Site Investigation at Kevin's Korner Market / Exxon in Enosburg, Vermont

Site #96-2107

(Latitude 44° 54.26' Longitude 072° 48.43')

Site Owner
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5 March 1998

Site Investigation at Kevin's Korner Market / Exxon in Enosburg, Vermont (Site #96-2107)

Executive Summary

Four underground storage tanks (USTs) are located at this site, three 6000 gallon tanks for gasoline at the southwest portion and one 2000 gallon tank for diesel fuel at the north central portion of the property. A previous investigation in September 1996 during piping replacement to the gasoline USTs and installation of the diesel fuel UST found petroleum impacted: soil near the gasoline USTs (at least 3' deep); water near the gasoline USTs (3' depth); soil along fuel lines from the gasoline USTs to the dispensing island (at least 3' deep); and soil near the diesel fuel UST (up to 9' deep).

In response to a request from the Agency of Natural Resources, three ground water monitoring wells were installed at the above mentioned site on 29 January 1998. Groundwater samples from these wells and an existing well at the diesel fuel UST were collected on 4 February 1998. Headspace screening of five composite soil samples from polyencapsulated stockpiled soils from the diesel UST excavation were also performed, as was screening of air in two adjacent storm drain manholes.

Soil borings showed the site to consist of silty sands to a depth of about 4 feet, underlain by silty clay grading to clay by about 10 feet below grade. The site's typical elevation is about 415 feet above the 1929 National Geodetic Vertical Datum. The site lies in the valley of the Missisquoi River, with surrounding hills reaching 600 or more feet. The site lies about 450 feet north of the river. Ground water elevation underneath the site was found at an estimated elevation of about 410 feet. This compares to the estimated typical river water surface elevation of 395 feet. Ground water flow direction was to the south.

Headspace screening of soil boring samples found elevated readings at each newly installed monitoring well location. Water sampling found ground water concentrations exceeding Primary Groundwater Enforcement Standards (PGES) at three out of four monitoring wells. Wells MW-2, -3, and -4 contained methyl tertiary butyl ether above the PGES, wells MW-2 and -3 contained benzene above the PGES, and well MW-3 contained toluene just above the PGES. Screening of 5 polyencapsulated soil samples and 2 storm drain manholes did not find any detectable readings.

The only potential receptors in the vicinity of the site are the indoor air of a few residences to the west, south, and east, and possibly the Missisquoi River to the south (either by natural groundwater transport or by groundwater entering nearby storm drains which discharge to the river). All drinking water in the vicinity of the site is provided from a water supply in Berkshire, VT located over 2 miles north of the site.

Recommendations for this site at this time are to complete another set of ground water sampling in a high water period document stability of on-site contamination. Samples should be collected from the four on-site wells and analyzed for volatile organic compounds using EPA Method 8020. If present, a sample of any infiltrating water

infiltrating water should also be collected from the adjacent storm drain manhole south of the site. Additionally, since contamination associated with the ground water table is encountered at relatively shallow depths (between 5 to 8 feet below grade), a soil gas survey combined with vacuum extraction to obtain both soil gas and shallow groundwater samples should be conducted at three to five adjacent properties. Soil gas samples should be screened with a portable PID, while groundwater samples should be submitted for 8020 analysis.

Table of Contents

Site Investigation at Kevin's Korner Market / Exxon (Site #96-2107) in Enosburg, Vermont

1 Site location and use

Kevin's Korner Market is located in the Village of Enosburg Falls, at the southern end of the village area. It is situated just west of Main Street, and just north of State Route 105. The site is located in the valley of the Missisquoi River, at an elevation of about 415 feet above the 1929 National Geodetic Vertical Datum (feet). Surrounding hills to the north and south reach elevations of about 600 feet. Local site topography decreases in elevation from north to south towards the river. The water surface elevation of the river is estimated at 395 feet. The Area Map (from USGS, 1986) shows the features described above.

