

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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

Southeast Regional Headquarters  
2300 N. Dr. ML King Drive, PO Box 12436  
Milwaukee, Wisconsin 53212-0436  
Telephone 414-263-8500  
FAX 414-263-8483  
TDD 414-263-8713

December 16, 1999

In Reply Refer To: FID# 241494000  
BRRTS# 02-41-000090  
County of Milwaukee  
BRR-ERP

Mr. Robert Feitler  
C/o Manufacturer's Box Company  
179 E Lakeshore Drive Apt 16E  
Chicago, IL 60611

SUBJECT: Closure Request for *Manufacturer's Box Company Site, 830 East Keefe Avenue, Milwaukee, WI*

Dear Mr. Feitler

The Wisconsin Department of Natural Resources (WDNR) previously reviewed the case file for the above referenced site to determine if case closure could be granted for the site. A letter was issued, that stated that a requirement of case closure is that a "groundwater use restriction" be placed on the deed of the property, according to s. NR 726.05(8)(am)."

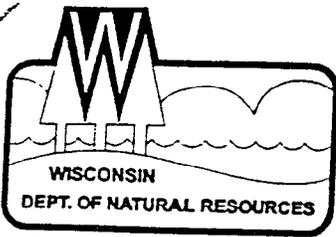
I have received an official copy of the "groundwater use restriction", which was recorded on November 30, 1999. Based upon the information in the case file, it appears that the degree and extent of petroleum contamination has been determined in the soil and groundwater at the site. It appears that the contamination at the above-named site has been remediated in compliance with the requirements of chs. NR 700 to 724, Wis. Adm. Code. Therefore, the Department considers the case "closed," having determined that no further remedial action is necessary at the site at this time. However, the case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety or welfare or the environment.

The WDNR appreciates the actions you have taken to restore the environment at this site. If you have any questions regarding this letter you may contact me at (414) 263-8541. Please refer to the FID and BRRTS numbers on the top of this letter in any future correspondence.

Sincerely,

Andrew Boettcher  
Hydrogeologist

cc: Key Engineering  
SER Case File



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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

Southeast Regional Headquarters  
2300 N. Dr. ML King Drive, PO Box 12436  
Milwaukee, Wisconsin 53212-0436  
Telephone 414-263-8500  
FAX 414-263-8483  
TDD 414-263-8713

September 2, 1999

In Reply Refer To: FID# 241494000  
BRRTS# 02-41-000090  
County of Milwaukee  
BRR-ERP

Mr. Robert Feitler  
C/o Manufacturer's Box Company  
179 E Lakeshore Drive Apt 16E  
Chicago, IL 60611

SUBJECT: Closure Request for *Manufacturer's Box Company Site, 830 East Keefe Avenue, Milwaukee, WI*

Dear Mr. Feitler:

The Wisconsin Department of Natural Resources (WDNR) has reviewed the reports entitled *Request for Case Closure*, dated January 27, 1999 and *Addendum to January 27, 1999 Request for Case Closure*, dated July 1, 1999, that were prepared by your consultant, Key Engineering. The reports contained requests that the WDNR grant "No Further Action" status for the site. Based upon the information in the case file and in the above referenced reports, it appears that the degree and extent of contamination has been determined to the extent practicable in the soil and groundwater at the site.

Due to the presence of remaining residual soil contamination under the building that is inaccessible, a requirement of case closure is that a deed restriction be placed on the deed of the property, according to s. NR 726.05(8)(a). The deed restriction should specify the location of the residual contamination on the property and require the existence of an on-site engineering control (i.e. the building foundation).

Because the site specific residual contamination levels were calculated based upon the land use being classified as industrial, a requirement of case closure is that a deed restriction be placed on the deed of the property, according to s. NR 726.05(8)(a), that limits land use to industrial use only.

Due to the presence of acetone, benzene, methyl ethyl ketone and toluene in the groundwater, at a concentration above the NR 140 Enforcement Standard (ES), a requirement of case closure is that a "groundwater use restriction" be placed on the deed of the property, according to s. NR 726.05(8)(am).

Your consultant submitted a draft copy of the proposed deed restriction. The language as proposed is not acceptable. The language in the deed restriction must follow the template contained in the guidance document entitled "Close Out Guidance on the Use of Deed and Groundwater Use Restrictions and Deed Notices". If you need a copy of this document, please contact me. In addition to the language, please attach a map that identifies the area of the remaining soil contamination to the deed restriction. You may wish to send another draft copy of the proposed deed restriction for WDNR approval prior to filing it with the Register of Deeds office. After the WDNR receives an official copy of an acceptable deed restriction from the Register of Deeds office, the site will be tracked as closed on the WDNR's computer database.

Quality Natural Resources Management  
Through Excellent Customer Service



The WDNR appreciates the actions you have taken to restore the environment at this site. If you have any questions regarding this letter you may contact me at (414) 263-8541. Please refer to the FID and BRRS numbers on the top of this letter in any future correspondence.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew Boettcher". The signature is written in a cursive style with a large initial "A".

Andrew Boettcher  
Hydrogeologist

cc: Key Engineering  
SER Case File

Document Number

GROUNDWATER USE RESTRICTION

REEL 4701 IMAG 659

7841923

REGISTER'S OFFICE 1 SS  
Milwaukee County, WI

RECORDED AT 12:26 PM

11-30-1999

REEL 4701 IMAGE 659 To 661 *INCL*

WALTER R. BARCZAK  
REGISTER OF DEEDS

AMOUNT 14.00

In Re: (Hubbard's Subd) the S 1/2 of NW 1/4  
SEC 9 & 4 Rods wide from the S side  
of N 1/2 of NW 1/4 Sec 9-7-22 Vol 1 P  
70 E 160' Lot 14 EXC N 30'

Site Address:  
Manufacturers Box Company  
830 East Keefe Avenue  
Milwaukee, Wisconsin 53212

Declaration of Restrictions

STATE OF WISCONSIN )  
 ) ss  
COUNTY OF MILWAUKEE )

Name and Return Address  
Manufacturers Box Company  
333 West Estabrook Boulevard  
Glendale, Wisconsin 53212

274-0131-8

Parcel Identification Number (PIN)

WHEREAS, Manufacturers Box Company is the owner of the above-described property; and

WHEREAS, one or more contaminant releases have occurred at this property. Groundwater with residual concentrations of acetone, methyl ethyl ketone and toluene above Ch. NR 140, Wisconsin Administrative Code, enforcement standards existed on this property in the Estimated Area of Unsaturated Residual Soil Contamination indicated on the attached figure on June 7, 1999.

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.

WHEREAS, natural attenuation has been approved by the Department of Natural Resources to remediate residual groundwater concentrations exceeding Chapter NR 140 groundwater standards within the boundaries of this property.

WHEREAS, construction of wells where the water quality exceeds the drinking water standards in Chapter NR 809 is restricted by Chapter NR 811 and Chapter NR 812. Special well construction standards or water treatment requirements, or both, or well construction prohibitions may apply.

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

- 1) Anyone who proposes to construct or reconstruct a well on this property is required to contact the Wisconsin Department of Natural Resources' Bureau of Drinking Water and Groundwater, or its

successor agency, to determine what specific prohibitions or requirements are applicable prior to constructing or reconstructing a well on this property. No well shall be constructed or reconstructed on the property unless applicable requirements are met.

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 of Natural Resources, 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 is no longer required. Upon receipt of such a request, the Wisconsin Department of Natural Resources shall determine whether or not the restriction contained herein can be extinguished. If the Wisconsin Department of Natural Resources determines that the restrictions can be removed, an affidavit can be recorded with a copy of the Wisconsin Department of Natural Resources's determination to give notice that the groundwater use restriction is no longer binding.

By signing this document, Mr. Robert Feitler asserts that he is duly authorized to sign this document on behalf of Manufacturers Box Company (the property owner).

IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restrictions, this 22<sup>nd</sup> day of November, 1999.

Signature: Robert Feitler

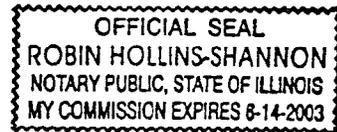
Printed Name: Robert Feitler

Subscribed and sworn to before me this 22<sup>nd</sup> day of November, 1999.

Robin Hollins-Shannon

Notary Public, State of ILLINOIS

My commission 06-19-2003



This document was drafted by the Wisconsin Department of Natural Resources.

CERTIFICATE NO. 225052

STATE OF WISCONSIN  
MILWAUKEE COUNTY SS.

OFFICE OF  
REGISTER OF DEEDS



I, the undersigned,  
Register of Deeds of  
Milwaukee County,  
hereby certify that  
this document is a  
true and correct copy  
of the original on  
file or record in  
this office.

