2538

GRIFFIN INTERNATIONAL INC

February 5, 1999

Mr. Rich Spiese
Sites Management Section
VTDEC WMD
103 South Main St./ West Bldg.
Waterbury, VT 05671-0404

RE: Initial Investigation of Subsurface Petroleum Contamination at the Former C&B Miller General Store, Gassetts, Vermont. VTDEC #98-2538

Dear Mr. Spiese:

Enclosed please find the January 1999 report titled *Initial Investigation of Subsurface Petroleum Contamination at C&B Miller General Store*. Please do not hesitate to call, if you have any questions or comments.

Sincerely,

Robert Higgins
Engineer

Enc.

cc: Mr. Frank Trombetta, Midway Oil Company
Mr. and Mrs. Charles Miller
GI #129841453

P.O. Box 943 • Williston, VT 05495 • Phone/Fax 802-865-4288
59 Clinton Street • Plattsburgh, NY 12901 • 518-562-4666 • Fax 518-561-6832

# INITIAL INVESTIGATION OF SUBSURFACE PETROLEUM CONTAMINATION AT FORMER C&B MILLER GENERAL STORE

**FEBRUARY 5, 1999**

**Site Location:**

**Former C&B Miller General Store**
**Intersection of Routes 103 and 10**
**Gassetts, VT**

**GI Project # 129841453**

**VTDEC # 98-2538**

**Prepared By:**

GRIFFIN INTERNATIONAL

P.O. Box 943 / 19 Commerce Street Williston, VT 05495 (802) 865-4288

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APPENDICES

# I. INTRODUCTION

This report summarizes the initial investigation of subsurface petroleum contamination at the Former C&B Miller General Store (Store) facility located near the intersection of Routes 103 and 10 in Gassetts, Vermont (see location map in Appendix A). Petroleum contamination was detected during the closure of five gasoline underground storage tanks (USTs) at the site in December of 1998. Two of the USTs (UST #1 and #3) were owned by Charles and Barbara Miller; one of the USTs (#2) was owned by Midway Oil Corporation. Ownership (and therefore responsibility for follow-on site investigation/ remediation) of the two remaining USTs (#4 and #5) is currently in dispute. The Vermont Department of Environmental Conservation (VTDEC) has agreed to proceed with investigative work at the site and to sort out the ownership disputes at a later date. Griffin International, Inc. (Griffin) has been retained by the VTDEC, Midway Oil Corporation, and the Millers to carry out this investigation. Work at the site was conducted through the VTDEC Site Investigation Expressway Notification process. Approval to proceed under the Expressway program was given by Mr. Rich Spiese in a telephone conversation with Griffin on December 24, 1998. The site property is owned by Mr. and Mrs. Miller of East Hampton, NY. The site is identified as VTDEC Site #98-2538.

Work conducted at the site included the installation of five groundwater monitoring wells (MW-101 through MW-105), the collection and laboratory analysis of groundwater samples from these new monitoring wells as well as three pre-existing monitoring wells (MW-1 through MW-3), and the collection and laboratory analysis of three potable water supply samples. In addition, a sensitive receptor risk assessment was conducted to assess the risk that subsurface petroleum contamination at the site may pose to potentially sensitive receptors identified in the site vicinity.

# II. SITE BACKGROUND

## *A. Site History*

Elevated levels of subsurface petroleum contamination were detected on December 15 and 16, 1998 at this site during the permanent closure of five gasoline USTs. The USTs consisted of: one (1) 6,000-gallon gasoline (UST #1); (1) 10,000-gallon gasoline (UST #2); (1) 4,000-gallon gasoline (UST #3); (1) 1,000-gallon gasoline (UST #4); and (1) 3,000-gallon gasoline (UST #5). USTs #1 through #3 shared a common tank pit and were located on the north side of the building; USTs #4 and #5 also shared a common tank pit and were located in the vicinity of the former dispenser island. Total volatile organic compounds (VOCs) were detected in soils in the vicinity of both of the UST pits in excess of the VTDEC UST closure soil standard (i.e. 20 parts per million [ppm]) using an HNu™ systems Model PI 101 photoionization detector (PID). The most significant contamination was detected in the vicinity of the former dispenser island and USTs #4 and #5. The contaminated soils were placed back in the excavation and covered with

clean fill. At the time of the UST closure it was not possible to determine which UST or piping system contributed what portion of contamination detected.

Due to the contamination detected and the potential for impact to area receptors, the VTDEC requested an expedited investigation under the VTDEC Site Investigation Expressway Program. On December 24, 1998, the Millers, Midway Oil, and the VTDEC retained the services of Griffin to conduct this investigation.

For further information regarding the UST closures, the reader is referred to the December 21, 1998 Underground Storage Tank Closure Inspection Report included in Appendix F.

### *B. Site Description*

The Store facility is located on the northeast side of Route 103, approximately 500 feet north of the intersection of Route 103 and 10 (see site location map in Appendix A). The subject property is mostly flat and slopes slightly toward the northeast. The area consists of primarily residential properties. The subject property is bordered by Route 103 to the west, and by residences to the north, east, and south. The Williams River is located approximately 350 feet to the southwest of the site; in the vicinity of the site the Williams River flows to the south.

The subject property is occupied by two buildings: the Store and a residence. The Store building is currently unoccupied. The residence is rented to and is occupied by the Losee family (referred to as the Losee Residence). The Store is of wood construction; the foundation construction is unknown. The Losee Residence is of wood construction on a masonry basement foundation. Water for both buildings is provided by a shallow dug well located in the basement of the Losee Residence. Both of the on-site buildings are serviced by a private septic system.

There is an apparent 1.5 inch diameter vent pipe exiting the rear of the store building. It is not known what this pipe may be venting. No additional fill pipes were observed . The store interior was not accessible for observation.

### *C. Site Geologic Setting*

According to the Surficial Geologic Map of Vermont [1], the site is underlain by glacial till. Soils encountered during the UST closure and during monitoring well installation consisted primarily of coarse gravel overlying medium sand and silt. Bedrock at the site is of the Mount Holly Complex and is described as being of profound unconformity [2].

Based on visual site inspections, shallow groundwater in the vicinity of the Store site would be expected to flow to the west and southwest toward the Williams River, following topographic contours.

## III. INVESTIGATIVE PROCEDURES

### *A. Monitoring Well Installation*

On December 28, 1998 five monitoring wells were installed by Technical Drilling Services of Leominster, Massachusetts using a hollow-stem auger drill rig. Drilling and well construction were directly supervised by a Griffin engineer. Soil samples were collected at approximately five-foot intervals in each boring using a two-foot split spoon sampler. Each soil sample was screened for VOCs using an Hnu™ Model PI-101 PID. Soils were screened using the Griffin Jar/Polyethylene Bag Headspace Screening Protocol, which conforms to state and industry standards. Contaminant concentrations and soil characteristics were recorded in detailed boring logs by the supervising Griffin engineer (see the Well Logs in Appendix B).

Approximately 1 cubic yard of drill cuttings with elevated contaminant concentrations was polyencapsulated and stockpiled at the northeast side of the store building. It is expected that over time, contaminant levels in these soils will degrade due to the natural mitigative processes of biodegradation, diffusion, and volatilization.

The monitoring wells (MW-101 through MW-105) were installed to help better define groundwater flow direction and gradient and the degree and extent of petroleum contamination in the vicinity of the site. MW-101 was installed near the former dispenser island, in the vicinity of former USTs # 4 and #5. MW-102 was installed to the southeast of former UST #5. MW-103 was installed in the vicinity of the Losee Residence. MW-104 was installed on the southeast side of the driveway. MW-105 was installed on the east side of the Store.

Three other monitoring wells (MW-1 through MW-3) were pre-existing at the site. MW-1 through MW-3 are located in the vicinity of former USTs #1 through #3. An additional monitoring well, MW-4, was observed to exist in the vicinity former USTs #1 through #3 on December 15, during the UST closure but could not be located during field activities at the site.

*MW-101*

The boring for MW-101 was advanced to 16 feet below grade. Soils from the boring for MW-101 consisted of dry black silt with some fine sand from 5 to 7 feet below grade. Wet gray/black coarse sand with little fine gravel was observed from 10 to 12 feet below grade. Wet brown medium to coarse sand was observed from 14 to 15 feet below grade. Wet brown silt with trace fine sand was observed from 15 to 16 feet below grade. Gasoline odors were observed in each of the samples. VOC concentrations ranging from 30 to 260 ppm were measured in soils from this boring.

*MW-102*

The boring for MW-102 was advanced to 16 feet below grade. Soils from the boring for MW-102 consisted of dry black silt with some fine sand from 5 to 7 feet below grade. Wet gray fine to coarse gravel was observed from 10 to 12 feet below grade. Wet gray fine to medium sand was observed from 15 to 15.3 feet below grade. Wet gray clay with silt was observed from 15.3 to 15.8 feet below grade. Wet brown silt with little fine sand was observed from 15.8 to 16 feet below grade. Gasoline odors were observed in each of the samples. VOC concentrations ranging from 30 to 260 ppm were measured in soils from this boring.

*MW-103*

The boring for MW-103 was advanced to 12 feet below grade. Soils from the boring for MW-103 consisted of dry reddish silt with fine sand from 5 to 6.5 feet below grade. Wet reddish fine to medium sand with trace silt was observed from 6.5 to 7 feet below grade. Wet gray fine to coarse sand was observed from 10 to 12 feet below grade. Odors resembling aged gasoline were observed in soils collected from 10 to 12 feet below grade. VOC concentrations ranging from 0 to 7 ppm were measured in soils from this boring.

*MW-104*

The boring for MW-104 was advanced to 16 feet below grade. Soils from the boring for MW-104 consisted of dry brown fine to medium sand from 5 to 6 feet below grade. Wet gray silt with fine sand was observed from 6 to 7 feet below grade. Wet gray coarse sand with some medium gravel was observed from 10 to 12 feet below grade. Wet gray medium gravel with fine to coarse sand was observed from 14 to 15.1 feet below grade. Due to the coarse conditions in the subsurface, the sample spoon could not be advanced below depths of 15.1 feet below grade. Gasoline odors were observed in each of the samples. VOC concentrations ranging from 0 to 200 ppm were measured in soils from this boring.

*MW-105*

The boring for MW-105 was advanced to 12 feet below grade. Soils from the boring for MW-105 consisted of wet brown fine to medium sand from 5 to 7 feet below grade. Wet brown silt with medium sand (till) with little gravel was observed from 10 to 12 feet below grade. No petroleum odors were observed in each of the samples. Soil samples collected from this boring were non-detect for VOCs.

*Well Construction Details*

Each monitoring well was constructed with two-inch diameter Schedule 40 PVC riser and 0.010-inch slotted screen. The length of the riser and the screened section of pipe varied depending on the depth of the well. A silica sand pack was placed around the screened portion of each well and a bentonite seal was placed above the sand pack. To complete the construction of each well, a road box was set in concrete at grade level. In addition, locking well caps were placed on the

monitoring wells. Specific well construction details are displayed in the detailed well logs included in Appendix B.

### *B. Determination of Groundwater Flow Direction and Gradient*

On January 5, 1999, depth to water measurements were taken with the use of a MMC™ interface probe in all eight site wells. These measurements were subtracted from the top of casing elevations, which were determined relative to an arbitrary datum of 100 feet at the top of the casing for MW-104, to determine the water table elevation at each of the wells. Groundwater level data are recorded in Appendix C.

As displayed on the groundwater contour map included in Appendix A, the groundwater flow direction for January 5, 1999, was estimated to be to the northwest at a gradient of 0.4%. No free phase petroleum product was observed in any of the monitoring wells gauged on January 5, 1999.

Under this flow regime MW-1 and MW-2 are located downgradient of the former dispenser island and the former UST #4 and #5 tank pit, MW-3 and MW-105 are located cross-gradient of both the former dispenser island and the former UST pits, MW-101 is directly in the former dispenser island and former UST #4 source area, and MW-102, 103, and 104 are located upgradient of both the former dispenser island and former UST source areas. Based on the fact that contamination is detected in up and cross-gradient MW-1, and MW-101 through MW-105, and not detected in downgradient MW-2 and MW-3, it is likely that groundwater flow direction and gradient fluctuate with seasonal variations in groundwater elevation at the site.

### *C. Groundwater Sample Collection and Analysis*

On January 5, 1999 samples of the groundwater were collected from MW 1 through MW-3 and from MW-101 through MW-105. Samples were analyzed per EPA Method 8021B for benzene, toluene, ethyl benzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE). Results of the laboratory analyses for wells sampled on January 5, 1999 are summarized in Appendix C. Laboratory report forms are presented in Appendix D.

None of the petroleum compounds targeted by EPA Method 8021B were found above detection limits in the primary groundwater samples collected from MW-2 or MW-3. Benzene and MTBE are in excess of Vermont Groundwater Enforcement Standards (VGESs) in the sample collected from MW-1. Several compounds are present in excess of VGESs in the samples collected from MW-101 through MW-105.

Total VOC results were plotted on the site map to generate the Contaminant Distribution Map presented in Appendix A. The January 5, 1999, contaminant distribution patterns indicate that the contamination is spread to the south and to the west of the former dispenser island. The

extent of the contamination is not defined. Based on the Contaminant Distribution Map it would appear that groundwater primarily flows toward the southwest.

All samples were collected according to Griffin's groundwater sampling protocol which complies with industry and state standards. Results from the analyses of the trip blank sample indicate that adequate quality assurance and control (QA/QC) were maintained during sample collection and analysis.

### *D. Sensitive Receptor Risk Assessment*

A visual survey of the area surrounding the Store site was conducted at the time of the UST closure and during the monitoring well installation and sampling. Based on these observations, an estimation of the potential risk to identified receptors was made based on proximity to the source areas, groundwater flow direction, and contaminant concentration levels in subsurface soils and groundwater.

*Water Supplies*

In addition to the on-site shallow dug well, three known shallow dug wells are currently in use as potable water supplies for residential properties in the vicinity of the store site. The residences include: the Deyo Residence (the green trailer to the west of the site across Route 103); the Haines Residence (the white house to the southeast of the site); and the Schoolhouse Residence (white schoolhouse to the north of the site). One residence (the Laduc Residence, located to the northeast of the site across Route 103) is reportedly served by a drilled well completed in the bedrock aquifer.

On December 28, 1998 water samples were collected from the Losee Residence (site) water supply, the Haines Residence water supply, and the Deyo Residence water supply; access could not be gained to the Schoolhouse Residence. The Laduc supply well was not sampled due to the significant distance between the site and the supply well and the fact that the well is completed in the bedrock aquifer. The Losee Residence is the only supply well that is accessible to view; each of the other dug wells are buried beneath the ground.

