GIS REGISTRY INFORMATION

SITE NAME:	Sun Oil Co (former)		
BRRTS #:	03-41-004678	**FID #** (if appropriate):	
COMMERCE # (if appropriate):	53210-1444-09		
CLOSURE DATE:	09/05/03		
STREET ADDRESS:	6309 W Appleton Ave		
CITY:	Milwaukee		

SOURCE PROPERTY GPS COORDINATES (meters in WTM91 projection):	**X =**	683524		**Y =**	291016	
CONTAMINATED MEDIA:	Groundwater		Soil		Both	x
OFF-SOURCE GW CONTAMINATION >ES:		**Yes**			**No**	x
• **IF YES, STREET ADDRESS:**						
• **GPS COORDINATES** (meters in WTM91 projection):	**X =**			**Y =**		
OFF-SOURCE SOIL CONTAMINATION >Generic or Site-Specific RCL (SSRCL):		**Yes**			**No**	x
• **IF YES, STREET ADDRESS 1:**						
• **GPS COORDINATES** (meters in WTM91 projection):	**X =**			**Y =**		
CONTAMINATION IN RIGHT OF WAY:		**Yes**			**No**	x

DOCUMENTS NEEDED

Closure Letter, and any conditional closure letter issued	X
Copy of most recent deed, including legal description, for all affected properties	X
Certified survey map or relevant portion of the recorded plat map (*if referenced in the legal description*) for all affected properties	X
County Parcel ID number, *if used for county*, for all affected properties	X
Location Map which outlines all properties within contaminated site boundaries on USGS topographic map or plat map in sufficient detail to permit the parcels to be located easily (8.5x14" if paper copy). If groundwater standards are exceeded, the map must also include the location of all municipal and potable wells within 1200' of the site.	X
Detailed Site Map(s) for all affected properties, showing buildings, roads, property boundaries, contaminant sources, utility lines, monitoring wells and potable wells. (8.5x14", if paper copy) This map shall also show the location of all contaminated public streets, highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding ch. NR 140 ESs and soil contamination exceeding ch. NR 720 generic or SSRCLs.	X
Tables of Latest Groundwater Analytical Results (no shading or cross-hatching)	X
Tables of Latest Soil Analytical Results (no shading or cross-hatching)	X
Isoconcentration map(s), *if required for site investigation (SI)* (8.5x14" if paper copy**).** The isoconcentration map should have flow direction and extent of groundwater contamination defined. **If not available, include the latest extent of contaminant plume map.**	X
GW: Table of water level elevations, with sampling dates, and free product noted if present	X
GW: Latest groundwater flow direction/monitoring well location map (should be 2 maps if maximum variation in flow direction is greater than 20 degrees)	X
SOIL: Latest horizontal extent of contamination exceeding generic or SSRCLs, with one contour	X
Geologic cross-sections, *if required for SI.* (8.5x14' if paper copy)	X
RP certified statement that legal descriptions are complete and accurate	X
Copies of off-source notification letters (if applicable)	
Letter informing ROW owner of residual contamination (if applicable)(public, highway or railroad ROW)	
Copy of (soil or land use) deed restriction(s) or deed notice *if any required as a condition of closure*	

ENVIRONMENTAL & REGULATORY SERVICES DIVISION
BUREAU OF PECFA
101 West Pleasant Street, Suite 100A
Milwaukee, Wisconsin 53212-3963
TDD #: (608) 264-8777
Fax #: (414) 220-5374
http://www.commerce.state.wi.us
http://www.wisconsin.gov
Jim Doyle, Governor
Cory L. Nettles, Secretary

Wisconsin
Department of Commerce

September 5, 2003

Mr. Edward Ennis
445 S. Elmridge Ave.
Brookfield, WI 53005

RE: **Final Closure**

Commerce # 53210-1444-09 WDNR BRRTS # 03-41-004678
Sun Oil Co. (former), 6309 W. Appleton Ave., Milwaukee

Dear Mr. Ennis:

The Wisconsin Department of Commerce (Commerce) has received all items required as conditions for closure of the site referenced above. This case is now listed as "closed" on the Commerce database and will be included on the Wisconsin Department of Natural Resources (WDNR) Geographic Information System (GIS) Registry of Closed Remediation Sites to address residual soil and groundwater contamination. It is in your best interest to keep all documentation related to the environmental activities that were conducted.

If residual contamination is encountered in the future, it must be managed in accordance with all applicable state and federal regulations. If it is determined that any remaining contamination poses a threat, the case may be reopened and further investigation or remediation may be required.

Thank you for your efforts to bring this case to closure. If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 220-5361.

Sincerely,

Monica Weis

Monica L. Weis
Hydrogeologist
Site Review Section

cc: Mr. Adam Roder, Sigma Environmental Services, Inc.
Case File

ENVIRONMENTAL & REGULATORY SERVICES DIVISION
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101 West Pleasant Street, Suite 100A
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Jim Doyle, Governor
Cory L. Nettles, Secretary

Wisconsin
Department of Commerce

August 14, 2003

Mr. Edward Ennis
445 S. Elmridge Ave.
Brookfield, WI 53005

RE: **Conditional Case Closure**

Commerce # 53210-1444-09 WDNR BRRTS # 03-41-004678
Sun Oil Co. (former), 6309 W. Appleton Ave., Milwaukee

Dear Mr. Ennis:

The Wisconsin Department of Commerce (Commerce) has reviewed the request for case closure prepared by your consultant, Sigma Environmental Services, Inc., for the site referenced above. It is understood that residual soil and groundwater contamination remains on-site. Commerce has determined that this site does not pose a significant threat to the environment and human health. No further investigation or remedial action is necessary.

The following condition must be satisfied to obtain final closure:

- All groundwater monitoring wells must be properly abandoned and the appropriate documentation forwarded to Commerce at the letterhead address.

This letter serves as your written notice of "no further action". Timely filing of your final PECFA claim (if applicable) is encouraged. If your claim is not received within 120 days of the date of this letter, interest costs incurred after 60 days of the date of this letter will not be eligible for PECFA reimbursement.

Thank you for your efforts to protect and restore Wisconsin's environment. I would also like to mention that Commerce appreciates the thoroughness in the preparation and presentation of this report. If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 220-5361.

Sincerely,

Monica Weis

Monica L. Weis
Hydrogeologist
Site Review Section

cc: Sigma Environmental Services, Inc.
Case File

DOCUMENT NO.

REEL 3481 IMAGE 29

STATE BAR OF WISCONSIN FORM 1 - 1982
WARRANTY DEED

THIS SPACE RESERVED FOR RECORDING DATA

7054203
REGISTER'S OFFICE
Milwaukee County, WI } ss
RECORDED AT 8 00 AM
FEB 16 1995
REEL 3481 IMAGE 29
REGISTER OF DEEDS

RETURN TO EDWARD ENNIS
445 S ENDRIDGE AVE.
BROOKFIELD, WI. 53005

This Deed, made between
CHESTER A. SHEVEY and ELIZABETH T. SHEVEY, husband and wife

Grantor, and
EDWARD G. ENNIS and MARY T. ENNIS, husband and wife, as survivorship marital property,

Grantee,
Witnesseth, That the said Grantor, for a valuable consideration conveys to Grantee the following described real estate in Milwaukee County,

Tax Parcel No.

Lots 5, 6, 7, 8 and 9, Block 5, in Lenox Heights, being a Subdivision of a part of the North East 1/4 of Section 15, Town 7 North, Range 21 East, in the City of Milwaukee, County of Milwaukee, State of Wisconsin.

Tax Key No. 305-0928-110-2

ADDRESS: 6309 West Appleton Avenue

DJ/WF/DD

TRANSFER
$ 330.00
FEE

7054203 #
RECORD 10.00
RTX 330.00

This is not homestead property.
Together with all and singular the hereditaments and appurtenances thereunto belonging.
And CHESTER A. SHEVEY and ELIZABETH T. SHEVEY, husband and wife warrants that the title is good, indefeasible in fee simple and free and clear of encumbrances except municipal and zoning ordinances, recorded easements for public utilities serving the property, recorded building and use restrictions and covenants, and general taxes levied in the year of closing and subsequent years.
and will warrant and defend the same.

Dated this 10TH day of February 1995

Chester A. Shevey (SEAL) _____ (SEAL)
• CHESTER A. SHEVEY
Elizabeth T. Shevey (SEAL) _____ (SEAL)
• ELIZABETH T. SHEVEY

AUTHENTICATION
Signature(s) of
authenticated this day of
TITLE: MEMBER STATE BAR OF WISCONSIN
(If not, authorized by § 706.06, Wis. Stats.)

THIS INSTRUMENT WAS DRAFTED BY
ATTORNEY HEATHER ISAACSON
(Signatures may be authenticated or acknowledged. Both are not necessary.)

ACKNOWLEDGEMENT
STATE OF WISCONSIN
WAUKESHA County } ss.
Personally came before me this 10th day of FEBRUARY, 19 95 the above named
CHESTER A. SHEVEY
ELIZABETH T. SHEVEY
to me known to be the person(s) who executed the foregoing instrument and acknowledge the same.
• JAE L. MYERS
Notary Public WAUKESHA County, Wis.
My Commission is permanent. (If not, state expiration date: 1/10, 19 97)

NOTARY PUBLIC JAE L MYERS STATE OF WISCONSIN

* Names of persons signing in any capacity should be typed or printed below their signatures.

WARRANTY DEED
STATE BAR OF WISCONSIN Form No. 1 - 1982
001044270
WARDEED RA-54

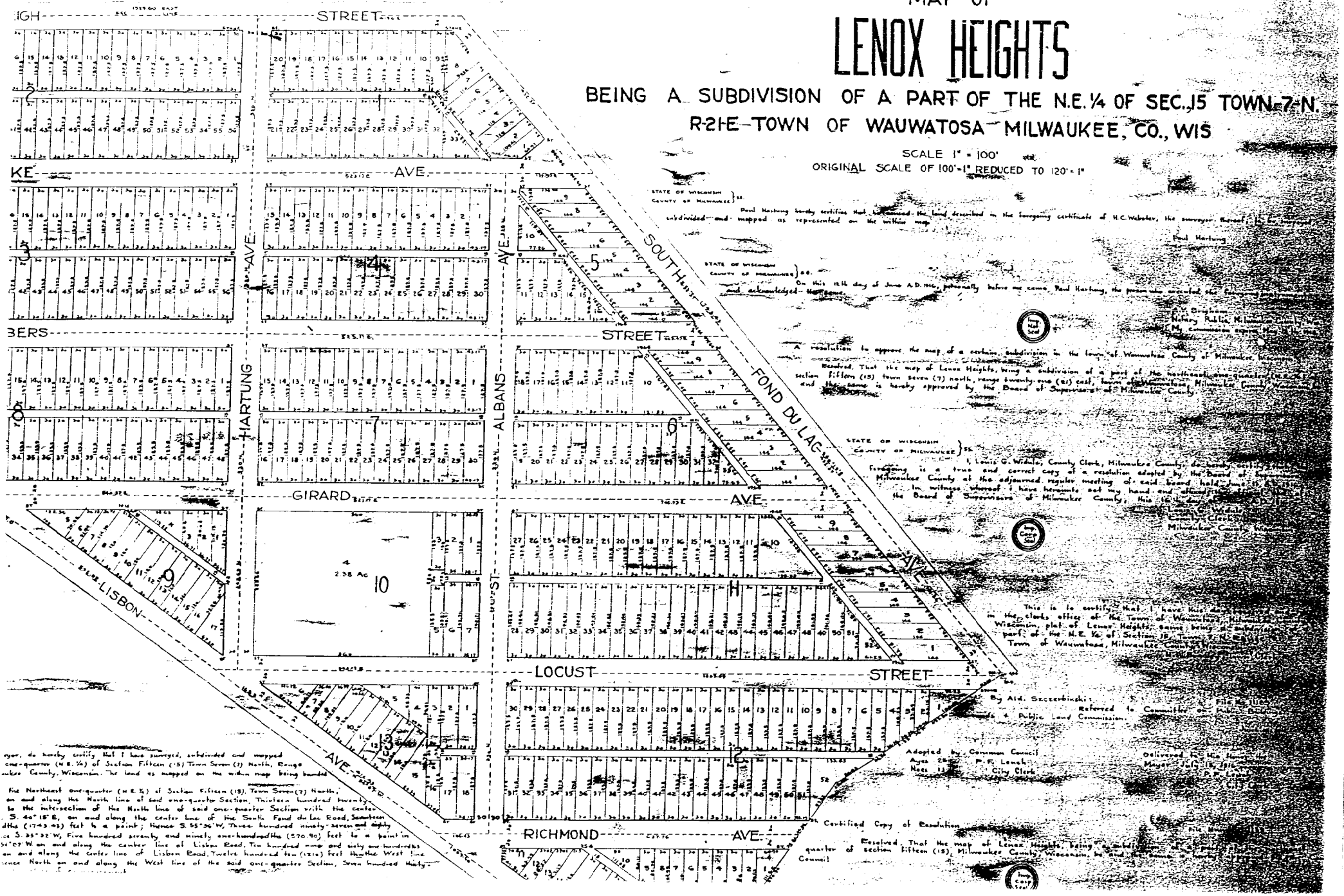
MAP OF

LENOX HEIGHTS

BEING A SUBDIVISION OF A PART OF THE N.E. ¼ OF SEC. 15 TOWN 7 N. R 21 E TOWN OF WAUWATOSA MILWAUKEE, CO., WIS

SCALE 1" = 100'