The site has been used for gasoline storage for many years. Four (4) underground storage tanks (USTs) are currently on-site, located south and northeast of the on-site store. These include 3 6000 gallon USTs to store unleaded gasoline south of the store, and a 2000 gallon UST (installed in 1996) to store diesel fuel east of the northeast corner of the store.

A previous investigation in September 1996 (ATC, 1996) during piping replacement to the gasoline USTs and installation of the diesel fuel UST found petroleum impacted: soil near the gasoline USTs (at least 3 feet deep); water near the gasoline USTs (3 feet depth); soil along fuel lines from the gasoline USTs to the dispensing island (at least 3 feet deep); and soil near the diesel fuel UST (up to 9 feet deep). The Site Map (from ATC, 1996) shows the general locations of the above described features. Site water and wastewater is provided by the Village of Enosburg Falls.

2 Abutting Properties

The abutter to the north is an R.L. Vallee office (73 Main Street). Abutters to the east, across Main Street, include a single family residence (62 Main Street) and a duplex residence (58 Main Street). The abutter to the south, across Route 105, is an antique dealer (currently out of business). The abutter to the west is a single family residence (6 River Road). Further to the south and east are a few more single family residences on either side of Main Street. A pre-school is operated on a residential property located off the west side of Main Street south of the site (between 47 and 53 Main Street).

3 Soil Borings and Monitoring Wells

Soil borings and monitor well installation was completed by Green Mountain Boring of Barre, VT on 28 January 1998. Boring logs and details of monitoring well construction are found in Appendix A. Borings were completed using 4.25 inch (") inner diameter by

5 foot (') long augers. After augering through the upper two feet, at 2' intervals, a standard 2" outer diameter, 1.625" inner diameter by 2' foot long split spoon sampler was advanced two feet into the boring using a 140 pound hammer falling 2.5'. The sampler was retrieved and opened. The retained soils were measured for percent recovery, inspected for description (including texture, moisture, and odor), and headspace screened. The split spoon sampler was cleaned with soap and water prior to re-use, while pre-cleaned augers were used at each boring.

Headspace screening was conducted by placing soil samples into "zip-lock" plastic bags, sealing the bags, then placing them in a calm, room temperature environment. After the temperatures had stabilized, the soil in the bag was mixed, the bag was opened, and the headspace was screened with a portable Thermo Environmental Instruments 580A OVM photoionization detector (PID) equipped with a 10.0 eV lamp and calibrated using 100 ppm isobutylene to register as ppm benzene.

Borings continue until PID screenings approached background levels and sufficient penetration of the ground water surface had been achieved. An appropriate length (8 to 10') of PVC well screen (Schedule 40, 0.010" slot) with end cap and appropriate riser was placed into the open borehole. Filter sand was placed around and about 1' above the well screen to form a sand pack. A 1' layer of pellet bentonite was used to seal the sand pack and well screen from surface infiltration. The riser was cut to about 0.5' below grade, and a flush mount protective casing was cemented in place.

Borings showed that the typical soil profile consisted of sandy soils with silt to a depth of about 4', then a silty clay layer grading to only clay at a depth of about 10'. For reference, the Soil Survey for Franklin County (SCS, 1979) classified surficial soils at this site as Eldridge loamy fine sands, extending to a typical depth of 5' or more, with some soils having silty clays or clays at the bottom of the profile. Petroleum odors and elevated PID readings (~ 20 ppm or greater) were encountered at all boring locations. The majority of impacts were observed at depths of 2 to 10', corresponding to the silty sands and silty clay soils.

Wells were dry on the day of installation, so no well development was possible. The horizontal location of each installed well was determined by measuring distances (using cloth tape) from existing landmarks. The vertical elevation of the PVC riser at each installed well and rims of nearby storm drain manholes were determined using an automatic level and graduated rod. An assumed reference elevation of 415 feet at the PVC riser to monitoring well MW-2 was used.

