



19 CROSBY DRIVE
BEDFORD, MASSACHUSETTS 01730
617-275-2970

C-583-5-9-13
May 3, 1989

Final Screening Site Inspection Letter Report
Orvis Co.
Manchester, Vermont

TDD No. F1-8806-01
Reference No. S375VT32\$1
CERCLIS No. VTD002075539

INTRODUCTION

The NUS Field Investigation Team (NUS/FIT) was requested by the Region 1 U.S. Environmental Protection Agency (EPA), Waste Management Division to perform a Screening Site Inspection of The Orvis Company, Inc. (Orvis Co.) in Manchester, Vermont. All tasks were conducted in accordance with Technical Directive Document (TDD) No.F1-8806-01 which was issued to NUS/FIT on June 22, 1988. NUS/FIT performed a Preliminary Assessment of this property in February 1988. On the basis of information provided in this Preliminary Assessment, the Orvis Screening Site Inspection was initiated.

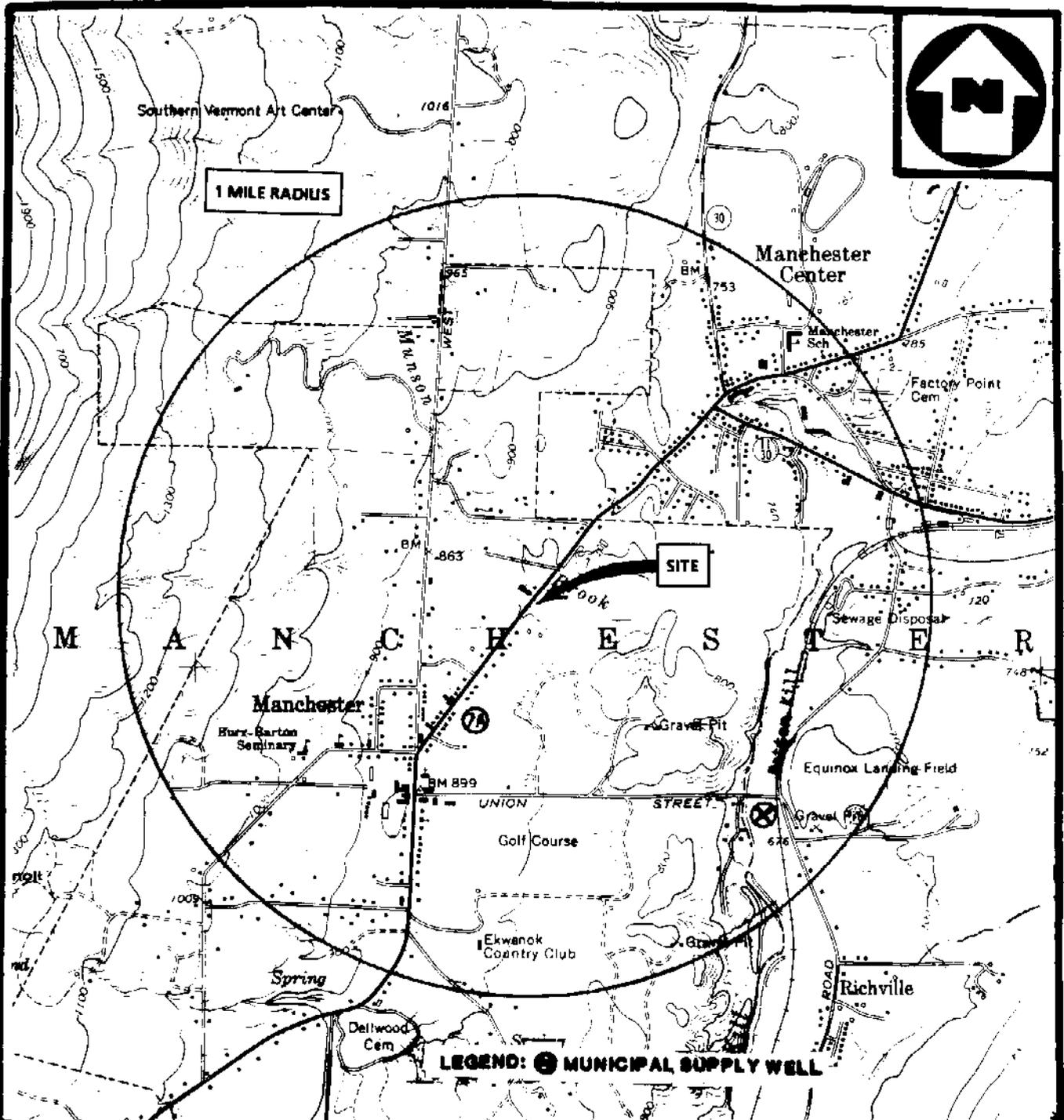
Background information used in the generation of this report was obtained through file searches conducted at the Vermont Department of Environmental Conservation, Hazardous Materials Section and at the EPA. Information was also collected during the onsite reconnaissance.

This package follows guidelines developed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, commonly referred to as Superfund. However, these documents do not necessarily fulfill the requirements of other EPA regulations such as those under the Resource Conservation and Recovery Act (RCRA) or other federal, state or local regulations. Screening Site Inspections are intended to provide a preliminary screening of sites to facilitate EPA's assignment of site priorities. They are limited efforts and are not intended to supplant more detailed investigations.

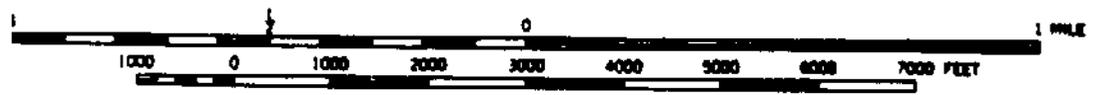
SITE DESCRIPTION

The Orvis Co. is located on the east side of Route 7A approximately 0.6 miles southwest of the junction of Routes 7A, 11 and 30 in Manchester, Vermont (Figure 1). Orvis Co. manufactures graphite and bamboo fishing rods and repairs fishing reels. Hazardous waste generated by the production and repair processes include 1,1,1- trichloroethane, formaldehyde and phenolic resins, and acids. The Orvis Co. is a RCRA notifier and is listed as a small quantity generator (4/14/86 notification date).