ORIGINAL SCALE OF 100' = 1" REDUCED TO 120' = 1"



STATE OF WISCONSIN } ss.
COUNTY OF MILWAUKEE

Paul Hartung hereby certifies that he caused the land described in the foregoing certificate of H.C. Webster, the surveyor thereof, to be surveyed, subdivided and mapped as represented on the within map.

Paul Hartung

STATE OF WISCONSIN } ss.
COUNTY OF MILWAUKEE

On this 11th day of June A.D. 1926, personally before me came Paul Hartung, the person who executed the foregoing instrument and acknowledged the same.

A.W. Bingham
Notary Public, Milwaukee County, Wis.
My commission expires May 15, 1927

A resolution to approve the map of a certain subdivision in the Town of Wauwatosa County of Milwaukee, Wisconsin.

Resolved, That the map of Lenox Heights, being a subdivision of a part of the northeast one-quarter (N.E. ¼) of section fifteen (15) town seven (7) north, range twenty-one (21) east, Town of Wauwatosa, Milwaukee County, Wisconsin, and the same is hereby approved by the Board of Supervisors of Milwaukee County.

STATE OF WISCONSIN } ss.
COUNTY OF MILWAUKEE

I, Louis G. Widder, County Clerk, Milwaukee County, do hereby certify that the foregoing is a true and correct copy of a resolution adopted by the Board of Supervisors of Milwaukee County at the adjourned regular meeting of said board held June 15, 1926.

In witness whereof I have hereunto set my hand and affixed the seal of the Board of Supervisors of Milwaukee County, this 16th day of June A.D. 1926.

Louis G. Widder
County Clerk
Milwaukee County, Wisconsin

This is to certify that I have this day filed in the clerks office of the Town of Wauwatosa, Milwaukee County, Wisconsin, plat of Lenox Heights, being a subdivision of a part of the N.E. ¼ of Section 15, Town 7 N. R. 21 E. Town of Wauwatosa, Milwaukee County, Wisconsin.

H. W. Kaiser
Clerk

By Ald. Szczerbinski:

Referred to Committee on Public Buildings & Public Land Commission.

File No. 11

Adopted by Common Council
Ayes 28 Noes 11
P. R. Leach
City Clerk

Delivered to the Honorable Mayor
P. R. Leach
City Clerk

Certified Copy of Resolution

Resolved, That the map of Lenox Heights, being a subdivision of a part of the northeast one-quarter of section fifteen (15), Milwaukee County, Wisconsin, be and the same is hereby approved.

Council

File No. 11

yor, do hereby certify that I have surveyed, subdivided and mapped one-quarter (N.E. ¼) of Section Fifteen (15) Town Seven (7) North, Range ukee County, Wisconsin. The land as mapped on the within map being bounded

the Northeast one-quarter (N.E. ¼) of Section Fifteen (15), Town Seven (7) North, on and along the North line of said one-quarter Section, Thirteen hundred twenty to the intersection of the North line of said one-quarter Section with the center S. 46° 18' E, on and along the center line of the South Fond du Lac Road, Seventeen dHds (1743.43) feet to a point; thence S. 55°36' W, Three hundred ninety-seven and eighty ce S. 35°32' W, Five hundred seventy and ninety one-hundredths (570.90) feet to a point in 34°07' W on and along the center line of Lisbon Road, Ten hundred nine and sixty one-hundredths on and along the center line of Lisbon Road, Twelve hundred ten (1210) feet thence West line ence North on and along the West line of the said one-quarter Section, Seven hundred thirty-

PARCEL IDENTIFICATION NUMBERS

- Parcel Identification Number (PIN) for the Former Sun Oil property, located at 6309 W. Appleton Avenue, Milwaukee, Wisconsin:

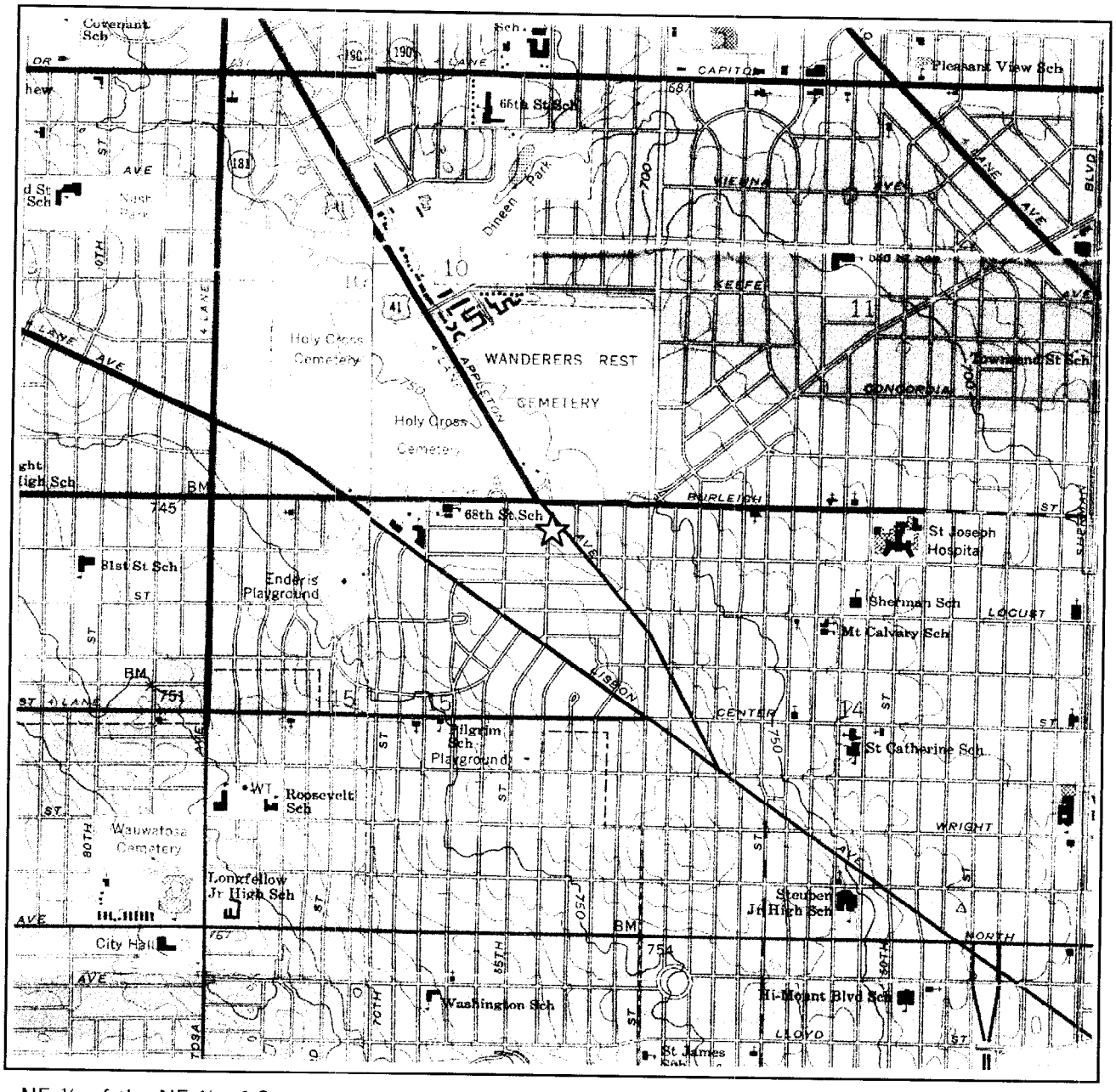
  305-0928-110-2

GEOGRAPHIC POSITIONS

- WTM91 coordinates for the Former Sun Oil property, located at 6309 W. Appleton Avenue, Milwaukee, Wisconsin:

  Center of site: 683524, 291016

*Coordinates obtained from WDNR's interactive map (1:753 scale) at http://gomapout.dnr.state.wi.us/org/at/et/geo/gwur/index.htm. See attached copy of image from website for reference.



NE ¼ of the NE ¼ of Sec. 15, T7N, R21E Adapted from U.S.G.S. 7.5 minute series, Wauwatosa and Milwaukee, Wisconsin, quadrangles dated 1958 (photorevised 1971, Wauwatosa photoinspected 1976).

SCALE 1:24 000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

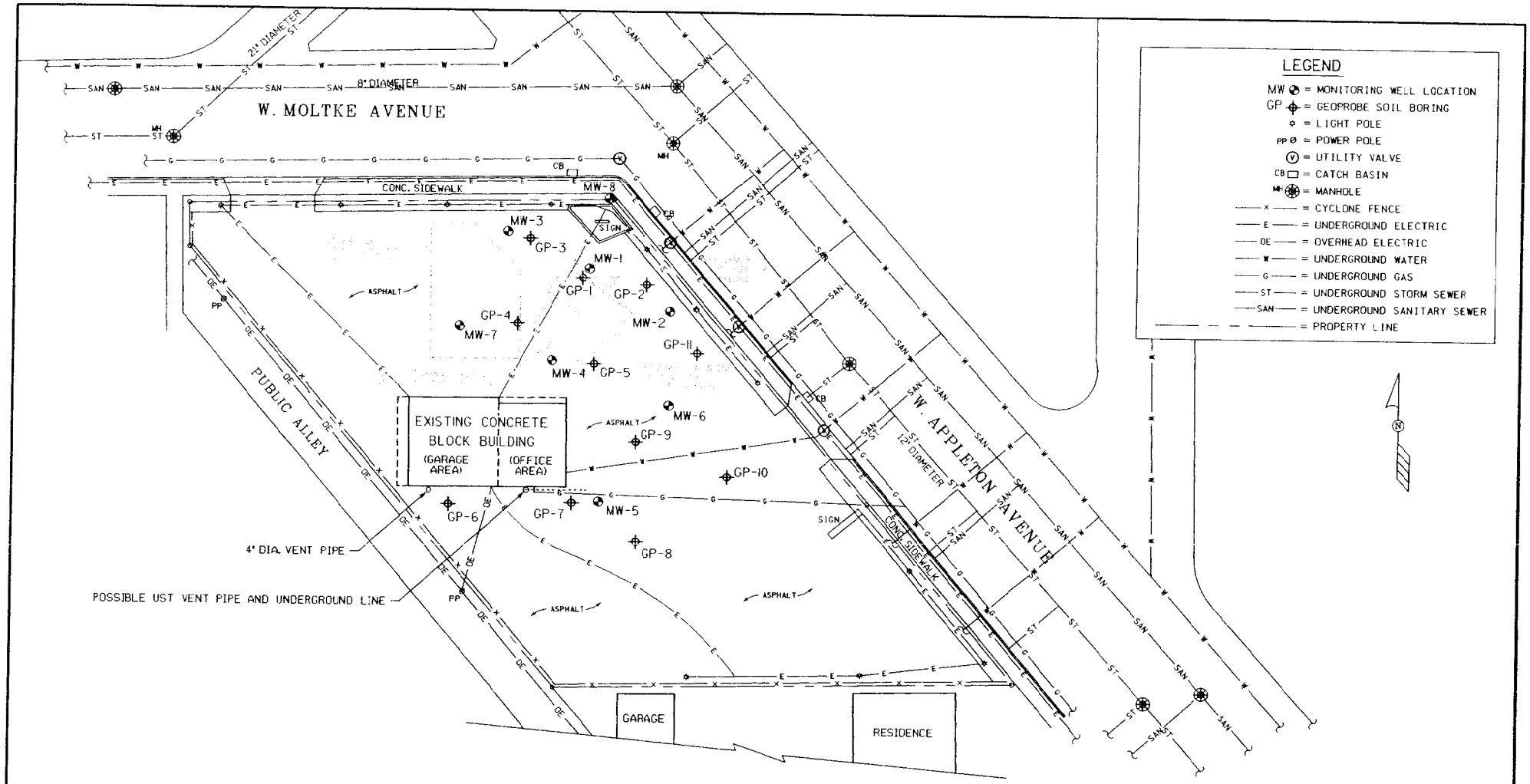
CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5 FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

N

Figure 1. Site Location Map
Former Sun Oil
6309 W. Appleton Ave., Milwaukee, Wisconsin

SIGMA
ENVIRONMENTAL SERVICES INC.