4 Ground Water Sampling

Groundwater sampling was completed on 4 February 1998. Prior to sampling monitor wells, the depth to water was determined using an electronic water level meter. An effort to find recovery well RW-1 was unsuccessful, since it apparently was underneath an ice filled snowbank. Wells were sampled by first purging three volumes of standing water

(or until nearly dry) using dedicated string and 1.5" outside diameter PVC bailers. After the wells were given time to recover, each bailer was used to collect water to pour into 40 milliliter vials equipped with zero headspace septa screw caps and containing hydrochloric acid as a preservative. Water temperature and specific conductance were measured using field meters.

Ground water elevations varied from a high of about 413 feet at MW-1 (towards north end of the site) to a low of about 407 feet at MW-4 (at the southeast corner of the site), all encountered at about 5 to 8' below grade. These ground water surface elevations compare to the estimated invert elevation of 410 feet in the adjacent storm drain system, and an estimated water surface elevation of 395 feet at the Missisquoi River. Calculated ground water flow direction is from north to south.

Ground water temperature was uniform at the southern end of the site (10.0 to 11.1 ^{o}C), but was noticeably lower at MW-1 (5.8^{o}C). Specific conductance was highest in MW-3 (4.2 mS) compared to the other three wells (2.4, 2.2, and 1.5 mS at MW-1, -2, and -4, respectively). Table 1 contains the field data for the February 1998 sampling. The Site Map shows the ground water elevation at each well, along with the calculated ground water flow direction.

Samples were submitted to ITS Environmental Laboratories in Colchester, VT for volatile organic compounds (VOCs) analysis following US EPA Method 8020; Analytical Reports are found in Appendix B. MTBE and a small amount of total xylenes were detected in upgradient well MW-1. Concentrations of MTBE exceeding Vermont's Primary Groundwater Enforcement Standard (PGES) were found in wells MW-2, -3, and -4, with the highest concentrations in MW-3. Concentrations of benzene exceeding PGES were found in wells MW-2 and -3. Toluene concentration in well MW-3 just exceeded the PGES. The Site Map shows MTBE concentrations at each monitoring well.

5 Soil and Storm Drain Headspace Screening

A field PID was used to sample standing air below the two storm drain manhole covers on 28 January 1998. No detectable readings were obtained. The manholes were full of snow, both on this day and on 4 February 1998.

Composite soil samples were collected on 4 February 1998 from polyencapsulated soils previously removed from the diesel fuel UST replacement in September 1996 and stored just north of the store. Steel sampling tubes (3/4" diameter) were pounded into the pile, using a 5 five foot length and then an 8 foot length to fully sample the soil pile, which reached 7 feet in places. The tubes were pulled out, and a hammer was used to vibrate the retained soils into a "zip-lock" plastic bag. Five such samples were collected and screened as described above in Section 3. No detectable vapors were observed in any of these five samples. Samples were predominantly silts and clays. The locations of the pile and the five samples are found on the Site Map.

6 Conclusions

The most likely potential human receptor is the indoor air of residences located about 40 feet west and 140 feet south-southeast of the site. The only likely potential environmental receptor is the Missisquoi River, about 450 feet south of the site. All public drinking water in the vicinity of the site is provided by a water supply in Berkshire, VT, located over 2 miles north of the site. No wells for residential use are located within one half mile of the site (ANR, 1993). (?)

Ground water flow direction generally follows local topography, and is from north to south. A typical hydraulic gradient was about 0.08 on 4 February 1998. A porosity of 0.3 would be reasonable for the site soils. Using a range of likely hydraulic conductivity (0.003 to 0.3 feet per day), possible ground water velocity (equal to the product of hydraulic conductivity and gradient divided by porosity) can range from 0.0008 to 0.08 feet per day. At these velocities, the time for ground water to travel from the site to the nearest downgradient residential building would range from 4.8 to 480 years. The time for groundwater to travel from the site to the Missisquoi River would range from 15 to 1500 years (not considering the possibility of groundwater infiltration into the nearby storm drain system, which discharges to the river).

7 Recommendations

Recommendations for this site are to:

(1) Complete another round of sampling during a high water period to document stability of impacted ground water. Samples should be collected from four on-site wells (MW-1 through -4) and analyzed for VOCs by US EPA Method 8020. If present, a sample of infiltrating water should be collected from the storm drain manhole located just south of the site; a better measure of storm drain invert elevation should also be obtained. Temperature and specific conductance of each water sample should be measured. Groundwater surface elevation at the other on-site well (RW-1) should be measured and used to calculate groundwater flow direction for the site.

