



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Gloria L. McCutcheon, Regional Director

Plymouth Service Center
1155 Pilgrim Rd.
Plymouth, Wisconsin 53073-4294
Telephone 920-892-8756
FAX 920-892-6638
TTY Access via relay - 711

September 25, 2008

FILE COPY

Mr. Mark Tusler
BT2 Inc.
2830 Dairy Drive
Madison, WI 53718-6751

Subject: West Good Hope Road Bridge Reconstruction

Dear Mr. Tusler:

I have reviewed the Sediment Management Plan and Special Provisions for the bridge reconstruction project over the Little Menomonee River at West Good Hope Road in the City of Milwaukee. The Sediment Management Plan provides an acceptable means of handling the sediment containing CPAHs that will be removed from the river during bridge reconstruction. More specifically it requires the contractor to dispose of the sediment at either Orchard Ridge Landfill or Emerald Park Landfill both being licensed by the Department to accept the CPAH waste.

Please contact me at 920-892-8756 Ex. 3028 if you should have any questions or comments regarding this letter.

Sincerely,

Thomas A. Wentland
Waste Management Engineer



September 18, 2008

Thomas A. Wentland
WDNR - Southeast Region
1155 Pilgrim Parkway
Plymouth, WI 53073

**SUBJECT: Phase 2.5 Sediment Investigation, Sediment Management Plan, and Special Provisions
West Good Hope Road/Little Menomonee River Bridges
WisDOT Project ID# 2130-12-00/13-00, BT² # 3595/3639**

Dear Tom:

We've completed the Phase 2.5 sampling of the sediment beneath the Little Menomonee River bridges at West Good Hope Road. The concentration of carcinogenic polyaromatic hydrocarbons (CPAH, the sum of seven USEPA designated CPAHs) is less than the Moss-American 15 milligram per kilogram (mg/kg) cleanup level but greater than the Wisconsin Department of Natural Resource (WDNR) background level of 3.6 mg/kg.

Approximately 180 tons of sediment will be disturbed during bridge reconstruction. Attached are the Special Provisions we've drafted for managing the sediment. We propose to manage this sediment as solid waste with disposal at either the Emerald Park or Orchard Ridge Landfills. The construction contractor awarded this project will choose which landfill will be used.

We request your review and comment/concurrence on our proposed sediment management plan. If possible, we would appreciate your comments/concurrence by the October 1, 2008 PS&E deadline.

Sediment Sampling

Sediment samples were collected on August 13, 2008. Sediment samples were collected in the 0 to 1-foot interval adjacent to the riprap. Samples LMR A, LMR B, LMR C, and LMR D were collected from under the northeast, southeast, southwest, and northwest corners of the bridges, respectively. The analytical report is attached.

A composite sample (LMR Comp), collected for landfill approval, was prepared by mixing approximately equal volumes of the four individual samples. Based on BT², Inc.'s review, it appears that the sediment can be disposed of in a Wisconsin licensed solid waste landfill.

PAH sample results are summarized in Table 1. CPAH concentrations ranged from 3.4 to 9.8 mg/kg (3,414 to 9,813 micrograms per kilogram), which is below the Moss-American cleanup level. Many individual compounds exceed the WDNR Generic Residual Contaminant Levels for non-industrial and industrial direct contact.


Sediment Management Plan

The attached Special Provisions serve as the project's Sediment Management Plan. The contractor will minimize disturbing/resuspending the sediment. Due to the elevated PAH levels, the contractor will minimize direct contact with the sediments. Excavated sediments will be disposed of in either the Orchard Ridge or Emerald Park landfills.

BT² will use the composite sample results to obtain partial landfill approval at the two landfills. The contractor must provide the landfill with credit and billing information to complete the approval process.

Please contact me at 608-216-7335 if you have any questions regarding this letter.

Sincerely,
BT², Inc.



Mark Tusler
Project Manager

Enclosure Table 1 – Summary of Sediment Sampling Results
 Figure 1 – Site Location Map
 Siemens Analytical Report
 Special Provisions for the Removal, Management, and Disposal of Sediment

cc: Roy Stollenwerk, P.E., TN & Associates
Mack Malas, P.E., Milwaukee County
Shar Te Beest, WisDOT
Ken Wade, WisDOT
Mark Wilfert, DAAR Engineering

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Table 1
Summary of Sediment Sampling Results
West Good Hope Road Bridges Over Little Menomonee River, Milwaukee, Wisconsin / BT² Project #3595
WisDOT Project 2130-12-00 and 2130-13-00
(Results are in µg/kg, except where noted otherwise)

Sample	Date	Total CPAHs	Acenaphthene	Acenaphthylene	Anthracene	*Benzo(a)anthracene	*Benzo(b)fluoranthene	*Benzo(k)fluoranthene	*Benzo(a)pyrene	*Benzo(ghi)perylene	*Chrysene	*Dibenzo(a,b)anthracene	Fluoranthene	Fluorene	*Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
LMR A	8/13/2008	8,459	<141	<198	208 LCL	979 LCL	2,130	942	1,190 LCL	648	1,520	<81.2	4,610	<99.2 LCL	1,050	<111	<123	<138	1,750 LCL	3,730 LCL
LMR B	8/13/2008	3,414	<61.9	<87	<42.2 LCL	474 LCL	803	343	479 LCL	301	609	<35.6	1,950	<43.5 LCL	405	<48.7	<54	<60.6	847 LCL	1,690 LCL
LMR C	8/13/2008	9,813	<18	<446	<216 LCL	1,240 LCL	2,370	1,050	1,370 LCL	803 J	1,700	<182	5,240	<223 LCL	1,280	<250	<277	<311	2,010 LCL	4,440 LCL
LMR D	8/13/2008	8,945	<159	<23	<108 LCL	994 LCL	2,290	1,040	1,250 LCL	621	1,670	<91.4	5,330	<112 LCL	1,080	<125	<139	<156	2,020 LCL	4,190 LCL
WDNR PAH Soil Generic Residual Contaminant Levels (RCLs) (Interim Guidance - April 1997)																				
Groundwater Pathway			38,000	700	3,000,000	17,000	360,000	870,000	48,000	6,800,000	37,000	38,000	500,000	100,000	680,000	23,000	20,000	400	1,800	8,700,000
Non-Industrial Direct Contact			900,000	18,000	5,000,000	88	88	880	8.8	1,800	8,800	8.8	600,000	600,000	88	1,100,000	600,000	20,000	18,000	500,000
Industrial Direct Contact			60,000,000	360,000	300,000,000	3,900	3,900	39,000	390	39,000	390,000	390	40,000,000	40,000,000	3,900	70,000,000	40,000,000	110,000	390,000	30,000,000

ABBREVIATIONS:

µg/kg = micrograms per kilogram or parts per billion (ppb)
 PAHs = Polynuclear Aromatic Hydrocarbons
 CPAHs = carcinogenic petroleum aromatic hydrocarbons.