6480fig1.ppt



NOTES:

1. SITE FEATURES BASED ON SURVEY DATED 6-2-95, BY METROPOLITIAN SURVEY SERVICE, INC., AND FIELD MEASURMENTS AND OBSERVATIONS MADE BY SIGMA ENVIRONMENTAL ON 4-11-01.
2. UTILITY LOCATIONS BASED ON LOCATIONS MARKED BY DIGGER'S HOTLINE, PRIVATE LINES, INC., AND DRAWINGS FROM CITY OF MILWAUKEE.
3. WELLS AND BORINGS BASED ON SURVEY DATED 2-4-02, BY EMCS.
4. LOCATIONS OF FORMER SERVICE STATION, DISPENSER ISLAND, AND UST BASIN BASED ON SANBORN MAPS AND HISTORICAL SITE DRAWINGS.

SCALE - 1" = 30'

0 15 30 60

FORMER SUN OIL PROPERTY 6309 W. APPLETON AVENUE, MILWAUKEE, WI			SIGMA ENVIRONMENTAL SERVICES INC.
DATE: 11-11-02	DR. BY: BEB	DR.# 6480-003	SCALE: 1" = 30'
SITE PLAN MAP			FIGURE 2

Table 4
Groundwater Analytical Quality Results - Detected Compounds
Former Sun Oil Company, 6309 W. Appleton Avenue, Milwaukee, Wisconsin
Sigma Project No. 6480

		MW-1										MW-2								
Paramter	**Units**	6/7/01	6/01 Dup.	1/2/02	1/02 Dup.	4/1/02	7/18/02	10/24/02	12/26/02	4/7/03	4/03 Dup	6/7/01	1/2/02	4/1/02	7/18/02	10/24/02	12/26/02	4/7/03	NR 140 ES	NR 140 PAL
Dissolved Lead	µg/l	***4.69***	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.00	NA	NA	NA	NA	NA	NA	15	1.5
Detected VOCs																				
Benzene	µg/l	<80	<160	**82**	79	**251**	**163**	**177**	**260**	**215**	454	<0.16	<0.21	<0.500	NA	<0.500	<0.500	***0.659***	5	0.5
n-Butylbenzene	µg/l	<120	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.571 "J"	NA	NA	NA	NA	NA	NA	NS	NS
sec-Butylbenzenese	µg/l	<95	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.392 "J"	NA	NA	NA	NA	NA	NA	NS	NS
tert-Butylbenzene	µg/l	<90	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.18	NA	NA	NA	NA	NA	NA	NS	NS
1,2-Dichloroethane	µg/l	<140	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.28	NA	NA	NA	NA	NA	NA	5	0.5
Ethylbenzene	µg/l	**3,870**	4,610	**3,500**	3,600	**3,980**	**3,650**	**3,310**	**4,090**	**3,210**	3,380	2.13	<0.22	<0.500	NA	<0.500	<0.500	1.43	700	140
Isopropylbenzene	µg/l	107	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.567	NA	NA	NA	NA	NA	NA	NS	NS
p-Isopropyltoluene	µg/l	<95	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.19	NA	NA	NA	NA	NA	NA	NS	NS
Methyl-tert-butyl-ether	µg/l	<150	<300	<46	<46	**317**	**197**	**296**	**238**	***31.9***	193	<0.3	<0.46	<0.200	NA	<0.200	<0.200	<0.200	60	12
Naphthalene	µg/l	<400	NA	NA	NA	**524**	**479**	**454**	**253**	**534**	NA	<0.8	NA	<2.00	NA	<2.00	<2.00	<2.00	40	8
n-Propylbenzene	µg/l	252	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.34	NA	NA	NA	NA	NA	NA	NS	NS
Toluene	µg/l	***626***	816	***790***	800	***943***	***620***	***462***	***659***	***838***	846	<0.4	<0.41	<0.500	NA	<0.500	<0.500	<0.500	1,000	200
1,2,4-Trimethylbenzene	µg/l	1,580	1,900	1,400	1,400	1,940	1,690	1,540	1,670	1,610	1,460	2.71	<0.26	5.03	NA	<1.00	<1.00	2.48	NS	NS
1,3,5-Trimethylbenzene	µg/l	367	515	580	590	606	489	449	500	524	433	0.263 "J"	<0.34	<1.00	NA	<1.00	<1.00	1.13	NS	NS
Total Trimethylbenzene	µg/l	**1,947**	2,415	**1,980**	1,990	**2,546**	**2,179**	**1,989**	**2,170**	**2,134**	1,893	2.71	<0.60	5.03	NA	<2.00	<2.00	3.61	480	96
m- & p-Xylene	µg/l	9,710	10,900	10,000	11,000	NA	NA	NA	NA	NA	NA	4.82	<0.43	NA	NA	NA	NA	NA	NS	NS
o-Xylenes	µg/l	1,990	2,370	2,400	2,500	NA	NA	NA	NA	NA	NA	<0.17	<0.26	NA	NA	NA	NA	NA	NS	NS
Total Xylenes	µg/l	**11,700**	13,270	**12,400**	13,500	**12,200**	**11,000**	***9,040***	**11,500**	***8,320***	9,230	4.82	<0.69	3.52	NA	<0.500	<0.500	2.80	10,000	1,000
Detected PAHs																				
Acenaphthene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Flourene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	400	80
1-Methylnaphthalene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
2-Methylnaphthalene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Naphthalene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40	8
Phenanthrene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS

Notes:
1. µg/l = micrograms per liter (equivalent to parts per billion, ppb)
2. NA = not analyzed
3. NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard
4. NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit
5. "J" = concentration estimated between Limit of Detection and Limit of Quantitation (flagged by laboratory)
6. Equipment blank commments:
   - 6/7/01: All PVOCs reported below laboratory cetection limits.
   - 1/2/02: All PVOCs reported below laboratory detection limits.
   - 4/1/02: Not submitted
   - 7/18/02: All PVOCs reported below laboratory detection limits.
   - 10/24/02: All PVOCs reported below laboratory detection limits.
   - 12/26/02: All PVOCs reported below laboratory detection limits.
   - 4/7/03: All PVOCs reported below laboratory detection limits.
7. Trip blank comments:
   - 6/7/01: All VOCs reported below laboratory detection limits.
   - 1/2/02: All PVOCs reported below laboratory detection limits.
   - 4/1/02: All PVOCs reported below laboratory detection limits.
   - 7/18/02: All PVOCs reported below laboratory detection limits.
   - 10/24/02: All PVOCs reported below laboratory detection limits.
   - 12/26/02: All PVOCs reported below laboratory detection limits.
   - 4/7/03: All PVOCs reported below laboratory detection limits.
8. Exceedances: ***bold, italics*** = concentration exceeds NR 140 PAL
   bold, box = concentration exceeds NR 140 ES

Table 4
Groundwater Analytical Quality Results - Detected Compounds
Former Sun Oil Company, 6309 W. Appleton Avenue, Milwaukee, Wisconsin
Sigma Project No. 6480

		MW-3							MW-4										
Paramter	**Units**	6/7/01	1/2/02	4/1/02	7/18/02	10/24/02	12/26/02	4/7/03	6/7/01	1/2/02	4/01/02	4/02 Dup	7/18/02	10/24/02	10/02 Dup	12/26/02	4/7/03	NR 140 ES	NR 140 PAL
Dissolved Lead	µg/l	<1.00	NA	NA	NA	NA	NA	NA	***2.93 "J"***	NA	NA	NA	NA	NA	NA	NA	NA	15	1.5
Detected VOCs																			
Benzene	µg/l	<0.16	<0.21	<0.500	NA	<0.500	<0.500	<0.500	**22.0**	<2.1	**59.5**	62.4	**5.14**	**31.7**	35.2	**27.4**	**98.0**	5	0.5
n-Butylbenzene	µg/l	<0.24	NA	NA	NA	NA	NA	NA	75.1	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
sec-Butylbenzenese	µg/l	<0.19	NA	NA	NA	NA	NA	NA	62.2	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
tert-Butylbenzene	µg/l	<0.18	NA	NA	NA	NA	NA	NA	<18.0	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
1,2-Dichloroethane	µg/l	<0.28	NA	NA	NA	NA	NA	NA	<28.0	NA	NA	NA	NA	NA	NA	NA	NA	5	0.5
Ethylbenzene	µg/l	<0.5	<0.22	<0.500	NA	<0.500	<0.500	<0.500	**709**	***250***	137	143	***225***	***390***	388	104	***342***	700	140
Isopropylbenzene	µg/l	<0.17	NA	NA	NA	NA	NA	NA	80.6	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
p-Isopropyltoluene	µg/l	<0.19	NA	NA	NA	NA	NA	NA	<19	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Methyl-tert-butyl-ether	µg/l	<0.3	<0.46	<0.200	NA	<0.200	<0.200	<0.200	<30	<4.6	***25.8***	52.0	9.09	***59.9***	72.7	***79.7***	**93.0**	60	12
Naphthalene	µg/l	<0.8	NA	<2.00	NA	<2.00	<2.00	<2.00	**157**	NA	**50.0**	NA	**75.7**	**178**	NA	**56.0**	**147**	40	8
n-Propylbenzene	µg/l	<0.16	NA	NA	NA	NA	NA	NA	128	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Toluene	µg/l	<0.4	<0.41	<0.500	NA	<0.500	<0.500	<0.500	<40	9.1 "J"	29.0	26.1	13.7	29.9	<25.0	4.39	<10.0	1,000	200
1,2,4-Trimethylbenzene	µg/l	<0.4	<0.26	<1.00	NA	<1.00	<1.00	<1.00	962	720	475	542	567	676	614	534	615	NS	NS
1,3,5-Trimethylbenzene	µg/l	<0.17	<0.34	<1.00	NA	<1.00	<1.00	<1.00	303	220	151	169	146	123	126	53.5	146	NS	NS
Total Trimethylbenzene	µg/l	<0.57	<0.60	<2.00	NA	<2.00	<2.00	<2.00	**1,265**	**940**	**626**	711	**713**	**799**	740	**588**	**761**	480	96
m- & p-Xylene	µg/l	<0.4	<0.43	NA	NA	NA	NA	NA	1,060	320	NA	NA	NA	NA	NA	NA	NA	NS	NS
o-Xylenes	µg/l	<0.17	<0.26	NA	NA	NA	NA	NA	53.7	34	NA	NA	NA	NA	NA	NA	NA	NS	NS
Total Xylenes	µg/l	<0.57	<0.69	<0.500	NA	0.547	<0.500	<0.500	***1,113.7***	354	179	189	302	466	449	124	599	10,000	1,000
Detected PAHs																			
Acenaphthene	µg/l	NA	NA	NA	NA	NA	NA	NA	15.6	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Flourene	µg/l	NA	NA	NA	NA	NA	NA	NA	1.05	NA	NA	NA	NA	NA	NA	NA	NA	400	80
1-Methylnaphthalene	µg/l	NA	NA	NA	NA	NA	NA	NA	42.6	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
2-Methylnaphthalene	µg/l	NA	NA	NA	NA	NA	NA	NA	103	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Naphthalene	µg/l	NA	NA	NA	NA	NA	NA	NA	**108**	NA	NA	NA	NA	NA	NA	NA	NA	40	8
Phenanthrene	µg/l	NA	NA	NA	NA	NA	NA	NA	0.345 "J"	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS

Notes:
1. µg/l = micrograms per liter (equivalent to parts per billion, ppb)
2. NA = not analyzed
3. NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard
4. NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit
5. "J" = concentration estimated between Limit of Detection and Limit of Quantitation (flagged by laboratory)
6. Equipment blank commments:
   - 6/7/01: All PVOCs reported below laboratory detection limits.
   - 1/2/02: All PVOCs reported below laboratory detection limits.
   - 4/1/02: Not submitted
   - 7/18/02: All PVOCs reported below laboratory detection limits.
   - 10/24/02: All PVOCs reported below laboratory detection limits.
   - 12/26/02: All PVOCs reported below laboratory detection limits.
   - 4/7/03: All PVOCs reported below laboratory detection limits.
7. Trip blank comments:
   - 6/7/01: All VCCs reported below laboratory detection limits.
   - 1/2/02: All PVOCs reported below laboratory detection limits.
   - 4/1/02: All PVOCs reported below laboratory detection limits.
   - 7/18/02: All PVOCs reported below laboratory detection limits.
   - 10/24/02: All PVOCs reported below laboratory detection limits.
   - 12/26/02: All PVOCs reported below laboratory detection limits.
   - 4/7/03: All PVOCs reported below laboratory detection limits.
8. Exceedances: ***bold, italics*** = concentration exceeds NR 140 PAL
   bold, box = concentration exceeds NR 140 ES

Table 4
Groundwater Analytical Quality Results - Detected Compounds
Former Sun Oil Company, 6309 W. Appleton Avenue, Milwaukee, Wisconsin
Sigma Project No. 6480

		MW-5								MW-6						NR 140	NR 140
Paramter	**Units**	6/7/01	1/2/02	4/1/02	7/18/02	7/02 Dup	10/24/02	12/26/02	4/7/03	1/2/02	4/1/02	7/18/02	10/24/02	12/26/02	4/7/03	ES	PAL
Dissolved Lead	µg/l	<1.00	NA	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	15	1.5
Detected VOCs																	
Benzene	µg/l	<0.8	<0.21	<0.500	<0.500	0.735	***0.556***	<0.500	***0.632***	<0.21	<0.500	NA	<0.500	<0.500	<0.500	5	0.5
n-Butylbenzene	µg/l	<1.20	NA	NA	NA	NA	NA	NA	NA	<0.13	NA	NA	NA	NA	NA	NS	NS
sec-Butylbenzenese	µg/l	11.1	NA	NA	NA	NA	NA	NA	NA	<0.21	NA	NA	NA	NA	NA	NS	NS
tert-Butylbenzene	µg/l	1.61	NA	NA	NA	NA	NA	NA	NA	<0.2	NA	NA	NA	NA	NA	NS	NS
1,2-Dichloroethane	µg/l	<1.40	NA	NA	NA	NA	NA	NA	NA	<0.23	NA	NA	NA	NA	NA	5	0.5
Ethylbenzene	µg/l	2.86	<0.22	<0.500	0.530	1.24	1.23	<0.500	<0.500	<0.22	<0.500	NA	<0.500	<0.500	1.02	700	140
Isopropylbenzene	µg/l	5	NA	NA	NA	NA	NA	NA	NA	<0.19	NA	NA	NA	NA	NA	NS	NS
p-Isopropyltoluene	µg/l	5.46	NA	NA	NA	NA	NA	NA	NA	<0.16	NA	NA	NA	NA	NA	NS	NS
Methyl-tert-butyl-ether	µg/l	<1.50	<0.46	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.46	<0.200	NA	<0.200	<0.200	<0.200	60	12
Naphthalene	µg/l	***35.7***	NA	**45.0**	**45.7**	NA	**53.2**	***21.4***	***31.3***	<0.69	<2.00	NA	<2.00	<2.00	***9.43***	40	8
n-Propylbenzene	µg/l	5.33	NA	NA	NA	NA	NA	NA	NA	<0.18	NA	NA	NA	NA	NA	NS	NS
Toluene	µg/l	<2.00	<0.41	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.41	<0.500	NA	<0.500	<0.500	<0.500	1,000	200
1,2,4-Trimethylbenzene	µg/l	10.2	<0.26	2.07	<1.00	<1.00	<1.00	<1.00	<1.00	<0.26	<1.00	NA	<1.00	<1.00	5.60	NS	NS
1,3,5-Trimethylbenzene	µg/l	<0.85	<0.34	<1.00	1.35	<1.00	<1.00	<1.00	1.04	<0.34	<1.00	NA	<1.00	<1.00	1.26	NS	NS
Total Trimethylbenzene	µg/l	10.2	<0.60	2.07	1.35	<2.00	<2.00	<2.00	1.04	<0.60	<2.00	NA	<2.00	<2.00	6.86	480	96
m- & p-Xylene	µg/l	<2.00	<0.43	NA	NA	NA	NA	NA	NA	<0.43	NA	NA	NA	NA	NA	NS	NS
o-Xylenes	µg/l	<0.85	<0.26	NA	NA	NA	NA	NA	NA	<0.26	NA	NA	NA	NA	NA	NS	NS
Total Xylenes	µg/l	<2.85	<0.69	0.592	1.19	1.36	3.21	<0.500	<0.500	<0.69	<0.500	NA	<0.500	<0.500	0.744	10,000	1,000
Detected PAHs																	
Acenaphthene	µg/l	10.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Flourene	µg/l	8.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	400	80
1-Methylnaphthalene	µg/l	94.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
2-Methylnaphthalene	µg/l	38.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Naphthalene	µg/l	***13.2***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40	8
Phenanthrene	µg/l	5.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS

Notes:
1. µg/l = micrograms per liter (equivalent to parts per billion, ppb)
2. NA = not analyzed
3. NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard
4. NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit
5. "J" = concentration estimated between Limit of Detection and Limit of Quantitation (flagged by laboratory)
6. Equipment blank commments:
   - 6/7/01: All PVOCs reported below laboratory detection limits.
   - 1/2/02: All PVOCs reported below laboratory detection limits
   - 4/1/02: Not submitted
   - 7/18/02: All PVOCs reported below laboratory detection limits.
   - 10/24/02: All PVOCs reported below laboratory detection limits.
   - 12/26/02: All PVOCs reported below laboratory detection limits.
   - 4/7/03: All PVOCs reported below laboratory detection limits.
7. Trip blank comments:
   - 6/7/01: All VOCs reported below laboratory detection limits.
   - 1/2/02: All PVOCs reported below laboratory detection limits.
   - 4/1/02: All PVOCs reported below laboratory detection limits.
   - 7/18/02: All PVOCs reported below laboratory detection limits.
   - 10/24/02: All PVOCs reported below laboratory detection limits.
   - 12/26/02: All PVOCs reported below laboratory detection limits.
   - 4/7/03: All PVOCs reported below laboratory detection limits.
8. Exceedances: ***bold, italics*** = concentration exceeds NR 140 PAL
   bold, box = concentration exceeds NR 140 ES

Table 4
Groundwater Analytical Quality Results - Detected Compounds
Former Sun Oil Company, 6309 W. Appleton Avenue, Milwaukee, Wisconsin
Sigma Project No. 6480

		MW-7						MW-8					NR 140	NR 140
Paramter	**Units**	1/2/02	4/1/02	7/18/02	10/24/02	12/26/02	4/7/03	7/18/02	10/24/02	12/26/02	12/02 Dup	4/7/03	ES	PAL
Dissolved Lead	µg/l	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	1.5
Detected VOCs														
Benzene	µg/l	<0.21	<0.500	NA	<0.500	<0.500	<0.500	***4.42***	**9.56**	**5.25**	5.06	2.27	5	0.5
n-Butylbenzene	µg/l	<0.13	NA	NA	NA	NA	NA	2.12	NA	NA	NA	NA	NS	NS
sec-Butylbenzenese	µg/l	<0.21	NA	NA	NA	NA	NA	3.29	NA	NA	NA	NA	NS	NS
tert-Butylbenzene	µg/l	<0.2	NA	NA	NA	NA	NA	0.993	NA	NA	NA	NA	NS	NS
1,2-Dichloroethane	µg/l	<0.23	NA	NA	NA	NA	NA	***1.74***	NA	NA	NA	NA	5	0.5
Ethylbenzene	µg/l	<0.22	<0.500	NA	<0.500	<0.500	<0.500	0.682	5.78	0.856	0.838	1.84	700	140
Isopropylbenzene	µg/l	<0.19	NA	NA	NA	NA	NA	1.39	NA	NA	NA	NA	NS	NS
p-Isopropyltoluene	µg/l	<0.16	NA	NA	NA	NA	NA	1.65	NA	NA	NA	NA	NS	NS
Methyl-tert-butyl-ether	µg/l	<0.46	<0.200	NA	<0.200	<0.200	<0.200	0.518	1.16	1.47	1.54	<0.200	60	12
Naphthalene	µg/l	<0.69	<2.00	NA	<2.00	<2.00	<2.00	<2.00	4.44	<2.00	NA	7.81	40	8
n-Propylbenzene	µg/l	<0.18	NA	NA	NA	NA	NA	2.42	NA	NA	NA	NA	NS	NS
Toluene	µg/l	<0.41	<0.500	NA	<0.500	<0.500	<0.500	0.834	1.96	0.659	0.610	<0.500	1,000	200
1,2,4-Trimethylbenzene	µg/l	<0.26	<1.00	NA	<1.00	<1.00	<1.00	<1.00	13.3	<1.00	<1.00	11.9	NS	NS
1,3,5-Trimethylbenzene	µg/l	<0.34	<1.00	NA	<1.00	<1.00	<1.00	1.06	7.19	2.96	5.41	6.99	NS	NS
Total Trimethylbenzene	µg/l	<0.60	<2.00	NA	<2.00	<2.00	<2.00	1.06	20.49	2.96	5.41	18.89	480	96
m- & p-Xylene	µg/l	<0.43	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
o-Xylenes	µg/l	<0.26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Total Xylenes	µg/l	<0.69	<0.500	NA	<0.500	<0.500	<0.500	9.25	11.1	2.11	2.56	6.09	10,000	1,000
Detected PAHs														
Acenaphthene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Flourene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	400	80
1-Methylnaphthalene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
2-Methylnaphthalene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Naphthalene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40	8
Phenanthrene	µg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS

Notes:
1. µg/l = micrograms per liter (equivalent to parts per billion, ppb)
2. NA = not analyzed
3. NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard
4. NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit
5. "J" = concentration estimated between Limit of Detection and Limit of Quantitation (flagged by laboratory)
6. Equipment blank commments:
   - 6/7/01: All PVOCs reported below laboratory detection limits.
   - 1/2/02: All PVOCs reported below laboratory detection limits.
   - 4/1/02: Not submitted
   - 7/18/02: All PVOCs reported below laboratory detection limits.
   - 10/24/02: All PVOCs reported below laboratory detection limits.
   - 12/26/02: All PVOCs reported below laboratory detection limits.
   - 4/7/03: All PVOCs reported below laboratory detection limits.
7. Trip blank comments:
   - 6/7/01: All VOCs reported below laboratory detection limits.
   - 1/2/02: All PVOCs reported below laboratory detection limits.
   - 4/1/02: All PVOCs reported below laboratory detection limits.
   - 7/18/02: All PVOCs reported below laboratory detection limits.
   - 10/24/02: All PVOCs reported below laboratory detection limits.
   - 12/26/02: All PVOCs reported below laboratory detection limits.
   - 4/7/03: All PVOCs reported below laboratory detection limits.
8. Exceedances: ***bold, italics*** = concentration exceeds NR 140 PAL
   bold, box = concentration exceeds NR 140 ES