The samples were submitted for laboratory analysis per EPA Method 8021B for BTEX and MTBE compounds. The Haines Residence and the Deyo Residence water samples were non-detect for all of the compounds targeted by the EPA Method 8021B analysis. Xylenes were present in the Losee Residence water supply at a concentration of 1.3 parts per billion (ppb); this is below the Vermont drinking water standard for these compounds. MTBE was present in the Losee sample at a concentration a trace below the quantitation limit of 10 ppb. Results of the laboratory analyses for supply wells sampled on December 28, 1998 are summarized in Appendix C. Laboratory report forms are presented in Appendix D.

Due to the fact that each of the four dug wells mentioned above are completed in the shallow groundwater aquifer, that the groundwater flow direction likely fluctuates with seasonal water table elevations, and given their close proximity to the Store site, it is possible that the shallow area wells are at risk of impact from petroleum contamination from the Store site.

Both the Losee family and the Deyo family report noticing an odor of petroleum in the drinking water at varying times during the year. Petroleum contamination was not evident during visual inspections of the supply well on December 15, and 16, 1998.

*Buildings in the Vicinity*

The Losee Residence, the Haines Residence, and the Schoolhouse Residence are constructed on basement foundations. The Deyo Residence is constructed on a slab foundation. The Store is believed to be constructed on a slab foundation, however, the interior of the Store was inaccessible during field activities at the site and the foundation construction could not be confirmed. On December 15, 1998 the basement of the Losee Residence was screened for VOCs by PID by both Griffin and the VTDEC. Both of the PIDs detected some compound which made them work erratically and unreliably. No olfactory evidence of petroleum vapors was detected in the basement at that time. Neither the Schoolhouse nor the Haines Residence were screened for VOCs by PID; no complaints of petroleum odors are known to have been reported within either the Haines Residence or the Schoolhouse.

Due to the shallow groundwater elevation, the fact that the groundwater flow direction likely fluctuates with seasonal water table elevations, and given the close proximity of the residences to the Store site, it is possible that the basement air spaces of nearby residences are at risk of petroleum vapor migration impact from contamination present at the Store site.

*Surface Water*

The Williams River is located approximately 400 feet to the southwest of the site. The river was covered by snow and ice at the time of the drilling and sampling activities in December 1998 and January 1999 and therefore was not assessed for petroleum impact. Based on the proximity of the river to the site it is possible that dissolved contamination will reach the river.

*Utility Corridors*

Groundwater is found at approximately 6 to 10 feet below grade at the site; this elevation is deeper than the elevation (4 to 5 feet below grade) where utilities are typically found. In addition, there are no known underground utilities in the vicinity of the source area, therefore, the potential for dissolved contaminant migration through utility corridors is considered negligible.

## IV. CONCLUSIONS

Based on the initial site investigation of petroleum contamination associated with the former UST systems at the Former C&B Miller General Store site, the following conclusions are offered:

1. As displayed on the groundwater contour map included in Appendix A, the groundwater flow direction for January 5, 1999, was estimated to be to the northwest at a gradient of 0.4%.

2. No free phase petroleum product was observed in any of the monitoring wells gauged on January 5, 1999.

3. It is likely that groundwater flow direction and gradient fluctuate with seasonal variations in groundwater elevation at the site.

4. None of the petroleum compounds targeted by EPA Method 8021B were found above detection limits in the primary groundwater samples collected from MW-2 or MW-3. Benzene and MTBE are in excess of VGESs in the sample collected from MW-1. Several compounds are present in excess of VGESs in the samples collected from MW-101 through MW-105.

5. The January 5, 1999, contaminant distribution patterns indicate that the contamination is spread to the south and to the west of the former dispenser island.

6. The extent of the contaminant plume has not been fully characterized.

7. Several area water supplies are potentially at risk of petroleum impact from the contamination present at the Store site.

8. A sample collected from the Losee Residence water supply on January 5, 1999 indicates low concentrations of Xylenes and MTBE are present in the water below VGESs.

9. It is possible that the basement air spaces of nearby residences are at periodic risk of petroleum vapor migration impact from contamination present at the Store site.

10. Approximately 1 cubic yard of drill cuttings with elevated contaminant concentrations was polyencapsulated and stockpiled at the northeast side of the store building.

11. The apparent source of contamination at the site (former USTs and piping) has been removed and permanently closed.

## V. RECOMMENDATIONS

Based on the above conclusions Griffin recommends that additional investigative work be conducted at this site.

A Corrective Action Feasibility Investigation (CAFI) should be conducted to identify the most effective remedial alternatives for the site. As part of the CAFI the following tasks should be accomplished:

- Additional borings should be installed to help define the extent of the dissolved phase groundwater and residual phase soil contaminant plume. Soil vent points and air sparge points may be installed for pilot tests in association with the CAFI.

- All of the site related monitoring wells should be gauged for depth to water and/or product. Samples should be collected from each site related monitoring well for analysis per EPA Method 8021B.

- MW-4 should be located when the ground thaws.

- Additional samples should be collected for laboratory analysis per EPA Method 524.2 from the Losee, Haines, Schoolhouse, and Deyo supply wells; the need for treatment of each water supply should be evaluated.

The approximately one cubic yard of petroleum-contaminated soils stockpiled behind the former C&B Miller General Store should be screened annually beginning in the summer of 1999. Soil screening efforts will be conducted in conjunction with groundwater monitoring events. Annual stockpiled soil screening will continue until contaminant levels decrease to levels below l ppm and there is no remaining evidence (olfactory or visual) of petroleum contamination. At that time, in accordance with VTDEC guidelines, the soils can then be thin-spread on their site of origin, with VTDEC approval. The integrity of the plastic liner covering the soil stockpile will be checked periodically by representatives of the C&B Miller General Store, and repairs or replacements will be made accordingly.