Three main buildings are situated on the 12.8 acre property: the sporting goods store abuts Route 7A; the repair shop is located approximately 500 feet southeast of the store; and the largest building on the property, the warehouse, is directly to the east of the repair shop. In addition, there is a garage across a parking lot and to the north of the warehouse (Figure 2). The northwest side of Orvis Co. is bounded by Route 7A, the north side by commercial properties, and the south and east by woods. An unnamed tributary to Munson Brook flows from the southwest to the northeast behind the property. There is good grass cover over the entire property, with the exception of the pond and parking areas. There are no fences or barriers of entry to the property. The properties in the vicinity of Orvis Co. are predominantly commercial and include a hotel, art gallery and antique shop (NUS/FIT, 1988).



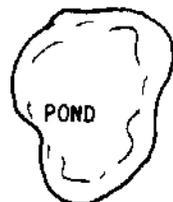
BASE MAP IS A PORTION OF THE FOLLOWING U.S.G.S. 7.5 SERIES QUADRANGLE(S):
 MANCHESTER, VT 1968.



LOCATION MAP
 ORVIS CO.
 MANCHESTER, VT



FIGURE 1



HOUSE

DEELY GALLERY

ANTIQUE SHOP

ROUTE 7A

HOTEL

ORVIS SPORTING GOODS STORE

GARAGE

ORVIS REPAIR SHOP

PARKING

SOOTWICK SPORTSWEAR

CONCRETE STRUCTURE

STORAGE TRAILER

ORVIS WAREHOUSE

FIELD

LEGEND:
★ DRUM STORAGE AREAS

NOT TO SCALE

PVC PIPE 103 ← SHED

SITE SKETCH
ORVIS CO.
MANCHESTER, VT



FIGURE 2

According to the site manager, drums containing waste 1,1,1-trichloroethane and mixed solvent waste had been stored outside the warehouse for approximately one year, prior to their removal in April 1986. The drums had been placed outside the warehouse for removal by a licensed waste hauler, but they were never picked up (NUS/FIT, 1988). Five drums had been stored at the northeast side of the warehouse near the storage trailer. Of these five, three drums were intact, and two were corroded and had leaked their contents onto the ground. Two other drums had been stored along the south side of the warehouse, one open and one closed. Vegetation surrounding these drums had died (NUS/FIT, 1988; VT DEC 1986a). Currently, all hazardous waste generated by the facility is stored in the repair shop until it is picked up by a licensed waste hauler (NUS/FIT, 1988).

NUS/FIT has not determined whether other potential hazardous waste sites exist in the vicinity of the Orvis Co. No NPL sites or other sites listed in CERCLIS are located within three miles of the facility.

SITE ACTIVITY/HISTORY

Orvis Co. was established in 1856. The company is currently owned by Mr. Lee Perkins. The manufacturing of graphite and bamboo fishing rods involves the following processes: cutting, glueing, wrapping, rolling, rod assembling, lacquer coating, and degreasing. Wastes generated by the production and repair processes include 1,1,1-trichloroethane (degreaser), formaldehyde and phenolic resins (impregnation/wrapping of bamboo strips), paints, lacquers, and thinners, and acids (VT DEC, 1986a). A total of 220 gallons of waste per year (100 -1,000 kg/month) are generated as a result of the processes. The repair of fishing reels generates 50 gallons of waste 1,1,1-trichloroethane (TCA) and 5 gallons of waste oil per year. The manufacture of rods produces 165 gallons per year of waste formaldehyde (5%), TCA (5%), and other constituents (45% -including n-butanol, sulfuric acid, phenols, and toluene). The waste is currently stored in 55-gallon drums until full, then disposed of by Northeast Solvent Reclamation Corporation (VT DEC, 1986b). Paints were disposed of in a dumpster prior to their transport to the local landfill (VT DEC, 1986a).

In March 1986, the Vermont Department of Environmental Conservation inspected the property in response to a citizen's complaint to the Health Department. The inspectors noticed the presence and condition of the seven drums. An Administrative Order was issued to Orvis Co. on March 27, 1986, mandating that a written site investigation plan be prepared by May 30, 1986, for the evaluation of soil contamination and potential groundwater contamination. Following the site investigation, a remediation plan would be prepared if necessary. Also, on or before April 15, 1986, all drums were to be properly stored and labeled, and a notification form of Hazardous Waste Activity was to be submitted (VT DEC, 1986c).

To date, a total of twenty-one monitoring wells have been installed for the purpose of identifying and monitoring ground water contamination and assessing the extent of any contaminant plume (Figure 3). As specified in the remediation plan, groundwater has been pumped from MW103, passed through a carbon filtration system, and discharged through a PVC pipe into an unnamed tributary of Munson Brook (VT DEC, 1987a). Orvis Co. was granted a 1272 Order in April 1987 for the discharge of treated groundwater into an unnamed tributary of Munson Brook. Orvis Co. does not hold an NPDES permit for the discharge. The 1272 Order recognizes that the facility is not in compliance with certain terms of a permit. Orvis Co.'s 1272 Order states that the groundwater collection and treatment system must continue for 12 consecutive months, or until levels of TCA remain at or below 200 parts per billion (ppb) ; the concentration of TCA in the discharge can never exceed 200 ppb at any time. The Order also presents a 12-month monitoring schedule and limits the volume of discharge to 1,500 gallons/day.

The following table presents a chronological summary of inspections, studies and remedial actions which have taken place at the facility.

DATE	DESCRIPTION
March 20, 1986	Trip report of inspection - lists RCRA violations
March 27, 1986	Administrative Order issued
April 10, 1986	All drums removed, four wells "hand installed"
June 17, 1986	Trip report of follow-up inspection - all violations corrected
June 23, 1986	Eight wells installed - identified as 100 series
February 12, 1987	Nine wells installed - identified as 200 series
April 16, 1987	Permit issued for discharge of treated groundwater to stream
June 1987	Groundwater remediation program begins

ENVIRONMENTAL SETTING

The Orvis Co. is situated at an elevation of approximately 800 feet above Mean Sea Level. The facility is in the Vermont Valley, an area extending in a north-south direction between the Green and Taconic Mountains for a distance of approximately 85 miles, and varying in width from 1 to 7 miles (Wright, 1975). The ground surface slopes gradually down to the east from Route 7A towards the rear of the property. The warehouse is situated at the lowest point of the property. A drainage pipe had been installed underground along the south side of the building at the time of the warehouse's construction in 1977 to prevent flooding (NUS/FIT, 1988). The property is situated on poorly drained soils which are susceptible to seasonal flooding (Wright, 1975). In the spring, the unnamed stream flowing behind the property overflows its banks so that water comes up to the top of the concrete step at the south door (NUS/FIT, 1988).