Table 3
Soil Analytical Quality Results - Detected Compounds
Former Sun Oil Company, 6309 W. Appleton Avenue, Milwaukee, Wisconsin
Sigma Project No. 6480

Soil Boring Identification:		GP-1		GP-2		GP-3	GP-4	GP-5	GP-6	NR 720 RCL	Ground-water Pathway RCL	Direct Contact Pathway RCL	NR 746 Table 1	NR 746 Table 2
Sample Depth (ft):		4 - 8	16 - 20	4 - 8	12 - 16	4 - 8	4 - 8	4 - 8	4 - 8					
Collection Date:		4/11/01	4/11/01	4/11/01	4/11/01	4/11/01	4/11/01	4/11/01	4/11/01					
Parameter	**Units**													
GRO	mg/kg	**1,500**	11	**420**	<10	<10	<10	<10	NA	100	NS	NS	NS	NS
DRO	mg/kg	NA	NA	NA	NA	NA	NA	NA	<10	100	NS	NS	NS	NS
Lead (total)	mg/kg	<6	<6	<6	<6	<6	<6	<6	NA	50	NS	NS	NS	NS
Detected VOCs														
Benzene	µg/kg	<1,300	<25	<250	<25	<25	<25	<25	<25	5.5	NS	NS	8,500	1,100
sec-Butylbenzene	µg/kg	9,300	41	2,600	<25	<25	<25	<25	<25	NS	NS	NS	NS	NS
n-Butylbenzene	µg/kg	53,000	360	13,000	<25	<25	<25	<25	<25	NS	NS	NS	NS	NS
1,2-Dichloroethane	µg/kg	<1,300	<25	<250	<25	<25	<25	<25	<25	4.9	NS	NS	600	540
Ethylbenzene	µg/kg	**49,000**	230	2,500	<25	<25	<25	<25	<25	2,900	NS	NS	4,600	NS
Isopropylbenzene	µg/kg	10,000	79	1,900	<25	<25	<25	<25	<25	NS	NS	NS	NS	NS
p-Isopropytoluene	µg/kg	6,300	<25	1,900	<25	<25	<25	<25	<25	NS	NS	NS	NS	NS
Methyl-tert-butyl-ether	µg/kg	<1,300	<25	<250	<25	<25	<25	<25	<25	NS	NS	NS	NS	NS
Naphthalene	µg/kg	**13,000**	150	**670**	<25	<25	<25	<25	<25	NS	NS	NS	2,700	NS
n-Propylbenzene	µg/kg	33,000	240	4,100	<25	<25	<25	<25	<25	NS	NS	NS	NS	NS
Toluene	µg/kg	**2,800**	<25	310	<25	<25	<25	<25	<25	1,500	NS	NS	38,000	NS
1,2,4-Trimethylbenzene	µg/kg	120,000	1,200	10,000	<25	<25	<25	<25	<25	NS	NS	NS	83,000	NS
1,3,5-Trimethylbenzene	µg/kg	50,000	410	4,000	<25	<25	<25	<25	<25	NS	NS	NS	11,000	NS
Xylenes (Total)	µg/kg	**151,000**	1,420	2,900	<75	<75	<75	<75	<75	4,100	NS	NS	42,000	NS
Detected PAHs														
Acenaphthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	<35	NS	38,000	900,000	NS	NS
Anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	<36	NS	3,000,000	5,000,000	NS	NS
Fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	<21	NS	500,000	600,000	NS	NS
Fluorene	µg/kg	NA	NA	NA	NA	NA	NA	NA	<20	NS	100,000	600,000	NS	NS
1-Methylnaphthalene	µg/kg	NA	NA	NA	NA	NA	NA	NA	<65	NS	23,000	1,100,000	NS	NS
2-Methylnaphthalene	µg/kg	NA	NA	NA	NA	NA	NA	NA	<87	NS	20,000	600,000	NS	NS
Naphthalene	µg/kg	NA	NA	NA	NA	NA	NA	NA	<44	NS	400	20,000	2,700	NS
Phenanthrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	<41	NS	1,800	18,000	NS	NS
Pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	<46	NS	8,700,000	500,000	NS	NS

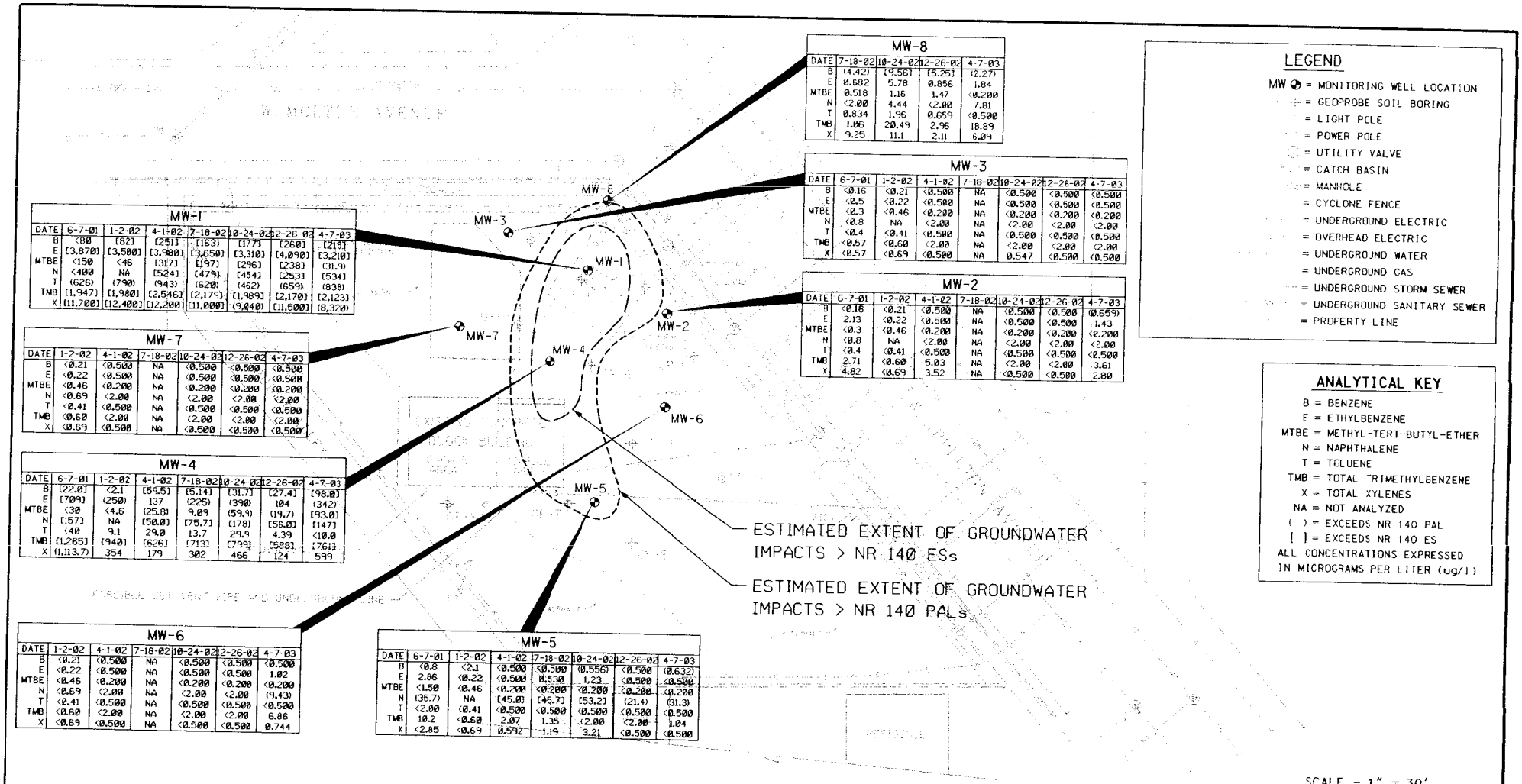
Notes:

1. mg/kg = milligrams per kilogram (equivalent to parts per million, ppm).
2. µg/kg = micrograms per kilogram (equivalent to parts per billion, ppb)
3. GRO = Gasoline Range Organics
4. DRO = Diesel Range Organics
5. NR 720 Generic RCL = Chapter NR 720 Generic Residual Contaminant Level
6. Groundwater Pathway RCL = Generic Residual Contaminant Level for protection of groundwater from WDNR Publication RR-519-97 "Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance" (April 1997).
7. Direct Contact Pathway RCL = Generic Residual Contaminant Level for the direct contact pathway (non-industrial land use) from WDNR Publication RR-519-97 "Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance" (April 1997).
8. NR 746 Table 1 = Chapter NR 746, Table 1: Indicators of Residual Petroleum Products in Soil Pores
9. NR 746 Table 2 = Chapter NR 746, Table 2: Protection of Human Health from Direct Contact with Contaminated Soil
10. NS = No standard
11. NA = Not analyzed
12. "J" = Analyte detected between Limit of Detection and Limit of Quantitation.
13. Exceedances: **bold** = Concentration exceeds NR 720 Generic RCL (PVOCs) or lowest Interim Guidance RCL (PAHs)
    box = Concentration exceeds NR 746 Table 1 value

Table 3
Soil Analytical Quality Results - Detected Compounds
Former Sun Oil Company, 6309 W. Appleton Avenue, Milwaukee, Wisconsin
Sigma Project No. 6480

