



EPA Region 5 Records Ctr.



393723

**WISCONSIN PUBLIC SERVICE
CORPORATION
GREEN BAY, WISCONSIN**

**TWO RIVERS FORMER MGP
UPLAND SITE DATA SUMMARY**

PROJECT 1569





UPLAND SITE DATA SUMMARY

FORMER MANUFACTURED GAS PLANT SITE TWO RIVERS, WISCONSIN

Prepared For:

**Wisconsin Public Service Corporation
700 North Adams Street
Green Bay, WI 54307**

Prepared By:

**Natural Resource Technology, Inc.
23713 West Paul Road, Suite D
Pewaukee, WI 53072**

NRT Project No. 1569

May 13, 2005

TWO RIVERS MGP SITE

Wisconsin Public Service Corporation

General Information

Site Size: 5 acres

Years of Operation: 1925-1946

Ownership: WPSC

Gas Process: Coal Carbonization, Carbureted Water Gas

Major Site Features:

Most of the site is a wetland (west of the MGP operations area bordering the west Twin River). The former MGP building and other structure foundations are present

Site Status Summary

Overview of Remediation Work Completed

- A remedial alternatives analysis (RAOR) for upland work was submitted to WDNR in December 2003 and approved. The selected remedial action identified by the RAOR includes limited soil removal/disposal from upland areas and in-situ chemical oxidation.
- Bench scale treatability testing for in-situ chemical oxidation was completed in 2003. A field scale pilot test program was conducted in December 2004, post-treatment groundwater monitoring was performed through March 2005.
- Groundwater monitoring is in progress as part of the pre-remediation planning work.
- An initial river sediment quality assessment was completed and reported by NRT in 1996. Supplemental field poling observations were made in 2003.

Status of Site Conditions & Monitoring

- The depth to groundwater ranges from approximately 0.5 to 3 feet below ground surface. Groundwater flow is southwest toward the West Twin River.
- Surficial soils consist of silts/sands, discontinuous peat units and fill material (wood, glass, brick, concrete, wire, and ash/cinder) overlying clay with intermittent sand layers.

- Residual concentrations of PVOCs, PAHs, and cyanide are present in soil and/or groundwater at the site, as described in the project reports of record
- Preliminary bench testing resulted in selecting BIOX[®] for the field scale pilot test program.
- Water depths in the West Twin River adjacent to the site range from 2 to 6 feet.
- In 1996, residual tar, sheens, and odor were detected in the sediments adjacent to the site, in an area extending approximately 120 feet outward from shore, and for a length of about 720 feet. The thickness of soft sediments in this area ranged from 2.0 to 11.3 feet, averaging about 7.2 feet. Tar was sometimes evident only in the lower portion of the soft sediment. Although the 2003 supplemental poling found occasional evidence of MGP-residuals outside this area, it was generally isolated and random.
- Within the area described above, total PAH concentrations from vibracore samples ranged from <1 to 2,004 mg/kg. Outside this area, based on limited testing, the PAH concentrations were ND to < 1 mg/kg. A “background” sediment sample at the upstream property line had 0.011 mg/kg total PAHs (0 to 20 inch composite).

Interim/Supplemental Actions Identified

- Design and implementation of upland remediation work (scheduled for 2005/2006 prior to transitioning sites to USEPA lead regulatory agency).

RECORD FILE

- 1986 January, EDI Engineering & Science, *Site Investigation, Former Coal Gas Manufacturing Plant, School Street, Two Rivers, Wisconsin*, Report No. 20401.
- 1991 October 7, Wisconsin Department of Natural Resources, Letter to Wisconsin Public Service Corporation *Groundwater Contamination at Wisconsin Public Service Sites: North Adams Street, Green Bay; Ceape Avenue, Oshkosh; School Street, Two Rivers*.
- 1991 November 7, Wisconsin Public Service Corporation, Letter to Wisconsin Department of Natural Resources, *Former Coal Gasification Sites*.
- 1994 June 27, Natural Resource Technology, Inc., *Work Plan - Phase II Environmental, Investigation of Manufactured Gas Plant Sites - Green Bay - Sheboygan I - Two Rivers, Wisconsin*, Project No. 1043.
- 1994 July 27, Wisconsin Department of Natural Resources, Letter to Wisconsin Public Service Corporation *Site Investigation at the Former Manufactured Gas Plants Located in Green Bay and Two Rivers, Wisconsin*, Project No 1057.

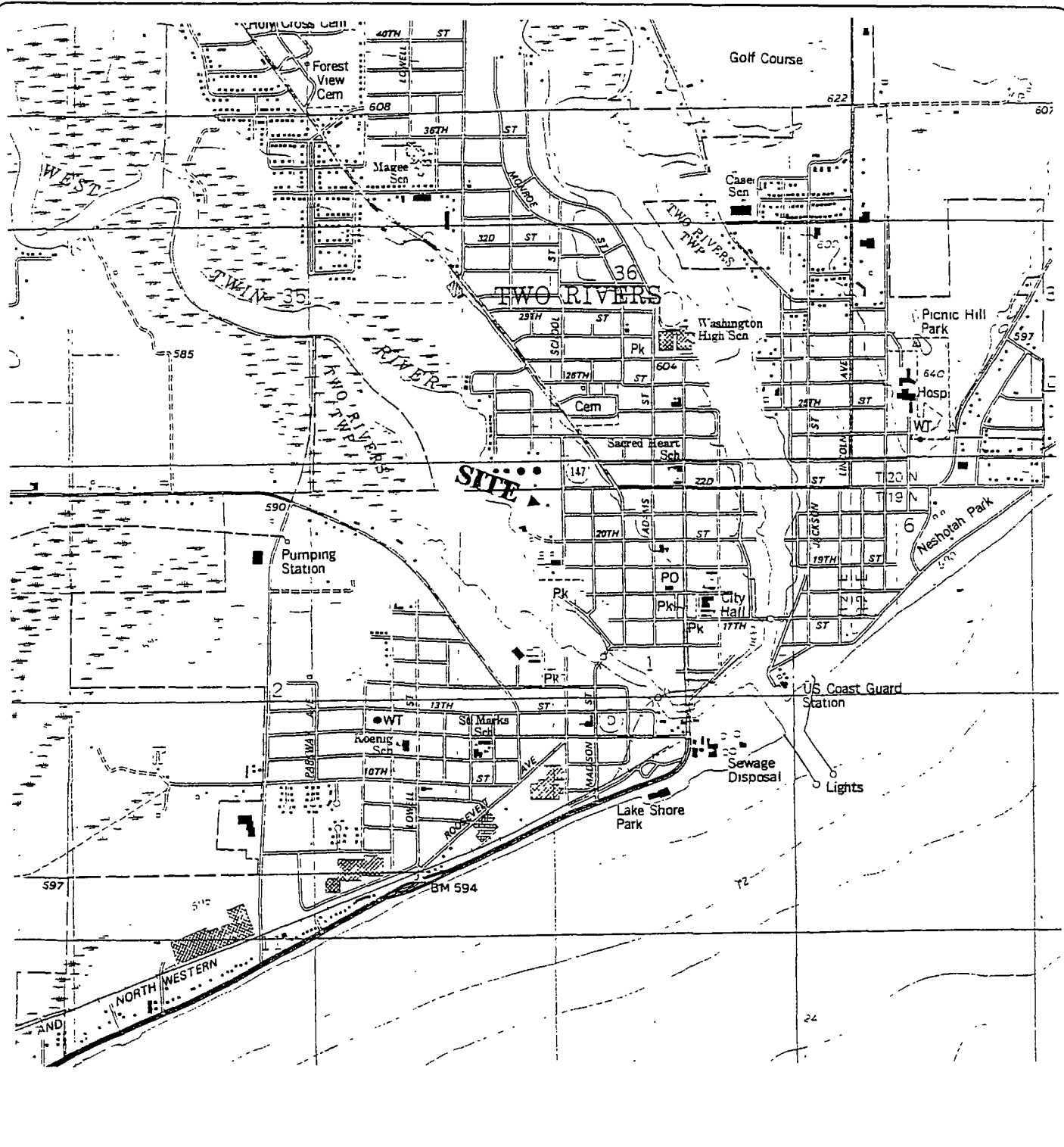
Wisconsin Public Service Corporation
Two Rivers Former Manufactured Gas Plant Site
Two Rivers, Wisconsin

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- 1994 October 21, Natural Resource Technology, *Sediment Sampling Work Plan Addendum - Green Bay And Two Rivers Manufactured Gas Plant Sites*, Project No. 1057 And 1059.
- 1994 October 31, Natural Resource Technology, Inc , Letter to Mr Richard Stoll, (Wisconsin Department of Natural Resources) *Monitoring Well Construction Variance Applications- for Former Manufactured Gas Plant (MPG) Investigations in Green Bay and Two Rivers, Wisconsin*, Project No, 1057.
- 1995 January 25, Natural Resource Technology, Inc, *Disposal Of Investigative Waste Soils From Site Investigations Of Former Manufactured Gas Plant (MGP) Sites For Wisconsin Public Service Corporation (WPSC) In. 1) Oshkosh, 2) Stevens Point, 3) Marinette, 4) Two Rivers, And 5) Green Bay, Wisconsin*, Project No. 1033.
- 1995 March 31, Natural Resource Technology, Inc., Letter to Wisconsin Department of Natural Resources, *Sediment Sampling at the Former Manufactured Gas Plants located in Green Bay and Two Rivers, Wisconsin*, Project No 1059.
- 1995 May 12, Natural Resource Technology, Inc., *Phase II Environmental Investigation Report, Former Manufactured Gas Plant Site, Two Rivers, Wisconsin*, Project No. 1059
- 1995 June 21, Natural Resource Technology, Inc., Letter to Thomas Stibbe, Wisconsin Department of Natural Resources, *Form 4400-149 and Composite Soil Sample Results for Wisconsin Public Service Corporation Sites in Marinette, Stevens Point, Oshkosh, Green Bay, and Two Rivers, Wisconsin*, Project No. 1059
- 1995 August 4, Natural Resource Technology, Inc., Letter to Joe Brehm, Wisconsin Department of Natural Resources, *Thermal Treatment of Soils from Wisconsin Public Service Corporation sites in Marinette, Stevens Point, Oshkosh, Green Bay, and Two Rivers, Wisconsin*, Project No. 1059.
- 1995 August 18, Natural Resource Technology, Inc , Letter to James Reyburn, Wisconsin Department of Natural Resources, *Site Investigation at the Former Manufactured Gas Plants located in Green Bay and Two Rivers, Wisconsin*, Project No 1059.
- 1995 October 21, Natural Resource Technology, Inc., Letter to James Reyburn, Wisconsin Department of Natural Resources, *Sediment and Surface Water Sampling at the Former Manufactured Gas Plants located in Green Bay and Two Rivers, Wisconsin*, Project No. 1059
- 1996 March 5, Natural Resource Technology, Inc., *Work Plan, Phase II Addendum Environmental Investigations of Manufactured Gas Plant Sites, Green Bay, Marinette, Oshkosh, Two Rivers Wisconsin*, Project No 1150.
- 1996 May 31, Natural Resource Technology, Inc., Letter to James Reyburn, Wisconsin Department of Natural Resources, *Phase II Addendum Investigation Work Plan Comments, Former Manufactured Gas Plant Sites, Green Bay, Marinette, Oshkosh, Two Rivers, Wisconsin*, Project No. 1050.
- 1996 November 11, Natural Resource Technology, Inc., Letter to James Reyburn, Wisconsin Department of Natural Resources, *Phase II Addendum Investigation Results, Former Two Rivers Manufactured Gas Plant (MGP) Site, Two Rivers, Wisconsin*, Project No. 1050.

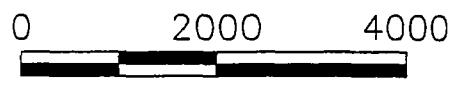
Wisconsin Public Service Corporation
Two Rivers Former Manufactured Gas Plant Site
Two Rivers, Wisconsin

- 1996 December 23, Natural Resource Technology, Inc., *Sediment Investigation Report Former Manufactured Gas Plant Site, Two Rivers, WI*, Project No. 1183.
- 2003 February 14, Natural Resource Technology, Inc., *Site Status Update/Groundwater Conditions Summary, Wisconsin Public Service Corporation Former Manufactured Gas Plant (MGP) Site on School Street, Two Rivers, Wisconsin*, Project No. 1569.
- 2003 March 20, Wisconsin Department of Natural Resources, Letter to Wisconsin Public Service Corporation *Acknowledgement of Receipt/Notice to Proceed Site Status Update – Future Activities, WPS Former Manufactured Gas Plant Site – School Street, Two Rivers, WDNR BRRTS# 02-36-000255*.
- 2003 August 15, Natural Resource Technology, Inc., *Pre-Remedial Site Investigation Work Plan, Two Rivers Former MGP Site, Two Rivers, Wisconsin*, Project No. 1569.
- 2003 August 22, Wisconsin Department of Natural Resources, Letter to Wisconsin Public Service Corporation *Acknowledgement of Receipt/Notice to Proceed with Work Plan for a Pre-remedial Site Investigation of the on-land areas at the Former Manufactured Gas Plant, School Street, Two Rivers, Manitowoc, WDNR BRRTS# 02-36-000255*.
- 2003 December 31, Natural Resource Technology, Inc., *Pre-Remedial Design Investigation and Remedial Action Option Report, Former Manufactured Gas Plant Site, Two Rivers Former, Wisconsin*, Project No. 1569.
- 2004 February 16, Wisconsin Department of Natural Resources, Letter to Wisconsin Public Service Corporation regarding Remedial Action Option Report Approval and Comments, Wisconsin Public Service Corporation, *Former Manufactured Gas Plant Site, School Street, Two Rivers, WDNR BRRTS# 02-36-000255*
- 2004 March 12, Natural Resource Technology, Inc., Response to WDNR Comments of *Pre-Remedial Design Investigation and Remedial Action Option Report, Former Manufactured Gas Plant Site, Two Rivers Former, Wisconsin*, Project No. 1569.
- 2004 August 31, Natural Resource Technology, Inc., *Bench Scale Treatability Study Results Summary, Wisconsin Public Service Corporation, Former Manufactured Gas Plant Site on School Street, Two Rivers Former, Wisconsin, BRRTS# 02-36-000255* Project No. 1569.
- 2004 September 21, Natural Resource Technology, Inc., *Request for BIOX® Pilot-Scale Injection Approval and Work Plan, Wisconsin Public Service Corporation, Former Manufactured Gas Plant (MGP) Site on School Street, Two Rivers Former, Wisconsin, BRRTS# 02-36-000255* Project No. 1569.
- 2004 November 1, Wisconsin Department of Natural Resources, *Injection Approval for Remediation with BIOX Oxygen Release Injection for Former Manufactured Gas Plant Site at 2000 21st Street, Two Rivers, WDNR (BRRTS# 02-36-000255)*.
- 2004 December 5, Wisconsin Department of Natural Resources, *Issuance of WPDES General Discharge Permit #WI-0046566-4 for the discharge of treated contaminated groundwater from the WPS former Manufactured Gas Plant Site, 2000 21st Street, Two Rivers, WI to groundwater via injection wells in the West Twin River watershed*.

FIGURES

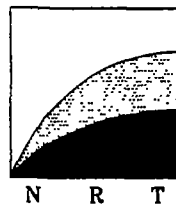


SOURCE: USGS 7.5 MINUTE QUADRANGLE,
TWO RIVERS. DATED 1978.



SCALE IN FEET

CONTOUR INTERVAL 10 FEET



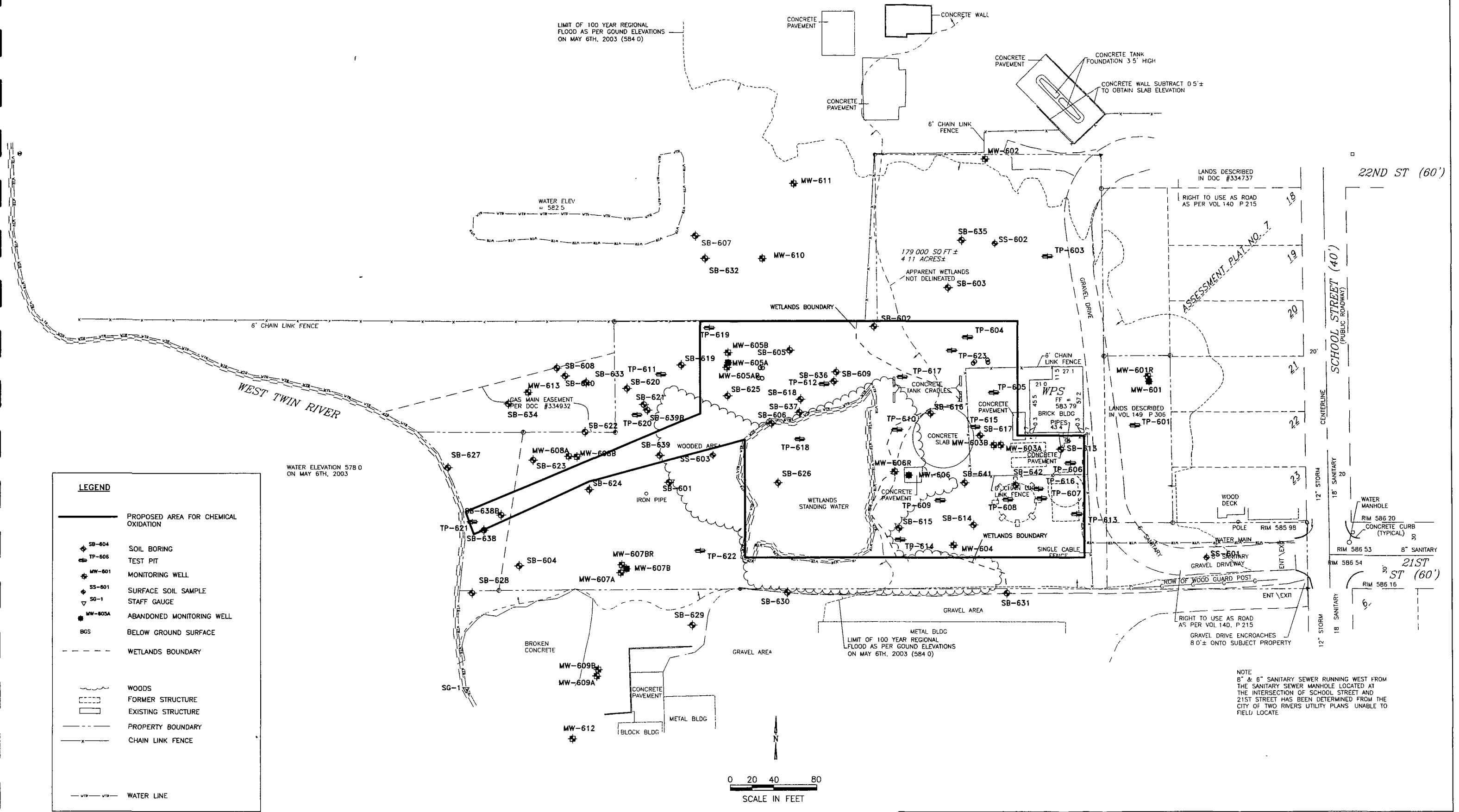
Natural
Resource
Technology

SITE LOCATION MAP

FORMER TWO RIVERS MANUFACTURED GAS PLANT SITE
WISCONSIN PUBLIC SERVICE CORPORATION
CITY OF TWO RIVERS, WISCONSIN

PROJECT NO.
1569
DRAWING NO.
1569-A01
FIGURE NO.
1

DRAWN BY: TAS APPROVED BY: EPK DATE: 07/07/03



LEGEND

- PROPOSED AREA FOR CHEMICAL OXIDATION
- ◆ SB-604 SOIL BORING
- ▣ TP-606 TEST PIT
- ⊕ MW-601 MONITORING WELL
- ⊕ SS-601 SURFACE SOIL SAMPLE
- ▽ SG-1 STAFF GAUGE
- ⊕ MW-605A ABANDONED MONITORING WELL
- BGS BELOW GROUND SURFACE
- - - WETLANDS BOUNDARY
- WOODS
- FORMER STRUCTURE
- EXISTING STRUCTURE
- PROPERTY BOUNDARY
- CHAIN LINK FENCE
- WATER LINE

NOTES
 1 APPROXIMATE LOCATION OF TEMPORARY GROUNDWATER MONITORING WELLS

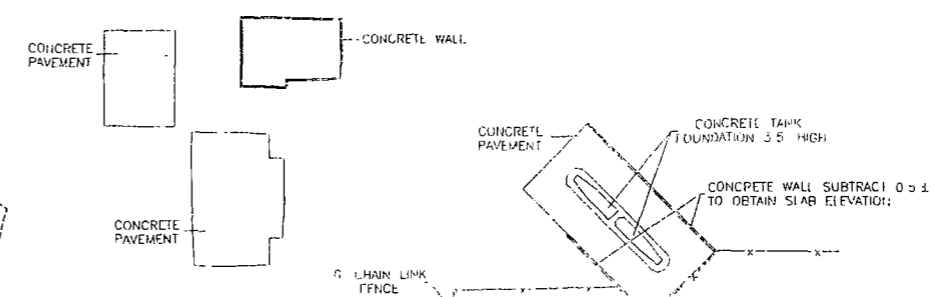
SOURCE NOTE
 THIS DRAWING WAS DEVELOPED FROM A SURVEY BY CAROW LAND SURVEYING CO., INC., PROJECT NO C034 29, DATED 5-27-03
 NORTH IS REFERENCED TO THE NORTH LINE OF THE FRACTIONAL NORTHWEST 1/4 OF SECTION 1, TOWNSHIP 19 NORTH, RANGE 24 EAST, CITY OF TWO RIVERS, MANITOWOC COUNTY, WISCONSIN WHICH BEARS N89°59'51"E PER THE MANITOWOC COUNTY COORDINATE SYSTEM
 2003 SOIL BORING AND TEST PIT LOCATIONS WERE TAKEN FROM A SURVEY BY CAROW LAND SURVEYING CO., INC., RECEIVED 09-17-03
 WETLAND BOUNDARY DELINEATED JULY 22, 2003 BY STS CONSULTANTS, LTD



PROJECT NO 1569/3 2	SOIL SAMPLE LOCATIONS	FORMER TWO RIVERS MANUFACTURED GAS PLANT SITE WISCONSIN PUBLIC SERVICE CORPORATION CITY OF TWO RIVERS, WISCONSIN
DRAWN BY RLH 05/04/05		
CHECKED BY JMK 05/04/05	DRAWING NO 1569-EPA32-B02	FIGURE NO 2
APPROVED BY JMK 05/12/05	REFERENCE	

NOTE
 8" & 6" SANITARY SEWER RUNNING WEST FROM THE SANITARY SEWER MANHOLE LOCATED AT THE INTERSECTION OF SCHOOL STREET AND 21ST STREET HAS BEEN DETERMINED FROM THE CITY OF TWO RIVERS UTILITY PLANS UNABLE TO FIELD LOCATE

LIMIT OF 100 YEAR REGIONAL FLOOD AS PER GROUND ELEVATIONS ON MAY 6TH, 2003 (584.0)



22ND ST

SCHOOL STREET (PUBLIC ROADWAY)

21ST ST

WEST TWIN RIVER

WATER ELEVATION 578.0 ON MAY 6TH, 2003

LEGEND

580 WATER TABLE CONTOUR ELEVATIONS, FT

580 POTENTIOMETRIC SURFACE ELEVATIONS, FT

GROUNDWATER FLOW DIRECTION (WATER TABLE)

MW-601 581.30 MONITORING WELL AND GROUNDWATER ELEVATION, FT

MW-603B 581.11 PIEZOMETER AND GROUNDWATER ELEVATION, FT

NM NOT MEASURED

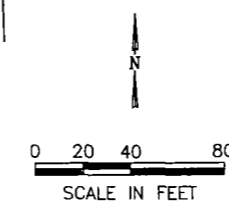
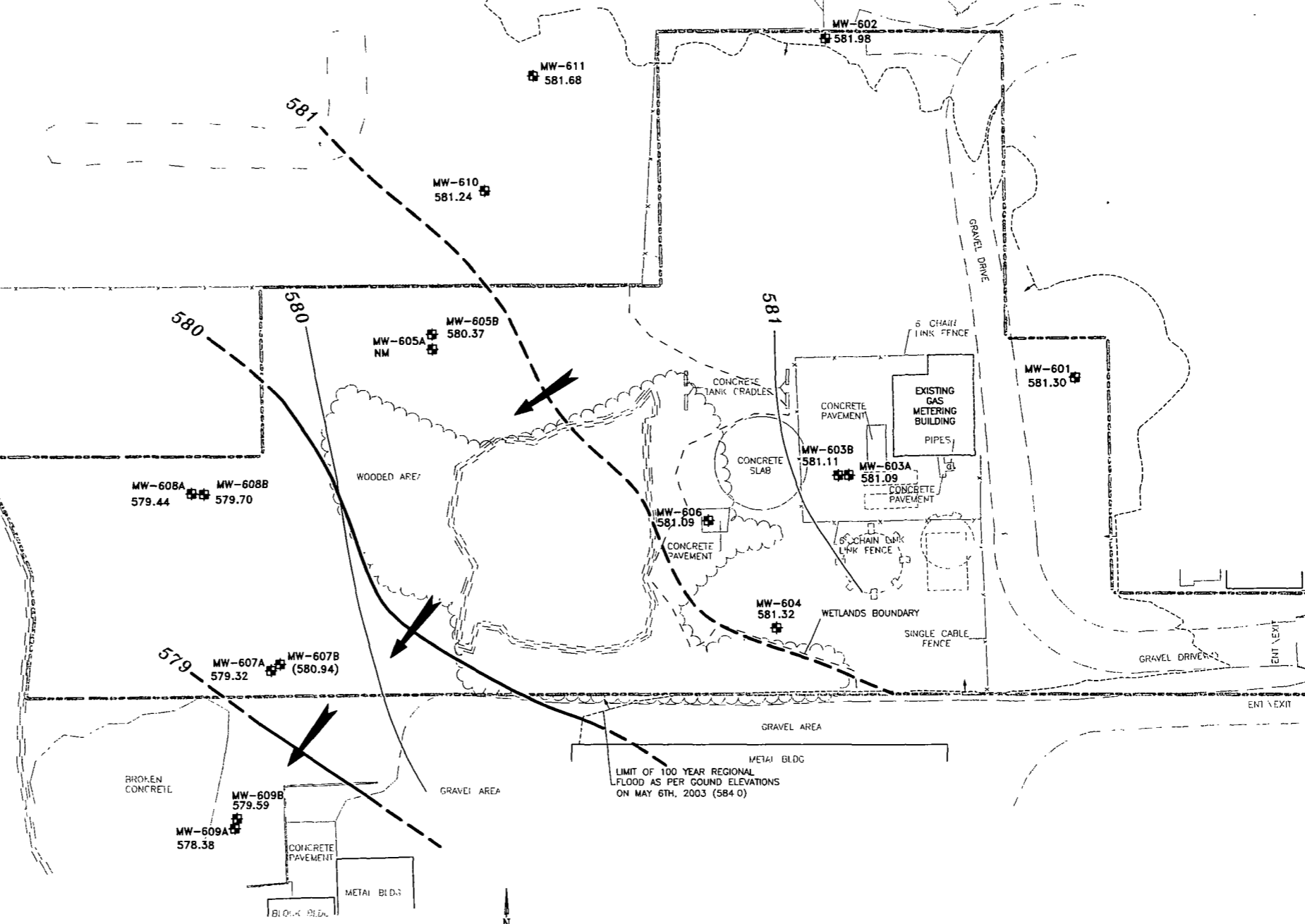
NOTE
GROUNDWATER ELEVATIONS SHOWN IN PARENTHESES WERE NOT USED TO DEVELOP THE GROUNDWATER DUE TO WELL OBSTRUCTIONS OR INCONSISTENT DATA.

