, and never work alone in an isolated area. Never wander off by yourself.
- ** Always maintain a line-of-sight.
- ** Practice contamination avoidance. Never sit down or kneel, never lay equipment on the ground, avoid obvious sources of contamination such as puddles, and avoid unnecessary contact with on-site objects
- ** No eating, drinking, or smoking outside the designated "clean" zone.
- ** In the event PPE is ripped or torn, work shall stop and PPE shall be removed and replaced as soon as possible.
- ** Be alert to any unusual changes in your own condition; never ignore warning signs. Notify Health and Safety Coordinator as to suspected exposures or accidents.
- ** A vehicle will be readily available exclusively for emergency use. All personnel going on-site shall be familiar with the most direct route to the nearest hospital.
- ** In the event of direct skin contact, the affected area shall be washed immediately with soap and water.
- ** Copies of the Health and Safety Plan shall be readily accessible at the command post.
- ** Note wind direction. Personnel shall remain upwind whenever possible during on-site activities.
- ** Never climb over or under refuse or obstacles. Use safety harness/safety lines when sampling lagoons, stream beds, and ravines with steep banks.
- ** Hands and face must be thoroughly washed before eating, drinking, etc.
- ** Any modifications to this safety plan MUST be approved by the Site Safety Officer.

PROJECT: NYNEX GARAGE INITIAL SITE INVESTIGATION
JOB NO.: 415015

Special Procedures:
Confined Space Entry

- No attempt will be made to enter abandoned buildings, manholes, tanks, or any other confined areas.
- Other:

Personnel Monitoring: (If applicable: Heat stress, frostbite, air sampling of individual breathing zone)

Monitoring of individual breathing space will be monitored by a Photovac MicroTIP HL-2000, explosimeter, O₂ meter, and H₂S meter as outlined in monitoring procedures. Monitoring of weather related hazards will be dictated by existing conditions.

EMERGENCY SITUATIONS

The following standard emergency procedures will be used by Dufresne-Henry on-site personnel. The Site Safety Officer (SSO) shall be notified of any on-site emergencies and be responsible for ensuring that the appropriate procedures are followed.

Personnel Injury to Dufresne-Henry Employees in the Exclusion Zone

Upon notification of an injury to a Dufresne-Henry employee in the exclusion zone, a rescue team will enter the zone (if required) to remove the injured person to the hotline. The SSO and Project Manager should evaluate the nature of the injury, and the affected person should be decontaminated to the extent possible prior to movement to the support zone. The SSO shall arrange for appropriate first aid, and contact should be made for an ambulance and with the designated medical facility (if required). No Dufresne-Henry personnel shall re-enter the exclusion zone until the cause of the injury or symptoms are determined.

Personnel Injury to Dufresne-Henry Employees in the Support Zone

Upon notification of an injury to a Dufresne-Henry employee in the support zone, the Project Manager and SSO will assess the nature of the injury. If the cause of the injury or loss of the injured person does not affect the performance of site personnel, operations may continue, with the on-site Field Team Leader initiating the appropriate first aid and necessary follow-up as stated above. If the injury increases the risk to others, all Dufresne-Henry personnel shall move to the decon line for further instructions. Dufresne-Henry activities on-site will cease until the added risk is removed or minimized.

Fire/Explosion

Upon notification of a fire or explosion on-site, all Dufresne-Henry personnel will assemble at the decon line. The fire department shall be alerted and all Dufresne-Henry personnel moved to a safe distance from the involved area.

Personal Protective Equipment Failure

If any Dufresne-Henry site personnel experience a failure or alteration of protective equipment that effects the protection factor, that person and his/her buddy shall immediately leave the exclusion zone. Re-entry shall not be permitted until the equipment has been repaired or replaced.

Other Equipment Failure

If any other equipment on-site fails to operate properly, the Project Manager and SSO shall be notified and then determine the effect of this failure on continuing operations on-site. If the failure affects the safety of on-site Dufresne-Henry personnel or prevents the completion of the tasks, all Dufresne-Henry personnel shall leave the exclusion zone until the situation is evaluated and appropriate actions taken.

