

DUFRESNE-HENRY, INC.
 Precision Park
 NORTH SPRINGFIELD, VERMONT 05150

LETTER OF TRANSMITTAL

(802) 886-2261

TO AGENCY OF NATURAL RESOURCES
DEC, WMD, SMS
103 SOUTH MAIN ST/WEST OFFICE
WATERBURY, VT 05671-0404

DATE 1/15/97	JOB NO. 4160076
ATTENTION MR. ANDREW SHIVELY	
RE JOHNSON & DEK	
LUDLOW BULK STORAGE FACILITY	
SMS # 96-2075	

GENTLEMEN:

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
1			INITIAL SITE INVESTIGATION REPORT

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ corrected prints
 For review and comment _____
 FOR BIDS DUE _____ 19 _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO NEIL MARTIN

SIGNED: Bruce Cox

If enclosures are not as noted, kindly notify us at once.

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
PHASE I**

**Ludlow Bulk Storage Facility
Ludlow, VT 05149**

SMS Site #96-2075

JAN 15 10 07 AM '97

A Facility Owned By:
Johnson & Dix Fuel Corporation
 240 Mechanic Street
 Lebanon, VT 03766
 (802) 885-4547
 Contact: Neil Martin

Prepared By:
Dufresne-Henry, Inc.
 Precision Park
 North Springfield, VT 05150
 (802) 886-2261
 Contact: Bruce H. Cox, P.E.

January 15, 1997

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EXECUTIVE SUMMARY

The first phase of an Initial Site Investigation has been completed at the Johnson & Dix Fuel Corporation bulk storage facility in Ludlow, Vermont. The investigation was in response to the discovery of contaminated soil and groundwater during a UST Closure Assessment in August 1996. The tanks were found to be in good condition. Contaminated soil was typically observed near the fillers. New UST's were installed in the same general location. At the direction of the Waste Management Division, all soil excavated from the tank beds was backfilled pending additional investigation.

At the time of sampling it was discovered that most of the twelve (12) existing site monitoring wells had apparently been buried during other site renovations. Four (4) of the monitoring wells were recovered and sampled in December 1996. The samples were analyzed for BTEX and MTBE by EPA Method 8020(mod) and for TPH by EPA Method 8100(mod). No compounds above detection limits for those methods were found.

A previously established contaminated soil stockpile was backfilled along with contaminated soil excavated as part of the new UST installation.

A significant number of structures exist within a one-half mile radius of the site. All or most are thought to be on the Ludlow or other public water supply system. Most are topographically upgradient or separated from the site by streams. The public supply is not threatened by this site. The nearest surface water is the Black River approximately 160 feet west of the site. No evidence of contamination was observed in the river.

Based on these findings, it is recommended that:

1. An attempt should be made in the spring to recover the buried wells. All wells found to be in usable condition should be extended to grade and the protective well boxes reset or replaced as required. Locations and elevations should be surveyed.
2. The recoverable monitoring wells should be sampled and analyzed annually for BTEX and TPH. It is recommended the sampling be done after spring runoff.

**INITIAL SITE INVESTIGATION - PHASE I
JOHNSON & DIX BULK STORAGE FACILITY
LUDLOW, VERMONT**

Introduction

The Johnson & Dix bulk storage facility is located at the intersection of Dug Way Road and Vermont Route 100 in Ludlow, Vermont. A site location map is included as Appendix A.

Dufresne-Henry, Inc., in conjunction with Great Northern Environmental Services, performed a Tank Closure Assessment at the site on August 13-15, 1996. The closure subjects were one (1) 500 gallon kerosene single wall UST, one (1) 17,000 gallon kerosene single wall UST, one (1) 17,000 gallon diesel single wall UST, and four (4) 25,000 gallon #2 heating oil UST's. All of the tanks were found to be in good condition. Evidence of soil and groundwater contamination was observed in several areas. The contaminated soil was typically observed near the fillers. Soil sample headspace PID readings up to 800 ppm were observed. Five (5) new UST's were installed at the same time. At the direction of the Waste Management Division, all contaminated soil was backfilled pending additional investigation.

Work and Health and Safety Plans

As a result of the findings of the Tank Closure Assessment, the Sites Management Section (SMS) requested additional investigation at the property in a letter dated November 5, 1996. Dufresne-Henry prepared a Work Plan and a Health and Safety Plan for the proposed activities at the site. As a number of monitoring wells currently exist, the work plan proposed a phased Initial Site Investigation. The phase covered by this report is sampling a representative number of those monitoring wells, a limited site survey, and a receptor study. A copy of the proposed work plan was forwarded to the SMS for review on November 11, 1996. The work plan was approved in a letter dated November 13, 1996. Copies of these documents will be found in Appendix B. The remainder of this report describes the on-site activities and subsequent findings based on that work plan.