PROPERTY BOUNDARY

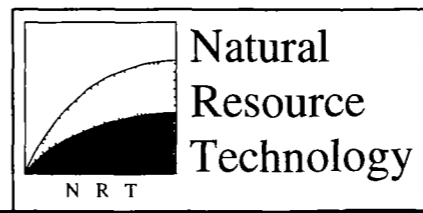
WOODS

FORMER STRUCTURE

EXISTING STRUCTURE



SOURCE NOTE
THIS DRAWING WAS DEVELOPED FROM A SURVEY BY CAROW LAND SURVEYING CO., INC., PROJECT NO. C034.28, DATED 5-27-03. NORTH IS REFERENCED TO THE NORTH LINE OF THE FRACTIONAL NORTHWEST 1/4 OF SECTION 1, TOWNSHIP 19 NORTH RANGE 24 EAST CITY OF TWO RIVERS, MANITOWOC COUNTY, WISCONSIN WHICH BEARS N89°59'51"E PER THE MANITOWOC COUNTY COORDINATE SYSTEM. 2003 SOIL BORING AND TEST PIT LOCATIONS WERE TAKEN FROM A SURVEY BY CAROW LAND SURVEYING CO., INC., RECEIVED 09-17-03. WETLAND BOUNDARY DELINEATED JULY 22, 2003 BY STS CONSULTANTS, LTD.



GROUNDWATER ELEVATION CONTOURS, JULY 2003		PROJECT NO 1569/2.2
SITE INVESTIGATION AND RAOR FORMER TWO RIVERS MANUFACTURED GAS PLANT SITE WISCONSIN PUBLIC SERVICE CORPORATION CITY OF TWO RIVERS, WISCONSIN		DRAWN BY TAS 10/23/03
CAD FILE 1569/2-2gw/1569-22-B03 DWG		CHECKED BY JMK 10/23/03
REFERENCE FILES		APPROVED BY SLF 12/22/03
		FIGURE NO 3

LIMIT OF 100 YEAR REGIONAL FLOOD AS PER GOUND ELEVATIONS ON MAY 6TH, 2003 (584.0)

LUNCHETT PAVEMENT

CONCRETE WALL

CONCRETE PAVEMENT

CONCRETE TANK FOUNDATION 3.5' HIGH

CONCRETE WALL SUBTRACT 0.5'± TO OBTAIN SLAB ELEVATION

CONCRETE PAVEMENT

6' CHAIN LINK FENCE

MW-602

581.98

MW-611

580.25

MW-610

579.63

579

6' CHAIN LINK FENCE

MW-605B

579.31

MW-605A NM

6' CHAIN LINK FENCE

MW-601 NM

WEST TWIN RIVER

WATER ELEVATION 578.0 ON MAY 6TH, 2003

MW-608A (573.60) MW-608B 578.72

WOODED AREA

CONCRETE TANK CRADLES

CONCRETE PAVEMENT

EXISTING GAS METERING BUILDING

CONCRETE SLAB

MW-603B (575.68)

MW-603A 579.88

CONCRETE PAVEMENT

MW-606 579.53

CONCRETE PAVEMENT

6' CHAIN LINK FENCE

WETLANDS BOUNDARY

MW-604 578.77

SINGLE CHAIN LINK FENCE

GRAVEL DRIVEWAY

ENT \ EXIT

22ND ST

SCHOOL STREET (PUBLIC ROADWAY)

21ST ST

ENT \ EXIT

GRAVEL AREA

METAL BLDG

LIMIT OF 100 YEAR REGIONAL FLOOD AS PER GOUND ELEVATIONS ON MAY 6TH, 2003 (584.0)

GRAVEL AREA

BROKEN CONCRETE

MW-609B 578.75

MW-609A 578.28

CONCRETE PAVEMENT

BLCK BLDG

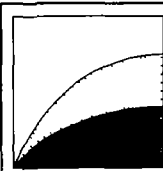
METAL BLDG

N

0 20 40 80

SCALE IN FEET

SOURCE NOTE
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 WETLAND BOUNDARY DELINEATED JULY 22, 2003 BY SIS CONSULTANTS, LTD.



Natural Resource Technology

GROUNDWATER ELEVATION CONTOURS, OCTOBER 2003
 SITE INVESTIGATION AND RAOR
 FORMER TWO RIVERS MANUFACTURED GAS PLANT SITE
 WISCONSIN PUBLIC SERVICE CORPORATION
 CITY OF TWO RIVERS, WISCONSIN

CAD FILE 1569/2-2gw/1569-22-B04 DWG
 REFERENCE FILES

PROJECT NO 1569/2.2
 DRAWN BY TAS 11/11/03
 CHECKED BY JMK 11/11/03
 APPROVED BY SLF 12/22/03
 FIGURE NO 4

LEGEND

580 WATER TABLE CONTOUR ELEVATIONS, FT

580 POTENTIOMETRIC SURFACE ELEVATIONS, FT

→ GROUNDWATER FLOW DIRECTION (WATER TABLE)

MW-601 581.50 MONITORING WELL AND GROUNDWATER ELEVATION, FT

MW-605B 581.11 PIEZOMETER AND GROUNDWATER ELEVATION, FT

NM NOT MEASURED

NOTE
 GROUNDWATER ELEVATIONS SHOWN IN PARANTHESES WERE NOT USED TO DEVELOP THE GROUNDWATER DUE TO WELL OBSTRUCIONS OR INCONSISTENT DATA.

— PROPERTY BOUNDARY

~ WOODS

--- FORMER STRUCTURE

▭ EXISTING STRUCTURE

MW-611	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
9/5/1996	nd	nd	nd	nd	na	na
10/11/1996	nd	nd	nd	nd	na	na
6/24/2002	*	*	*	*	*	*
10/30/2002	<0.25	<0.024	nd	nd	<0.0027	<0.0027
7/2/2003	<0.30	0.028 Q	nd	0.03	0.0104	na
7/2/03#	<0.30	0.024 Q	nd	0.024 Q	<0.0010	na
10/16/2003	<0.30	<0.024	nd	nd	0.00072	na

MW-610	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
9/5/1996	nd	nd	nd	nd	na	na
10/11/1996	nd	nd	nd	nd	na	na
6/24/2002	*	*	*	*	*	*
10/30/2002	<0.25	0.030 Q	nd	0.5	<0.0027	0.0030 Q
7/2/2003	<0.30	0.028 Q	nd	0.5	0.0038	na
7/2/03#	<0.30	0.025 Q	nd	0.6	0.0017	na
10/16/2003	<0.30	<0.024	nd	0.6	0.00106	na

MW-605A	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	140	1,500	970	3,486	0.14	0.2
12/8/94#	130	1,700	880	2,308	0.096	0.18
1/10/1995	1,400	2,300	4,330	3,589	0.013	0.096
1/10/95#	1,300	1,800	3,530	2,023	0.0093	0.082
6/24/2002	65	97	102	1,559	<0.0084	<0.0023
7/2/2003	**	**	**	**	**	**
10/16/2003	**	**	**	**	**	**

MW-608A	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	760	980	827	1,725	nd	0.006
1/10/1995	990	510	990	1,245	nd	0.01
6/24/2002	420	0.060 Q	491	23	<0.0084	0.012
7/2/2003	2,400	120	2,766	619	<0.0010	na
10/16/2003	3,700	170 D	4,250	734	0.0032	na

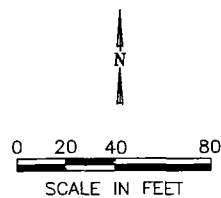
MW-607A	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	830	1,300	2,469	2,080	0.76	1.1
1/10/1995	1,100	1,300	2,960	1,300	0.23	1.5
6/24/2002	570	34 F	1,673	53	0.042	0.56
7/2/2003	980	240	2,858	452	0.009	na
10/16/2003	560	260 D	1,905	557	0.00358	na

Well ID	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
Date Sampled	Benzene	Naphthalene	Total Benzene, Toluene, Ethylbenzene, and Xylenes	Total Polynuclear Aromatic Hydrocarbons	Dissociable Cyanide	Total Cyanide
	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L

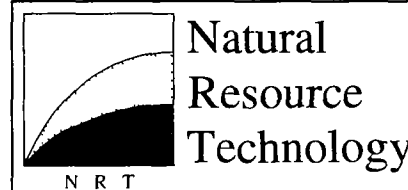
ANALYTICAL NOTES

- Q - Concentration between the limit of detection and limit of quantitation
 - K - Detection limit may be elevated due to the presence of an unrequested analyte
 - F - Analyte value from diluted analysis
 - D - Analyte value from diluted analysis
 - * - Well not sampled - located on US Oil property and access could not be obtained
 - ** - well not sampled-obstruction or damaged well
 - # - QA/QC duplicate sample
 - nd - parameter not detected
 - na - parameter not analyzed
- Concentrations equaling/exceeding the NR 140 Enforcement Standard are bold/underlined
 Concentrations equaling/exceeding the NR 140 Preventive Action Limit are italicized
 Benzene Enforcement Standard = 5 micrograms per liter
 Benzene Preventive Action Limit = 0.5 micrograms per liter
 Naphthalene Enforcement Standard = 40 micrograms per liter
 Naphthalene Preventive Action Limit = 8 micrograms per liter

	MW-601	MONITORING WELL		MW-606A	PIEZOMETER		SB-626	SOIL BORING		TP-611	TEST PIT
		PROPERTY BOUNDARY			WOODS			FORMER STRUCTURE			EXISTING STRUCTURE
		µg/L			MILLIGRAMS PER LITER			mg/L			MILLIGRAMS PER LITER



SOURCE NOTE
 THIS DRAWING WAS DEVELOPED FROM A SURVEY BY CAROW LAND SURVEYING CO., INC., PROJECT NO. CO34 29, DATED 5-27-03. NORTH IS REFERENCED TO THE NORTH LINE OF THE FRACTIONAL NORTHWEST 1/4 OF SECTION 1, TOWNSHIP 19 NORTH, RANGE 24 EAST, CITY OF TWO RIVERS, MANITOWOC COUNTY, WISCONSIN WHICH BEARS N89°59'51"E PER THE MANITOWOC COUNTY COORDINATE SYSTEM. 2003 SOIL BORING AND TEST PIT LOCATIONS WERE TAKEN FROM A SURVEY BY CAROW LAND SURVEYING CO., INC RECEIVED 09-17-03. WETLAND BOUNDARY DELINEATED JULY 22, 2003 BY SIS CONSULTANTS, LTD.



DISTRIBUTION OF SELECT PARAMETERS IN SHALLOW WELLS
 SITE INVESTIGATION AND RAOR
 FORMER TWO RIVERS MANUFACTURED GAS PLANT SITE
 WISCONSIN PUBLIC SERVICE CORPORATION
 CITY OF TWO RIVERS, WISCONSIN

CAD FILE 1569/2-2gw/1569-22-B05 DWG
 REFERENCE FILES

PROJECT NO 1569/2.2
 DRAWN BY TAS TAS 12/3/03
 CHECKED BY JMK 12/3/03
 APPROVED BY SLF 12/22/03
 FIGURE NO 5

MW-609A	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
9/5/1996	45	89	105	52	na	na
10/11/1996	31	4.5	70	27	na	na
10/11/96#	28	2.2	75	42	0.2	8.5
6/24/2002	72	2.4	122	51	0.024 Q	0.73
7/2/2003	67	3.3	140	39	0.0074	na
10/16/2003	51	2.8	134	3.3	<0.00048	na

MW-603A	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	710	500	2,547	592	0.47	5.3
1/11/1995	340	230	1,060	341	0.64	7.9
1/11/95#	380	230	1,170	1,300	0.2	8.5
6/24/2002	1,100	360 F	2,863	1,598	0.11	24
7/2/2003	500	280	1,166	453	0.0539	na
10/16/2003	530	120	1,519	231	0.015	na
10/16/03#	670	120 D	2,002	248	0.0188	na

MW-606	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	61	170	248	332	0.62	1.2
1/11/1995	660	2,300	1,890	2,988	0.033	0.8
6/24/2002	30	78	104	914	0.081	1.5
7/2/2003	28	71	119	268	0.0171	na
10/16/2003	38	3.3 Q	99	152	0.0186	na

MW-604	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	200	1,300	697	1,793	0.22	0.37
1/11/1995	240	1,200	692	1,610	0.05	0.73
6/24/2002	91	<14	243	411	<0.0084	0.096
7/2/2003	140 K	150	361	657	0.0048	na
10/16/2003	140	12	377	526	0.00231	na

MW-602	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	nd	nd	nd	nd	nd	nd
1/11/1995	nd	nd	nd	nd	nd	nd
6/24/2002	<0.48	<0.027	<1.4	nd	<0.0084	0.0036 Q
6/24/02#	<0.48	0.027 Q	nd	0.03	<0.0084	0.0024 Q
7/2/2003	<0.30	0.038 Q	nd	0.1	<0.001	na
10/16/2003	<0.30	<0.024	nd	0.03	0.00068	na

MW-601	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	nd	nd	nd	nd	nd	nd
1/11/1995	nd	nd	nd	nd	nd	0.2
6/24/2002	<0.48	<0.027	<1.4	nd	<0.0084	0.0040 Q
7/2/2003	<0.30	0.038 Q	nd	0.2	<0.001	na
10/16/2003	**	**	**	**	**	**

MW-605B	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	29	1,300	977	2,175	0.007	0.009
1/10/1995	47	nd	94	0.5	nd	0.011
6/24/2002	0.49 Q	2.8	3.8	29	<0.0084	0.012
7/2/2003	0.87 Q	<0.24	5.2	7.9	<0.001	na
10/16/2003	5.5	7.6 D	60	16	<0.00048	na

MW-603B	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	2.3	6.0	24	9.1	0.29	0.8
1/10/1995	2.6	6.9	28	10	0.33	0.88
1/11/1995	nd	nd	nd	11.0	0.095	0.67
6/24/2002	<0.48	0.21	nd	1.0	<0.0084	0.45
7/2/2003	<0.48	0.18	nd	1.0	<0.0084	0.57
10/16/2003	<0.30	0.088	nd	0.4	0.0039	na
11/01/03	<0.30	0.071 Q	nd	0.8	0.0015	na
11/01/03	<0.30	0.094	nd	0.7	0.0020	na

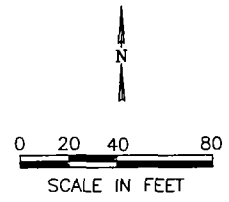
MW-608B	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	610	110	958	278	nd	0.007
1/10/1995	96	310	226	445	0.072	1.1
6/19/1996	13	nd	30	14	na	na
6/24/2002	2.3	<2.2	2.3	88	<0.0084	0.0035 Q
7/2/2003	2.2	2.0	2.2	32	0.0065	na
10/16/2003	1.7	<0.96	1.7	32	0.0024	na

MW-607B	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
12/8/1994	8.4	7.2	30	15	0.022	0.053
1/10/1995	17	11	40	12	nd	0.035
6/19/1996	0.91	nd	0.9	nd	na	na
6/24/2002	**	**	**	**	**	**
7/2/2003	**	**	**	**	**	**
10/16/2003	**	**	**	**	**	**

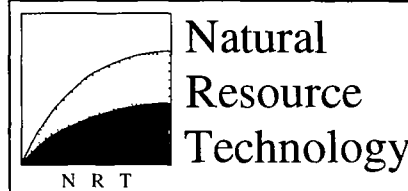
Well ID	Benz	Naph	BTEX	PAHs	Dis Cyanide	Cyanide
Date Sampled	Benzene	Naphthalene	Total Benzene, Toluene, Ethylbenzene, and Xylenes	Total Polynuclear Aromatic Hydrocarbons	Dissociable Cyanide	Total Cyanide
	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L

ANALYTICAL NOTES
 ** - Well not sampled due to an obstruction
 # - QA/QC Field duplicate sample
 Q - Concentration between the limit of detection and limit of quantitation
 na - parameter not analyzed
 nd - parameter not detected
 Concentrations equaling/exceeding the NR 140 Enforcement Standard are bold/underlined
 Concentrations equaling/exceeding the NR 140 Preventive Action Limit are italicized
 Benzene Enforcement Standard = 5 micrograms per liter
 Benzene Preventive Action Limit = 0.5 micrograms per liter
 Naphthalene Enforcement Standard = 40 micrograms per liter
 Naphthalene Preventive Action Limit = 8 micrograms per liter

Symbol	Description	Unit
⊕	MW-608B PIEZOMETER	µg/L MICROGRAMS PER LITER
⊕	MW-607 MONITORING WELL	µg/L MICROGRAMS PER LITER
⊕	SB-607 SOIL BORING	mg/L MILLIGRAMS PER LITER
⊕	TP-607 TEST PIT	mg/L MILLIGRAMS PER LITER

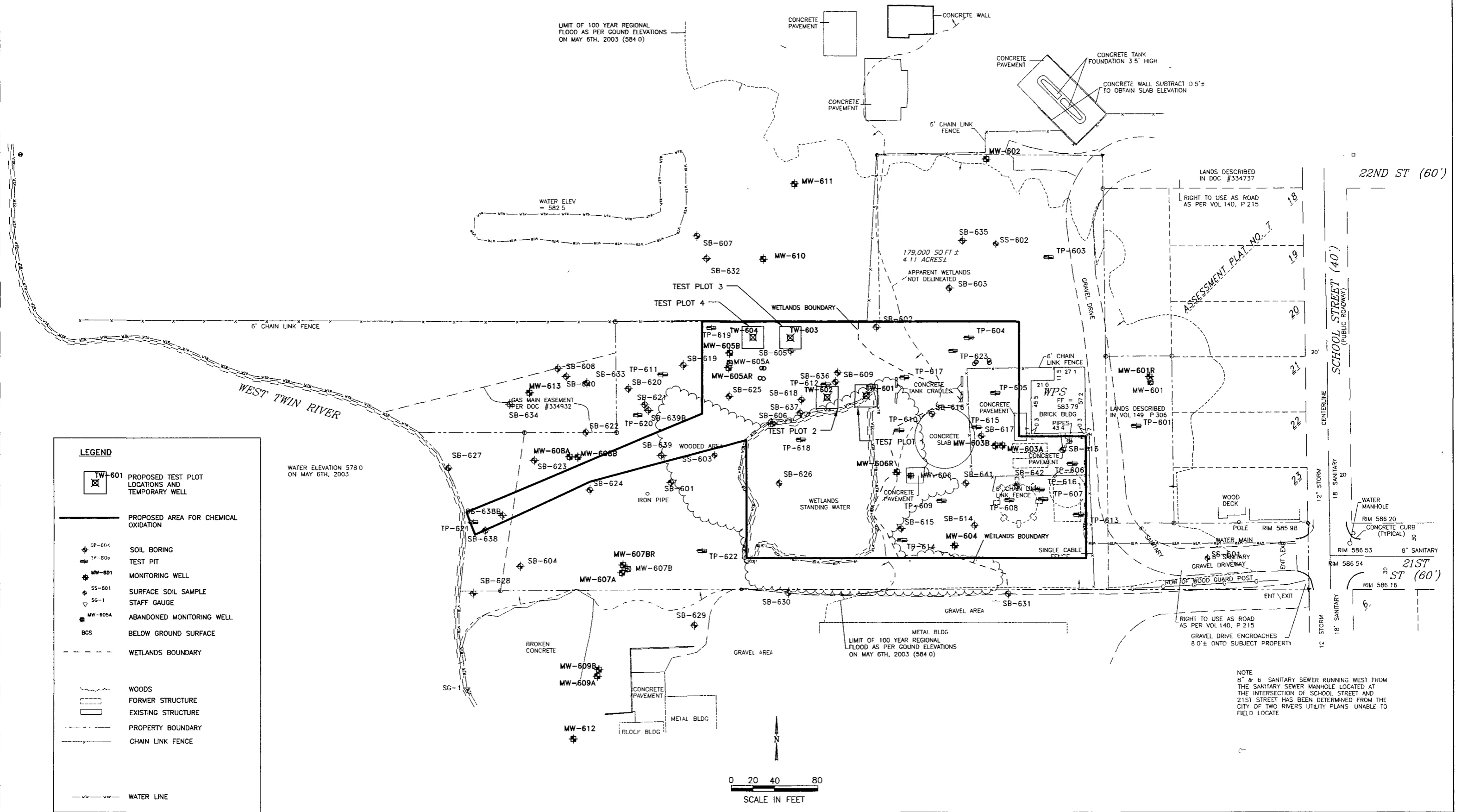


SOURCE NOTE
 THIS DRAWING WAS DEVELOPED FROM A SURVEY BY CAROW LAND SURVEYING CO., INC., PROJECT NO. C034 29, DATED 5-27-03
 NORTH IS REFERENCED TO THE NORTH LINE OF THE FRACTIONAL NORTHWEST 1/4 OF SECTION 1 TOWNSHIP 19 NORTH RANGE 24 EAST, CITY OF TWO RIVERS, MANITOWOC COUNTY, WISCONSIN WHICH BEARS N89°59'51"E PER THE MANITOWOC COUNTY COORDINATE SYSTEM
 2003 SOIL BORING AND TEST PIT LOCATIONS WERE TAKEN FROM A SURVEY BY CAROW LAND SURVEYING CO., INC RECEIVED 09-17-03
 WETLAND BOUNDARY DELINEATED JULY 22, 2003 BY STS CONSULTANTS, LTD



DISTRIBUTION OF SELECT PARAMETERS IN PIEZOMETERS
 SITE INVESTIGATION AND RAOR
 FORMER TWO RIVERS MANUFACTURED GAS PLANT SITE
 WISCONSIN PUBLIC SERVICE CORPORATION
 CITY OF TWO RIVERS, WISCONSIN

PROJECT NO 1569/2.2
 DRAWN BY: TAS
 TAS 12/05/03
 CHECKED BY: JMK
 JMK 12/5/03
 APPROVED BY: SLF
 SLF 12/22/03
 FIGURE NO 6



LEGEND

- PROPOSED TEST PLOT LOCATIONS AND TEMPORARY WELL
- PROPOSED AREA FOR CHEMICAL OXIDATION
- SOIL BORING
- TEST PIT
- MONITORING WELL
- SURFACE SOIL SAMPLE
- STAFF GAUGE
- ABANDONED MONITORING WELL
- BELOW GROUND SURFACE
- WETLANDS BOUNDARY
- WOODS
- FORMER STRUCTURE
- EXISTING STRUCTURE
- PROPERTY BOUNDARY
- CHAIN LINK FENCE
- WATER LINE

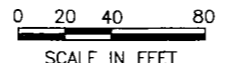
NOTES
 1 APPROXIMATE LOCATION OF TEMPORARY GROUNDWATER MONITORING WELLS

WATER ELEVATION 578.0 ON MAY 6TH, 2003

LIMIT OF 100 YEAR REGIONAL FLOOD AS PER GROUND ELEVATIONS ON MAY 6TH, 2003 (584.0)

WATER ELEV = 582.5

LIMIT OF 100 YEAR REGIONAL FLOOD AS PER GROUND ELEVATIONS ON MAY 6TH, 2003 (584.0)



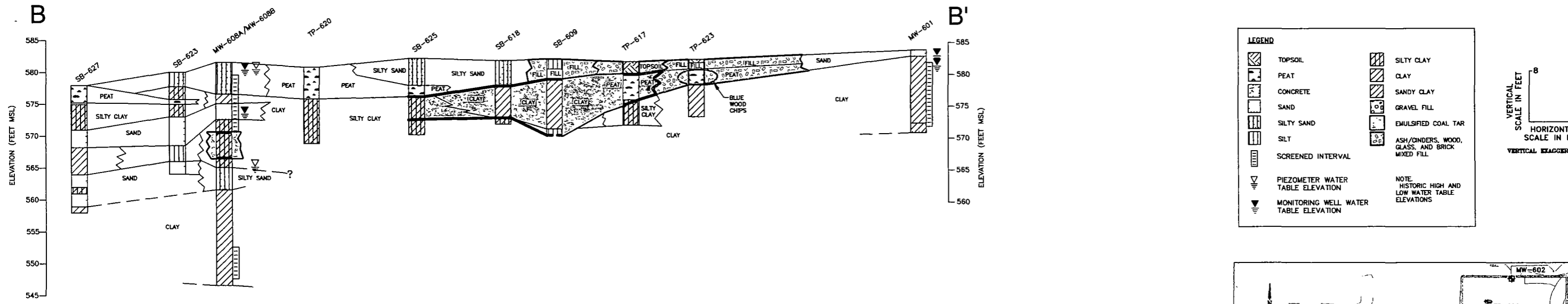
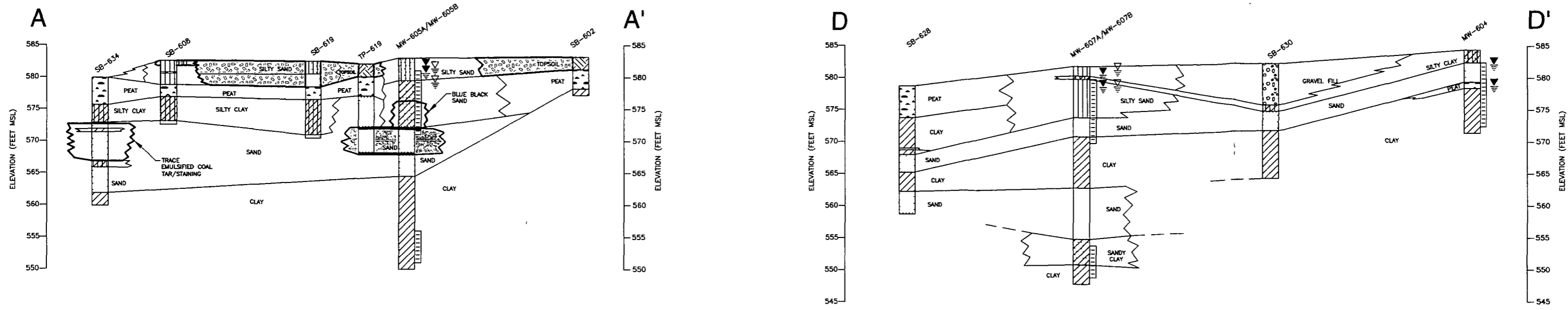
SOURCE NOTE
 THIS DRAWING WAS DEVELOPED FROM A SURVEY BY CAROW LAND SURVEYING CO., INC. PROJECT NO C034 29, DATED 5-27-03
 NORTH IS REFERENCED TO THE NORTH LINE OF THE FRACTIONAL NORTHWEST 1/4 OF SECTION 1, TOWNSHIP 19 NORTH, RANGE 24 EAST, CITY OF TWO RIVERS, MANITOWOC COUNTY, WISCONSIN WHICH BEARS N89°59'51"E PER THE MANITOWOC COUNTY COORDINATE SYSTEM
 2003 SOIL BORING AND TEST PIT LOCATIONS WERE TAKEN FROM A SURVEY BY CAROW LAND SURVEYING CO., INC. RECEIVED 09-17-03
 WETLAND BOUNDARY DELINEATED JULY 22, 2003 BY STS CONSULTANTS, LTD