Witness my hand and  
official seal this

DEC 10 1999

Walter H. Burczak  
Walter H. Burczak

GROUNDWATER USE RESTRICTION

MANUFACTURERS BOX COMPANY  
800 EAST KEEFE AVENUE  
MILWAUKEE, WISCONSIN



DRN. BY:	J.J.J.	DATE:	11/05/99
DSN. BY:	S.W.C.	FILE NO.:	0604010
CHK. BY:	S.W.C.	DWG. NO.:	604010B
REV. BY:	G.L.J.	SHEET NO.:	1

- NOTES**
- VOC: VOLATILE ORGANIC COMPOUNDS ug/l
  - B: BENZENE ug/l
  - CB: CHLOROBENZENE ug/l
  - CE: CHLOROETHANE ug/l
  - 1,1-DCA: 1,1-DICHLOROETHANE ug/l
  - 1,2-DCA: 1,2-DICHLOROETHANE ug/l
  - C-1,2-DCE: CIS-1,2-DICHLOROETHYLENE ug/l
  - EA: ETHYL ACETATE ug/l
  - E: ETHYLBENZENE ug/l
  - T: TOLUENE ug/l
  - A: ACETONE ug/l
  - H: HEXANE ug/l
  - MC: METHYLENE CHLORIDE ug/l
  - MEK: METHYL ETHYL KETONE ug/l
  - 1,2-DCE: 1,2-DICHLOROBENZENE ug/l
  - 1,3-DCE: 1,3-DICHLOROBENZENE ug/l
  - 1,4-DCE: 1,4-DICHLOROBENZENE ug/l
  - TMB: TOTAL TRIMETHYLBENZENES ug/l
  - ug/l: MICROGRAMS PER LITER
  - : NOT ANALYZED
  - ND: NOT DETECTED
  - \*: NO YEAR ENFORCEMENT STANDARD ESTABLISHED
  - RL: REPORTING LIMIT
  - L: GENERAL LAB SOLVENT AND CONTAMINANT
  - (Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION
  - (D): SAMPLE DELAYED BY LABORATORY FOR ANALYSIS

MW-4

DATE	11/21/95	6/26/96	11/20/97	5/19/98
H	712	--	ND	ND

MW-3

DATE	11/21/95	6/26/96	11/20/97	5/19/98
H	2.94	--	ND	ND
MC	1.07	<2.0	<0.42	<0.36

P-1K

DATE	9/8/98	11/21/97	5/19/98	11/20/98
VOC	ND	ND	ND	ND

MW-9

DATE	11/21/95	6/20/96	11/20/97	5/19/98	11/20/98	6/18/99
MC	6.28	<2.0	<0.42	<0.36	<0.9	<0.78

MW-7

DATE	11/21/95	6/20/96	11/20/97	5/19/98	11/20/98	5/15/99
A	1020	<10	350 (D)	3,900	7,290	15,490
B	9.4	28	10	27	24 (Q)	28
CB	25.2	11	3.4 (Q)	54	<116	<22
MEK	581	<10	200	7,300	1,690	15,300
MC	781	<10	0.88 (C)	1.54 (Q)	276	<152
T	29	38	75	210	80 (Q)	182 (Q)
1,2-DCA	18	<10	2.3	<37	<19	<28
C-1,2-DCE	<20	<10	0.51 (Q)	<28	<20	<40
X	<30	<10	2.2 (Q)	<87	<54	<108

MW-5

DATE	11/21/95	6/20/96	11/20/97	5/19/98
MC	<1	<2	<0.42	0.41 (Q)

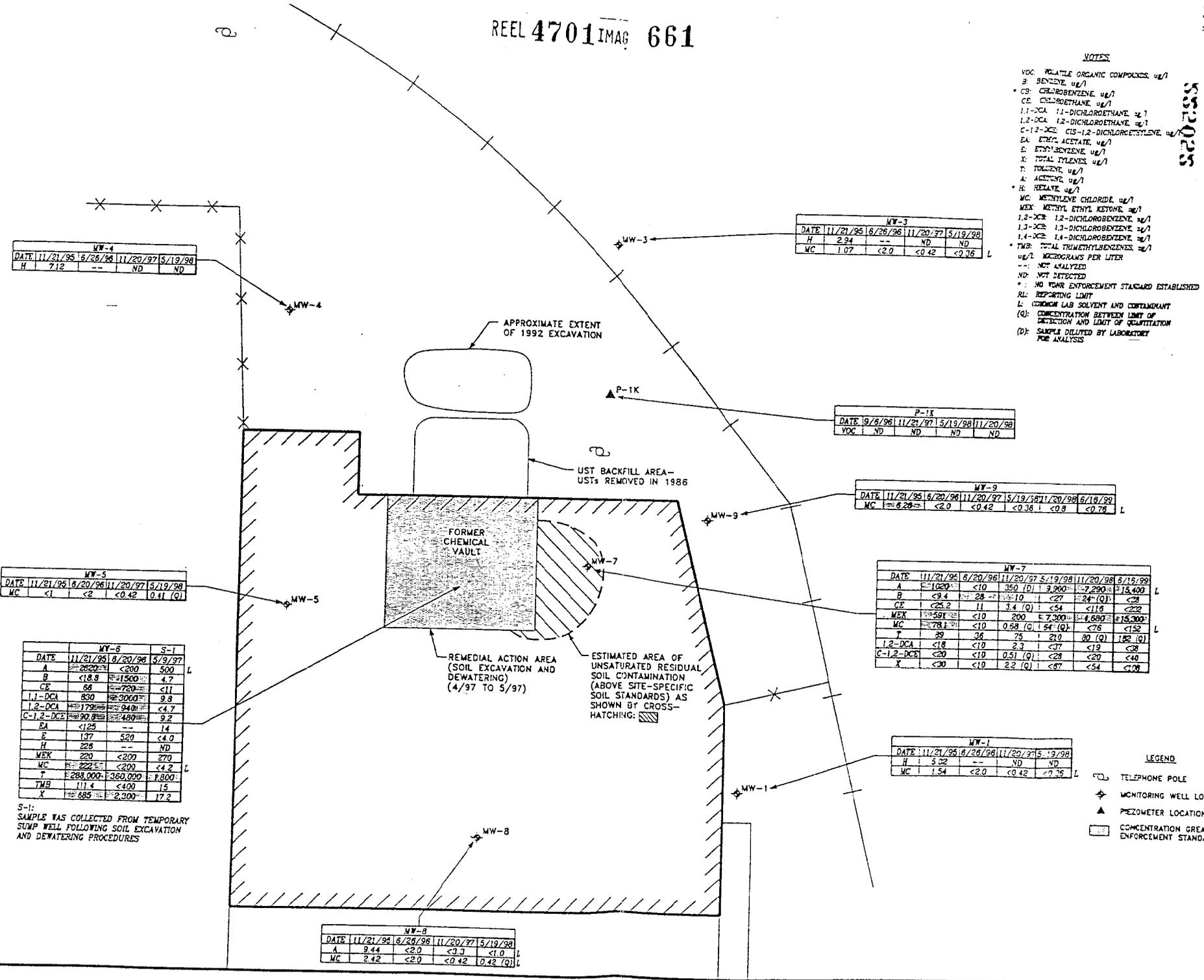
MW-6

DATE	11/21/95	6/20/96	5/19/97
A	2620	<200	500
B	18.8	1500	4.7
CB	86	720	<11
1,1-DCA	800	3000	9.8
1,2-DCA	179	940	<4.7
C-1,2-DCE	90.8	480	9.2
EA	125	--	14
E	137	520	<4.0
H	228	--	ND
MEK	220	<200	270
MC	222	<200	<4.2
T	288,000	380,000	1,800
TMB	11.4	<400	15
X	885	2,300	17.2

S-1: SAMPLE WAS COLLECTED FROM TEMPORARY SUMP WELL FOLLOWING SOIL EXCAVATION AND DEWATERING PROCEDURES

MW-8

DATE	11/21/95	6/26/96	11/20/97	5/19/98
A	9.44	<2.0	<0.3	<1.0
MC	2.42	<2.0	<0.42	0.43 (Q)



Document Number

DEED RESTRICTION  
REEL 4701 IMAG 662

7841924

REGISTER'S OFFICE 1 SS  
Milwaukee County, WI

RECORDED AT 12:26 PM

11-30-1999

REEL 4701 IMAGE 66276664  
ZNA

WALTER R. BARCZAK  
REGISTER OF DEEDS

AMOUNT 14.00

Declaration of Restrictions

In Re: (Hubbard's Subd) the S 1/2 of NW  
1/4 SEC 9 & 4 Rods wide from the  
S side of N 1/2 of NW 1/4 Sec 9-7-  
22 Vol 1 P 70 E 160' Lot 14 EXC  
N 30'

Site Address:  
Manufacturers Box Company  
830 East Keefe Avenue  
Milwaukee, Wisconsin 53212

Name and Return Address  
Manufacturers Box Company  
333 West Estabrook Boulevard  
Glendale, Wisconsin 53212

Declaration of Restrictions

STATE OF WISCONSIN )  
 ) ss  
COUNTY OF MILWAUKEE )

274-0131-8  
Parcel Identification Number (PIN)

WHEREAS, Manufacturers Box Company is the owner of the above-described property; and

WHEREAS, one or more contaminant releases have occurred at this property. Structural impediments existing at the time of clean-up made complete remediation of the soil contamination impracticable. Soil with residual concentrations of acetone, benzene, methyl ethyl ketone and toluene remains on this property at the location depicted on the attached diagram (Estimated Area of Unsaturated Residual Soil Contamination).

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 the property described above shall be held, conveyed or encumbered, leased, rented, used, occupied and improved subject to the following limitation and restrictions:

- 1) The current low-permeability cover (existing building) or equivalent must be maintained unless remedial action is taken as necessary to meet all applicable soil cleanup standards.
- 2) The property described above may not be used or developed for a residential, commercial, agricultural or other non-industrial use, unless (at the time that the non-industrial use is proposed) remedial action is taken as necessary to meet all applicable non-industrial soil cleanup standards.