Site Description

The Johnson & Dix bulk storage facility is located east of Vermont Route 100 and on the north side of the intersection with Dug Way Road. The developed portion of the property currently consists of five (5) UST's and two small structures housing pumps and other product loading and unloading equipment. The area around the tanks and the loading/unloading facilities is gravel. The surrounding land is wooded. The Black River is approximately 160' west of the tank farm. A low berm constructed as part of the site Spill Prevention, Control, and Countermeasure Plan (SPCC Plan) borders the western side of the open area. There are no water or wastewater facilities on the site. Immediately surrounding land is undeveloped. At the time of the UST Closure there were twelve (12) monitoring wells on the site. The current number of wells is uncertain. A polyencapsulated stockpile of contaminated soil was formerly located at the edge of the open area north of the UST's. A site plan is included as Appendix C.

Site History

The history of the site is not completely known. Johnson & Dix has occupied the property since at least the early 1970's. The UST's which were the subject of the Closure Assessment were installed in 1973 following a record flood that disturbed the previous tanks. Five (5) new UST's were installed in the same general location concurrent with the Closure Assessment performed in August 1996. No other UST's are known to exist on the site. With the exception of petroleum products, no other hazardous materials are known to exist on the site. The facility is currently active.

The most recent (September 1996) Vermont Hazardous Waste Sites List maintained by the HMMD contains three (3) active sites in Ludlow. One known additional site is expected to appear in the next list. None of the sites are within a one-half mile radius of the subject property.

Monitoring Wells

A total of thirteen (13) monitoring wells have been installed on the site at various times. One of the wells, MW-7, has been destroyed since at least 1994. Logs of the borings were not obtained. At some time after the removal of the existing UST's and the installation of the new UST's, additional work was done at the site. Regrading to the west of the tanks buried most of the remaining wells. Only four of the wells (MW-1, MW-9, MW-10, and MW-12) have been

recovered to date. It is expected that most of the remaining wells may be recoverable.

Site Geology

Surficial geology at the site is published as glacial outwash. Upper portions of the soil profile in the area are undoubtedly recent alluvium related to flooding of the Black River. The sand and gravel deposits observed during the UST removals substantiate the mapping. The deposits can be expected to have moderate - high permeability.

Published data indicates bedrock at the site is most likely the Plymouth Member of the Hoosac Formation. The Plymouth Member is generally described as quartzite, schistose quartzite, dolomitic quartzite, and carbonaceous phyllite. The age is Lower Cambrian. No bedrock was observed in the UST removal excavations.

Site Hydrogeology

Dufresne-Henry has sounded the recoverable monitoring wells several times since 1994. At the time that groundwater samples were obtained on December 20, 1996, the water levels ranged from 9.6' - 14.5' below the ground surface. Based on the measured elevations over the course of our involvement at the site, the water table appears to be relatively flat. The general direction of groundwater flow is expected to be to the west and southwest toward the Black River. The water table elevations appear to be highly influenced by the river level. Soundings made on January 2, 1997 show that all of the recoverable wells were dry. There is also some evidence the gradient may temporarily reverse during periods when the river level rises rapidly. A site plan showing the water table elevations as of December 20, 1996, as well as a summary table of sounding data to date, are included as Appendix D.

Potential Receptors

Based on the 1971 USGS Ludlow, VT topographic quadrangle, in excess of 50 structures are within a one-half mile radius of the site. All or most are thought to be connected to the Ludlow municipal system or other public water system. As of the date of submittal, municipal officials had not been reached to confirm this. Most of the structures are topographically upgradient or separated from the site by the Black River. The nearest surface water is the Black River located approximately 160 feet to the west. No sheens or other evidence of contamination

have been observed in the Black River.

Monitoring Well Sampling

The initial round of sampling was performed on December 20, 1996 following the standard protocols on file with the WMD. The sampling was performed by Dufresne-Henry personnel. Due to extensive site modifications stemming from the reconstruction of the loading rack, only four (4) of the existing monitoring wells were recovered. The remaining wells are either buried under several feet of fill, or have been destroyed. Dufresne-Henry was unaware of these site changes at the time of work plan submittal. The recovered wells are arrayed in a west - east line on either side of the UST's. Well MW-1 is on the east side of the tanks in the probable upgradient direction. Proceeding toward the Black River, in approximately the probable direction of groundwater flow, are wells MW-10, MW-9, and MW-12. Well MW-1 is located approximately 15' from the tanks. Wells MW-9, MW-10, and MW-12 range from approximately 20' to 70' from the tanks. Although the number of wells is limited, the locations of the wells relative to the tanks are such that interception of a contaminant plume is likely.

Three well volumes were purged prior to drawing a sample. No sheens were observed in any of the wells. The refrigerated samples were shipped to Eastern Analytical, Inc. of Concord, New Hampshire on December 23, 1996 via overnight carrier. The samples were analyzed for BTEX and MTBE by EPA Method 8020(mod) and for TPH (Level II) by EPA Method 8100(mod). One sample, MW-1 TPH, froze during shipment to the lab and was unusable. No compounds above detection limits for either method were found in any well. A copy of the contract laboratory analytical report is included as Appendix E.