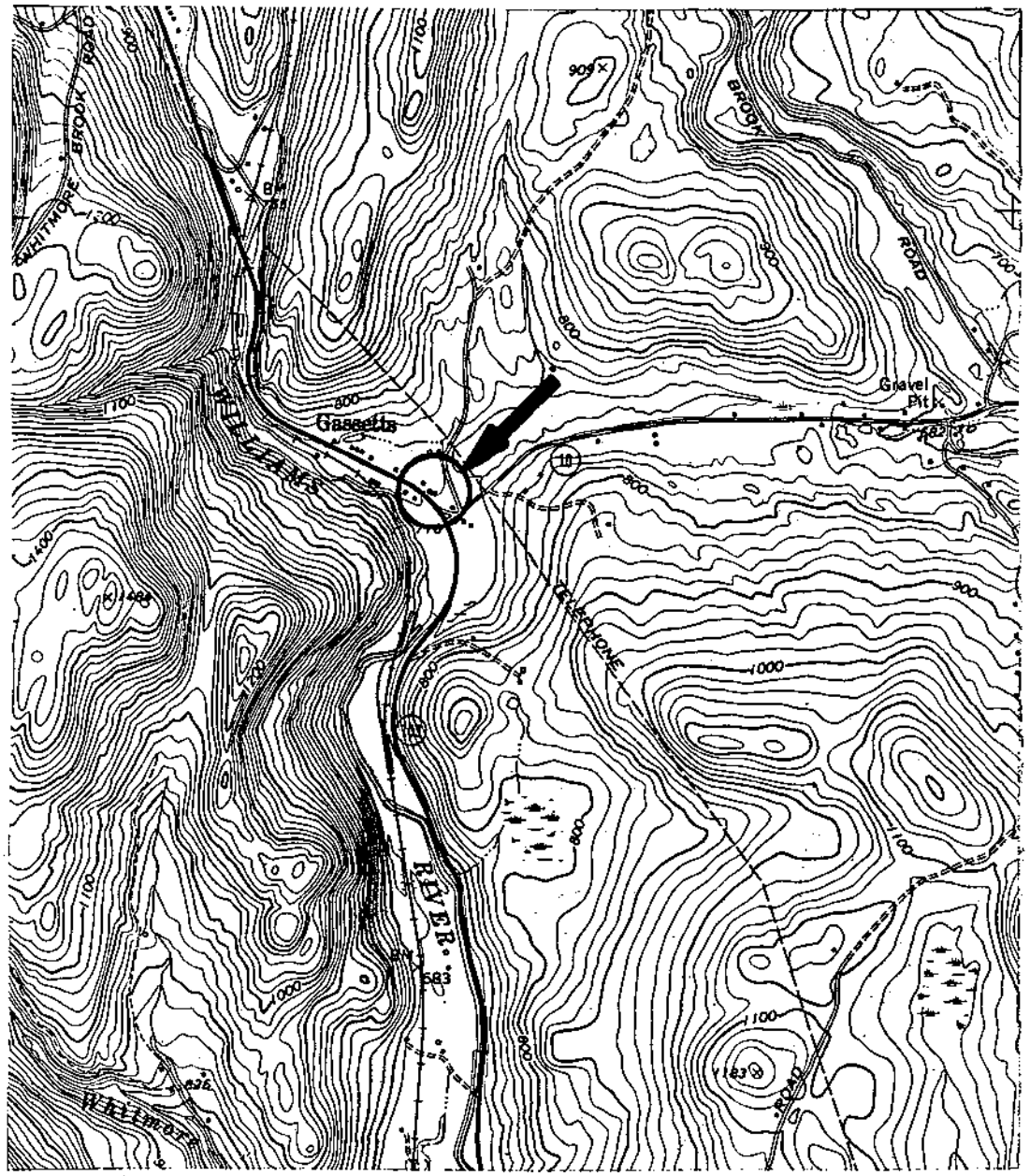
## REFERENCES


1. Doll, Charles G., ed., 1970, Surficial Geologic Map of Vermont, State of Vermont.

2. Doll, Charles G., ed., 1961, Centennial Geologic Map of Vermont, State of Vermont.

# APPENDIX A

## Maps




SOURCE: USGS- CHESTER, VERMONT QUADRANGLE

JOB #: 129841453

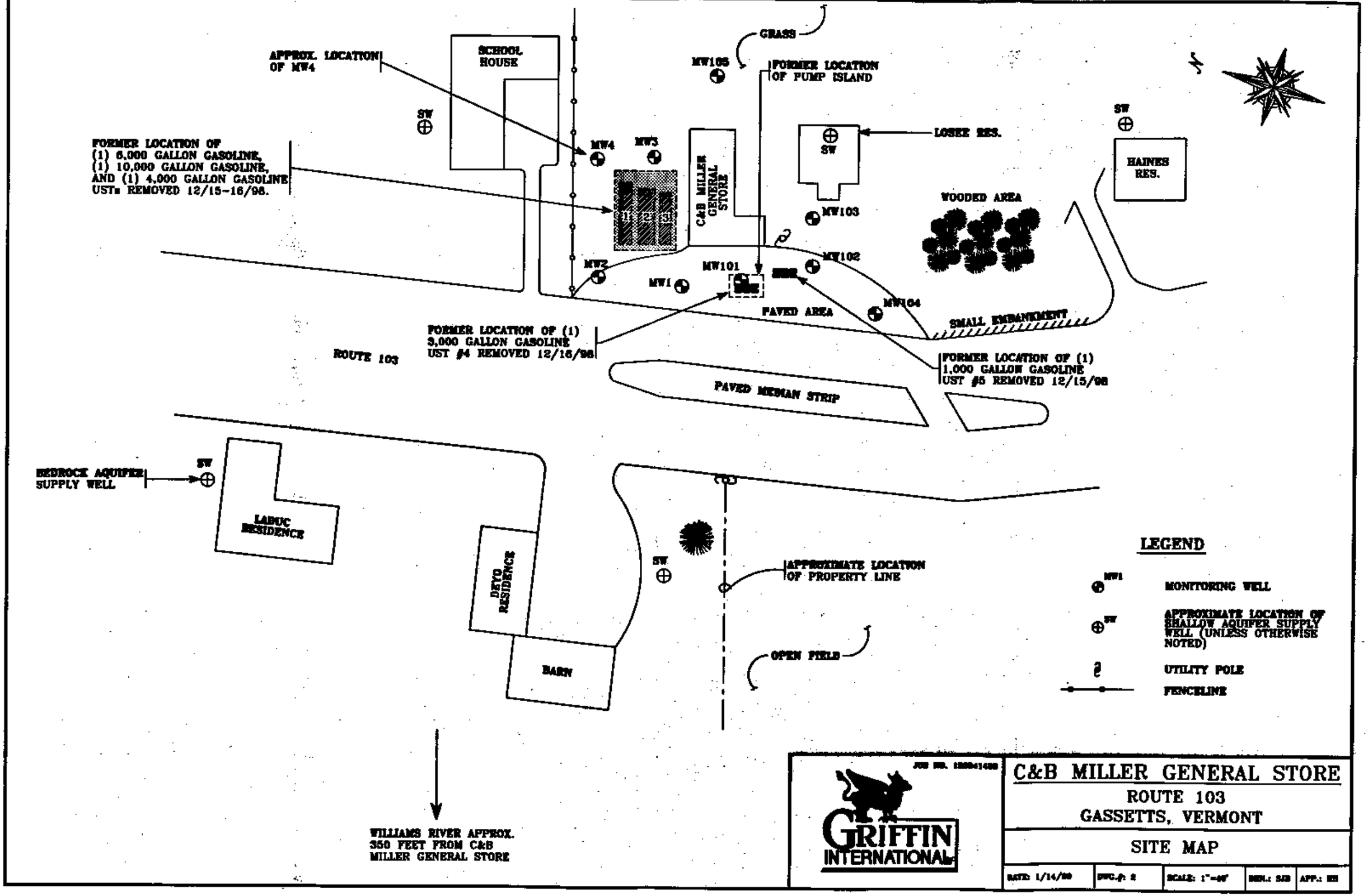
GRIFFIN INTERNATIONAL INC

# C&B MILLER GENERAL STORE

ROUTE 103
GASSETTS, VERMONT

## SITE LOCATION MAP

| DATE: 1/7/99 | DWG.#:1 | SCALE: 1:24000 | DRN.:SB | APP.:RH |
|---|---|---|---|---|



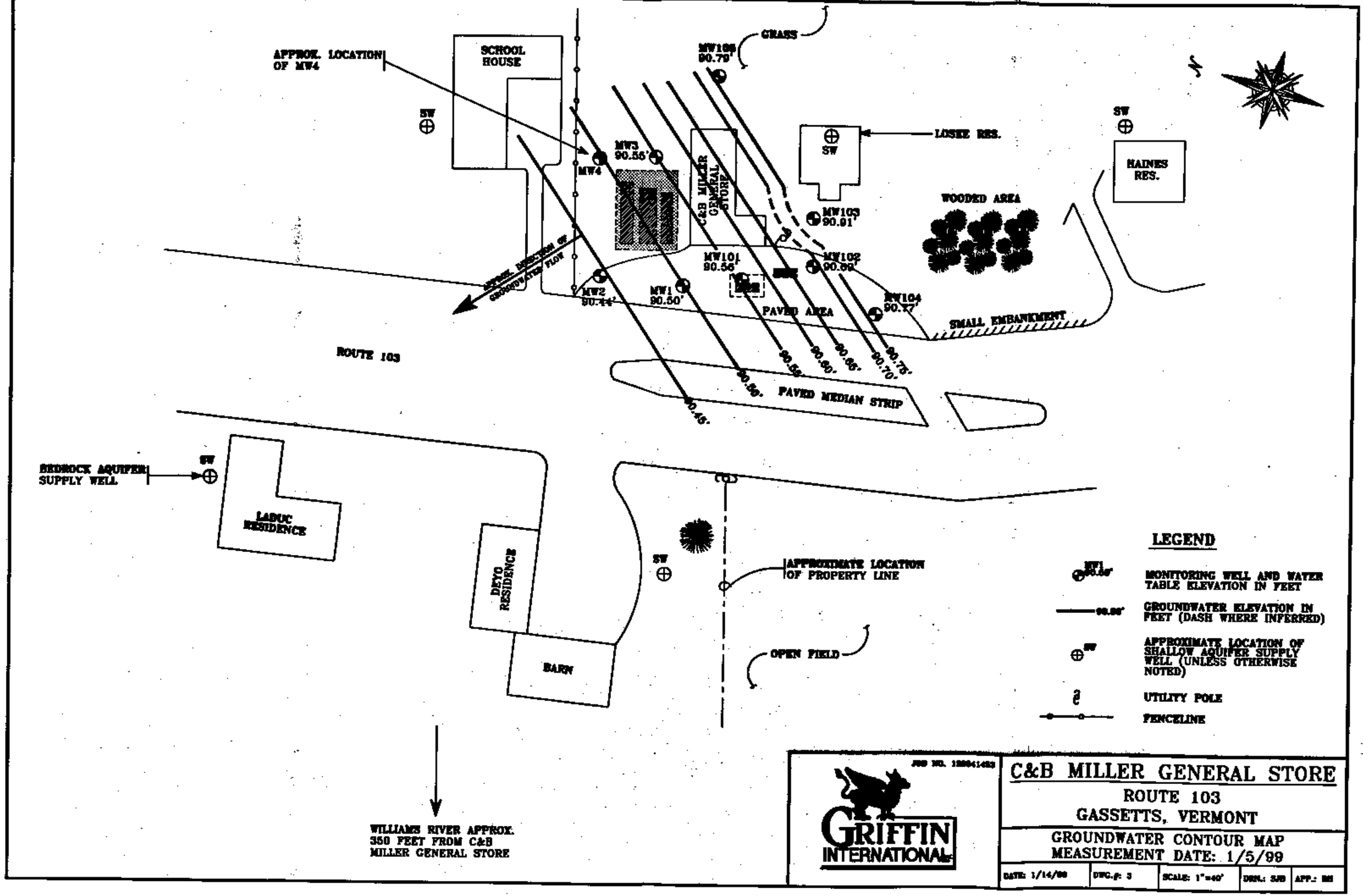

GRIFFIN INTERNATIONAL

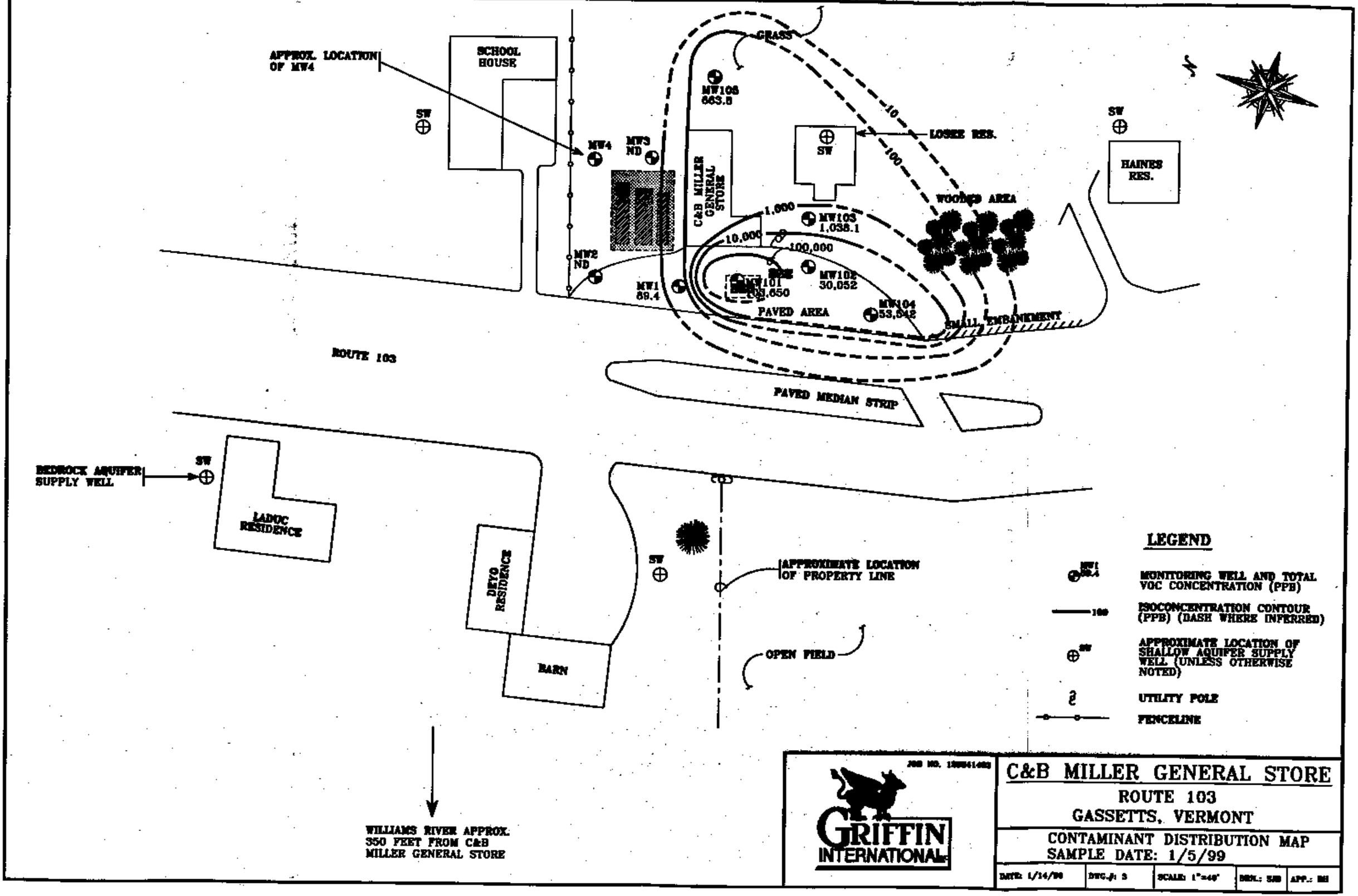
# C&B MILLER GENERAL STORE

ROUTE 103
GASSETTS, VERMONT

## SITE MAP

| DATE: 1/14/00 | DWG.#: 2 | SCALE: 1"=40' | DES.: SJD | APP.: HH |
|---|---|---|---|---|


APPROX. LOCATION OF MW4
SCHOOL HOUSE
SW
MW4
MW3
90.56'
MW2
90.44'
MW1
90.50'
APPROX. DIRECTION OF GROUNDWATER FLOW
ROUTE 103
C&B MILLER GENERAL STORE
MW105
90.79'
GRASS
SW
LOSEE RES.
MW103
90.91'
MW101
90.56'
MW102
90.99'
MW104
90.77'
PAVED AREA
WOODED AREA
SW
HAINES RES.
SMALL EMBANKMENT
90.45'
90.50'
90.55'
90.60'
90.65'
90.70'
90.75'
PAVED MEDIAN STRIP
BEDROCK AQUIFER SUPPLY WELL
SW
LABUC RESIDENCE
DEYO RESIDENCE
BARN
SW
APPROXIMATE LOCATION OF PROPERTY LINE
OPEN FIELD
WILLIAMS RIVER APPROX. 350 FEET FROM C&B MILLER GENERAL STORE
LEGEND
MONITORING WELL AND WATER TABLE ELEVATION IN FEET
GROUNDWATER ELEVATION IN FEET (DASH WHERE INFERRED)
APPROXIMATE LOCATION OF SHALLOW AQUIFER SUPPLY WELL (UNLESS OTHERWISE NOTED)
UTILITY POLE
FENCELINE
GRIFFIN INTERNATIONAL
C&B MILLER GENERAL STORE
ROUTE 103
GASSETTS, VERMONT
GROUNDWATER CONTOUR MAP
MEASUREMENT DATE: 1/5/99
DATE: 1/14/99
DWG.#: 3
SCALE: 1"=40'
DRN.: SJB
APP.: BH


APPROX. LOCATION OF MW4
SCHOOL HOUSE
SW
MW4
MW3 ND
MW2 ND
MW1 89.4
MW105 663.8
GRASS
10
100
LOSEE RES.
SW
C&B MILLER GENERAL STORE
1,000
MW103 1,036.1
10,000
100,000
MW102 30,052
MW101
PAVED AREA
MW104 53,542
SMALL EMBANKMENT
WOODED AREA
SW
HAINES RES.
ROUTE 103
PAVED MEDIAN STRIP
BEDROCK AQUIFER SUPPLY WELL
SW
LADUC RESIDENCE
DEYO RESIDENCE
BARN
SW
APPROXIMATE LOCATION OF PROPERTY LINE
OPEN FIELD
WILLIAMS RIVER APPROX. 350 FEET FROM C&B MILLER GENERAL STORE
LEGEND
MONITORING WELL AND TOTAL VOC CONCENTRATION (PPB)
ISOCONCENTRATION CONTOUR (PPB) (DASH WHERE INFERRED)
APPROXIMATE LOCATION OF SHALLOW AQUIFER SUPPLY WELL (UNLESS OTHERWISE NOTED)
UTILITY POLE
FENCELINE
GRIFFIN INTERNATIONAL
C&B MILLER GENERAL STORE
ROUTE 103
GASSETTS, VERMONT
CONTAMINANT DISTRIBUTION MAP
SAMPLE DATE: 1/5/99
DATE: 1/14/99
SCALE: 1"=40'

# APPENDIX B

## Well Logs

PROJECT C&B MILLER GENERAL STORE

LOCATION GASSETTS, VERMONT

DATE DRILLED 12/28/98 TOTAL DEPTH OF HOLE 16.0'

DIAMETER 4.25"

SCREEN DIA. 2" LENGTH 10.0' SLOT SIZE 0.010"

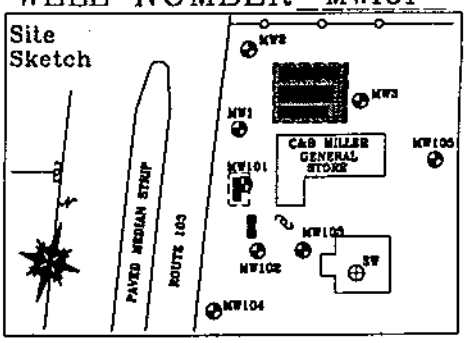
CASING DIA. 2" LENGTH 3.5' TYPE sch 40 pvc

DRILLING CO. TDS DRILLING METHOD HSA

DRILLER MARTY LOG BY R. HIGGINS

WELL NUMBER MW101

Site Sketch




*GRIFFIN INTERNATIONAL, INC*

| DEPTH IN FEET | WELL CONSTRUCTION | NOTES | BLOWS PER 6" OF SPOON & PID READINGS | DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES) | DEPTH IN FEET |
|---|---|---|---|---|---|
| 0 | | ROAD BOX | | | 0 |
| 1 | | LOCKING WELL CAP | | | 1 |
| 2 | | CONCRETE | | | 2 |
| 3 | | NATIVE BACKFILL | | | 3 |
| 4 | | BENTONITE | | | 4 |
| 5 | | WELL RISER | | | 5 |
| 6 | | | 5'-7' 2/2/4/3 260 ppm | Dry, black SILT with fine sand, gasoline odor. | 6 |
| 7 | | SAND PACK | | | 7 |
| 8 | | | | | 8 |
| 9 | | | | 9.0' WATER TABLE ▼ | 9 |
| 10 | | WELL SCREEN | | | 10 |
| 11 | | | 10'-12' 3/3/7/10 200 ppm | Wet, gray/black, coarse SAND with little fine gravel, gasoline odor. | 11 |
| 12 | | | | | 12 |
| 13 | | BOTTOM CAP | | | 13 |
| 14 | | | | Wet, brown, medium to coarse SAND, gasoline odor. | 14 |
| 15 | | | 14'-16' 4/4/5/29 14'-15' 240 ppm 15'-16' 30 ppm | Wet, brown, SILT with trace fine sand, slight gasoline odor. | 15 |
| 16 | | UNDISTURBED NATIVE SOIL | | | 16 |
| 17 | | | | BASE OF WELL AT 14' END OF EXPLORATION AT 16' | 17 |
| 18 | | | | | 18 |
| 19 | | | | | 19 |
| 20 | | | | | 20 |
| 21 | | | | | 21 |
| 22 | | | | | 22 |
| 23 | | | | | 23 |
| 24 | | | | | 24 |
| 25 | | | | | 25 |

WELL NUMBER MW102

PROJECT C&B MILLER GENERAL STORE

LOCATION GASSETTS, VERMONT

DATE DRILLED 12/28/98 TOTAL DEPTH OF HOLE 16.0'

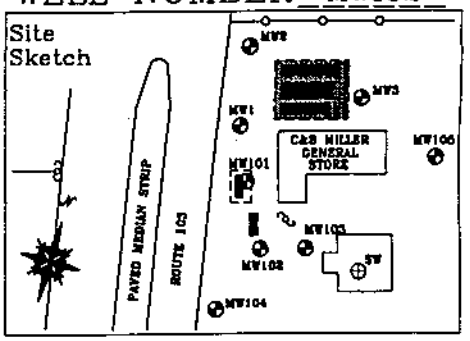
DIAMETER 4.25"

SCREEN DIA. 2" LENGTH 10.0' SLOT SIZE 0.010"