The depths of the 100 series wells vary from 10 feet to 44 feet below ground surface and each is screened at the bottom over a 5 foot interval. The depths of the 200 series wells vary from 11.5 feet to 41.7 feet. These wells are screened over a ten foot interval. Groundwater has been encountered at 4 to 6 feet below the ground surface. Logs for the 200 series monitoring wells indicate that surficial material underlying the site is mainly fine to medium silty sand, with some thin layers of coarse sand found at wells MW205 and MW201. Exact thickness of overburden is not known since wells were not drilled to bedrock. Logs for the deepest onsite well, MW205, indicate sand to a depth of 41.7 feet (Adams, 1987).

The Vermont Valley is developed on a thick section of less resistant metamorphosed carbonate rocks. The bedrock is composed predominantly of green, grey, and black argillaceous slates, shales, and phyllites with subordinate amounts of limestone, dolomite, marble, and some quartzite and schist. Locally, within the fractured limestones and dolomites (marble), acidic waters have dissolved portions of the rock forming surface rills, enlarged fractures, and subsurface caves (Wright, 1975).

The surface water which does not infiltrate the ground will flow east towards the rear of the property and into the unnamed tributary of Munson Brook. Surface water flows from this stream into Munson Brook and finally into the Batten Kill, 0.6 miles from the Orvis Co.

The Batten Kill enjoys a reputation as one of America's best trout fishing rivers. The Vermont Water Resources Board designates three classifications for surface water quality within the state, Classes A, B and C. There is one Class C portion of the Batten Kill between Manchester Center Depot and the confluence of Tanner Brook approximately 6.5 miles downstream from Orvis Co. The Manchester Waste Water Treatment Facility discharges treated sewage effluent under an NPDES permit within this region. There are several other permitted dischargers along the Batten Kill; however, these are not listed in the NPDES printout (Anderson, 1988a).

Twenty out of twenty-one miles of the main stem of the Batten Kill are currently threatened primarily due to sedimentation and turbidity, bank destabilization and erosion, poor agricultural practices, and land development. The unnamed tributary of Munson Brook is a threatened main stem tributary of the Batten Kill. Because of the former proximity of the drums to the stream, the VT DEC considers the site a threat to biota, non-contact and contact recreation, and drinking and agricultural water supplies (VT DEC, 1988). There are no drinking water intakes along the Batten Kill (Anderson, 1988a).

Public community and non-community water systems and private residential wells draw groundwater from within four miles of Orvis Co. The following table presents the public community systems, their approximate distance from Orvis Co. and the population served by each (Anderson, 1988b).

<u>Well</u>	<u>Distance from the Orvis Co.</u>	<u>Population served</u>
Manchester Water Department gravel-packed well	0.8 miles	3,500
Meadow Ridge	1.6 miles	396
Manchester Mobile Homes	1.9 miles	80
Eagle Rise	3.3 miles	144

The following list provides the number of private wells in Manchester and in surrounding towns. Please note that some of these wells lie outside the four mile radius from Orvis Co. The list includes all wells drilled in overburden and bedrock since 1966 (Anderson, 1988c).

<u>Town</u>	<u>Number of Private Wells</u>
Arlington	215
Dorset	379
Manchester	435
Sandgate	42
Sunderland	137
Winhall	573

In the vicinity of the site, groundwater flows in a southeasterly direction towards the Batten Kill (VT DEC, 1986d). It has not been determined whether any contaminant plume could impact Manchester's municipal supply well. A pump test was conducted on the Manchester Water Department's well by Dufresne & Henry in 1985 to determine whether the Batten Kill acts as a hydrogeological barrier to groundwater flow. Results were not conclusive. A new well, 90 to 100 feet deep, has been drilled next to the old one (Anderson, 1988b). A pump test was conducted on this 96 feet deep gravel packed well in November 1988 to determine the well's draw down. No pumping tests were conducted to determine if the Batten Kill acts as a hydrogeological barrier (Anderson, 1989b).

May 3, 1989

There is a Federally endangered listed species and a species which is both Federally endangered and under review for Federal listing within 2 to 3 miles of Orvis Co. There are also nine areas within 1 to 2 miles and one area within 2 to 3 miles in which rare plants, animals, or natural communities or state natural/fragile areas exist. In addition, the Batten Kill is a natural/fragile managed area (VT NHP, 1988).

RESULTS

Sampling of soils, groundwater, and surface water was conducted by Orvis' contractor, Wagner, Heindel and Noyes, Inc., of Burlington, Vermont, over an 18 month period. Samples were analyzed for volatile organic contaminants by Industrial & Environmental Analysts, Inc. of Essex Junction, Vermont, following EPA Methods 601 and 602. Detection limits for analyses have varied; the lowest reported detection limit is 1 part per billion (ppb) (Appendix 1).