Contaminated Soil Stockpile

A polyencapsulated stockpile of contaminated soil was located at the north end of the open portion of the site. Dufresne-Henry had periodically screened the soil with a PID since July 1994. At the time of the most recent screening (October 1995), PID readings up to 400 ppm were observed. Contaminated soil excavated during the UST closure was temporarily stockpiled in the same general location. All of the soil, including the previously established stockpile, was backfilled as part of the new UST installation.

Summary and Recommendations

In summary, four (4) of the formerly existing twelve (12) site monitoring wells were sampled. Analysis of groundwater samples from those wells found no BTEX, MTBE, or TPH above detection limits for the methods used. No evidence of free product was observed in any of the wells. No evidence of free product has been observed in any site monitoring well since Dufresne-Henry observations started in 1994.

The tanks removed during the August 1996 closure were in good condition. Contaminated soil was typically observed near the fillers. The tanks replaced an unknown number of tanks damaged by a record flood in 1973. No information regarding that removal has been disclosed.

The majority of the previously installed groundwater monitoring wells have been buried by regrading during site renovations. It is expected that most of the wells can be recovered.

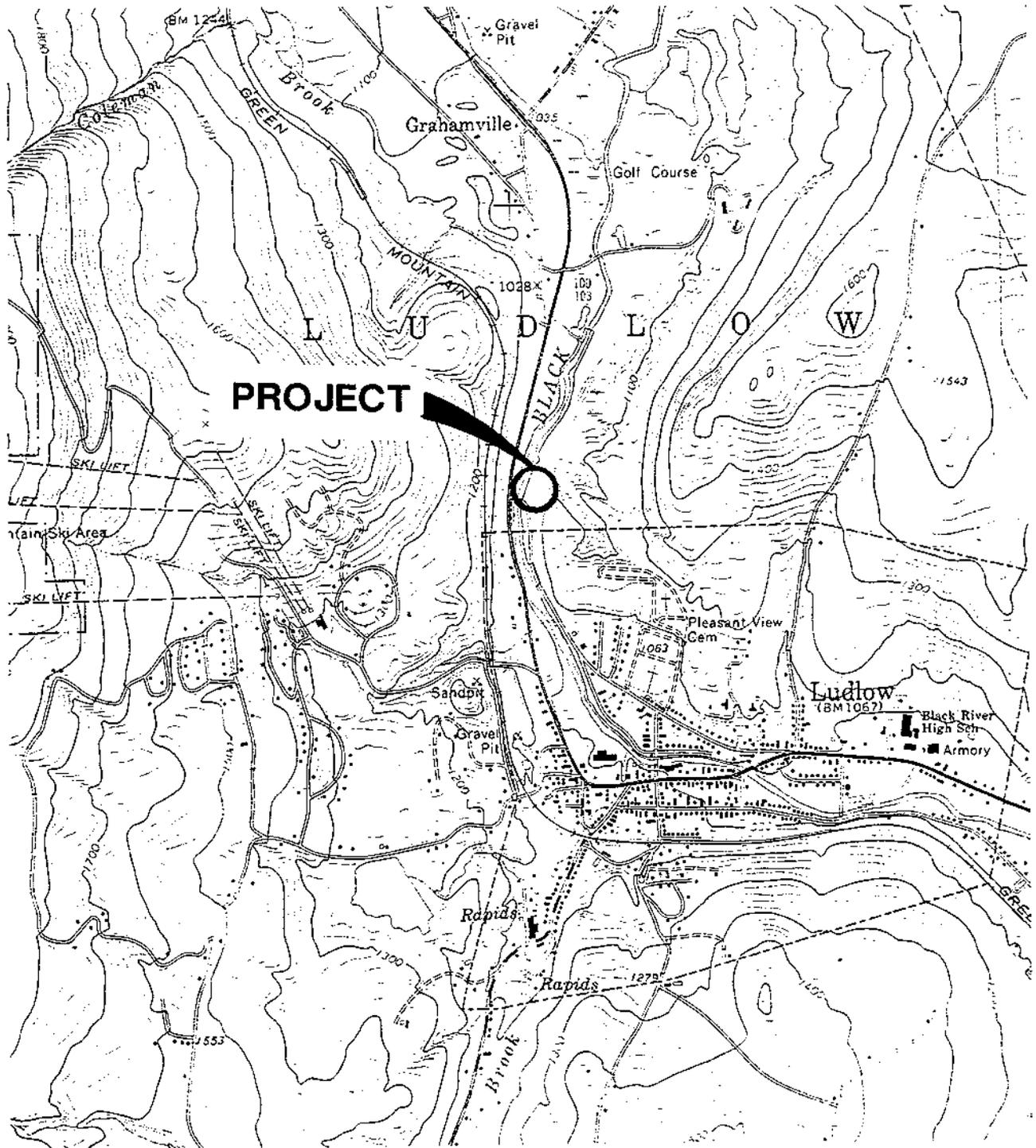
The stockpile of contaminated soil previously on the site was backfilled along with the soil excavated as part of the UST closure and installation of the new UST's.