- = Not Applicable
 WDNR = Wisconsin Department of Natural Resources

NOTES:

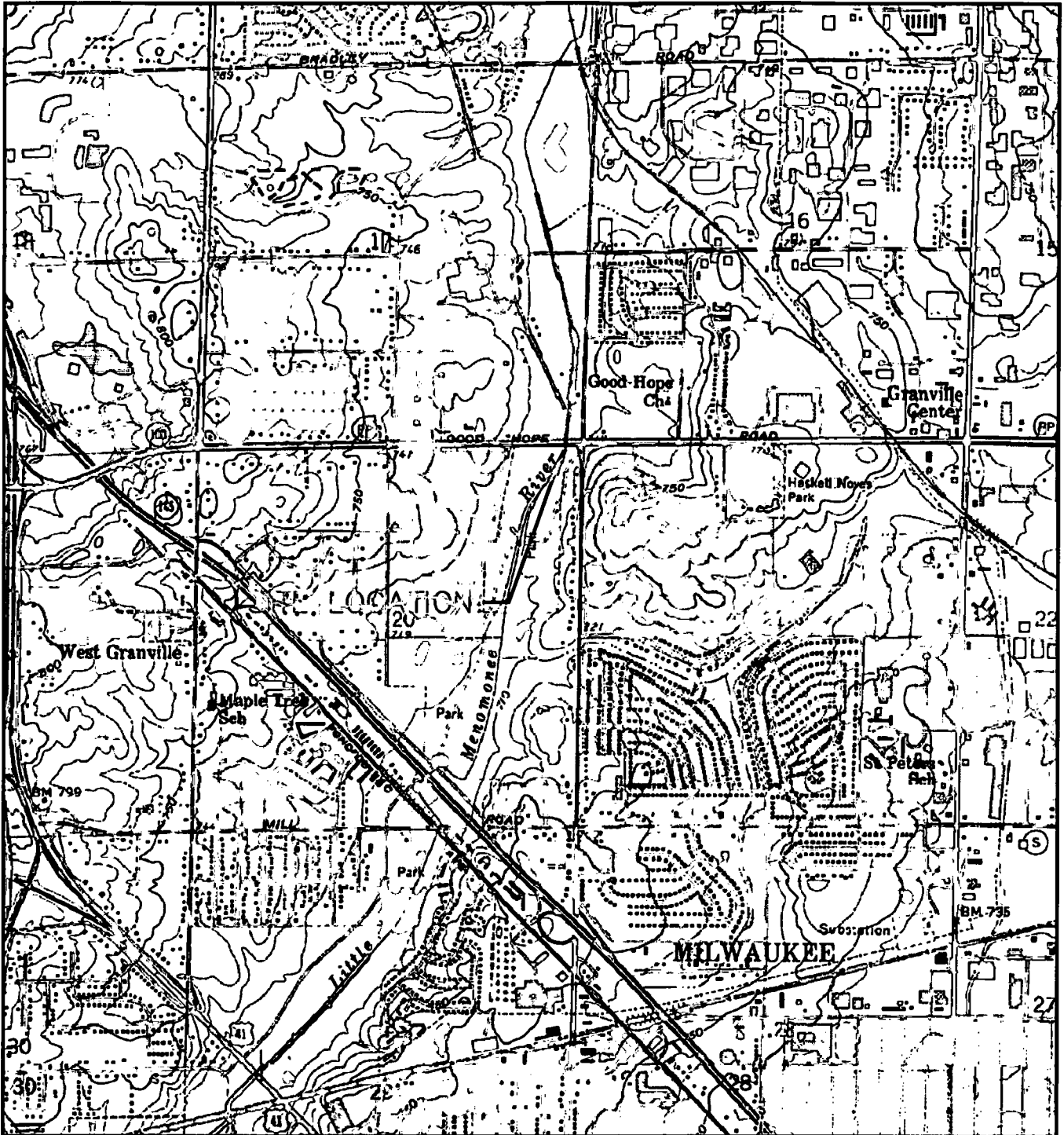
Total CPAHs is sum of stored compounds.

LABORATORY NOTES/QUALIFIERS

J = Estimated concentration below laboratory quantitation level.
 LCL = Laboratory control sample exhibited a low bias. Sample results may also be biased low.

Created by: TLR Date: 8/29/2008
 Last revision by: TLR Date: 8/29/2008
 Checked by: _____ Date: _____

I:\3595\Tables-General\Soil_PAHs.xls\Soil PAHs



MENOMONEE FALLS
 AND WAUWATOSA QUADRANGLES—WISCONSIN
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 1994
 SCALE: 1" = 2,000'



PROJECT NO. 3595
DRAWN BY: DG
CHECKED BY: MT
APPROVED BY:
DRAWN: 08/29/08
REVISED:

FIGURE 1
 SITE LOCATION MAP
 WISCONSIN DEPARTMENT OF TRANSPORTATION
 WEST GOOD HOPE ROAD/ LITTLE MENOMONEE RIVER
 MILWAUKEE, WISCONSIN



SIEMENS

September 02, 2008

BT2, Inc.
2830 Dairy Drive
Madison, WI 53718

Attn: Mark Tusler

REPORT NO.: 0808234

PROJECT NO.: 3595 Little Monomonee River Sediment

Please find enclosed the analytical report, including the Sample Summary, Sample Narrative and Chain of Custody for your sample set received August 15, 2008.

All analyses were performed in accordance with NELAC Standards using approved methods as indicated on this report.

If you have any questions about the results, please call. Thank you for using Siemens Water Technologies for your analytical needs.

Sincerely,

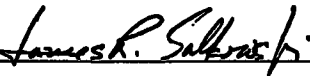
Siemens Water Technologies



Brian Korb
Customer Services Manager
Enviroscan Analytical™ Services

I certify that the data contained in this report has been generated and reviewed in accordance with the Siemens Water Technologies Quality Assurance Program. Exceptions, if any, are discussed in the sample narrative. Samples will be retained for 30 days from the date of this report, then disposed in an appropriate manner. Siemens Water Technologies Corp. reserves the right to return samples identified as hazardous. Release of this Final Report is authorized as verified by the following signature.

Approved by: _____



Certifications:

Wisconsin 737053130
Minnesota 055-999-302
Illinois 100317



Siemens Water Technologies Corp.

301 West Military Road
Rothschild, WI 54474

Tel: 800-338-7226
Fax: 715-355-3221
www.siemens.com/enviroscan

The total number of pages in this report, including this page is 12.