Soil Boring Identification:		GP-7		GP-8	GP-9	GP-10	GP-11	MW-1	MW-4	MW-8		NR 720 RCL	Ground-water Pathway RCL	Direct Contact Pathway RCL	NR 746 Table 1	NR 746 Table 2
Sample Depth (ft):		4 - 8	12 - 16	4 - 8	4 - 8	4 - 8	4 - 8	4 - 6	6 - 8	2 - 4	6 - 8					
Collection Date:		4/11/01	4/11/01	4/11/01	4/11/01	4/11/01	4/11/01	6/1/01	6/1/01	7/12/02	7/12/02					
Parameter	**Units**															
GRO	mg/kg	NA	NA	NA	NA	NA	<10	**120**	**160**	<5.82	<6.00	100	NS	NS	NS	NS
DRO	mg/kg	**470**	<10	<10	<10	<10	NA	NA	NA	NA	NA	100	NS	NS	NS	NS
Lead (total)	mg/kg	NA	NA	NA	NA	NA	<6	NA	NA	NA	NA	50	NS	NS	NS	NS
Detected VOCs																
Benzene	µg/kg	<25	<25	<25	<25	<25	<25	**75.8**	<100	<25.0	<25.0	5.5	NS	NS	8,500	1,100
sec-Butylbenzene	µg/kg	210	<25	<25	<25	<25	<25	NA	NA	NA	NA	NS	NS	NS	NS	NS
n-Butylbenzene	µg/kg	140	<25	<25	<25	<25	<25	NA	NA	NA	NA	NS	NS	NS	NS	NS
1,2-Dichloroethane	µg/kg	<25	<25	<25	<25	<25	<25	NA	NA	NA	NA	4.9	NS	NS	600	540
Ethylbenzene	µg/kg	<25	<25	<25	<25	<25	<25	1,130	**4,200**	<25.0	<25.0	2,900	NS	NS	4,600	NS
Isopropylbenzene	µg/kg	<25	<25	<25	<25	<25	<25	NA	NA	NA	NA	NS	NS	NS	NS	NS
p-Isopropytoluene	µg/kg	48	<25	<25	<25	<25	<25	NA	NA	NA	NA	NS	NS	NS	NS	NS
Methyl-tert-butyl-ether	µg/kg	<25	<25	<25	<25	<25	<25	<25	<100	<25.0	<25.0	NS	NS	NS	NS	NS
Naphthalene	µg/kg	<25	<25	<25	<25	<25	<25	NA	NA	NA	NA	NS	NS	NS	2,700	NS
n-Propylbenzene	µg/kg	62	<25	<25	<25	<25	<25	NA	NA	NA	NA	NS	NS	NS	NS	NS
Toluene	µg/kg	<25	<25	<25	<25	<25	<25	<25	166	<25.0	<25.0	1,500	NS	NS	38,000	NS
1,2,4-Trimethylbenzene	µg/kg	100	<25	<25	<25	<25	<25	840	10,900	<25.0	<25.0	NS	NS	NS	83,000	NS
1,3,5-Trimethylbenzene	µg/kg	<25	<25	<25	<25	<25	<25	1,170	3,860	<25.0	<25.0	NS	NS	NS	11,000	NS
Xylenes (Total)	µg/kg	<75	<75	<75	<75	<75	<75	347	**5,945**	<25.0	<25.0	4,100	NS	NS	42,000	NS
Detected PAHs																
Acenaphthene	µg/kg	340	<35	<35	<35	<35	NA	NA	40.3	NA	NA	NS	38,000	900,000	NS	NS
Anthracene	µg/kg	160	<36	<36	<36	<36	NA	NA	<3.51	NA	NA	NS	3,000,000	5,000,000	NS	NS
Fluoranthene	µg/kg	62 "J"	<21	<21	28 "J"	83	NA	NA	<3.15	NA	NA	NS	500,000	600,000	NS	NS
Fluorene	µg/kg	520	28 "J"	<20	<20	<20	NA	NA	4.99 "J"	NA	NA	NS	100,000	600,000	NS	NS
1-Methylnaphthalene	µg/kg	1,800	<65	<65	<65	<65	NA	NA	538	NA	NA	NS	23,000	1,100,000	NS	NS
2-Methylnaphthalene	µg/kg	180 "J"	<87	<87	<87	<87	NA	NA	1,070	NA	NA	NS	20,000	600,000	NS	NS
Naphthalene	µg/kg	72 "J"	<44	<44	<44	<44	NA	NA	**424**	NA	NA	NS	400	20,000	2,700	NS
Phenanthrene	µg/kg	1,600	77 "J"	<41	<41	<41	NA	NA	<1.94	NA	NA	NS	1,800	18,000	NS	NS
Pyrene	µg/kg	140 "J"	<46	<46	<46	62 "J"	NA	NA	<3.75	NA	NA	NS	8,700,000	500,000	NS	NS

Notes:
1. mg/kg = milligrams per kilogram (equivalent to parts per million, ppm).
2. µg/kg = micrograms per kilogram (equivalent to parts per billion, ppb)
3. GRO = Gasoline Range Organics
4. DRO = Diesel Range Organics
5. NR 720 Generic RCL = Chapter NR 720 Generic Residual Contaminant Level
6. Groundwater Pathway RCL = Generic Residual Contaminant Level for protection of groundwater from WDNR Publication RR-519-97 "Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance" (April 1997).
7. Direct Contact Pathway RCL = Generic Residual Contaminant Level for the direct contact pathway (non-industrial land use) from WDNR Publication RR-519-97 "Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance" (April 1997).
8. NR 746 Table 1 = Chapter NR 746, Table 1: Indicators of Residual Petroleum Products in Soil Pores
9. NR 746 Table 2 = Chapter NR 746, Table 2: Protection of Human Health from Direct Contact with Contaminated Soil
10. NS = No standard
11. NA = Not analyzed
12. "J" = Analyte detected between Limit of Detection and Limit of Quantitation.
13. Exceedances: **bold** = Concentration exceeds NR 720 Generic RCL (PVOCs) or lowest Interim Guidance RCL (PAHs)
box = Concentration exceeds NR 746 Table 1 value



MW-8

DATE	7-18-02	10-24-02	12-26-02	4-7-03
B	(4.42)	(9.56)	(5.25)	(2.27)
E	0.682	5.78	0.856	1.84
MTBE	0.518	1.16	1.47	<0.200
N	<2.00	4.44	<2.00	7.81
T	0.834	1.96	0.659	<0.500
TMB	1.06	20.49	2.96	18.89
X	9.25	11.1	2.11	6.09

MW-3

DATE	6-7-01	1-2-02	4-1-02	7-18-02	10-24-02	12-26-02	4-7-03
B	<0.16	<0.21	<0.500	NA	<0.500	<0.500	<0.500
E	<0.5	<0.22	<0.500	NA	<0.500	<0.500	<0.500
MTBE	<0.3	<0.46	<0.200	NA	<0.200	<0.200	<0.200
N	<0.8	NA	<2.00	NA	<2.00	<2.00	<2.00
T	<0.4	<0.41	<0.500	NA	<0.500	<0.500	<0.500
TMB	<0.57	<0.60	<2.00	NA	<2.00	<2.00	<2.00
X	<0.57	<0.69	<0.500	NA	0.547	<0.500	<0.500

MW-2

DATE	6-7-01	1-2-02	4-1-02	7-18-02	10-24-02	12-26-02	4-7-03
B	<0.16	<0.21	<0.500	NA	<0.500	<0.500	(0.659)
E	2.13	<0.22	<0.500	NA	<0.500	<0.500	1.43
MTBE	<0.3	<0.46	<0.200	NA	<0.200	<0.200	<0.200
N	<0.8	NA	<2.00	NA	<2.00	<2.00	<2.00
T	<0.4	<0.41	<0.500	NA	<0.500	<0.500	<0.500
TMB	2.71	<0.60	5.03	NA	<2.00	<2.00	3.61
X	4.82	<0.69	3.52	NA	<0.500	<0.500	2.80

MW-1

DATE	6-7-01	1-2-02	4-1-02	7-18-02	10-24-02	12-26-02	4-7-03
B	<80	[82]	[25]	[163]	[177]	[260]	[215]
E	[3,870]	[3,500]	[3,980]	[3,650]	[3,310]	[4,090]	[3,210]
MTBE	<150	<46	[317]	[197]	[296]	[238]	(31.9)
N	<400	NA	[524]	[479]	[454]	[253]	[534]
T	(626)	(790)	(943)	(620)	(462)	(659)	(838)
TMB	[1,947]	[1,980]	[2,546]	[2,179]	[1,989]	[2,170]	[2,123]
X	[11,700]	[12,400]	[12,200]	[11,000]	(9,840)	[11,500]	(8,320)

MW-7

DATE	1-2-02	4-1-02	7-18-02	10-24-02	12-26-02	4-7-03
B	<0.21	<0.500	NA	<0.500	<0.500	<0.500
E	<0.22	<0.500	NA	<0.500	<0.500	<0.500
MTBE	<0.46	<0.200	NA	<0.200	<0.200	<0.200
N	<0.69	<2.00	NA	<2.00	<2.00	<2.00
T	<0.41	<0.500	NA	<0.500	<0.500	<0.500
TMB	<0.60	<2.00	NA	<2.00	<2.00	<2.00
X	<0.69	<0.500	NA	<0.500	<0.500	<0.500

MW-4

DATE	6-7-01	1-2-02	4-1-02	7-18-02	10-24-02	12-26-02	4-7-03
B	[22.0]	<2.1	[59.5]	[5.14]	[31.7]	[27.4]	[98.0]
E	[709]	(250)	137	(225)	(390)	104	(342)
MTBE	<30	<4.6	(25.8)	9.09	(59.9)	(19.7)	[93.0]
N	[57]	NA	[50.0]	[75.7]	[78]	[55.0]	[147]
T	<40	9.1	29.0	13.7	29.9	4.39	<10.0
TMB	[1,265]	(940)	(626)	(713)	(799)	[588]	[761]
X	(1,113.7)	354	179	302	466	124	599

MW-6

DATE	1-2-02	4-1-02	7-18-02	10-24-02	12-26-02	4-7-03
B	<0.21	<0.500	NA	<0.500	<0.500	<0.500
E	<0.22	<0.500	NA	<0.500	<0.500	1.02
MTBE	<0.46	<0.200	NA	<0.200	<0.200	<0.200
N	<0.69	<2.00	NA	<2.00	<2.00	(9.43)
T	<0.41	<0.500	NA	<0.500	<0.500	<0.500
TMB	<0.60	<2.00	NA	<2.00	<2.00	6.86
X	<0.69	<0.500	NA	<0.500	<0.500	0.744

MW-5

DATE	6-7-01	1-2-02	4-1-02	7-18-02	10-24-02	12-26-02	4-7-03
B	<0.8	<2.1	<0.500	<0.500	(0.556)	<0.500	(0.632)
E	2.86	<0.22	<0.500	0.530	1.23	<0.500	<0.500
MTBE	<1.50	<0.46	<0.200	<0.200	<0.200	<0.200	<0.200
N	(35.7)	NA	[45.0]	[46.7]	[53.2]	(21.4)	(31.3)
T	<2.00	(0.41	<0.500	<0.500	<0.500	<0.500	<0.500
TMB	10.2	<0.60	2.07	1.35	<2.00	<2.00	1.04
X	<2.85	<0.69	0.592	1.19	3.21	<0.500	<0.500

LEGEND

MW ⊕ = MONITORING WELL LOCATION
= GEOPROBE SOIL BORING
= LIGHT POLE
= POWER POLE
= UTILITY VALVE
= CATCH BASIN
= MANHOLE
= CYCLONE FENCE
= UNDERGROUND ELECTRIC
= OVERHEAD ELECTRIC
= UNDERGROUND WATER
= UNDERGROUND GAS
= UNDERGROUND STORM SEWER
= UNDERGROUND SANITARY SEWER
= PROPERTY LINE

ANALYTICAL KEY

B = BENZENE
E = ETHYLBENZENE
MTBE = METHYL-TERT-BUTYL-ETHER
N = NAPHTHALENE
T = TOLUENE
TMB = TOTAL TRIMETHYLBENZENE
X = TOTAL XYLENES
NA = NOT ANALYZED
( ) = EXCEEDS NR 140 PAL
[ ] = EXCEEDS NR 140 ES
ALL CONCENTRATIONS EXPRESSED IN MICROGRAMS PER LITER (ug/l)

SCALE - 1" = 30'

0 15 30 60

NOTES:

1. SITE FEATURES BASED ON SURVEY DATED 6-2-95, BY METROPOLITIAN SURVEY SERVICE, INC., AND FIELD MEASURMENTS AND OBSERVATIONS MADE BY SIGMA ENVIRONMENTAL ON 4-11-01.
2. UTILITY LOCATIONS BASED ON LOCATIONS MARKED BY DIGGER'S HOTLINE, PRIVATE LINES, INC., AND DRAWINGS FROM CITY OF MILWAUKEE.
3. WELLS AND BORINGS BASED ON SURVEY DATED 2-4-02, BY EMCS.
4. LOCATIONS OF FORMER SERVICE STATION, DISPENSER ISLAND, AND UST BASIN BASED ON SANBORN MAPS AND HISTORICAL SITE DRAWINGS.

FORMER SUN OIL PROPERTY
6309 W. APPLETON AVENUE, MILWAUKEE, WI

SIGMA ENVIRONMENTAL SERVICES INC.