All properties in the vicinity of the site are believed to be connected to the municipal or other public water supply system. The nearest surface water is the Black River approximately 160 feet west of the site. No evidence of contamination was observed in the river.

Based on these findings, we recommend:

1. An attempt should be made in the spring to recover the buried monitoring wells. All wells found to be in usable condition should be extended to grade and the protective well boxes reset or replaced as required. Locations and elevations should be surveyed.
2. The recoverable monitoring wells should be sampled and analyzed annually for BTEX and TPH. It is recommended the sampling be done after spring runoff.

APPENDIX A
SITE LOCATION MAP



PROJECT

SCALE
1:24,000

TAKEN FROM A USGS QUAD. SHEET FOR LUDLOW, VT
FIELD CHECKED IN 1971

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

LUDLOW,

**SITE LOCATION PLAN
PREPARED FOR
JOHNSON & DIX FUEL CO.
LUDLOW BULK FACILITY**

VERMONT

Project No.	4160076
Proj. Mgr.	B. H. C.
Date	JAN., '97
B	SLP-1

APPENDIX B

**SITE INVESTIGATION REQUEST, WORK PLAN,
SITE HEALTH AND SAFETY PLAN**



State of Vermont

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

NOV - 7 1996

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation

Waste Management Division
103 South Main Street / West Office
Waterbury, VT 05671-0404
Tel: (802) 241-3888
Fax: (802) 241-3296

November 5, 1996

NEIL MARTIN
JOHNSON AND DIX FUEL CORPORATION
30 HARTNESS AVENUE
SPRINGFIELD, VT, 05156

RE: Petroleum contamination at Ludlow Bulk Storage Facility
(Site #96-2075)

Dear Mr. Martin:

The Sites Management Section (SMS) has received a site assessment report outlining the subsurface conditions for the above referenced site, submitted by Anna M. Cozzaglio of Dufresne-Henry, Inc. on August 23, 1996. This report summarizes the degree and extent of contamination encountered during the assessment. The tanks removed were; four (4) 25,000 gallon, steel, #2 fuel oil underground storage tank (UST)s; one (1) 17,000 gallon, steel, diesel UST; one (1) 17,000 gallon, steel, kerosene UST; and one (1) 500 gallon, steel, kerosene UST.

During the tank pull, soils screened at 10.0 feet below ground surface (fbgs) had a peak volatile organic compound (VOC) concentration of 791 parts per million (ppm) as measured by a photoionization detector (PID). Groundwater was encountered at 10.0 feet below ground surface. Free phase petroleum product was not found to be present. All excavated soil was backfilled since the full extent of the contamination was unknown.

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

1. Determine the degree and extent of contamination to groundwater. Since evidence of contamination to groundwater was found, 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 collected should be analyzed for BTEX and TPH

compounds.

2. 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 to be at risk from this contamination, they should be sampled and analyzed for BTEX and TPH compounds.

3. 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 investigation.

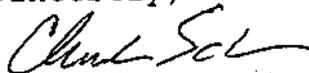
4. Submit to the SMS a summary report which outlines the work performed, as well as provides conclusions and recommendations. Included should be detailed wells logs, analytical data, a detailed site map showing the location of any potential sensitive receptors, an area map, and a groundwater contour map.

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. Enclosed please find a list of consultants who perform this type of work in the area as well as the brochure "Selecting Your UST Cleanup Contractor", which will help you in choosing an environmental consultant.

Based on the current information available, the USTs at the Ludlow Bulk Storage Facility are covered by the Petroleum Cleanup Fund (PCF) as set forth in 10 V.S.A. § 1941. An owner or permittee of a UST that does not hold private insurance coverage applicable to this situation, is eligible for reimbursement from the PCF for certain expenses. A written proof of no insurance must be submitted before the PCF can be utilized for reimbursement. An owner or permittee of an UST, who is not in significant violation of his or her permit, is eligible for reimbursement from the PCF. The owner or permittee must pay for the removal or repair of the UST and the first \$10,000 of the cleanup; there after the PCF will reimburse the owner or permittee for additional eligible cleanup costs up to \$1,000,000. All expenditures must be pre-approved by the Agency or performed in accordance with the "Site Investigation Guidance" expressway program for reimbursement to occur. Please refer to the attached guidance document "Procedures for Reimbursement from the Petroleum Cleanup Fund" for further information on this program. Additionally, the Secretary of the Agency of Natural Resources reserves the right to seek cost recovery of fund monies spent at the Ludlow site if the Secretary concludes that Johnson and Dix Fuel Corporation is in significant violation of the Vermont

Underground Storage Tank Regulations and/or the Underground Storage Tank statute (10 V.S.A., Chapter 59). If you have any questions, please feel free to contact me at (802) 241-3876.