SIEMENS

SAMPLE SUMMARY

<u>Lab Id</u>	<u>Client Sample Id</u>	<u>Date/Time</u>	<u>Matrix</u>
0808234-01	LMR Comp	08/13/08 00:00	Soil
0808234-02	LMR A	08/13/08 00:00	Soil
0808234-03	LMR B	08/13/08 00:00	Soil
0808234-04	LMR C	08/13/08 00:00	Soil
0808234-05	LMR D	08/13/08 00:00	Soil

SIEMENS

BT2, Inc.
2830 Dairy Drive
Madison, WI 53718

PROJECT NO. : 3595 Little Monomonee River Sedim
REPORT NO. : 0808234
DATE REC'D 08/15/08 10:45
REPORT DATE : 09/02/08 14:38
PREPARED BY : BDK

Attn: Mark Tusler

Sample ID: LMR Comp Matrix: Soil Sample Date/Time: 08/13/08 0:00 Lab No. : 0808234-01

	<u>Results</u>	<u>Units</u>	<u>LOD</u>	<u>LOQ</u>	<u>Dilution Factor</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>	<u>Analyst</u>
EPA 1030								
Ignitability	Not Ignitable	-			1		08/18/08	LMP

EPA 1311

	<u>By: SMM</u>	<u>Date Prepared:</u>						
<i>Prep Method: EPA 1311 - TCLP Extraction</i>		08/19/08						
Fluid Used	Fluid 2				1		08/19/08	SMM
Initial pH	8.74		pH Units		1		08/19/08	SMM
pH of Extract	5.03		pH Units		1		08/19/08	SMM

EPA 6010B - TCLP

TCLP Arsenic	ND	mg/L	0.020	0.100	2		08/21/08	DJB
TCLP Barium	0.729	mg/L	0.006	0.100	2		08/21/08	DJB
TCLP Cadmium	0.0164	mg/L	0.0034	0.100	2	J	08/21/08	DJB
TCLP Chromium	ND	mg/L	0.0032	0.100	2		08/21/08	DJB
TCLP Copper	0.016	mg/L	0.008	0.100	2	J	08/21/08	DJB
TCLP Lead	ND	mg/L	0.032	0.106	2		08/21/08	DJB
TCLP Nickel	0.038	mg/L	0.006	0.100	2	J	08/21/08	DJB
TCLP Selenium	0.053	mg/L	0.036	0.120	2	J	08/21/08	DJB
TCLP Silver	0.027	mg/L	0.012	0.050	2	J	08/21/08	DJB
TCLP Zinc	1.59	mg/L	0.010	0.100	2		08/21/08	DJB

EPA 7470A - TCLP

TCLP Mercury	ND	mg/L	0.00175	0.00580	1		08/22/08	JCH
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EPA 8270C - TCLP

	<u>By: KAM</u>	<u>Date Prepared:</u>						
<i>Prep Method: Method 3510C Liquid Extraction</i>		08/25/08						
2,4,5-Trichlorophenol - TCLP	ND	mg/L	0.01	0.03	1	S1H, S2H	08/26/08	MRD
2,4,6-Trichlorophenol - TCLP	ND	mg/L	0.008	0.03	1	S1H, S2H	08/26/08	MRD
2,4-Dinitrotoluene - TCLP	ND	mg/L	0.002	0.01	1	S1H, S2H	08/26/08	MRD
2-Methylphenol - TCLP	ND	mg/L	0.01	0.03	1		08/26/08	MRD
3 & 4-Methylphenol - TCLP	ND	mg/L	0.01	0.03	1		08/26/08	MRD
Hexachlorobenzene - TCLP	ND	mg/L	0.001	0.004	1		08/26/08	MRD
Hexachlorobutadiene - TCLP	ND	mg/L	0.002	0.007	1	SH	08/26/08	MRD
Hexachloroethane - TCLP	ND	mg/L	0.002	0.008	1	SH	08/26/08	MRD
Nitrobenzene - TCLP	ND	mg/L	0.003	0.009	1	SH	08/26/08	MRD
Pentachlorophenol - TCLP	ND	mg/L	0.01	0.03	1	S2H	08/26/08	MRD
Pyridine - TCLP	ND	mg/L	0.002	0.007	1	SH	08/26/08	MRD

SIEMENS

BT2, Inc.
2830 Dairy Drive
Madison, WI 53718

PROJECT NO. : 3595 Little Monomonee River Sediment
REPORT NO. : 0808234
DATE REC'D 08/15/08 10:45
REPORT DATE : 09/02/08 14:38
PREPARED BY : BDK

Attn: Mark Tusler

Sample ID: LMR Comp	Matrix: Soil	Sample Date/Time: 08/13/08 0:00	Lab No. : 0808234-01				Date	
	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Analyzed	Analyst
EPA 9045C								
pH	8.10	pH Units			1		08/15/08 13:20	JJP
EPA 9056								
Total Chloride	683	mg/kg dry	13.9	46.3	0.967		08/19/08	ALZ
EPA 9066 - TCLP								
Phenolics	0.064	mg/L	0.050	0.170	10	J	08/20/08	LNB
EPA 9095A								
Free Liquid	0.00	%			1		08/15/08	JJP
MOSA21-2								
Total Solids	69.6	% by Weight	0.03	0.03	1		08/20/08	LNB
SM 2710F								
Specific Gravity	1.618	N/A			1		08/15/08	JJP
SW846 Vol 1C Sec 7.3.3.2								
Reactive Cyanide	0.048	mg/kg dry	0.019	0.062	1	J	08/18/08	LNB
Reactive Sulfide	ND	mg/kg dry	35.9	35.9	1		08/15/08	JJP
WI DNR / EPA 8260B								
1,1,1,2-Tetrachloroethane	ND	ug/kg dry	20.0	25.0	100		08/29/08	MPM
1,1,1-Trichloroethane	ND	ug/kg dry	21.0	25.0	100		08/29/08	MPM
1,1,2,2-Tetrachloroethane	ND	ug/kg dry	32.0	35.0	100		08/29/08	MPM
1,1,2-Trichloroethane	ND	ug/kg dry	20.0	25.0	100		08/29/08	MPM
1,1-Dichloroethane	ND	ug/kg dry	16.0	25.0	100		08/29/08	MPM
1,1-Dichloroethylene	ND	ug/kg dry	57.0	60.0	100		08/29/08	MPM
1,1-Dichloropropylene	ND	ug/kg dry	89.0	90.0	100		08/29/08	MPM
1,2,3-Trichlorobenzene	ND	ug/kg dry	23.0	25.0	100		08/29/08	MPM
1,2,3-Trichloropropane	ND	ug/kg dry	49.0	50.0	100		08/29/08	MPM
1,2,4-Trichlorobenzene	ND	ug/kg dry	27.0	30.0	100		08/29/08	MPM
1,2,4-Trimethylbenzene	ND	ug/kg dry	36.0	40.0	100		08/29/08	MPM
1,2-Dibromo-3-chloropropane	ND	ug/kg dry	99.0	100	100	CSH	08/29/08	MPM
1,2-Dibromoethane	ND	ug/kg dry	27.0	30.0	100		08/29/08	MPM

