WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Gloria L. McCutcheon, Regional Director

Southeast Region
Milwaukee Service Center
2300 N. Dr. ML King Drive, PO Box 12436
Milwaukee, Wisconsin 53212-0436
Telephone 414-263-8500
FAX 414-263-8716
TDD 414-263-8713

April 20, 1999

Mr. Jim McFadden
2310 North 55th Street
Milwaukee, Wisconsin 53210

Subject: Request for closure, McFadden Service Site, 2310 North 55th Street, Milwaukee, Wisconsin. BRR-LUST FID#241759870.

Dear Mr. McFadden:

At the request of your environmental consultant, Advent Environmental Services, Inc., we have reviewed the referenced case file for closure. Based on the information presented, we concur with Advent's recommendation of no further action and conditionally grant closure to the site. As always, the department reserves the right to reopen this case pursuant to s. NR 726.09, WAC, should additional information regarding site conditions indicate that contamination on or from the site poses a threat to public health, safety or welfare or the environment.

As part of the condition of closure, you must place a groundwater use restriction on the property deed at the county register of deeds office which specifies the legal description of the property, the location, type and concentration of the contaminants and includes the following language:

> "Natural attenuation has been approved by the Department of Natural Resources to remediate groundwater exceeding ch. NR 140 groundwater standards within the boundaries of this property. construction of wells where the water quality exceeds the drinking water standards in ch. NR 809 is restricted by chs. NR 811 and 812. Special well construction standards or water treatment requirements, or both, or well construction prohibitions may apply. Anyone who proposes to construct or reconstruct a well on this property is required to contact the Department of Natural Resources' Bureau of Drinking Water and Groundwater to determine what specific requirements are applicable prior to constructing or reconstructing a well on this property."

Additionally, within sixty days, all of the groundwater monitoring wells at the site must be abandoned in accordance with ch. NR 141 and the completed abandonment forms must be submitted to the department, along with the soil boring logs for the monitoring wells. Once the department receives the abandonment forms and documentation that the groundwater use restriction has been placed on the deed, this case will be tracked as closed on the department's tracking system. If you have any questions regarding this letter, you may contact me at the above address or at (414) 263-8689.

Sincerely,

Gina Keenan
Hydrogeologist

c: Advent Environmental Services, Inc.
SER case file

REEL 4604 IMAG 1423

7772856

Document Number	GROUNDWATER USE RESTRICTION

REGISTER'S OFFICE | SS
Milwaukee County, WI

RECORDED AT 3:37 PM

07-14-1999 1423 T

REEL 4604 IMAGE 1425 INCL.

WALTER R. BARCZAK
REGISTER OF DEEDS

AMOUNT 14.00

Declaration of Restriction

In Re: Plat Page 329-15. Neighborhood 6252
North Avenue Heights in SW ¼ Sec. 14-7-21
Block 1 Lots 14 & 15
Bid #16

Recording Area
Return to:
Jeff Tracy
Advent Environmental Services, Inc.
P.O. Box 277
Mequon, WI 53092

STATE OF WISCONSIN)
) ss
COUNTY OF MILWAUKEE)

Tax Key #: 329-0911-8

WHEREAS, McFadden & Schiel, LLC, is the owner of the above-described property, commonly known as 2310 North 55th Street, in the City and County of Milwaukee, Wisconsin.

WHEREAS, one or more discharges of gasoline have occurred at this property. Petroleum contaminated groundwater above the NR 140 enforcement standard (ES) exists on this property in monitoring well MW-3, which is located on the southern edge of the property (see Figure 1). The groundwater in this area is contaminated with benzene above the NR 140 ES and the contamination may be coming from the former gas station on the adjoining property east of the site. Petroleum contaminated groundwater above the NR 140 preventive action limit (PAL) exists on this property in monitoring well MW-4, which is located on the western edge of the property. The groundwater in this area is contaminated with benzene and methyl-tert-butyl-ether above their NR 140 PALs. The following number is the Wisconsin Department of Natural Resources case number associated with the petroleum release at this site: BRR-LUST FID No. 241759870.

WHEREAS, it is the desire and intention of the property owner to impose on the property restrictions which will make it unnecessary to conduct additional soil or groundwater remediation activities on the property at the present time.

NOW THEREFORE, the owner hereby declares that all of the property described above is held and shall be held, conveyed or encumbered, leased, rented, used, occupied, and improved subject to the following limitation and restrictions:

Natural attenuation has been approved by the Department of Natural Resources to remediate groundwater exceeding ch. NR 140 groundwater standards within the boundaries of this property. Construction of wells where the water quality exceeds the drinking water standards in ch. 809 is restricted by chs. NR 811 and NR 812. Special well construction standards or water treatments, or both, or well construction prohibitions may apply. Anyone who proposes to

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construct or reconstruct a well on this property is required to contact the Department of Natural Resources' Bureau of Drinking Water and Groundwater to determine what specific requirements are applicable prior to constructing or reconstructing a well on this property.

This restriction is hereby declared to be a covenant running with the land and shall be fully binding upon all persons acquiring the above-described property whether by descent, devise, purchase or otherwise. This restriction benefits and is enforceable by, the Wisconsin Department of Natural Resources, its successors and assigns. The Department, its successors or assigns, may initiate proceedings at law or in equity against any person or persons who violate or are proposing to violate this covenant, to prevent the proposed violation or to recover damages for such violation.

Any person who is or becomes owner of the property described above may request that the Wisconsin Department of Natural Resources or its successor issue a determination that the restriction set forth in this covenant are no longer required. Upon receipt of such a request, the Wisconsin Department of Natural Resources shall determine whether or not the restrictions contained herein can be extinguished. If the Department determines that the restrictions can be extinguished, an affidavit, with a copy of the Department's written determination, may be recorded to give notice that this groundwater use restriction is no longer binding.

IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restrictions, this 7th day of July, 1999.