SURFACE WATER

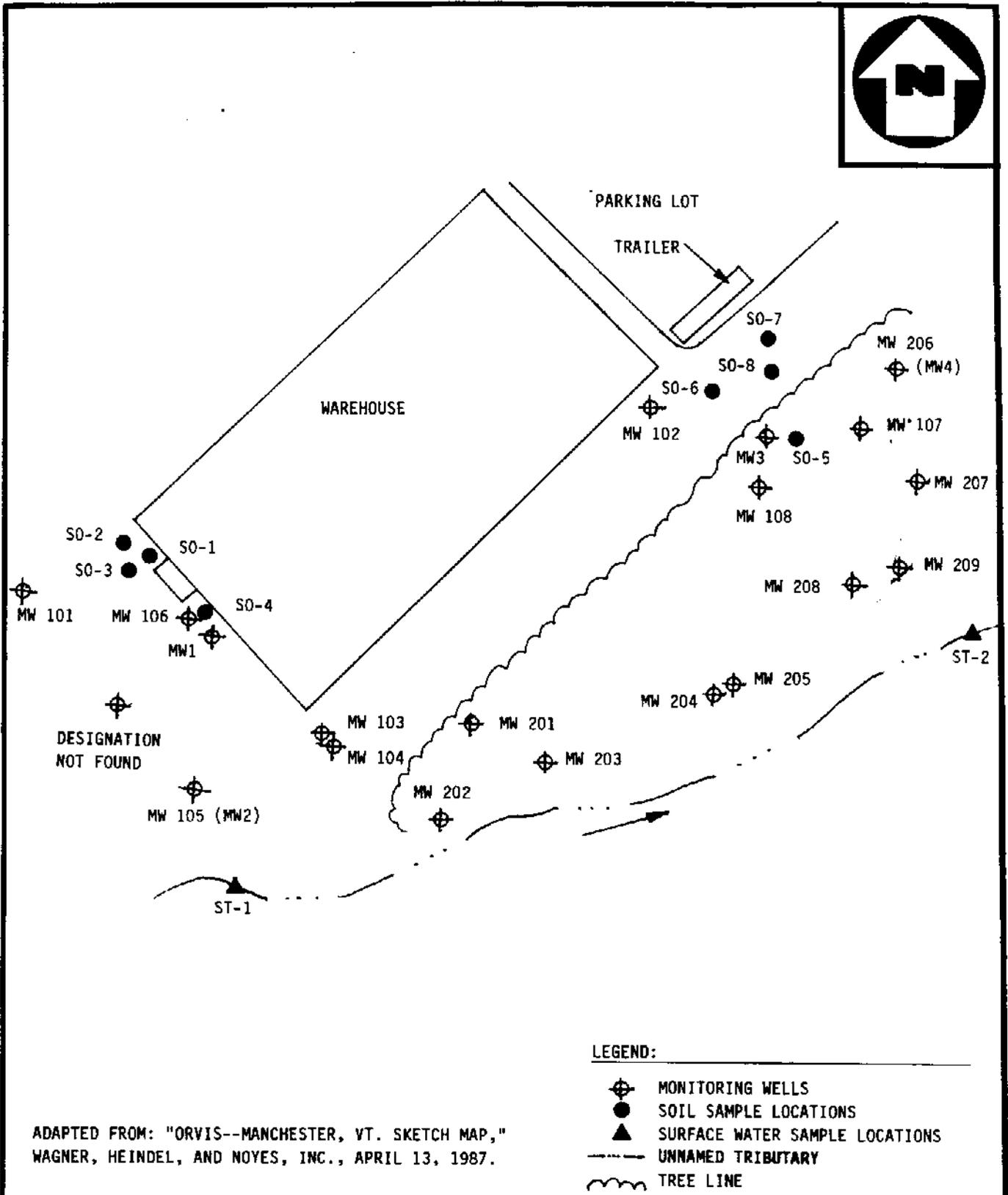
There are two surface water sample points in the unnamed tributary of Munson Brook; an upstream sample point (ST-1) and downstream sample point (ST-2). Wagner, Heindel & Noyes proposed sampling surface water from ST-1 quarterly, beginning in June 1987, and surface water from ST-2 monthly (Figure 3; Heindel, 1987a). Trace amounts, not defined, of trichloroethylene were detected in surface water from both ST-1 and ST-2 in July 1988. The trace levels detected in both samples may be due to laboratory error.

SOILS

Soils from eight locations surrounding the drum spill areas were analyzed in April and July 1986. The highest concentration of TCA detected in April was 1,600 ppb at location S0-1 (iea, Inc., 1986a). Other compounds detected were: bromodichloromethane, trichloroethene, and tetrachloroethene. The VT DEC decided not to order the removal of soils because a ground water treatment system was going to be installed (Shepard, 1987).

GROUNDWATER

Shallow monitoring wells MW1 through MW4 were installed in March 1986. Groundwater from these wells was sampled in April, July, October, and December 1986. The highest concentration of TCA (110,000ppb) was detected in MW1 in April and December 1986. Other compounds detected were: 1,1-dichloroethane (up to 170 ppb), 1,2-dichloroethane (up to 1,700 ppb), trichloroethylene (up to 23 ppb), 1,1-dichloroethene (up to 4,700 ppb), and tetrachloroethane or tetrachloroethene (up to 100/570 ppb) (VT DEC, no date). ("Or" in the previous sentence means that one of the compounds is present, the compounds coelute during analysis (iea, Inc., 1986b)). Due to the high concentrations of contaminants detected, the 100 series wells were installed in June 1986 in order to aid in the preparation of a remediation plan. These wells were used to identify lateral and vertical extent of dissolved TCA, presence of undissolved TCA, and presence of and depth to any potential clay layer (Heindel, 1986). Groundwater quality monitoring continued from July 1986 on a quarterly basis. Because of the sustained levels of TCA above 200 ppb (200 ppb is the Maximum Contaminant Level as defined by the Safe Drinking Water Act), the VT DEC required the implementation of a remediation plan including groundwater filtration. In addition, the VT DEC requested the installation of more monitoring wells in order to more adequately define the contaminant plume, and monthly monitoring of the 100 series and new 200 series wells (VT DEC, 1987). In February 1987, Wagner, Heindel & Noyes proposed sampling MW103, 107, 201, 202, 208, and 209 monthly, beginning in March, and the remainder of the wells quarterly (Heindel, 1987a). The filtration of groundwater was discontinued in August 1988 since the concentration of TCA had remained below 200 ppb for six consecutive months. The monitoring program is ongoing. Monitoring will continue



ADAPTED FROM: "ORVIS--MANCHESTER, VT. SKETCH MAP,"
WAGNER, HEINDEL, AND NOYES, INC., APRIL 13, 1987.

NOT TO SCALE

SITE SKETCH

ORVIS CO.
MANCHESTER, VT



FIGURE 3

May 3, 1989

quarterly for another year; if at any time the levels of TCA rise above 200 ppb, treatment must begin again (VT DEC, 1986c).

Trace to low amounts of contaminants have been detected in all monitoring wells with the exception of MW2. The contaminants include: 1,1-dichloroethane, 1,2-dichloroethane, *trans*-1,2-dichloroethene, 1,1,1-trichloroethane, trichloroethene, 1,1-dichloroethene and tetrachloroethane (VT DEC, no date). Results from each sampling round are presented as Appendix 1.

SUMMARY

The total volume of TCA which has spilled onto the ground at the Orvis Co. is not known. However, it is estimated by Dufresne & Henry, Inc. (consultants to Manchester's Water Department), that 350 gallons of TCA may have been released into the aquifer. Some of the highest concentrations of the primary contaminant, TCA, have been detected in the shallow monitoring wells MW1, MW3, and MW4. The highest sustained concentrations of TCA have been detected in MW103, located east (downgradient) of the south spill area. Levels detected in this well fluctuated (250 ppb to 8,500 ppb) but remained high from July 1986 through September 1987.