SIEMENS

BT2, Inc.
2830 Dairy Drive
Madison, WI 53718

PROJECT NO. : 3595 Little Monomonee River Sediment
REPORT NO. : 0808234
DATE REC'D 08/15/08 10:45
REPORT DATE : 09/02/08 14:38
PREPARED BY : BDK

Attn: Mark Tusler

Sample ID: LMR Comp

Matrix: Soil

Sample Date/Time: 08/13/08 0:00

Lab No. : 0808234-01

	<u>Results</u>	<u>Units</u>	<u>LOD</u>	<u>LOQ</u>	<u>Dilution</u> <u>Factor</u>	<u>Qualifiers</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
<u>WI DNR / EPA 8260B Continued</u>								
1,2-Dichlorobenzene	ND	ug/kg dry	18.0	25.0	100		08/29/08	MPM
1,2-Dichloroethane	ND	ug/kg dry	20.0	25.0	100		08/29/08	MPM
1,2-Dichloropropane	ND	ug/kg dry	26.0	30.0	100		08/29/08	MPM
1,3,5-Trimethylbenzene	ND	ug/kg dry	14.0	25.0	100		08/29/08	MPM
1,3-Dichlorobenzene	ND	ug/kg dry	13.0	25.0	100		08/29/08	MPM
1,3-Dichloropropane	ND	ug/kg dry	24.0	25.0	100		08/29/08	MPM
1,4-Dichlorobenzene	ND	ug/kg dry	14.0	25.0	100		08/29/08	MPM
2,2-Dichloropropane	ND	ug/kg dry	100	100	100	CSH	08/29/08	MPM
2-Chlorotoluene	ND	ug/kg dry	26.0	30.0	100		08/29/08	MPM
4-Chlorotoluene	ND	ug/kg dry	15.0	25.0	100		08/29/08	MPM
4-Isopropyltoluene	ND	ug/kg dry	20.0	25.0	100		08/29/08	MPM
Benzene	ND	ug/kg dry	10.0	25.0	100		08/29/08	MPM
Bromobenzene	ND	ug/kg dry	24.0	25.0	100		08/29/08	MPM
Bromochloromethane	ND	ug/kg dry	12.0	25.0	100		08/29/08	MPM
Bromodichloromethane	ND	ug/kg dry	29.0	30.0	100		08/29/08	MPM
Bromoform	ND	ug/kg dry	48.0	50.0	100		08/29/08	MPM
Bromomethane	ND	ug/kg dry	100	100	100	CSH	08/29/08	MPM
Butylbenzene	ND	ug/kg dry	33.0	40.0	100		08/29/08	MPM
Carbon Tetrachloride	ND	ug/kg dry	41.0	45.0	100		08/29/08	MPM
Chlorobenzene	ND	ug/kg dry	11.0	25.0	100		08/29/08	MPM
Chloroethane	ND	ug/kg dry	68.0	70.0	100		08/29/08	MPM
Chloroform	ND	ug/kg dry	16.0	25.0	100		08/29/08	MPM
Chloromethane	ND	ug/kg dry	32.0	35.0	100		08/29/08	MPM
cis-1,2-Dichloroethylene	ND	ug/kg dry	26.0	30.0	100		08/29/08	MPM
cis-1,3-Dichloropropylene	ND	ug/kg dry	20.0	25.0	100	CSH	08/29/08	MPM
Dibromochloromethane	ND	ug/kg dry	29.0	30.0	100		08/29/08	MPM
Dibromomethane	ND	ug/kg dry	39.0	40.0	100		08/29/08	MPM
Dichlorodifluoromethane	ND	ug/kg dry	17.0	25.0	100		08/29/08	MPM
Ethylbenzene	ND	ug/kg dry	15.0	25.0	100		08/29/08	MPM
Hexachlorobutadiene	ND	ug/kg dry	35.0	40.0	100	CSH	08/29/08	MPM
Isopropyl Ether	ND	ug/kg dry	53.0	60.0	100		08/29/08	MPM
Isopropylbenzene (Cumene)	ND	ug/kg dry	14.0	25.0	100		08/29/08	MPM
m,p-Xylenes	ND	ug/kg dry	50.0	50.0	100	CSH	08/29/08	MPM
Methylene Chloride	ND	ug/kg dry	24.0	25.0	100		08/29/08	MPM
Methyl-tert-Butyl Ether	ND	ug/kg dry	84.0	90.0	100		09/02/08	MPM

SIEMENS

BT2, Inc.
2830 Dairy Drive
Madison, WI 53718

PROJECT NO. : 3595 Little Monomonee River Sedim
REPORT NO. : 0808234
DATE REC'D : 08/15/08 10:45
REPORT DATE : 09/02/08 14:38
PREPARED BY : BDK

Attn: Mark Tusler

Sample ID: LMR Comp

Matrix: Soil

Sample Date/Time: 08/13/08 0:00

Lab No. : 0808234-01

	<u>Results</u>	<u>Units</u>	<u>LOD</u>	<u>LOQ</u>	<u>Dilution</u> <u>Factor</u>	<u>Qualifiers</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
<u>WI DNR / EPA 8260B Continued</u>								
Naphthalene	49.7	ug/kg dry	17.0	25.0	100		08/29/08	MPM
o-Xylene	ND	ug/kg dry	50.0	50.0	100		08/29/08	MPM
Propylbenzene	ND	ug/kg dry	12.0	25.0	100		08/29/08	MPM
sec-Butylbenzene	ND	ug/kg dry	19.0	25.0	100		08/29/08	MPM
Styrene	ND	ug/kg dry	11.0	25.0	100	CSH	08/29/08	MPM
tert-Butylbenzene	ND	ug/kg dry	37.0	40.0	100		08/29/08	MPM
Tetrachloroethene	ND	ug/kg dry	28.0	30.0	100		08/29/08	MPM
Toluene	ND	ug/kg dry	41.0	45.0	100		08/29/08	MPM
trans-1,2-Dichloroethylene	ND	ug/kg dry	30.0	30.0	100		08/29/08	MPM
trans-1,3-Dichloropropylene	ND	ug/kg dry	26.0	30.0	100	CSH	08/29/08	MPM
Trichloroethene	ND	ug/kg dry	29.0	30.0	100		08/29/08	MPM
Trichlorofluoromethane	ND	ug/kg dry	28.0	30.0	100		08/29/08	MPM
Vinyl chloride	ND	ug/kg dry	16.0	25.0	100		08/29/08	MPM