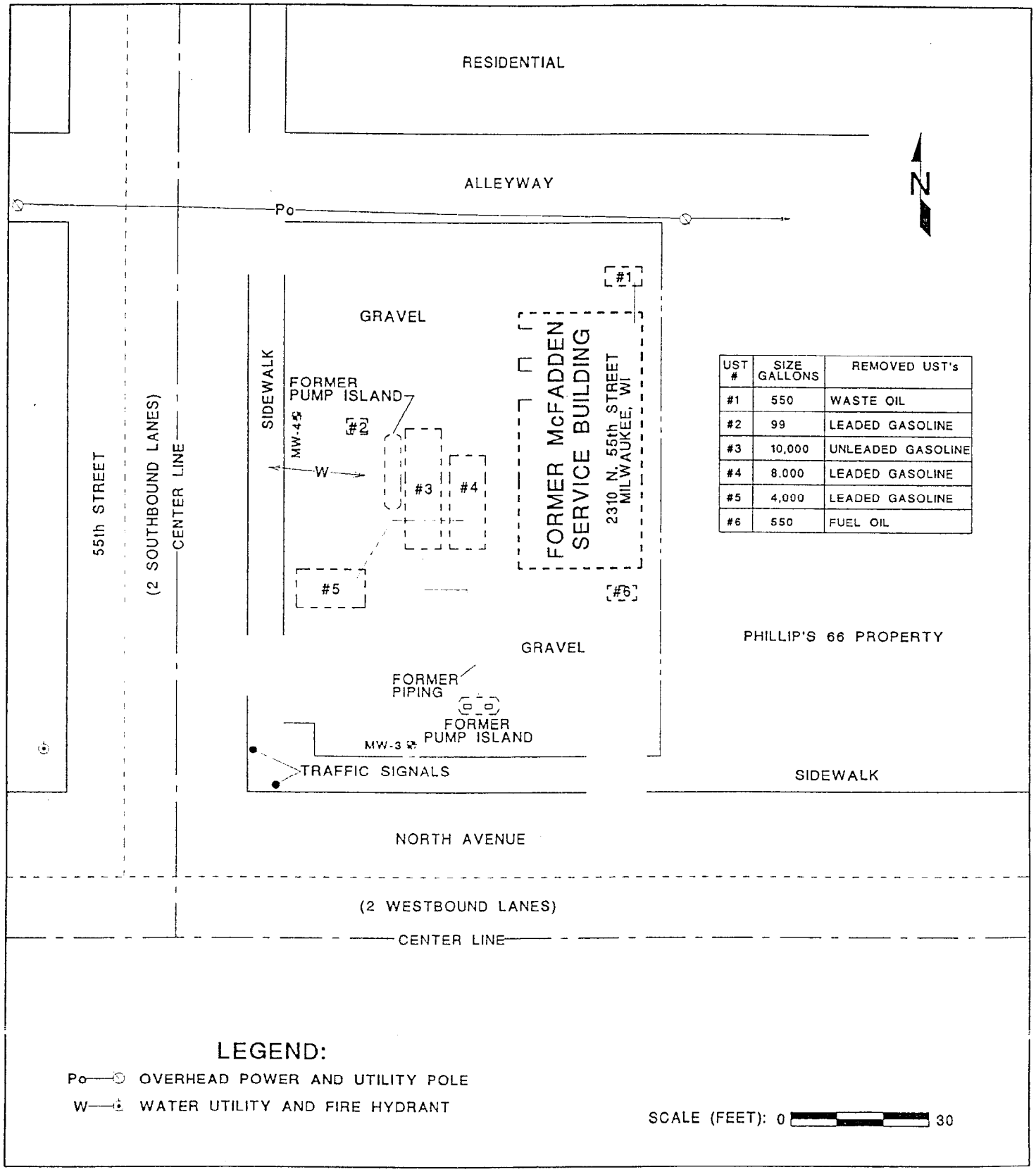
Signature: James R McFadden
Printed Name: Jim R McFadden

Subscribed and sworn to before me
this 7th day of July, 1999.

Notary Public, State of WISCONSIN
My commission expires 3-18-2001

This document was drafted by Jeffrey G. Tracy of Advent Environmental Services, Inc., in conjunction with the Wisconsin Department of Natural Resources.