CASING DIA. 2" LENGTH 3.5' TYPE sch 40 pvc

DRILLING CO. TDS DRILLING METHOD HSA

DRILLER MARTY LOG BY R. HIGGINS




*GRIFFIN INTERNATIONAL, INC*

| DEPTH IN FEET | WELL CONSTRUCTION | NOTES | BLOWS PER 6" OF SPOON & PID READINGS | DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES) | DEPTH IN FEET |
|---|---|---|---|---|---|
| 0 | | ROAD BOX | | | 0 |
| 1 | | LOCKING WELL CAP | | | 1 |
| 2 | | CONCRETE | | | 2 |
| 3 | | NATIVE BACKFILL | | | 3 |
| 4 | | BENTONITE | | | 4 |
| 5 | | WELL RISER | | | 5 |
| 6 | | | 5'–7' 7/7/6/4 260 ppm | Dry, black SILT with some fine sand, gasoline odor. | 6 |
| 7 | | SAND PACK | | | 7 |
| 8 | | | | | 8 |
| 9 | | | | 9.0' WATER TABLE ▼ | 9 |
| 10 | | WELL SCREEN | | | 10 |
| 11 | | | 10'–12' 17/18/9/21 200 ppm | Wet, gray, fine to coarse GRAVEL, gasoline odor. | 11 |
| 12 | | | | | 12 |
| 13 | | BOTTOM CAP | | | 13 |
| 14 | | | | | 14 |
| 15 | | | 14'–16' 6/9/26/51 14'–15.3' 220 ppm 15.3'–15.8' 200 ppm 15.8'–16.0' 30 ppm | Wet, gray, fine to medium SAND, gasoline odor. | 15 |
| 16 | | UNDISTURBED NATIVE SOIL | | Wet, gray CLAY with silt. Brown SILT with little fine sand. | 16 |
| 17 | | | | BASE OF WELL AT 14' END OF EXPLORATION AT 16' | 17 |
| 18 | | | | | 18 |
| 19 | | | | | 19 |
| 20 | | | | | 20 |
| 21 | | | | | 21 |
| 22 | | | | | 22 |
| 23 | | | | | 23 |
| 24 | | | | | 24 |
| 25 | | | | | 25 |

PROJECT C&B MILLER GENERAL STORE

LOCATION GASSETTS, VERMONT

DATE DRILLED 12/28/98 TOTAL DEPTH OF HOLE 12.0'

DIAMETER 4.25"

SCREEN DIA. 2" LENGTH 8.0' SLOT SIZE 0.010"

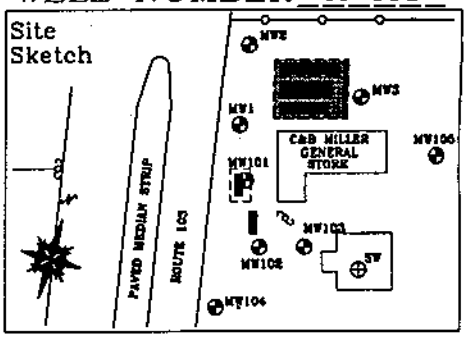
CASING DIA. 2" LENGTH 1.5' TYPE sch 40 pvc

DRILLING CO. TDS DRILLING METHOD HSA

DRILLER MARTY LOG BY R. HIGGINS

WELL NUMBER MW103

Site Sketch




*GRIFFIN INTERNATIONAL, INC*

| DEPTH IN FEET | WELL CONSTRUCTION | NOTES | BLOWS PER 6" OF SPOON & PID READINGS | DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES) | DEPTH IN FEET |
|---|---|---|---|---|---|
| 0 | | ROAD BOX<br>LOCKING WELL CAP<br>CONCRETE | | | 0 |
| 1 | | BENTONITE | | | 1 |
| 2 | | WELL RISER | | | 2 |
| 3 | | | | | 3 |
| 4 | | | | | 4 |
| 5 | | SAND PACK | | | 5 |
| 6 | | | 5'-7' 6/7/12/15 | 6.0' WATER TABLE ▼ | 6 |
| 7 | | WELL SCREEN | 5'-6.5' 0 ppm<br>6.5'-7' 1.8 ppm | Reddish, dry SILT and fine sand.<br>Wet, reddish, fine to medium SAND with trace silt. | 7 |
| 8 | | | | | 8 |
| 9 | | BOTTOM CAP | | | 9 |
| 10 | | | | | 10 |
| 11 | | | 10'-12' 7/7/10/12<br>7 ppm | Wet, gray, fine to coarse SAND, aged gasoline odor. | 11 |
| 12 | | UNDISTURBED NATIVE SOIL | | | 12 |
| 13 | | | | BASE OF WELL AT 10'<br>END OF EXPLORATION AT 12' | 13 |
| 14 | | | | | 14 |
| 15 | | | | | 15 |
| 16 | | | | | 16 |
| 17 | | | | | 17 |
| 18 | | | | | 18 |
| 19 | | | | | 19 |
| 20 | | | | | 20 |
| 21 | | | | | 21 |
| 22 | | | | | 22 |
| 23 | | | | | 23 |
| 24 | | | | | 24 |
| 25 | | | | | 25 |

PROJECT C&B MILLER GENERAL STORE

LOCATION GASSETTS, VERMONT

DATE DRILLED 12/28/98 TOTAL DEPTH OF HOLE 15.1'

DIAMETER 4.25"

SCREEN DIA. 2" LENGTH 10.0' SLOT SIZE 0.010"

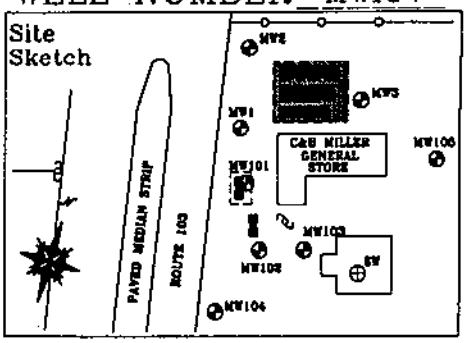
CASING DIA. 2" LENGTH 3.5' TYPE sch 40 pvc

DRILLING CO. TDS DRILLING METHOD HSA

DRILLER MARTY LOG BY R. HIGGINS

WELL NUMBER MW104

Site Sketch

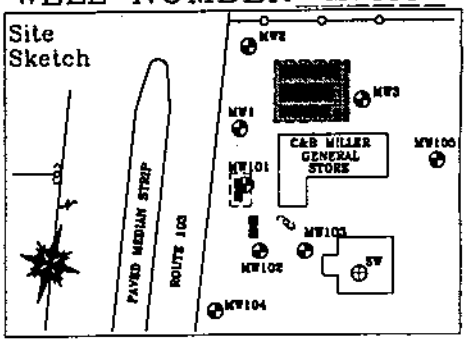



*GRIFFIN INTERNATIONAL, INC*

| DEPTH IN FEET | WELL CONSTRUCTION | NOTES | BLOWS PER 6" OF SPOON & PID READINGS | DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES) | DEPTH IN FEET |
|---|---|---|---|---|---|
| 0 | | ROAD BOX | | | 0 |
| 1 | | LOCKING WELL CAP | | | 1 |
| 2 | | CONCRETE | | | 2 |
| 3 | | NATIVE BACKFILL | | | 3 |
| 4 | | BENTONITE | | | 4 |
| 5 | | WELL RISER | | | 5 |
| 6 | | | 5'–7' 29/23/28/27 | Dry, brown, fine to medium SAND with silt. | 6 |
| 7 | | SAND PACK | 5'–6' 0 ppm<br>6'–7' 19 ppm | Wet, gray SILT with fine sand, gasoline odor. | 7 |
| 8 | | | | 8.0' WATER TABLE ▼ | 8 |
| 9 | | | | | 9 |
| 10 | | WELL SCREEN | | | 10 |
| 11 | | | 10'–12' 19/12/20/12<br>200 ppm | Wet, gray, coarse SAND with some medium gravel, gasoline odor. | 11 |
| 12 | | | | | 12 |
| 13 | | BOTTOM CAP | | | 13 |
| 14 | | | | | 14 |
| 15 | | | 14'–15.1' 23/33/120<br>200 ppm | Wet, gray, medium GRAVEL with fine to coarse sand, gasoline odor. | 15 |
| 16 | | UNDISTURBED NATIVE SOIL | | BASE OF WELL AT 14'<br>SAMPLE SPOON REFUSAL AT 15.1' | 16 |
| 17 | | | | | 17 |
| 18 | | | | | 18 |
| 19 | | | | | 19 |
| 20 | | | | | 20 |
| 21 | | | | | 21 |
| 22 | | | | | 22 |
| 23 | | | | | 23 |
| 24 | | | | | 24 |
| 25 | | | | | 25 |

WELL NUMBER MW105

PROJECT C&B MILLER GENERAL STORE
LOCATION GASSETTS, VERMONT
DATE DRILLED 12/28/98 TOTAL DEPTH OF HOLE 12.0'
DIAMETER 4.25"
SCREEN DIA. 2" LENGTH 8.0' SLOT SIZE 0.010"
CASING DIA. 2" LENGTH 1.5' TYPE sch 40 pvc
DRILLING CO. TDS DRILLING METHOD HSA
DRILLER MARTY LOG BY R. HIGGINS




*GRIFFIN INTERNATIONAL, INC*

| DEPTH IN FEET | WELL CONSTRUCTION | NOTES | BLOWS PER 6" OF SPOON & PID READINGS | DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES) | DEPTH IN FEET |
|---|---|---|---|---|---|
| 0 | | ROAD BOX | | | 0 |
| | | LOCKING WELL CAP | | | |
| | | CONCRETE | | | |
| 1 | | BENTONITE | | | 1 |
| 2 | | WELL RISER | | | 2 |
| 3 | | | | | 3 |
| 4 | | | | | 4 |
| 5 | | SAND PACK | | | 5 |
| 6 | | | 5'–7' 3/6/12/14<br>0 ppm | 6.0' WATER TABLE | 6 |
| 7 | | WELL SCREEN | | Wet, brown, medium to fine SAND. | 7 |
| 8 | | | | | 8 |
| 9 | | | | | 9 |
| 10 | | BOTTOM CAP | | | 10 |
| 11 | | | 10'–12' 9/11/17/19<br>0 ppm | Wet, brown SILT with medium sand (till), little medium gravel. | 11 |
| 12 | | UNDISTURBED NATIVE SOIL | | BASE OF WELL AT 10'<br>END OF EXPLORATION AT 12' | 12 |
| 13 | | | | | 13 |
| 14 | | | | | 14 |
| 15 | | | | | 15 |
| 16 | | | | | 16 |
| 17 | | | | | 17 |
| 18 | | | | | 18 |
| 19 | | | | | 19 |
| 20 | | | | | 20 |
| 21 | | | | | 21 |
| 22 | | | | | 22 |
| 23 | | | | | 23 |
| 24 | | | | | 24 |
| 25 | | | | | 25 |

# APPENDIX C

## Liquid Level Monitoring Data

## Liquid Level Monitoring Data
### C&B Miller General Store
### Gassetts, VT

**Monitoring Date: 1/5/99**

| Well I.D. | Top of Casing Elevation | Depth To Product | Depth To Water | Product Thickness | Specific Gravity Of Product | Hydro Equivalent | Corrected Depth To Water | Corrected Water Table Elevation |
|---|---|---|---|---|---|---|---|---|
| MW-1 | **99.68** | - | **9.18** | - | - | - | **9.18** | **90.50** |
| MW-2 | **99.80** | - | **9.36** | - | - | - | **9.36** | **90.44** |
| MW-3 | **98.33** | - | **7.78** | - | - | - | **7.78** | **90.55** |
| MW-101 | **99.63** | - | **9.07** | - | - | - | **9.07** | **90.56** |
| MW-102 | **99.79** | - | **9.10** | - | - | - | **9.10** | **90.69** |
| MW-103 | **97.97** | - | **7.06** | - | - | - | **7.06** | **90.91** |
| MW-104 | **100.00** | - | **9.23** | - | - | - | **9.23** | **90.77** |
| MW-105 | **96.33** | - | **5.54** | - | - | - | **5.54** | **90.79** |

All Values Presented in Units of Feet

# APPENDIX D

## Laboratory Analytical Data

## Groundwater Quality Summary
## C&B Miller General Store
## Gassetts, VT

| PARAMETER | MW1 | | | | VGES |
|---|---|---|---|---|---|
| | 1/5/99 | | | | |
| MTBE | 60.2 | | | | 40 |
| Benzene | 19.9 | | | | 5 |
| Toluene | 1.6 | | | | 1,000 |
| Ethylbenzene | TBQ<1 | | | | 700 |
| Xylenes | 3.7 | | | | 10,000 |
| 1,3,5, trimethyl benzene | TBQ<1 | | | | 4 |
| 1,2,4, trimethyl benzene | 1.6 | | | | 5 |
| Naphthalene | 2.4 | | | | 20 |
| Total 8021B VOCs | 89.4 | | | | - |

| PARAMETER | MW2 | | | | VGES |
|---|---|---|---|---|---|
| | 1/5/99 | | | | |
| MTBE | <10 | | | | 40 |
| Benzene | <1 | | | | 5 |
| Toluene | <1 | | | | 1,000 |
| Ethylbenzene | <1 | | | | 700 |
| Xylenes | <1 | | | | 10,000 |
| 1,3,5, trimethyl benzene | <1 | | | | 4 |
| 1,2,4, trimethyl benzene | <1 | | | | 5 |
| Naphthalene | <1 | | | | 20 |
| Total 8021B VOCs | | | | | - |

all values in parts per billion (ppb)
TBQ - trace below quantitation limit
Analysis per EPA Method 8021B
VGES - Vermont Groundwater Enforcement Standard

## Groundwater Quality Summary
## C&B Miller General Store
## Gassetts, VT

| PARAMETER | MW3 | | | | VGES |
|---|---|---|---|---|---|
| | 1/5/99 | | | | |
| MTBE | <10 | | | | 40 |
| Benzene | <1 | | | | 5 |
| Toluene | <1 | | | | 1,000 |
| Ethylbenzene | <1 | | | | 700 |
| Xylenes | <1 | | | | 10,000 |
| 1,3,5, trimethyl benzene | <1 | | | | 4 |
| 1,2,4, trimethyl benzene | <1 | | | | 5 |
| Naphthalene | <1 | | | | 20 |
| Total 8021B VOCs | | | | | - |

| PARAMETER | MW101 | | | | VGES |
|---|---|---|---|---|---|
| | 1/5/99 | | | | |
| MTBE | **32,300.** | | | | 40 |
| Benzene | **5,160.** | | | | 5 |
| Toluene | **35,100.** | | | | 1,000 |
| Ethylbenzene | **3,290.** | | | | 700 |
| Xylenes | **21,200.** | | | | 10,000 |
| 1,3,5, trimethyl benzene | **1,270.** | | | | 4 |
| 1,2,4, trimethyl benzene | **4,030.** | | | | 5 |
| Naphthalene | **1,300.** | | | | 20 |
| Total 8021B VOCs | **103,650.** | | | | - |

all values in parts per billion (ppb)
TBQ - trace below quantitation limit
Analysis per EPA Method 8021B
VGES - Vermont Groundwater Enforcement Standard