No TCA was detected in the upgradient wells, MW101 and MW102, in MW105 and 202, or in the downgradient wells, MW104, MW205, and MW209, which were screened deep. Low levels of TCA have been detected in MW106, 107, and 108, as well as in MW203, 207, and 208. Higher levels of TCA have been detected in MW201 (up to 170 ppb), 204 (up to 100 ppb), and 206 (up to 210 ppb) (VT DEC, no date). The TCA is migrating in groundwater in an east-southeast direction towards the stream and the plume appears to be confined in a layer between 11.5 and 17 feet below the ground surface. Based upon review of the analytical results, the predominant contaminant plume appears to be emanating from the northeast corner of the warehouse. It has been observed that with increased distances from spill sites, both lateral and vertical, concentrations of TCA decrease, while concentrations of its biodegradation products, 1,1-dichloroethane and chloroethane increase (Wood, 1985).

Levels of TCA in the monitoring wells currently remain below the Maximum Contaminant Level of 200 ppb as defined by the Safe Drinking Water Act. Monitoring of groundwater will continue for another year. At that time, if the levels remain below 200 ppb, the Orvis Co. may petition the State to discontinue the monitoring program (Anderson, 1988d).

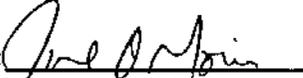
The Manchester Water Department's well is situated approximately 0.8 miles southeast of the Orvis Co. and across the Batten Kill (USGS, 1985). Dufresne & Henry, Inc., stated in a letter to Manchester's Town Manager that there is little likelihood of impact to the municipal well due to the low volume of hazardous substances spilled, the current levels of contaminants in the groundwater, and the volumes of groundwater in the vicinity of the municipal well. Trace amounts of trichloroethylene were detected in surface water in July 1988 (VT DEC, no date; Anderson, 1989a). Since trichloroethylene was detected only once during the first year of the treatment program, its presence could be due to poor sampling procedures or laboratory error (Anderson, 1989a). There are no surface water intakes or sensitive environments located 15 miles downstream of Orvis Co.

Soils underlying the drum spill areas were not removed since a groundwater treatment system was installed. These soils were sampled in April and July 1986. Groundwater has been encountered at 4 to 6 feet below the ground surface, the exact thickness of overburden which underlies the site is unknown.

Submitted By:



Jane Anderson
Project Manager

Approval: 

Joanne O. Morin
FIT Office Manager

JA/kk

REFERENCES

- Adams, G. (Adams Engineering). 1987. Boring logs of 200 - series wells at Orvis Co. February 13.
- Anderson, J. (NUS/FIT). 1988a. Telecon with Rick Hopkins (Water Resources Planner, Vermont Department of Environmental Conservation), Re: Drinking water intakes. October 14.
- Anderson, J. (NUS/FIT). 1988b. Telecon with Kevin Bannister, VT DEC), Re: Municipal water supplies. October 25.
- Anderson, J. (NUS/FIT). 1988c. Telecon with Jim Ashley (VT DEC), Re: Private wells. October 14.
- Anderson, J. (NUS/FIT). 1988d. Telecon with Diane Conrad (VT DEC), Re: Orvis status. October 25.
- Anderson, J. (NUS/FIT). 1989a. Telecon with D. Shepard (VT DEC), Re: Surface water analytical results, March 27.
- Anderson, J. (NUS/FIT) 1989b. Telecon with L. Herbert (Dufresne-Henry), Re: Pump test results, April 24.
- Heindel, C. (Wagner, Heindel, and Noyes, Inc.). 1986. Letter to John Amadon (VT DEC), Re: Orvis Investigation, Manchester. June 18.
- Heindel, C. (Wagner, Heindel, and Noyes, Inc.). 1987a. Letter to Diane Conrad (VT DEC), Re: Proposed groundwater remediation program TCA spill Orvis Co., Manchester. February 27.
- Heindel, C. (Wagner, Heindel, and Noyes, Inc.). 1987b. Letter to John Harder (Orvis Co.), Re: Results of 11 December 1986 Sampling. January 20.
- IEA Inc. (Industrial & Environmental Analysts, Inc.) 1986a. Analytical results of samples collected at Orvis in April. May 20.
- IEA, Inc. (Industrial & Environmental Analysts, Inc.) 1986b. Analytical results of samples collected at Orvis in October. November 17.
- NUS/FIT. 1988. Logbook 88-1225. Onsite Reconnaissance. September 28.
- Sax, N.I. 1987. Hawley's Condensed Chemical Dictionary, 11th Edition. New York: Van Nostrand Reinhold Company, Inc.
- Shepard, D. (VT DEC). 1987. Letter to Sheila Jackson (NUS Corporation), Re: current status of Orvis Company. November 25.
- USGS. 1967; Arlington, West Rupert Quadrangles 1968; Manchester, Sunderland Quadrangles are Vermont 7.5' Series (Topographic).
- Wright, F. (State of Vermont Water Resources Department). 1975. Geology for Environmental Planning in the Bennington- Manchester Region, Vermont.
- VT DEC. no date. Analytical results of all sampling rounds at Orvis Co.

VT DEC. 1986a. Trip Report. Orvis Company, Inc. Route 7, Manchester, VT. March 20.

VT DEC. 1986b. Notification of Proposed Hazardous Waste Activity. Orvis Company, Inc. April 8.

VT DEC. 1986c. Letter to State of Vermont Agency of Environmental Conservation. In the matter of: Orvis Company, Incorporated. March 27.

VT DEC. 1986d. Letter to John Amadon (State of Vermont Department of Environmental Conservation) from Wagner, Heindel, and Noyes, Inc., RE: Orvis site; TCA spills, Manchester, Vermont. August 4.

VT DEC. 1987a. Letter to John Harder (Orvis Co.), Re: Remediation of groundwater contamination at Orvis Facility. February 10.

VT DEC. 1988. General Report of All Waterbody Data. August 17.

VT NHP (Vermont Natural Heritage Program). 1988. Re: Sensitive areas near EPA sites. November '83.

Wood, P. et. al. 1985. "Anaerobic Transformation, Transport, and Removal of Volatile Chlorinated Organics in Ground Water," Ground Water Quality. C. Ward, ed., pages 493-499.

CERCLIS DATABASE FORM

DATE: 5/4/89

SITE NAME: ORVIS (The ORVIS Co., Inc.)