SIEMENS

BT2, Inc.
2830 Dairy Drive
Madison, WI 53718

PROJECT NO. : 3595 Little Monomonee River Sediment
REPORT NO. : 0808234
DATE REC'D 08/15/08 10:45
REPORT DATE : 09/02/08 14:38
PREPARED BY : BDK

Attn: Mark Tusler

Sample ID: LMR A

Matrix: Soil

Sample Date/Time: 08/13/08 0:00

Lab No. : 0808234-02

	<u>Results</u>	<u>Units</u>	<u>LOD</u>	<u>LOQ</u>	<u>Dilution</u> <u>Factor</u>	<u>Qualifiers</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
EPA 8310								
<i>Prep Method: Method 3550B Ultrasonic Extraction</i>			<i>By: JEG</i>			<i>Date Prepared: 08/19/08</i>		
1-Methylnaphthalene	ND	mg/kg dry	0.111	0.361	20		08/20/08	LMP
2-Methylnaphthalene	ND	mg/kg dry	0.123	0.421	20		08/20/08	LMP
Acenaphthene	ND	mg/kg dry	0.141	0.481	20		08/20/08	LMP
Acenaphthylene	ND	mg/kg dry	0.198	0.662	20		08/20/08	LMP
Anthracene	0.208	mg/kg dry	0.0962	0.322	20	LCL, J	08/20/08	LMP
Benzo(a)anthracene	0.979	mg/kg dry	0.123	0.421	20	LCL	08/20/08	LMP
Benzo(a)pyrene	1.19	mg/kg dry	0.0692	0.232	20	LCL	08/20/08	LMP
Benzo(b)fluoranthene	2.13	mg/kg dry	0.0632	0.211	20		08/20/08	LMP
Benzo(g,h,i)perylene	0.648	mg/kg dry	0.120	0.391	20		08/20/08	LMP
Benzo(k)fluoranthene	0.942	mg/kg dry	0.0872	0.292	20		08/20/08	LMP
Chrysene	1.52	mg/kg dry	0.0692	0.232	20		08/20/08	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0812	0.271	20		08/20/08	LMP
Fluoranthene	4.61	mg/kg dry	0.0782	0.262	20		08/20/08	LMP
Fluorene	ND	mg/kg dry	0.0992	0.331	20	LCL	08/20/08	LMP
Indeno(1,2,3-cd)pyrene	1.05	mg/kg dry	0.0662	0.220	20		08/20/08	LMP
Naphthalene	ND	mg/kg dry	0.138	0.451	20		08/20/08	LMP
Phenanthrene	1.75	mg/kg dry	0.123	0.403	20	LCL	08/20/08	LMP
Pyrene	3.73	mg/kg dry	0.0848	0.282	20	LCL	08/20/08	LMP
MOSA21-2								
Total Solids	66.5	% by Weight	0.03	0.03	1		08/20/08	LNB

SIEMENS

BT2, Inc.
2830 Dairy Drive
Madison, WI 53718

PROJECT NO. : 3595 Little Monomonee River Sedim
REPORT NO. : 0808234
DATE REC'D 08/15/08 10:45
REPORT DATE : 09/02/08 14:38
PREPARED BY : BDK

Attn: Mark Tusler

Sample ID: LMR B

Matrix: Soil

Sample Date/Time: 08/13/08 0:00

Lab No. : 0808234-03

	<u>Results</u>	<u>Units</u>	<u>LOD</u>	<u>LOQ</u>	<u>Dilution</u> <u>Factor</u>	<u>Qualifiers</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
EPA 8310								
<i>Prep Method: Method 3550B Ultrasonic Extraction</i>			<i>By: JEG</i>			<i>Date Prepared: 08/19/08</i>		
1-Methylnaphthalene	ND	mg/kg dry	0.0487	0.158	10		08/20/08	LMP
2-Methylnaphthalene	ND	mg/kg dry	0.0540	0.184	10		08/20/08	LMP
Acenaphthene	ND	mg/kg dry	0.0619	0.211	10		08/20/08	LMP
Acenaphthylene	ND	mg/kg dry	0.0870	0.290	10		08/20/08	LMP
Anthracene	ND	mg/kg dry	0.0422	0.141	10	LCL	08/20/08	LMP
Benzo(a)anthracene	0.474	mg/kg dry	0.0540	0.184	10	LCL	08/20/08	LMP
Benzo(a)pyrene	0.479	mg/kg dry	0.0303	0.101	10	LCL	08/20/08	LMP
Benzo(b)fluoranthene	0.803	mg/kg dry	0.0277	0.0922	10		08/20/08	LMP
Benzo(g,h,i)perylene	0.301	mg/kg dry	0.0527	0.171	10		08/20/08	LMP
Benzo(k)fluoranthene	0.343	mg/kg dry	0.0382	0.128	10		08/20/08	LMP
Chrysene	0.609	mg/kg dry	0.0303	0.101	10		08/20/08	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0356	0.119	10		08/20/08	LMP
Fluoranthene	1.95	mg/kg dry	0.0343	0.115	10		08/20/08	LMP
Fluorene	ND	mg/kg dry	0.0435	0.145	10	LCL	08/20/08	LMP
Indeno(1,2,3-cd)pyrene	0.405	mg/kg dry	0.0290	0.0962	10		08/20/08	LMP
Naphthalene	ND	mg/kg dry	0.0606	0.198	10		08/20/08	LMP
Phenanthrene	0.847	mg/kg dry	0.0540	0.177	10	LCL	08/20/08	LMP
Pyrene	1.69	mg/kg dry	0.0372	0.124	10	LCL	08/20/08	LMP
MOSA21-2								
Total Solids	.75.9	% by Weight	0.03	0.03	1		08/20/08	LNB

SIEMENS

BT2, Inc.
2830 Dairy Drive
Madison, WI 53718

PROJECT NO. : 3595 Little Monomonnee River Sedim
REPORT NO. : 0808234
DATE REC'D 08/15/08 10:45
REPORT DATE : 09/02/08 14:38
PREPARED BY : BDK