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 of Natural Resources, 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 is no longer required. Upon receipt of such a request, the Wisconsin Department of Natural Resources shall determine whether or not the restriction contained herein can be extinguished. If the Wisconsin Department of Natural Resources determines that the restrictions can be removed, an affidavit can be recorded with a copy of the Wisconsin Department of Natural Resources's determination to give notice that the groundwater use restriction is no longer binding.

By signing this document, Mr. Robert Feitler asserts that he is duly authorized to sign this document on behalf of Manufacturers Box Company (the property owner).

IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restrictions, this 22nd day of November, 1999.

Signature: Robert Feitler

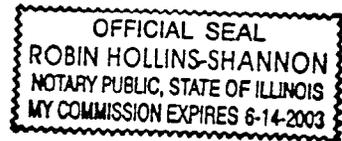
Printed Name: Robert Feitler

Subscribed and sworn to before me this 22nd day of November, 1999.

John Hollins Shannon

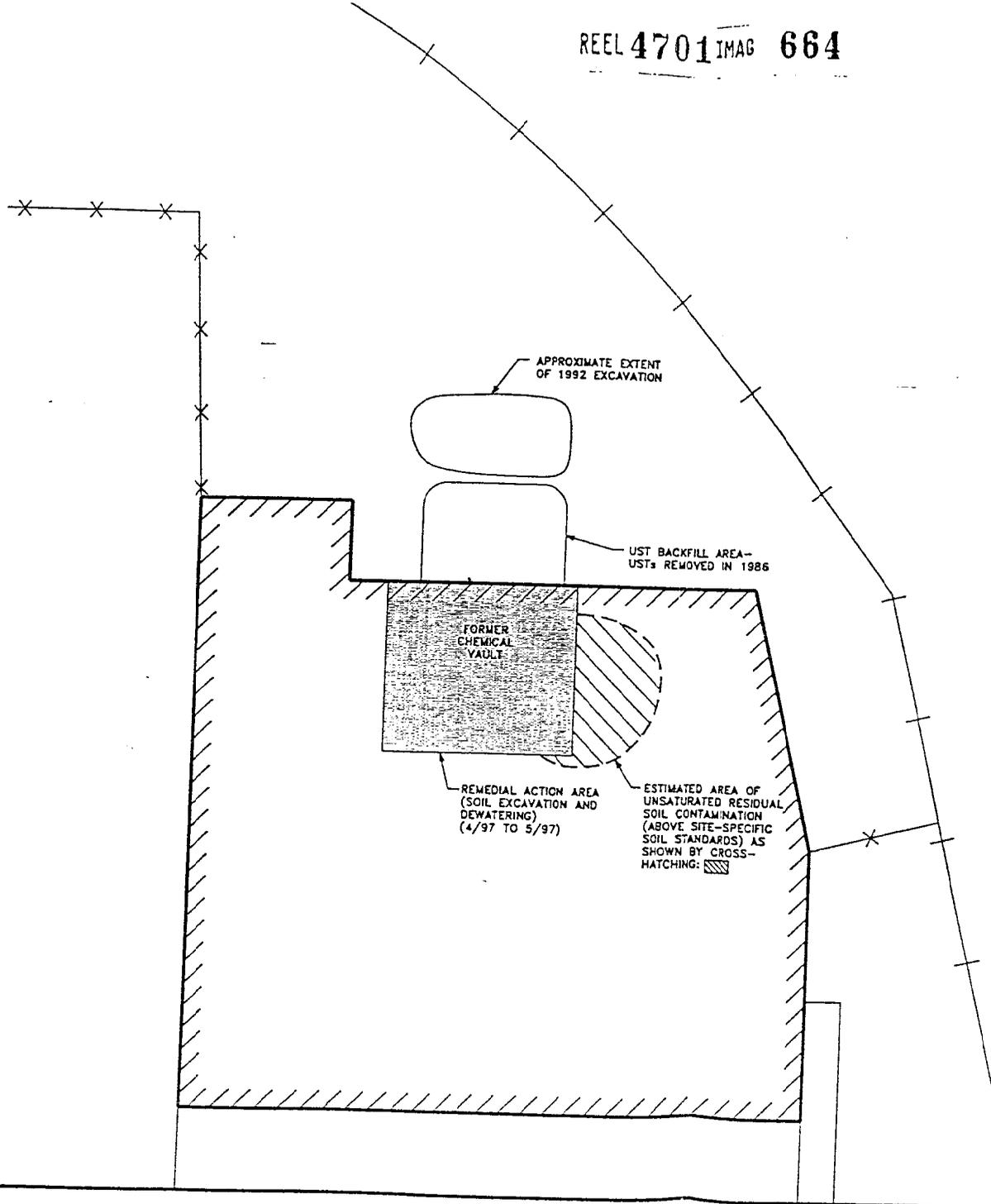
Notary Public, State of ILLINOIS

My commission 06-14-2003



This documented was drafted by the Wisconsin Department of Natural Resources.

SS:SS



© 1999 Key Engineering Group Ltd.



DEED RESTRICTION  
 MANUFACTURERS BOY COMPANY  
 830 EAST KEEFE AVENUE  
 MILWAUKEE, WISCONSIN



DRN. BY:	J.J.J.	DATE:	01/26/99
DSN. BY:	S.W.C.	FILE NO.:	0804010
CHK. BY:	S.W.C.	DWG. NO.:	6040105
REV. BY:	G.L.J.	SHEET NO.:	1

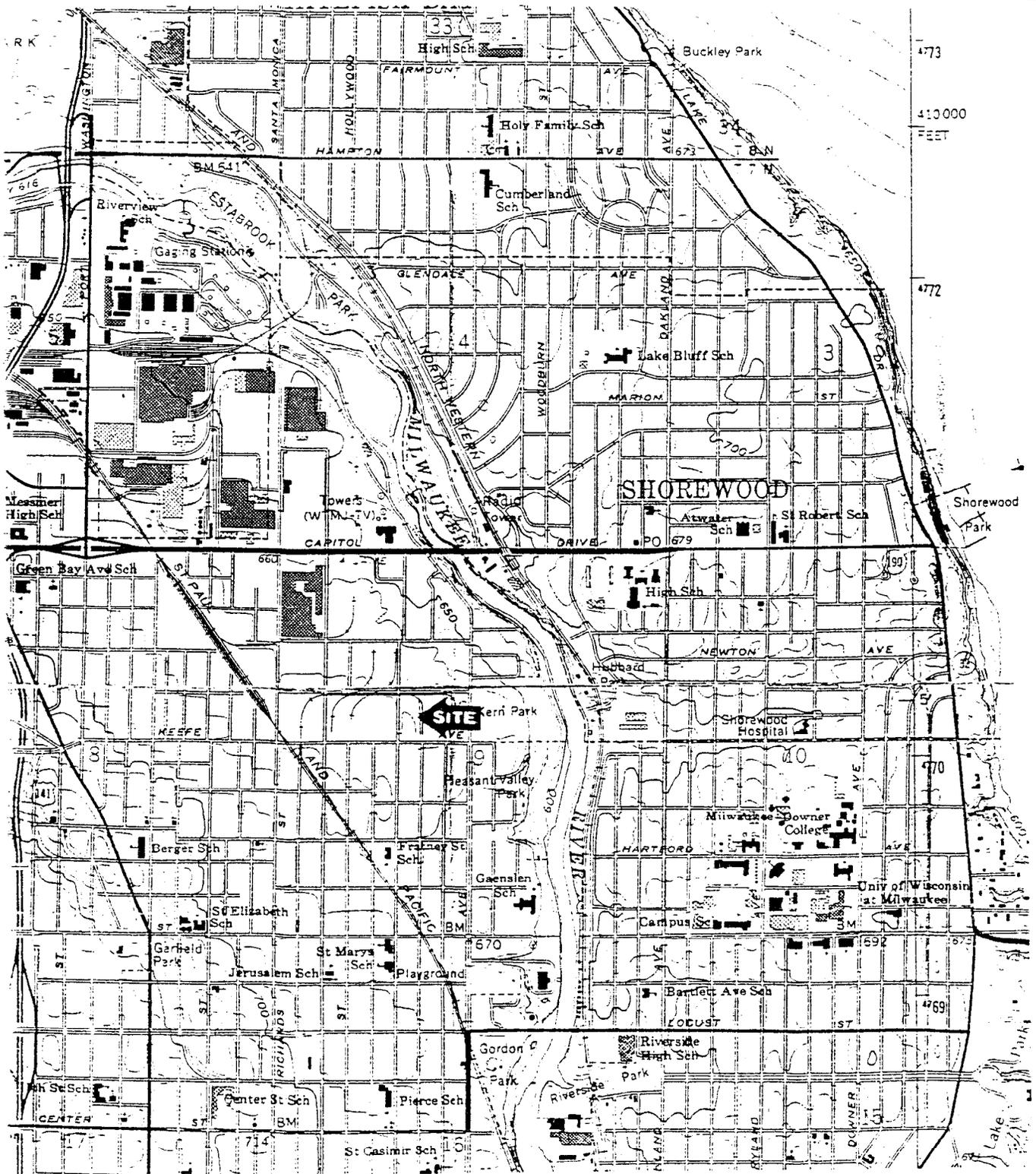
CERTIFICATE NO. **225053**  
STATE OF WISCONSIN  
MILWAUKEE COUNTY 88.  
OFFICE OF  
REGISTER OF DEEDS



I, the undersigned,  
Register of Deeds of  
Milwaukee County,  
hereby certify that  
this document is a  
true and correct copy  
of the original on  
file or record in  
this office.