PROJECT NO 1569/32	PROPOSED PILOT TESTING LOCATIONS
DRAWN BY RLH 05/04/05	
CHECKED BY JMK 05/04/05	
APPROVED BY JMK 05/12/05	
FORMER TWO RIVERS MANUFACTURED GAS PLANT SITE WISCONSIN PUBLIC SERVICE CORPORATION CITY OF TWO RIVERS, WISCONSIN	
DRAWING NO 1569-EPA32-B07	FIGURE NO 7

NOTE
 B" & 6" SANITARY SEWER RUNNING WEST FROM THE SANITARY SEWER MANHOLE LOCATED AT THE INTERSECTION OF SCHOOL STREET AND 21ST STREET HAS BEEN DETERMINED FROM THE CITY OF TWO RIVERS UTILITY PLANS UNABLE TO FIELD LOCATE



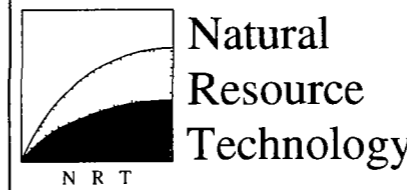
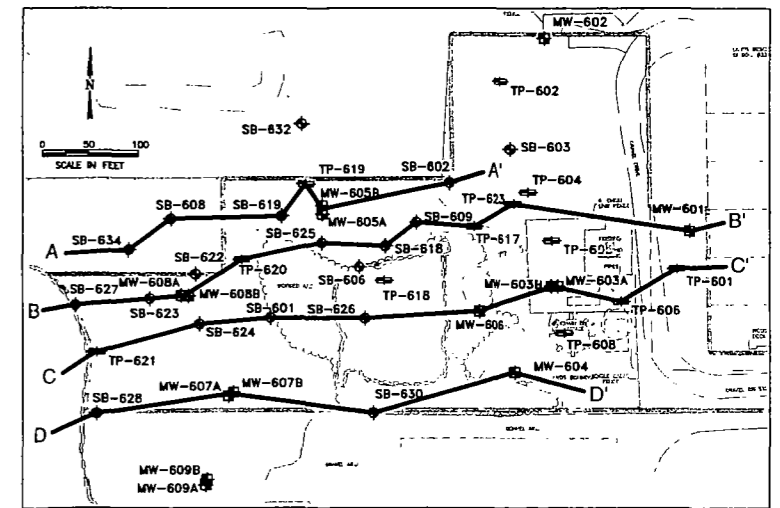


LEGEND

	TOPSOIL		SILTY CLAY
	PEAT		CLAY
	CONCRETE		SILTY SAND
	SAND		SANDY CLAY
	SILTY SAND		GRAVEL FILL
	SILT		EMULSIFIED COAL TAR
	SCREENED INTERVAL		ASH/CINDERS, WOOD, GLASS, AND BRICK MIXED FILL
	PIEZOMETER WATER TABLE ELEVATION		MONITORING WELL WATER TABLE ELEVATION

NOTE: HISTORIC HIGH AND LOW WATER TABLE ELEVATIONS

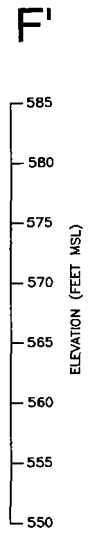
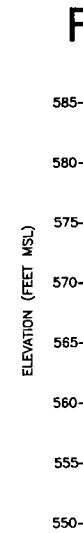
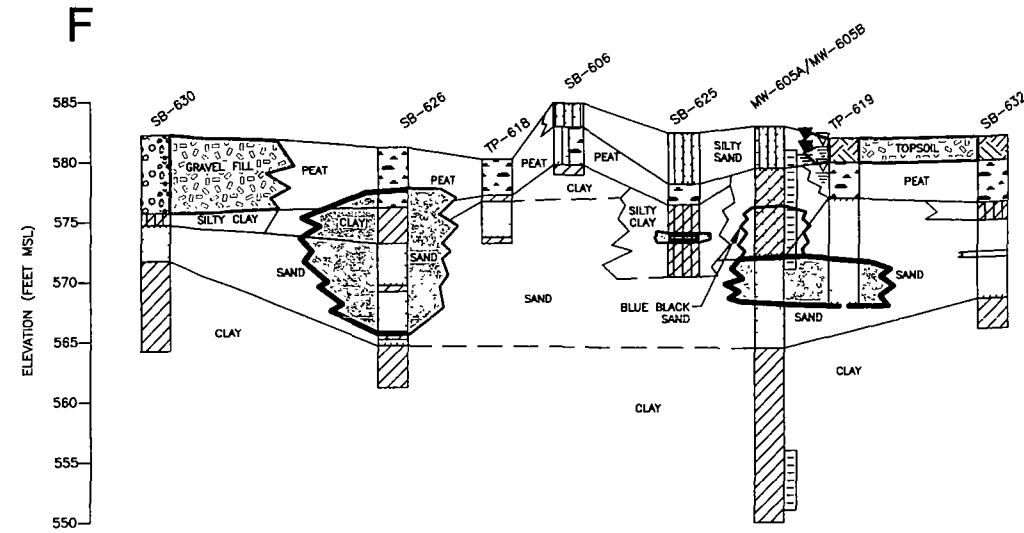
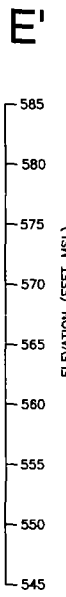
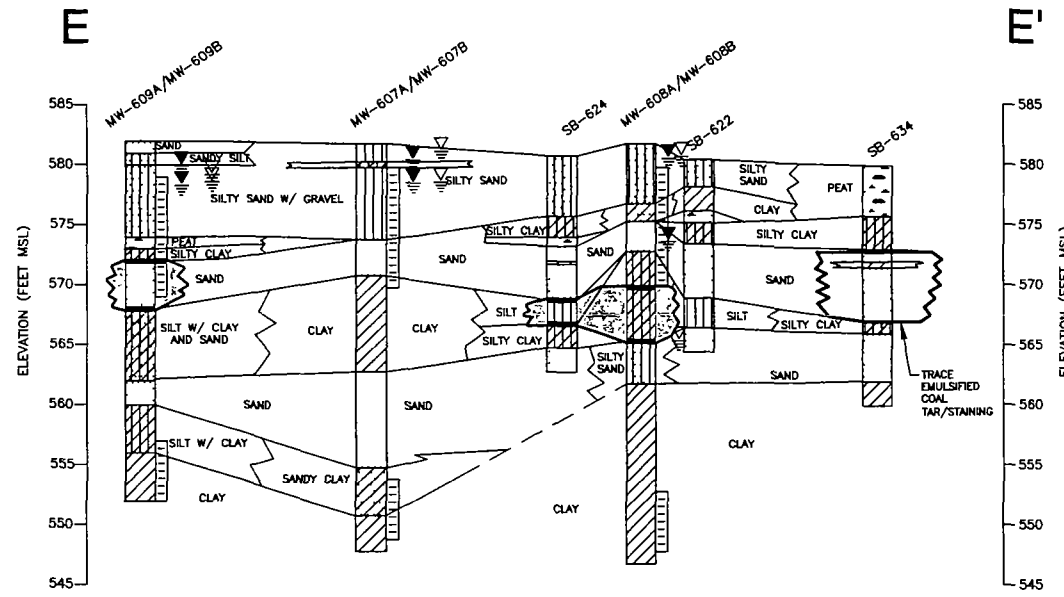
VERTICAL SCALE IN FEET: 1" = 40'
 HORIZONTAL SCALE IN FEET: 1" = 40'
 VERTICAL EXAGGERATION = 5



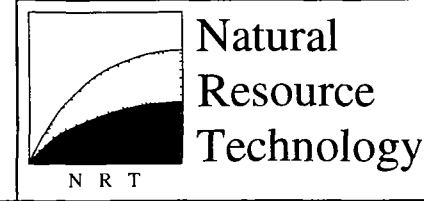
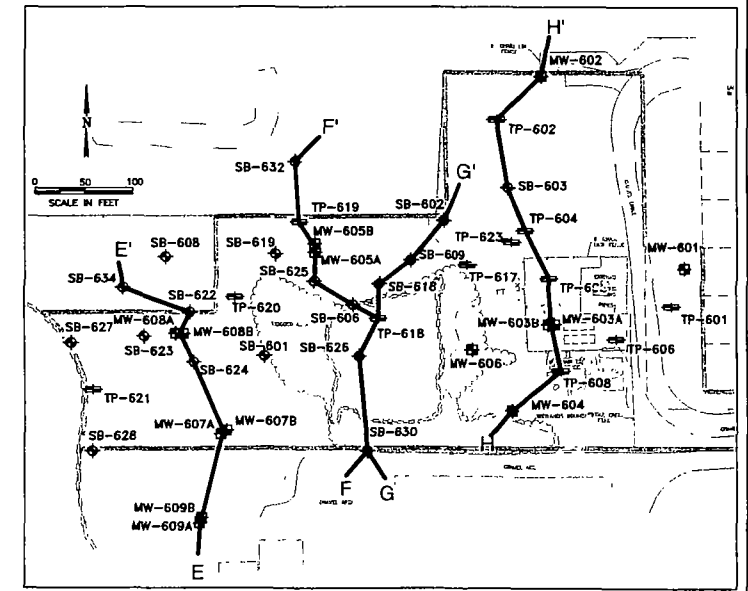
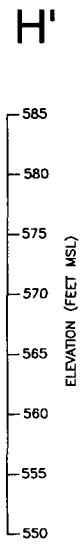
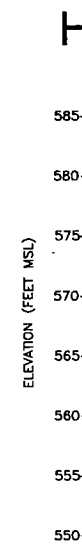
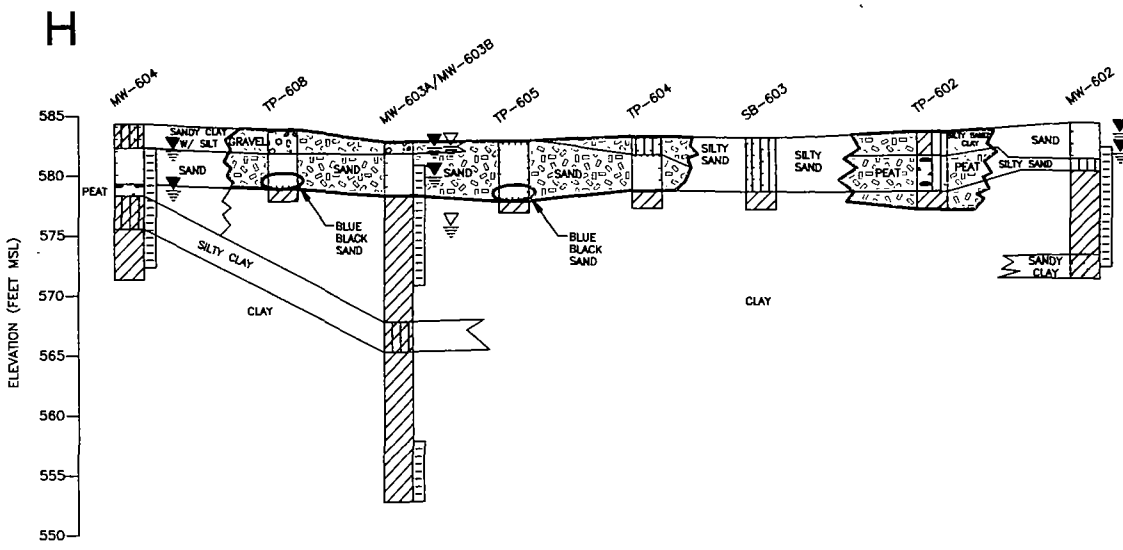
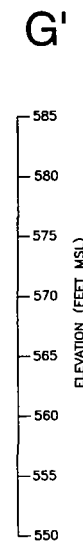
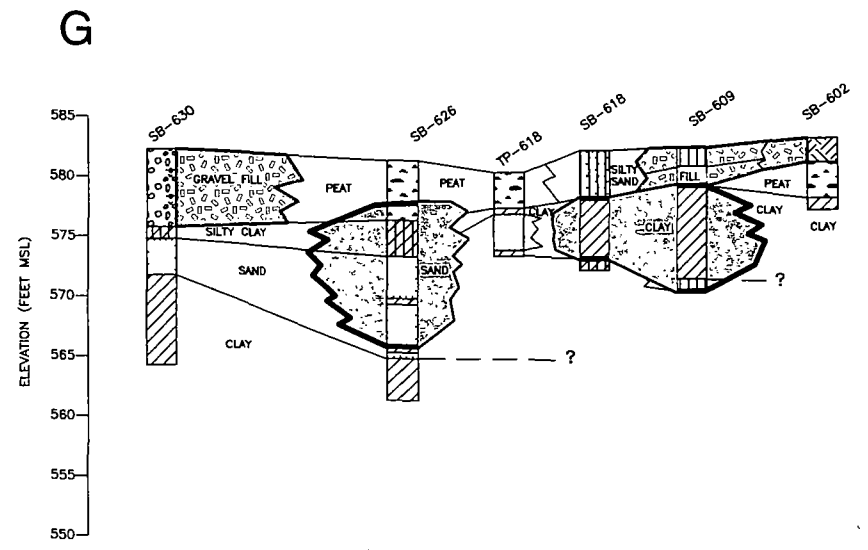
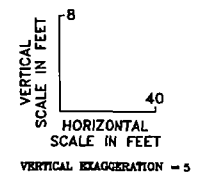
GEOLOGIC CROSS SECTION A-A' THROUGH D-D'
 SITE INVESTIGATION AND RAOR
 FORMER TWO RIVERS MANUFACTURED GAS PLANT SITE
 WISCONSIN PUBLIC SERVICE CORPORATION
 CITY OF TWO RIVERS, WISCONSIN

PROJECT NO 1569/2.2
 DRAWN BY RLH/TAS 12/15/03
 CHECKED BY JMK 12/15/03
 APPROVED BY SLF 12/22/03
 SHEET NO 3

CAD FILE 1569/2 2gw/1569-22-D03 DWG
 REFERENCE FILES 1569/2 2/XREF/XS-MAP-INS DWG



LEGEND	
	TOPSOIL
	PEAT
	CONCRETE
	SAND
	SILTY SAND
	SILT
	SCREENED INTERVAL
	PIEZOMETER WATER TABLE ELEVATION
	MONITORING WELL WATER TABLE ELEVATION
	SILTY CLAY
	CLAY
	SANDY CLAY
	GRAVEL FILL
	EMULSIFIED COAL TAR
	ASH/CINDERS, WOOD, GLASS, AND BRICK MIXED FILL
NOTE HISTORIC HIGH AND LOW WATER TABLE ELEVATIONS	



GEOLOGIC CROSS SECTION E-E' THROUGH H-H'
 SITE INVESTIGATION AND RAOR
 FORMER TWO RIVERS MANUFACTURED GAS PLANT SITE
 WISCONSIN PUBLIC SERVICE CORPORATION
 CITY OF TWO RIVERS, WISCONSIN

PROJECT NO
1569/2.2
 DRAWN BY RLH/
TAS 12/15/03
 CHECKED BY
JMK 12/15/03
 APPROVED BY
SLF 12/22/03
 SHEET NO
4

CAD FILE 1569/2.2gw/1569-22-004 DWG
 REFERENCE FILES 1569/2.2/XREF/XS-MAP-INS DWG

TABLES

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GROUNDWATER ANALYTICAL TABLES

Table 3 Groundwater Analytical Results - BTEX, Cyanide, Phenol, & Metals
 Wisconsin Public Service Corporation
 Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	BTEX (µg/L)					VOCs (µg/L)						Phenol/Cyanide (mg/L)			Metals (mg/L)													
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Total BTEX	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Methyl-tert-butyl-ether	Naphthalene	Isopropylbenzene	n-Propylbenzene	p-Isopropyltoluene	Phenols	Cyanide (dissociable)	Cyanide (total)	Cyanide (amenable)	Arsenic	Barium	Cadmium	Chromium	Iron	Lead	Mercury	Selenium	Silver	Nitrogen mg/L	Manganese, mg/L	Sulfate, mg/L
Preventive Action Limit		0.5	200	140	1,000	ns	96*	96*	12	8	ns	ns	1.2	0.04	ns	ns	0.005	0.4	0.0005	0.01	0.15	0.0015	0.0002	0.01	0.01	2	0.025	125	ns
Enforcement Standard		5	1,000	700	10,000	ns	480*	480*	60	40	ns	ns	6	0.2	ns	ns	0.05	2	0.005	0.1	0.3	0.015	0.002	0.05	0.05	10	0.05	250	ns
MW-601	12/8/1994	nd	nd	nd	nd	nd	--	--	--	--	--	nd	nd	nd	nr	0.0043	0.19	nd	nd	--	nd	nd	nd	nd	--	--	--	--	--
	1/11/1995	nd	nd	nd	nd	nd	--	--	--	--	--	nd	nd	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/24/2002	<0.48	<0.47	<0.43	<1.4	<1.4	0.58 Q	<0.52	--	0.67 Q	<0.43	<0.64	<0.57	--	<0.0084	0.0040 Q	0.0033 Q	--	--	--	--	--	--	--	--	--	--	--	--
	7/2/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	<0.001	--	--	<0.0081	0.18	<0.00053	<0.00093	7.2	<0.0013	<0.000030	<0.0048	<0.0011	<0.047	--	1.9 Q	
	10/16/2003	Unable to sample due to bent riser section																											
Monitoring Well Abandoned																													
MW-601R	8/3/2004	0.15	<0.36	<0.40	<1.2	0.15	<0.39	<0.40	<0.36	--	--	--	--	--	--	--	--	--	--	--	0.02 Q	--	--	--	--	<0.063	7.5	8.4	--
MW-602	12/8/1994	nd	nd	nd	nd	nd	--	--	--	--	--	nd	nd	nd	nr	nd	0.15	nd	nd	--	nd	nd	nd	nd	--	--	--	--	--
	1/11/1995	nd	nd	nd	nd	nd	--	--	--	--	--	nd	nd	nd	nd	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/24/2002	<0.48	<0.47	<0.43	<1.4	<1.4	<0.51	<0.52	--	<0.59	<0.43	<0.64	<0.57	--	<0.0084	0.0036 Q	0.0036 Q	--	--	--	--	--	--	--	--	--	--	--	--
duplicate (QA/QC-1)	6/24/2002	<0.48	<0.47	<0.43	<1.4	nd	<0.51	<0.52	--	<0.59	<0.43	<0.64	<0.57	--	<0.0084	0.0024 Q	0.57 A	--	--	--	--	--	--	--	--	--	--	--	--
	7/2/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	<0.001	--	--	<0.0081	0.13	<0.00053	<0.00093	0.17	<0.0013	<0.000030	<0.0048	<0.0011	0.16	--	2.0 Q	
	10/16/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	0.00068	--	--	<0.0058	0.12	<0.00041	<0.0011	0.035 Q	<0.0012	<0.000030	<0.0036	<0.0038	0.13 Q	--	<0.97	
	8/3/2004	<0.14	<0.36	<0.40	<1.2	nd	<0.39	<0.40	<0.36	--	--	--	--	--	--	--	--	--	--	--	0.033 Q	--	--	--	--	<0.063	0.96	48	--
MW-603A	12/8/1994	710	37	980	820	2,547	--	--	--	--	--	nd	0.47	5.3	nr	nd	0.25	nd	0.0042	--	nd	nd	nd	nd	--	--	--	--	
	1/11/1995	340	<100	320	400	1,060	--	--	--	--	--	nd	0.64	7.9	7.9	--	--	--	--	--	--	--	--	--	--	--	--	--	
duplicate (MW-6D)	1/11/1995	380	nd	380	410	1,170	--	--	--	--	--	0.022	0.2	8.5	4.9	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	1,100	33	900	830	2,863	350	140	--	520	54	34	<5.7	--	0.11	24	810	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	500	16	330	320	1,166	140	36	<1.2	--	--	--	--	0.0539	--	--	<0.0081	0.19	<0.00053	<0.00093	44	<0.0013	<0.000030	<0.0048	<0.0011	0.063 Q	--	1.2 Q	
	10/16/2003	530	19	390	580	1,519	130	70	<1.4	--	--	--	--	0.015	--	--	<0.02	0.2	<0.0013	<0.0023	40	<0.0032	<0.000030	<0.012	<0.0028	<0.047	--	5.8	
duplicate (QC-1)	10/16/2003	670	22	640	670	2,002	160	85	<2.9	--	--	--	--	0.0188	--	--	<0.02	0.19	<0.0013	<0.0023	35	<0.0032	<0.000030	<0.012	<0.0028	0.073 Q	--	2.0 Q	
	8/3/2004	840	26	690	600	2,156	280	100	<3.6	--	--	--	--	--	--	--	--	--	--	--	39	--	--	--	--	<0.063	1.7	31	--
MW-603B	12/8/1994	2.3	nd	11	11	24	--	--	--	--	--	nd	0.2	0.8	nr	nd	0.064	nd	nd	--	nd	nd	nd	nd	--	--	--	--	
duplicate (MW-A)	12/8/1994	2.6	nd	14	11	28	--	--	--	--	--	nd	0.33	0.88	nr	nd	0.071	nd	nd	--	nd	nd	nd	nd	--	--	--	--	
	1/11/1995	nd	nd	nd	nd	nd	--	--	--	--	--	nd	0.095	0.67	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	<0.48	<0.47	<0.43	<1.4	<1.4	<0.51	<0.52	--	<0.59	<0.43	<0.64	<0.57	--	<0.0084	0.45	0.43 A	--	--	--	--	--	--	--	--	--	--	--	
duplicate (QA/QC-2)	6/24/2002	<0.48	<0.47	<0.43	<1.4	nd	<0.51	<0.52	--	<0.59	<0.43	<0.64	<0.57	--	<0.0084	0.57	0.074 A	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	0.0039	--	--	<0.0058	0.039	<0.00041	<0.0011	0.13	<0.0012	<0.000030	0.00081 Q	<0.0038	0.050 Q	--	<0.97	
	10/16/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	0.00154	--	--	<0.0058	0.044	<0.00041	<0.0011	0.071	<0.0012	<0.000030	<0.0036	<0.0038	0.061 Q	--	<0.97	
duplicate (QC-2)	10/16/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	0.00197	--	--	<0.0058	0.045	<0.00041	<0.0011	0.067	<0.0012	<0.000030	<0.0036	<0.0038	0.065 Q	--	<0.97	
	8/3/2004	0.20 Q	<0.36	<0.40	<1.2	0.2	<0.39	<0.40	<0.36	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	<0.063	1.9	0.85 Q	--
MW-604	12/8/1994	200	47	180	270	697	--	--	--	--	--	0.021	0.22	0.37	nr	nd	0.21	nd	nd	--	nd	nd	nd	nd	--	--	--	--	
	1/11/1995	240	42	150	260	692	--	--	--	--	--	nd	0.05	0.73	0.65	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	91	14	52	86	243	22	6.4	--	320	4.2	0.71 Q	0.60 Q	--	<0.0084	0.096	0.084 A	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	140 K	12 K	79 K	130 K	361	46 K	15 K	<2.3 K	--	--	--	--	--	0.0048	--	--	<0.0081	0.15	<0.00053	<0.00093	7.6	<0.0013	<0.000030	<0.0048	<0.0011	0.047 Q	--	<0.97
	10/16/2003	140	12	95	130	377	41	11	<0.58	--	--	--	--	0.00231	--	--	<0.0081	0.13	<0.00053	0.0013 Q	11	<0.0013	<0.000030	<0.0048	<0.0011	0.063 Q	--	6.8	
	8/3/2004	77	10	67	113	267	38	11	<0.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.063	0.59	1.9	--
MW-605A	12/8/1994	140	180	340	310	970	--	--	--	--	--	nd	0.14	0.2	nr	nd	0.35	nd	nd	--	nd	nd	nd	nd	--	--	--	--	
duplicate (MW-B)	12/8/1994	130	160	310	280	880	--	--	--	--	--	nd	0.096	0.18	nr	nd	0.37	nd	nd	--	nd	nd	nd	nd	--	--	--	--	
	1/10/1995	1,400	1,400	790	740	4,330	--	--	--	--	--	0.085	0.013	0.096	0.096	--	--	--	--	--	--	--	--	--	--	--	--	--	
duplicate (MW-6C)	1/10/1995	1,300	1,200	530	500	3,530	--	--	--	--	--	0.05	0.093	0.082	0.082	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	65	3.3	17	16.4	102	9.2	3.2	--	--	--	--	<0.0084	<0.0023	<0.0023	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	Unable to sample due to bent riser section																											
	10/16/2003	Unable to sample due to bent riser section																											
Monitoring Well Abandoned																													
MW-605AR	8/3/2004	3,300	5,500	3,200	3,000	15,000	480	130	<45	--	--	--	--	--	--	--	--	--	--	--	4.9	--	--	--	--	<0.063	2.7	12	--
duplicate (QC-1)	8/3/2004	3500 K	5000 K	2300 K	2110 K	12,910	360 K	97 K,Q	<36	--	--	--	--	--	--	--	--	--	--	--	4.3	--	--	--	--	0.063 Q	3.2	5.9	--