DATE: 5-12-03	DR. BY: BEB	DR.# 6480-007	SCALE: 1" = 30'

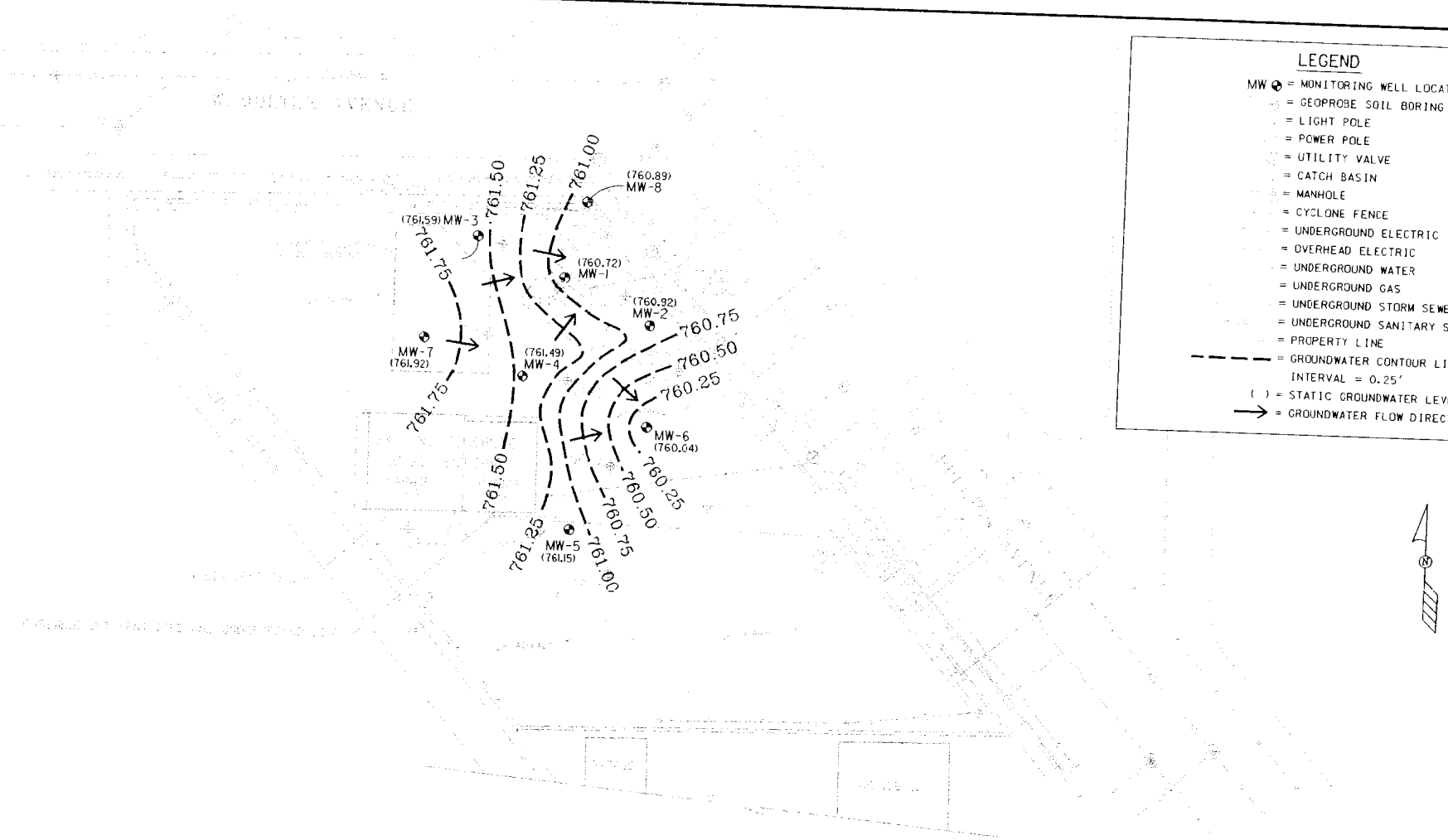
GROUNDWATER QUALITY MAP

FIGURE 9

Table 1
Groundwater Elevation Data
Former Sun Oil Company, 6309 W. Appleton Avenue, Milwaukee, Wisconsin
Sigma Project No. 6480

Monitoring Well Identification	Date	Top of Casing Elevation (feet MSL)	Ground Surface Elevation (feet MSL)	Depth to Water (feet TOC)	Depth to Water (feet bgs)	Groundwater Elevation (feet MSL)	Screen Interval (feet MSL)
MW-1	06/07/2001	767.18	767.7	3.78	4.31	763.40	763.7 - 753.7
	01/02/2002			6.55	7.08	760.63	
	04/01/2002			6.27	6.80	760.91	
	07/18/2002			6.62	7.15	760.56	
	10/24/2002			6.06	6.59	761.12	
	12/26/2002			7.07	7.60	760.11	
	04/07/2003			6.46	6.99	760.72	
MW-2	06/07/2001	767.08	767.6	3.97	4.44	763.11	763.6 - 753.6
	01/02/2002			6.55	7.02	760.53	
	04/01/2002			6.13	6.60	760.95	
	07/18/2002			7.60	8.07	759.48	
	10/24/2002			6.06	6.53	761.02	
	12/26/2002			7.07	7.54	760.01	
	04/07/2003			6.16	6.63	760.92	
MW-3	06/07/2001	767.41	767.8	4.05	4.48	763.36	763.8 - 753.8
	01/02/2002			6.96	7.39	760.45	
	04/01/2002			6.50	6.93	760.91	
	07/18/2002			7.02	7.45	760.39	
	10/24/2002			5.94	6.37	761.47	
	12/26/2002			7.40	7.83	760.01	
	04/07/2003			5.82	6.25	761.59	
MW-4	06/07/2001	767.65	768.3	4.15	4.77	763.50	763.3 - 753.3
	01/02/2002			6.91	7.53	760.74	
	04/01/2002			6.28	6.90	761.37	
	07/18/2002			7.03	7.65	760.62	
	10/24/2002			6.45	7.07	761.20	
	12/26/2002			7.44	8.06	760.21	
	04/07/2003			6.16	6.78	761.49	
MW-5	06/07/2001	767.18	768.3	4.08	5.21	763.10	764.3 - 754.3
	01/02/2002			6.25	7.38	760.93	
	04/01/2002			5.70	6.83	761.48	
	07/18/2002			6.35	7.48	760.83	
	10/24/2002			6.09	7.22	761.09	
	12/26/2002			6.87	8.00	760.31	
	04/07/2003			6.03	7.16	761.15	
MW-6	06/07/2001			not installed	---	---	---
	01/02/2002	767.59	768.0	7.61	8.05	759.98	764.0 - 754.0
	04/01/2002			7.24	7.68	760.35	
	07/18/2002			7.31	7.75	760.28	
	10/24/2002			6.38	6.82	761.21	
	12/26/2002			7.65	8.09	759.94	
	04/07/2003			7.55	7.99	760.04	
MW-7	06/07/2001			not installed	---	---	---
	01/02/2002	767.78	768.3	7.05	7.54	760.73	764.3 - 754.3
	04/01/2002			6.41	6.90	761.37	
	07/18/2002			7.90	8.39	759.88	
	10/24/2002			6.16	6.65	761.62	
	12/26/2002			7.61	8.10	760.17	
	04/07/2003			5.86	6.35	761.92	
MW-8	06/07/2001			not installed	---	---	---
	01/02/2002			not installed	---	---	---
	04/01/2002			not installed	---	---	---
	07/18/2002	766.77	767.1	7.78	8.15	758.99	763.1 - 753.1
	10/24/2002			6.16	6.53	760.61	
	12/26/2002			7.20	7.57	759.57	
	04/07/2003			5.88	6.25	760.89	

Notes:
1. Monitoring wells MW-1 through MW-7 surveyed by EMCS Design Group in January 2002.
2. feet MSL = feet Mean Sea Level
3. feet TOC = feet from Top of Casing
4. feet bgs = feet below ground surface
5. MW-1 through MW-5 installed on June 1, 2001. MW-6 and MW-7 installed on December 14, 2001.
6. MW-8 installed on July 12, 2002 and surveyed on July 18, 2002 by Sigma Environmental.



LEGEND

- MW ⊕ = MONITORING WELL LOCATION
- = GEOPROBE SOIL BORING
- = LIGHT POLE
- = POWER POLE
- = UTILITY VALVE
- = CATCH BASIN
- = MANHOLE
- = CYCLONE FENCE
- = UNDERGROUND ELECTRIC
- = OVERHEAD ELECTRIC
- = UNDERGROUND WATER
- = UNDERGROUND GAS
- = UNDERGROUND STORM SEWER
- = UNDERGROUND SANITARY SEWER
- = PROPERTY LINE
- = GROUNDWATER CONTOUR LINE, CONTOUR INTERVAL = 0.25'
- ( ) = STATIC GROUNDWATER LEVEL (4-7-03)
- → = GROUNDWATER FLOW DIRECTION

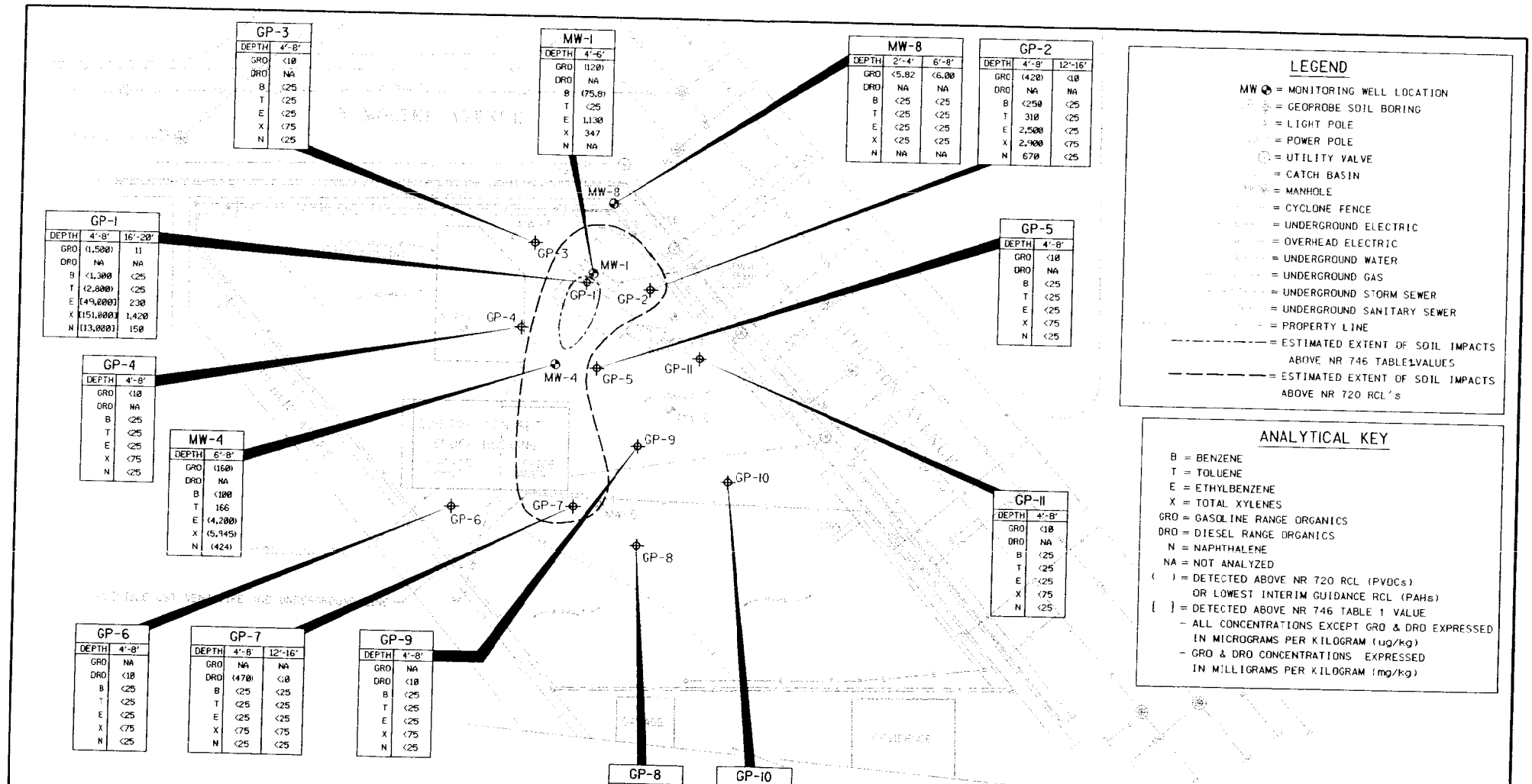
NOTES:

1. SITE FEATURES BASED ON SURVEY DATED 6-2-95, BY METROPOLITIAN SURVEY SERVICE, INC., AND FIELD MEASURMENTS AND OBSERVATIONS MADE BY SIGMA ENVIRONMENTAL ON 4-11-01.
2. UTILITY LOCATIONS BASED ON LOCATIONS MARKED BY DIGGER'S HOTLINE, PRIVATE LINES, INC., AND DRAWINGS FROM CITY OF MILWAUKEE.
3. WELLS AND BORINGS BASED ON SURVEY DATED 2-4-02, BY EMCS.
4. LOCATIONS OF FORMER SERVICE STATION, DISPENSER ISLAND, AND UST BASIN BASED ON SANBORN MAPS AND HISTORICAL SITE DRAWINGS.