In all situations, when an on-site emergency results in evacuation of the exclusion zone, Dufresne-Henry personnel shall not re-enter until:

1. The conditions resulting in the emergency have been corrected.
2. The hazards have been reassessed.
3. The Site Safety Plan has been reviewed.
4. Dufresne-Henry personnel have been briefed on any changes in the Site Safety Plan.

PROJECT: NYNEX GARAGE INITIAL SITE INVESTIGATION
JOB NO.: 415015

EMERGENCY INFORMATION

AMBULANCE: White River Junction Phone: 911
HOSPITAL: Dartmouth-Hitchcock Med. Ctr. Phone: (603) 650 - 5000
One Medical Ctr. Dr.
Lebanon, NH
(see attached map)
POLICE: White River Junction Phone: 911
FIRE DEPARTMENT: White River Junction Phone: 911
POISON CENTER: Burlington Phone: (802) 658 - 3456
ANR INCIDENT RESPONSE: Office Phone: (802) 241 - 3888

CORPORATE:

Dufresne-Henry N. Springfield, VT Phone: (802) 886-2261

Project Manager: F. David Deane

NEAREST PHONE: NYNEX office.

LOCATION OF ON-SITE FIRST AID KIT: Boring contractor's vehicle.

EMERGENCY VEHICLE: The designated emergency vehicle on-site shall be that of the Dufresne-Henry, Inc. representative.

PROJECT: NYNEX GARAGE INITIAL SITE INVESTIGATION
JOB NO.: 415015

The following individuals have read this safety document and are familiar with its contents, site conditions, and on-site safety procedures (please sign below):

<u>Name</u>	<u>Company</u>
F. David Deane <i>F. David Deane</i>	Dufresne-Henry, Inc.
Bruce Cox <i>Bruce Cox</i>	Dufresne-Henry, Inc.
Oscar Garcia	Dufresne-Henry, Inc.
Myron Domingue <i>Myron Domingue</i>	M & W Soils Engineering, Inc.
Richard Holmes <i>Richard Holmes</i>	M & W Soils Engineering, Inc.
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Copies of this SSP have been given to:

Approval Signatures:

PM _____

Div. Dir. _____

APPENDIX C

SITE PLAN



GRASS

3.5' WIDE STONELINED DITCH

PAVEMENT

NYNEX FACILITY

GARAGE DOOR

DOOR

CONCRETE PAD

MW-2

MW-1

ISLAND

MW-3

GRASS

GRASS

ROAD

GRASS

SCALE 1" = 40'



A DVI Company
Precision Park
No. Springfield,
Vermont 05150
Tel. (802)886-2261 Fax (802)886-2260

SITE SKETCH
PREPARED FOR
RICHARD FERDINANDO
NYNEX FACILITY

HARTFORD,

VERMONT

Project No. 414938

Proj. Mgr. F.D.D.

Date MAY '95

B SKETCH 1

APPENDIX D
BORING LOGS
AND
WELL INSTALLATION REPORT

NYNEX
INITIAL SITE INVESTIGATION
WHITE RIVER JUNCTION, VERMONT

4/20/95

Dufresne-Henry, Inc. - Bruce Cox on site at 9:00 am.

M & W Soils Engineering, Inc. - Myron Domingue, Richard Holmes on site at 9:10 am.

Notified the NYNEX manager of work to be done.

The Photovac was calibrated at 9:30 am.

MW-1

Started boring at 9:35 am. The rig and other equipment had been steam cleaned prior to arrival on site. All water used for cleaning split spoons and other tools was obtained from the NYNEX garage. Drilled with 4 1/4" hollow stem augers taking split spoon samples starting at 5'. All samples were screened for VOC's with a Photovac MicroTIP HL-2000 (10.6 eV lamp, calibrated with isobutylene). Representative soil samples from each split spoon were stored in clear glass jars and retained by Dufresne-Henry. Total depth of the boring was 15' with no refusal. The general geologic column is "Surepac" fill to approximately 11', followed by sandy gravel to 12'6", and silty sand and silt to the total depth of the boring. No visual or olfactory evidence of contamination was observed in the samples or on the tools. PID readings ranging from 0 ppm to 5.4 ppm were observed from samples headspaced at ambient temperature. The highest reading was from the 7' - 9' sample. The water table was encountered at approximately 8'. Installed a 10' long, 2" diameter, .020" machine slotted, threaded, flush joint, Schedule 40 PVC well at 14'6". All pipe came from factory sealed plastic bags. The annular space was backfilled with clean silica sand to 4'. A bentonite seal was installed from 3' - 4'. A watertight aluminum monitoring well box was grouted in flush at the surface.