Table 3 Groundwater Analytical Results - BTEX, Cyanide, Phenol, & Metals
 Wisconsin Public Service Corporation
 Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	BTEX (µg/L)					VOCs (µg/L)						Phenol/Cyanide (mg/L)				Metals (mg/L)													
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Total BTEX	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Methyl-tert-butyl-ether	Naphthalene	Isopropylbenzene	n-Propylbenzene	p-Isopropyltoluene	Phenols	Cyanide (dissociable)	Cyanide (total)	Cyanide (amenable)	Arsenic	Barium	Cadmium	Chromium	Iron	Lead	Mercury	Selenium	Silver	Nitrogen mg/L	Manganese, mg/L	Sulfate, mg/L	Sulfide, mg/L
Wisconsin Groundwater Quality Standards (NR 140)																														
Preventive Action Limit		0.5	200	140	1,000	ns	96*	96*	12	8	ns	ns	ns	1.2	0.04	ns	ns	0.005	0.4	0.0005	0.01	0.15	0.0015	0.0002	0.01	0.01	2	0.025	125	ns
Enforcement Standard		5	1,000	700	10,000	ns	480*	480*	60	40	ns	ns	ns	6	0.2	ns	ns	0.05	2	0.005	0.1	0.3	0.015	0.002	0.05	0.05	10	0.05	250	ns
MW-605B	12/8/1994	29	88	320	540	977	--	--	--	--	--	--	nd	0.007	0.009	nr	nd	0.076	nd	nd	--	nd	nd	nd	nd	--	--	--	--	
	1/10/1995	41	89	15	79	94	--	--	--	--	--	--	nd	nd	0.011	0.011	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	0.49 Q	<0.68	1.7 Q	1.6 Q	3.8	3.6	<0.94	--	--	--	--	--	<0.0084	0.012	0.012 A	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	0.87 Q	0.60 Q	1.7 Q	2.0 Q	5.2	4.0	<0.52	<0.58	--	--	--	--	<0.001	--	--	<0.0081	0.063	<0.00053	<0.00093	0.28	<0.0013	<0.000030	<0.0048	<0.0011	<0.047	--	--	1.4 Q	
	10/16/2003	5.5	16	20	18.9	60	7.1	0.77 Q	<0.58	--	--	--	--	<0.00048	--	--	<0.0058	0.062	<0.00041	<0.0011	55 Q	<0.0012	<0.000030	<0.0036	<0.0038	0.059 Q	--	--	<0.97	
8/3/2004	130 K	530 K	540 K	470 K	1,670	52 K	12 K.Q	<3.6 K	--	--	--	--	--	--	--	--	--	--	--	--	0.028 Q	--	--	--	--	0.095 Q	0.53	0.47 Q	--	
MW-606	12/8/1994	61	19	88	80	248	--	--	--	--	--	--	0.032	0.62	1.2	nr	nd	0.18	nd	nd	--	0.0031	nd	nd	nd	--	--	--	--	
	1/11/1995	660	300	340	590	1,890	--	--	--	--	--	--	nd	0.033	0.8	0.57	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	30	7.3	38	29	104	9.8	3.6	--	--	--	--	--	0.081	1.5	1.5 A	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	28	9.3	43	39	119	14	4.3	<0.58	--	--	--	--	0.0171	--	--	<0.0081	0.19	<0.00053	<0.00093	11	<0.0013	<0.000030	<0.0048	<0.0011	0.056 Q	--	--	2.9 Q	
	10/16/2003	38	3.9	37	20.5	99	3.3	0.86 Q	<0.58	--	--	--	--	0.0186	--	--	<0.0058	0.38	<0.00041	<0.0011	16	<0.0012	<0.000030	<0.0036	<0.0038	0.070 Q	--	--	5.4	
Monitoring Well Abandoned																														
MW-606R	8/3/2004	19 K	2.7 K.Q	34 K	26 K	82	29 K	8.9 K	<1.8	--	--	--	--	--	--	--	--	--	--	--	2.9	--	--	--	--	0.09 Q	2.5	40	--	
MW-607A	12/8/1994	830	19	1,300	320	2,469	--	--	--	--	--	--	nd	0.76	1.1	nr	nd	0.17	nd	nd	--	nd	nd	nd	nd	--	--	--	--	
	1/10/1995	1,100	<100	1,400	460	2,960	--	--	--	--	--	--	0.041	0.23	1.5	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	570	19	910	174	1,673	110	6.9 Q	--	380	36	8.4 Q	<2.8	0.042	0.56	0.089 A	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	980	28	1,500	350	2,858	160	12.0	<5.8	--	--	--	--	0.0090	--	--	<0.0081	0.26	<0.00053	<0.00093	8.1	<0.0013	<0.000030	<0.0048	<0.0011	<0.047	--	--	<0.97	
	10/16/2003	560	18	1,100	227	1,905	140	7.4	<1.4	--	--	--	--	0.00358	--	--	<0.0081	0.2	<0.00053	0.0036	14	0.0023	<0.000030	<0.0048	<0.0011	<0.047	--	--	<0.97	
8/4/2004	1,000	33	1,700	390	3,123	270	31	<1.8	--	--	--	--	--	--	--	--	--	--	--	--	10	--	--	--	<0.063	1.3	80	--		
MW-607B	12/8/1994	8.4	1.2	2	18	30	--	--	--	--	--	--	nd	0.022	0.053	nr	nd	0.058	0.0014	nd	--	nd	nd	nd	nd	--	--	--	--	
	1/10/1995	17	3.8	11	7.8	40	--	--	--	--	--	--	nd	nd	0.035	0.035	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/19/1996	0.91	nd	nd	nd	0.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	Unable to sample due to bailer stuck in well																												
	7/2/2003	Unable to sample due to bailer stuck in well																												
10/16/2003	Unable to sample due to bailer stuck in well																													
Monitoring Well Abandoned																														
MW-607BR	8/4/2004	590	1.8 Q	220	58	870	9.5	1.8 Q	<0.9	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	<0.063	6	5.3	--	
MW-608A	12/8/1994	760	9.4	34	24	827	--	--	--	--	--	--	0.03	nd	0.006	nr	nd	0.23	nd	nd	--	nd	nd	nd	nd	--	--	--	--	
	1/10/1995	990	<100	<100	<300	990	--	--	--	--	--	--	0.024	nd	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	420	2.9 Q	22	49	491	15	3.5 Q	--	--	--	--	--	<0.0084	0.012	<0.0023	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	2,400	7.6 Q	180	178	2,766	19 Q	<5.2	<5.8	--	--	--	--	<0.0010	--	--	<0.0058	0.079	<0.00041	<0.0011	5	<0.0012	<0.000030	0.0028	<0.0038	0.051 Q	--	--	<0.97	
	10/16/2003	3,700	<14	290	260	4,250	31 Q	<13	<14	--	--	--	--	0.0032	--	--	<0.0081	0.091	<0.00053	0.003 Q	8.5	<0.0013	<0.000030	<0.0048	<0.0011	0.060 Q	--	--	<0.97	
	8/3/2004	1,300	11	650	540	2,501	35	7.7	<1.8	--	--	--	--	--	--	--	--	--	--	--	--	6.2	--	--	--	<0.063	1.3	0.76 Q	--	
duplicate (QC-2)	8/3/2004	1,300	11	660	560	2,531	36	8.3 Q	<3.6	--	--	--	--	--	--	--	--	--	--	--	5.9	--	--	--	<0.063	1.5	0.69 Q	--		
MW-608B	12/8/1994	610	18	180	150	958	--	--	--	--	--	--	0.025	nd	0.007	nr	nd	0.068	nd	nd	--	nd	nd	nd	nd	--	--	--	--	
	1/10/1995	96	7.7	36	86	226	--	--	--	--	--	--	0.036	0.072	1.1	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/19/1996	13	nd	9.6	7.2	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	2.3	<0.68	<0.82	<1.7	2.3	<0.92	<0.94	--	--	--	--	--	<0.0084	0.0035 Q	<0.0023	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	2.2	<0.58	<0.60	<1.2	2.2	<0.66	<0.52	<0.58	--	--	--	--	0.0065	--	--	<0.0058	0.066	<0.00041	<0.0011	<0.018	<0.0012	<0.000030	0.001 Q	<0.0038	<0.047	--	--	1.6 Q	
	10/16/2003	1.7	<0.58	<0.60	<1.2	1.7	<0.66	<0.52	<0.58	--	--	--	--	0.0024	--	--	<0.0081	0.089	<0.00053	0.0042	2.4	0.0013 Q	<0.000030	<0.0048	<0.0011	0.065 Q	--	--	<0.97	
8/3/2004	1.1	<0.36	<0.40	<1.2	1.1	<0.39	<0.40	<0.36	--	--	--	--	--	--	--	--	--	--	--	--	<0.017	--	--	--	<0.063	1.4	0.7 Q	--		
MW-609A	9/5/1996	45	3.7	4.4	52	105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/11/1996	31	2.3	5.9	31	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/11/1996	28	2.2	8.4	36	75	--	--	--	--	--	--	0.022	0.2	8.5	4.9	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	72	2.5	24	23.6	122	2.1 Q	<0.94	--	--	--	--	--	0.024 Q	0.73	0.045 A	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	67	2.7	31	38.9	140	2.3	<0.52	<0.58	--	--	--	--	0.0074	--	--	<0.0081	0.15	<0.00053	0.0025 Q	12	0.0076	<0.000030	<0.0048	<0.0011	<0.047	--	--	1.5 Q	
	10/16/2003	51	2.3	45	36.1	134	2.2 Q	<0.52	<0.58	--	--	--	--	<0.00048	--	--	<0.0058	0.15	<0.00041	<0.0011	11	<0.0012	<0.000030	<0.0036	<0.0038	0.061 Q	--	--	<0.97	
8/4/2004	35	2.1	60	30.5	128	2.3	<0.4	<0.36	--	--	--	--	--	--	--	--	--	--	--	--	12	--	--	--	<0.063	2	15	--		

Table 3 Groundwater Analytical Results - BTEX, Cyanide, Phenol, & Metals
 Wisconsin Public Service Corporation
 Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	BTEX (µg/L)					VOCs (µg/L)							Phenol/Cyanide (mg/L)				Metals (mg/L)													
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Total BTEX	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Methyl-tert-butyl-ether	Naphthalene	Isopropylbenzene	n-Propylbenzene	p-Isopropyltoluene	Phenols	Cyanide (dissociable)	Cyanide (total)	Cyanide (amenable)	Arsenic	Barium	Cadmium	Chromium	Iron	Lead	Mercury	Selenium	Silver	Nitrogen mg/L	Manganese, mg/L	Sulfate, mg/L	Sulfide, mg/L	
		Wisconsin Groundwater Quality Standards (NR 140)																													
Preventive Action Limit		<i>0.5</i>	<i>200</i>	<i>140</i>	<i>1,000</i>	ns	<i>96*</i>	<i>96*</i>	<i>12</i>	<i>8</i>	ns	ns	ns	<i>1.2</i>	<i>0.04</i>	ns	ns	<i>0.005</i>	<i>0.4</i>	<i>0.0005</i>	<i>0.01</i>	<i>0.15</i>	<i>0.0015</i>	<i>0.0002</i>	<i>0.01</i>	<i>0.01</i>	<i>2</i>	<i>0.025</i>	<i>125</i>	ns	
Enforcement Standard		5	1,000	700	10,000	ns	480*	480*	60	40	ns	ns	ns	6	0.2	ns	ns	0.05	2	0.005	0.1	0.3	0.015	0.002	0.05	0.05	10	0.05	250	ns	
MW-609 B	9/5/1996	<i>56</i>	3.7	3.7	3.7	67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/11/1996	<i>9.6</i>	nd	nd	nd	9.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	<i>1.9</i>	<0.68	<0.82	<1.7	1.9	<0.92	<0.94	--	--	--	--	--	--	<0.0084	0.0068 Q	0.73 A	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	0.37 Q	<0.58	<0.60	<1.2	0.4	<0.66	<0.52	<0.58	--	--	--	--	--	<0.0010	--	--	<0.0081	0.066	<0.00053	0.0015 Q	<i>0.51</i>	<0.0013	<0.000030	<0.0048	<0.0011	<0.047	--	--	3.2	
	10/16/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	--	0.00382	--	--	<0.0081	0.058	<0.00053	0.0012 Q	<i>0.52</i>	<0.0013	<0.000030	<0.0048	<0.0011	0.067 Q	--	--	<0.97	
	8/4/2004	<0.14	<0.36	<0.4	<1.2	nd	<0.39	<0.4	<0.36	--	--	--	--	--	--	--	--	--	--	--	--	<17	--	--	--	--	<0.063	<i>8.4</i>	1.6	--	
MW-610	9/5/1996	nd	nd	nd	nd	nd	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/11/1996	nd	nd	nd	nd	nd	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	Well not sampled - Located on US Oil property and access could not be obtained																													
	10/30/2002	<0.25	<0.84	<0.53	<1.9	nd	<0.69	<0.64	--	--	--	--	--	--	<0.0027	0.0030 Q	0.0030 Q	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/2/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	--	0.0038	--	--	<0.0081	0.1	<0.00053	0.0028	<i>3.3</i>	<0.0013	<0.000030	<0.0048	<0.0011	<0.047	--	--	1.2 Q	
	duplicate (QC-1)	7/2/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	0.0017	--	--	<0.0081	0.1	<0.00053	0.00095 Q	<i>4.5</i>	<0.0013	<0.000030	<0.0048	<0.0011	<0.047	--	--	<0.97 Q	
10/16/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	--	0.00106	--	--	<0.0081	0.13	<0.00053	0.0010 Q	<i>3.2</i>	<0.0013	<0.000030	<0.0048	<0.0011	0.069 Q	--	--	2.2 Q		
8/4/2004	<0.14	<0.36	<0.40	<1.2	nd	<0.39	<0.4	<0.36	--	--	--	--	--	--	--	--	--	--	--	--	<i>1.8</i>	--	--	--	--	<0.063	<i>1.8</i>	7	--		
MW-611	9/5/1996	nd	nd	nd	nd	nd	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/11/1996	nd	nd	nd	nd	nd	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/24/2002	Well not sampled - Located on US Oil property and access could not be obtained																													
	10/30/2002	<0.25	<0.84	<0.53	<1.9	nd	<0.69	<0.64	--	--	--	--	--	--	<0.0027	<0.0027	<0.0027	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/2/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	--	0.0104	--	--	<0.0081	0.074	<0.00053	<0.00093	<i>1.2</i>	<0.0013	<0.000030	0.0016 Q	<0.0011	0.090 Q	--	--	2.6 Q	
	duplicate (QC-2)	7/2/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	<0.0010	--	--	<0.0058	0.072	<0.00041	<0.0011	<i>1.3</i>	<0.0012	<0.000030	0.0019 Q	<0.0038	<0.047	--	--	1.0 Q	
10/16/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	--	0.00072	--	--	<0.0081	0.083	<0.00053	<0.00093	<i>1.1</i>	<0.0013	<0.000030	<0.0048	<0.0011	0.056 Q	--	--	1.8 Q		
8/4/2004	<0.14	<0.36	<0.40	<1.2	nd	<0.39	<0.40	<0.36	--	--	--	--	--	--	--	--	--	--	--	--	<i>2.7</i>	--	--	--	--	<0.063	<i>1.7</i>	2.5	--		
MW-612	8/4/2004	<i>4.3</i>	<0.67	<0.54	<2.63	4.3	<0.97	<0.83	<0.61	3	2.8	6.2	<0.67	--	--	--	0.0037 Q	0.38	<0.00028	<0.00052	<i>7.9</i>	<0.0015	<0.000028	0.0018	<0.00057	<0.063	<i>7.4</i>	24	--		
MW-613	8/4/2004	<0.41	<0.67	<0.54	<2.63	nd	<0.97	<0.83	<0.61	<0.74	<0.59	<0.81	<0.67	--	--	--	<0.0035	0.12	<0.0003	0.99 Q	<i>5.8</i>	<0.0011	<0.000028	<0.0048	<0.00076	<0.063	<i>4.4</i>	0.97 Q	--		
Trip Blank	12/8/1994	nd	nd	nd	nd	nd	--	--	--	--	--	--	--	--	--	nr	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	1/11/1995	nd	nd	nd	nd	nd	--	--	--	--	--	--	--	--	--	nr	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	6/19/1996	nd	nd	nd	nd	nd	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	9/5/1996	nd	nd	nd	nd	nd	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/11/1996	nd	nd	nd	nd	nd	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/2/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
10/16/2003	<0.30	<0.58	<0.60	<1.2	nd	<0.66	<0.52	<0.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
8/3/2004	<0.41	<0.67	<0.54	<2.63	nd	<0.97	<0.83	<0.61	<0.74	<0.59	<0.81	<0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

(C:\JTB\C-EPK\PAH 8/02 12/02 2003\U-JMK\PAR 1003\U-PAR\IMS 11/03\U-HMS\GRL 8/26/04)

Notes:

- VOCs : Volatile Organic Compounds
- Cyanide: Dissociable cyanide analyzed by Method OIA-1677 in July and October 2003
 - 1) Concentrations equaling/exceeding the enforcement standard (ES) are shown in bold
 - 2) Concentrations equaling/exceeding the preventive action limit (PAL) are italicized
- µg/L : Micrograms per liter
- mg/L : Milligrams per liter
- : Analysis was not performed
- <0.30 : Analyte not detected above method detection limit shown for parameter

- ns : NR140 ES or PAL standards have not been established
- duplicate (MW-B) : Field duplicate sample with field identity shown in parentheses
- Q : Analyte detected between the limit of detection (LOD) and limit of quantitation (LOQ)
- K : Detection limit may be elevated due to the presence of an unrequested analyte
- A : Analyte present in method blank at 0.0029 mg/L
- * : Quality standards for Trimethylbenzenes combined

Table 4 Groundwater Analytical Results - PAHs
 Wisconsin Public Service Corporation
 Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	PAHs (µg/L)																		
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs
Wisconsin Groundwater Quality Standards (NR 140)																				
<i>Preventive Action Limit</i>		<i>ns</i>	<i>0.5</i>	<i>600</i>	<i>ns</i>	<i>0.02</i>	<i>0.02</i>	<i>ns</i>	<i>ns</i>	<i>0.02</i>	<i>ns</i>	<i>80</i>	<i>80</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>8</i>	<i>ns</i>	<i>50</i>	<i>ns</i>
Enforcement Standard		ns	5	3,000	ns	0.2	0.2	ns	ns	0.2	ns	400	400	ns	ns	ns	40	ns	250	ns
MW-601	12/8/1994	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	--	--	nd	nd	nd	nd
	1/11/1995	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	--	--	nd	nd	nd	nd
	6/24/2002	<0.018	<0.023	<0.020	<0.019	0.014 Q	<0.014	<0.015	<0.013	<0.018	<0.017	<0.028	<0.021	<0.014	<0.027	<0.028	<0.027	<0.019	<0.020	nd
	7/2/2003	<0.018	<0.019	<0.020	0.016 Q	0.015 Q	<0.013	0.020 Q	<0.019	<u>0.022 Q</u>	<0.016	0.021 Q	<0.017	<0.021	<0.018	0.021 Q	0.038 Q	0.020 Q	0.032 Q	0.2
	10/16/2003	Unable to sample due to bent riser section																		
	Monitoring Well Abandoned																			
MW-601R	8/3/2004	0.047 Q	0.047 Q	0.034 Q	0.038 Q	<u>0.051 Q</u>	<u>0.026 Q</u>	0.042 Q	0.028 Q	<u>0.043 Q</u>	<0.022	0.053 Q	0.028 Q	0.023 Q	0.13	0.19	0.14	0.09	0.095	1.11
MW-602 <i>duplicate (QA/QC-1)</i>	12/8/1994	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	--	--	nd	nd	nd	nd
	1/11/1995	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	--	--	nd	nd	nd	nd
	6/24/2002	<0.018	<0.023	<0.020	<0.019	<0.012	<0.014	<0.015	<0.013	<0.018	<0.017	<0.028	<0.021	<0.014	<0.027	<0.028	<0.027	<0.019	<0.020	nd
	6/24/2002	<0.018	<0.023	<0.020	<0.019	<0.012	<0.014	<0.015	<0.013	<0.018	<0.017	<0.028	<0.021	<0.014	<0.027	<0.028	0.027 Q	<0.019	<0.020	0.03
	7/2/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<0.018	0.019 Q	0.038 Q	<0.016	<0.017	0.1
	10/16/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	0.025 Q	<0.017	<0.024	<0.016	<0.017	0.03
8/3/2004	<0.019	<0.019	<0.018	<0.02	<0.018	<0.018	<0.021	<0.019	<0.016	<0.022	<0.016	<0.022	<0.017	<0.02	<0.023	<0.022	<0.02	<0.016	nd	
MW-603A <i>duplicate (MW-6D)</i>	12/8/1994	nd	nd	5	1.2	0.32	<i>0.15</i>	nd	nd	2.2	nd	7.6	42	nd	--	--	500	31	2.2	592
	1/11/1995	70	nd	2.5	1.3	0.24	<i>0.03</i>	0.56	nd	0.39	nd	7.3	10	0.14	--	--	230	15	4	341
	1/11/1995	44	nd	1.7	0.57	0.2	nd	nd	nd	<i>0.13</i>	nd	4.1	6.8	nd	--	--	230	11	1.8	300
	6/24/2002	39 Q,D	5.2	4.1	<1.1	<0.72	<0.84	<0.90	<0.78	<1.1	<1.0	<1.7	18	<0.84	130 D	24	360 D	18	<1.2	598
	7/2/2003	36 Q	<19	<20	<12	<14	<13	<16	<19	<14	<16	<13	<17	<21	100	19 Q	280	18 Q	<17	453
	10/16/2003	25	<4.8	<5.0	<3.0	<3.5	<3.2	<4.0	<4.8	<3.5	<4.0	<3.2	12 Q	<5.2	56	6.8 Q	120	11 Q	<4.2	231
<i>duplicate (QC-1)</i>	10/16/2003	28	3.8 Q	3.1 Q	<1.2	<1.4	<1.3	<1.6	<1.9	<1.4	<1.6	1.8 Q	14	<2.1	58 D	7.0	120 D	9.8	2.7 Q	248
8/3/2004	26 Q	<15	<14	<16	<14	<14	<14	<17	<15	<13	<18	<13	<17	<14	77	<18	200	<16	<13	303
MW-603B <i>duplicate (MW-A)</i>	12/8/1994	nd	nd	0.91	nd	nd	nd	nd	nd	nd	nd	0.63	0.91	nd	--	--	6	0.62	nd	9.1
	12/8/1994	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.63	0.89	nd	--	--	6.9	1.8	nd	10
	1/11/1995	nd	nd	nd	0.12	nd	nd	nd	nd	<i>0.11</i>	nd	nd	nd	nd	--	--	nd	nd	0.53	1
	6/24/2002	0.029 Q	<0.023	<0.020	0.054 Q	0.019 Q	<u>0.020 Q</u>	0.015 Q	0.013 Q	<u>0.045 Q</u>	<0.017	0.072 Q	0.033 Q	<0.014	0.069 Q	0.032 Q	0.21	0.08	0.13	1
	6/24/2002	0.025 Q	0.050 Q	0.028 Q	0.085	<u>0.031 Q</u>	<u>0.033 Q</u>	0.023 Q	0.022 Q	<u>0.072</u>	<0.017	0.10	0.038 Q	0.016 Q	0.063 Q	0.074 Q	0.18	0.1	0.17	1
	7/2/2003	0.018 Q	<0.019	<0.020	0.025 Q	<0.014	0.016 Q	<0.016	<0.019	<u>0.027 Q</u>	<0.016	0.036 Q	<0.017	<0.021	0.041 Q	<0.017	0.088	0.043 Q	0.066	0.4
10/16/2003	0.026 Q	0.037 Q	0.024 Q	0.069	<u>0.041 Q</u>	<u>0.040 Q</u>	0.041 Q	0.038 Q	<u>0.081</u>	<0.016	0.075	0.034 Q	0.028 Q	0.024 Q	<0.017	0.071 Q	0.078	0.13	0.8	
<i>duplicate (QC-2)</i>	10/16/2003	0.039 Q	0.025 Q	<0.020	0.039 Q	<u>0.025 Q</u>	<u>0.023 Q</u>	0.026 Q	0.022 Q	<u>0.048</u>	<0.016	0.050	0.027 Q	0.022 Q	0.059 Q	<0.017	0.094	0.064	0.088	0.7
8/3/2004	0.023 Q	0.060 Q	0.035 Q	0.12	<u>0.055 Q</u>	<u>0.053 Q</u>	0.054 Q	0.048 Q	<u>0.11</u>	<0.022	0.100	0.024 Q	0.034 Q	0.081	0.092	0.29	0.095	0.21	1.5	

Table 4 Groundwater Analytical Results - PAHs
 Wisconsin Public Service Corporation
 Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	PAHs (µg/L)																		
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs
Wisconsin Groundwater Quality Standards (NR 140)																				
<i>Preventive Action Limit</i>		ns	0.5	600	ns	0.02	0.02	ns	ns	0.02	ns	80	80	ns	ns	ns	8	ns	50	ns
Enforcement Standard		ns	5	3,000	ns	0.2	0.2	ns	ns	0.2	ns	400	400	ns	ns	ns	40	ns	250	ns
MW-604	12/8/1994	76	nd	22	13	10	2.6	9	4.6	7.3	nd	52	120	4.6	--	--	1,300	160	12	1,793
	1/11/1995	71	nd	nd	12	9.3	1.2	8.6	3.3	7.4	1.1	58	78	3.7	--	--	1,200	120	36	1,610
	6/24/2002	58	<12	41	11 Q	6.9 Q	<7.0	<7.5	<6.5	11 Q	<8.5	38 Q	37	<7.0	22 Q	<14	<14	130	56	411
	7/2/2003	89	<9.5	15 Q	<6.0	<7.0	<6.5	<8.0	<9.5	7.6 Q	<8.0	15 Q	44	<10	220	15 Q	150	75	26 Q	657
	10/16/2003	79 D	11	23	10	9.4	3.7 Q	5.1 Q	4.8 Q	9.4	<1.6	21	44 D	3.4 Q	180 D	11	12	69 D	30	526
	8/3/2004	64	<9.7	27 Q	<9.8	<9.1	<8.9	<10	<9.7	<8.2	<11	15 Q	39	<8.5	110	19 Q	17 Q	52	22 Q	350
MW-605A <i>duplicate (MW-B)</i>	12/8/1994	37	nd	57	96	92	21	74	27	46	nd	460	460	34	--	--	1,500	540	42	3,486
	12/8/1994	nd	nd	25	27	21	4.7	17	6.2	10	nd	120	160	8.2	--	--	1,700	200	8.5	2,308
	1/10/1995	nd	nd	15	54	43	12	38	12	34	4.6	320	200	16	--	--	2,300	240	300	3,589
	1/10/1995	59	nd	5.6	2.6	1.6	0.48	1.5	0.51	1.6	nd	19	69	0.63	--	--	1,800	52	9.3	2,023
	6/24/2002	45 Q	93	77	66	46	36 Q	29 Q	33 Q	64	<17	130	110	23 Q	270	<28	97	280	160	1,559
	7/2/2003	Unable to sample due to bent riser section																		
10/16/2003	Unable to sample due to bent riser section																			
Monitoring Well Abandoned																				
MW-605AR <i>duplicate (QC-1)</i>	8/3/2004	24,000 Q	82,000	48,000	18,000 Q	14,000 Q	<8,900	<10,000	<9,700	21,000 Q	<11,000	40,000	49,000	<8,500	110,000	160,000	310,000	110,000	62,000	1,048,000
	8/3/2004	<680	1,800	1,300 Q	<690	<630	<630	<720	<680	<570	<770	740 Q	930 Q	<600	2,600	3,300	11,000	1,900 Q	1,100 Q	24,670
MW-605B	12/8/1994	640	nd	12	2.3	0.44	nd	nd	4.8	nd	nd	12	130	nd	--	--	1,300	73	nd	2,175
	1/10/1995	nd	nd	nd	nd	nd	nd	nd	nd	0.12	nd	nd	nd	nd	--	--	nd	nd	0.34	0.5
	6/24/2002	4.5	1.2 Q	2.4	1.1 Q	0.65 Q	0.30 Q	<0.30	0.30 Q	0.83 Q	<0.34	2.8	0.45 Q	<0.28	2.5	0.68 Q	2.8	5.3	3.5	29
	7/2/2003	3.9	0.59 Q	0.26 Q	0.18 Q	<0.14	<0.13	<0.16	<0.19	0.19 Q	<0.16	0.66	0.25 Q	<0.21	0.61	<0.17	<0.24	0.24 Q	1.0	7.9
	10/16/2003	3.0 D	<0.76 D	0.49	0.12	0.063	0.030 Q	0.037 Q	0.034 Q	0.11	<0.016	0.42	0.47	0.024 Q	2.3 Q,D	0.75 Q,D	7.6 D	0.82 Q,D	<0.68 D	16
	8/3/2004	7.2 Q	6.2 Q	<2.8	<3.1	<2.9	<2.9	<3.3	<3.1	<2.6	<3.5	<2.6	<3.5	<2.7	12	25	19	<3.3	<2.6	69
MW-606	12/8/1994	nd	nd	7.7	7.7	2.1	0.48	4.7	2.1	2.5	nd	18	40	0.85	--	--	170	65	11	332
	1/11/1995	110	nd	15	28	18	5.3	19	7.8	15	1.9	120	92	8.2	--	--	2,300	170	78	2,988
	6/24/2002	46	<9.2	8.3 Q	<7.6	<4.8	<5.6	<6.0	<5.2	<7.2	<6.8	<11	19 Q	<5.6	120	16 Q	78	27	<8.0	314
	7/2/2003	13 Q	9.0 Q	5.8 Q	<3.0	<3.5	<3.2	<4.0	<4.8	<3.5	<4.0	6.3 Q	27	<5.2	96	<4.2	71	30	9.4 Q	268
	10/16/2003	13	10	5.2 Q	2.0 Q	<1.4	<1.3	<1.6	<1.9	2.1 Q	<1.6	5.0	20	<2.1	62 D	<1.7	3.3 Q	22	7.3	152
Monitoring Well Abandoned																				
MW-606R	8/3/2004	95 Q	75 Q	59 Q	<39	<36	<36	<41	<39	<33	<44	<33	63 Q	<34	370	210	260	120 Q	42 Q	1294
MW-607A	12/8/1994	780	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	--	--	1,300	nd	nd	2,080
	1/10/1995	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	--	--	1,300	nd	nd	1,300