Witness my hand and  
official seal this

DEC 10 1944  
*Walter R. Barczak*  
Walter R. Barczak



SOURCE: USGS Milwaukee, Wisconsin Quadrangle Map  
 Topographic Map 1958  
 Photorevised 1971

© 1997 Key Environmental Services, Inc.

**FIGURE 1  
 SITE LOCATION MAP**

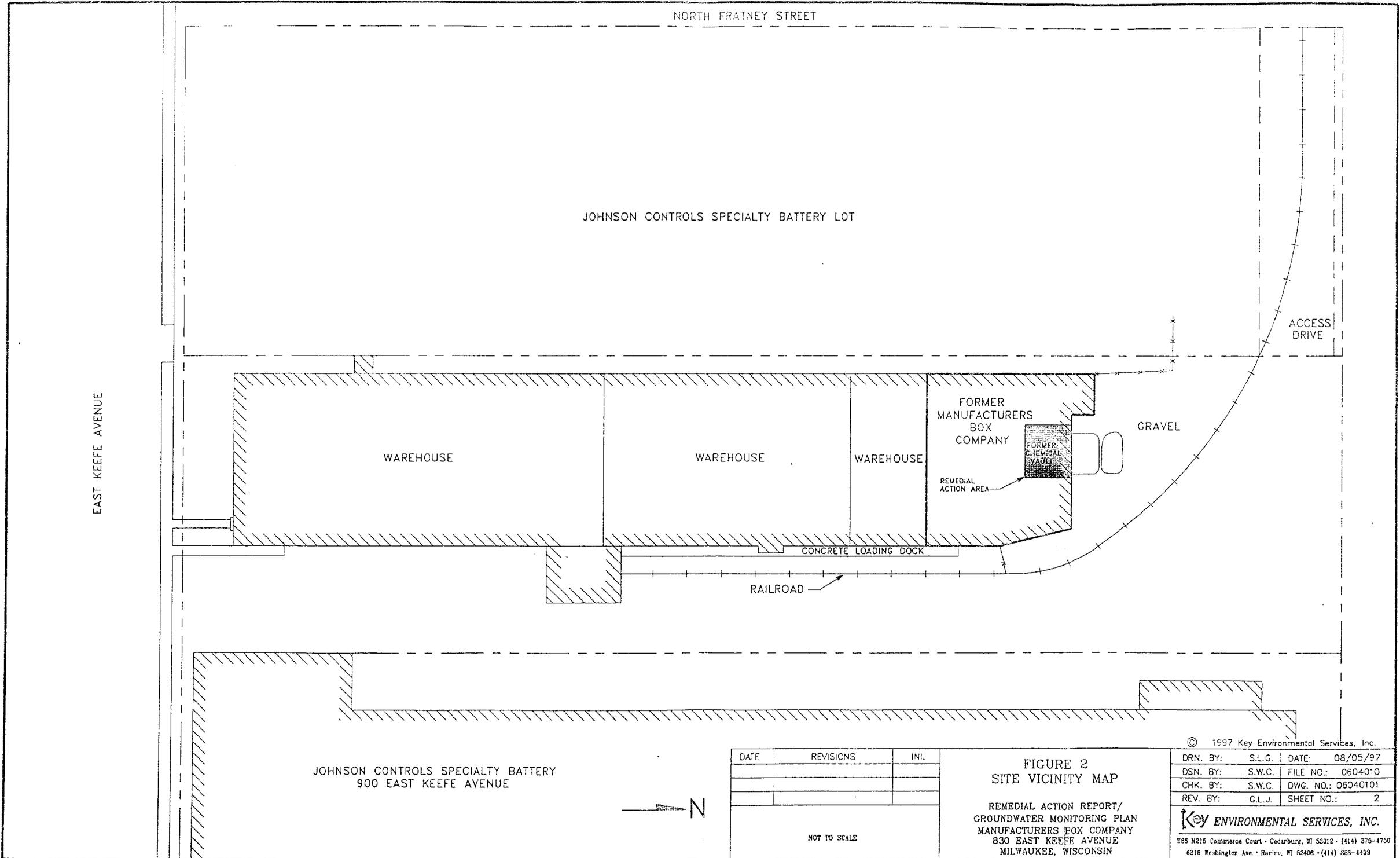
REMEDIAL ACTION REPORT/  
 GROUNDWATER MONITORING PLAN  
 MANUFACTURERS BOX COMPANY  
 830 EAST KEEFE AVENUE  
 MILWAUKEE, WISCONSIN

DRN. BY:	S.L.G.	DATE:	07/29/97
DSN. BY:	S.W.C.	FILE NO.:	0604010
CHK. BY:	S.W.C.	DWG. NO.:	60401001
REV. BY:	G.L.J.	SHEET NO.:	1

**Key ENVIRONMENTAL SERVICES, INC.**

W86 N215 Commerce Court • Cedarburg, WI 53012 • (414) 375-4750  
 8216 Washington Ave. • Racine, WI 53406 • (414) 886-4439

DATE	REVISIONS	INI.



NORTH FRATNEY STREET

JOHNSON CONTROLS SPECIALTY BATTERY LOT

EAST KEEFFE AVENUE

ACCESS DRIVE

WAREHOUSE

WAREHOUSE

WAREHOUSE

FORMER MANUFACTURERS BOX COMPANY

FORMER CHEMICAL VAULT

GRAVEL

REMEDIAL ACTION AREA

CONCRETE LOADING DOCK

RAILROAD

JOHNSON CONTROLS SPECIALTY BATTERY  
900 EAST KEEFFE AVENUE



DATE	REVISIONS	INI.

NOT TO SCALE

**FIGURE 2  
SITE VICINITY MAP**

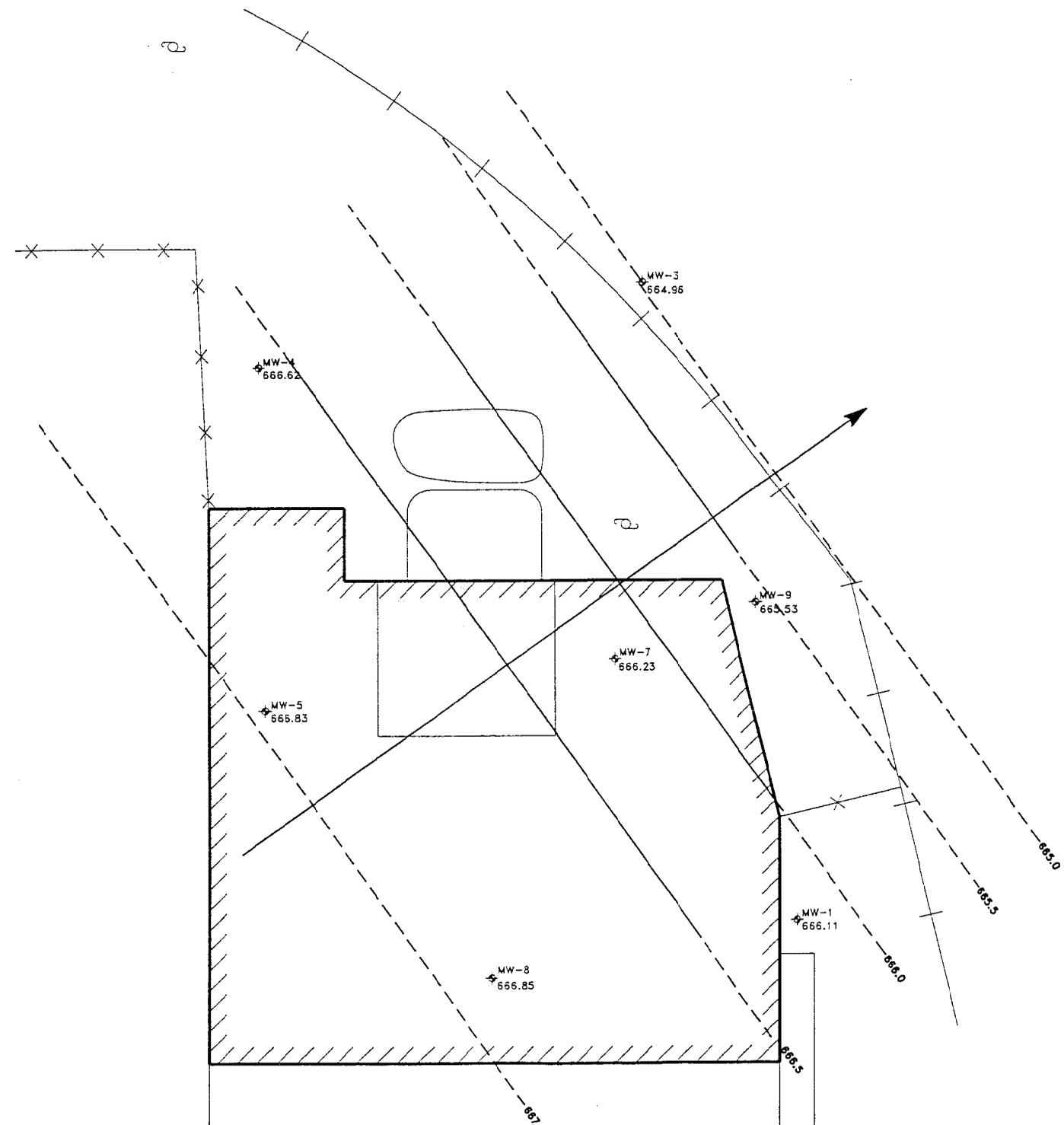
REMEDIAL ACTION REPORT/  
GROUNDWATER MONITORING PLAN  
MANUFACTURERS BOX COMPANY  
830 EAST KEEFFE AVENUE  
MILWAUKEE, WISCONSIN

© 1997 Key Environmental Services, Inc.