Materials: 10' of 2", .020" slot, threaded, flush joint, SCHD 40 PVC.
4'4" of 2", solid wall, threaded, flush joint, SCHD 40 PVC.
125 lb± of silica sand.
25 lb± of bentonite chips.
40 lb± of concrete mix.
1 2" push-on PVC cap.
1 2" expanding gasket cap.
1 6" aluminum monitoring well box.

MW-2

Started boring at 11:10 am. Clean augers not previously used on the site were used. The bit was washed in ALCONOX prior to reuse. All water used for cleaning split spoons and other tools was obtained from the NYNEX garage. Drilled with 4 1/4" hollow stem augers taking split spoon samples starting at 5'. All samples were screened for VOC's with a Photovac MicroTIP HL-2000 (10.6 eV lamp, calibrated with isobutylene). Representative soil samples from each split spoon

were stored in clear glass jars and retained by Dufresne-Henry. Total depth of the boring was 15' with no refusal. The general geologic column is "Surepac" to approximately 9', followed by silty sand to the limit of the boring. No visual or olfactory evidence of contamination was observed in the samples or on the tools. PID readings of 0 ppm were observed from all samples when headspaced at ambient temperature. The water table was encountered at approximately 8'. Installed a 10' long, 2" diameter, .020" machine slotted, threaded, flush joint, Schedule 40 PVC well at 15'. All pipe came from factory sealed plastic bags. The annular space was backfilled with clean silica sand to 3'6". A bentonite seal was installed from 2'6" - 3'6". A watertight aluminum monitoring well box was grouted in flush at the surface.

Materials: 10' of 2", .010" slot, threaded, flush joint, SCHD 40 PVC.
4'9" of 2", solid wall, threaded, flush joint, SCHD 40 PVC.
125 lb± of silica sand.
25 lb± of bentonite chips.
40 lb± of concrete mix.
1 2" push-on PVC cap.
1 2" expanding gasket cap.
1 6" aluminum monitoring well box.

MW-3

Started boring at 12:45 pm. Clean augers not previously used on the site were used. The bit was washed in ALCONOX prior to reuse. All water used for cleaning split spoons and other tools was obtained from the NYNEX garage. Drilled with 4 1/4" hollow stem augers taking split spoon samples starting at 4'6". All samples were screened for VOC's with a Photovac MicroTIP HL-2000 (10.6 eV lamp, calibrated with isobutylene). Representative soil samples from each split spoon were stored in clear glass jars and retained by Dufresne-Henry. Total depth of the boring was 15' with no refusal. The general geologic column is topsoil to 4"±, followed by silty sand to the limit of the boring. No visual or olfactory evidence of contamination was observed in the samples or on the tools. PID readings of 0 ppm were observed from all samples when headspaced at ambient temperature. The water table was encountered at approximately 8'. Installed a 10' long, 2" diameter, .020" machine slotted, threaded, flush joint, Schedule 40 PVC well at 15'. All pipe came from factory sealed plastic bags. The annular space was backfilled with clean silica sand to 3'6". A bentonite seal was installed from 2'6" - 3'6". A watertight aluminum monitoring well box was grouted in flush at the surface.

Materials: 10' of 2", .020" slot, threaded, flush joint, SCHD 40 PVC.
4'9" of 2", solid wall, threaded, flush joint, SCHD 40 PVC.
125 lb± of silica sand.
25 lb± of bentonite chips.
40 lb± of concrete mix.
1 2" push-on PVC cap.
1 2" expanding gasket cap.
1 6" aluminum monitoring well box.