(2) Assess possible contamination at off-site properties. Since observed contamination was associated with the relatively shallow ground water table (~5 to 8 feet below grade), a soil gas survey combined with vacuum extraction to obtain both soil gas and shallow groundwater samples should be conducted on the same day as the above sampling. At three to five adjacent properties, soil gas samples (~ 4 foot depth) should be screened with a portable PID, while groundwater samples (~ 8 foot depth) should be submitted for 8020 analysis.

(3) Prepare a summary report with a tabulation of field and analytical data, a site map showing ground water elevations and contaminant concentrations, and recommendations for future environmental activities at this site.

add – utilities

(4) Arrange for disposal of the on-site polyencapsulated soils (remaining from the diesel fuel UST replacement) at the solid waste facility in Moretown, VT.

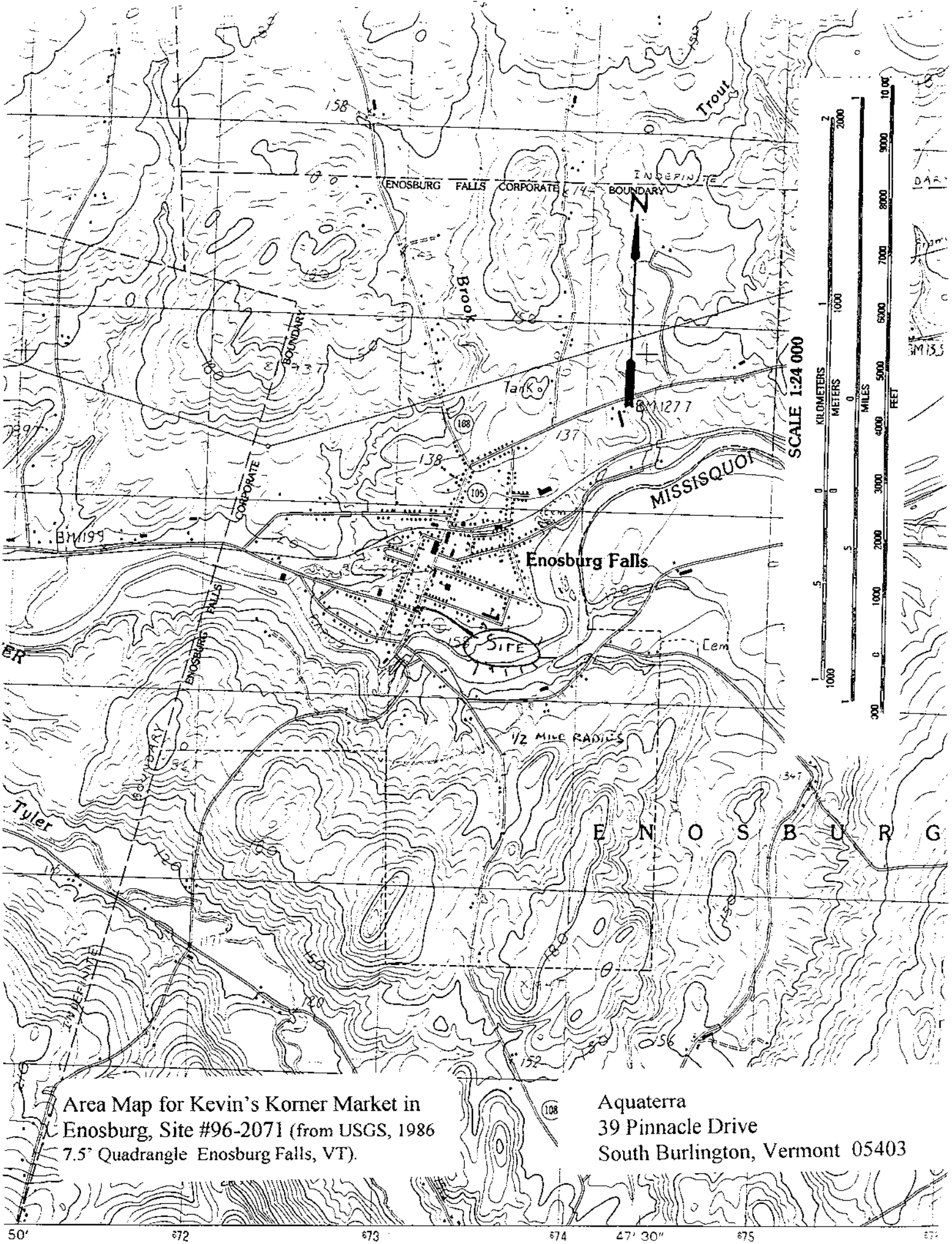
8 References

Agency of Natural Resources (ANR). 1993. From files of A. Brown Bulk Fuel Facility (Site #921201), USGS map dated January 1993. Waterbury, VT.

ATC Environmental, Inc. (ATC). 1996. Letter report to ANR dated 29 October 1996. Richmond, VT.

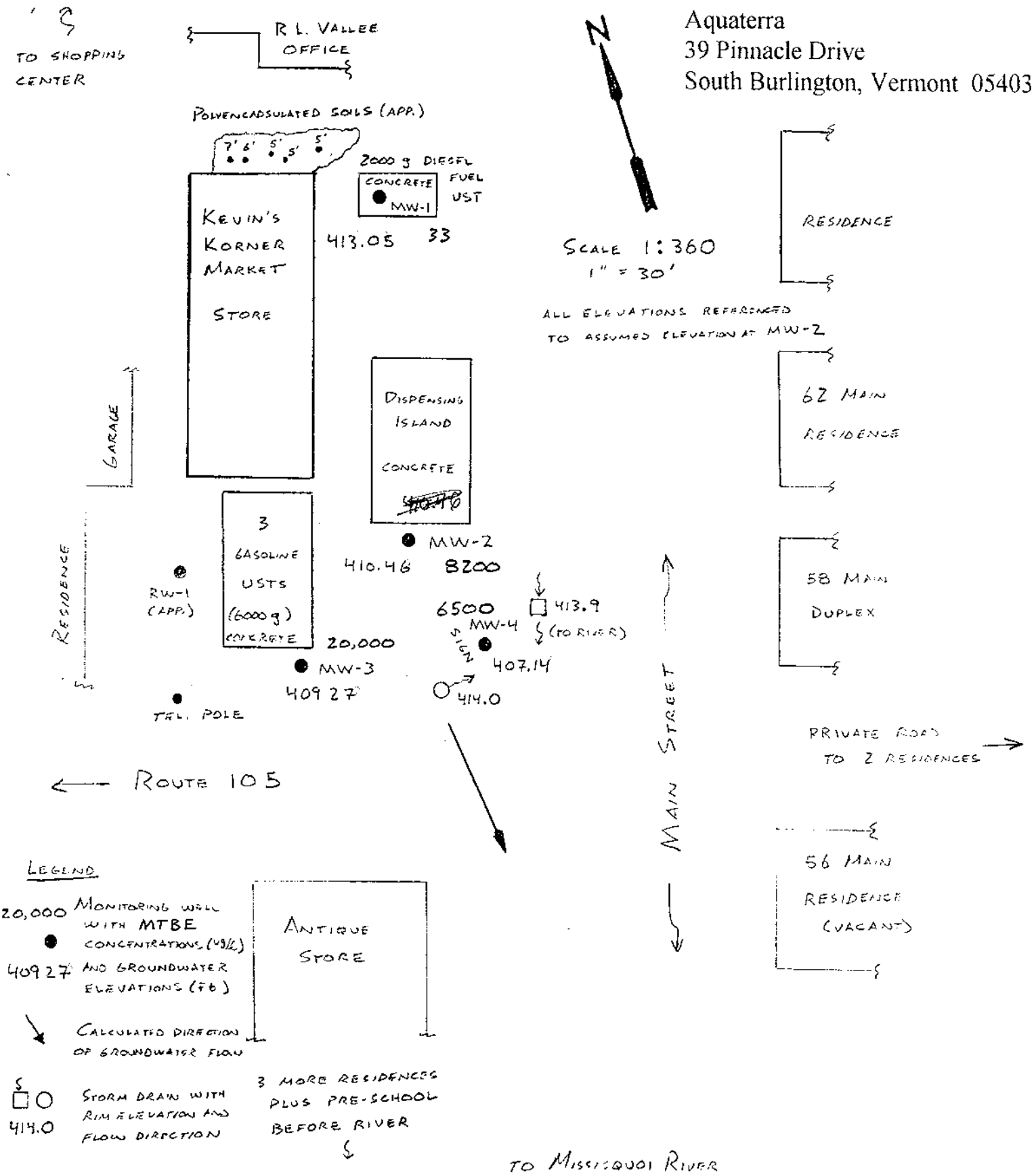
Soil Conservation Service (SCS). 1979. Soil Survey of Franklin County, Vermont. Washington, DC.