Sincerely,


Chuck Schwer, Supervisor
Sites Management Section

cc: Ludlow Selectboard
Ludlow Health Officer
DEC Regional Office
Anna Cozzaglio, Dufresne-Henry, Inc.
CS:AS/SMS/962075

Proposed Work Plan
Initial Site Investigation

**JOHNSON & DIX BULK STORAGE FACILITY
LUDLOW, VERMONT**

INTRODUCTION

In August 1996 Dufresne-Henry, Inc. provided UST Closure Assessment services for the removal of seven (7) UST's at the Johnson & Dix bulk storage facility in Ludlow, VT. The UST's were: four (4) 25,000 #2 heating oil UST's, one (1) 17,000 gallon diesel UST, one (1) 17,000 gallon kerosene UST, and one (1) 500 gallon kerosene UST. All of the tanks were found to be in good condition. Evidence of soil and groundwater contamination was observed in several areas. Soil sample headspace PID readings up to 800 ppm were observed. At the direction of Tim McNamara all contaminated soil was backfilled. The SMS requested additional work in a letter dated November 5, 1996.

There are currently twelve (12) monitoring wells at the site. Since June 1994 these wells have been sounded, screened with a PID, and bailed to check for free product on three (3) separate occasions. At no time have sheens been observed in any well. PID readings upon opening the wells have ranged from 0 ppm to 10.9 ppm.

It is our recommendation that the Initial Site Investigation be conducted in phases. The first phase would be to analyze samples from a number of the existing monitoring wells. A site sketch showing the monitoring well locations is attached. Please note that the tanks shown are those that were removed. Well MW-7 was destroyed during installation of the new UST's. Subsequent phases, possibly including additional monitoring wells and/or test borings, will be based on the results of the sampling.

This work plan outlines the tasks to be completed for Phase I of the Initial Site Investigation at the site.

WATER SAMPLING

Water quality samples will be obtained from the following monitoring wells: MW-1, MW-2, MW-A, MW-9, MW-8, MW-6, MW-3, MW-11, and MW-12. The samples will be taken by Dufresne-Henry personnel. Protocols for the sampling have been previously forwarded and are on file with the WMD. Samples will be obtained with disposables which are already in place. Samples will not be obtained from any well exhibiting free product. The samples will be analyzed for BTEX by EPA Method 8020 and for TPH (Level II) by EPA Method 8100 (mod) by Eastern Analytical, Inc. of Concord, New Hampshire.

SITE SURVEY

The relative locations and elevations of the monitoring wells will be determined. Sufficient additional surveying will be performed to update any existing site plan or prepare a new site plan.

RECEPTOR ASSESSMENT

A receptor assessment will be conducted to identify potential receptors including nearby water supply wells and surface water. The basements of any nearby buildings, if any, will be screened with the PID as deemed necessary.

MONITORING WELLS

An attempt will be made to obtain logs of the existing monitoring wells from Johnson & Dix and/or the boring contractor(s). The logs will be reviewed relative to site soils and placement of the well screen.

REPORTING

A report will be prepared summarizing the findings and recommendations of the investigation including groundwater quality, direction of groundwater flow, and the likely impacts on potential receptors. Conclusions and recommendations regarding additional monitoring wells and/or test borings, and the need for long term treatment and/or monitoring will be included. The report will be submitted within 60 days of approval by the SMS.

A summary breakdown of estimated costs to complete the work will be found attached.



State of Vermont

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

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation

Waste Management Division
103 South Main Street / West Office
Waterbury, VT 05671-0404
Tel: (802) 241-3888
Fax: (802) 241-3296

November 13, 1996

NEIL MARTIN
JOHNSON AND DIX FUEL CORPORATION
240 MECHANIC STREET
LEBANON, NH, 03766

NOV 15 1996

Re: Ludlow Bulk Storage Facility
SMS Site # (96-2075)

Dear Mr. Martin:

The Sites Management Section (SMS) has received the Work Plan / Cost Estimate for Site Investigation for the above referenced site on November 13, 1996. The SMS has reviewed the Work Plan and requests initiation of Phase I of the Site Investigation as outlined. The cost estimate for the work to be performed is acceptable and the final dollar amount expended for the investigation will be credited towards the 10,000 dollar deductible required by the Petroleum Cleanup Fund. If you have any questions feel free to contact me at (802) 241-3892.

Sincerely,

Andrew Shively
Environmental Technician,
Sites Management Section

cc: Defresne-Henry, Inc.

MONITORING PROCEDURES

- Photo-Vac Micro-Tip (Model HL-2000, 10.6 eV probe)
- Explosimeter/O2 meter (Supplied by tank cleaning company)

Frequency of Monitoring

- Air - not to exceed every 15 mins.
- Soil - as obtained

Upgrade / Downgrade Contingency Plan

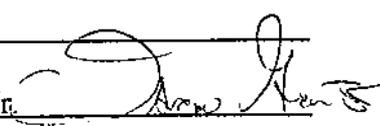
DH personnel will not expose themselves to conditions where PID readings exceed 10 ppm in the breathing zone for longer than 5 minutes, LEL readings above 10%, or oxygen levels below 19.5% or above 23.5%.