CERCLIS No. VT0002075539

TDD No. F1-8806-01 PROJECT MANAGER: J. Anderson

DIRECTIONS TO SITE: Route 3N to Route 91N to Route 9. Route 9 to Route 7N to Route 7A

ELEMENT	CERCLIS CODE (No. of positions)	DESCRIPTION	ENTRY
I. FOR ALL PROJECTS			
State	C2(2)	Postal code	<u>VT</u>
Site ID (if available)	C101(12)	Dun & Bradstreet or GSA	<u>—</u>
Site Name	C104(40)		<u>ORVIS</u>
Street Address	C110(25)		<u>Route 7A</u>
City	C111(25)		<u>Manchester</u>
County	*TBD		<u>Bennington</u>
Ownership	C136(2)	FF = Federally owned ST = State owned CO = County owned DI = District owned IL = Indian lands MI = Mixed ownership UN = Unknown *TBD1 = Municipally owned *TBD2 = Privately owned OH = Other	<u>private</u>
Years of operation	*TBD	<u>unknown to present</u>	<u>—</u>
FMS Number (if assigned)	C315(4)		<u>—</u>
Coordinates	*TBD	Latitude	<u>43° 10' 09"</u>
		Longitude	<u>73° 04' 03"</u>

ELEMENT	CERCLIS CODE (No. of positions)	DESCRIPTION	ENTRY
Recommendation of Most Recent Project at Site	C2103(1)	For PAs: H = High = SSI Required M = Med. = SSI Recommended N = NFRAP = No Further Remedial Action Planned For SSIs: R = Recommended for an LSI D = Deferred to another authority N = NFRAP = No Further Remedial Action Planned For LSIs: G = Recommended for an HRS Scoring N = NFRAP = No Further Remedial Action Planned	<u>D</u>
Note	C2105(20)	Abbreviated Comments <u>active RCRA facility</u>	
Reasons for Ineligibility (for Sites Determined Ineligible under CERCLA)	*TBD	*TBD1 = Petroleum contamination only *TBD2 = Active RCRA facility *TBD3 = Properly applied pesticide *TBD4 = Nuclear/radioactive waste *TBD5 = All other reasons	<u>NA</u>
Agency Responsible for Work at Site	C2117(2)	F = EPA, Fund financed S = State, Fund financed SN = State, no Fund financing FF = Federal facility *TBD = Responsible Party	<u>F</u>

ELEMENT	CERCLIS CODE (No. of positions)	DESCRIPTION	ENTRY
----------------	---	--------------------	--------------

II. ONLY FOR SITE WITH HRS

Type of
Facility of
Source

C137(1)

- B = Chemical Plant
- C = City Contamination
- L = Landfill
- M = Manufacturing Plant
- N = Military Facility
- F = Other Federal Facility
- T = mines/tailings
- P = Lagoons
- A = Abandoned/Midnight dumping

If unknown,
Type of Waste
Present

- R = Radioactive Waste
- J = Inorganic Waste
- *TBD = Organic Waste
- I = Other Industrial Waste
- D = Dioxin

If unknown,
Type of Receptor
Affected

- V = Waterways/river
- H = Housing Area
- W = Drinking Water Wells
- *TBD = Ecological Receptors
- O = Other

Abstract

C201(240)

Site Description

Site Name: ORVIS
 CERCLIS No.: VTD002075539
 TDD No.: FI-8706-01
 Reference No.: \$375VT324I

NPL ELIGIBILITY CHECKLIST

	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
Are the wastes onsite considered hazardous as defined in CERCLA?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-----
*Sites covered by other authorities:			
Are the hazardous materials at the site solely petroleum products (gasoline, oil, natural gas)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----
Is the contamination at the site caused solely by pesticides that were applied using an accepted practice?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----
If the release is into public or private drinking water systems, is it due to deterioration of the system through ordinary use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----
Is the release from products which are part of the structure, and result in exposure within residential, business, or community structures?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----
Did the release result in exposure to people solely within a work place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----
Does the facility have an Underground Injection Control permit under the Safe Drinking Water Act?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----
Is the release the result of the normal application of fertilizer?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----
Does the release involve naturally occurring substances in their unaltered form?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----
Does the contamination at the site consist solely of radioactive materials generated by Department of Energy/Atomic Energy Commission activities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----
Is the contamination at the site caused solely by coal mining operations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----
Does the facility have a permit from EPA or the U.S. Army Corps of Engineers (under the Marine Protection, Research, and Sanctuaries Act) to dispose of dredged materials in ocean waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-----

Site Name: ORVIS
 CERCLIS No.: VTD002075539
 DDD No.: FI-8806-01
 Reference No.: \$375VT3251

	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
*Other issues of site definition:			
Is the site defined solely as a contaminated well field?	---	✓	-----
Is the site currently owned or operated by a federal agency, or has it been in the past?	---	✓	-----
Is the site a municipal landfill?	---	✓	-----
-- Check if there is documentation of industrial waste disposed of.	---		
Does the waste consist of a "special waste" such as fly ash?	---	✓	-----
-- Check if there is documentation of a hazardous component to the waste.	---		
Does the facility have an NPDES permit?	---	✓	-----
Check if the facility has a history of permit violations.	---		
Is the facility subject to ambient air quality standards under the Clean Air Act?	---	✓	-----
Does the facility have a permit under the Clean Air Act?	---	✓	-----
*RCRA status			
Has the facility notified as a RCRA generator?	✓	---	-----
Has the facility ever had RCRA interim status or a RCRA permit?	---	✓	-----
If yes, check any that apply:			
-- The facility is a small quantity generator.	---		
-- The facility is a "non-notifier" or "protective filer" (identified as such by EPA or the state).	---		

Site Name: ORVIS
EPCRA No.: VTD002075539
EPA No.: F1-8806-01
Reference No.: 375VT32SI

***RCRA status (continued)**

- The owner of the facility is bankrupt, or the owner has filed for protection under bankruptcy laws (if known). ---
- A RCRA compliance order or notice of violation has been issued for the facility at some time. ✓ ---
- The order or notice concerned:
 - conditions that posed a hazard (i.e. a release of contamination to the environment) OR ✓ ---
 - administrative violations (i.e. recordkeeping or financial requirements). ---
- Some RCRA enforcement action is currently pending at the facility. ---
- A RCRA permit has been denied or interim status has been revoked for the facility. ---
- The permit or interim status was revoked:
 - because of conditions at the facility that posed a hazard OR ---
 - because the facility failed to meet an administrative requirement (i.e., failed to file an acceptable Part B permit application). ---
- A closure plan has been requested or submitted for the facility under RCRA. ---
- A closure plan has been approved for the facility under RCRA. ---
- The facility is closed and currently monitoring under RCRA regulations. ---

Well No. MW2

Parameter	Std.	5/5/86	7/9/86	10/10/86	12/11/86						
1,1, DCA	50	EDL	7	BDL	BDL						
1,2 DCA	5			BDL	BDL						
Trans 1,2, DCE				BDL	BDL						
Methylene chloride	40			EDL	BDL						
Tetrachloroethane				BDL	BDL						
Tetrachloroethene	50			BDL	BDL						
1,1,1 TCA	500			EDL	BDL						
TCE	5			BDL	BDL						
1,1 DCE fresh	5			BDL	BDL						
chloroform	100	7		EDL	BDL						