US Geological Survey (USGS). 1986. 7.5' Enosburg Falls, VT Quadrangle.



Area Map for Kevin's Korner Market in Enosburg, Site #96-2071 (from USGS, 1986 7.5' Quadrangle Enosburg Falls, VT).

Aquaterra
39 Pinnacle Drive
South Burlington, Vermont 05403



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Site Map for Kevin's Korner Market in Enosburg (Site #96-2071) with 4 Feb. '98 sampling results (all off-site locations approx.).

Table 1 Water sampling field and analytical data for Kevin's Korner Market in Enosburg, VT (Site #96-2107); 4 February 1998

Location	MW-1	MW-2 #	MW-3	MW-4	MW-4 blind duplicate	PGES*
Top of well casing, feet	416.33	415.00	414.07	414.27		na
Depth to water, feet	3.28	4.54	4.80	7.13		na
Ground water surface, feet	413.05	410.46	409.27	407.14		na
Depth to bottom, feet	9.0	12.6	11.5	14.0		na
Standing water, liters	14.1	5.0	4.1	4.2		na
Purge volume, liters @	20	14	13	13		na
Temperature, degrees C	5.8	10.5	9.9	11.1		na
Specific conductance, mS	2.4	2.2	4.4	1.5		na
VOCs by Method 8020, ug/l						
Benzene (B)	<0.5	**920**	**4300**	<250	<250	5
Toluene (T)	<0.5	410	**1100**	<250	<250	1000
Ethylbenzene (E)	<0.5	<250	<500	<250	<250	700
Total Xylenes (X)	2.9	<750	<1500	<750	<750	10000
total BTEX (by summation)	2.9	1330	5400	<1500	<1500	na
Methyl tertiary butyl ether (MTBE)	33	**8200**	**20000**	**6500**	6000	40

Notes:

* PGES = Vermont Primary Ground Water Enforcement Standard.

Bolded concentrations exceed PGES

Assumed reference elevation, top of PVC riser at MW-2

@ All wells almost dry at indicated purge volumes; all wells 2" PVC, except 4" PVC at MW-1

Appendix A:
Boring / Monitoring Well Logs: MW-2, MW-3, and MW-4

Boring / Monitoring Well Log

Boring ID: 2

Location: South of dispensing island
Rationale: Downgradient of piping

Project site: **Kevin's Korner Market**
Town: Enosburg, Vermont

Boring Co.: Green Mountain Boring
Operator(s): Ron Garneau
Jamie Bernasconi & Royce Lussier
Date, time: 28 January 1998, 1350

Super. Co.: Aquaterra
Supervisor: Roland Luxenberg, P.E.
Groundwater: ~5' below grade

Depth, feet	Blows per 6" on sampler	Sample Type	Rec.	Description	Moist.	Odor	PID, ppm
2-3		SS	33%	Silty fine sand	dry	pet.	260
3-5	7/9/13/13	SS	83%	Top few inches medium sand with asphalt; rem. silt w/ clay	dry	pet.	30
5-7	6/5/8/12	SS	83%	Silty clay with some asphalt at top	dry	pet.	110 @ top 35 @ bott
7-9	9/11/12/10	SS	83%	Silty clay, wetter towards bottom	moist	pet.	35 @ top 6 @ bott.
9-11	5/4/4/4	SS	13%	fine sand over clay at tip	wet	pet.	110
11-13	4/2/3/3	SS	100%	Clay	wet		8 @ top 2 @ bott.