EMERGENCY INFORMATION

AMBULANCE:	Phone: 911 or
POLICE:	Phone: 911 or
FIRE DEPARTMENT:	Phone: 911 or
DEC INCIDENT RESPONSE:	Phone: VT (802)241-3888
DES INCIDENT RESPONSE:	NH (603)271-3440

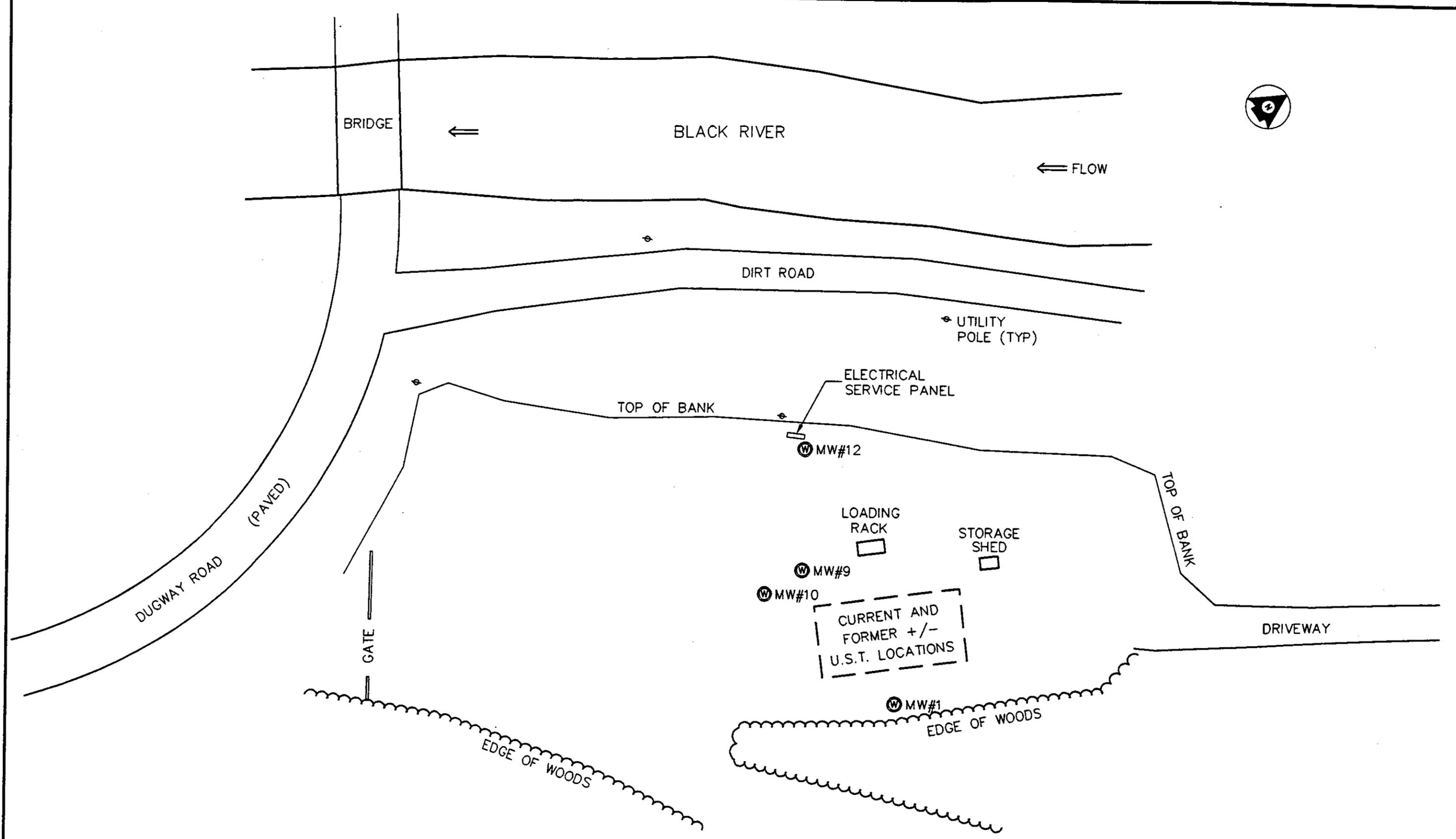
CORPORATE:
 Dufresne-Henry Inc., Precision Park, N. Springfield, VT 05150-0029
 Phone: (802) 886-2261
 Project Manager: Bruce Cox

The following individuals have read this safety document, and are familiar with its' contents, site conditions, and on-site safety procedures. Please sign and note your company below:

<u>Name</u>	<u>Company</u>
F. David Deane _____	Dufresne-Henry, Inc. _____
Bruce Cox _____	Dufresne-Henry, Inc. _____
Oscar Garcia Jr.  _____	Dufresne-Henry, Inc. _____
Anna Cozzaglio _____	Dufresne-Henry, Inc. _____
_____	_____
_____	_____
_____	_____

APPENDIX C

SITE PLAN



PLAN
1" = 40'