DRN. BY:	S.L.G.	DATE:	08/05/97
DSN. BY:	S.W.C.	FILE NO.:	0604010
CHK. BY:	S.W.C.	DWG. NO.:	06040101
REV. BY:	G.L.J.	SHEET NO.:	2

**Key ENVIRONMENTAL SERVICES, INC.**

186 N216 Commerce Court • Cedarburg, WI 53012 • (414) 375-4750  
6216 Washington Ave. • Racine, WI 53406 • (414) 895-4439



**LEGEND**  
 ☐ TELEPHONE POLE  
 ⊕ MONITORING WELL LOCATION (SWANSON)  
 666.11 GROUNDWATER ELEVATION (11/20/98)  
 ← GROUNDWATER FLOW DIRECTION

DRN. BY:	S.L.G.	DATE:	01/12/99
DSN. BY:	S.W.C.	FILE NO.:	0604010
CHK. BY:	S.W.C.	DWG. NO.:	6040107
REV. BY:	G.L.J.	SHEET NO.:	2



© 1999 Key Engineering Group Ltd.  
**FIGURE 2**  
**GROUNDWATER ELEVATION**  
**CONTOUR MAP**  
**(NOVEMBER 20, 1998)**  
 GROUNDWATER MONITORING REPORT  
 MANUFACTURERS BOX COMPANY  
 830 EAST KEEFE AVENUE  
 MILWAUKEE, WISCONSIN



© 1999 Key Engineering Group Ltd.

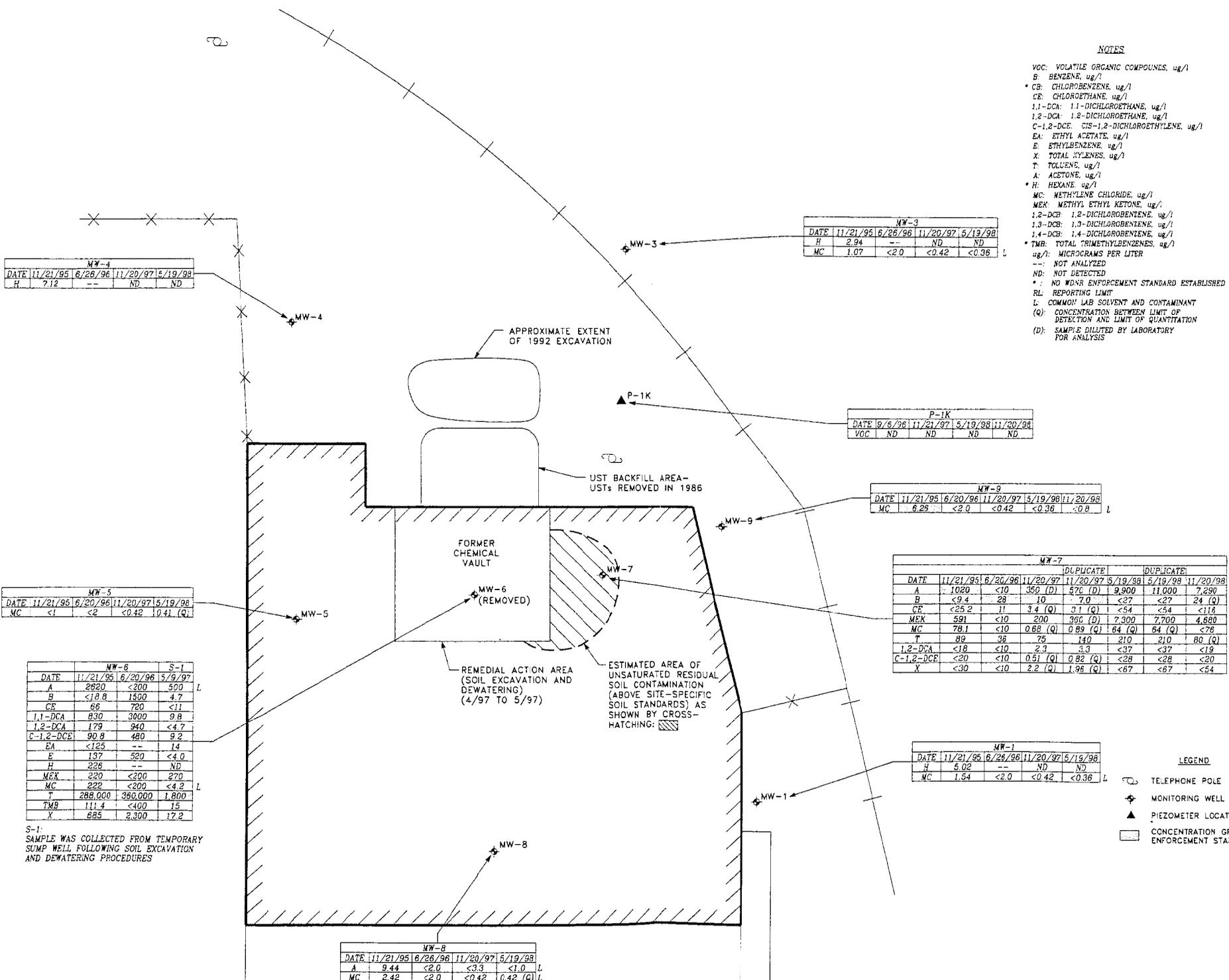
# FIGURE 1 SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

GROUNDWATER MONITORING REPORT  
MANUFACTURERS BOX COMPANY  
830 EAST KEEFE AVENUE  
MILWAUKEE, WISCONSIN



DRN. BY:	S.L.G.	DATE:	01/26/99
USN. BY:	S.W.C.	FILE NO.:	0604010
CHK. BY:	S.W.C.	DWG. NO.:	6040105
REV. BY:	G.L.J.	SHEET NO.:	1

- NOTES**
- VOC: VOLATILE ORGANIC COMPOUNDS, ug/l
  - B: BENZENE, ug/l
  - CB: CHLOROBENZENE, ug/l
  - CE: CHLOROETHANE, ug/l
  - 1,1-DCA: 1,1-DICHLOROETHANE, ug/l
  - 1,2-DCA: 1,2-DICHLOROETHANE, ug/l
  - C-1,2-DCE: CIS-1,2-DICHLOROETHYLENE, ug/l
  - EA: ETHYL ACETATE, ug/l
  - E: ETHYLBENZENE, ug/l
  - X: TOTAL XYLENES, ug/l
  - T: TOLUENE, ug/l
  - A: ACETONE, ug/l
  - H: HEXANE, ug/l
  - MC: METHYLENE CHLORIDE, ug/l
  - MEK: METHYL ETHYL KETONE, ug/l
  - 1,2-DCB: 1,2-DICHLOROBENZENE, ug/l
  - 1,3-DCB: 1,3-DICHLOROBENZENE, ug/l
  - 1,4-DCB: 1,4-DICHLOROBENZENE, ug/l
  - TMB: TOTAL TRIMETHYLBENZENES, ug/l
  - ug/l: MICROGRAMS PER LITER
  - ND: NOT ANALYZED
  - ND: NOT DETECTED
  - \*: NO MDN ENFORCEMENT STANDARD ESTABLISHED
  - RL: REPORTING LIMIT
  - L: COMMON LAB SOLVENT AND CONTAMINANT
  - (Q): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION
  - (D): SAMPLE DILUTED BY LABORATORY FOR ANALYSIS



MW-4				
DATE	11/21/95	6/26/96	11/20/97	5/19/98
H	7.12	--	ND	ND

MW-3				
DATE	11/21/95	6/26/96	11/20/97	5/19/98
H	2.94	--	ND	ND
MC	1.07	<2.0	<0.42	<0.36

P-1K				
DATE	9/6/96	11/21/97	5/19/98	11/20/98
VOC	ND	ND	ND	ND

MW-9					
DATE	11/21/95	6/20/96	11/20/97	5/19/98	11/20/98
MC	6.28	<2.0	<0.42	<0.36	<0.8

MW-5				
DATE	11/21/95	6/20/96	11/20/97	5/19/98
MC	<1	<2	<0.42	10.41 (Q)

DATE	DUPLICATE				DUPLICATE			
	11/21/95	6/20/96	11/20/97	5/19/98	5/19/98	11/20/98	11/20/98	
A	1020	<10	350 (D)	576 (D)	9,900	11,000	7,290	
B	<9.4	28	10	7.0	<27	<27	24 (Q)	
CE	<25.2	11	3.4 (Q)	3.1 (Q)	<54	<54	<114	
MEK	591	<10	200	360 (D)	7,300	7,700	4,680	
MC	78.1	<10	0.68 (Q)	0.89 (Q)	64 (Q)	64 (Q)	<76	
T	88	36	75	140	210	210	80 (Q)	
1,2-DCA	<18	<10	2.9	3.3	<37	<37	<19	
C-1,2-DCE	<20	<10	0.51 (Q)	0.82 (Q)	<28	<28	<20	
X	<30	<10	2.2 (Q)	1.98 (Q)	<67	<67	<54	