## Groundwater Quality Summary
## C&B Miller General Store
## Gassetts, VT

| PARAMETER | MW102 | | | | VGES |
|---|---|---|---|---|---|
| | 1/5/99 | | | | |
| MTBE | TBQ < 1,000 | | | | 40 |
| Benzene | 954. | | | | 5 |
| Toluene | 6,150. | | | | 1,000 |
| Ethylbenzene | 2,720. | | | | 700 |
| Xylenes | 14,600. | | | | 10,000 |
| 1,3,5, trimethyl benzene | 1,160. | | | | 4 |
| 1,2,4, trimethyl benzene | 3,850. | | | | 5 |
| Naphthalene | 618. | | | | 20 |
| Total 8021B VOCs | 30,052. | | | | - |

| PARAMETER | MW103 | | | | VGES |
|---|---|---|---|---|---|
| | 1/5/99 | | | | |
| MTBE | 197. | | | | 40 |
| Benzene | 156. | | | | 5 |
| Toluene | 106. | | | | 1,000 |
| Ethylbenzene | 123. | | | | 700 |
| Xylenes | 270. | | | | 10,000 |
| 1,3,5, trimethyl benzene | 17.5 | | | | 4 |
| 1,2,4, trimethyl benzene | 141. | | | | 5 |
| Naphthalene | 27.6 | | | | 20 |
| Total 8021B VOCs | 1038.1 | | | | - |

all values in parts per billion (ppb)
TBQ - trace below quantitation limit
Analysis per EPA Method 8021B
VGES - Vermont Groundwater Enforcement Standard

## Supply Well Water Quality Summary
## C&B Miller General Store
## Gassetts, VT

| PARAMETER | Haines Residence | | | | VGES |
|---|---|---|---|---|---|
| | 12/28/98 | | | | |
| MTBE | <10 | | | | 40 |
| Benzene | <1 | | | | 5 |
| Toluene | <1 | | | | 1,000 |
| Ethylbenzene | <1 | | | | 700 |
| Xylenes | <1 | | | | 10,000 |
| 1,3,5, trimethyl benzene | <1 | | | | 4 |
| 1,2,4, trimethyl benzene | <1 | | | | 5 |
| Naphthalene | <1 | | | | 20 |
| Total 8021B VOCs | | | | | - |

all values in parts per billion (ppb)
TBQ - trace below quantitation limit
Analysis per EPA Method 8021B
VGES - Vermont Groundwater Enforcement Standard

# APPENDIX E
## Laboratory Analysis Reports

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

# REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: CB Miller Store
REPORT DATE: January 11, 1999
DATE SAMPLED: January 5, 1999

PROJECT CODE: GICB1363
REF.#: 133,420 - 133,429

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

# EPA METHOD 8021B--PURGEABLE AROMATICS

CLIENT: Griffin
PROJECT NAME: CB Miller Store
CLIENT PROJ. #: 129841453

DATE RECEIVED: January 6, 1999
REPORT DATE: January 11, 1999
PROJECT CODE: GICB1363

| Ref. #: | 133,420 | 133,421 | 133,422 | 133,423 | 133,424 |
|---|---|---|---|---|---|
| Site: | Trip Blank | MW-2 | MW-102 | MW-101 | MW-3 |
| Date Sampled: | 1/5/99 | 1/5/99 | 1/5/99 | 1/5/99 | 1/5/99 |
| Time Sampled: | 7:07 | 10:16 | 10:33 | 10:35 | 10:49 |
| Sampler: | RH & LD | RH & LD | RH & LD | RH & LD | RH & LD |
| Date Analyzed: | 1/8/99 | 1/8/99 | 1/9/99 | 1/9/99 | 1/8/99 |
| UIP Count: | 0 | 0 | >10 | >10 | 0 |
| Dil. Factor (%): | 100 | 100 | 1 | 0.2 | 100 |
| Surr % Rec. (%): | 93 | 93 | 106 | 91 | 89 |
| Parameter | Conc. (ug/L) | Conc. (ug/L) | Conc. (ug/L) | Conc. (ug/L) | Conc. (ug/L) |
| MTBE | <10 | <10 | TBQ <1000 | 32,300. | <10 |
| Benzene | <1 | <1 | 954. | 5,160. | <1 |
| Toluene | <1 | <1 | 6,150. | 35,100. | <1 |
| Ethylbenzene | <1 | <1 | 2,720. | 3,290. | <1 |
| Xylenes | <1 | <1 | 14,600. | 21,200. | <1 |
| 1,3,5 Trimethyl Benzene | <1 | <1 | 1,160. | 1,270. | <1 |
| 1,2,4 Trimethyl Benzene | <1 | <1 | 3,850. | 4,030. | <1 |
| Naphthalene | <1 | <1 | 618. | 1,300. | <1 |

| Ref. #: | 133,425 | 133,426 | 133,427 | 133,428 | 133,429 |
|---|---|---|---|---|---|
| Site: | MW-103 | MW-104 | Duplicate 104 | MW-1 | MW-105 |
| Date Sampled: | 1/5/99 | 1/5/99 | 1/5/99 | 1/5/99 | 1/5/99 |
| Time Sampled: | 10:52 | 11:01 | 11:01 | 11:05 | 12:02 |
| Sampler: | RH & LD | RH & LD | RH & LD | RH & LD | RH & LD |
| Date Analyzed: | 1/11/99 | 1/11/99 | 1/11/99 | 1/8/99 | 1/11/99 |
| UIP Count: | >10 | >10 | >10 | >10 | >10 |
| Dil. Factor (%): | 20 | 0.5 | 0.5 | 100 | 50 |
| Surr % Rec. (%): | 92 | 89 | 88 | 90 | 85 |
| Parameter | Conc. (ug/L) | Conc. (ug/L) | Conc. (ug/L) | Conc. (ug/L) | Conc. (ug/L) |
| MTBE | 197. | 13,500. | 13,700. | 60.2 | <20 |
| Benzene | 156. | 2,400. | 2,380. | 19.9 | 4.6 |
| Toluene | 106. | 16,100. | 16,000. | 1.6 | 86.6 |
| Ethylbenzene | 123. | 2,160. | 2,140. | TBQ <1 | 43.2 |
| Xylenes | 270. | 14,000. | 13,800. | 3.7 | 281. |
| 1,3,5 Trimethyl Benzene | 17.5 | 1,160. | 1,140. | TBQ <1 | 61.6 |
| 1,2,4 Trimethyl Benzene | 141. | 3,580. | 3,520. | 1.6 | 173. |
| Naphthalene | 27.6 | 642. | 631. | 2.4 | 13.8 |

Note: UIP = Unidentified Peaks TBQ = Trace Below Quantitation NI = Not Indicated

ENDYNE INC.

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

12984453

# CHAIN-OF-CUSTODY RECORD

| | | |
|---|---|---|
| Project Name: B Miller Store<br>Site Location: ASSETTS VT | Reporting Address: GRIFFITH | Billing Address: |
| Endyne Project Number: C-ICB 1363 | Company:<br>Contact Name/Phone #: R Hampton | Sampler Name: RH / LD<br>Phone #: |

| Lab # | Sample Location | Matrix | GRAB | COMP | Date/Time 1/5/99 | Sample Containers No. | Sample Containers Type/Size | Field Results/Remarks | Analysis Required | Sample Preservation | Rush |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 133420 | TRIP BLANK | $H_2O$ | ✓ | | 7:07 | 2 | 40mL | | 8021B | HCl | |
| 133421 | MW2 | | | | 10:16 | | | | | | |
| 133422 | MW102 | | | | 10:33 | | | | | | |
| 133423 | MW101 | | | | 10:35 | | | | | | |
| 133424 | MW3 | | | | 10:49 | | | | | | |
| 133425 | MW103 | | | | 10:52 | | | | | | |
| 133426 | MW104 | | | | 11:01 | | | | | | |
| 133427 | DUCK 104 | | | | 11:01 | | | | | | |
| 133428 | MW1 | | | | 11:05 | | | | | | |
| 133429 | MW105 | | | | 12:02 | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| | | |
|---|---|---|
| Relinquished by: Signature Robert Hampton | Received by: Signature | Date/Time |
| Relinquished by: Signature | Received by: Signature | Date/Time 1/6/99 10:26 |

New York State Project: Yes ____ No ✓

## Requested Analyses

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | pH | 6 | TKN | 11 | Total Solids | 16 | Metals (Specify) | 21 | EPA 624 | 26 | EPA 8270 B/N or Acid |
| 2 | Chloride | 7 | Total P | 12 | TSS | 17 | Coliform (Specify) | 22 | EPA 625 B/N or A | 27 | EPA 8010/8020 |
| 3 | Ammonia | 8 | Total Diss. P | 13 | TDS | 18 | COD | 23 | EPA 418.1 | 28 | EPA 8080 Pest/PCB |
| 4 | Nitrite N | 9 | $BOD_5$ | 14 | Turbidity | 19 | BTEX | 24 | EPA 608 Pest/PCB | | |
| 5 | Nitrate N | 10 | Alkalinity | 15 | Conductivity | 20 | EPA 601/602 | 25 | EPA 8240 | | |
| 29 | TCLP (Spe | volatiles, semi-volatiles, metals, pesticides, herbicides) | | | | | | | | | |
| 30 | Other (Spe | ) | | | | | | | | | |

ENDYNE, INC.

31471

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

# CHAIN-OF-CUSTODY RECORD

| | | |
|---|---|---|
| Project Name: C.B. Mobil Site<br>Site Location: Albany, NY | Reporting Address: GRIFFIN | Billing Address: |
| Endyne Project Number: | Company:<br>Contact Name/Phone #: R. Athyn | Sampler Name: RH / LD<br>Phone #: |

| Lab # | Sample Location | Matrix | GRAB | COMP | Date/Time 1/5/95 | Sample Containers No. | Sample Containers Type/Size | Field Results/Remarks | Analysis Required | Sample Preservation | Rush |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | TRIP BLANK | H2O | ✓ | | 7:07 | 2 | 40ML | | 8021B | HCl | |
| | MW2 | | | | 10:16 | | | | | | |
| | MW1-2 | | | | 10:33 | | | | | | |
| | MW101 | | | | 10:35 | | | | | | |
| | MW3 | | | | 10:49 | | | | | | |
| | MW103 | | | | 10:52 | | | | | | |
| | MW104 | | | | 11:01 | | | | | | |
| | Duplicate 104 | | | | 11:01 | | | | | | |
| | MW4 | | | | 11:05 | | | | | | |
| | MW105 | | | | 12:02 | | | | | | |
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| | | |
|---|---|---|
| Relinquished by: Signature Robert Athyn | Received by: Signature | Date/Time |
| Relinquished by: Signature | Received by: Signature | Date/Time 1/6/95 10:26 |

New York State Project: Yes ____ No ✓

**Requested Analyses**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | pH | 6 | TKN | 11 | Total Solids | 16 | Metals (Specify) | 21 | EPA 624 | 26 | EPA 8270 B/N or Acid |
| 2 | Chloride | 7 | Total P | 12 | TSS | 17 | Coliform (Specify) | 22 | EPA 625 B/N or A | 27 | EPA 8010/8020 |
| 3 | Ammonia N | 8 | Total Diss. P | 13 | TDS | 18 | COD | 23 | EPA 418.1 | 28 | EPA 8080 Pest/PCB |
| 4 | Nitrite N | 9 | $BOD_5$ | 14 | Turbidity | 19 | BTEX | 24 | EPA 608 Pest/PCB | | |
| 5 | Nitrate N | 10 | Alkalinity | 15 | Conductivity | 20 | EPA 601/602 | 25 | EPA 8240 | | |
| 29 | TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides) | | | | | | | | | | |
| 30 | Other (Specify): | | | | | | | | | | |

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

# REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: C&B Miller Store
REPORT DATE: January 6, 1999
DATE SAMPLED: December 28, 1998

PROJECT CODE: GICB1303
REF.#: 133,241 - 133,243

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

# EPA METHOD 8021B--PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: C&B Miller Store
CLIENT PROJ. #: NI

DATE RECEIVED: December 29, 1998
REPORT DATE: January 6, 1999
PROJECT CODE: GICB1303

| Ref. #: | 133,241 | 133,242 | 133,243 | | |
|---|---|---|---|---|---|
| Site: | Deyo Res | Losee Res | Haines Res | | |
| Date Sampled: | 12/28/98 | 12/28/98 | 12/28/98 | | |
| Time Sampled: | 11:16 | 11:52 | 12:54 | | |
| Sampler: | R. Higgins | R. Higgins | R. Higgins | | |
| Date Analyzed: | 1/5/99 | 1/1/99 | 1/1/99 | | |
| UIP Count: | 0 | 0 | 0 | | |
| Dil. Factor (%): | 100 | 100 | 100 | | |
| Surr % Rec. (%): | 93 | 90 | 86 | | |
| Parameter | Conc. (ug/L) | Conc. (ug/L) | Conc. (ug/L) | | |
| MTBE | <10 | TBQ <10 | <10 | | |
| Benzene | <1 | <1 | <1 | | |
| Toluene | <1 | <1 | <1 | | |
| Ethylbenzene | <1 | <1 | <1 | | |
| Xylenes | <1 | 1.3 | <1 | | |
| 1,3,5 Trimethyl Benzene | <1 | <1 | <1 | | |
| 1,2,4 Trimethyl Benzene | <1 | <1 | <1 | | |
| Naphthalene | <1 | <1 | <1 | | |

Note: UIP = Unidentified Peaks TBQ = Trace Below Quantitation NI = Not Indicated

ENDYNE, INC.

31476

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333 12/29/98

# CHAIN-OF-CUSTODY RECORD

| | | |
|---|---|---|
| Project Name: C+B Miller Shore. Site Location: Grissetts, VT | Reporting Address: Gkl Final | Billing Address: |
| Endyne Project Number: GJCB/303 | Company: Contact Name/Phone #: J. Hayward | Sampler Name: R. Hayward Phone #: |

| Lab # | Sample Location | Matrix | GRAB | COMP | Date/Time 12/29/98 | Sample Containers No. | Sample Containers Type/Size | Field Results/Remarks | Analysis Required | Sample Preservation | Rush |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 33,241 | Deyo Res | $H_2O$ | ✓ | | 11:15 | 2 | 40ml G | | 502B | HCl | |
| 133,242 | Losee Res | ↓ | ↓ | | 11:5. - | ↓ | ↓ | | ↓ | ↓ | |
| 133,243 | Haines Res | ↓ | ↓ | | 12:5. | ↓ | ↓ | | ↓ | ↓ | |
| | | | | | | | | | | | |
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|---|---|---|
| Relinquished by: Signature | Received by: Signature | Date/Time 12-29-98 10:25 |
| Relinquished by: Signature | Received by: Signature | Date/Time 12-29-98 10:25 |

New York State Project: Yes ____ No ____

**Requested Analyses**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | pH | 6 | TKN | 11 | Total Solids | 16 | Metals (Specify) | 21 | EPA 624 | 26 | EPA 8270 B/N or Acid |
| 2 | Chloride | 7 | Total P | 12 | TSS | 17 | Coliform (Specify) | 22 | EPA 625 B/N or A | 27 | EPA 8010/8020 |
| 3 | Ammonia N | 8 | Total Diss. P | 13 | TDS | 18 | COD | 23 | EPA 418.1 | 28 | EPA 8080 Pest/PCB |
| 4 | Nitrite N | 9 | $BOD_5$ | 14 | Turbidity | 19 | BTEX | 24 | EPA 608 Pest/PCB | | |
| 5 | Nitrate N | 10 | Alkalinity | 15 | Conductivity | 20 | EPA 601/602 | 25 | EPA 8240 | | |
| 29 | TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides) | | | | | | | | | | |
| 30 | Other (Specify): | | | | | | | | | | |

ENDYNE, INC.