JDLUDLOW.DWG

DH
Dufresne-Henry, Inc.
 Precision Park
 No. Springfield,
 Vermont 05150
 A DH Company
 Tel. (802)886-2261 Fax (802)886-2260

SITE PLAN
AT
JOHNSON & DIX FUEL COMPANY
LUDLOW STORAGE FACILITY
LUDLOW, VERMONT

Project No.	4160076
Proj. Mgr.	B.H.C
Date	JAN. '97
B	SP1

APPENDIX D

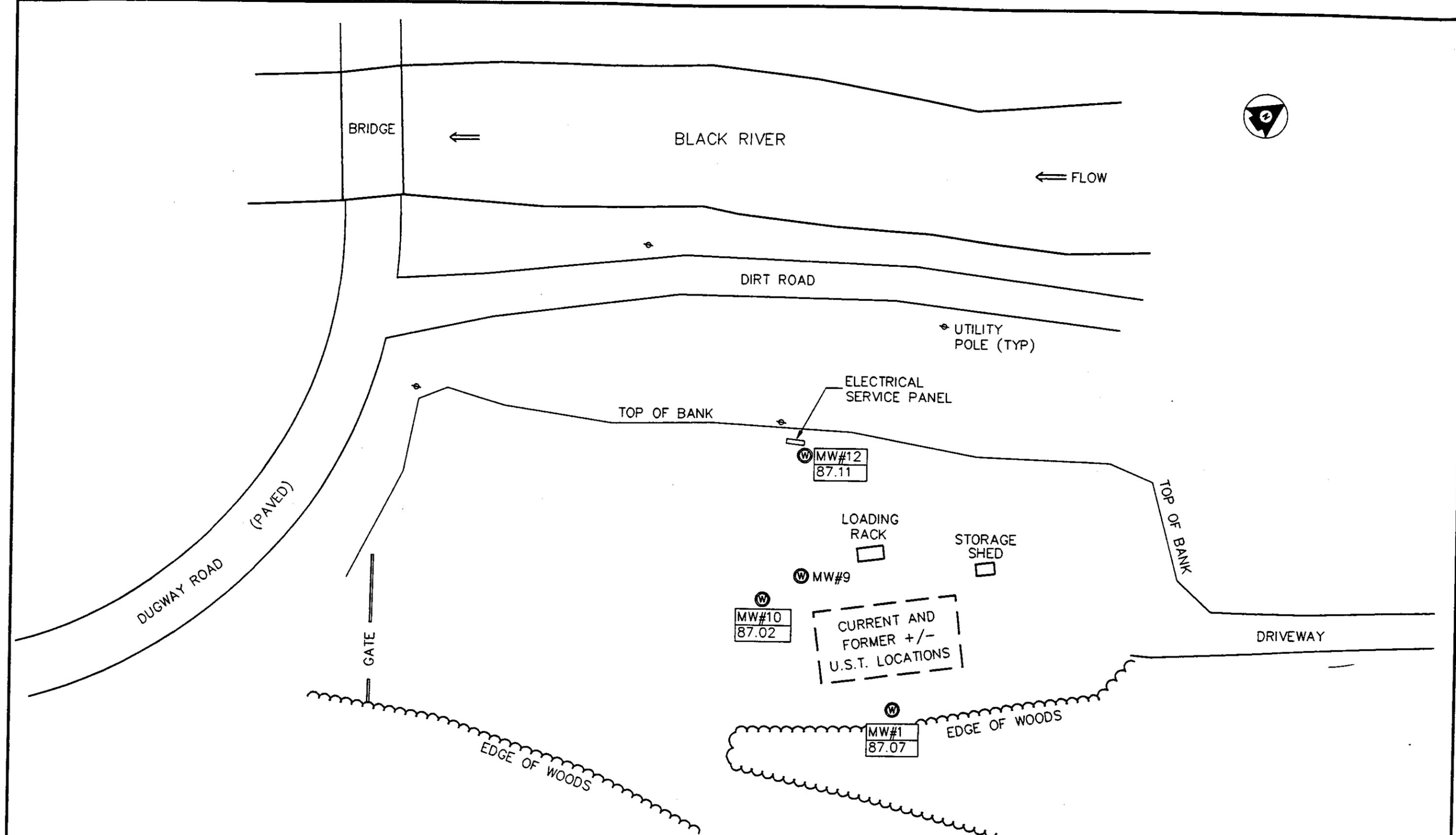
**SUMMARY OF SOUNDING DATA
AND
GROUNDWATER ELEVATION MAP**

JOHNSON & DIX FUEL CORP.
LUDLOW, VT BULK STORAGE FACILITY

SUMMARY TABLE - WATER TABLE ELEVATIONS

DATE	MW-1	MW-9	MW-10	MW-12
6/28/94	86.89	N/A	86.85	86.74
5/4/95	86.49	N/A	86.50	86.49
10/24/95	86.44	N/A	86.45	86.74
12/20/96	87.07	N/A	87.02	87.11
1/2/97	DRY	N/A	DRY	DRY