Table 4 Groundwater Analytical Results - PAHs
 Wisconsin Public Service Corporation
 Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	PAHs (µg/L)																		
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs
Wisconsin Groundwater Quality Standards (NR 140)																				
<i>Preventive Action Limit</i>		<i>ns</i>	<i>0.5</i>	<i>600</i>	<i>ns</i>	<i>0.02</i>	<i>0.02</i>	<i>ns</i>	<i>ns</i>	<i>0.02</i>	<i>ns</i>	<i>80</i>	<i>80</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>8</i>	<i>ns</i>	<i>50</i>	<i>ns</i>
Enforcement Standard		ns	5	3,000	ns	0.2	0.2	ns	ns	0.2	ns	400	400	ns	ns	ns	40	ns	250	ns
	6/24/2002	5.9 D	<1.8	<0.020	<0.019	<0.012	<0.014	<0.015	<0.013	<0.018	<0.017	<0.028	0.024 Q	<0.014	13 D	0.046 Q	34 D	<0.019	<0.020	53
	7/2/2003	62	<15	<16	<9.6	<11	<10	<13	<15	<11	<13	<10	<14	<17	150	<14	240	<13	<14	452
	10/16/2003	87 D	<15 D	0.026 Q	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	0.20	<0.021	210 D	0.14	260 D	<0.016	<0.017	557
	8/4/2004	160 D	18 D	0.028 Q	<0.02	<0.018	<0.018	<0.021	<0.019	<0.016	<0.022	<0.016	<5.4	<0.017	320 D	<5.7 D	650 D	<0.02	<0.016	1,148
MW-607B	12/8/1994	nd	nd	0.6	0.97	0.72	0.19	0.086	nd	0.42	nd	2.6	0.7	0.36	--	--	7.2	0.8	0.26	15
	1/10/1995	nd	nd	nd	0.16	nd	nd	nd	nd	nd	nd	0.44	nd	nd	--	--	11	nd	0.78	12
	6/19/1996	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	--	--	nd	nd	nd	nd
	6/24/2002	Unable to sample due to bailer stuck in well																		
	7/2/2003	Unable to sample due to bailer stuck in well																		
	10/16/2003	Unable to sample due to bailer stuck in well																		
Monitoring Well Abandoned																				
MW-607BR	8/4/2004	4.3	<2.0	<1.8	<2.0	<1.8	<1.8	<2.1	<2.0	<1.7	<2.2	<1.7	<2.2	<1.7	6.3 Q	4.0 Q	120 D	<2.1	<1.7	134.6
MW-608A	12/8/1994	400	nd	15	2.4	2.1	0.26	1.7	0.81	1.3	nd	14	150	0.81	--	--	980	140	17	1,725
	1/10/1995	130	210	11	12	2.7	1.8	8.1	3.2	7.1	1.2	66	110	3.6	--	--	510	120	41	1,245
	6/24/2002	6.6 Q,D	1.0 Q,D	0.64 Q,D	1.5 Q,D	1.6 D	0.63 Q,D	0.79 Q,D	0.82 Q,D	1.3 Q,D	0.27	1.9 Q,D	0.37	0.61 Q,D	1.1 Q,D	0.092	0.060 Q	1.2 Q,D	2.8 D	23
	7/2/2003	120	<9.5	15 Q	<6.0	<7.0	<6.5	<8.0	<9.5	<7.0	<8.0	14 Q	53	<10	120	76	120	79	22 Q	619
	10/16/2003	110 D	22 Q,D	7 Q,D	7.0	8.4	3.3	3.8	4.2	9.2	0.87 Q	18 D	51 D	3.0	130 D	78 D	170 D	76 D	32 D	734
	8/3/2004	110	<19	35 Q	<20	<18	<18	<21	<19	<16	<22	17 Q	60 Q	<17	90	86	330	92	25	845
duplicate (QC-2)	8/3/2004	120 D	4.3 Q	27	4.1 Q	3.5 Q	<1.8	<2.1	2.2 Q	4.7 Q	<2.2	16	61 Q,D	<1.7	94 D	77 D	330 D	85 D	23	852
MW-608B	12/8/1994	nd	nd	12	8.3	7.7	1.2	6.6	2.6	4.4	nd	27	17	3.1	--	--	110	65	13	278
	1/10/1995	12	nd	4.9	4.3	2.8	0.86	3.1	1.1	2.9	0.56	24	21	1.5	--	--	310	41	15	445
	6/19/1996	nd	nd	1.8	0.98	0.6	0.21	0.52	0.38	0.34	nd	3.2	0.47	0.26	--	--	nd	3.4	2.2	14
	6/24/2002	13	<1.8	9.5	1.5 Q	1.4 Q	1.7 Q	<1.2	<1.0	2.4 Q	<1.4	7.8	6.3	<1.1	4.6 Q	<2.2	<2.2	27	13	88
	7/2/2003	6.0	<0.48	1.6 Q	0.69 Q	0.61 Q	0.37 Q	<0.40	<0.48	0.79 Q	<0.40	2.1	2.6	<0.52	3.5	0.49 Q	2.0	7.5	3.4	32
	10/16/2003	5.3	<0.76	2.2 Q	1.6	0.92 Q	<0.52	<0.64	<0.76	1.7 Q	<0.64	4.5	2.2 Q	<0.84	2.1 Q	<0.68	<0.96	4.2	7.6	32
	8/3/2004	3.9	0.39 Q	1.9	1.1 Q	0.76 Q	<0.36	<0.41	0.44 Q	1.0 Q	<0.44	3.4	1.4 Q	<0.34	1.2 Q	<0.45	<0.45	2.7	5.1	23
MW-609A	9/5/1996	nd	nd	1.4	nd	nd	nd	nd	nd	nd	nd	nd	1.9	nd	5.6	30	8.9	4.5	nd	52
	10/11/1996	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4.3	nd	nd	18	4.5	nd	nd	27
duplicate (MW-Z)	10/11/1996	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4.7	nd	nd	33	2.2	2.1	nd	42
	6/24/2002	0.24 Q	<0.23	<0.20	<0.19	<0.12	<0.14	<0.15	<0.13	<0.18	<0.17	<0.28	0.27 Q	<0.14	2.2	<0.28	2.4	<0.19	<0.20	5.1
	7/2/2003	<0.18	<0.19	<0.20	<0.12	<0.14	<0.13	<0.16	<0.19	<0.14	<0.16	<0.13	<0.17	<0.21	0.55 Q	<0.17	3.3	<0.16	<0.17	3.9

Table 4 Groundwater Analytical Results - PAHs
Wisconsin Public Service Corporation
Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	PAHs (µg/L)																		
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs
Wisconsin Groundwater Quality Standards (NR 140)																				
<i>Preventive Action Limit</i>		<i>ns</i>	<i>0.5</i>	<i>600</i>	<i>ns</i>	<i>0.02</i>	<i>0.02</i>	<i>ns</i>	<i>ns</i>	<i>0.02</i>	<i>ns</i>	<i>80</i>	<i>80</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>8</i>	<i>ns</i>	<i>50</i>	<i>ns</i>
Enforcement Standard		ns	5	3,000	ns	0.2	0.2	ns	ns	0.2	ns	400	400	ns	ns	ns	40	ns	250	ns
	10/16/2003	<0.18	<0.19	<0.20	<0.12	<0.14	<0.13	<0.16	<0.19	<0.14	<0.16	<0.13	<0.17	<0.21	0.50 Q	<0.17	2.8	<0.16	<0.17	3.3
	8/4/2004	0.85 Q	<0.39	<0.35	<0.39	<0.36	<0.36	<0.41	<0.39	<0.33	<0.44	<0.33	0.89 Q	<0.34	6	<0.45	2.8	0.99 Q	<0.33	11.5
MW-609 B	9/5/1996	nd	nd	0.79	nd	nd	nd	nd	nd	nd	nd	8.9	nd	nd	nd	nd	nd	2.6	0.4	13
	10/11/1996	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	6/24/2002	<0.018	<0.023	<0.020	<0.019	<i>0.051</i>	<0.014	<0.015	<0.013	<0.018	<0.017	<0.028	<0.021	<0.014	<0.027	<0.028	0.044 Q	0.028 Q	<0.020	0.1
	7/2/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<0.018	<0.017	0.029 Q	<0.016	<0.017	0.03
	10/16/2003	0.085	<0.019	<0.020	<0.012	0.016 Q	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	0.027 Q	<0.021	0.30	0.10	0.50	0.021 Q	<0.017	1.0
	8/4/2004	<0.019	<0.019	<0.018	<0.02	<0.018	<0.018	<0.021	<0.019	<0.016	<0.022	<0.016	<0.022	<0.017	<0.02	<0.023	0.034 Q	<0.02	<0.016	
MW-610	9/5/1996	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	10/11/1996	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	6/24/2002	Well not sampled - located on US Oil property and access could not be obtained																		
duplicate (QC-1)	10/30/2002	<0.018	0.074	<0.020	0.048	<i>0.13</i>	<i>0.065</i>	0.090	0.049 Q	<i>0.061</i>	0.024 Q	0.033 Q	<0.017	0.062 Q	0.021 Q	<0.017	0.030 Q	0.023 Q	0.053 Q	0.5
	7/2/2003	<0.018	0.051 Q	0.021 Q	0.026 Q	<i>0.085</i>	<i>0.036 Q</i>	0.052 Q	0.036 Q	<i>0.030 Q</i>	<0.016	0.018 Q	<0.017	0.036 Q	<0.018	<0.017	0.028 Q	0.020 Q	0.037 Q	0.5
	7/2/2003	<0.018	0.058 Q	0.022 Q	0.034 Q	<i>0.10</i>	<i>0.043</i>	0.063	0.041 Q	<i>0.036 Q</i>	<0.016	0.023 Q	<0.017	0.043 Q	<0.018	<0.017	0.025 Q	0.023 Q	0.044 Q	0.6
	10/16/2003	<0.018	0.062 Q	<0.020	0.034 Q	<i>0.11</i>	<i>0.054</i>	0.073	0.053 Q	<i>0.054</i>	0.021 Q	0.024 Q	<0.017	0.052 Q	<0.018	<0.017	<0.024	<0.016	0.042 Q	0.6
	8/4/2004	<0.02	0.043 Q	<0.018	<0.02	<i>0.054 Q</i>	<i>0.023 Q</i>	0.034 Q	0.022 Q	<i>0.024 Q</i>	<0.022	<0.017	<0.022	0.022 Q	<0.02	<0.023	0.027 Q	<0.021	0.023 Q	0.3
MW-611	9/5/1996	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	10/11/1996	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	6/24/2002	Well not sampled - located on US Oil property and access could not be obtained.																		
duplicate (QC-2)	10/30/2002	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<0.017	<0.017	<0.024	<0.016	<0.017	nd
	7/2/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<0.018	<0.017	0.028 Q	<0.016	<0.017	0.03
	7/2/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<0.018	<0.017	0.024 Q	<0.016	<0.017	0.02
	10/16/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<0.018	<0.017	<0.024	<0.016	<0.017	nd
	8/4/2004	<0.019	<0.019	<0.018	<0.02	<0.018	<0.018	<0.021	<0.019	<0.016	<0.022	<0.016	<0.022	<0.017	<0.02	<0.023	0.028 Q	<0.02	<0.016	0.03
MW-612	8/4/2004	9.3	<i>2.2 Q</i>	3.4 Q	<2.0	<1.8	<1.8	<2.1	<1.9	<1.6	<2.2	<1.6	9.1	<1.7	87 D	<2.3	2.4 Q	1.9	1.7 Q	1.34
MW-613	8/4/2004	0.048 Q	0.047 Q	0.024 Q	<0.02	<0.018	<0.018	<0.021	<0.019	0.016 Q	<0.022	0.034 Q	0.026 Q	<0.017	0.12	0.099	0.57 D	0.09	0.047 Q	1.1

[JTB/EPK/PAH 8/02, 12/02, 2/03 U-JMK/PAR 10/03][U-PAR/HMS 11/03][U-HMS/GRL 8/26/04]

Notes:

PAHs : Polynuclear Aromatic Hydrocarbons

1) Concentrations equaling/exceeding the enforcement standard (ES) are shown in bold

2) Concentrations equaling/exceeding the preventive action limit (PAL) are italicized.

nd : Analysis was not performed

µg/L : Micrograms per liter

<0.018 : Analyte concentration less than method detection limit shown

ns : NR140 ES or PAL standards have not been established

duplicate (MW-B) : Field duplicate sample with field identity shown in parentheses

Q : Analyte detected between the limit of detection (LOD) and limit of quantitation (LOQ)

D : Laboratory Data Qualifier - Analyte value from diluted analysis

Table 5 Groundwater Elevations and Monitoring Well Construction Details

Wisconsin Public Service Corporation

Former Two Rivers Manufactured Gas Plant Site

Sample Location	Date	TOC Elevation (NGVD)	Ground Surface Elevation (NGVD)	Total Well Depth from TOC (feet)	Well Screen Length (feet)	Top of Screen Elevation (NGVD)	Bottom of Screen Elevation (NGVD)	Depth to Water from TOC (feet)	Groundwater Elevation (NGVD)	Middle of Screen Elevation (NGVD)	Vertical Gradient
MW601	12/7/1994	586.25	583.85	13.54	10	582.71	572.71	3.40	582.85	--	--
	12/8/1994							3.40	582.85	--	--
	12/21/1994							3.53	582.72	--	--
	1/10/1995							4.33	581.92	--	--
	1/30/1995							3.80	582.45	--	--
	6/24/2002							3.20	583.05	--	--
	7/2/2003							4.95	581.30	--	--
	10/16/2003							*(bent)	*	--	--
Monitoring Well Abandoned											
MW601R	8/3/2004	586.44	583.89	15.55	10	580.89	570.89	3.80	582.64	--	--
MW602	12/7/1994	586.83	584.35	14.18	10	582.65	572.65	3.45	583.38	--	--
	12/21/1994							3.38	583.45	--	--
	1/10/1995							4.64	582.19	--	--
	1/30/1995							3.92	582.91	--	--
	6/24/2002							3.50	583.33	--	--
	7/2/2003							4.85	581.98	--	--
	10/16/2003							4.85	581.98	--	--
	8/3/2004							4.09	582.74	--	--
MW603A	12/7/1994	585.53	582.95	14.50	10	581.03	571.03	3.23	582.30	**	1.2E-02 D
	12/21/1994							3.73	581.80	**	-7.7E-03 U
	1/10/1995							4.43	581.10	**	-2.7E-02 U
	1/30/1995							***	***	**	***
	6/24/2002							4.00	581.53	**	-3.4E-02 U
	7/2/2003							4.44	581.09		-7.9E-04 U
	10/16/2003							5.65	579.88		1.7E-01 D
	8/3/2004							3.61	581.92		1.3E-02 D
MW603B	12/7/1994	585.25	582.85	31.99	5	558.26	553.26	3.26	581.99	555.76	
	12/8/1994							3.25	582.00		
	12/21/1994							3.46	581.79		
	1/10/1995							3.97	581.28		
	1/30/1995							***	***		
	6/24/2002							2.85	582.40		
	7/2/2003							4.14	581.11		
	10/16/2003							9.57	575.68		
8/3/2004							3.67	581.58			
MW604	12/8/1994	586.57	584.35	14.22	10	582.35	572.35	4.81	581.76	--	--
	12/21/1994							4.97	581.60	--	--
	1/10/1995							5.42	581.15	--	--
	1/30/1995							4.87	581.70	--	--
	6/24/2002							4.30	582.27	--	--
	7/2/2003							5.25	581.32	--	--
	10/16/2003							7.80	578.77	--	--
	8/3/2004							4.84	581.73	--	--
MW605A	12/8/1994	585.65	583.05	14.37	10	581.28	571.28	4.04	581.61	**	1.0E-02 D
	12/21/1994							4.04	581.61	**	1.4E-02 D
	1/10/1995							4.98	580.67	**	-5.2E-03 U
	1/30/1995							4.22	581.43	**	6.1E-03 D
	6/24/2002							3.72	581.93	**	1.5E-02 D
	7/2/2003							*(obstruction)	*		
	10/16/2003							*(obstruction)	*		
	Monitoring Well Abandoned										
MW605AR	8/3/2004	585.48	583.16	15.32	10	580.16	570.16	4.86	580.62	**	-2.1E-03 D
MW605B	12/8/1994	585.80	583.05	34.71	5	556.09	551.09	4.48	581.32	553.59	
	12/21/1994							4.59	581.21		
	1/10/1995							4.99	580.81		
	1/30/1995							4.54	581.26		
	6/24/2002							4.30	581.50		
	7/2/2003							5.43	580.37		
	10/16/2003							6.49	579.31		
	8/3/2004							5.12	580.68		

Table 5 Groundwater Elevations and Monitoring Well Construction Details

Wisconsin Public Service Corporation

Former Two Rivers Manufactured Gas Plant Site

Sample Location	Date	TOC Elevation (NGVD)	Ground Surface Elevation (NGVD)	Total Well Depth from TOC (feet)	Well Screen Length (feet)	Top of Screen Elevation (NGVD)	Bottom of Screen Elevation (NGVD)	Depth to Water from TOC (feet)	Groundwater Elevation (NGVD)	Middle of Screen Elevation (NGVD)	Vertical Gradient
MW606	12/8/1994	585.15	582.75	14.59	10	580.56	570.56	3.38	581.77	--	--
	12/21/1994							3.51	581.64	--	--
	1/10/1995							3.99	581.16	--	--
	1/30/1995							ice	ice	--	--
	6/24/2002			(to 10 - well vandalized, possibly filled with sand)				3.00	582.15	--	--
	7/2/2003							4.06	581.09	--	--
	10/16/2003							5.62	579.53	--	--
Monitoring Well Abandoned											
MW606R	8/3/2004	585.78	582.99	16.79	10	578.99	568.99	3.91	581.87	--	--
MW607A	12/8/1994	584.61	581.65	15.86	10	578.75	568.75	4.18	580.43	**	-4.6E-03 U
	12/21/1994							4.31	580.30	**	-9.6E-03 U
	1/10/1995							4.87	579.74	**	-1.9E-02 U
	1/30/1995							4.41	580.20	**	-1.5E-02 U
	6/24/2002							4.20	580.41	**	-2.6E-02 U
	7/2/2003							5.29	579.32		-5.9E-02 U
	10/16/2003							6.10	578.51		-3.8E-03 U
	8/3/2004							4.80	579.81		-1.5E-02 U
MW607B	12/8/1994	584.26	581.75	34.70	5	554.56	549.56	3.70	580.56	552.06	
	12/21/1994							3.69	580.57		
	1/10/1995							3.99	580.27		
	1/30/1995							3.65	580.61		
	6/24/2002							3.10	581.16		
	7/2/2003							3.32	580.94		
	10/16/2003							5.65	578.61		
Monitoring Well Abandoned											
MW607BR	8/3/2004	584.59	581.70	34.9	5	554.69	549.69	4.36	580.23		
MW608A	12/8/1994	583.37	581.15	15.19	10	578.18	568.18	2.80	580.57	**	5.1E-01 D
	12/21/1994							2.87	580.50	**	-4.8E-03 U
	1/10/1995							3.32	580.05	**	-1.2E-02 U
	1/30/1995							2.92	580.45	**	-7.8E-03 U
	6/24/2002							2.70	580.67	**	-5.1E-03 U
	7/2/2003							3.93	579.44		-9.2E-03 U
	10/16/2003							9.77	573.60		-2.3E-01 U
	8/3/2004							3.52	579.85		-1.0E-02 U
MW608B	12/8/1994	584.15	581.75	35.54	5	553.61	548.61	18.65	565.50	551.11	
	12/21/1994							3.51	580.64		
	1/10/1995							3.76	580.39		
	1/30/1995							3.47	580.68		
	6/24/2002							3.33	580.82		
	7/2/2003							4.45	579.70		
	10/16/2003							5.43	578.72		
	8/3/2004							4.01	580.14		
MW-609A	12/8/1994	584.81	582.00	14.70	10	580.11	570.11	--	--	--	--
	12/21/1994							--	--	--	--
	1/10/1995							--	--	--	--
	1/30/1995							--	--	--	--
	6/24/2002							4.80	580.01	--	-3.2E-02 U
	7/2/2003							6.43	578.38	--	-5.0E-02 U
	10/16/2003							6.53	578.28	--	-2.0E-02 U
	8/3/2004							5.54	579.27	--	-3.4E-02 U
MW-609B	12/8/1994	584.69	582.00	33.00	5	556.69	551.69	--	--	554.19	
	12/21/1994							--	--		
	1/10/1995							--	--		
	1/30/1995							--	--		
	6/24/2002							3.85	580.84		
	7/2/2003							5.10	579.59		
	10/16/2003							5.94	578.75		
	8/3/2004							4.56	580.13		
MW-610	12/8/1994	585.96	583.00	12	10	583.96	573.96	--	--	--	--
	12/21/1994							--	--	--	--
	1/10/1995							--	--	--	--
	1/30/1995							--	--	--	--
	10/30/2002							4.42	581.54	--	--
	7/2/2003							4.72	581.24	--	--
	10/16/2003							6.33	579.63	--	--
	8/3/2004							4.53	581.43	--	--

Table 5 Groundwater Elevations and Monitoring Well Construction Details
 Wisconsin Public Service Corporation
 Former Two Rivers Manufactured Gas Plant Site

Sample Location	Date	TOC Elevation (NGVD)	Ground Surface Elevation (NGVD)	Total Well Depth from TOC (feet)	Well Screen Length (feet)	Top of Screen Elevation (NGVD)	Bottom of Screen Elevation (NGVD)	Depth to Water from TOC (feet)	Groundwater Elevation (NGVD)	Middle of Screen Elevation (NGVD)	Vertical Gradient
MW-611	12/8/1994	586.17	583.70	12	10	584.17	576.17	--	--	--	--
	12/21/1994							--	--	--	--
	1/10/1995							--	--	--	--
	1/30/1995							--	--	--	--
	10/30/2002							3.90	582.27	--	--
	7/2/2003							4.49	581.68	--	--
	10/16/2003							5.92	580.25	--	--
	8/3/2004							4.20	581.97	--	--
MW-612	8/3/2004	586.37	583.59	16.8	10	579.57	569.57	7.10	579.27	--	--
MW-613	8/3/2004	584.47	581.41	16.8	10	577.67	567.67	4.30	580.17	--	--

(JTB/EPK/C-PAH 2003 U HMS/GRL 8/26/04)

NOTES:

TOC : Top of well casing

NGVD : All elevations relative to National Vertical Geodetic Datum

U : Upward vertical hydraulic gradient

D : Downward vertical hydraulic gradient

ice : Ice present on the inside of the well casing prohibited groundwater elevation measurement

-- : not applicable

* : not measured

*** : Measurement was not collected, area was inaccessible

SOIL ANALYTICAL TABLES

Table 1 Soil Analytical Results - BTEX, Cyanides, & Phenol
 Remedial Action Options Report
 Wisconsin Public Service Corporation
 Former Two Rivers Manufactured Gas Plant Site