Boring information

Augers: 4.25" ID
Sampler: 2" OD, 1.375" ID, 2' split spoor
Hammer
Weight: 140 pounds
Fall: 2.5'

Well construction

Screen: 2.0" PVC, .01" slot; 13-4'
Riser: 2.0" PVC; 4-0.5'
Sand: #1 well gravel, 13 - 3'
Bentonite: 3/8", 3 - 2'
Prot casing: 12" flush mount road box

Monitoring Well ID: MW-2

Boring / Monitoring Well Log

Boring ID: 3

Location: South of gasoline USTs
Rationale: Downgradient of USTs

Project site: **Kevin's Korner Market**
Town: Enosburg, Vermont

Boring Co.: Green Mountain Boring
Operator(s): Ron Garneau
Jamie Bernasconi & Royce Lussier
Date, time: 28 January 1998, 1140

Super. Co.: Aquaterra
Supervisor: Roland Luxenberg, P.E.
Groundwater: ~5' below grade

Depth, feet	Blows per 6" on sampler	Sample Type	Rec.	Description	Moist.	Odor	PID, ppm
2-4	5/8/6/9	SS	75%	Silty sand (4 ") over sandy silt with clay	dry	pet.	220 @ top 140 @ bott.
4-6	8/10/12/17	SS	100%	Wet sand at top over silty clay	moist	pet.	190 @ top 200 @ bott.
6-8	13/14/16/14	SS	83%	Wet sand at top over silty clay	moist	pet.	170 @ top 60 @ bott
8-10	2/2/3/3	SS	100%	Clay, siltier at top	wet		10 @ top 4 @ bott.
10-12	3/3/3/4	SS	100%	Clay	wet		2 @ top 8 @ bott.

Boring information

Augers: 4.25" ID
Sampler: 2" OD, 1.375" ID, 2' split spoor
Hammer
Weight: 140 pounds
Fall: 2.5'

Well construction

Screen: 2.0" PVC, .01" slot; 12-4'
Riser: 2.0" PVC; 4-0.5'
Sand: #1 well gravel, 12 - 3'
Bentonite: 3/8", 3 - 2'
Prot casing: 12" flush mount road box
Monitoring Well ID: MW-3

Boring / Monitoring Well Log

Boring ID: 4

Location: Southeast corner of site
Rationale: Downgradient well

Project site: **Kevin's Korner Market**
Town: Enosburg, Vermont

Boring Co.: Green Mountain Boring
Operator(s): Ron Garneau
Jamie Bernasconi & Royce Lussier
Date, time: 28 January 1998, 0940

Super. Co.: Aquaterra
Supervisor: Roland Luxenberg, P.E.
Groundwater: ~8' below grade

Depth, feet	Blows per 6" on sampler	Sample Type	Rec.	Description	Moist.	Odor	PID, ppm
2-4	9/18/12/9	SS	33%	Fine silty sand	dry		16
4-6	3/7/8/13	SS	96%	Fine sand and silt (10") over silty clay	dry moist	pet.	6 @ top 45 @ bott.
6-8	11/17/15/16	SS	88%	Sand and silt (few inches) over silty clay	dry moist		2 @ top 13 @ bott
8-10	5/4/5/5	SS	21%	Silty clay	wet	pet.	50
10-12	2/1/2/2	SS	100%	Silt and clay (4") over clay	wet	pet.	60 @ top 0 @ bott.
12-14	3/2/3/3	SS	100%	Clay	wet		2 @ top 0 @ bott.