Attn: Mark Tusler

Sample ID: LMR C

Matrix: Soil

Sample Date/Time: 08/13/08 0:00

Lab No. : 0808234-04

	<u>Results</u>	<u>Units</u>	<u>LOD</u>	<u>LOQ</u>	<u>Dilution Factor</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>	<u>Analyst</u>
EPA 8310								
<i>Prep Method: Method 3550B Ultrasonic Extraction</i>			<i>By: JEG</i>			<i>Date Prepared: 08/19/08</i>		
1-Methylnaphthalene	ND	mg/kg dry	0.250	0.811	50		08/20/08	LMP
2-Methylnaphthalene	ND	mg/kg dry	0.277	0.946	50		08/20/08	LMP
Acenaphthene	ND	mg/kg dry	0.318	1.08	50		08/20/08	LMP
Acenaphthylene	ND	mg/kg dry	0.446	1.49	50		08/20/08	LMP
Anthracene	ND	mg/kg dry	0.216	0.723	50	LCL	08/20/08	LMP
Benzo(a)anthracene	1.24	mg/kg dry	0.277	0.946	50	LCL	08/20/08	LMP
Benzo(a)pyrene	1.37	mg/kg dry	0.155	0.520	50	LCL	08/20/08	LMP
Benzo(b)fluoranthene	2.37	mg/kg dry	0.142	0.473	50		08/20/08	LMP
Benzo(g,h,i)perylene	0.803	mg/kg dry	0.270	0.878	50	J	08/20/08	LMP
Benzo(k)fluoranthene	1.05	mg/kg dry	0.196	0.655	50		08/20/08	LMP
Chrysene	1.70	mg/kg dry	0.155	0.520	50		08/20/08	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.182	0.608	50		08/20/08	LMP
Fluoranthene	5.24	mg/kg dry	0.176	0.588	50		08/20/08	LMP
Fluorene	ND	mg/kg dry	0.223	0.743	50	LCL	08/20/08	LMP
Indeno(1,2,3-cd)pyrene	1.28	mg/kg dry	0.149	0.493	50		08/20/08	LMP
Naphthalene	ND	mg/kg dry	0.311	1.01	50		08/20/08	LMP
Phenanthrene	2.01	mg/kg dry	0.277	0.905	50	LCL	08/20/08	LMP
Pyrene	4.44	mg/kg dry	0.191	0.634	50	LCL	08/20/08	LMP
MOSA21-2								
Total Solids	74.0	% by Weight	0.03	0.03	1		08/20/08	LNB

SIEMENS

BT2, Inc.
2830 Dairy Drive
Madison, WI 53718

PROJECT NO. : 3595 Little Monomonee River Sedim
REPORT NO. : 0808234
DATE REC'D 08/15/08 10:45
REPORT DATE : 09/02/08 14:38
PREPARED BY : BDK

Attn: Mark Tusler

Sample ID: LMR D

Matrix: Soil

Sample Date/Time: 08/13/08 0:00

Lab No. : 0808234-05

	<u>Results</u>	<u>Units</u>	<u>LOD</u>	<u>LOQ</u>	<u>Dilution</u> <u>Factor</u>	<u>Qualifiers</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
EPA 8310								
<i>Prep Method: Method 3550B Ultrasonic Extraction</i>			<i>By: JEG</i>			<i>Date Prepared: 08/19/08</i>		
1-Methylnaphthalene	ND	mg/kg dry	0.125	0.406	20		08/20/08	LMP
2-Methylnaphthalene	ND	mg/kg dry	0.139	0.474	20		08/20/08	LMP
Acenaphthene	ND	mg/kg dry	0.159	0.541	20		08/20/08	LMP
Acenaphthylene	ND	mg/kg dry	0.223	0.745	20		08/20/08	LMP
Anthracene	ND	mg/kg dry	0.108	0.362	20	LCL	08/20/08	LMP
Benzo(a)anthracene	0.994	mg/kg dry	0.139	0.474	20	LCL	08/20/08	LMP
Benzo(a)pyrene	1.25	mg/kg dry	0.0778	0.261	20	LCL	08/20/08	LMP
Benzo(b)fluoranthene	2.29	mg/kg dry	0.0711	0.237	20		08/20/08	LMP
Benzo(g,h,i)perylene	0.621	mg/kg dry	0.135	0.440	20		08/20/08	LMP
Benzo(k)fluoranthene	1.04	mg/kg dry	0.0981	0.328	20		08/20/08	LMP
Chrysene	1.67	mg/kg dry	0.0778	0.261	20		08/20/08	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0914	0.305	20		08/20/08	LMP
Fluoranthene	5.33	mg/kg dry	0.0880	0.294	20		08/20/08	LMP
Fluorene	ND	mg/kg dry	0.112	0.372	20	LCL	08/20/08	LMP
Indeno(1,2,3-cd)pyrene	1.08	mg/kg dry	0.0745	0.247	20		08/20/08	LMP
Naphthalene	ND	mg/kg dry	0.156	0.508	20		08/20/08	LMP
Phenanthrene	2.02	mg/kg dry	0.139	0.453	20	LCL	08/20/08	LMP
Pyrene	4.19	mg/kg dry	0.0954	0.318	20	LCL	08/20/08	LMP
MOSA21-2								
Total Solids	59.1	% by Weight	0.03	0.03	1		08/20/08	LNB

SIEMENS

Qualifier Descriptions

SH	Surrogate recovery was high. Result for sample may be biased high.
S2H	Second sample matrix spike recovery was high.
S1H	First sample matrix spike recovery was high.
LCL	Laboratory control sample exhibited a low bias. Sample results may also be biased low.
J	Estimated concentration below laboratory quantitation level.
FL2	Fluid 2
F-03	Not Ignitable
CSH	Check standard for this analyte exhibited a high bias. Sample results may also be biased high.

Definitions

LOD = Limit of Detection (Dilution Corrected)
LOQ = Limit of Quantitation (Dilution Corrected)
ND = Not Detected
COMP = Complete
SUBCON = Subcontracted analysis
mv = millivolts
pci/L = picocuries per Liter
mL/L = milliliters per Liter
mg = milligram

ug/l = Micrograms per Liter = parts per billion (ppb)
ug/kg = Micrograms per kilogram = parts per billion (ppb)
mg/l = Milligrams per liter = parts per million (ppm)
mg/kg = Milligrams per kilogram = parts per million (ppm)
NOT PRES = Not Present
ppth = Parts per thousand
* = Result outside established limits.
mg/m³ = Milligrams per meter cubed
ng/L = Nanograms per Liter = Parts per trillion (ppt)
> = Greater Than

When the word "dry" follows the units on the result page the sample results are dry weight corrected.

LODs and LOQs are dry weight corrected for all soils except WI GRO, EPA 8021 and WI DNR/EPA 8260B methanol and WI DNR methylene chloride preserved soils being reported to the State of Wisconsin.

State of Wisconsin Methanol Soils for WI GRO, WI DNR/EPA 8260B and EPA 8021 are reported to the LOQ.