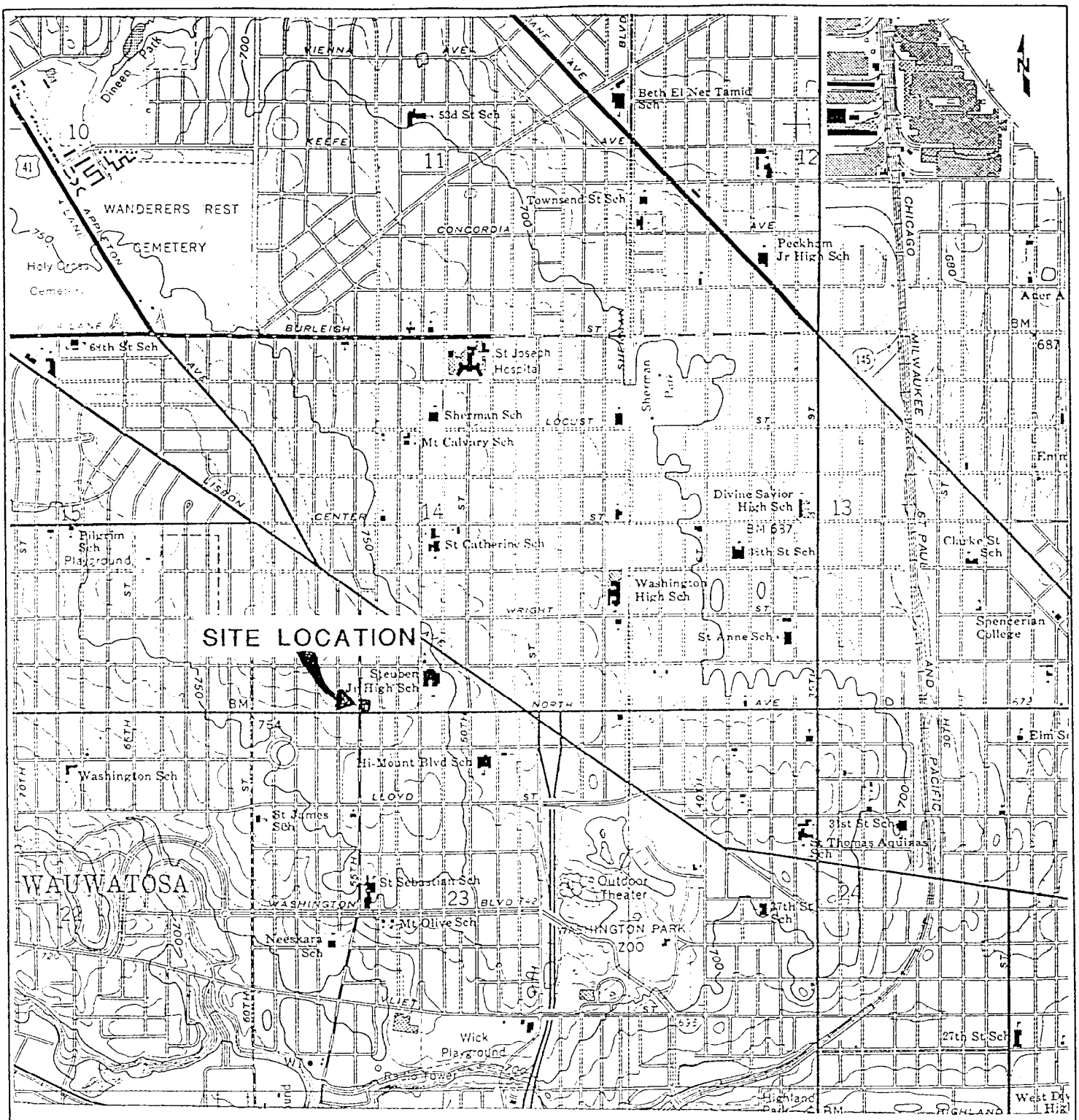
REEL 4604 IMAG 1425



UST #	SIZE GALLONS	REMOVED UST's
#1	550	WASTE OIL
#2	99	LEADED GASOLINE
#3	10,000	UNLEADED GASOLINE
#4	8,000	LEADED GASOLINE
#5	4,000	LEADED GASOLINE
#6	550	FUEL OIL

FIGURE 1 SITE LAYOUT
McFADDEN SERVICE STATION
MILWAUKEE, WISCONSIN

ADVENT
ENVIRONMENTAL SERVICES, INC.
DATE: 7/2/99
DRAWING #97266.00A



QUADRANGLE LOCATION
SE1/4 SW1/4 SEC.14 T.7N., R.21E.

SCALE (FEET): 0 2000

NOTE:
BASE MAP DEVELOPED FROM THE MILWAUKEE, WISCONSIN 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP.

DRAWN BY: KRK	FIGURE #1 DETAIL SHEET
APPROVED BY:	SITE LOCATION
DATE: 5/13/97	McFADDEN SERVICE STATION MILWAUKEE, WISCONSIN
PROJECT # 97266.01	ADVENT
REVISION #	ENVIRONMENTAL SERVICES, INC.