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

12/20/98

31476

# CHAIN-OF-CUSTODY RECORD

| | | |
|---|---|---|
| Project Name: CVB Miller Shore<br>Site Location: Ganeth, VT | Reporting Address: Griffin | Billing Address: |
| Endyne Project Number: | Company:<br>Contact Name/Phone #: R. Hayward | Sampler Name: R. Hayward<br>Phone #: |

| Lab # | Sample Location | Matrix | GRAB | COMP | Date/Time | Sample Containers No. | Sample Containers Type/Size | Field Results/Remarks | Analysis Required | Sample Preservation | Rush |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dep. Res | H2O | ✓ | | 11:16 | 2 | Amber | | 9213 | HCl | |
| | Lasee Res | ↓ | ↓ | | 11:52 | ↓ | ↓ | | ↓ | ↓ | |
| | Haines Res | ↓ | ↓ | | 12:54 | ↓ | ↓ | | ↓ | ↓ | |
| | | | | | | | | | | | |
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|---|---|---|
| Relinquished by: Signature | Received by: Signature | Date/Time |
| Relinquished by: Signature | Received by: Signature | Date/Time |

New York State Project: Yes ____ No ____

## Requested Analyses

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | pH | 6 | TKN | 11 | Total Solids | 16 | Metals (Specify) | 21 | EPA 624 | 26 | EPA 8270 B/N or Acid |
| 2 | Chloride | 7 | Total P | 12 | TSS | 17 | Coliform (Specify) | 22 | EPA 625 B/N or A | 27 | EPA 8010/8020 |
| 3 | Ammonia N | 8 | Total Diss. P | 13 | TDS | 18 | COD | 23 | EPA 418.1 | 28 | EPA 8080 Pest/PCB |
| 4 | Nitrite N | 9 | $BOD_5$ | 14 | Turbidity | 19 | BTEX | 24 | EPA 608 Pest/PCB | | |
| 5 | Nitrate N | 10 | Alkalinity | 15 | Conductivity | 20 | EPA 601/602 | 25 | EPA 8240 | | |
| 29 | TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides) | | | | | | | | | | |
| 30 | Other (Specify): | | | | | | | | | | |

**APPENDIX F**
**Underground Storage Tank Closure Inspection Report**

GRIFFIN INTERNATIONAL INC

December 21, 1998

Ms. Sue Thayer
Vermont Department of Environmental Conservation
Waste Management Division
103 South Main St. / West Bldg.
Waterbury, VT 05671-0404

RE: C&B Miller General Store UST System Closure Inspection
Gassetts, VT, Facility ID # 1514, VTDEC Site# 95-2538

Dear Ms. Thayer:

On December 15 and 16, 1998, Griffin inspected the permanent closure of five underground storage tanks and associated distribution systems at the above site. The USTs were located at the former C&B Miller General Store (also called Gassetts General Store) located at the intersection of Routes 10 and 103 in Gassetts, Vermont. The USTs had been out of service for undetermined lengths of time. Enclosed are the UST permanent closure forms, completed Site Investigation Expressway Notification Form, and photographs. Mr. Andrew Shively, VTDEC, was on-site both days of the UST closures.

The USTs consisted of:

UST 1 - 6,000 gallon, gasoline, single wall, steel
UST 2 - 10,000 gallon, gasoline fuel, single wall, steel
UST 3 - 4,000 gallon, gasoline, single wall, steel
UST 4 - 1,000 gallon, gasoline, single wall steel
UST 5 - 3,000 gallon, gasoline, single walled steel

The five USTs were respectively owned by:

UST 1 and 3
Charles and Barbara Miller
23 Fanning Avenue
East Hampton, NY 11937
(516)324-7671

UST 2
Midway Oil Company
P.O. Box 8
Rutland, VT 05701
(802)775-5534
Contact: Mr. Frank Trombetta

USTs 4 and 5
Ownership in Question, please contact:
Sean P. Reagan, Esq.
Dakin and Binelli P.G.
PO Box 433
Chester, VT 05143-0499

Residual product was removed from the USTs by Environmental Products and Services of Burlington, VT. The USTs were excavated and cleaned by T. L. Boise of New Haven, Vermont. Waste generated is attributed to the three owners as follows:

| | |
|---|---|
| UST 1 (Miller) | 100 gal |
| UST 2 (Midway Oil) | 725 gal |
| UST 3 (Miller) | 240 gal |
| UST 4 (In Question) | 0 gal |
| UST 5 (In Question) | 1,000 gal |

In addition, about 200 gallons of tank bottom waste were generated from the UST cleanings. The waste hauler of the tank bottom waste is to be determined.

Once cleaned, USTs 1, 2 and 3 were taken by a local resident for equipment storage. USTs 4 and 5 were taken by T. L. Boise for later scrap disposal. USTs 1, 2 and 3 were likely older than 20 years. USTs 4 and 5 were much older and may have been over 50 years old. The USTs are not being replaced.

Soils were screened for volatile organic compounds (VOCs) using properly calibrated HNu Model PI-101 photoionization devices (PIDs). This was accomplished at depths from 0 to 12 feet below grade. VOCs were detected by PID at concentrations ranging from 0 parts per million (ppm) to 300 ppm. All soil samples were collected and field screened using the bag-headspace method in accordance with Griffin protocols.

UST 1 was in poor condition with some rust and significant pitting with no visible holes or signs of leakage.

UST 2 was in fair condition with minor rust with no visible holes or signs of leakage.

UST 3 was in failed condition, with rust, pitting and several visible holes.

UST 4 was in failed condition, with rust, pitting and one visible hole.

UST 5 was in failed condition, with rust, pitting and several visible holes.

In addition to the USTs, there was a significant amount of old abandoned distribution piping between the UST locations and the former pump islands. It was not possible to positively ascertain which UST the piping may have been connected to. Several piping unions and elbows exhibited signs of leakage.

Table 1 is a summary of soil sample field screening results. The sample locations are shown on the attached site sketch.

Soils at the site in the vicinity of USTs 1 - 3 consisted of medium gravel from 0 to 4 feet below grade, medium to fine sand and silt from 4 to 12 feet below grade and medium gravel starting at 12 feet below grade. The soils around these USTs were likely mostly fill. Significant gray soil staining was observed at several places in the UST excavation starting at about 5 feet below grade and was most prevalent in the vicinity of UST 3. Groundwater was encountered at about seven to eight feet below grade. All excavated soils were backfilled.

Soils at the site in the vicinity of USTs 4 and 5 consisted of medium gravel fill from 0 to 2.5 feet below grade where a layer of asphalt and an older pump island were encountered. The grade level had apparently been raised at some time. From 2.5 feet to the depth of the excavation the soils consisted of course gravel with cobbles and silty sand. Significant gray soil staining was observed throughout the UST excavation starting at grade level. Due to the close proximity of Route 103, the excavation was not left open for observation. Groundwater is estimated to be at about 8 feet below grade. All excavated soils were backfilled. Ambient air readings with a PID during excavation of UST 4 and 5 ranged up to 200 ppm near the USTs to 70 ppm approximately 50 feet from the excavation.

The area obtains its water from a private water supplies which appeared to be shallow surficial aquifer dug wells. No drilled well heads were visible in the area. There are about 8 private water supply wells in the vicinity of this site. The supply well for the site itself is located in the on-site house basement and is a dug well. A water sample was collected for analysis by the VTDEC from this well. The VTDEC verbally reported to Griffin 12/18/98 that the sample did not contain VOCs. The renters of the house stated

that they had observed gasoline odors in the well at times; however, no visible presence of petroleum was evident in the well upon inspection. PID screening of the basement of this residence was unsuccessful. Both the VTDEC PID and Griffin's PID picked up some compound in the basement that made them work erratically and unreliably. There were no petroleum vapors obvious in the basement.

Four monitoring wells exist at the site which had been used for leak detection. They were preserved for potential future use.

Conclusions:

UST 3, 4 and 5 had holes in them and have leaked at some time.

Significant old and new distribution piping was encountered at the site. The piping exhibited weeping and joint leakage in several places. It was not possible to determine which pipes had been used with which USTs for the most part.

It is not possible to fully determine which UST or pipe contributed what portion of the contamination detected.

The most significant contamination was detected near the pump island where there had been obvious significant releases from both the piping and the USTs as the soils were highly contaminated from grade downwards and the USTs had failed.

The area water supplies are at risk. The adjacent house water supply was sampled and tested by the VTDEC and reported to had been free of VOCs. This condition may change with seasonal fluctuations of the water table.

Free product was not observed on the water table but heavy sheens were visible where water collected.

There is an apparent 1.5" diameter vent pipe present at the rear of the former store. It is not known what this pipe may be venting, No additional fill pipes were observed. The store interior was not accessible for observation.

This site will proceed on a Site Investigation Expressway but with coordination with and approval by the VTDEC prior to initiation of all stages of work.

Please call me with any questions that you may have regarding this closure inspection.

Sincerely,

Peter Schuyler

pbs/tpi/gassets

Encl.

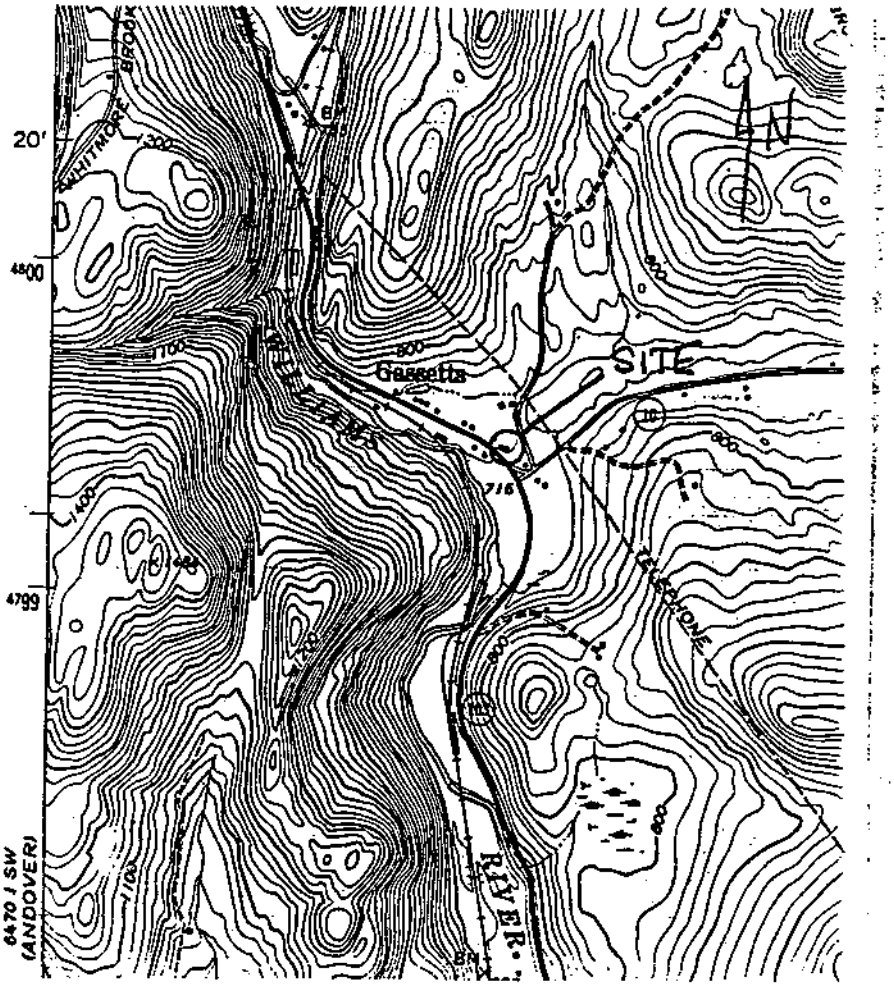
cc: 129841433

c: Mr. Tony Cairns, Champlain Oil Company
Mr. Frank Trombetta, Midway Oil Company
Mr. Charles Miller
Mr. Tom Boise, T. L. Boise

TABLE 1

| Soil Sample | Depth (ft) | HNu PI101 VOCs (ppm) |
|---|---|---|
| 1 | 2.5 | .6 |
| 2 | 6 | .4 |
| 3 | 3 | .2 |
| 4 | excavation pile | 0 |
| 5 | excavation pile | 3.5 |
| 6 | 9 at water table | 2 |
| 7 | 9 at water table | 3 |
| 8 | 9 at water table | 200 |
| 9 | 6.5 | 60 |
| 10 | 3 | .2 |
| 11 | 3 | 0 |
| 12 | 7 | 0 |
| 13 | 2 | 280 |
| 14 | 5 | 240 |
| 15 | 7 | 280 |
| 16 | 10 | 240 |
| 17 | 11 | 80 |
| 18 | 11 | 18 |
| 19 | 11 | 80 |
| 20 | 13 | 20 |
| 21 | 6 | 200 |
| 22 | 8 | 220 |
| 23 | 2 | 10 |
| 24 | 11 | 200 |
| 25 | 11 | 200 |
| 26 | 2 | 300 |
| 27 | 4 | 300 |
| 28 | 6 | 300 |
| 29 | 6 | 300 |
| 30 | 8 | 300 |

SITE LOCATION MAP
C & B MILLER GENERAL STORE
GASSETTS, VT




USGS CHESTER, VT QUAD
1972

GRIFFIN INTERNATIONAL Inc
19 Commerce Street
P.O. Box 943
Williston, VT 05495
Ph/Fax (802) 865-4288
E-mail: griffint@together.net