3595

Company Name <i>RT² Inc</i>		Project <i>LITTLE MEMPHIS RIVER Sediment Sampling</i>	
Report Mailing Address <i>2830 Dairy Drive</i>		Contact Name, Phone, Fax, Email <i>Mark Tustler 608 224-2830</i>	
Invoice Address ↓		Purchase Order #	Invoice Contact and Phone No. ↓

Matrix: Drinking Water Groundwater Wastewater Soil/Solid Other: Sediment

Wis. PECFA Project subject to U&C? Yes No

For Compliance Monitoring? Yes No State: _____
(If Yes, please specify Agency or Regulation) Agency/Reg.: LDNR

Turnaround Request: Normal (10 Bus. Days)
 Rush (Must be pre-approved by Lab and is subject to surcharges)
Date Needed: _____

Analyses Requested		Lab/Use Only		
WMP Protocol B PAH		Delivered by	Walk-in	Counter
		Ship Cont. OK?	<input checked="" type="checkbox"/>	NA
		Samples Leaking?	<input checked="" type="checkbox"/>	NA
		Seals OK?	<input checked="" type="checkbox"/>	NA
		Recd on Ice?	<input checked="" type="checkbox"/>	NA
		Sample Receiving Comments: <i>2.0</i>		

Dinker

WO No. 080823

Lab/Use Only	Sample		No. of Containers		Sample ID	WMP Protocol B	PAH	Comments
	Date	Time	Comp	Grab				
1	8/13		5	1	LMP Comp	X		4. 4oz jar, 1-2oz Meath, 1-75plamp
2				2	LMP A	X		1-4oz, 1-75plamp
3				2	LMP B	X		
4				2	LMP C	X		
5				2	LMP D	X		

75plamp

Chain of Custody Record

Relinquished By:	Date	Time	Received By:
<i>Mark Tustler</i>	8/14	8:15	
	8/15	10:45	<i>John Andri</i>

questioned Mr. Tustler in regard to 2oz Meath. He would like the Protocol B but total VOC not TCLP-VOC

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.



3100 North Austin - Merton Grove, IL 60053-3203
847.967.6666 • 800.246.0663 • fax: 847.967.6735 • www.emt.com

Brian Korb
Siemens Water Technologies Corp.
301 W. Military Rd
Rothschild, WI 54474

August 22, 2008

RE 0808234

Lab Orders:
08080486

Dear Mr. Brian Korb:

Enclosed are the analytical reports for the EMT Lab Order listed. Also included with this analytical report is a copy of the chain of custody associated with these samples. If you have any questions, please contact me at 847-967-6666.

Sincerely,

Approved by,

A handwritten signature in cursive script that reads "Arminta P. Priddy".

Arminta Priddy
Project Manager

A handwritten signature in cursive script that reads "Mitchell Ostrowski".

Mitchell Ostrowski
Laboratory Director

This Report Contains 3 pages

The Contents of this report apply to the sample(s) analyzed. No duplication is allowed except in its entirety.

State of Illinois Chemical Analysis in Drinking Water Accredited Lab. No. 100256
State of Wisconsin Wastewater and Hazardous Waste No. 99988890

environmental laboratory and testing services
water | soil | air | product | waste

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.



3100 North Austin - Morton Grove, IL 60053-3203
847 967 8668 • 800 248 6863 • Fax: 847 967 6735 • www.emt.com

CLIENT: Siemens Water Technologies Corp.

Date: 22-Aug-08

Project: 0808249

CASE NARRATIVE

Lab Order: 08080485

Unless otherwise noted, samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

Unless otherwise noted, all method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Sample results relate only to the analytes of interest tested and to the sample received at the laboratory.

All results are reported on a wet weight basis, unless otherwise noted. Dry weight adjusted results are indicated by the notation "dry" in the Units column.

Accreditation by the State of Illinois or Wisconsin is not an endorsement or a guarantee of the validity of data generated. For specific information regarding EMT's scope of accreditation, please contact your EMT project manager.

The Reporting Limit listed on the Report of Laboratory Analysis is EMT's reporting limit for the analyte reported. For most test methods this reporting limit is primarily based upon the lowest point in the calibration curve.

Analyst's initials of "OUT" indicate that the analyte was analyzed by a subcontracted laboratory.

Method References:

SW=USEPA, Test Methods for Evaluating Solid Waste, SW-846.

E=USEPA Methods for the Determination of Inorganic Substances in Environmental Samples; Methods for Chemical Analysis of Water and Wastes; Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40 CFR Part 136, App A; methods for the Determination of Metals in Environmental Samples; Methods for the Determination of Organic Compounds in Drinking Water.

SM= APHA, Standard Methods for the Examination of Water and Wastewater.

D=ASTM, Annual Book of Standards

Analytical Comments for METHOD 8082_S, 08080485-01A: Aroclors reported down to the MDL.

2

environmental laboratory and testing services
water | soil | air | product | waste



ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.



8100 North Austin - Morton Grove, IL 60053-3203
 Tel: 847.967.6666 • 800.246.0663 • fax: 847.967.6735 • www.emt.com

Report of Laboratory Analysis

CLIENT: Siemens Water Technologies Corp. **Client Sample ID:** 0808234-01
Lab Order: 08080486 **Report Date:** 8/22/2008
Project: 0808234 **Collection Date:** 8/13/2008
Lab ID: 08080486-01 **Matrix:** Soil

Analyses	Result	EMT Reporting Limit	Qual Units	Date Analyzed	Batch	Analyst
Percent Moisture						
Method: SM2540G						
Percent Moisture	31.8	0.1	% (Percent)	8/19/08 08:04	R117344	VT
Polychlorinated biphenyls (PCBs)						
Method: SW8082 / SW3540C						
Aroclor 1016	< 145.	145.	µg/Kg-dry	8/19/08	45156	IP
Aroclor 1221	< 145.	145.	µg/Kg-dry	8/19/08	45156	IP
Aroclor 1232	< 145.	145.	µg/Kg-dry	8/19/08	45156	IP
Aroclor 1242	< 145.	145.	µg/Kg-dry	8/19/08	45156	IP
Aroclor 1248	< 145.	145.	µg/Kg-dry	8/19/08	45156	IP
Aroclor 1254	< 145.	145.	µg/Kg-dry	8/19/08	45156	IP
Aroclor 1260	< 145.	145.	µg/Kg-dry	8/19/08	45156	IP
Surrogates:						
2,4,5,6-Tetrachloro-m-xylene	98.2	9.34-155	%REC	8/19/08	45156	IP
Decachlorobiphenyl	115	11.3-166	%REC	8/19/08	45156	IP

Qualifiers: B - Analyte detected in the associated Method Blank
 E - Estimated
 H - Holding Time Exceeded
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 J - Analyte detected below quantitation limits

SUBCONTRACT ORDER
Siemens Water Technologies Corp.
0808234

SENDING LABORATORY:

Siemens Water Technologies Corp.
 301 West Military Road
 Rothschild, WI 54474
 Phone: 715-359-7226
 Fax: 715-355-3221
 Project Manager: Brian Korb Email: brian.korb@siemens.com

RECEIVING LABORATORY:

EMT, Inc.
 8100 N. Austin Ave
 Morton Grove, IL 60053
 Phone : (847) 967-6666
 Fax: (847) 967-6735