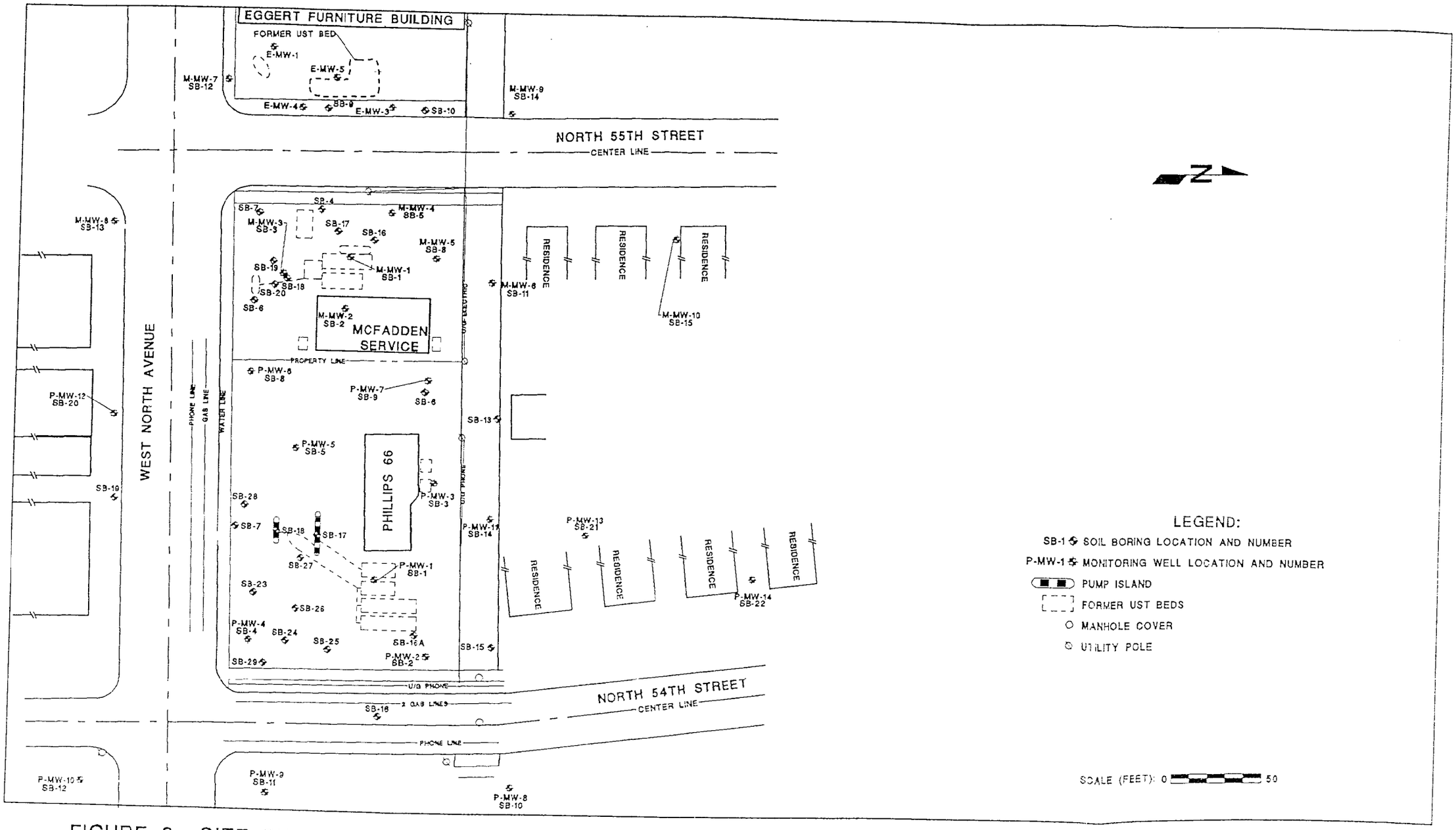


FIGURE 2 SITE FEATURES, SOIL BORING AND MONITORING WELL LOCATIONS
McFADDEN SERVICE STATION
MILWAUKEE, WISCONSIN

ADVENT
ENVIRONMENTAL SERVICES, INC.
DATE: 5/13/97
DRAWING # 97266.01J

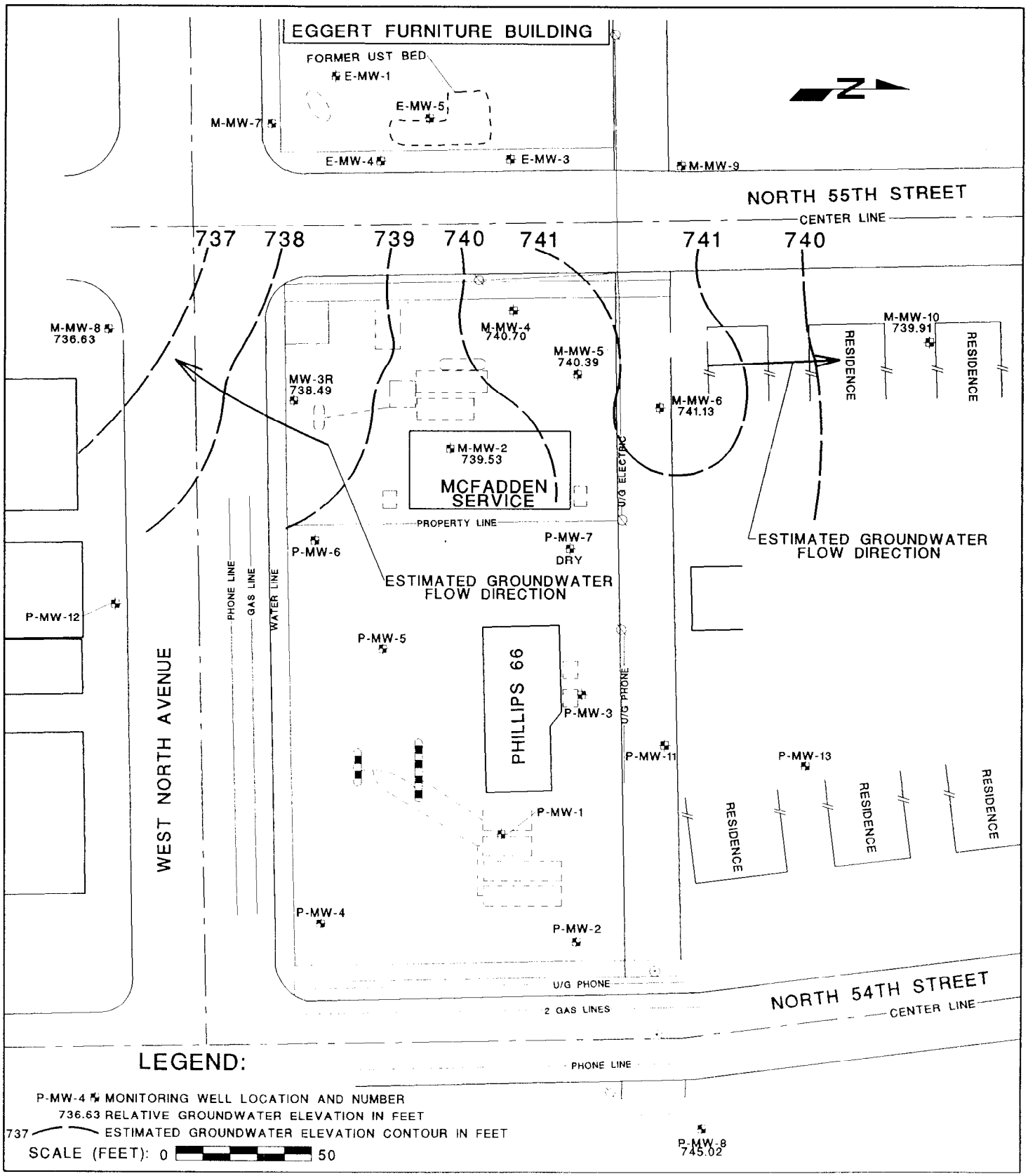


FIGURE 2 GROUNDWATER FLOW DIRECTION (6/17/98)
McFADDEN SERVICE STATION
MILWAUKEE, WISCONSIN

A D V E N T
ENVIRONMENTAL SERVICES, INC.
DATE: 2/19/99
DRAWING #97266.02N

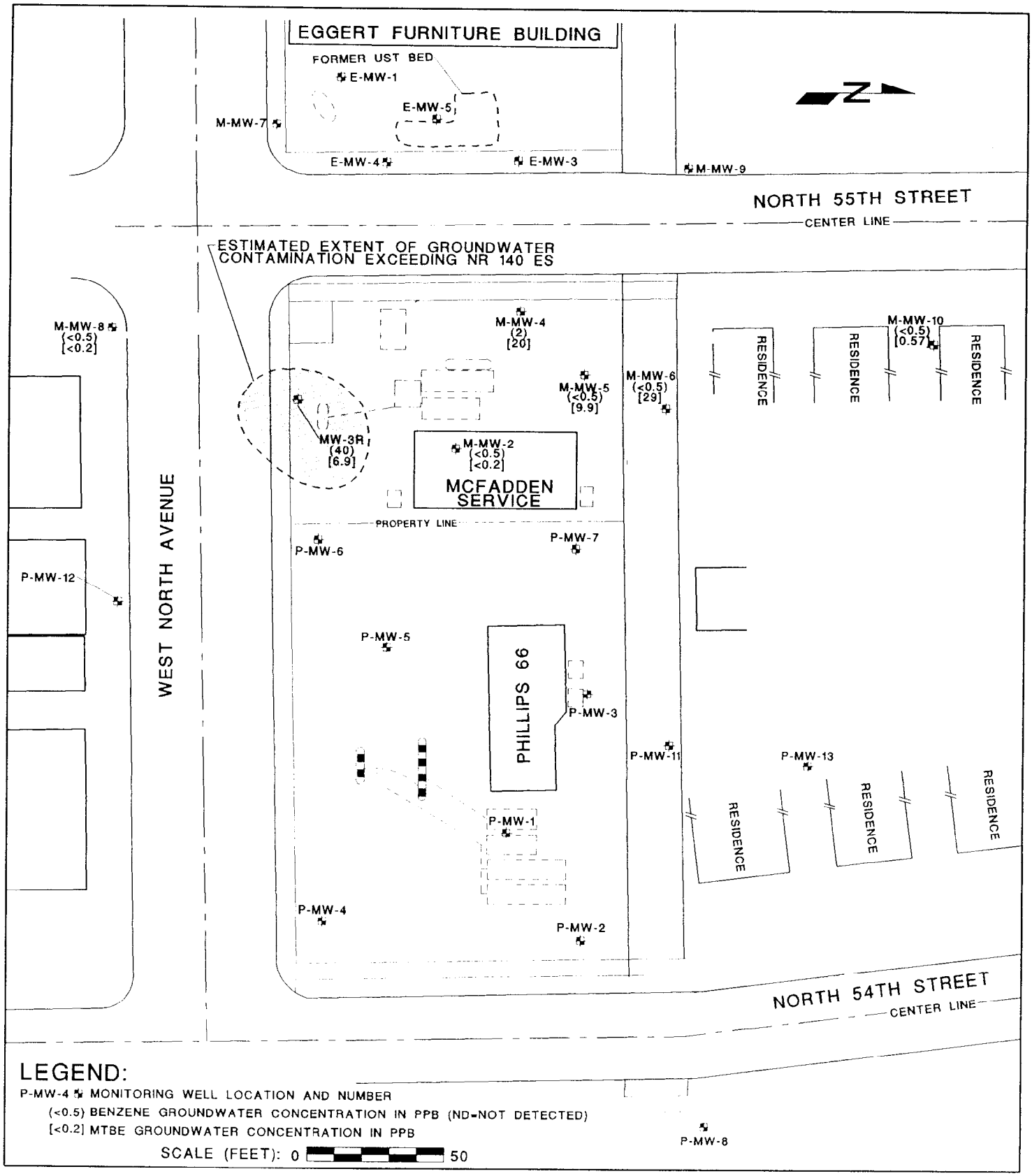


FIGURE 1 ESTIMATED GROUNDWATER CONTAMINATION EXTENT (6/17/98)
McFADDEN SERVICE STATION
MILWAUKEE, WISCONSIN

A D V E N T
ENVIRONMENTAL SERVICES, INC.
DATE: 2/19/99
DRAWING #97266.02O

TABLE 1 (page 1 of 7)
GROUNDWATER RESULTS
McFADDEN SERVICE SITE

	NR 140 PAL	NR 140 ES	Pre-Remediation			Post-Remediation			
			MW-2	MW-2A	MW-2B	MW-2C	MW-2D	MW-2E	MW-2F
Date Collected			2/8/95	9/30/96	4/1/97	9/10/97	12/3/97	3/3/98	6/17/98
GROs (ppb)	---	---	<50	<50	<50	<50	<50	<50	<50
Lead - (ppb)	*1.5*	*0.02*	<5	NA	<1.5	NA	NA	NA	NA
Dissolved Oxygen ppm			NA	NA	2.2	3.	1.76	NA	1.82
Sulfates-ppm	---	---	NA	72.	200.	110.	270.	NA	NA
Nitrates-ppm	*2.*	*10.*	NA	2.2	0.2	1.4	0.93	NA	NA
Soluble Iron-ppm	---	---	NA	<0.05	<0.05	<0.05	<0.05	NA	NA
Manganese-ppm	---	---	NA	<0.02	<0.05	<0.05	<0.05	NA	NA
VOCs									
Benzene	*0.5*	*5.*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
tert-butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
Chloroform	*0.6*	*6.*	<0.5	NA	NA	NA	NA	NA	NA
1, 2-Dichlororethane	*0.5*	*5.*	<0.5	NA	NA	NA	NA	NA	NA
Ethylbenzene	*140.*	*700.*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
Methy-tert-butyl-ether	*12.*	*60.*	<5	<5	<0.2	<0.2	<0.2	<0.2	<0.2
n-Propylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
Toluene	*68.6*	*343.*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	---	---	<1.0	<1.0	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	---	---	<1.0	<1.0	<1	<1	<1	<1	<1