Boring information

Augers: 4.25" ID
Sampler: 2" OD, 1.375" ID, 2' split spoor
Hammer
Weight: 140 pounds
Fall: 2.5'

Well construction

Screen: 2.0" PVC, .01" slot; 14-4'
Riser: 2.0" PVC; 4-0.5'
Sand: #1 well gravel, 14 - 3'
Bentonite: 3/8", 3 - 2'
Prot casing: 12" flush mount road box
Monitoring Well ID: MW-4

Appendix B:
Analytical Reports for Water Sampling on 4 February 1998

FORM 1
8020-VOA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW_1

Lab Name: ITS ENVIRONMENTAL Contract: 98000

Lab Code: INCHVT Case No.: 98000 SAS No.: SDG No.: 68226

Matrix: (soil/water) WATER Lab Sample ID: 352176

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 16FEB981430-I261

Level: (low/med) LOW Date Received: 02/04/98

% Moisture: not dec. _____ Date Analyzed: 02/17/98

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-Butyl Ether	33	
71-43-2	Benzene	0.50	U
108-88-3	Toluene	0.50	U
100-41-4	Ethylbenzene	0.50	U
----------	p/m-Xylene	1.0	U
95-47-6	o-Xylene	1.9	

FORM 1
8020-VOA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW_2

Lab Name: ITS ENVIRONMENTAL Contract: 98000

Lab Code: INCHVT Case No.: 98000 SAS No.: SDG No.: 68226

Matrix: (soil/water) WATER Lab Sample ID: 352175

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 16FEB981430-I251

Level: (low/med) LOW Date Received: 02/04/98

% Moisture: not dec. _____ Date Analyzed: 02/17/98

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 500.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-Butyl Ether	8200	
71-43-2	Benzene	920	
108-88-3	Toluene	410	
100-41-4	Ethylbenzene	250	U
----------	p/m-Xylene	500	U
95-47-6	o-Xylene	250	U

FORM 1
8020-VOA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW_3

Lab Name: ITS ENVIRONMENTAL Contract: 98000

Lab Code: INCHVT Case No.: 98000 SAS No.: SDG No.: 68226

Matrix: (soil/water) WATER Lab Sample ID: 352174

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 16FEB981430-I241

Level: (low/med) LOW Date Received: 02/04/98

% Moisture: not dec. _____ Date Analyzed: 02/17/98

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1000.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-Butyl Ether	20000	
71-43-2	Benzene	4300	
108-88-3	Toluene	1100	
100-41-4	Ethylbenzene	500	U
----------	p/m-Xylene	1000	U
95-47-6	o-Xylene	500	U

FORM 1
8020-VOA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW_4

Lab Name: ITS ENVIRONMENTAL Contract: 98000

Lab Code: INCHVT Case No.: 98000 SAS No.: SDG No.: 68226

Matrix: (soil/water) WATER Lab Sample ID: 352173

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 16FEB981430-I231

Level: (low/med) LOW Date Received: 02/04/98

% Moisture: not dec. _____ Date Analyzed: 02/17/98

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 500.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-Butyl Ether	6500	
71-43-2	Benzene	250	U
108-88-3	Toluene	250	U
100-41-4	Ethylbenzene	250	U
----------	p/m-Xylene	500	U
95-47-6	o-Xylene	250	U

FORM 1

8020-VOA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

DUPLICATE

Lab Name: ITS ENVIRONMENTAL Contract: 98000

Lab Code: INCHVT Case No.: 98000 SAS No.: SDG No.: 68226

Matrix: (soil/water) WATER Lab Sample ID: 352177

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 16FEB981430-I271

Level: (low/med) LOW Date Received: 02/04/98

% Moisture: not dec. _____ Date Analyzed: 02/17/98

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 500.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1634-04-4	Methyl tert-Butyl Ether	6000	
71-43-2	Benzene	250	U
108-88-3	Toluene	250	U
100-41-4	Ethylbenzene	250	U
----------	p/m-Xylene	500	U
95-47-6	o-Xylene	250	U