Visitors: David Deane, Dufresne-Henry 10:00 am† - 11:30 am†.

Hartford Water Dept employee at 11:10 am to discuss water lines.

Weather: Sunny, 40's am - 50's pm, light breeze.

Off site: 2:30 pm.

BORING LOCATION MW-1 INCLINATION V BEARING DATE START/FINISH 4/20/95 / 4/20/95
 CASING ID CORE SIZE TOTAL DEPTH 15 FT DRILLED BY: M & W SOILS ENGINEERING, INC. (M.D.)
 GROUND EL (AD) 499.18 DEPTH TO WATER/DATE 5.60 FT/ 4/23/95 LOGGED BY: B. COX

ELEV AD FT	SAMPLE			SAMP OD IN	LENGTH		REMARKS ON ADVANCE OF BORING	SIZE/TYPE BIT USED TO ADVANCE BORING	SOIL AND ROCK DESCRIPTION
	DEPTH FT	TYPE AND NO.	B		REC IN	PENETRATION IN			
494.18	5						4 1/4" HSA	8"/CCH	0' - 4' Medium gray "Surepac". 4' - 5' Probable concrete rubble.
492.18	7	SS-1	5 4 2 1	2	0	24			No sample recovery.
490.18	9	SS-2	2 1 2 2	2	2	24			Medium - dark brown gray, very loose, silty, sandy GRAVEL. Fine - coarse grained, poorly sorted sand 10% - 20% non plastic fines. 60%± fine gravel to 1". Probable mixture of "Surepac" and native soil Wet - saturated. No odor or staining. 5.4 ppm.
489.18	10						4 1/4" HSA	8"/CCH	Probable GRAVEL similar to above.
487.18	12	SS-3	5 5 9 8	2	4	24			Medium - dark gray brown, medium dense, silty, sandy GRAVEL. Very fine - coarse grained, poorly sorted sand. 20%± non plastic fines. 60%± gravel 1/8" - rarely 1". Trace "Surepac". Sandier at bottom. No odor or staining. 2.5 ppm.
485.18	14	SS-4	9 12 7 9	2	24	24			12' - 12'6" Sandy GRAVEL as above. 12'6" - 14' Medium brown gray, medium dense silty SAND. Very fine - fine grained, well sorted, predominately quartz sand. 40%± non plastic fines. Trace mafic minerals, mica. Saturated. No odor or staining. 0 ppm.
484.18	15						4 1/4" HSA	8"/CCH	Probable silty SAND similar to above.
									No refusal to depth. Set 10' of 2" dia, .020" slot, threaded, flush joint, Schd 40 PVC at 14'6". Sand backfill to 3'. Bentonite seal 3' - 4'. Grouted in flush aluminum monitoring well box.

B - Penetration resistance, Blows/6" of a 140 lb hammer falling 30 in to drive a split spoon sampler.
 REC - Length of sample recovered.
 SS - Split spoon sample.
 U - Undisturbed samples
 S - Shelby tube M - Denison
 F - Fixed piston P - Pitcher
 O - Osterberg
 SAMP OD - Outside diameter of sampling spoon

NOTES
 HSA = Hollow Stem Auger
 CCH = Conical Cutter Head
 ppm Refers to PID reading (10.6 eV lamp)
 Top of PVC elev = 498.90

NYNEX
 INITIAL SITE INVESTIGATION
 HARTFORD, VERMONT
 DATE: 4/20/95 PROJECT: 415015
 PAGE 1 OF 1 LOG OF BORING: MW-1

BORING LOCATION MW-2 INCLINATION V BEARING DATE START/FINISH 4/20/95 / 4/20/95
 CASING ID CORE SIZE TOTAL DEPTH 15 FT DRILLED BY: M & W SOILS ENGINEERING, INC. (M.D.)
 GROUND EL (AD) 499.18 DEPTH TO WATER/DATE 5.35 FT/ 4/23/95 LOGGED BY: B. COX