1,2,4- & 1,3,5-TMB combined	*96.*	*480.*	<1	<1	<1	<1	<1	<1	<1
Xylenes	*124.*	*620.*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Detected PVOCs	---	---	0.	0.	0.	0.	0.	0.	0.

Shaded areas exceed NR 140 Enforcement Standards.
Bolded values exceed NR 140 Preventive Action Limits.
NA = not analyzed
--- = no established groundwater quality standard

TABLE 1 (page 2 of 7)
GROUNDWATER RESULTS
McFADDEN SERVICE SITE

	NR 140 PAL	NR 140 ES	Pre-Remediation			Post-Remediation			
			MW-3	MW-3A	MW-3B	MW-3C	MW-3D	MW-3E	MW-3F
Date Collected			2/8/95	9/30/96	4/1/97	9/10/97	12/3/97	3/3/98	6/17/98
GROs (ppb)	---	---	310.	95.	<50	<50	90	150	<50
Lead - (ppb)	*1.5*	*0.02*	<5	NA	<1.5	NA	NA	NA	NA
Dissolved Oxygen ppm			NA	NA	0.6	3.	0.67	NA	0.53
Sulfates-ppm	---	---	NA	97.	120.	130.	120	NA	NA
Nitrates-ppm	*2.*	*10.*	NA	0.21	0.14	<0.5	<0.05	NA	NA
Soluble Iron-ppm	---	---	NA	0.41	0.86	7.1	11	NA	NA
Manganese-ppm	---	---	NA	0.59	0.32	0.14	0.059	NA	NA
VOCs									
Benzene	*0.5*	*5.*	**3.6**	**3.2**	<0.5	<0.5	**86**	<0.5	**40.**
n-Butylbenzene	---	---	5.2	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
tert-butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
Chloroform	*0.6*	*6.*	<0.5	NA	NA	NA	NA	NA	NA
1, 2-Dichlororethane	*0.5*	*5.*	17.	NA	NA	NA	NA	NA	NA
Ethylbenzene	*140.*	*700.*	6.4	3.2	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
Methy-tert-butyl-ether	*12.*	*60.*	<5	<5	2.4	8.8	4.6	<0.2	6.9
n-Propylbenzene	---	---	1.4	NA	NA	NA	NA	NA	NA
Toluene	*68.6*	*343.*	62.	43.	4.1	<0.5	<0.5	<0.5	0.9
1,2,4-Trimethylbenzene	---	---	14.	<1.0	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	---	---	5.1	<1.0	<1	<1	<1	<1	<1
1,2,4- & 1,3,5-TMB combined	*96.*	*480.*	19.1	<1	<1	<1	<1	<1	<1
Xylenes	*124.*	*620.*	39.	12.	1.7	<0.5	0.51	<0.5	<0.5
Total Detected PVOCs	---	---	130.1	61.4	8.2	8.8	91.11	0.	47.8