MW-6				S-1
DATE	11/21/95	6/20/96	5/19/97	
A	2620	<200	500	
B	<18.8	1800	4.7	
CE	65	720	<11	
1,1-DCA	830	3000	9.8	
1,2-DCA	179	840	<4.7	
C-1,2-DCE	90.8	480	9.2	
EA	<125	--	14	
E	137	520	<4.0	
H	226	--	ND	
MEK	230	<200	270	
MC	222	<200	<4.2	
T	288,000	360,000	1,800	
TMB	111.4	<400	15	
X	685	2,300	12.2	

S-1: SAMPLE WAS COLLECTED FROM TEMPORARY SUMP WELL FOLLOWING SOIL EXCAVATION AND DEWATERING PROCEDURES

MW-8				
DATE	11/21/95	6/26/96	11/20/97	5/19/98
A	9.44	<2.0	<3.3	<1.0
MC	2.42	<2.0	<0.42	0.42 (Q)

MW-1				
DATE	11/21/95	6/26/96	11/20/97	5/19/98
H	5.02	--	ND	ND
MC	1.54	<2.0	<0.42	<0.36

- LEGEND**
- ☎ TELEPHONE POLE
  - ⊕ MONITORING WELL LOCATION (SWANSON)
  - ▲ PIEZOMETER LOCATION (KEY)
  - ▨ CONCENTRATION GREATER THAN NR 140 ENFORCEMENT STANDARDS

GP-2		
SOIL		
DEPTH	3'-5'	18'-20'
B	ND	13
n-BB	240	ND
s-BB	40	ND
t-BB	170	ND
CF	ND	3
MC	130	88
T	1800	161
1,1,1-TCA	ND	12
TCE	ND	17
1,2,4-TMB	600	ND
1,3,5-TMB	300	ND
X	120	6

GP-1		
SOIL		
DEPTH	3'-5'	18'-20'
B	330	13
BM	18	ND
n-BB	11	ND
s-BB	8	ND
t-BB	189	ND
CF	3	ND
E	43	ND
MC	45	ND
S	7	ND
T	24	ND
1,1,1-TCA	14	ND
TCE	32	ND
1,3,5-TMB	112	ND
X	454	ND

MW-6		
GROUNDWATER		
DATE	11/21/95	06/20/96
A	262	ND
B	ND	150
CE	66	720
1,1-DCA	830	ND
1,2-DCA	170	940
C-1,2-DCE	90.8	480
E	137	520
H	226	--
MEK	220	ND
MC	222	ND
T	288,000	360,000
1,2,4-TMB	52.4	ND
1,3,5-TMB	59.0	ND
X	865	2300

MW-6		
SOIL		
DEPTH	0'-12'	PID
		34.6-9999

- NOTES
- GROUNDWATER LABORATORY ANALYTICAL:
    - VOC: VOLATILE ORGANIC COMPOUNDS, ug/l
    - B: BENZENE, ug/l
    - CB: CHLOROBENZENE, ug/l
    - CE: CHLOROETHANE, ug/l
    - 1,1-DCA: 1,1-DICHLOROETHANE, ug/l
    - 1,2-DCA: 1,2-DICHLOROETHANE, ug/l
    - C-1,2-DCE: CIS-1,2-DICHLOROETHYLENE, ug/l
    - E: ETHYLBENZENE, ug/l
    - X: TOTAL XYLENES, ug/l
    - T: TOLUENE, ug/l
    - A: ACETONE, ug/l
    - H: HEXANE, ug/l
    - MC: METHYLENE CHLORIDE, ug/l
    - MEK: METHYL ETHYL KETONE, ug/l
    - 1,2-DCB: 1,2-DICHLOROBENZENE, ug/l
    - 1,3-DCB: 1,3-DICHLOROBENZENE, ug/l
    - 1,4-DCB: 1,4-DICHLOROBENZENE, ug/l
    - 1,2,4-TMB: 1,2,4-TRIMETHYLBENZENE, ug/l
    - 1,3,5-TMB: 1,3,5-TRIMETHYLBENZENE, ug/l
    - ug/l: MICROGRAMS PER LITER
    - ND: NOT ANALYZED
    - NO: NOT DETECTED
    - NO ENFORCEMENT STANDARD ESTABLISHED
    - R: REPORTING LIMIT
    - L: COMMON LAB SOLVENT AND CONTAMINANT

- SOIL LABORATORY ANALYTICAL:
  - PHOTOIONIZATION DETECTOR, I.U.
  - I.U.: INSTRUMENT UNITS
  - B: BENZENE, ug/kg
  - T: TOLUENE, ug/kg
  - E: ETHYLBENZENE, ug/kg
  - X: TOTAL XYLENES, ug/kg
  - FA: ETHYL ACETATE, ug/kg
  - A: ACETONE, ug/kg
  - MEK: METHYL ETHYL KETONE, ug/kg
  - H: HEXANE, ug/kg
  - 1,1-DCA: 1,1-DICHLOROETHANE, ug/kg
  - 1,2-DCA: 1,2-DICHLOROETHANE, ug/kg
  - 1,2-DCE: 1,2-DICHLOROETHYLENE, ug/kg
  - BM: BROMOMETHANE, ug/kg
  - n-BB: n-BUTYLBENZENE, ug/kg
  - s-BB: sec-BUTYLBENZENE, ug/kg
  - t-BB: tert-BUTYLBENZENE, ug/kg
  - CE: CHLOROETHANE, ug/kg
  - CF: CHLOROPFORM, ug/kg
  - CM: CHLOROMETHANE, ug/kg
  - 1,1,2-DCE: trans-1,2-DICHLOROETHYLENE, ug/kg
  - Pb: LEAD, mg/kg
  - MC: METHYLENE CHLORIDE, ug/kg
  - N: NAPHTHALENE, ug/kg
  - S: STYRENE, ug/kg
  - 1,1,1-TCA: 1,1,1-TRICHLOROETHANE, ug/kg
  - TCE: TRICHLOROETHYLENE, ug/kg
  - 1,2,4-TMB: 1,2,4-TRIMETHYLBENZENE, ug/kg
  - 1,3,5-TMB: 1,3,5-TRIMETHYLBENZENE, ug/kg
  - PCB: POLYCHLORINATED BIPHENYLS, ug/kg (COMPOSITE OF HA-1 THROUGH HA-6)
  - mg/kg: MILLIGRAMS PER KILOGRAM
  - ug/kg: MICROGRAMS PER KILOGRAM
  - <: LESS THAN
  - ND: NO DETECTION
  - ND: NOT ANALYZED
  - L: COMMON LAB SOLVENT & CONTAMINANT

- IMPACTED SOIL AT LOCATIONS B-1, B-4 AND TP-2 REMOVED DURING EXCAVATION ACTIVITIES.
- NO LABORATORY SOIL SAMPLES WERE COLLECTED FROM B-2, B-5, TP-4, MW-1 THROUGH MW-3, OW-1 OR OW-2.

© 1996 Key Environmental Services, Inc.  
 DRN BY: ALR DATE: 12/12/96  
 DSN BY: G.L.J. FILE NO.: 0604010  
 CHK BY: G.L.J. DWG. NO.: 06040102  
 REV. BY: K.W.W. SHEET NO.: 3

Key ENVIRONMENTAL SERVICES, INC.  
 #608 N215 Commerce Court - Cedarburg, WI 53012 - (414) 375-4750  
 6216 Washington Ave. - Racine, WI 53406 - (414) 666-4499