ELEV AD FT	SAMPLE			SAMP OD IN	LENGTH		REMARKS ON ADVANCE OF BORING	SIZE/TYPE BIT USED TO ADVANCE BORING	SOIL AND ROCK DESCRIPTION
	DEPTH FT	TYPE AND NO.	B		REC IN	PENETRATION IN			
494.18	5						4 1/4" HSA	8"/CCH	Medium gray "Surepac".
489.18	10	SS-1	1 1* 1 1 3	2	11	60	* 1/30"		Medium gray brown, very loose, silty, gravelly SAND. Very fine - occasionally medium grained, moderately well sorted, predominately quartz sand. 30% non plastic fines. 10% fine rounded gravel to 1/2". Saturated. No odor or staining. 0 ppm.
487.18	12	SS-2	2 2 2 1	2	20	24			Medium brown, very loose, silty SAND. Very fine - fine grained, well sorted, predominately quartz sand. 40%+ non plastic fines. Trace mica, mafic minerals. Saturated. No odor or staining. 0 ppm
484.18	15						4 1/4" HSA	8"/CCH	Probable silty SAND similar to above.
									No refusal to depth. Set 10' of 2" dia, .020" slot, threaded, flush joint, Schd 40 PVC at 15'. Sand backfill to 3'6". Bentonite seal 2'6" - 3'6". Grouted in flush aluminum monitoring well box.

B - Penetration resistance, Blows/6" of a 140 lb hammer falling 30 in to drive a split spoon sampler. REC - Length of sample recovered. SS - Split spoon sample. U - Undisturbed samples S - Shelby tube N - Denison F - Fixed piston P - Pitcher O - Osterberg SAMP OD - Outside diameter of sampling spoon	NOTES HSA = Hollow Stem Auger CCH = Conical Cutter Head ppm Refers to PID reading (10.6 eV lamp) Top of PVC elev = 498.88	NYNEX INITIAL SITE INVESTIGATION	
		HARTFORD, VERMONT DATE: 4/20/95 PROJECT: 415015	PAGE 1 OF 1 LOG OF BORING: MW-2

BORING LOCATION MW-3 INCLINATION V BEARING DATE START/FINISH 4/20/95 / 4/20/95
 CASING ID CORE SIZE TOTAL DEPTH 15 FT DRILLED BY: M & W SOILS ENGINEERING, INC. (M.D.)
 GROUND EL (AD) 499.35 DEPTH TO WATER/DATE 6.85 FT/ 4/23/95 LOGGED BY: B. COX

ELEV AD FT	SAMPLE			SAMP OD IN	LENGTH		REMARKS ON ADVANCE OF BORING	SIZE/TYPE BIT USED TO ADVANCE BORING	SOIL AND ROCK DESCRIPTION
	DEPTH FT	TYPE AND NO.	B		REC IN	PENETRA- TION IN			
494.85	4.5						4 1/4" HSA	8"/CCH	0" - 4"± Medium - dark brown, silty, sandy, OR- GANIC SOIL. 4" - 4'6" Medium brown, silty SAND.
492.85	6.5	SS-1	8 12 11 11	2	17	24			Medium brown gray, medium dense, silty SAND. Very fine - occasionally medium grained, moderately well sorted, predominately quartz sand. 20% - 30% non plastic fines. Dry - slightly moist. No odor or staining. 0 ppm.
490.85	8.5	SS-2	11 8 8 7	2	11	24			Medium brown gray, medium dense, silty SAND simi- lar to above. 2" layer of medium gray silt at 7'± Saturated bottom 6"±. No odor or staining. 0 ppm
489.85	9.5						4 1/4" HSA	8"/CCH	Probable silty SAND similar to above.
487.85	11.5	SS-3	6 3 2 2	2	14	24			Dark brown, loose, sandy SILT. Very fine grained, well sorted sand. 60%+ non plastic fines. Occa- sional 1/2" layers of light olive brown, clayey silt. Saturated. No odor or staining. 0 ppm.
484.35	15						4 1/4" HSA	8"/CCH	Probable silty SAND or sandy SILT similar to above
<p>No refusal to depth.</p> <p>Set 10' of 2" dia, .020" slot, threaded, flush joint, Schd 40 PVC at 15'. Sand backfill to 3'6". Bentonite seal 2'6" - 3'6". Grouted in flush aluminum monitoring well box.</p>									