Shaded areas exceed NR 140 Enforcement Standards.
Bolded values exceed NR 140 Preventive Action Limits.
NA = not analyzed
--- = no established groundwater quality standard

TABLE 1 (page 3 of 7)
GROUNDWATER RESULTS
McFADDEN SERVICE SITE

	NR 140 PAL	NR 140 ES	Pre-Remediation			Post-Remediation				
			MW-4	MW-4A	MW-4B	MW-4C	MW-4D	MW-4D Dup	MW-4E	MW-4F
Date Collected			2/8/95	9/30/96	4/1/97	9/10/97	12/3/97	12/3/97	3/3/98	6/17/98
GROs (ppb)	---	---	1,400.	660.	590.	540.	570	540	640	440
Lead - (ppb)	*1.5*	*0.02*	<5	NA	<1.5	NA	NA	NA	NA	NA
Dissolved Oxygen ppm					0.4	2.4	0.58	0.58	NA	0.54
Sulfates-ppm	---	---	NA	64.	110.	110.	140	NA	NA	NA
Nitrates-ppm	*2.*	*10.*	NA	<0.05	0.61	<0.05	<0.05	NA	NA	NA
Soluble Iron-ppm	---	---	NA	13.	13.	6.1	18	NA	NA	NA
Manganese-ppm	---	---	NA	0.22	<0.05	0.16	<0.05	NA	NA	NA
VOCs										
Benzene	*0.5*	*5.*	**4.2**	**2.5**	**2.2**	**1.4**	**1.5**	**1.4**	**2.4**	**2**
n-Butylbenzene	---	---	10.	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	---	---	1.3	NA	NA	NA	NA	NA	NA	NA
tert-butylbenzene	---	---	1.9	NA	NA	NA	NA	NA	NA	NA
Chloroform	*0.6*	*6.*	<0.5	NA	NA	NA	NA	NA	NA	NA
1, 2-Dichlororethane	*0.5*	*5.*	0.92	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	*140.*	*700.*	3.7	14.	8.5	9.	15	16	12	3.7
Isopropylbenzene	---	---	2.1	NA	NA	NA	NA	NA	NA	NA
Methy-tert-butyl-ether	*12.*	*60.*	480.	73.	**36.**	**57.**	**22**	**24**	**30**	**20**
n-Propylbenzene	---	---	1.8	NA	NA	NA	NA	NA	NA	NA
Toluene	*68.6*	*343.*	2.	<2.5	0.85	<0.63	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	---	---	7.4	47.	39.	39.	51	55	36	18
1,3,5-Trimethylbenzene	---	---	2.	8.5	6.5	7.3	7.2	7.8	4.4	2.9
1,2,4- & 1,3,5-TMB combined	*96.*	*480.*	9.4	55.5	45.5	46.3	58.2	62.8	40.4	20.9
Xylenes	*124.*	*620.*	11.	49.	24.	30.	36	38	31	15
Total Detected PVOCs	---	---	510.3	194.	117.05	143.7	132.7	142.2	115.8	61.6

Shaded areas exceed NR 140 Enforcement Standards.
Bolded values exceed NR 140 Preventive Action Limits.
NA = not analyzed
--- = no established groundwater quality standard

TABLE 1 (page 4 of 7)
GROUNDWATER RESULTS
McFADDEN SERVICE SITE

	NR 140 PAL	NR 140 ES	Pre-Remediation			Post-Remediation			
			MW-5	MW-5A	MW-5B	MW-5C	MW-5D	MW-5E	MW-5F
Date Collected			5/11/95	9/30/96	4/1/97	9/10/97	12/3/97	3/3/98	6/17/98
GROs (ppb)	---	---	3,000.	610.	960	<50	880	<50	<50
Lead - (ppb)	*1.5*	*0.02*	<5	NA	<1.5	NA	NA	NA	NA
Dissolved Oxygen ppm					0.3	2.	0.9	NA	2.23
Sulfates-ppm	---	---	NA	230.	110	290	130	NA	NA
Nitrates-ppm	*2.*	*10.*	NA	1.2	0.57	6.4	0.42	NA	NA
Soluble Iron-ppm	---	---	NA	0.41	1.2	0.11	1.9	NA	NA
Manganese-ppm	---	---	NA	1.1	0.39	1	0.74	NA	NA
VOCs									
Benzene	*0.5*	*5.*	**8.9**	**1.7**	8.2	<0.5	**6.1**	<0.5	<0.5
n-Butylbenzene	---	---	<2.5	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	---	---	<2.5	NA	NA	NA	NA	NA	NA
tert-butylbenzene	---	---	<2.5	NA	NA	NA	NA	NA	NA
Chloroform	*0.6*	*6.*	<2.5	NA	NA	NA	NA	NA	NA
1, 2-Dichlororethane	*0.5*	*5.*	<2.5	NA	NA	NA	NA	NA	NA
Ethylbenzene	*140.*	*700.*	14.	4.6	5.8	<0.5	2.6	<0.5	<0.5
Isopropylbenzene	---	---	29.	NA	NA	NA	NA	NA	NA
Methy-tert-butyl-ether	*12.*	*60.*	**740.**	**63.**	**32**	**13**	**23**	<0.2	9.9
n-Propylbenzene	---	---	33.	NA	NA	NA	NA	NA	NA
Toluene	*68.6*	*343.*	<2.5	1.2	2.4	<0.5	1.8	<0.5	<0.5
1,2,4-Trimethylbenzene	---	---	91.	25.	29	<1	31	<1	<1
1,3,5-Trimethylbenzene	---	---	26.	6.2	9.9	<1	5.1	<1	<1
1,2,4- & 1,3,5-TMB combined	*96.*	*480.*	**117.**	31.2	38.9	<1	36.1	<1	<1
Xylenes	*124.*	*620.*	27.	9.1	11	0.5	9.3	<0.5	<0.5
Total Detected PVOCs	---	---	906.9	110.8	98.3	13.5	78.9	0.	9.9