Site Orois

Well No. MW3 ug/L

Parameter	Std.	5/5/86	7/9/86	10/14/86	12/11/86						
1,1-DCA	70	NDL	7	2.9	23						
1,2-DCA	5			2.6	80L						
trans 1,2-DCE	-				80L						
ethylene chloride	40				80L						
tetrachloroethane	1.0			4.5	3.5						
tetrachloroethene	2.0			7.8	6.5						
1,1,1-TCA	200	25,000		8900	3800						
TCE	5	NDL			80L						
1,1 DCE or PCE	7	NDL		52,100	5100						
chloroform	100	NDL			2.4						

Parameter	Std.	5/5/86	7/9/86	10/10/86	12/11/86						
1,1-DCA	10	BUL	7	5.1	5.9						
1,2-DCA	5				BUL						
Trans 1,2-DCE	-				BUL						
1,1,1-trichloroethane	18				5.0						
Tetrachloroethane	17				BUL						
1,1,1-trichloroethane	200	3900		430	240						
1,1,2-trichloroethane	5	BUL			BUL						
1,1,1,2-tetra	2				8.7						
1,1,1,2-tetra	-	BUL		5.0	180						
Chloroform	100	BUL			BUL						

10' deep
5' screen

Q

Site Driv

Well No. MW 101 U.G. ug/l

Parameter	Std.	5/5/86	7/9/86	12/16/86	12/11/86	3/11/87	6/23/87	7/23/87	2/10/88	10/23/88	7/0
1,1,1-DEA	70		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4-DEA	5			BDL	BDL						
Trans, 1,2-DEE				BDL	BDL						
1,2,3,4-DEE	48			BDL	BDL						
1,2,3,4-DEE	17			BDL	BDL						
1,2,3,4-DEE	20			BDL	BDL						
1,2,3,4-TEA	100			BDL	BDL						
1,2,3,4-TEA	5			BDL	BDL						
1,2,3,4-TEA	7			BDL	BDL						
1,2,3,4-TEA				BDL	BDL						
1,2,3,4-TEA	20		↓	BDL	BDL	↓	↓	↓	↓		

15.4' deep
5' screen

Well No. mw102

Q Site Dr. 15

Parameter	Std.	5/5/86	7/9/86	10/16/86	12/11/86	3/11/87	6/22/87	9/24/87	2/10/88	5/20/88	7/5/88
1,1-DCA	70		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-DCA	5			BDL	BDL						
Trans 1,2-DCE	-			BDL	BDL						
Methylene chloride	42			BDL	BDL						
Tetra. chloroethane	5			BDL	BDL						
Tetrachloroethene	5			BDL	BDL						
1,1,1-TCA	200			BDL	BDL						
TCE	-			BDL	BDL						
1,1-DCE or Freon	7			BDL	BDL						
chloroform	100		✓	BDL	BDL	✓	✓	✓	✓	✓	✓

44' deep
5' screen

Site Orvis

Well No. MW104

Q

Parameter	Std.	5/5/86	7/14/86	10/10/86	12/10/86	3/11/87	6/23/87	9/23/87	2/10/88	2/10/88	7/8
1,1 DCA	70	/	2.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2 DCA	5		BDL	BDL	BDL	/	/	/	/	/	/
Trans 1,2-DCE	-										
Methylene chloride	46			BDL	BDL						
Tetrachloroethane or Tetrachloroethene	20			BDL	BDL						
1,1,1 TCA	290			BDL	BDL						
TCE	5			BDL	BDL						
1,1 DCE or 1,2 DCE	-			BDL	BDL						
1,1,1 TCA	290			BDL	BDL						
chloroform	190			BDL	BDL						

17 deep
5' screen

Well No. MW106

Site Ordis
Q
ug/L

Parameter	Std.	5/5/86	7/19/86	10/11/86	12/11/86	3/11/87	6/23/87	7/23/87	10/24/87	05/25/88	7/88
1,1-DCA	70	↓	BDL	BDL	BDL	BDL	BDL	BDL			
1,2-DCA	5				BDL	BDL					
TRANS 1,2-DCE	-				BDL	BDL					
methylene chloride	48				BDL	BDL					
Tetrachloroethane	1				BDL	BDL					
Tetra. chloroethene	30			↓	↓	BDL	BDL				
1,1,1 TCA	200			47	6.8	1.1	31	↓			
100	5			BDL	BDL	BDL	BDL	2.8			
1,1 DCE or furan	3			4.6	4.1	BDL	BDL	BDL			
chloroform	150			BDL	BDL	BDL	BDL	BDL	↓		

Well No. MW107 M

Parameter	Std.	5/5/86	7/9/86	10/10/86	12/10/86	3/11/87	6/23/87	9/23/87	2/1/88	3/29/88	5/2/88
1,1 DCA	10		7	1.2	BDL	1.1	BDL	BDL	4.8	trace	4.2
1,2 DCA	5			BDL	BDL	BDL			BDL	BDL	
Trans 1,2 DCE	-			BDL	BDL	BDL					
Methylene chloride	40			BDL	BDL	BDL					
Tetrachloroethane	10			BDL	BDL	BDL					
tetrachloroethene	20			BDL	BDL	BDL					
1,1,1 TCA	200			22	BDL	77	18	18/85	34.4	8.76	10.2
TCE	5			BDL	BDL	BDL	BDL	BDL	BDL	BDL	4.0
1,1 DCE or free	2			13	BDL	3.2	BDL	BDL			4.0
chloroform	100			BDL	BDL	BDL	BDL	BDL			BDL

Site Orvis

Well No. MW108

Q

Parameter	Std.	5/5/86	7/9/86	10/10/86	12/11/86	3/11/87	6/23/87	9/23/87	2/10/88	4/25/88	7/2/88
1,1-DCA	70		7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-DCA	5			BDL	BDL						BDL
Trans 1,2 DCE	—			BDL	BDL						BDL
Methylene chloride	48			BDL	BDL						BDL
Tetrachloroethane	—			BDL	BDL						BDL
1,1,1,2-TCA	200			BDL	1.1				2.1	BDL	BDL
1,1,1-TCE	—			BDL	BDL						BDL
1,1-DCE or Freon	—			BDL	BDL						BDL
Chloroform	100			BDL	BDL						BDL