Sample Location (Depth)	Sample Date	BTEX (mg/kg)					Phenol/Cyanide (mg/kg)		
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Total BTEX	Cyanide (total)	Cyanide (dissociable)	Phenol
INTERIM AND PRELIMINARY GUIDANCE LEVELS									
NR720 Groundwater Pathway RCL		0.0055	1.5	2.9	4.1	ns	ns	ns	ns
MW-601 (0'-2')	11/08/94	nd	nd	0.46	0.4	0.86	na	na	nd
MW-602 (0'-2')	11/08/94	nd	nd	nd	nd	0	na	na	nd
MW-603 (0'-2')	11/08/94	3.1	2.3	110	48	163.4	210	31	0.35
MW-604 (2'-5')	11/09/94	nd	nd	nd	nd	0	1.5	0.41	0.93
MW-605 (2'-4')	11/10/94	nd	nd	nd	nd	0	na	na	nd
MW-606 (2'-4')	11/10/94	0.29	0.45	1.7	2.3	4.74	na	na	0.41
MW-607 (0'-2')	11/11/94	nd	nd	nd	nd	0	na	na	0.16
MW-608 (0'-2')	11/28/94	nd	nd	nd	nd	0	na	na	0.16
MW-609A (0'-2')	09/04/96	0.33	nd	0.49	2.2	3.02	na	na	na
MW-610 (2'-4')	09/03/96	nd	nd	nd	nd	0	na	na	na
MW-611 (2'-4')	09/03/96	nd	nd	nd	nd	0	na	na	na
SB-601 (0'-2')	11/11/94	nd	nd	nd	nd	0	na	na	0.34
SB-602 (4'-6')	11/10/94	nd	nd	nd	nd	0	na	na	0.17
SB-604 (0'-2')	11/29/94	nd	nd	nd	nd	0	na	na	0.18
SB-606 (0'-2')	11/29/94	nd	nd	nd	nd	0	na	na	0.17
SB-607 (0'-2')	09/04/96	0.028	0.044	nd	nd	0.072	na	na	na
SB-608 (0'-2')	09/04/96	nd	nd	nd	nd	0	na	na	na
SB-619 (2'-4')	03/27/96	nd	nd	0.0075	0.029	0.0365	na	na	na
SB-621 (2'-4')	03/27/96	nd	nd	nd	nd	0	na	na	na
SB-622 (2'-4')	03/27/96	0.33	nd	0.013	nd	0.343	na	na	na
SB-624 (12'-14')	03/27/96	1.7	0.66	3.9	2.2	8.46	na	na	na
SB-625 (6'-8')	03/27/96	0.52	1.1	5.5	5.5	12.62	na	na	na
SS-601 (0'-1')	11/10/94	na	na	na	na	na	na	na	nd
SS-602 (0'-1')	11/10/94	na	na	na	na	na	na	na	0.23
SS-603 (0'-1')	11/11/94	na	na	na	na	na	na	na	0.24
TP-604 (0'-1.5')	11/08/94	nd	0.11	nd	0.16	0.27	1.1	0.48	nd
TP-605 (1'-2')	11/08/94	nd	nd	nd	nd	0	45	31	0.22
TP-606 (2'-3')	11/08/94	0.74	0.75	54	27	82.49	0.98	0.22	0.27
TP-607 (0'-1')	11/08/94	nd	nd	nd	nd	0	na	na	nd
TP-608 (2'-3')	11/08/94	2	nd	21	33	56	1.8	0.33	0.33
TP-610 (0'-1')	11/08/94	nd	nd	nd	nd	0	3.9	0.41	nd
TP-612 (2'-3')	11/08/94	1.3	1.7	18	18	39	0.69	nd	0.69
TP-614 (2.5'-3.5')	11/08/94	4	3	8.5	15	30.5	3.5	0.26	2.5
Methanol Blank	09/06/96	nd	nd	nd	nd	0	na	na	na

Notes

- 1 Sample locations provided on Sheet 2
- 2 na Parameter not analyzed for in this sample.
- 3 NR720 RCL is the WDNR Residual Contaminant Level for the protection of groundwater quality
 Samples equaling or exceeding the RCL are bold/underlined
- 4 ns There is no NR720 P S N S has been established for this parameter
- 5 nd Parameter not detected in this sample
- 6 No samples were analyzed for amenable cyanides

Table 2 Previous Soil Analytical Results - PAHs
 Remedial Action Options Report
 Wisconsin Public Service Corporation
 Former Two Rivers Manufactured Gas Plant Site

Sample Location (Depth)	Sample Date	PAHs (mg/kg)																	
		Anthracene	Acenaphthene	Acenaphthylene	Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(ghi)perylene	Benzo(a)pyrene	Chrysene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs
INTERIM AND PRELIMINARY GUIDANCE LEVELS																			
Groundwater Pathway RCL		3,000	38	0.7	17	360	870	6,800	48	37	500	100	680	23	20	0.4	1.8	8,700	ns
MW-601 (0'-2')	11/08/94	0.07	nd	nd	0.25	0.25	0.31	0.71	0.62	0.36	0.75	nd	0.33	na	na	<u>0.84</u>	0.35	0.42	5.26
MW-602 (0'-2')	11/08/94	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na	nd	nd	nd	0
MW-603 (0'-2')	11/08/94	11	nd	nd	<u>29</u>	5.4	12	20	15	16	129	23	7	na	na	<u>125</u>	<u>71</u>	153	616.4
MW-604 (2'-5')	11/09/94	1.1	nd	nd	4.7	0.85	1.6	3.6	4.5	2.8	16	13	1.5	na	na	<u>19</u>	<u>30</u>	2.8	101.45
MW-605 (2'-4')	11/10/94	0.072	nd	nd	0.8	0.14	0.075	0.4	0.44	0.33	1.5	nd	0.035	na	na	<u>0.44</u>	0.31	0.67	5.212
MW-606 (2'-4')	11/10/94	1.2	nd	nd	14	2.2	1.2	7.5	5.3	3.7	20	7.7	2	na	na	<u>41</u>	<u>23</u>	29	157.8
MW-607 (0'-2')	11/11/94	0.049	nd	nd	0.38	0.037	0.2	0.35	0.31	0.24	0.52	nd	0.1	na	na	0.3	0.21	0.6	3.296
MW-608 (0'-2')	11/28/94	nd	nd	nd	0.16	0.023	0.037	0.12	0.081	0.047	0.079	nd	0.043	na	na	0.064	0.059	nd	0.713
MW-609A (0'-2')	09/04/96	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2.3	1.8	nd	0.33	nd	4.43
MW-610 (2'-4')	09/03/96	0.09	nd	nd	0.61	0.25	0.41	0.88	1.1	0.14	0.55	nd	0.57	0.83	0.8	nd	0.27	0.68	7.18
MW-611 (2'-4')	09/03/96	0.011	nd	0.36	0.074	0.013	0.028	0.053	0.043	0.048	0.073	0.15	0.048	0.24	0.027	<u>0.84</u>	0.043	0.094	2.145
SB-601 (0'-2')	11/11/94	0.12	nd	nd	1	0.11	0.68	1.2	1	0.7	2.2	nd	0.14	na	na	<u>0.9</u>	0.69	0.63	9.37
SB-602 (4'-6')	11/10/94	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na	nd	nd	nd	0
SB-604 (0'-2')	11/29/94	0.016	nd	nd	0.23	0.073	0.0082	0.22	0.13	0.06	0.11	nd	0.082	na	na	0.11	0.086	0.018	1.1432
SB-606 (0'-2')	11/29/94	0.1	nd	nd	0.095	0.41	0.48	1.4	1.4	0.45	1.1	nd	0.66	na	na	<u>1</u>	0.26	0.32	7.675
SB-607 (0'-2')	09/04/96	nd	nd	nd	0.32	0.12	0.19	0.36	0.38	0.093	0.37	nd	0.23	nd	nd	nd	nd	0.53	2.593
SB-608 (0'-2')	09/04/96	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0
SB-624 (12'-14')	03/27/96	14	38	<u>95</u>	14	2.1	1.6	5.1	6.8	5	22	43	3.2	<u>49</u>	<u>58</u>	<u>113</u>	<u>54</u>	17	540.8
SB-625 (6'-8')	03/27/96	0.68	0.59	<u>7.3</u>	1.1	0.2	0.12	0.46	0.55	0.5	4.5	1.6	0.25	2.3	3.5	<u>1.4</u>	<u>3</u>	0.69	28.74
SS-601 (0'-1')	11/10/94	0.011	nd	nd	0.064	0.044	0.048	0.13	0.071	0.054	0.12	nd	0.079	na	na	0.051	0.043	0.07	0.785
SS-602 (0'-1')	11/10/94	0.55	nd	nd	1.9	0.079	0.71	1.8	1.6	1.2	3.4	0.22	11.2	na	na	<u>1.7</u>	<u>3.8</u>	2.9	31.059
SS-603 (0'-1')	11/11/94	0.02	nd	nd	0.047	0.017	0.023	0.3	0.25	0.08	0.23	nd	0.12	na	na	nd	0.016	0.0096	1.1126
TP-604 (0'-1.5')	11/08/94	0.22	nd	nd	0.16	0.49	0.21	1.4	0.92	0.62	1.7	0.043	0.44	na	na	<u>0.91</u>	0.76	0.81	8.683
TP-605 (1'-2')	11/08/94	1	nd	nd	8.7	1.9	0.71	5.6	3.6	1.5	7.2	0.86	1.4	na	na	<u>4.9</u>	<u>2.7</u>	1.4	41.47
TP-606 (2'-3')	11/08/94	2.9	nd	nd	9.3	3	4.1	8.8	11	5.9	22	8.8	3.5	na	na	<u>36</u>	<u>26</u>	16	157.3
TP-607 (0'-1')	11/08/94	0.081	nd	nd	nd	0.15	2.1	1.9	0.52	0.032	0.66	nd	0.054	na	na	0.39	0.24	0.33	6.457
TP-608 (2'-3')	11/08/94	0.24	nd	nd	0.065	0.13	0.14	1.3	0.22	0.22	1.1	0.23	0.12	na	na	<u>8.8</u>	0.9	0.26	13.725
TP-610 (0'-1')	11/08/94	0.037	nd	nd	0.034	0.032	0.22	0.16	0.16	0.2	0.44	nd	0.11	na	na	0.2	0.11	0.14	1.843
TP-612 (2'-3')	11/08/94	16	nd	nd	<u>42</u>	12	13	35	42	18	68	<u>131</u>	14	na	na	<u>386</u>	<u>94</u>	23	894
TP-614 (2.5'-3.5')	11/08/94	3.7	nd	nd	10	1.2	4.5	9.4	6.1	4.7	34	3.3	1.8	na	na	<u>29</u>	<u>31</u>	23	161.7
Composite SB-609	09/03/96	4.1	nd	<u>40</u>	3.5	1.3	0.88	1.6	1.9	1.3	14	12	0.9	<u>26</u>	<u>20</u>	<u>40</u>	<u>15</u>	3.5	185.98

- Notes: 1 Sample locations provided on Sheet 2
 2 na: Parameter not analyzed for in this sample
 3. nd: Parameter not detected in this sample
 4 A parameter is listed if detected in at least one sample.
 5 RCL is Residual Contaminant Level Concentrations exceeding the RCL are bold/underlined

Table 8 Soil Analytical Results - PVOCs¹
Wisconsin Public Service Corporation
Former Two Rivers Manufactured Gas Plant Site

Sample Location ² (depth fbs)	Sample Date	Benzene (ug/kg)	Ethylbenzene (ug/kg)	Toluene (ug/kg)	Total Xylene (ug/kg)	1,2,4-Trimethylbenzene (ug/kg)	1,3,5-Trimethylbenzene (ug/kg)	Methyl-tert-butyl-ether (ug/kg)
Generic Guidance Values³								
Groundwater Pathway RCL		55	2,900	1,500	4,100	ns	ns	ns
SOIL BORINGS								
SB-626 (12-15)	8/26/2003	4,200	130,000	14,000	110,000	47,000	14,000	<620
SB-626 (16 5-20)	8/26/2003	36	200	<25	174	82	35	<25
SB-627 (9 75-14)	8/26/2003	200	220	<25	153	<25	<25	<25
SB-628 (13 5-16.5)	8/26/2003	2,100	1,800	<25	209	<25	<25	<25
SB-629 (14-17.5)	8/27/2003	370	350	<25	87	92	<25	<25
SB-630 (14-18)	8/27/2003	2,400	1,600	47	880	34	<25	<25
SB-631 (8.5-14)	8/27/2003	<25	<25	<25	<50	<25	<25	<25
SB-632 (10.5-13.5)	8/27/2003	<25	<25	<25	<50	<25	<25	<25
SB-633 (14.5-19.5)	8/27/2003	<25	110	<25	<50	<25	<25	<25
SB-634 (7-8)	8/27/2003	<25	<25	<25	<50	<25	<25	<25
SB-637 (0-2)	5/13/2004	<37	<37	<37	<75	na	na	na
SB-638 (0-2)	5/12/2004	<25	<25	<25	<50	na	na	na
SB-639 (0-2)	5/12/2004	100 Q	<25	120 Q	<50	na	na	na
SB-640 (0-2)	5/11/2004	<25	<25	<25	<50	na	na	na
MW-613 (0-2)	5/11/2004	<25	<25	<25	<50	na	na	na
TEST PITS								
TP-615(3.5)	8/25/2003	<25	<25	<25	<50	<25	<25	<25
TP-616(3-4)	8/25/2003	130,000	820,000	6,400	1,500,000	210,000	84,000	<1,000
TP-617(4-6)	8/25/2003	2,000	68,000	1,300	38,000	29,000	8,500	<500
TP-617(9-10)	8/25/2003	260	1,100	<25	760	250	59	<25
TP-619(14)	8/25/2003	<100	18,000	8,400	17,000	8,000	2,300	<100
TP-620(4-5)	8/25/2003	<25	<25	<25	<50	<25	<25	<25
TP-620(11-12)	8/25/2003	3,100	2,400	33	2,040	350	100	<25
TP-621(8 5-9)	8/25/2003	1,800	3,100	48	2,110	960	300	<25
TP-622(11)	8/25/2003	53	310	<25	169	93	<25	<25

[Prepared by JMK/Checked by EPK U-HMS C-MJR 6/3/04]

Notes.

- Petroleum Volatile Organic Compounds (PVOCs) analyzed by EnChem, Inc., Green Bay, Wisconsin, by SW846 Method 8021.
- Sample locations are provided on Figure 2 and Sheet 2
- Groundwater Pathway RCL from Wisconsin Administrative Code Department of Natural Resources Chapter NR 720.09 Table 1 Residual Contaminant Levels Protective of groundwater, January 2001.

na = not analyzed

fbs = feet below ground surface

ug/kg = micrograms per kilogram

< = constituent was analyzed for but not detected at the listed detection limit

RCL = residual contaminant levels

Q = analyte was detected between the limit of detection and limit of quantitation

K = detection limit may be elevated due to the presence of an unrequested analyte

Concentrations attaining or exceeding the NR 720 RCL are **bold/underlined**

Table 9 Soil Analytical Results - PAHs¹
Wisconsin Public Service Corporation
Former Two Rivers Manufactured Gas Plant Site

Sample Location (depth fbs) ²	Sample Date	1-Methylnaphthalene (ug/kg)	2-Methylnaphthalene (ug/kg)	Acenaphthene (ug/kg)	Acenaphthylene (ug/kg)	Anthracene (ug/kg)	Benzo(a)anthracene (ug/kg)	Benzo(a)pyrene (ug/kg)	Benzo(b)fluoranthene (ug/kg)	Benzo(ghi)perylene (ug/kg)	Benzo(k)fluoranthene (ug/kg)	Chrysene (ug/kg)	Dibenzo(a,h)anthracene (ug/kg)	Fluoranthene (ug/kg)	Fluorene (ug/kg)	Indeno(1,2,3-cd)pyrene (ug/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	Pyrene (ug/kg)
WDNR Draft Generic Soil Cleanup Levels (DSCLs)³																			
Groundwater Pathway RCL		23,000	20,000	38,000	700	3,000,000	17,000	48,000	360,000	6,800,000	870,000	37,000	38,000	500,000	100,000	680,000	400	1,800	8,700,000
DCP - Non-Industrial RCL		1,100,000	600,000	900,000	18,000	5,000,000	88	88	88	1,800	880	8,800	88	600,000	600,000	88	20,000	18,000	500,000
DCP - Industrial RCL		70,000,000	40,000,000	60,000,000	360,000	300,000,000	3,900	390	3,900	39,000	39,000	390,000	390	40,000,000	40,000,000	3,900	110,000	390,000	30,000,000
SOIL BORINGS																			
SB-626 (12-15)	8/26/2003	420,000	510,000	380,000	51,000 Q	210,000	78,000	75,000	25,000 Q	28,000 Q	56,000	87,000	<9,700	180,000	200,000	26,000 Q	1,100,000	540,000	280,000
SB-626 (16.5-20)	8/26/2003	970	1,300	290	730 *	160	68	51	27 Q	33 Q	34 Q	64	<19	180	180	<28	2,200	580	280
SB-627 (9.75-14)	8/26/2003	<8.9	<9.6	<14	<23	<14	<7.6	<7.6	<8.3	<15	<11	<8.8	<9.4	<10	<7.6	<14	58	11 Q	<17
SB-628 (13.5-16.5)	8/26/2003	8.7 Q	13 Q	<13	26 Q	<13	59	78	47	45 Q	50	67	<9.0	64	<7.3	30 Q	83	24 Q	120
SB-629 (14-17.5)	8/27/2003	290	120	240	<45	<28	<15	<15	<16	<30	<23	<17	<19	<20	<15	<28	550	<20	<33
SB-630 (14-18)	8/27/2003	<8.7	<9.3	<14	<22	<14	<7.4	<7.4	<8.1	<15	<11	<8.5	<9.2	<9.9	<7.4	<14	340	<9.9	<16
SB-631 (8.5-14)	8/27/2003	<8.7	<9.3	<14	<22	<14	<7.4	<7.4	<8.0	<15	<11	<8.5	<9.2	<9.9	<7.4	<14	<9.3	<9.9	<16
SB-632 (10.5-13.5)	8/27/2003	<8.8*	<9.4	<14	<23	<14	<7.5	<7.5	<8.1	<15	<11	<8.6	<9.3	<10	<7.5	<14	<9.4 &*	<10	<16
SB-633 (14.5-19.5)	8/27/2003	<8.7*	<9.3	<14	<22	<14	<7.5	<7.5	<8.1	<15	<11	<8.6	<9.2	<9.9	<7.5	<14	68 &*	10 Q	<16
SB-634 (7-8)	8/27/2003	10 Q*	18 Q	<14	<23	<14	<7.6	<7.6	<8.2	<15	<11	<8.7	<9.3	<10	<7.6	<14	<9.4 &*	<10	<16
SB-635 (0-2)	5/13/2004	32 Q	55 Q	<38	<63	54 Q	110	110	100	45 Q, &	110	140	<26	200	33 Q	40 Q, &	57 Q	170	210
SB-637 (0-2)	5/13/2004	32 Q	58 Q	<38	540	180	910	1,400	860	470	990	1,100	150	940	34 Q	400	61 Q	250	1,800
SB-638 (0-2)	5/12/2004	<36	<38	<56	<91	<56	140	150	130	<61 &	110 Q	190	<38	240	<30	<56 &	<38	71 Q	340
SB-639 (0-2)	5/12/2004	25 Q	39 Q	<27	300	210	880	920	840	250	1,000	960	85	1,700	29 Q	260	87	510	1,700
SB-640 (0-2)	5/11/2004	<34	<37	<54	<88	<54	110	120	110	76 Q, &	100 Q	140	<36	200	<29	62 Q, &	<37	97 Q	180 Q
MW-613 (0-2)	5/11/2004	57	89	27 Q	1,300	360	990	2,100	1,800	460 &	1,500	1,500	270	350	41 Q	460 &	100	70	1,000
TEST PITS																			
TP-615(3.5)	8/25/2003	<10	<11	<16	<26	<16	31	45	34	23 Q	39 Q	39	<11	50	<8.6	27 Q	16 Q	31 Q	56 Q
TP-616(3-4)	8/25/2003	100,000	100,000	89,000	72,000 Q	54,000	26,000	23,000	7,200	9,700	15,000	26,000	2,700 Q	58,000	44,000	8,700	100,000	160,000	80,000
TP-617(4-6)	8/25/2003	41,000	57,000	27,000	19,000	25,000	11,000	11,000	3,800	3,500 Q	7,400	11,000	980 Q	25,000	21,000	3,700 Q	83,000	75,000	38,000
TP-617(9-10)	8/25/2003	160	74 Q	<73	<120	<73	<40	<40	<43	<80	<60	<46	<49	<53	<40	<73	3,800	<53	<87
TP-619(14)	8/25/2003	13,000	17,000	2,300	9,700	5,600	2,700	2,300	820	1,100	1,500	2,700	230 Q	5,400	4,700	960 Q	28,000	17,000	7,800
TP-620(4-5)	8/25/2003	<72	<77	<110	<190	<110	<62	<62	<67	<120	<93	<71	<76	<82	<62	<110	<77	<82	<130
TP-620(11-12)	8/25/2003	31 Q	30 Q	<18	<29	<18	<9.7	<9.7	<10	<19	<14	<11	<12	<13	<9.7	<18	2,000	<13	<21
TP-621(8.5-9)	8/25/2003	2,400	2,600	1,100	<270	<170	<90	<90	<98	<180	<140	<100	<110	<120	<90	<170	12,000	<120	<200
TP-622(11)	8/25/2003	310	150	350	<23	<14	<7.8	<7.8	<8.5	<16	<12	<9.0	<9.6	<10	77	<14	1,600	<10	<17

[Prepared by JMK/Checked by EPK U-HMS C MR 6/3/04]

Notes:

1. Polynuclear Aromatic Hydrocarbons (PAHs) analyzed by EnChem, Inc., Green Bay, Wisconsin, by EPA Method 8270C
2. Sample locations are provided on Figure 2 and Sheet 2.
3. Wisconsin Department of Natural Resources Draft Soil Cleanup Levels (DSCLs) from Table 1 of the Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons Interim Guidance Document, April 1997

fbs = feet below ground surface

ug/kg = micrograms per kilogram

< = constituent was analyzed for but not detected at the listed detection limit

RCL = residual contaminant levels

DCP = Direct Contact Pathway

Q = analyte was detected between the limit of detection and limit of quantitation

* = Precision not within control limits

& = Laboratory control spike recovery not within control limits

Concentrations attaining or exceeding the NR 720 RCL are **bold/underlined**

Table 10 Soil Analytical Results -RCRA Metals, Sulfide, Sulfur, and Cyanides¹

Wisconsin Public Service Corporation

Former Two Rivers Manufactured Gas Plant Site

Sample Location (depth fbgs)	Sample Date	Percent Solids (%)	Sulfide (mg/kg)	Sulfur (mg/kg)	Cyanide Weak and Dissociable (mg/kg)	Total Cyanide (mg/kg)	RCRA Metals							
							Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Mercury (mg/kg)
NR720 Generic Direct Contact ¹														
RCL Non-Industrial		ns	ns	ns	ns	ns	0.039	ns	8	ns	50	ns	ns	ns
RCL Industrial		ns	ns	ns	ns	ns	1.6	ns	510	ns	500	ns	ns	ns
SOIL BORINGS														
SB-626 (12-15)	8/26/2003	76.0	<31	200 Q	<0.14	na	0.61	9.1	<0.045	4.1	1.2	0.43 Q	<0.026	0.0045 Q
SB-626 (16.5-20)	8/26/2003	79.3	<32	100 Q	<0.13	na	na	na	na	na	na	na	na	na
SB-627 (9.75-14)	8/26/2003	78.5	<31	<100	<0.13	na	na	na	na	na	na	na	na	na
SB-628 (13.5-16.5)	8/26/2003	82.1	<31	<100	<0.13	na	na	na	na	na	na	na	na	na
SB-629 (14-17.5)	8/27/2003	79.8	<30	300 Q	<0.13	na	na	na	na	na	na	na	na	na
SB-630 (14-18)	8/27/2003	80.7	<39	100 Q	<0.13	na	na	na	na	na	na	na	na	na
SB-631 (8.5-14)	8/27/2003	80.8	<36	<100	<0.13	na	na	na	na	na	na	na	na	na
SB-632 (10.5-13.5)	8/27/2003	79.8	<36	420	<0.13	na	na	na	na	na	na	na	na	na
SB-633 (14.5-19.5)	8/27/2003	80.5	<33	330	<0.13	na	na	na	na	na	na	na	na	na
SB-634 (7-8)	8/27/2003	79.4	na	na	na	na	na	na	na	na	na	na	na	na
SB-635 (0-2)	5/13/2004	57.6	na	na	na	<0.25	na	na	na	na	58	na	na	na
SB-637 (0-2)	5/13/2004	29.1	na	na	na	5.3	na	na	na	na	150	na	na	na
SB-638 (0-2)	5/12/2004	19.7	na	na	na	3.4	na	na	na	na	550	na	na	na
SB-639 (0-2)	5/12/2004	40.2	na	na	na	2.8	na	na	na	na	2,300	na	na	na
SB-640 (0-2)	5/11/2004	40.9	na	na	na	0.87 Q	na	na	na	na	610	na	na	na
MW-613 (0-2)	5/11/2004	47.8	na	na	na	0.38 Q	na	na	na	na	170	na	na	na
TEST PITS														
TP-615(3.5)	8/25/2003	69.9	880	13,000	na	4.3	na	na	na	na	na	na	na	na
TP-616(3-4)	8/25/2003	42.1	<58	4,100	na	2.1	na	na	na	na	na	na	na	na
TP-617(4-6)	8/25/2003	75.6	<25	5,500	na	3.3	1.5	26	0.14 Q	7.2	2.1	1.0	0.026 Q	0.0044 Q
TP-617(9-10)	8/25/2003	80.0	<24	300 Q	na	1.4	na	na	na	na	na	na	na	na
TP-619(14)	8/25/2003	75.9	<26	410	na	0.16 Q	0.57	19	0.11 Q	5.2	2.2	<0.25	<0.026	0.017
TP-620(4-5)	8/25/2003	19.4	<230	310 Q	na	0.63 Q	na	na	na	na	na	na	na	na
TP-620(11-12)	8/25/2003	82.8	<24	100 Q	na	1.3	na	na	na	na	na	na	na	na
TP-621(8.5-9)	8/25/2003	70.8	<30	300 Q	na	0.70	na	na	na	na	na	na	na	na
TP-622(11)	8/25/2003	81.0	<26	<100	na	0.14 Q	na	na	na	na	na	na	na	na

(Prepared by JMK/Checked by FPK UHMS C ___/M/D)

Notes

1 Percent Solids analyzed by SM 2450 G sulfide analyzed by Method 9034/9030B, sulfur analyzed by Method 9038, weak and dissociable cyanide analyzed by Method SM 4500 Total Cyanide by SW846 9012A RCRA metals by SW846 Method 6020 (mercury by 7471A) Analysis performed by EnChem Inc., Green Bay Wisconsin

2 Sample Locations provided on Figure 2 and Sheet 2

3 Wisconsin Administrative Code Department of Natural Resources Chapter NR 720.11 Table 2 Residual Contaminant Levels January 2001

fbgs = feet below ground surface

% = percent

mg/Kg = milligrams per kilogram

< = constituent was analyzed for but not detected at the listed detection limit

Q = analyte was detected between the limit of detection and limit of quantitation

na = not analyzed

ns = no standard exists

Concentrations attaining or exceeding the NR 720 RCL are **bold/underlined**

PILOT SCALE IN-SITU CHEMICAL OXIDATION TEST

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PILOT SCALE IN-SITU CHEMICAL OXIDATION TEST
GROUNDWATER ANALYTICAL TABLES