Shaded areas exceed NR 140 Enforcement Standards.
Bolded values exceed NR 140 Preventive Action Limits.
NA = not analyzed
--- = no established groundwater quality standard

TABLE 1 (page 5 of 7)
GROUNDWATER RESULTS
McFADDEN SERVICE SITE

	NR 140 PAL	NR 140 ES	Pre-Remediation			Post-Remediation					
			MW-6	MW-6A	MW-6B	MW-6C	MW-6D	MW-6E	MW-6E DUP	MW-6F	MW-6F DUP
Date Collected			3/13/95	9/30/96	4/1/97	9/10/97	12/3/97	3/3/98	3/3/98	6/17/98	6/17/98
GROs (ppb)	---	---	3,100.	9,400.	850	490	3000	260	200	210	200
Lead - (ppb)	*1.5*	*0.02*	<5	NA	<1.5	NA	NA	NA	NA	NA	NA
Dissolved Oxygen ppm			NA	NA	0.3	0.8	0.53	NA	NA	0.58	0.58
Sulfates-ppm	---	---	NA	27.	81	87	49	NA	NA	NA	NA
Nitrates-ppm	*2.*	*10.*	NA	3.	17	13	4.2	NA	NA	NA	NA
Soluble Iron-ppm	---	---	NA	3.2	<0.05	<0.05	0.79	NA	NA	NA	NA
Manganese-ppm	---	---	NA	0.16	<0.05	2.1	0.058	NA	NA	NA	NA
VOCs											
Benzene	*0.5*	*5.*	<25	**210.**	**11**	**1.5**	**21**	**3.4**	**16**	<0.5	<0.5
n-Butylbenzene	---	---	32.	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	---	---	<25	NA	NA	NA	NA	NA	NA	NA	NA
tert-butylbenzene	---	---	<25	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	*0.6*	*6.*	<25	NA	NA	NA	NA	NA	NA	NA	NA
1, 2-Dichlororethane	*0.5*	*5.*	<25	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	*140.*	*700.*	130.	**1,000.**	23	2.4	**160**	<0.5	<0.5	8.9	8.7
Isopropylbenzene	---	---	<25	NA	NA	NA	NA	NA	NA	NA	NA
Methy-tert-butyl-ether	*12.*	*60.*	**970.**	**620.**	**48**	**53**	**88**	<0.2	<0.2	**28**	**29**
n-Propylbenzene	---	---	<25	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	*68.6*	*343.*	28.	**470.**	13	3.2	18	<0.5	<0.5	0.95	1.1
1,2,4-Trimethylbenzene	---	---	140.	1,000.	<1	2.8	310	<1	<1	8.8	7.6
1,3,5-Trimethylbenzene	---	---	<50	120.	<1	<1	50	<1	<1	1.3	1.2
1,2,4- & 1,3,5-TMB combined	*96.*	*480.*	140.	**1,120.**	<1	2.8	**360.**	<1	<1	10.1	8.8
Xylenes	*124.*	*620.*	**430.**	**3,300.**	80	14	**580**	<0.5	<0.5	17	17
Total Detected PVOCs	---	---	1,698.	6,720.	175.	76.9	1,227.	3.4	16.	64.95	64.6

Shaded areas exceed NR 140 Enforcement Standards.
Bolded values exceed NR 140 Preventive Action Limits.
NA = not analyzed
--- = no established groundwater quality standard

TABLE 1 (page 6 of 7)
GROUNDWATER RESULTS
McFADDEN SERVICE SITE

	NR 140 PAL	NR 140 ES	Pre-Remediation			Post-Remediation			
			MW-8	MW-8A	MW-8B	MW-8C	MW-8D	MW-8E	MW-8F
Date Collected			3/13/95	9/30/96	4/1/97	9/10/97	12/3/97	3/3/98	6/17/98
GROs (ppb)	---	---	<50	<50	<50	<50	<50	60	<50
Lead - (ppb)	*1.5*	*0.02*	<5	NA	<1.5	NA	NA	NA	NA
Dissolved Oxygen ppm			NA	NA	3.	4.4	1.8	NA	2.66
Sulfates-ppm	---	---	NA	77.	82.	89.	65.	NA	NA
Nitrates-ppm	*2.*	*10.*	NA	13.	13.	13.	11.	NA	NA
Soluble Iron-ppm	---	---	NA	<0.05	<0.05	<0.05	<0.05	NA	NA
Manganese-ppm	---	---	NA	<0.02	<0.05	<0.05	<0.05	NA	NA
VOCs									
Benzene	*0.5*	*5.*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
tert-butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
Chloroform	*0.6*	*6.*	**1.5**	NA	NA	NA	NA	NA	NA
1, 2-Dichlororethane	*0.5*	*5.*	<0.5	NA	NA	NA	NA	NA	NA
Ethylbenzene	*140.*	*700.*	<0.5	<0.5	<0.5	<0.5	0.69	<0.5	<0.5
Isopropylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
Methy-tert-butyl-ether	*12.*	*60.*	<5.0	<5.0	<0.2	1.9	<0.2	<0.2	<0.2
n-Propylbenzene	---	---	<0.5	NA	NA	NA	NA	NA	NA
Toluene	*68.6*	*343.*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	---	---	<1.0	<1.0	<1	<1	2.	<1	<1
1,3,5-Trimethylbenzene	---	---	<1.0	<1.0	<1	<1	1.8	<1	<1
1,2,4- & 1,3,5-TMB combined	*96.*	*480.*	<1	<1	<1	<1	3.8	<1	<1
Xylenes	*124.*	*620.*	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5
Total Detected PVOCs	---	---	0.	0.	0.	1.9	6.99	0.	0.