B - Penetration resistance, Blows/6" of a 140
lb hammer falling 30 in to drive a split
spoon sampler.
 REC - Length of sample recovered.
 SS - Split spoon sample.
 U - Undisturbed samples
 S - Shelby tube N - Denison
 F - Fixed piston P - Pitcher
 O - Osterberg
 SAMP OD - Outside diameter of sampling spoon

NOTES
 HSA = Hollow Stem Auger
 CCH = Conical Cutter Head
 ppm Refers to PID reading
 (10.6 eV lamp)
 Top of PVC elev = 499.13

NYNEX
 INITIAL SITE INVESTIGATION
 HARTFORD, VERMONT
 DATE: 4/20/95 PROJECT: 415015
 PAGE 1 OF 1 LOG OF BORING: MW-3

M & W Soils Engineering, Inc.
Main St. Charlestown, NH 03603

TO DUFRESNE-HENRY ENGINEERING ADDRESS NORTH SPRINGFIELD, VT
 PROJECT NAME NEW ENGLAND TELEPHONE LOCATION HARTFORD, VT
 REPORT SENT TO BRUCE COX PROJ. NO. _____
 SAMPLE SENT TO RETAINED BY DUFRESNE-HENRY OUR JOB NO. 6347-95

SHEET 1 OF 1
 DATE 4/20/95
 HOLE NO. MW-2
 LINE & STA. _____
 OFFSET _____

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BAR	SURFACE ELEV.
AT <u>5:10</u> "	AT <u>*</u> "	HSA	SS		
HOURS _____		Type			DATE STARTED <u>4/20/95</u>
*WELL COMPLETION _____		Size I. D.	<u>4 1/4"</u>	<u>1 1/2"</u>	DATE COMPL. <u>4/20/95</u>
AT _____		Hammer Wt.		<u>140#</u>	BORING FORMAN <u>M.D. & R.H.</u>
AT _____		Hammer Fall		<u>30"</u>	INSPECTOR <u>B. COX</u>
					SOILS ENGR. _____

LOCATION OF BORING

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect	SAMPLE					
				From 0-6	6-12	To 12-18				NO.	PEN	REC			
									GREY SUREPACK						
5'		5' - 8'	SS	1	1		LOOSE - MOIST TO WET	4'	OLIVE BROWN GRAVELLY SAND	1	36"	*			
				1/24"											
		8' - 10'	SS	1	1					2	24"	12"			
10'		10' - 12'	SS	2	2		LOOSE - WET	11'	SAME MATERIAL	3	24"	12"			
				2	1										
15'							LOOSE - WET	15'	OLIVE BROWN SILTY FINE SAND INSTALLED 2" PVC WELL AT 15' SLOTTED FROM 5'-15' WITH 0.020" SLOTS SCREEN FILTER SAND TO 3'6" BENTONITE FROM 2'6"-3'6" MATERIALS USED: 10' OF 2" PVC 0.020" SLOT SCREEN 5' OF 2" PVC SOLID 25# OF BENTONITE CHIPS 125# OF SAND 40# OF CEMENT MIX 1 6" MANHOLE 1 2" SLIDE CAP 1 2" EXPANSION CAP						

GROUND SURFACE TO 15' USED HSA CASING THEN _____

Sample Type D-Dry C-Cored W-Washed UP-Unfinished Piston TP-Test Pit A-Auger V-Vane Test UT-Undisturbed Thinwall	Proportions Used trace 0 to 10% little 10 to 20% some 20 to 35% and 35 to 50%	140 lb. wt. x 30"-fall an 2" O.D. Sampler Cohesionless Density 0-10 Loose 10-30 Med. Dense 30-50 Dense 50+ Very Dense	Cohesive Consistency 0-4 Soft 30 + Hard 4-8 M/Stiff 8-15 Stiff 15-30 V-Stiff	summary EARTH BORING <u>15'</u> ROCK CORING _____ SAMPLES <u>3</u> HOLE NO. <u>MW-2</u>
--	--	--	--	--