Table 2. PILOT SCALE Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
 Wisconsin Public Service Corporation - Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	PAHs (µg/L)																			
		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)pyrene	Benz(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(ghi)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs	Percent Change
Wisconsin Groundwater Quality Standards (NR 140, February 2004)																					
Preventive Action Limit		ns	ns	<u>600</u>	<u>0.02</u>	ns	<u>0.02</u>	ns	ns	<u>0.02</u>	ns	<u>80</u>	<u>80</u>	ns	ns	ns	<u>8</u>	ns	<u>50</u>	ns	ns
Enforcement Standard		ns	ns	<u>3,000</u>	<u>0.2</u>	ns	<u>0.2</u>	ns	ns	<u>0.2</u>	ns	<u>400</u>	<u>400</u>	ns	ns	ns	<u>40</u>	ns	<u>250</u>	ns	ns
MW-605A	12/8/1994	37	nd	57	<u>92</u>	96	<u>21</u>	27	74	<u>46</u>	nd	<u>460</u>	<u>460</u>	34	--	--	<u>1,500</u>	540	42	3,486	
Dupl. MW-B	12/8/1994	nd	nd	25	<u>21</u>	27	<u>4.7</u>	6.2	17	<u>10</u>	nd	<u>120</u>	<u>160</u>	8.2	--	--	<u>1,700</u>	200	8.5	2,308	
	1/10/1995	nd	nd	15	<u>43</u>	54	<u>12</u>	12	38	<u>34</u>	4.6	<u>320</u>	<u>200</u>	16	--	--	<u>2,300</u>	240	<u>300</u>	3,589	
Dupl. MW-6C	1/10/1995	59	nd	5.6	<u>1.6</u>	2.6	<u>0.48</u>	0.51	1.5	<u>1.6</u>	nd	19	69	0.63	--	--	<u>1,800</u>	52	9.3	2,023	
	6/24/2002	45 Q	93	77	<u>46</u>	66	<u>36 Q</u>	33 Q	29 Q	<u>64</u>	<17	<u>130</u>	<u>110</u>	23 Q	270	<28	<u>97</u>	280	<u>160</u>	1,559	
	7/2/2003	Unable to be sampled due to bailer stuck in well																			
	10/16/2003	Unable to be sampled due to bailer stuck in well.																			
MW-605AR	8/3/2004	24,000 Q	82,000	<u>48,000</u>	<u>18,000 Q</u>	14,000 Q	<8,900	<10,000	<9,700	<u>21,000 Q</u>	<11,000	<u>40,000</u>	<u>49,000</u>	<8,500	110,000	160,000	<u>310,000</u>	110,000	<u>62,000</u>	1,048,000	
duplicate (QC-1)	8/3/2004	<680	1,800	<u>1,300 Q</u>	<690	<630	<630	<720	<680	<570	<770	<u>740 Q</u>	<u>930 Q</u>	<600	2,600	3,300	<u>11,000</u>	1,900 Q	<u>1,100 Q</u>	24,670	
MW-605AR	2/2/2005	140	430 D	270 D	<u>160</u>	190	<u>65</u>	77	66	<u>160</u>	13 Q	<u>300 D</u>	<u>180</u>	49	490 D	610 D	<u>1,400 D</u>	600 D	<u>390 D</u>	5,590	
	3/17/2005	62	100 Q,D	99 D	<u>74</u>	89	<u>35</u>	43	35	<u>80</u>	8.3 Q	<u>140 D</u>	54	27	130 D	140 D	<u>410 D</u>	240 D	<u>180 D</u>	1,946	-100%
MW-605B	12/8/1994	640	nd	12	<u>0.44</u>	2.3	nd	4.8	nd	nd	nd	12	<u>130</u>	nd	--	--	<u>1,300</u>	73	nd	2,175	
	1/10/1995	nd	nd	nd	nd	nd	nd	nd	nd	<u>0.12</u>	nd	nd	nd	nd	--	--	nd	nd	0.34	0	
	6/24/2002	4.5	1.2 Q	2.4	<u>0.65 Q</u>	1.1 Q	<u>0.30 Q</u>	0.30 Q	<0.30	<u>0.83 Q</u>	<0.34	2.8	0.45 Q	<0.28	2.5	0.68 Q	2.8	5.3	3.5	29	
	7/2/2003	3.9	0.59 Q	0.26 Q	<0.14	0.18 Q	<0.13	<0.19	<0.16	<u>0.19 Q</u>	<0.16	0.66	0.25 Q	<0.21	0.61	<0.17	<0.24	0.24 Q	1.0	7.9	
	10/16/2003	3.0	<0.76	0.49	<u>0.12</u>	0.063	<u>0.030</u>	0.037	0.034	<u>0.11</u>	<0.016	0.42	0.47	0.024	2.3	0.75	7.6	0.82	<0.68	16	
	8/3/2004	7.2 Q	6.2 Q	<2.8	<3.1	<2.9	<2.9	<3.3	<3.1	<2.6	<3.5	<2.6	<3.5	<2.7	12	25	<u>19</u>	<3.3	<2.6	69	
	2/2/2005	58 E	110 E	9.6	<1.8	<2.0	<1.8	<1.9	<2.1	<u>1.7 Q</u>	<2.2	5.3 Q	22	<1.7	290 Q,D	390 E	<u>3,300 D</u>	26	6.7	4,219	
	3/17/2005	<390 D	<390 D	16	<u>7.4</u>	9.5	<u>3.2 Q</u>	4.1 Q	3.1 Q	<u>9.7</u>	<2.2	18	33	2.2 Q	470 Q,D	<450 D	<u>5,300 D</u>	<410 D	29	5,905	8409%

Table 2. PILOT SCALE Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service Corporation - Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	PAHs (µg/L)																		Total PAHs	Percent Change
		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)pyrene	Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(ghi)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene		
Wisconsin Groundwater Quality Standards (NR 140, February 2004)																					
Preventive Action Limit		ns	ns	<u>600</u>	<u>0.02</u>	ns	<u>0.02</u>	ns	ns	<u>0.02</u>	ns	<u>80</u>	<u>80</u>	ns	ns	ns	<u>8</u>	ns	<u>50</u>	ns	ns
Enforcement Standard		ns	ns	<u>3,000</u>	<u>0.2</u>	ns	<u>0.2</u>	ns	ns	<u>0.2</u>	ns	<u>400</u>	<u>400</u>	ns	ns	ns	<u>40</u>	ns	<u>250</u>	ns	ns
TW-601	12/6/2004	95 E	210 E	43	<u>14</u>	21	<u>6.2</u>	6.6	6.2 Q	<u>15</u>	<2.2	37	68 E	4.4 Q	590 Q,D	650 Q,D	<u>5,000 D</u>	160 E	<u>51 E</u>	6,977	
4' inject spacing	12/21/2004	57	200 Q,D	63	<u>25</u>	28	<u>10 Q</u>	13 Q	10 Q	<u>27</u>	<4.8	59	74	7 Q	370 Q,D	260 Q,D	<u>1,500 D</u>	190 Q,D	<u>84</u>	2,977	
	2/2/2005	130 E	98 E	24	<u>6.3 Q</u>	7.6 Q	<3.6	<3.9	<4.1	<u>7.8 Q</u>	<4.4	18	45	<3.4	420 Q,D	570 E	<u>3,900 D</u>	76	23	5,326	
	3/17/2005	120 E	68	19	<u>5.3 Q</u>	6.6 Q	<3.6	<3.9	<4.1	<u>6.9 Q</u>	<4.4	16	46	<3.4	330 Q,D	340 Q,D	<u>3,000 D</u>	70	21	4,049	-42%
TW-602	12/6/2004	150 E	330 E	53	<u>12.0 Q</u>	21	<u>6.4 Q</u>	6.2 Q	5.9 Q	<u>17</u>	<4.4	44	<u>95</u>	4.0 Q	710 Q,D	810 Q,D	<u>6,000 D</u>	210 E	<u>60</u>	8,535	
10' inject spacing	12/21/2004	<620 D	<620 D	76	<u>27</u>	32	<u>12 Q</u>	13 Q	11 Q	<u>30</u>	<4.7	69	<u>95</u>	7.4 Q	<630 D	<720 D	<u>5,500 D</u>	<650 D	<u>95</u>	5,967	
	2/2/2005	1,200 E	8,500 Q,D	<u>4,900 Q,D</u>	<u>1,600 E</u>	2,100 E	<u>650</u>	730 E	630	<u>1,700 E</u>	140	<u>3,900 Q,D</u>	<u>3,500 Q,D</u>	480	11,000 D	12,000 D	<u>33,000 D</u>	9,500 Q,D	<u>5,200 Q,D</u>	100,730	
	3/17/2005	250	820 Q,D	350	<u>130</u>	160	<u>59 Q</u>	81 Q	72 Q	<u>180</u>	<44	<u>390</u>	<u>460</u>	47 Q	1,200 Q,D	1,300 Q,D	<u>6,000 D</u>	990 Q,D	<u>520</u>	13,009	52%
TW-603	12/6/2004	460 Q,D	360	310	<u>100</u>	160	<u>52</u>	49 Q	44 Q	<u>130</u>	<18	<u>310</u>	<u>290</u>	31 Q	950 Q,D	1,200 D	<u>4,400 D</u>	920 Q,D	<u>380 Q,D</u>	10,146	
4' inject spacing	12/21/2004	<400 D	<400 D	<360 D	<u>62</u>	79	<u>24</u>	32	23	<u>68</u>	5.3 Q	<340 D	<450 D	17	950 Q,D	960 Q,D	<u>3,700 D</u>	440 Q,D	<330 D	6,360	
	2/2/2005	150 E	290 E	80	<u>27</u>	33	<u>10 Q</u>	14	10 Q	<u>30</u>	<4.4	78	26	7.6 Q	550 Q,D	550 Q,D	<u>4,300 D</u>	250 E	<u>95</u>	6,501	
	3/17/2005	240	380	130	<u>50 Q</u>	59 Q	<u>22 Q</u>	30 Q	27 Q	<u>62</u>	<22	<u>150</u>	<u>200</u>	<17	670 Q,D	730 Q,D	<u>4,800 D</u>	450	<u>190</u>	8,190	-19%
TW-604	12/6/2004	310	600 Q,D	410	<u>130</u>	220	<u>59 Q</u>	70	58 Q	<u>170</u>	<22	<u>420</u>	<u>380</u>	41 Q	1,100 Q,D	1,500 Q,D	<u>4,700 D</u>	1,200 Q,D	<u>510 Q,D</u>	11,878	
10' inject spacing	12/21/2004	<850 D	<850 D	<780 D	<800 D	<860 D	<u>86</u>	<850 D	79	<720 D	17	<730 D	<960 D	58	1,500 Q,D	1,900 Q,D	<u>8,300 D</u>	1,200 Q,D	<720 D	13,140	
	2/2/2005	1,000 Q,D	1,900 Q,D	<u>1,300 Q,D</u>	<u>440</u>	580 E	<u>170</u>	220	170	<u>490 E</u>	35 Q	<u>1,100 Q,D</u>	<u>1,100 E</u>	130	3,400 D	4,000 D	<u>14,000 D</u>	2,900 Q,D	<u>1,400 Q,D</u>	34,335	
	3/17/2005	650	1,000	560	<u>220 Q</u>	250 Q	<u>91 Q</u>	140 Q	120 Q	<u>300</u>	<88	<u>660</u>	<u>700</u>	74 Q	1,800	1,800 Q,D	<u>7,300 D</u>	1,700 Q,D	<u>860</u>	18,225	53%

[O-HMS/JAH 1/7/05][U-HMS/PAR 2/05][HMS/JMK/RHS 04/05]

Notes:
 1) Concentrations equaling/exceeding the enforcement standard (ES) are **bold/ underlined**
 2) Concentrations equaling/exceeding the preventive action limit (PAL) are *italicized/ underlined*.

nd Parameter was not detected
 µg/L Micrograms per liter
 --- Analysis was not performed
 ns NR140 ES or PAL standards have not been established

Laboratory Notes:
 Q Laboratory note - Analyte detected between the limit of detection (LOD) and limit of quantitation (LOQ)
 D Laboratory note - Analyte value from diluted analysis or surrogate result not applicable due to sample dilution
 E Laboratory note - Analyte concentration exceeds calibration range

Table 3. PILOT SCALE Groundwater Analytical Results - BTEX, BOD, COD, TOC, Iron and Heterotrophic Plate Count
 Wisconsin Public Service Corporation - Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	BTEX (µg/L)				Other VOCs (µg/L)			Other						
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Total BTEX	Percent Change	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Methyl-tert-butyl-ether	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Iron (µg/L)	Heterotrophic Plate Count (CFU/ml)
Wisconsin Groundwater Quality Standards (NR 140, February 2004)															
Preventive Action Limit		0.5	200	140	1,000	ns	ns	96 T	96 T	12	25	25	1	150	ns
Enforcement Standard		5	1,000	700	10,000	ns	ns	480 T	480 T	60	ns	ns	ns	300	ns
MW-605A	12/8/1994	140	180	340	310	970	--	--	--	--	--	--	--	--	--
Dupl MW-B	12/8/1994	130	160	310	280	880	--	--	--	--	--	--	--	--	--
	1/10/1995	1,400	1,400	790	740	4,330	--	--	--	--	--	--	--	--	--
Dupl MW-6C	1/10/1995	1,300	1,200	530	500	3,530	--	--	--	--	--	--	--	--	--
	6/24/2002	65	33	17	164	102	92	32	--	--	--	--	--	--	--
	7/2/2003														
	10/16/2003														
Unable to be sampled due to bailer stuck in well															
Unable to be sampled due to bailer stuck in well															
MW-605AR	8/3/2004	3,300	5,500	3,200	3,000	15,000	480	130	<45 K	--	--	--	--	--	--
duplicate (QC-1)	8/3/2004	3,500 K	5,000 K	2,300 K	2,110 K	12,910	360 K	97 K, Q	<36	--	--	--	--	--	--
	2/2/2005	160 K	100 K	170 K	165 K	595	54 K	13 Q, K	<72 K	26	840	26	4,400	140E+04	--
	3/17/2005	250	130	210	186	776	40,	11	<0.36	--	--	--	--	--	--
-95%															
MW-605B	12/8/1994	29	88	320	540	977	--	--	--	--	--	--	--	--	--
	1/10/1995	41	89	15	79	94	--	--	--	--	--	--	--	--	--
	6/24/2002	0.49 Q	<0.68	1.7 Q	1.6 Q	3.8	3.6	<0.94	--	--	--	--	--	--	--
	7/2/2003	0.87	0.60	1.7	2.0	5.2	4	<0.52	--	--	--	--	--	--	--
	10/16/2003	5.5	16	20	18.9	19	7.1	0.77	--	--	--	--	--	--	--
	8/3/2004	130 K	530 K	540 K	470 K	1,670	52 K	12 K, Q	<3.6 K	--	--	--	--	--	--
	2/2/2005	500 K	2,100 K	2,300 K	2,190 K	7,090	350 K	83 K	<18 K	39	690	10	4,400	570	--
	3/17/2005	590 K	2,200 K	2,100 K	2,210 K	7,100	310 K	85 K	<18 K	--	--	--	--	--	--
325%															

Table 3. PILOT SCALE Groundwater Analytical Results - BTEX, BOD, COD, TOC, Iron and Heterotrophic Plate Count
 Wisconsin Public Service Corporation - Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	BTEX (µg/L)					Other VOCs (µg/L)			Other					
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Total BTEX	Percent Change	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Methyl-tert-butyl-ether	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Iron (µg/L)	Heterotrophic Plate Count (CFU/ml)
Wisconsin Groundwater Quality Standards (NR 140, February 2004)															
<i>Preventive Action Limit</i>		<u>0.5</u>	<u>200</u>	<u>140</u>	<u>1,000</u>	ns		<u>96^T</u>	<u>96^T</u>	<u>12</u>	<u>25</u>	<u>25</u>	<u>1</u>	<u>150</u>	ns
Enforcement Standard		5	1,000	700	10,000	ns		480^T	480^T	60	ns	ns	ns	300	ns
TW-601	12/6/2004	<u>1,900</u>	<u>660</u>	<u>1,900</u>	<u>1,630</u>	6,090		<u>250</u>	<u>75</u>	<7.2	20	<u>820</u>	<u>41</u>	<u>6,000</u>	4.68E+06
4' inject spacing	12/21/2004	<u>450 K</u>	130 K	<u>430 K</u>	350 K	1,360		<u>90 K</u>	<u>24 Q, K</u>	<7.2 K	15	<u>280</u>	<u>40</u>	<u>37,000</u>	1.00E+04
	2/2/2005	<u>2,500 K</u>	<u>1,000 K</u>	<u>2,300 K</u>	<u>2,400 K</u>	8,200		<u>350 K</u>	<u>87 K</u>	<18 K	<u>43</u>	<u>390</u>	<u>70</u>	<u>400</u>	1.80E+04
	3/17/2005	<u>1,600</u>	<u>830</u>	<u>1,800</u>	<u>1,870</u>	6,100	0.2%	<u>300</u>	<u>79</u>	<3.6	<u>26</u>	<u>550</u>	<u>11</u>	<u>1,900</u>	4.70E+04
TW-602	12/6/2004	<u>5,000</u>	<u>3,300</u>	<u>2,700</u>	<u>2,350</u>	13,350		<u>320</u>	<u>96</u>	<18	<u>38</u>	<u>410</u>	<u>41</u>	<u>13,000</u>	5.37E+06
10' inject spacing	12/21/2004	<u>6,200 K</u>	<u>4,600 K</u>	<u>3,300 K</u>	<u>2,900 K</u>	17,000		<u>340 K</u>	<u>86 Q, K</u>	<36 K	<u>86</u>	<u>490</u>	<u>200</u>	<u>530</u>	2.90E+05
	2/2/2005	<u>5,700</u>	<u>4,700</u>	<u>3,300</u>	<u>3,400</u>	17,100		<u>450</u>	<u>100</u>	<18	<u>89</u>	<u>620</u>	<u>62</u>	<u>4,100</u>	5.30E+05
	3/17/2005	<u>4,900</u>	<u>4,300</u>	<u>3,300</u>	<u>3,200</u>	15,700	18%	<u>410</u>	<u>99</u>	<14	<u>56</u>	<u>770</u>	<u>27</u>	<u>7,000</u>	6.50E+04
TW-603	12/6/2004	<u>1,200 V</u>	<u>5,600 V</u>	<u>3,300 V</u>	<u>2,900 V</u>	13,000		<u>350 V</u>	<u>110 V</u>	<18 V	<u>180</u>	<u>780</u>	<u>27</u>	<u>7,600</u>	1.23E+07
4' inject spacing	12/21/2004	<u>880 K</u>	<u>4,100 K</u>	<u>2,900 K</u>	<u>2,610 K</u>	10,490		<u>360 K</u>	<u>84 Q, K</u>	<36 K	<u>130</u>	<u>1,300</u>	<u>140</u>	<u>7,900</u>	1.10E+04
	2/2/2005	<u>1,500</u>	<u>5,300</u>	<u>2,900</u>	<u>2,650</u>	12,350		<u>510</u>	<u>140</u>	<18	<u>120</u>	<u>830</u>	<u>99</u>	<u>6,000</u>	9.80E+04
	3/17/2005	<u>1,300</u>	<u>6,300</u>	<u>3,100</u>	<u>2,900</u>	13,600	5%	<u>380</u>	<u>92</u>	<18	<u>52</u>	<u>630</u>	<u>28</u>	<u>460</u>	7.30E+04
TW-604	12/6/2004	<u>6,000</u>	<u>7,500</u>	<u>3,300</u>	<u>2,900</u>	19,700		<u>350</u>	<u>110 Q</u>	<36	<u>100</u>	<u>830</u>	<u>41</u>	<u>2,700</u>	6.31E+06
10' inject spacing	12/21/2004	<u>3,900 K</u>	<u>5,600 K</u>	<u>3,400 K</u>	<u>2,900 K</u>	15,800		<u>380 K</u>	<u>85 Q, K</u>	<36 K	<u>85</u>	<u>5000</u>	<u>73</u>	<u>9,900</u>	1.40E+06
	2/2/2005	<u>2,900 K</u>	<u>4,400 K</u>	<u>3,800 K</u>	<u>3,200 K</u>	14,300		<u>460 K</u>	<u>110 Q, K</u>	<36 K	<u>160</u>	<u>790</u>	<u>100</u>	<u>3,500</u>	3.70E+04
	3/17/2005	<u>3,900</u>	<u>5,200</u>	<u>3,200</u>	<u>2,900</u>	15,200	-23%	<u>390</u>	<u>95</u>	<18	<u>56</u>	<u>570</u>	<u>26</u>	<u>3,100</u>	7.30E+04

Table 3. PILOT SCALE Groundwater Analytical Results - BTEX, BOD, COD, TOC, Iron and Heterotrophic Plate Count
Wisconsin Public Service Corporation - Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	BTEX (µg/L)					Other VOCs (µg/L)			Other				
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Total BTEX	Percent Change	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Methyl-tert-butyl-ether	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Iron (µg/L)
Wisconsin Groundwater Quality Standards (NR 140, February 2004)														
<i>Preventive Action Limit</i>		<u>0.5</u>	<u>200</u>	<u>140</u>	<u>1,000</u>	ns	<u>96</u> ^T	<u>96</u> ^T	<u>12</u>	<u>25</u>	<u>25</u>	<u>1</u>	<u>150</u>	ns
Enforcement Standard		5	1,000	700	10,000	ns	480 ^T	480 ^T	60	ns	ns	ns	300	ns
Trip Blank	12/6/2004	<0.14	<0.36	<0.40	<0.74	nd	<0.39	<0.40	<0.36	--	--	--	--	--
	2/2/2005	<0.14	<0.36	<0.40	<0.74	nd	<0.39	<0.40	<0.36	--	--	--	--	--
	3/17/2005	<0.14	<0.36	<0.40	<0.74	nd	<0.39	<0.40	<0.36	--	--	--	--	--

[O-HMS/JAH 1/7/05][U-HMS/PAR 2/05][U-HMS/JMK/RHS 04/05]

Notes:

- 1) Concentrations equaling/exceeding the enforcement standard (ES) are **bold/ underlined**
- 2) Concentrations equaling/exceeding the preventive action limit (PAL) are *italicized/ underlined*

µg/L Micrograms per liter

-- Analysis was not performed

ns NR140 ES or PAL standards have not been established

BOD. Biological Oxygen Demand

COD Chemical Oxygen Demand

TOC Total Organic Carbon as NPOC

VOC Volatile Organic Compound

T Standard established for total trimethylbenzenes

(1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene)

Laboratory Notes:

V Laboratory note - Sample received with headspace

Q Laboratory note - Analyte detected between the limit of detection (LOD) and limit of quantitation (LOQ)

K Laboratory note - Detection Limit may be elevated due to the presence of an unrequested analyte

Table 3. PILOT SCALE Groundwater Analytical Results - BTEX, BOD, COD, TOC, Iron and Heterotrophic Plate Count
 Wisconsin Public Service Corporation - Former Two Rivers Manufactured Gas Plant Site

Sample Location	Sample Date	BTEX (µg/L)					Other VOCs (µg/L)			Other				
		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Total BTEX	Percent Change	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Methyl-tert-butyl-ether	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Iron (µg/L)
Wisconsin Groundwater Quality Standards (NR 140, February 2004)														
<i>Preventive Action Limit</i>		<i>0.5</i>	<i>200</i>	<i>140</i>	<i>1,000</i>	ns	<i>96^T</i>	<i>96^T</i>	<i>12</i>	<i>25</i>	<i>25</i>	<i>1</i>	<i>150</i>	ns
Enforcement Standard		5	1,000	700	10,000	ns	480^T	480^T	60	ns	ns	ns	300	ns
Trip Blank	12/6/2004	<0.14	<0.36	<0.40	<0.74	nd	<0.39	<0.40	<0.36	--	--	--	--	--
	2/2/2005	<0.14	<0.36	<0.40	<0.74	nd	<0.39	<0.40	<0.36	--	--	--	--	--
	3/17/2005	<0.14	<0.36	<0.40	<0.74	nd	<0.39	<0.40	<0.36	--	--	--	--	--

[O-HMS/JAH 1/7/05][U-HMS/PAR 2/05][U-HMS/JMK/RHS 04/05]

Notes:

- 1) Concentrations equaling/exceeding the enforcement standard (ES) are **bold/ underlined**
- 2) Concentrations equaling/exceeding the preventive action limit (PAL) are *italicized/ underlined*

µg/L Micrograms per liter

-- Analysis was not performed

ns NR140 ES or PAL standards have not been established

BOD Biological Oxygen Demand

COD Chemical Oxygen Demand

TOC Total Organic Carbon as NPOC

VOC Volatile Organic Compound

T Standard established for total trimethylbenzenes
 (1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene)

Laboratory Notes:

V Laboratory note - Sample received with headspace

Q Laboratory note - Analyte detected between the limit of detection (LOD) and limit of quantitation (LOQ)

K Laboratory note - Detection Limit may be elevated due to the presence of an unrequested analyte

PILOT SCALE IN-SITU CHEMICAL OXIDATION TEST
SOIL ANALYTICAL TABLES

Table 1 Pilot Test Soil Analytical Results - PVOC¹
Wisconsin Public Service Corporation
Former Two Rivers Manufactured Gas Plant Site

Sample Location ² (depth fbg)	Sample Date	PVOCs (µg/kg)						
		1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Benzene	Ethylbenzene	Methyl-tert-butyl-ether	Toluene	Total Xylene
EPA Generic Direct Contact Soil Screening Level (SSLs) for Residential Scenario³								
EPA SSLs Ingestion Dermal				12,000	7,800,000		16,000,000	160,000,000
EPA SSLs Inhalation of Volatiles				800	400,000		650,000	ns
EPA Generic Direct Contact Soil Screening Level (SSLs) for Commercial/ Industrial Scenario for Outdoor Worker³								
EPA SSLs Ingestion Dermal				58,000	110,000,000		230,000,000	1,000,000,000
EPA SSLs Inhalation of Volatiles				1,000	400,000		650,000	ns
SOIL BORINGS								
PLOT 1								
TW-601 (4-8)	8/5/2004	33,000 K	9,300 K	2,500 K	61,000 K	<500 K	5,400 K	60,000 K
SB-P1-5 (4-8)	2/3/2005	1,400 K	480 K	580 K	3,400 K	<25 K	250 K	3,000 K
SB-P1-1 (4-8)	12/6/2004	1,400	420	1,300	4,500	<25	720	3,700
SB-P1-1 (4-8)	2/3/2005	2,400 K	660 K	2,100 K	7,300 K	<62 K	680 K	5,400 K
SB-P1-2 (4-8)	12/6/2004	200	36 Q	170	680	<25	<25	590
SB-P1-2 (4-8)	2/3/2005	520	160	130	1,100	<25	<25	730
SB-P1-3 (4-8)	12/6/2004	9,300 K	2,900 K	3,400 K	24,000 K	<250 K	5,100 K	22,200 K
SB-P1-3 (4-8)	2/3/2005	59 Q	43 Q	<25	86 Q	<25	<25	100 Q
SB-P1-4 (4-8)	12/6/2004	890	270	570	2,800	<25	330	2,580
SB-P1-4 (4-8)	2/3/2005	13,000 K	4,000 K	1,200 Q,K	27,000 K	<310 K	2,400 K	27,400 K
PLOT 2								
TW-602 (4-8)	8/5/2004	11,000	3,100	4,600	27,000	<120	10,000	24,500
SB-P2-5 (4-8)	2/3/2005	6,400 K	1,900 K	2,900 K	14,000 K	<100 K	2,600 K	12,700 K
SB-P2-1 (4-8)	12/6/2004	1,800	540	3,500	6,500	<25	3,700	5,800
SB-P2-1 (4-8)	2/3/2005	17,000 K	5,300 K	4,200 K	37,000 K	<310 K	17,000 K	36,000 K
SB-P2-2 (4-8)	12/6/2004	1,300	390	2,800	5,300	<25	2,300	4,600
SB-P2-2 (4-8)	2/3/2005	3,900 K	1,300 K	1,600 K	9,800 K	<120 K	2,400 K	9,200 K
SB-P2-3 (4-8)	12/6/2004	2,800	940	2,300	7,600	<25	530	5,200
SB-P2-3 (4-8)	2/3/2005	5,400 K	1,500 K	2,600 K	14,000 K	<120 K	4,500 K	12,600 K
SB-P2-4 (4-8)	12/6/2004	2,800	830	4,800	10,000	<50	6,800	8,900
SB-P2-4 (4-8)	2/3/2005	18,000 K	5,300 K	4,900 K	41,000 K	<620 K	17,000 K	39,000 K