Shaded areas exceed NR 140 Enforcement Standards.
Bolded values exceed NR 140 Preventive Action Limits.
NA = not analyzed
--- = no established groundwater quality standard

TABLE 1 (page 7 of 7)
GROUNDWATER RESULTS
McFADDEN SERVICE SITE

	NR 140 PAL	*NR 140 ES*	Pre-Remediation		Post-Remediation			
			MW-10A	MW-10B	MW-10C	MW-10D	MW-10E	MW-10F
Date Collected			9/30/96	4/1/97	9/10/97	12/3/97	3/3/98	6/17/98
GROs (ppb)	---	---	<50	<50	<50	<50	<50	<50
Lead - (ppb)	*1.5*	*0.02*	2.8	<1.5	NA	NA	NA	NA
Dissolved Oxygen ppm				0.18	2.5	0.52	NA	0.58
Sulfates-ppm	---	---	69.	79	85	70	NA	NA
Nitrates-ppm	*2.*	*10.*	<0.05	<0.05	<0.05	0.088	NA	NA
Soluble Iron-ppm	---	---	1.4	0.36	0.63	0.93	NA	NA
Manganese-ppm	---	---	0.58	0.46	0.44	0.32	NA	NA
VOCs								
Benzene	*0.5*	*5.*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA
sec-Butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA
tert-butylbenzene	---	---	<0.5	NA	NA	NA	NA	NA
Chloroform	*0.6*	*6.*	<0.5	NA	NA	NA	NA	NA
1, 2-Dichlororethane	*0.5*	*5.*	0.5	NA	NA	NA	NA	NA
Ethylbenzene	*140.*	*700.*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	---	---	<0.5	NA	NA	NA	NA	NA
Methy-tert-butyl-ether	*12.*	*60.*	**21.**	1.1	3.6	<0.2	10	0.57
n-Propylbenzene	---	---	<0.5	NA	NA	NA	NA	NA
Toluene	*68.6*	*343.*	<0.5	<0.5	<0.5	<0.5	2.4	2.4
1,2,4-Trimethylbenzene	---	---	<1.0	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	---	---	<1.0	<1	<1	<1	<1	1.2
1,2,4- & 1,3,5-TMB combined	*96.*	*480.*	0.	0.	0.	0.	0.	1.2
Xylenes	*124.*	*620.*	<0.5	<0.5	<0.5	<0.5	3.4	3.4
Total Detected PVOCs	---	---	21.	1.1	3.6	0.	15.8	7.57

Shaded areas exceed NR 140 Enforcement Standards.
Bolded values exceed NR 140 Preventive Action Limits.
NA = not analyzed
--- = no established groundwater quality standard

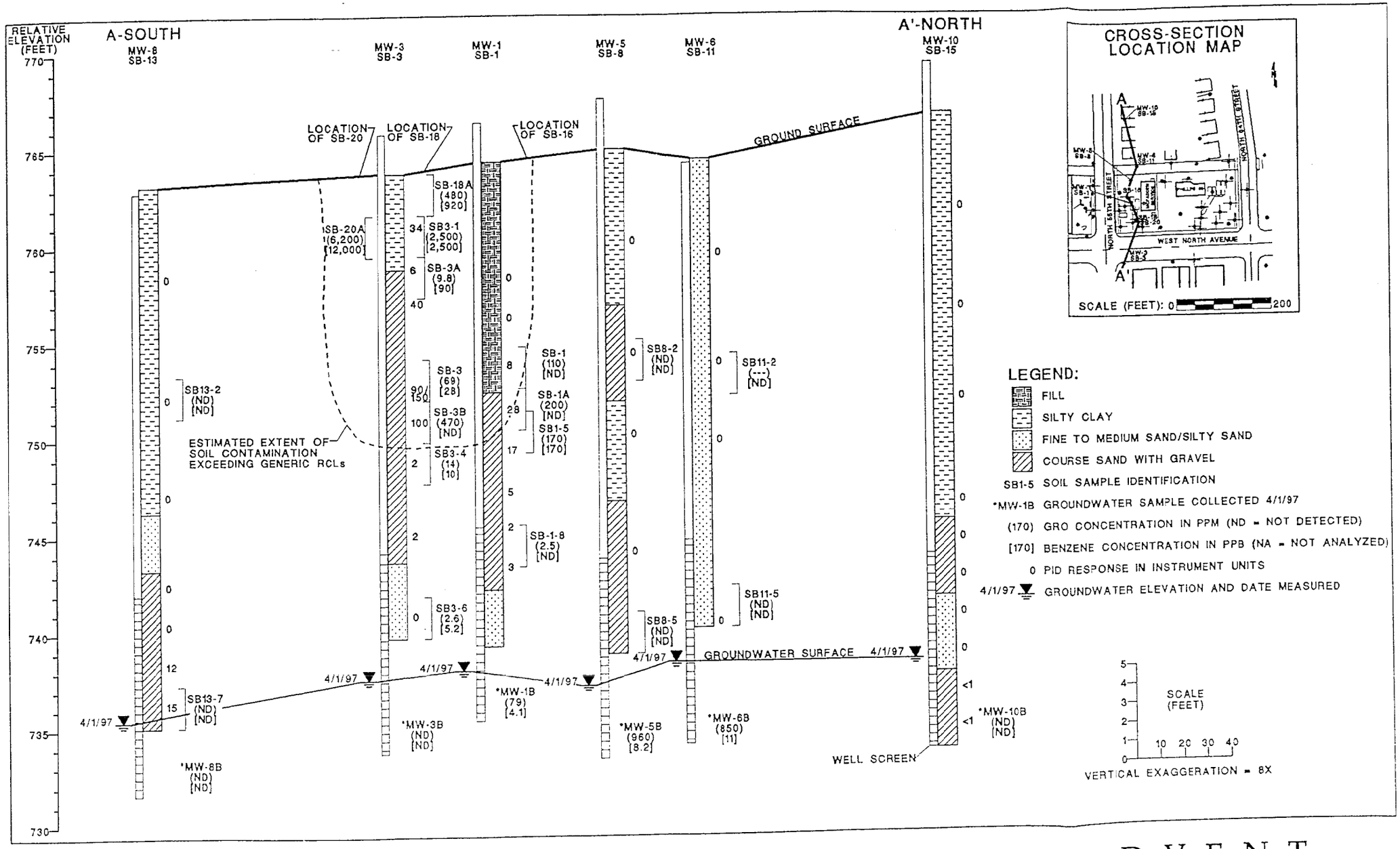


FIGURE 4 SOUTH TO NORTH CROSS SECTION A TO A'
McFADDEN SERVICE STATION
MILWAUKEE, WISCONSIN

ADVENT
ENVIRONMENTAL SERVICES, INC.
DATE: 5/13/97
DRAWING #97266.01L