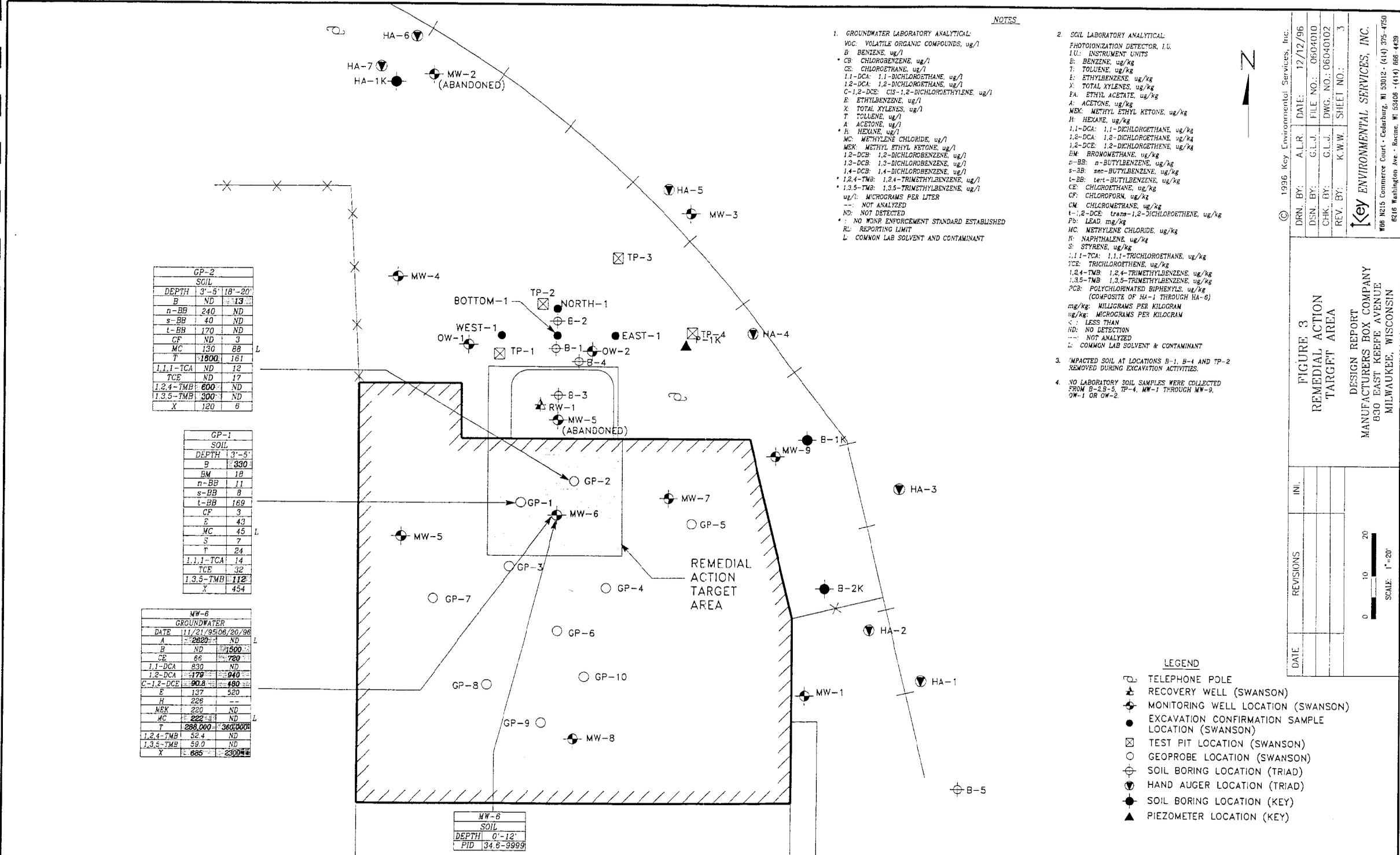
DESIGN REPORT  
 REMEDIAL ACTION  
 TARGET AREA

MANUFACTURERS BOX COMPANY  
 830 EAST KEEFE AVENUE  
 MILWAUKEE, WISCONSIN

DATE	REVISIONS	INI.

LEGEND

- ☉ TELEPHONE POLE
- ⊕ RECOVERY WELL (SWANSON)
- ⊙ MONITORING WELL LOCATION (SWANSON)
- EXCAVATION CONFIRMATION SAMPLE LOCATION (SWANSON)
- ⊠ TEST PIT LOCATION (SWANSON)
- GEOPROBE LOCATION (SWANSON)
- ⊕ SOIL BORING LOCATION (TRIAD)
- ⊖ HAND AUGER LOCATION (TRIAD)
- SOIL BORING LOCATION (KEY)
- ▲ PIEZOMETER LOCATION (KEY)



Mr. Andy Boettcher  
July 1, 1999  
Page 2

Elevated levels of acetone and methyl ethyl ketone (MEK) were again detected in MW-7. However, as you can see from the table below and as documented in the *Request for Closure*, the concentration is significantly influenced by the height of the groundwater table, the higher the groundwater table, the higher the groundwater concentration (indicative of more residual contaminated soil being intersected). In the latest round of groundwater sampling, the groundwater level was the highest it has been since soil excavation and dewatering. Consequently, the groundwater concentrations spiked.

The following is a summary of the MW-7 data (acetone and MEK are the principal residual contaminants):

Date	Acetone (µg/l)	MEK (µg/l)	Water Depth (feet)	Log Conc. X Water Depth (Acetone/MEK)
Nov 97	570	360	4.72	13/12
May 98	11,000	7,700	3.42	14/13
Nov 98	7,290	4,680	4.39	17/16
June 99	15,400	15,300	3.19	13/13

In order to assess the significance of the variation in concentration with water level and time, a water level "corrected concentration factor" was calculated for acetone and MEK (log concentration x water depth). The results are provided in the last column of the table above. The results indicate a relatively constant "corrected concentration factor" over time. It is likely that concentrations of acetone and MEK will continue to vary with groundwater level. However, given the significant quantity of contaminant mass/source removal completed (to the extent feasible, even within the building), there is no reason to believe that the "corrected concentration factor" would not remain constant or reduce over time. Groundwater monitoring data confirm that these residual groundwater impacts are confined to the area of residual soil impacts.

Based on the data and conclusions, along with the rationale provided in the *Request for Closure* (significant source control completed, residual groundwater contaminant concentrations significantly decrease with distance from the source, residual groundwater impacts are not migrating off-site, residual groundwater impacts are not migrating vertically, and the subject site and vicinity are serviced by municipal water), it is KEY's opinion that further groundwater monitoring is not warranted.

### **Floor Drains**

There are no floor drains in the building.

### **Polychlorinated Biphenyl Detects in Soil**

The polychlorinated biphenyl (PCB) (Aroclor 1254) concentration detected in the composite sample from HA-1 through HA-2 (0.0811 milligrams per kilogram (mg/kg)) is significantly less than the United States Environmental Protection Agency (USEPA) Region 9 Preliminary Remediation Goals of 0.97 mg/kg (residential) and 18 mg/kg (industrial).

TABLE 2

## SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

SITE INVESTIGATION/REMEDIAL ACTION OPTIONS REPORT  
MANUFACTURERS BOX COMPANY830 East Keefe Avenue  
Milwaukee, Wisconsin

	ACETONE	BENZENE	CHLORO BENZENE	CHLORO ETHANE	1,2-DCB	1,3-DCB	1,4 DCB	1,1 DCA	1,2 DCA	C-1,2-DCE	ETHYL ACETATE	ETHYL BENZENE	HEXANE	MEK	METHYLENE CHLORIDE	TOLUENE	1,2,4-TMB	1,3,5-TMB	XYLENE
MW-1																			
10/23/91	<50	<1	<1	<1	<2	<2	<2	<1	<1	---	<50	<1	<50	---	<1	2	---	---	3
04/01/92	<50	<1	<1	<1	<2	<2	<2	<1	<1	---	<50	<1	<50	---	<1	<1	---	---	<1
07/27/95	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<19,000	<2	<250	<10	<2	<2	<2	<2	<2
11/21/95	<9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	6.02	<4	1.64	<1	<1	<1	<1
08/20/98	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	---	<2	---	<2	<2	<2	<2	<2	<2
MW-2																			
10/23/91	84	<1	<1	<1	<2	<2	<2	<1	<1	<1	<50	<1	<50	---	<1	<1	---	---	<1
MW-3																			
10/23/91	<50	<1	<1	<1	<2	<2	<2	<1	<1	---	<50	<1	<50	---	<1	<1	---	---	<1
04/01/92	<50	<1	<1	<1	<2	<2	<2	<1	<1	---	<50	<1	<50	---	<1	<1	---	---	<1
07/27/95	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<19000	<2	<250	<10	<2	<2	<2	<2	<2
11/21/95	<9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	2.04	<4	1.07	<1	<1	<1	<1
08/25/98	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	---	<2	---	<2	<2	<2	<2	<2	<2
MW-4																			
10/23/91	<50	<1	<1	<1	<2	<2	<2	<1	<1	---	<50	<1	<50	---	<1	<1	---	---	<1
04/01/92	<50	<1	<1	<1	<2	<2	<2	<1	<1	---	<50	<1	<50	---	<1	<1	---	---	<1
07/27/95	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<19000	<2	<250	<10	<2	<2	<2	<2	<2
11/21/95	<9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	7.12	<4	<1	<1	<1	<1	<1
08/20/98	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	---	<2	---	<2	<2	<2	<2	<2	<2
MW-5																			
07/27/95	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<19000	<2	<250	<10	<2	<2	<2	<2	<2
11/21/95	<9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<2	<4	<1	<1	<1	<1	<1
08/20/98	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	---	<2	---	<2	<2	<2	<2	<2	<2
MW-6																			
07/27/95	<5000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1900	<1000	740	<5000	<1000	250000	<1000	<1000	<1000
11/21/95	2820	<19	<10	66	<38	<49	<48	830	179	90.8	<125	137	228	220	222	288000	52.4	59.0	686
08/20/98	<200	1500	<200	720	<200	<200	<200	<200	940	480	---	520	---	<200	<200	360000	<200	<200	2300
MW-7																			
07/27/95	3300	20	<20	<20	<20	<20	<20	<20	<20	<20	<1900	<20	<250	1700	<20	80	<20	<20	<20
11/21/95	1020	<10	<5	<28	<19	<25	<23	<8	<18	<20	<63	<10	<58	691	78.1	89.0	<24	<18	<30
08/20/98	<10	28	<10	11	<10	<10	<10	<10	<10	<10	---	<10	---	<10	<10	38	<10	<10	<10
PAL	200	0.5	NE	80	60	125	15	85	0.5	7	NE	140	NE	80	0.5	88.8	NE	NE	124
ES	1000	5	NE	400	600	1250	75	850	5	70	NE	700	NE	480	5	343	NE	NE	620

## Notes:

DCB - dichlorobenzene

DCA - dichloroethane

DCE - dichloroethene

MEK - methyl ethyl ketone (2-butanone)

PAL - WDNR 140 Preventive Action Limit

All values in ug/l

TMB - trimethylbenzene

--- - not analyzed for indicated parameter

MW - 2 was damaged following initial sampling 10/23/91 and therefore abandoned according to NR 141