13' deep
3.5-13 screen

Well No. 203

Q Site Ord. is

mg/L

Parameter	Std.	3/11/87	6/20/87	9/20/87	2/19/88	5/1/88	7/27/88				
1,1-DCA	70	BDL	BDL	BDL	BDL	BDL	1.1				
1,2-DCA	5	↓	↓	↓	↓	↓	BDL				
Trans 1,2-DCE	-	↓	↓	↓	↓	↓	↓				
Methylene chloride	48	↓	↓	↓	↓	↓	PLC				
Tetrachloroethane	-	↓	↓	↓	↓	↓	BDL				
1,1,1-TCA	200	13	2.8	40	3.8	3.2	37.2				
TCE	5	BDL	BDL	BDL	BDL	BDL	BDL				
1,1-DCE	7	↓	↓	1.2	↓	↓	↓				
Chloroform	100	↓	↓		↓	↓	↓				

11.5 deep
2-11.5 screen

Well No. 204

Q Site Drains
ug/l

Parameter	Std.	3/11/87	6/24/87	9/24/87	2/10/88	05/23/88	7/27/88				
1,1-DCA	70	2.8	1.2	1.7	4.1	trace	1.6				
1,2-DCA	5	BOL	BOL	BOL	BOL	trace	ND				
Trans 1,2-DCE	-	↓	↓	↓	↓	↓	trace				
Methylene Chloride	48	↓	↓	↓	↓	↓	PLE				
Tetrachloroethane	17	↓	↓	↓	↓	↓	ND				
1,1,1-TCA	200	100	↓	28	14	↓	21.6				
TLE	5	BOL	↓	BOL	BOL	BOL	ND				
1,1,1-DCE	7	2.1	↓	↓	↓	↓	↓				
chloroform	100	BOL	↓	↓	↓	↓	↓				
carbon tetrachloride		BOL	28	↓	↓	↓	↓				

41.7 deep

33.3 - 41.7 screen Well No. 205

Q Site Orvis
ug/l

Parameter	Std.	3/11/87	6/24/87	9/24/87	2/10/88	5/15/88	7/27/88				
1,1-DCA	70	BDL	↓	BDL	BDL	BDL	BDL				
1,2-DCA	5	↓	↓	↓	↓	↓	↓				
Trans 1,2-DCE	-	↓	↓	↓	↓	↓	↓				
Methylene chloride	48	↓	↓	↓	↓	↓	PLE				
Tetrachloroethane	1.7	↓	↓	↓	↓	↓	BDL				
1,1,1-TCA	200	↓	↓	↓	↓	↓	↓				
1,1,1,2-TCE	5	↓	3.5	↓	↓	↓	↓				
1,1,2-DCE	7	↓	↓	↓	↓	↓	↓				
Chloroform	100	↓	↓	↓	↓	↓	↓				

11.5 deep
2.0-11.5 screen

Well No. 206

Q Site DCL's
mg/L

Parameter	Std.	3/11/87	6/24/87	9/24/87	2/10/88	5/10/88	7/27/88				
1,1-DCA	20	BOL	BUL	BUL	BUL	BUL	BOL				
1,2-DCA	5	↓									
Trans 1,2-DCE	-										
Methylene Chloride	48	↓					PLF				
Tetrachloroethane	1.7	↓		✓	↓		BOL				
1,1,1-TCA	200	150		210	95	133	28.2				
1,1,2-TCE	5	BUL		BUL	BUL	BUL	BOL				
1,1-DCE	7	4.2		5.8	trace	1.1	1.0				
Chloroform	100	BOL	↓	FL	BOL	BOL	BOL				

11.5 deep
2-11.5 down

Well No. 207

Site Orvis
mg/l

Parameter	Std.	3/11/87	4/24/87	9/24/87	2/10/88	5/12/88	7/27/88				
1,1-DCA	70	BDL	BDL	EDL	BDL	22	BDL				
1,2-DCA	5	↓	↓	↓	↓	1000	↓				
Trans 1,2-DCE	-	↓	↓	↓	↓	200	↓				
Methylene chloride	42	↓	↓	↓	↓	↓	MLE				
Tetrachloroethane	1.7	69	↓	↓	↓	↓	BDL				
1,1,1-TCA	200	BDL	1.0	110	26.8	24.5	14.6				
TCE	5	↓	BDL	1.1	BDL	BDL	BDL				
1,1,1-DCE	7	2.0	↓	3.8	↓	↓	Trace				
Chloroform	100	BDL	↓	22	↓	↓	BDL				

2-11.5 screen

Well No. 208

M Site QAL's
mg/L

Parameter	Std.	3/11/87	6/24/87	6/24/87	7/21/87	7/24/87	2/10/88	3/29/88	05/04/88	05/22/88	05/22/88
1,1-DCA	70	1.0	1.0	3.0	2.7	1.5	trace	EDL	trace	1.0	1.0
1,2-DCA	5	BDL		BDL	BDL	BDL	BDL		trace	1.0	1.0
Trans 1,2-DCE		↓		↓	↓	↓	↓	↓	trace		
methylene chloride	48	↓		↓	↓	↓	↓	↓	BDL		
Tetrachloroethn	1.7	↓		↓	↓	↓	↓	↓	BDL		
1,1,1-TCA	280	6.0		6.4	7.3	1.4	Trace	Trace	1.0	1.0	1.0
TCE	5	BDL		BDL	BDL	BDL	BDL	BDL	trace	BDL	BDL
1,1,2-DCE	7	↓		↓	↓	↓	↓	↓	trace		
chloroform	190	↓	↓	↓	↓	↓	↓	↓	trace		
Bromoacetic acid									trace		
1,1,1,1-tetrahydro									trace		
Dibromochloromethane									trace		
1,2-Dichloropropane									trace		
1,1,2,2-tetrachloroethane									trace		
Trichlorofluoromethane									trace		

37' deep
32-37 screen

Well No. 209

Site Orvis
Aug 12

Parameter	Std.	3/11/87	6/24/87	7/21/87	7/24/87	8/10/88	3/29/88	4/28/88	6/23/88	6/27/88	7/87
1,1-DCA	70	BDL	BDL								
1,2-DCA	5										
Trans 1,2-dichloroethene	-										
1,1,1-trichloroethane	48			2.7							
Tetrachloroethene	1.7			BDL							
1,1,1-TCA	200										
TCE	5		1.1								
1,1-DCE	7		BDL								
chloroform	150		BDL								
Bromoethane							trace				
1,1,1,2-tetrafluoroethane							trace				