Table 1 Pilot Test Soil Analytical Results - PVOC¹
Wisconsin Public Service Corporation
Former Two Rivers Manufactured Gas Plant Site

		PVOCs (µg/kg)						
Sample Location ² (depth fbs)	Sample Date	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Benzene	Ethylbenzene	Methyl-tert-butyl-ether	Toluene	Total Xylene
EPA Generic Direct Contact Soil Screening Level (SSLs) for Residential Scenario³								
EPA SSLs Ingestion Dermal				12,000	7,800,000		16,000,000	160,000,000
EPA SSLs Inhalation of Volatiles				800	400,000		650,000	ns
EPA Generic Direct Contact Soil Screening Level (SSLs) for Commercial/ Industrial Scenario for Outdoor Worker³								
EPA SSLs Ingestion Dermal				58,000	110,000,000		230,000,000	1,000,000,000
EPA SSLs Inhalation of Volatiles				1,000	400,000		650,000	ns
PLOT 3								
TW-603 (8-12)	8/5/2004	3,700	1,000	2,300	10,000	<50	3,200	8,600
SB-P3-5 (8-12)	2/3/2005	7,000 K	2,100 K	610 Q.K	16,000 K	<310 K	6,200 K	15,100 K
SB-P3-1 (8-12)	12/6/2004	4,700	1,400	370	13,000	<50	4,500	11,600
SB-P3-1 (8-12)	2/3/2005	9,300 K	2,700 K	2,000 K	25,000 K	<310 K	10,000 K	21,200 K
SB-P3-2 (8-12)	12/6/2004	1,100	340	2,400	4,200	<25	4,800	3,600
SB-P3-2 (8-12)	2/3/2005	5,600 K	1,600 K	800 K	15,000 K	<200 K	12,000 K	13,100 K
SB-P3-3 (8-12)	12/6/2004	5,200	1,600	1,000	14,000	<62	8,700	12,400
SB-P3-3 (8-12)	2/3/2005	5,200 K	1,600 K	850 K	13,000 K	<200 K	8,800 K	12,200 K
SB-P3-4 (8-12)	12/6/2004	3,900	1,200	4,200	12,000	<50	9,000	10,600
SB-P3-4 (8-12)	2/3/2005	7,200 K	2,200 K	4,000 K	19,000 K	<310 K	14,000 K	16,800 K

Table 1 Pilot Test Soil Analytical Results - PVOC¹
Wisconsin Public Service Corporation
Former Two Rivers Manufactured Gas Plant Site

Sample Location ² (depth fbgs)	Sample Date	PVOCs (µg/kg)						
		1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Benzene	Ethylbenzene	Methyl-tert-butyl-ether	Toluene	Total Xylene
EPA Generic Direct Contact Soil Screening Level (SSLs) for Residential Scenario³								
EPA SSLs Ingestion Dermal				12,000	7,800,000		16,000,000	160,000,000
EPA SSLs Inhalation of Volatiles				800	400,000		650,000	ns
EPA Generic Direct Contact Soil Screening Level (SSLs) for Commercial/ Industrial Scenario for Outdoor Worker⁴								
EPA SSLs Ingestion Dermal				58,000	110,000,000		230,000,000	1,000,000,000
EPA SSLs Inhalation of Volatiles				1,000	400,000		650,000	ns
PLOT 4								
TW-604 (6-10)	8/5/2004	51,000 K	14,000 K	32,000 K	140,000 K	<1000 K	110,000 K	123,000 K
SB-P4-5 (6-10)	2/3/2005	580	170	1,900	2,000	<25	1,200	1,650
SB-P4-1 (6-10)	12/6/2004	29,000 K	9,100 K	8,600 K	83,000 K	<1,000 K	68,000 K	74,000 K
SB-P4-1 (6-10)	2/3/2005	64,000 K	18,000 K	40,000 K	180,000 K	<3,100 K	150,000 K	163,000 K
SB-P4-2 (6-10)	12/6/2004	100,000 K	29,000 K	11,000 K	310,000 K	<5,000 K	280,000 K	270,000 K
SB-P4-2 (6-10)	2/3/2005	51,000 K	14,000 K	9,900 K	140,000 K	<2,000 K	110,000 K	122,000 K
SB-P4-3 (6-10)	12/6/2004	74,000 K	23,000 K	60,000 K	220,000 K	<5,000 K	190,000 K	193,000 K
SB-P4-3 (6-10)	2/3/2005	45,000 K	12,000 K	24,000 K	130,000 K	<1,200 K	97,000 K	111,000 K
SB-P4-4 (6-10)	12/6/2004	26,000 K	7,600 K	16,000 K	74,000 K	<1,000 K	58,000 K	68,000 K
SB-P4-4 (6-10)	2/3/2005	14,000 K	3,900 K	7,800 K	32,000 K	<620 K	22,000 K	29,000 K

[O-HMS/IAH 12/22/04 U-HMS/IAH 1/7/05 U-HMS/PAR 2/25/05]

Notes

1. PVOC (petroleum volatile organic compounds) analyzed by EnChem, Inc, Green Bay, Wisconsin, by SW846 Method 8021.
2. Sample Locations provided on Figure 1
3. EPA Generic Direct Contact Soil Screening Level (SSLs) for Residential Scenario in the Supplemental Guidance for Developing Soil
4. EPA Generic Direct Contact SSLs for Commercial/Industrial Scenario for Outdoor Workers in the Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites (OSWER 9355 4-24)

Constituent concentrations which attain or exceed the EPA SSLs are **underlined and bold**.

fbgs = Feet below ground surface.

Q = Laboratory note - analyte was detected between the limit of detection and limit of quantitation.

K = Laboratory note - Detection limit may be elevated due to presence of an unrequested analyte

na = Not analyzed

ns = No standard exists

µg/kg = micrograms per kilogram

< = Constituent was analyzed for but not detected above the listed detection limit.

Table 2 Pilot Test Soil Analytical Results - PAHs¹
Wisconsin Public Service Corporation
Former Two Rivers Manufactured Gas Plant Site

Sample Location (depth fbs) ²	Sample Date	PAHs (µg/kg)																		TOTAL PAHs	Percent Change
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene		
		WDNR Draft Generic Soil Cleanup Levels (DSCLs) ³																			
Groundwater Pathway RCL		23,000	20,000	38,000	700	3,000,000	17,000	48,000	360,000	6,800,000	870,000	37,000	38,000	500,000	100,000	680,000	400	1,800	8,700,000		
DCP - Non-Industrial RCL		1,100,000	600,000	900,000	18,000	5,000,000	88	88	88	1,800	880	8,800	88	600,000	600,000	88	20,000	18,000	500,000		
DCP - Industrial RCL		70,000,000	40,000,000	60,000,000	360,000	300,000,000	3,900	390	3,900	39,000	39,000	390,000	390	40,000,000	40,000,000	3,900	110,000	390,000	30,000,000		
SOIL BORINGS																					
		PLOT 1																			
TW-601 (4-8)	8/5/2004	3,700	5,200	990	2,300	1,300	700	680	300 Q	370	430 Q	720	74 Q	1,200	970	260 Q	12,000 *	3,500	1,900	36,594	
SB-P1-5 (4-8)	2/3/2005	1,400	670	1,100	400	530	510 Q	610	320 Q	250	360 Q	550	47 Q	700	440	250	600	1,600	1,300	11,637	-214%
SB-P1-1 (4-8)	12/6/2004	38,000	51,000	17,000	12,000	14,000	7,800	5,900	1,800 Q	2,700 Q	4,100 Q	8,400	<5,000	15,000	13,000	1,800 Q	99,000	47,000	21,000	359,500	
SB-P1-1 (4-8)	2/3/2005	4,400	4,800	3,100	2,400	2,100	7,500	9,100	5,000	4,000	5,900	8,300	990	7,500	1,300	4,000	10,000	5,000	16,000	101,390	-255%
SB-P1-2 (4-8)	12/6/2004	570	570	330	120	140	<46	<38	<31	<21	<41	47 Q	<12	76 Q	140	<20	2,800	330	110 Q	5,233	
SB-P1-2 (4-8)	2/3/2005	1,100	1,500	100	1,000	490	390	470	520	450	460	520	120	550	370	430	2,300	1,400	820	12,990	60%
SB-P1-3 (4-8)	12/6/2004	73,000	100,000	51,000	7,500	23,000	13,000	10,000	3,800 Q	4,400 Q	6,300 Q	14,000	<870	26,000	29,000	3,300 Q	170,000	91,000	36,000	661,300	
SB-P1-3 (4-8)	2/3/2005	31 B	38	7.8 Q	140	46	210	320	180	100	200	250	26	240	12	110	110 B	63	590	2,674	-24633%
SB-P1-4 (4-8)	12/6/2004	1,800	2,200	1,400	330	640	180 Q	140 Q	<65	65 Q	99 Q	220 Q	<26	410	640	43 Q	4,900	1,800	680	15,547	
SB-P1-4 (4-8)	2/3/2005	36,000	25,000	11,000	3,500	6,000	3,100	2,400	1,100 Q	1,100 Q	1,300 Q	3,100	<220	5,900	5,400	1,000 Q	45,000	20,000	8,700	179,600	91%
		PLOT 2																			
TW-602 (4-8)	8/5/2004	50,000	71,000	7,400	40,000	23,000	9,700	8,800	3,900	4,000	5,100	9,400	720 Q	20,000	17,000	2,800	120,000	63,000	29,000	484,820	
SB-P2-5 (4-8)	2/3/2005	18,000	22,000	9,400	9,000	9,000	6,700	6,900	4,200	3,200	4,500	7,300	850	10,000	6,900	3,300	27,000	26,000	17,000	191,250	-154%
SB-P2-1 (4-8)	12/6/2004	30,000	47,000	16,000	14,000	11,000	5,500	4,600	1,600 Q	1,900	2,600	5,700	300 Q	12,000	13,000	1,200	78,000	43,000	17,000	304,400	
SB-P2-1 (4-8)	2/3/2005	230,000	330,000	120,000	72,000	82,000	41,000	33,000	16,000	13,000	18,000	37,000	2,500 Q	80,000	74,000	9,800	520,000	260,000	120,000	2,058,300	85%
SB-P2-2 (4-8)	12/6/2004	780	1,000	130	900	320	730	860	590	560	560	810	110	1,300	290	400	3,300	1,000	1,800	15,440	
SB-P2-2 (4-8)	2/3/2005	3,800	4,800	1,800	4,200	2,400	5,400	8,800	5,100	4,700	5,700	6,500	1,100	6,400	1,900	4,800	9,800	8,700	14,000	99,900	85%
SB-P2-3 (4-8)	12/6/2004	11,000	15,000	6,800	2,700	4,300	2,400	1,900	790	820	1,100	2,300	150 Q	4,900	4,800	580	25,000	17,000	7,400	108,940	
SB-P2-3 (4-8)	2/3/2005	51,000	68,000	30,000	14,000	17,000	9,300	7,600	3,700 Q	3,500	4,100 Q	9,400	<550	18,000	16,000	3,200	130,000	56,000	26,000	466,800	77%
SB-P2-4 (4-8)	12/6/2004	930	1,200	230	360	190	<80	<65	<53	<36	<71	<74	<21	110 Q	130	<34	4,700	400	160 Q	8,410	
SB-P2-4 (4-8)	2/3/2005	32,000	45,000	20,000	8,400	12,000	5,900	4,500	1,900 Q	2,000	2,800 Q	5,700	<350	12,000	11,000	1,900	77,000	40,000	17,000	299,100	97%

Table 2 Pilot Test Soil Analytical Results - PAHs¹

Wisconsin Public Service Corporation

Former Two Rivers Manufactured Gas Plant Site

Sample Location (depth fbs) ²	Sample Date	PAHs (µg/kg)																		TOTAL PAHs	Percent Change
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene		
WDNR Draft Generic Soil Cleanup Levels (DSCLs)³																					
Groundwater Pathway RCL		23,000	20,000	38,000	700	3,000,000	17,000	48,000	360,000	6,800,000	870,000	37,000	38,000	500,000	100,000	680,000	400	1,800	8,700,000		
DCP - Non-Industrial RCL		1,100,000	600,000	900,000	18,000	5,000,000	88	8.8	88	1,800	880	8,800	8.8	600,000	600,000	88	20,000	18,000	500,000		
DCP - Industrial RCL		70,000,000	40,000,000	60,000,000	360,000	300,000,000	3,900	390	3,900	39,000	39,000	390,000	390	40,000,000	40,000,000	3,900	110,000	390,000	30,000,000		
PLOT 3																					
TW-603 (8-12)	8/5/2004	4,000	5,600	1,500	2,400	2,100	740	680	300 Q	250 Q	410 Q	700	<51	1,600	1,400	200 Q	10,000	5,400	2,300	39,580	
SB-P3-5 (8-12)	2/3/2005	9,100	13,000	5,000	4,100	3,800	1,700	1,300	520 Q	520	840 Q	1,700	92 Q	3,600	3,300	480	22,000	13,000	5,600	89,652	56%
SB-P3-1 (8-12)	12/6/2004	96,000	120,000	42,000	39,000	35,000	15,000 Q	12,000 Q	3,500 Q	5,000 Q	7,300 Q	17,000	<1,300	32,000	38,000	3,500 Q	230,000	120,000	52,000	867,300	
SB-P3-1 (8-12)	2/3/2005	28,000	40,000	9,700	16,000	10,000	4,900	3,600	1,700 Q	1,600 Q	2,000 Q	4,700	<330	10,000	9,000	1,400 Q	71,000	33,000	14,000	260,600	-233%
SB-P3-2 (8-12)	12/6/2004	1,500	1,900	1,100	430	720	320 Q	240 Q	96 Q	110 Q	160 Q	370 Q	<33	640	590	75 Q	5,000	1,900	920	16,071	
SB-P3-2 (8-12)	2/3/2005	55,000	80,000	12,000	39,000	21,000	9,700	7,600	3,700	3,300	4,200 Q	9,400	490 Q	21,000	18,000	3,000	140,000	67,000	29,000	523,390	97%
SB-P3-3 (8-12)	12/6/2004	13,000	21,000	6,800	9,000	6,300	3,000	2,400	880	960	1,400	2,700	170 Q	6,400	7,000	690	30,000	24,000	8,900	144,600	
SB-P3-3 (8-12)	2/3/2005	40,000	56,000	21,000	19,000	15,000	7,400	5,800	2,800 Q	2,600	3,200 Q	7,300	440 Q	15,000	13,000	2,300	96,000	51,000	23,000	380,840	62%
SB-P3-4 (8-12)	12/6/2004	4,100	5,600	440	3,100	1,400	590	430	160 Q	180 Q	280 Q	610	<40	1,400	1,700	130 Q	10,000	5,100	1,900	37,120	
SB-P3-4 (8-12)	2/3/2005	21,000	30,000	5,900	15,000	8,600	4,000	3,200	1,500	1,400	1,900	3,900	250 Q	8,100	7,200	1,200	52,000	27,000	13,000	205,150	82%
PLOT 4																					
TW-604 (6-10)	8/5/2004	130,000	180,000	32,000	87,000	58,000	23,000	20,000	8,500 Q	8,400 Q	12,000 Q	22,000	1,800 Q	47,000	41,000	6,200 Q	320,000	150,000	68,000	1,214,900	
SB-P4-5 (6-10)	2/3/2005	580	380	440	1,700	610	1,800	4,500	2,200	2,400	2,300	2,300	490	1,900	340	2,400	470	1,700	4,400	30,910	-3830%
SB-P4-1 (6-10)	12/6/2004	310	420	96	160	110	49 Q	37 Q	12 Q	15 Q	24 Q	48	<41	100	120 Q	12	740	370	140	2,763	
SB-P4-1 (6-10)	2/3/2005	150,000	220,000	62,000	75,000	57,000	28,000	22,000	11,000	8,600	12,000 Q	26,000	<1,300	56,000	49,000	6,200 Q	390,000	180,000	78,000	1,430,800	100%
SB-P4-2 (6-10)	12/6/2004	170,000	250,000	58,000	100,000	54,000	29,000	23,000	8,800 Q	9,800	14,000 Q	29,000	<1,600	62,000	73,000	7,300 Q	410,000	220,000	85,000	1,602,900	
SB-P4-2 (6-10)	2/3/2005	140,000	210,000	65,000	75,000	54,000	26,000	20,000	9,300 Q	8,800 Q	13,000 Q	26,000	<1,900	55,000	46,000	5,700 Q	380,000	180,000	77,000	1,390,800	-15%
SB-P4-3 (6-10)	12/6/2004	110,000	140,000	35,000	53,000	36,000	15,000 Q	12,000 Q	4,600 Q	5,200 Q	7,600 Q	17,000	<1,400	33,000	42,000	3,600 Q	260,000	120,000	46,000	940,000	
SB-P4-3 (6-10)	2/3/2005	140,000	210,000	46,000	87,000	55,000	26,000	21,000	10,000	8,400	12,000	24,000	1,700 Q	55,000	47,000	5,900	350,000	170,000	74,000	1,343,000	30%
SB-P4-4 (6-10)	12/6/2004	97,000	130,000	27,000	57,000	35,000	16,000 Q	11,000 Q	4,000 Q	4,800 Q	7,400 Q	16,000 Q	<1,400	32,000	40,000	3,300 Q	260,000	120,000	44,000	904,500	
SB-P4-4 (6-10)	2/3/2005	250,000	360,000	68,000	170,000	91,000	46,000 Q	36,000 Q	17,000 Q	17,000 Q	20,000 Q	45,000	<3,700	90,000	78,000	14,000 Q	680,000	290,000	130,000	2,402,000	62%

10-HMS/IAH 12/22/04 U-HMS/IAH 1/7/05 U-HMS/PAH 2/25/05

Notes

1 Polynuclear Aromatic Hydrocarbons (PAHs) analyzed by EnChem, Inc. Green Bay, Wisconsin, by EPA Method 8270C

2 Sample Locations provided on Figure 1.

3 Wisconsin Department of Natural Resources Draft Soil Cleanup Levels (DSCLs) from Table 1 of the Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons Interim Guidance Document, April 1997

fbs = Feet below ground surface

DCP = Direct Contact Pathway

µg/kg = Micrograms per kilogram

< = Constituent was analyzed for but not detected above the listed detection limit

Q = Laboratory note - analyte was detected between the limit of detection and limit of quantitation

B = Laboratory note - Analyte present in the method blank

* = Laboratory note - Precision not within control limits

Table 3 Pilot Test Soil Analytical Results -TOC, BOD, COD, Heterotrophic Plate Count and Iron¹
 Wisconsin Public Service Corporation
 Former Two Rivers Manufactured Gas Plant Site

Sample Location (depth fbgs)	Sample Date	Percent Solids (%)	TOC (mg/kg)	BOD (mg/kg)	COD (mg/kg)	Heterotrophic Plate Count ² (CFU/g dry soil)	Iron (mg/kg)
EPA Generic Direct Contact Soil Screening Level (SSLs) for Residential Scenario³							
EPA SSLs Ingestion Dermal		ns					400
EPA SSLs Inhalation of Volatiles		ns					ns
EPA Generic Direct Contact SSLs for Commercial/ Industrial Scenario for Outdoor Worker⁴							
EPA SSLs Ingestion Dermal		ns					750
EPA SSLs Inhalation of Volatiles		ns					ns
NR 720 Generic Direct Contact⁵							
RCL Non-Industrial		ns					50
RCL Industrial		ns					500
SOIL BORINGS							
PLOT 1							
TW-601 (4-8)	8/5/2004	76.1	21,000	350	29,000	1.64E+08	7,800
SB-P1-5 (4-8)	2/3/2005	77.9	34,000	200	25,000	1.8E+06	4,700
SB-P1-1 (4-8)	12/6/2004	79.8	na	na	na	1.15E+07	na
SB-P1-1 (4-8)	2/3/2005	56.8	na	na	na	9.4E+05	na
SB-P1-2 (4-8)	12/6/2004	80.3	4,200	280	23,000	9.77E+06	7,500
SB-P1-2 (4-8)	2/3/2005	71.8	49,000	200	54,000	2.1E+06	21,000
SB-P1-3 (4-8)	12/6/2004	76.4	5,100	720	31,000	2.63E+07	3,600
SB-P1-3 (4-8)	2/3/2005	65.4	na	na	na	1.8E+06	na
SB-P1-4 (4-8)	12/6/2004	75.3	3,800	>1842	31,000	3.80E+07	8,600
SB-P1-4 (4-8)	2/3/2005	59.5	29,000 N,*	2,000	150,000	7.2E+05	5,800
PLOT 2							
TW-602 (4-8)	8/5/2004	76.9	11,000	640	44,000	3.01E+07	6,700
SB-P2-5 (4-8)	2/3/2005	45.8	24,000	630	220,000	6.3E+06	14,000
SB-P2-1 (4-8)	12/6/2004	76.7	8,500 N,*	1,000	28,000	2.69E+06	12,000
SB-P2-1 (4-8)	2/3/2005	46.6	na	na	na	2.9E+05	na
SB-P2-2 (4-8)	12/6/2004	76.8	na	na	na	7.59E+07	na
SB-P2-2 (4-8)	2/3/2005	73.8	24,000	410	48,000	3E+05	8,900
SB-P2-3 (4-8)	12/6/2004	73.2	71,000	430	99,000	4.79E+07	2,700
SB-P2-3 (4-8)	2/3/2005	72.4	na	na	na	1.7E+06	na
SB-P2-4 (4-8)	12/6/2004	77.6	4,900	270	17,000	1.02E+07	11,000
SB-P2-4 (4-8)	2/3/2005	76.5	17,000	350	52,000	2.3E+05	8,700
PLOT 3							
TW-603 (8-12)	8/5/2004	81.4	4,700	330	17,000	4.91E+07	8,600
SB-P3-5 (8-12)	2/3/2005	79.6	5,200	470	15,000	2.6E+05	4,000
SB-P3-1 (8-12)	12/6/2004	82.8	4,700	1,300	22,000	2.57E+07	1,900
SB-P3-1 (8-12)	2/3/2005	81.1	6,600 *	1,600	28,000	3.1E+05 H	6,100
SB-P3-2 (8-12)	12/6/2004	80.9	1,800	540	13,000	4.27E+07	4,500
SB-P3-2 (8-12)	2/3/2005	80.7	na	na	na	1.8E+06	na
SB-P3-3 (8-12)	12/6/2004	81.3	5,500	1,700	32,000	1.62E+07	3,000
SB-P3-3 (8-12)	2/3/2005	82.4	5,300	>5,940 ⁷	28,000	3.7E+03 Q	3,900
SB-P3-4 (8-12)	12/6/2004	82.0	na	na	na	7.59E+06	na
SB-P3-4 (8-12)	2/3/2005	78.2	na	na	na	2E+04	na
PLOT 4							
TW-604 (6-10)	8/5/2004	80.8	25,000	1,400	38,000 N	2.14E+08	2,900
SB-P4-5 (6-10)	2/3/2005	64.3	69,000	200	280,000 N	2.2E+06	13,000
SB-P4-1 (6-10)	12/6/2004	81.4	10,000	600	18,000 N	5.89E+07	1,500
SB-P4-1 (6-10)	2/3/2005	78.5	na	na	na	1.9E+04	na
SB-P4-2 (6-10)	12/6/2004	83.7	9,000	>6070 ⁷	52,000	4.47E+06	1,900
SB-P4-2 (6-10)	2/3/2005	68.6	18,000	1,600 ⁴	34,000 N	1.6E+04	1,900
SB-P4-3 (6-10)	12/6/2004	82.8	na	na	na	1.32E+07	na
SB-P4-3 (6-10)	2/3/2005	68.5	na	na	na	6.3E+05	na
SB-P4-4 (6-10)	12/6/2004	82.5	3,700	3,000	49,000 N,*	2.34E+06	1,700
SB-P4-4 (6-10)	2/3/2005	72.4	26,000	2,300	100,000	8.9E+04	1,900

Notes

- Percent Solids analyzed by SM 2540 G Total Iron by SW846 6020, Total Organic Carbon (TOC) by SW846 M9060, Biological Oxygen Demand (BOD) by SM5210B and Chemical Oxygen Demand (COD) by EPA 410.4 Analysis performed by EnChem Inc. Green Bay, Wisconsin
- December 6 2004 Heterotrophic Plate Count samples were analyzed by University of Laval in Quebec, Canada. Each sample was analyzed three times to provide an average count
- EPA Generic Direct Contact Soil Screening Level (SSLs) for Residential in the Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites (OSWER 9355.4-24)
- EPA Generic Direct Contact Soil Screening Level (SSLs) for Commercial/Industrial Scenario for Outdoor Workers in the Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites (OSWER 9355.4-24)
- Wisconsin Administrative Code Department of Natural Resources Chapter NR 720.11 Table 2 Residual Contaminant Levels January 2001
- Sample Locations provided on Figure 1

Concentrations attaining or exceeding the NR 720 Non-Industrial RCL are italicized/underlined

Concentrations attaining or exceeding the NR 720 Industrial RCL are **bold/underlined**

fbgs = Feet below ground surface

% = percent

mg/kg = milligrams per kilogram

CFU/g =

< = Constituent was analyzed for but not detected above the listed detection limit

* = Laboratory note - Precision not within control limits

N = Laboratory note - Spiked sample recovery not within control limits

Q = Laboratory note - analyte was detected between the limit of detection and limit of quantitation

4 = Laboratory note - BOD duplicate precision not within control limits

7 = Laboratory note - BOD result is estimated due to complete oxygen depletion

na = not analyzed

ns = no standard exists