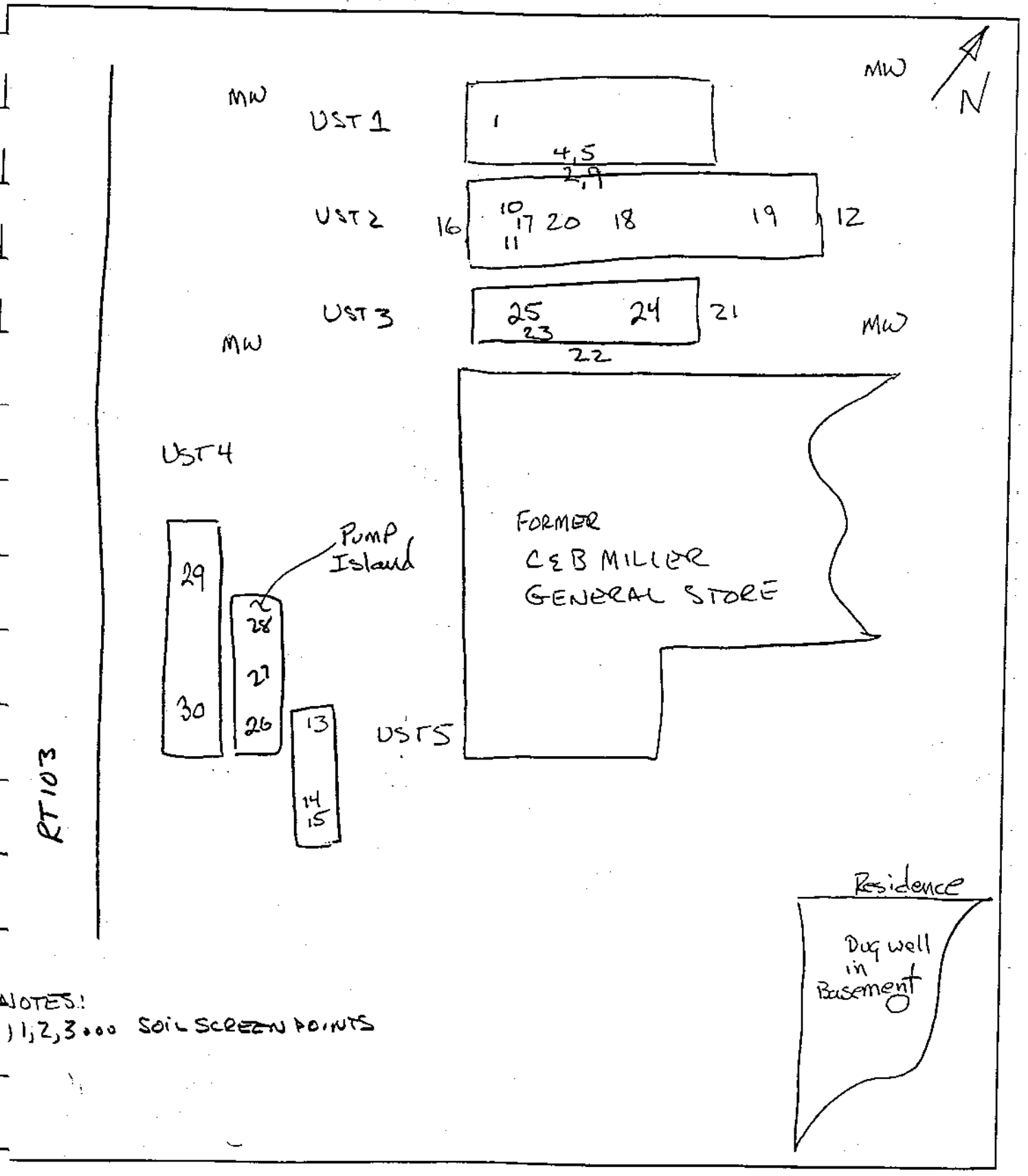
JOB 1298413 3 SITE SKETCH

SHEET NO. 1 OF 1

CALCULATED BY PBS DATE 12-20-98

CHECKED BY _____ DATE _____

SCALE 1" = 15'




NOTES:
1) 2,3... Soil Screen Points

# State of Vermont

AGENCY OF NATURAL RESOURCES
**Department of Environmental Conservation**

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

Waste Management Division
103 South Main Street/West Office
Waterbury, Vermont 05671-0404
(802) 241-3888, FAX (802) 241-3296

## SITE INVESTIGATION EXPRESSWAY NOTIFICATION FORM

Site Owner: Charles & Barbara Miller, To be determined, Midway Oil Co

Site Name, Town: C & B Miller General Store

___ Yes, this site will participate in the Site Investigation Expressway Process.

X No, this site will not participate in the Site Investigation Expressway Process.
WITH VERBAL VTDEC APPROVAL OF WORK ELEMENTS

If yes, please complete the checklist below:

✓ Contamination present in soils above action levels ___ Yes ___ No

If yes, summarize levels:

✓ Free product observed ___ Yes ___ No

✓ Groundwater contamination observed ___ Yes ___ No

✓ Surface water contamination observed ___ Yes ___ No

✓ Suspected release of hazardous substances ___ Yes ___ No

If yes, please explain:

✓ Affected receptors ___ Yes ___ No

If yes, please identify receptors including names and addresses of third party receptors:

Please provide an estimated date of when you expect to submit Site Investigation Report: 1-99

Owner's Signature/Date: 12-21-98 Consultant's Signature/Date: 12-21-98

The SMS has reviewed this expressway notification form and approves / disapproves of this action.

SMS Signature/Date: _____

# UNDERGROUND STORAGE TANK PE. MANENT CLOSURE FORM

Vermont Agency of Natural Resources, Department of Environmental Conservation, Waste Management Division
103 South Main Street, West Building, Waterbury, Vermont 05671-0404, Telephone: (802) 241-3888

*Agency Use Only*
Date of scheduled Activity 12/15/98 Facility ID # 1514 Closing: ___tanks, ___piping, ___system
DEC initials: AS SMS # DEC evaluator:

*Section A. Facility Information:*
Name of facility: C?B Millers General Store Number of employees: Closed
Street address: RT 103 & RT 10 Town/city Chester
Owner of UST(s) to be closed: 3 - see attached Contact(if different than owner): see attached
Mailing address of owner: See Attached
Telephone number of owner: See Attached Contact telephone #: See Attached

*Section B. UST Closure Information: (please check one)*
Reason for initiating UST closure: __Suspected Leak ___Liability __Replacement X Abandoned

**USTs (piping is considered a part of UST system) undergoing permanent closure. Include condition of USTs**

| UST # | Product | Size (gallons) | Tank age | Tank Condition | Piping age | Piping condition |
|---|---|---|---|---|---|---|
| 1 | GAS | 6000 | UNK >10 | P. Wed Bad | UNK >10 | Good |
| 2 | GAS | 10000 | UNK >10 | Pitted FAIR | UNK >10 | Leaking |
| 3 | GAS | 4000 | UNK >10 | FAILED | UNK >10 | Leaking |
| 4 | GAS | 3000 | UNK >20 | FAILED | Disconnected >20 | Disconnected |
| 5 | GAS | 1000 | UNK >20 | FAILED | >20 | Disconnected |

Which tanks, if any, will be closed in-place: USTs# ___ Authorized by: ___ Date: / /
Disposal/destruction of removed UST(s): Location See Attached Method Scrap Date: 12/16/98
Amount (gal.) and type of waste generated from USTs: See Attached
(tank contents are hazardous wastes unless recovered as usable product)
Tank cleaning company (must be trained in confined space entry) T. L. Boise
Certified hazardous waste hauler : See Attached Generator ID number: See Attached

*Section C. Initial site characterization:*
***Work in this section must be completed by a professional environmental consultant or hydrogeologist with experience in environmental sampling for the presence of hazardous materials. A full report from the consultant must accompany this form.***
**Excavation information:** *(some tank pulls require more than one excavation)*

| Tank(s) # and Excavation (A,B,C,etc) | Depth (ft) | Excavation size(ft²) | Peak PID reading | Depth of Peak (ft) | Avg PID reading | Bedrock Depth (ft) | Groundwater encountered? (y/n) and at depth (ft) | Soil type |
|---|---|---|---|---|---|---|---|---|
| A | 12 | 1000 | 240 | 10 | 100 | UNK | Y ± 8' | med gravel, Fine sand/silt |
| B | 8 | 250 | 300 | 0-8' | >200 | UNK | N | gravel fill, course gravel/cobbles, silty sand |
| | | | | | | | | |

**Dig Safe Number:** ___ 12/15/98 10:15 ISO
**PID information:**
Make: HNU Model: PI 101 Calibration information (date, time, gas): 12/16/98 9:30 ISO

*Locate all readings and samples on site diagram*
Number of soil samples collected for laboratory analysis? 0 results due date / /
Have any soils been polyencapsulated on site? Yes___(#yds³___ PID range above zero ___ - ___ ppm) No X
Have any soils been transported off site? Yes___ list amount (yds³): ___ No X
Location transported to: ___ DEC official who approved ___
Amount of soils backfilled(yds³): ±150 PID range above zero 0 - 300 ppm
Have limits of contamination been defined? Yes___ No X
Is there any other known contamination on- site? Yes___ No X Comments: ___

Free Phase product encountered? Yes___ :*thickness*___ *sheen* X No___
Groundwater encountered? Yes X depth(ft) 8 No___
Are there existing monitoring wells on-site? Yes X how many: 4 (locate on site diagram) No___
Have new monitoring wells been installed? Yes___ how many: ___ (locate on site diagram) No X
Samples obtained from monitoring wells for lab analysis? Yes___ results due date / / No X

Is there a water supply well on site? Yes X* (check type: shallow___ rock___ spring___) No
* AREA SERVED BY WELLS - LOCATION UNKNOWN
Number of public water supply wells are located within a 0.5 mile radius? UNK min. distance (ft.): ___
Number of private water supply wells located within a 0.5 mile radius? >10 min distance (ft.): UNK

Receptors impacted? X soil ___ indoor air __ ambient air X groundwater ___ surface water ___ water supply

Facility ID# 1514

*Section D: Tanks/Piping Remaining/installed*

Regardless of size, include USTs at site as to *status, e.g. "abandoned", "in use", or "to be installed". (Most installations require permits and advance notice to this office.)

| UST# | Product | Size(gallons) | Tank age | *Tank status | Piping age | *Piping Status |
|---|---|---|---|---|---|---|
| none | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

___There are no other tanks at this site.

*Section E. Statements of UST closure compliance:*
(must have both signatures or site assessment not complete)

As the party responsible for compliance with the Vermont UST Regulations and related statutes at this facility, I hereby certify that the all of the information provided on this form is true and correct to the best of my knowledge.

Three separate owners - not available for signature - renewed results prior to submittal of closure report via phone

Signature of UST owner or owner's authorized representative — Date of signature: 1/1

As the environmental consultant on site, I hereby certify that the site assessment requirements were performed in accordance with DEC policy and regulations, and that information which I have provided on this form is true and correct to the best of my knowledge.

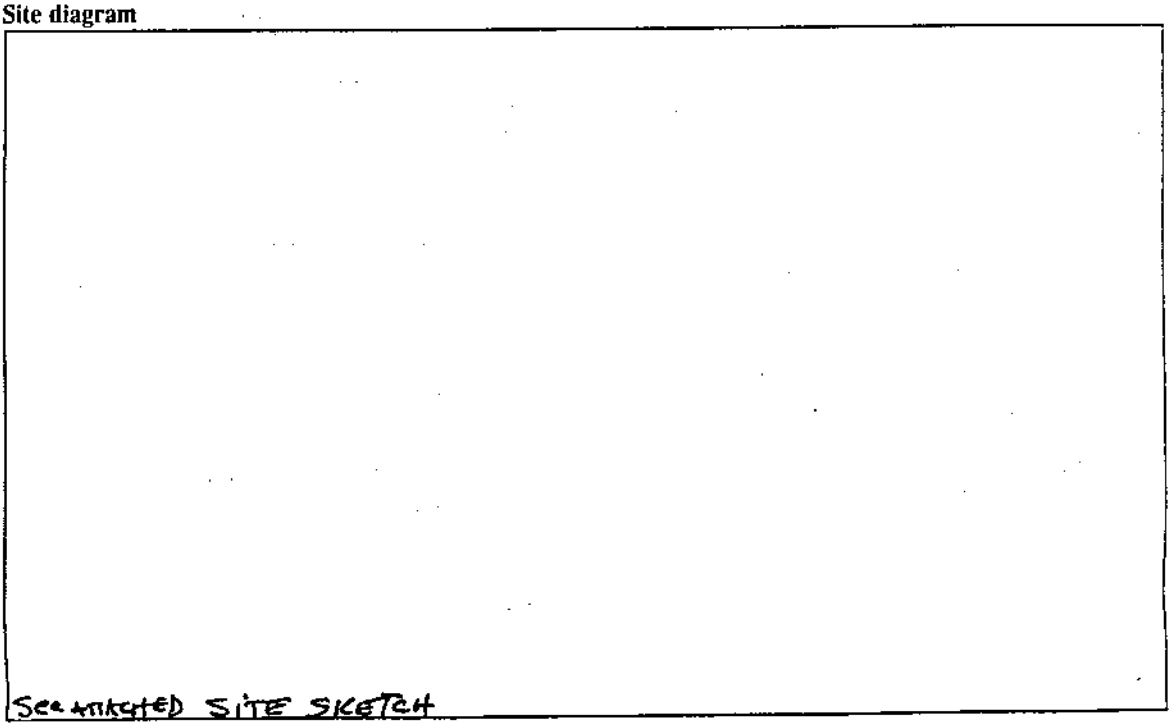
Signature of Environmental Consultant — Date of signature: 12/21/98

Company: GRIFFIN INTERNATIONAL INC

Telephone #: 802 865 4288 Date of Closure: 12/16/98 Date of Assessment 12/16/98 12 15 98

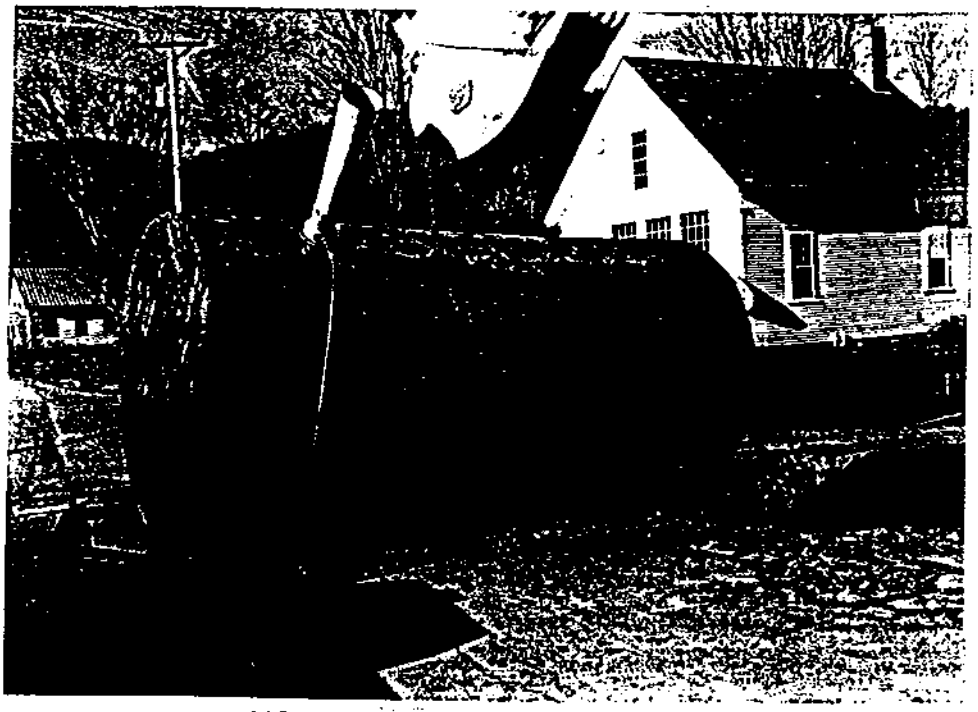
Return form along with complete narrative report and photographs to the Department of Environmental Conservation(DEC), Underground Storage Tank Program within 72 hours of closure.