1. WELLS SURVEYED 12/20/96. THOSE SHOWN ARE THE ONLY ONES RECOVERED.



PLAN
1" = 40'

JDLUDLOW.DWG

DH **Dufresne-Henry, Inc.**
 Precision Park
 No. Springfield,
 Vermont 05150
 A DVI Company
 Tel. (802)896-2261 Fax (802)896-2260

GROUNDWATER ELEVATION PLAN
 AS OF DECEMBER 20, 1996 AT
JOHNSON & DIX FUEL COMPANY
LUDLOW STORAGE FACILITY
 LUDLOW, VERMONT

Project No. 4160076
Proj. Mgr. B.H.C
Date JAN. '97
B GW1

APPENDIX E

CONTRACT LABORATORY ANALYTICAL REPORT



eastern analytical

professional laboratory services

Bruce Cox
Dufresne-Henry
Precision Park
N. Springfield, VT 05150

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 7627 DUFVT
Client Identification: 4160076 / J & D Ludlow
Date Received: 12/24/96
Sample Quantity/Type: 4 aqueous

Dear Mr. Cox:

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

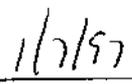
If you have any questions regarding the results contained within, please feel free to directly contact me, the department supervisor, or the analytical chemist who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

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

Sincerely,



Will Brunkhorst, President



Date



LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7627 DUFVT

Client: Dufresne-Henry

Client Designation: 4160076 / J & D Ludlow

Total Petroleum Hydrocarbons

Sample ID:	MW-9	MW-10	MW-12
Matrix:	Aqueous	Aqueous	Aqueous
Date Received:	12/24/96	12/24/96	12/24/96
Units:	mg/L	mg/L	mg/L
Date of Extraction:	12/26/96	12/26/96	12/26/96
Date of Analysis:	12/27/96	12/27/96	12/27/96
Analyst:	DJS	DJS	DJS
EPA Method:	8100(mod)	8100(mod)	8100(mod)
Carbon Range:	C9-C40*	C9-C40*	C9-C40*
Identification:			
None Identified	< 0.5	< 0.5	< 0.5

* Fuel (Diesel) and Lubricating Oil Range Organics.

Approved By: Timothy Schaper, Organics Supervisor



LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7627 DUFVT

Client: Dufresne-Henry

Client Designation: 4160076/J&D Ludlow

Volatile Organic Compounds

Sample ID:	MW-1	MW-9	MW-10	MW-12
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous
Date Received:	12/24/96	12/24/96	12/24/96	12/24/96
Units:	µg/L	µg/L	µg/L	µg/L
Date of Analysis:	1/2/97	1/2/97	1/2/97	1/2/97
Analyst:	TML	TML	TML	TML
EPA Method:	*8020(mod)	*8020(mod)	*8020(mod)	*8020(mod)
Benzene	< 1	< 1	< 1	< 1
Toluene	< 1	< 1	< 1	< 1
Ethylbenzene	< 1	< 1	< 1	< 1
Total Xylenes	< 1	< 1	< 1	< 1
Chlorobenzene	< 1	< 1	< 1	< 1
MTBE	< 20	< 20	< 20	< 20

* Method modification includes MTBE in the instrument calibration.

Approved By: Clifford Chase, Volatile Organics Supervisor

7627
CHAIN OF CUSTODY F...

DH Dufresne-Henry, Inc.
Precision Park
N. Springfield, VT 05150 (802)886-2261

Generator: *J.D. Luskow*

Page *1* of *1*

Facility #:

DH #: *4160076*

Return To: *Bruce Cox*

Client:

Client #:

Address: *State Center*

Sampled By: *[Signature]*

State Sampled: *VT*

Sample Identification	Date Start Stop	Time Start Stop	Comp. Desc.	Water Liquid Solid	# / Size Containers	Field Preserved Y/N	Field Filtered Y/N	Analysis Requested	Est. Lab Cost (\$)
<i>1</i>	<i>12/20/96</i>	<i>PM</i>	<i>D</i>	<i>W</i>	<i>2-40ml 1-Amb. lit</i>	<i>Y</i>	<i>N</i>	<i>BOD BIOG L₂</i>	
<i>7?</i>	↓	↓	↓	↓	↓	↓	↓	↓	
<i>10?</i>	↓	↓	↓	↓	↓	↓	↓	↓	
<i>12</i>	↓	↓	↓	↓	↓	↓	↓	↓	
<i>Sample 1 Received Broken. Sample Freeze Probably on UPS Truck over night</i>									
<i>VOC vials not kept cool = 98 hrs - only one VOC sample #12</i>									

Generator Rep. Authorization:

Estimated Lab Analysis Total

Relinquished By: *[Signature]* Date: *12/23/96*
Time: *1:00 PM*

Received By: *[Signature]* Date: *12/24/96*
Time: *1:23*
via UPS

Relinquished By: Date: Time:

Received By: Date: Time:

PLEASE RETURN COMPLETED CHAIN OF CUSTODY WITH ANALYTICAL RESULTS