M & W Soils Engineering, Inc.
Main St. Charlestown, NH 03603

TO DUFRESNE-HENRY ENGINEERING ADDRESS NORTH SPRINGFIELD, VT
PROJECT NAME NEW ENGLAND TELEPHONE LOCATION HARTFORD, VT
REPORT SENT TO BRUCE COX PROJ. NO. _____
SAMPLE SENT TO RETAINED BY DUFRESNE-HENRY OUR JOB NO. 6347-95

SHEET 1 OF 1
DATE 4/20/95
HOLE NO. MW-3
LINE & STA. _____
OFFSET _____

GROUND WATER OBSERVATIONS		Type	CASING	SAMPLER	CORE BAR	SURFACE ELEV.
AT <u>7'</u>	AT <u> </u> HOURS		HSA	SS	_____	DATE STARTED <u>4/20/95</u>
*WELL COMPLETION		Size I. D.	<u>4 1/4"</u>	<u>1 1/2"</u>	_____	DATE COMPL. <u>4/20/95</u>
AT _____ AT _____ HOURS		Hammer Wt.	_____	<u>140#</u>	BIT	BORING FORMAN <u>M.D. & R.H.</u>
		Hammer Fall	_____	<u>30"</u>	_____	INSPECTOR <u>B. COX</u>
						SOILS ENGR. _____

LOCATION OF BORING

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect	SAMPLE		
				From 0-6	6-12	To 12-18				NO.	PEN	REC
								10'	TOPSOIL			
									BROWN SAND AND GRAVEL			
5'		4'6" - 6'6"	SS	8	12			3'		1	24"	20"
		6'6" - 8'6"	SS	11	11				BROWN LAYERS OF GRAVELLY COARSE TO FINE SAND AND FINE SILTY SAND WITH COBBLES	2	24"	18"
		9'6" - 11'6"	SS	11	8					3	24"	16"
10'				8	7			10'				
				6	3				BROWN FINE SAND AND SILT			
15'				2	2			15'				

GROUND SURFACE TO 15'

USED HSA CASING THEN _____

Sample Type
D-Dry C-Cored W-Washed
UP-Unfinished Piston
TP-Test Pit A-Auger V-Vane Test
UT-Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense
Cohesive Consistency
0-4 Soft 30+ Hard
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff

summary	
EARTH BORING	<u>15'</u>
ROCK CORING	_____
SAMPLES	<u>3</u>
HOLE NO.	<u>MW-3</u>

APPENDIX E
LABORATORY ANALYTICAL REPORT



Eastern Analytical, Inc. 25 Chenell Dr., Concord, NH 03301 (603) 228-0525

May 3, 1995

Oscar Garcia
Dufresne-Henry
Precision Park
North Springfield, VT 05150

Subject: Laboratory Report

Eastern Analytical, Inc. ID #: 2445 DUF
Client Identification: 415015/Nynex-Hartford, VT
Sample Quantity/Type: 3 aqueous
Date Received: 4/25/95

Dear Mr. Garcia:

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 limit
- BRL = Below Reporting 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
President



LABORATORY REPORT

Eastern Analytical, Inc. ID#: 2445 DUF

Client: Dufresne-Henry
Client Designation: 415015/Nynex-Hartford, VT

Sample Qty/Type: 3 aqueous
Date Received: April 25, 1995

Volatile Organic Compounds

Sample ID:	1	2	3
Matrix:	Aqueous	Aqueous	Aqueous
Date of Analysis:	5/1/95	5/1/95	5/1/95
Units:	µg/L	µg/L	µg/L
Analyst:	TML	TML	TML
EPA Method:	602	602	602
Benzene	<1	<1	<1
Toluene	<1	<1	<1
Ethylbenzene	<1	<1	<1
Total Xylenes	4	<1	<1
EPA Method:	8015	8015	8015
MTBE	< 20	< 20	< 20

Approved By: Timothy Schaper, Organics Supervisor