**Site diagram**

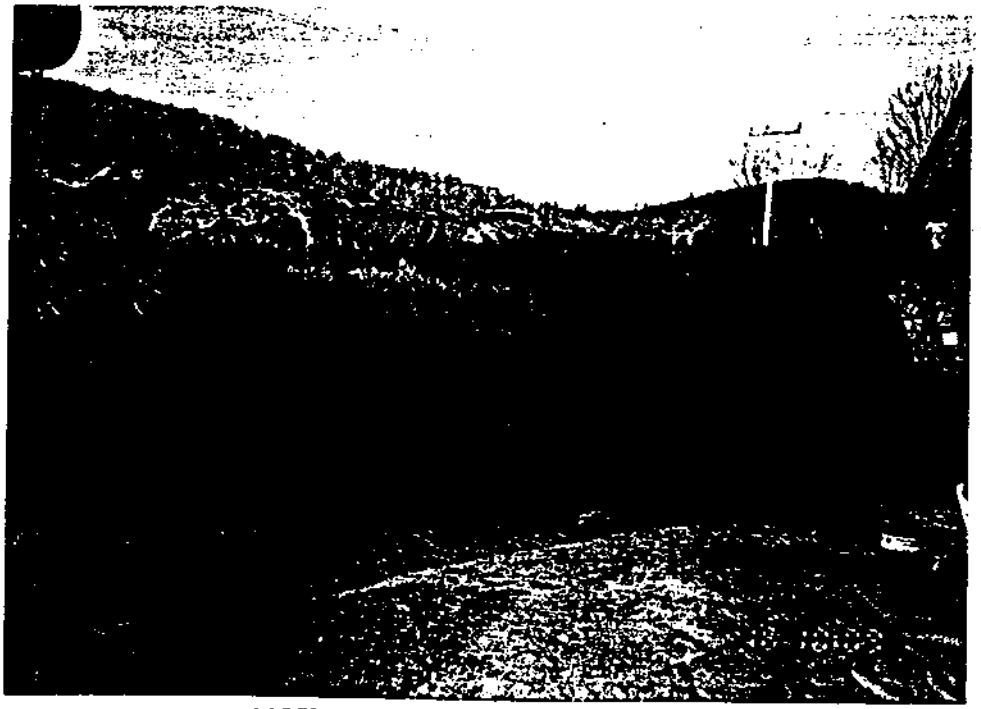



This Closure Form may only be issued for the facility and the date indicated at top of page 1. **Changes in the scheduled closure date should be phoned in at least 48 hours in advance.** Both the yellow and white copies of this form must be returned to the address on the top of page 1 of this form: the pink copy should be retained by the UST owner. A written report from an environmental consultant covering all aspects of closure and site assessment, complete with photographs and any other relevant data, must accompany this form. All procedures must be conducted by qualified personnel, to include training required by 29 CFR 1910.120. Documentation of all methods and materials used must be adequate. All work must be performed in compliance with DEC policy "UST Closure and Site Assessment Requirements" as well as all applicable statues, regulations, and additional policies. The DEC may reject inadequate closure forms and reports.

C & B MILLER GENERAL STORE
RT 10 & 103, GASSET, VT
UNDERGROUND STORAGE TANK REMOVAL
DECEMBER 15 AND 16, 1998

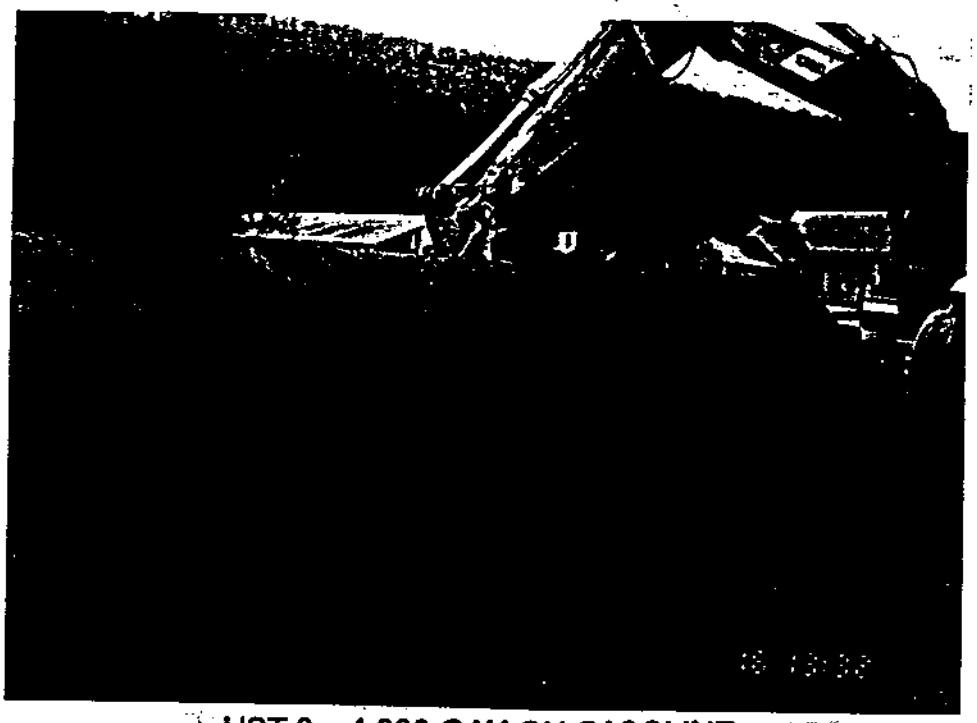


UST 1 – 6,000 GALLON GASOLINE

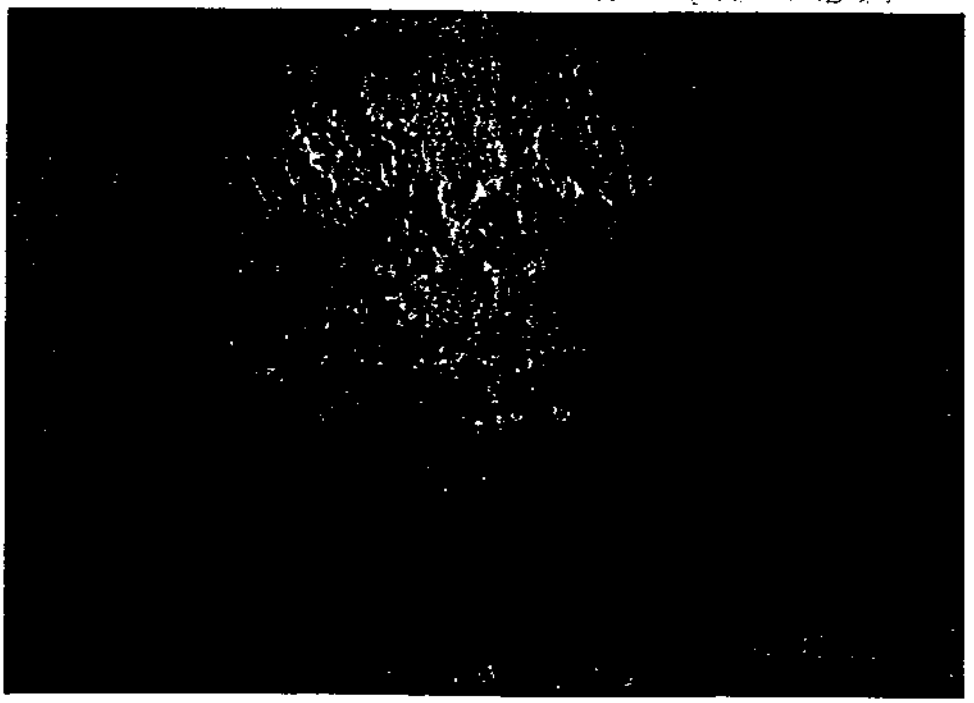


UST 2 – 10,000 GALLON GASOLINE

C & B MILLER GENERAL STORE
RT 10 & 103, GASSET, VT
UNDERGROUND STORAGE TANK REMOVAL
DECEMBER 15 AND 16, 1998



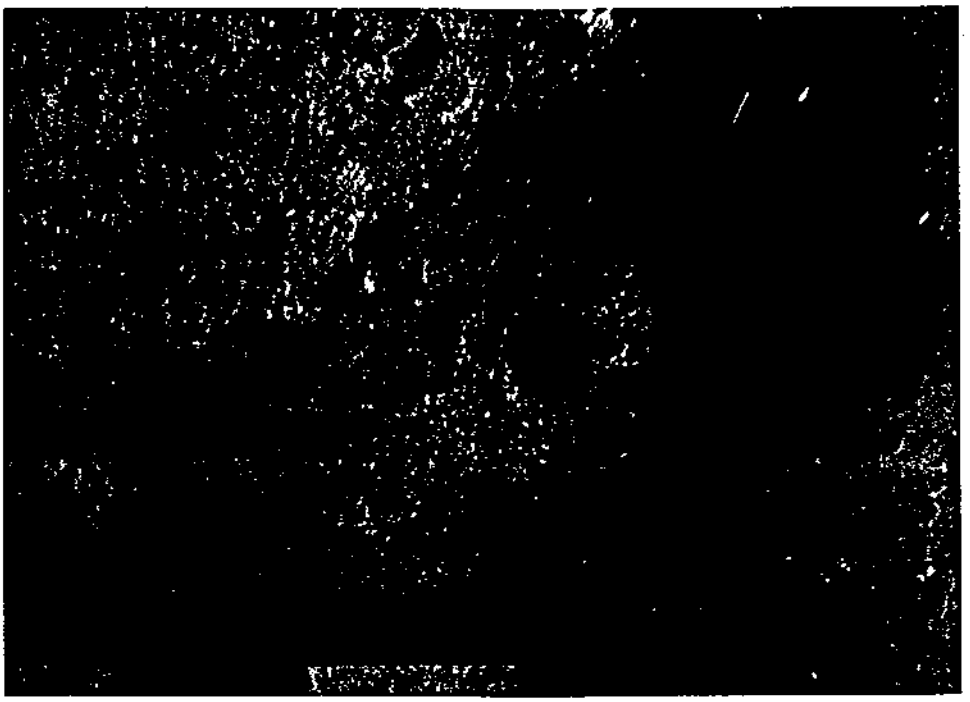
UST 3 – 4,000 GALLON GASOLINE



UST 3 – TYPICAL HOLE

C & B MILLER GENERAL STORE
RT 10 & 103, GASSET, VT
UNDERGROUND STORAGE TANK REMOVAL
DECEMBER 15 AND 16, 1998

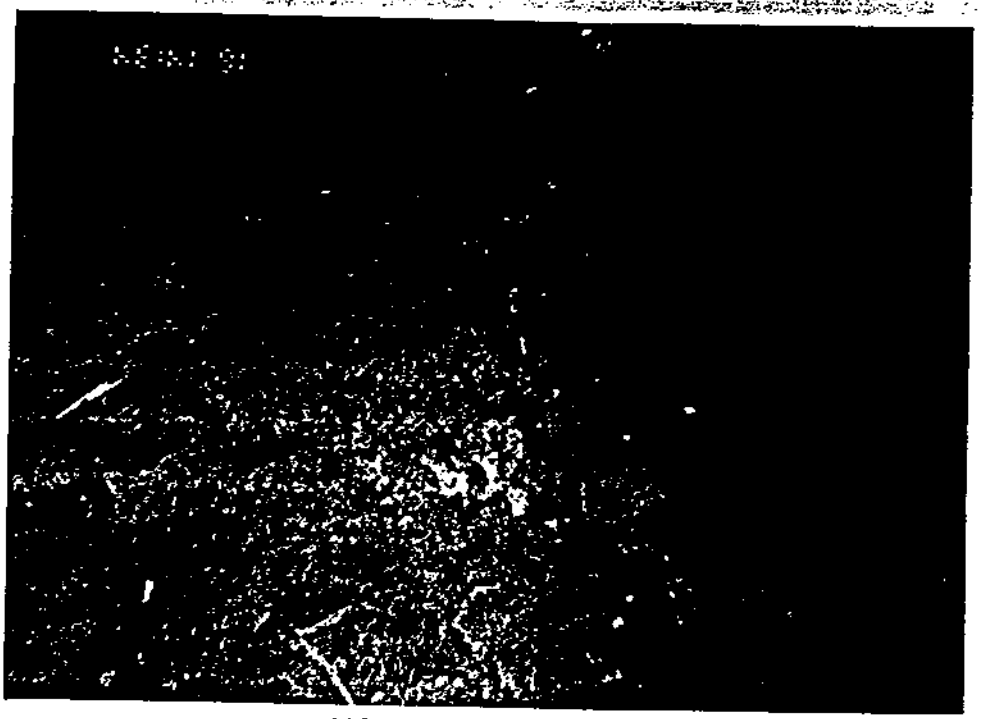
UST 4 – 1,000 GALLON GASOLINE



UST 4 – HOLE

C & B MILLER GENERAL STORE
RT 10 & 103, GASSET, VT
UNDERGROUND STORAGE TANK REMOVAL
DECEMBER 15 AND 16, 1998

UST 5 – 3,000 GALLON GASOLINE



UST 5 – TYPICAL HOLE

C & B MILLER GENERAL STORE
RT 10 & 103, GASSET, VT
UNDERGROUND STORAGE TANK REMOVAL
DECEMBER 15 AND 16, 1998

TYPICAL WEEPING PIPE JOINT

SITE - VIEW LOOKING GENERALLY NORTHWARD