Values in bold indicate those which exceed NR 140 Enforcement Standards

ES - WDNR 140 Enforcement Standard

NE - No established NR 140 Enforcement Standard

TABLE 3

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS  
REMEDIAL ACTION REPORT/GROUNDWATER MONITORING PLAN

MANUFACTURER'S BOX COMPANY  
830 East Keefe Avenue  
Milwaukee, Wisconsin

SAMPLE I.D.	MW-6		FINAL INFLUENT	PAL	ES
	11/21/95	6/20/96			
Date Collected	11/21/95	6/20/96	5/9/97	---	---
Acetone (ug/l)	<b>2,620</b>	<200	500	200	1,000
Benzene (ug/l)	<19	<b>1,500</b>	4.7 Q	0.5	5
Chlorobenzene (ug/l)	<10	<200	<2.9	NSE	NSE
Chloroethane (ug/l)	66	<b>720</b>	<11	80	400
1,2-Dichlorobenzene (ug/l)	<38	<200	<5.5	60	600
1,3-Dichlorobenzene (ug/l)	<49	<200	<3.2	125	1,250
1,4-Dichlorobenzene (ug/l)	<46	<b>&lt;200</b>	<4.6	15	75
1,1-Dichloroethane (ug/l)	830	<200	9.8	85	850
1,2-Dichloroethene (ug/l)	<b>179</b>	<b>940</b>	<4.7	0.5	5
c-1,2-Dichloroethane (ug/l)	<b>90.8</b>	<b>480</b>	9.2	7	70
Ethyl Acetate (ug/l)	<125	NA	14	NSE	NSE
Ethylbenzene (ug/l)	137	520	<4.0	140	700
Hexane (ug/l)	226	NA	ND	120*	600*
MEK (ug/l)	220	<200	270	90	460
Methylene Chloride (ug/l)	<b>222</b>	<200	<4.2	0.5	5
Toluene (ug/l)	<b>288,000</b>	<b>360,000</b>	<b>1,800</b>	68.6	343
TMB (ug/l)	<b>111.4</b>	<400	15	10*	50*
Xylenes (ug/l)	<b>685</b>	<b>2,300</b>	17.2	124	620

## Notes:

TMB - trimethylbenzenes

ug/l - micrograms per liter

PAL - NR 140 preventive action limit

ES - NR 140 enforcement standard

NA - not analyzed

ND - not detected

NSE - no standard established

\* - draft NR 140 PAL and ES

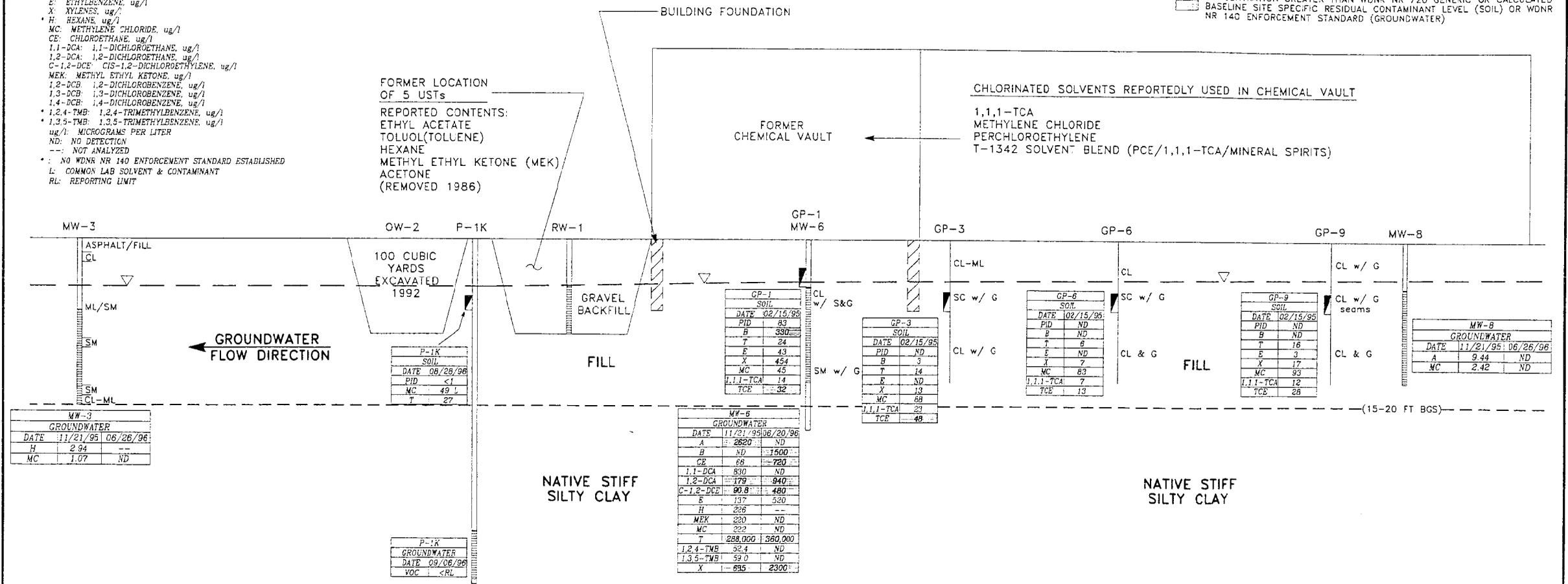
Bold concentrations indicate those values which exceed NR 140 ES or draft NR 140 ES.

**NOTES**

1. SOIL ANALYTICAL NOTES  
 PID: PHOTIONIZATION DETECTOR, I.U.  
 I.U.: INSTRUMENT UNITS  
 B: BENZENE, ug/kg  
 T: TOLUENE, ug/kg  
 E: ETHYLBENZENE, ug/kg  
 X: TOTAL XYLENES, ug/kg  
 MC: METHYLENE CHLORIDE, ug/kg  
 1,1,1-TCA: 1,1,1-TRICHLOROETHANE, ug/kg  
 TCE: TRICHLOROETHENE, ug/kg  
 ug/kg: MICROGRAMS PER KILOGRAM  
 ND: NO DETECTION

2. GROUNDWATER ANALYTICAL NOTES  
 A: ACETONE, ug/l  
 B: BENZENE, ug/l  
 T: TOLUENE, ug/l  
 E: ETHYLBENZENE, ug/l  
 X: XYLENES, ug/l  
 H: HEXANE, ug/l  
 MC: METHYLENE CHLORIDE, ug/l  
 CE: CHLOROETHANE, ug/l  
 1,1-DCA: 1,1-DICHLOROETHANE, ug/l  
 1,2-DCA: 1,2-DICHLOROETHANE, ug/l  
 C-1,2-DCE: CIS-1,2-DICHLOROETHYLENE, ug/l  
 MEK: METHYL ETHYL KETONE, ug/l  
 1,2-DCB: 1,2-DICHLOROBENZENE, ug/l  
 1,3-DCB: 1,3-DICHLOROBENZENE, ug/l  
 1,4-DCB: 1,4-DICHLOROBENZENE, ug/l  
 1,2,4-TMB: 1,2,4-TRIMETHYLBENZENE, ug/l  
 1,3,5-TMB: 1,3,5-TRIMETHYLBENZENE, ug/l  
 ug/l: MICROGRAMS PER LITER  
 ND: NO DETECTION  
 -: NOT ANALYZED  
 \* : NO WDNR NR 140 ENFORCEMENT STANDARD ESTABLISHED  
 L: COMMON LAB SOLVENT & CONTAMINANT  
 RL: REPORTING LIMIT

- LEGEND**  
 ▽ GROUNDWATER LEVEL (3 TO 6 FEET BGS)  
 █ SOIL SAMPLE LOCATION  
 ▨ SCREENED INTERVAL  
 CL: SILTY CLAY  
 SM: SILTY SAND  
 ML: CLAYEY SILT  
 SC: CLAYEY SAND  
 ML-CL: CLAYEY SILT TO SILTY CLAY  
 ML/SM: CLAYEY SILT TO SILTY SAND  
 S: SAND  
 G: GRAVEL  
 BGS: BELOW GROUND SURFACE  
 [ ] CONCENTRATION GREATER THAN WDNR NR 720 GENERIC OR CALCULATED BASELINE SITE SPECIFIC RESIDUAL CONTAMINANT LEVEL (SOIL) OR WDNR NR 140 ENFORCEMENT STANDARD (GROUNDWATER)



DATE	REVISIONS	INI.	<p><b>FIGURE 4</b>  <b>SCHEMATIC CROSS-SECTION</b></p> <p>DESIGN REPORT                  MANUFACTURERS BOX COMPANY                  830 EAST KEEFE AVENUE                  MILWAUKEE, WISCONSIN</p>	DRN. BY: A.L.R.	DATE: 12/2/96
				DSN. BY: S.W.C.	FILE NO.: C604010
				CHK. BY: S.W.C.	DWG. NO.: C6040103
				REV. BY: G.L.J.	SHEET NO.: 4

HORIZONTAL SCALE: 1"=10'  
 VERTICAL SCALE: 1"=10'

**Key ENVIRONMENTAL SERVICES, INC.**  
 W66 N215 Commerce Court • Cedarburg, WI 53012 • (414) 375-4750  
 6216 Washington Ave. • Racine, WI 53406 • (414) 886-4439

© 1996 Key Environmental Services, Inc.