SCALE - 1" = 30'

0 15 30 60

FORMER SUN OIL PROPERTY 6309 W. APPLETON AVENUE, MILWAUKEE, WI			SIGMA ENVIRONMENTAL SERVICES INC.
DATE: 4-21-03	DR. BY: BEB	DR.# 6480-012	SCALE: 1" = 30'
GROUNDWATER CONTOUR MAP (4-7-03)			FIGURE 7



GP-3	
DEPTH	4'-8'
GRO	<10
DRO	NA
B	<25
T	<25
E	<25
X	<75
N	<25

MW-1	
DEPTH	4'-6'
GRO	(120)
DRO	NA
B	(75.8)
T	<25
E	1,130
X	347
N	NA

MW-8		
DEPTH	2'-4'	6'-8'
GRO	<5.82	<6.00
DRO	NA	NA
B	<25	<25
T	<25	<25
E	<25	<25
X	<25	<25
N	NA	NA

GP-2		
DEPTH	4'-8'	12'-16'
GRO	(420)	<10
DRO	NA	NA
B	<250	<25
T	310	<25
E	2,500	<25
X	2,900	<75
N	670	<25

GP-1		
DEPTH	4'-8'	16'-20'
GRO	(1,500)	11
DRO	NA	NA
B	<1,300	<25
T	(2,800)	<25
E	[49,000]	230
X	[151,000]	1,420
N	[13,000]	150

GP-5	
DEPTH	4'-8'
GRO	<10
DRO	NA
B	<25
T	<25
E	<25
X	<75
N	<25

GP-4	
DEPTH	4'-8'
GRO	<10
DRO	NA
B	<25
T	<25
E	<25
X	<75
N	<25

MW-4	
DEPTH	6'-8'
GRO	(160)
DRO	NA
B	<100
T	166
E	(4,200)
X	(5,945)
N	(424)

GP-11	
DEPTH	4'-8'
GRO	<10
DRO	NA
B	<25
T	<25
E	<25
X	<75
N	<25

GP-6	
DEPTH	4'-8'
GRO	NA
DRO	<10
B	<25
T	<25
E	<25
X	<75
N	<25

GP-7		
DEPTH	4'-8'	12'-16'
GRO	NA	NA
DRO	(470)	<10
B	<25	<25
T	<25	<25
E	<25	<25
X	<75	<75
N	<25	<25

GP-9	
DEPTH	4'-8'
GRO	NA
DRO	<10
B	<25
T	<25
E	<25
X	<75
N	<25

GP-8	
DEPTH	4'-8'
GRO	NA
DRO	<10
B	<25
T	<25
E	<25
X	<75
N	<25

GP-10	
DEPTH	4'-8'
GRO	NA
DRO	<10
B	<25
T	<25
E	<25
X	<75
N	<25

NOTES:

1. SITE FEATURES BASED ON SURVEY DATED 6-2-95, BY METROPOLITIAN SURVEY SERVICE, INC., AND FIELD MEASURMENTS AND OBSERVATIONS MADE BY SIGMA ENVIRONMENTAL ON 4-11-01.
2. UTILITY LOCATIONS BASED ON LOCATIONS MARKED BY DIGGER'S HOTLINE. PRIVATE LINES, INC., AND DRAWINGS FROM CITY OF MILWAUKEE.
3. WELLS AND BORINGS BASED ON SURVEY DATED 2-4-02, BY EMCS.
4. LOCATIONS OF FORMER SERVICE STATION, DISPENSER ISLAND, AND UST BASIN BASED ON SANBORN MAPS AND HISTORICAL SITE DRAWINGS.

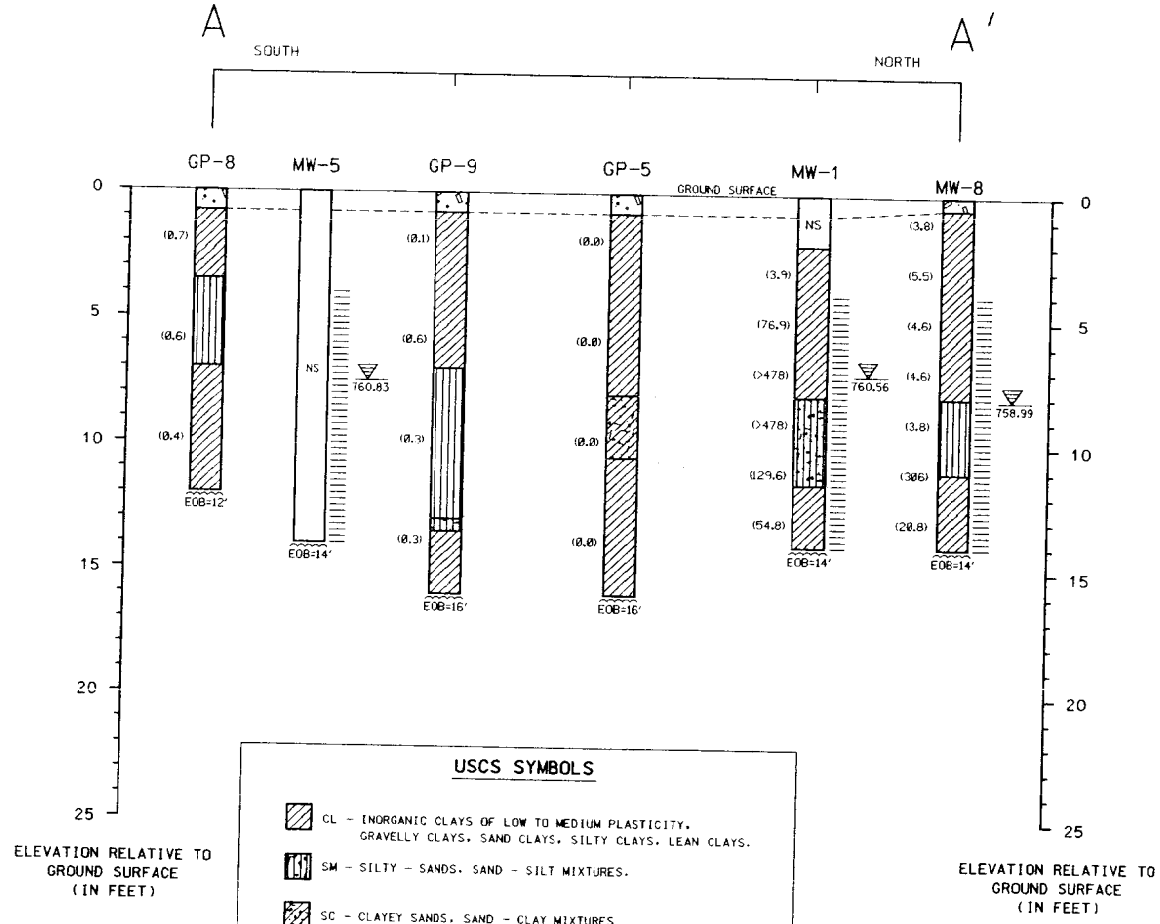
FORMER SUN OIL PROPERTY
6309 W. APPLETON AVENUE, MILWAUKEE, WI

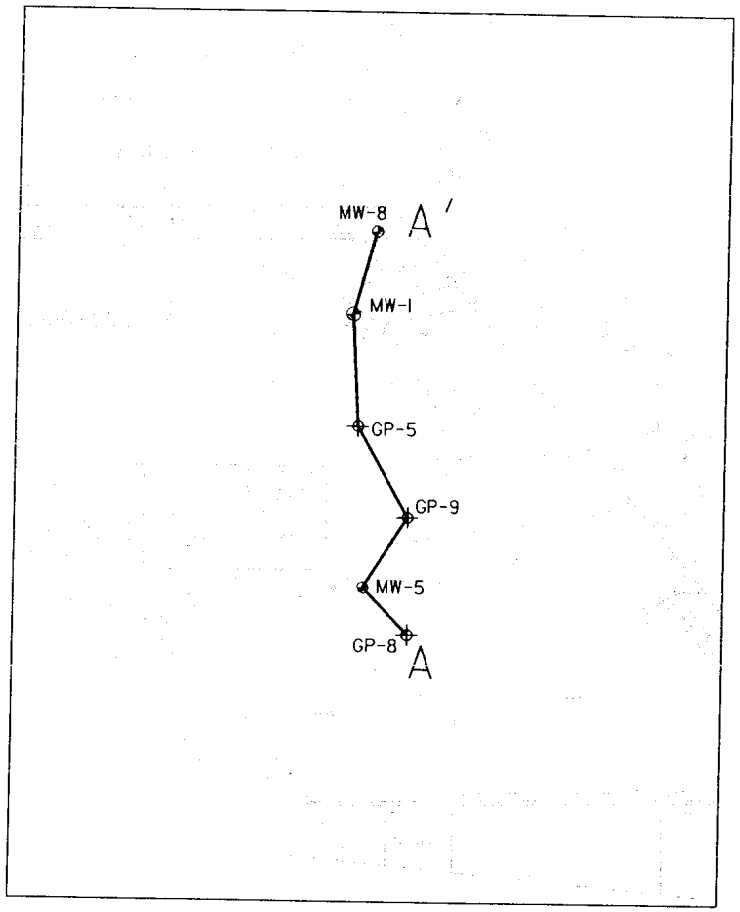
SIGMA ENVIRONMENTAL SERVICES INC.

DATE: 11-11-02	DR. BY: BEB	DR.# 6480-005	SCALE: 1" = 30'

SOIL QUALITY MAP

FIGURE 8





GEOLOGIC CROSS SECTION LOCATION

NOT TO SCALE

USCS SYMBOLS

- CL - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY. GRAVELLY CLAYS, SAND CLAYS, SILTY CLAYS, LEAN CLAYS.
- SM - SILTY - SANDS, SAND - SILT MIXTURES.
- SC - CLAYEY SANDS, SAND - CLAY MIXTURES
- ML - INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY.

NON-USCS SYMBOLS

- FILL MATERIAL

LEGEND

- ≡ = WELL SCREEN INTERVAL
- NS = NOT SAMPLED
- ▽ = STATIC GROUNDWATER ELEVATION AS MEASURED (7-18-02)

NOTES:
1. HORIZONTAL SCALE 1" = 20', VERTICAL SCALE 1" = 5'.
2. ( ) = FLAME IONIZATION DETECTOR (FID) VALUE SHOWN IN PARTS PER MILLION AS METHANE.

FORMER SUN OIL PROPERTY 6309 W. APPLETON AVENUE, MILWAUKEE, WI			SIGMA ENVIRONMENTAL SERVICES INC.
DATE: 4-30-02	DR. BY: BEB	DR.# 6480-008	SCALE: SEE NOTES
GEOLOGIC CROSS SECTION A - A'			FIGURE 3

GIS Registry Packet
Former Sun Oil – 6309 W. Appleton Avenue, Milwaukee, Wisconsin

STATEMENT BY RESPONSIBLE PARTY

Mr. Edward Ennis, the responsible party for the property located at 6309 W. Appleton Avenue, Milwaukee, Wisconsin, states that the legal description provided to the Wisconsin Department of Commerce in this Geographic Information System (GIS) Registry packet for Wisconsin Department of Natural Resources BRRTS #03-41-004678 is complete and accurate to the best of my knowledge.

Signature of Responsible Party

Date