08080486-01A

State: WI Special Analyte List Attached: RB List

Analysis	Due	Expires	Sample ID	Comments
Sample ID: 0808234-01	Solid	Sampled:08/13/08 00:00	LMR Comp	
PCBs Sub (S) EPA 8082	08/29/08 15:00	08/20/08 00:00		

Containers Supplied:
 15_4oz Jar (A)

BT

Released By: <u>Kathy Dahlke</u>	Date: <u>8-15-08</u>	Time: <u>14:30</u>		
Received By: <u>Romick P. King</u>	Date: <u>8-15-08</u>	Time: <u>10:45</u>	Temperature: C	Received On Ice: <input checked="" type="radio"/> YES / NO / NA
Received Comments:				

**Please confirm receipt of samples and analysis being tested by email to Brian Korb
 brian.korb@siemens.com**

Siemens Water Technologies
 301 W. Military Road
 Rothschild, WI, 54474
 Toll Free: 800.338.7226 Fax: 715.355.3221

Sample ID: 0808234 - 1

Pesticides	Herbicides
<input type="checkbox"/> 4,4'-DDD	<input type="checkbox"/> 2,4,5-T
<input type="checkbox"/> 4,4'-DDE	<input type="checkbox"/> 2,4,5-TP (Silvex)
<input type="checkbox"/> 4,4'-DDT	<input type="checkbox"/> 2,4-D
<input type="checkbox"/> Aldrin	<input type="checkbox"/> 2,4-DB
<input type="checkbox"/> alpha-BHC	<input type="checkbox"/> Dicamba
<input type="checkbox"/> beta-BHC	<input type="checkbox"/> Dichlorprop
<input type="checkbox"/> Chlordane	<input type="checkbox"/> Dinoseb
<input type="checkbox"/> delta-BHC	<input type="checkbox"/> MCPA
<input type="checkbox"/> Dieldrin	<input type="checkbox"/> MCPP
<input type="checkbox"/> Endosulfan I	<input type="checkbox"/> Pentachlorophenol
<input type="checkbox"/> Endosulfan II	<input type="checkbox"/> Picloram
<input type="checkbox"/> Endosulfan sulfate	
<input type="checkbox"/> Endrin	<input type="checkbox"/> Dalapon
<input type="checkbox"/> Endrin aldehyde	
<input type="checkbox"/> gamma-BHC	
<input type="checkbox"/> Heptachlor	PCB's
<input type="checkbox"/> Heptachlor epoxide	<input type="checkbox"/> Aroclor 1016
<input type="checkbox"/> Methoxychlor	<input checked="" type="checkbox"/> Aroclor 1221
<input type="checkbox"/> Toxaphene	<input checked="" type="checkbox"/> Aroclor 1232
	<input checked="" type="checkbox"/> Aroclor 1242
	<input checked="" type="checkbox"/> Aroclor 1248
	<input checked="" type="checkbox"/> Aroclor 1254
	<input checked="" type="checkbox"/> Aroclor 1260
	<input checked="" type="checkbox"/> PCB's Total
	Endothal
	<input type="checkbox"/> Endothal

Special Requests	
Normal TAT <input checked="" type="checkbox"/>	RUSH <input type="checkbox"/> Requested Due Date: _____
EDD Needed <input type="checkbox"/>	QC Needed <input type="checkbox"/>

**Special Provisions for the
Removal, Management, and Disposal of Sediment**

**Project ID #2130-12-00 and 2130-13-00
Little Menomonee River Bridges
West Good Hope Road
Milwaukee County**

Prepared by
BT², Inc.
Madison, Wisconsin

Notice to the Contractor

The contractor is advised that many portions of the Little Menomonee River and adjacent floodplain have been impacted by the presence of creosote contaminants from the Moss-American/Tronox Superfund site that construction activities within the river and floodplain may be closely scrutinized by the Wisconsin Department of Natural Resources (WDNR), the United States Environmental Protection Agency and/or others. From a human health and ecological risk perspective, the principal contaminants of concern in the Little Menomonee River sediments and adjacent floodplain soil are carcinogenic polynuclear aromatic hydrocarbons (CPAHs). Sediments and adjacent floodplain soil have been sampled and characterized. A cleanup of this area was conducted in 2003 that removed soil/sediment containing over 15 ppm CPAHs. However the some CPAH concentrations still exceed WDNR's generic residual contaminant levels for industrial and non-industrial direct contact.

Reports and other available information on the investigation and characterization for sediment and floodplain soil at the project location is available by contacting Mr. Ryan P. Murphy, P.E., TN & Associates, 1033 N. Mayfair Road, Suite 200, Milwaukee, WI, 53226, telephone (414-607-6765, or Mr. Mahmoud N. Malas, P.E. at Milwaukee County, Environmental Services Division, 2711 W. Wells Street, Suite 300, Milwaukee, WI, 53208, telephone (414) 278-4885.

Coordination With The Environmental Consultant

The Contractor shall provide the schedule for construction operations to the Engineer at the preconstruction conference. The Contractor shall coordinate work under this contract with the Environmental Consultant retained by the Department:

Consultant: BT², Inc.
Address: 2830 Dairy Drive, Madison, WI 53718
Contact: Mark Tusler
Email: mtusler@bt2inc.com
Phone: (608) 224-2830
FAX: (608) 224-2839

The role of the Department's Environmental Consultant will be to document the conformance of activities associated with the management of contaminated sediment and floodplain soil in accordance with the agreements between the WDNR and the Department. The Contractor shall notify the Environmental Consultant at least 10 calendar days prior to the commencement of excavation activities. The Contractor's initial construction activities on the project without the Environmental Consultant present shall be limited to the implementation of traffic control, removal of existing pavement, and construction of erosion control.

Health and Safety Requirements

The Contractor shall incorporate environmental controls to minimize resuspension and migration of contaminated sediments and to protect the health of people and wildlife, as well as water, air, and soil. The Contractor shall, as a minimum, satisfy all applicable federal, state, and local statutes, regulations, and ordinances regarding health and safety, including, but not limited to, the standards contained in 29 CFR 1926 Construction and 29 CFR 1910 General Industry, with specific attention to 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response, Final Rule, US. Department of Labor, Occupational Safety and Health Administration.

The sediments and floodplain soils are known to contain CPAHs, therefore direct contact with sediment and floodplain soil should be minimized. Site workers taking part in excavations, old structure removal activities, and new structure construction in areas in and adjacent to the Little Menomonee River will have a reasonable probability of exposure to potential health hazards associated with creosote contamination. Likely exposure routes are skin contact and ingestion. Site workers that have a probability of exposure to a hazardous material shall have completed Health and Safety training that meets OSHA requirements. The contractor shall prepare a site-specific Health and Safety Plan complying with the Occupational Safety and Health Administration (OSHA) standard for Hazardous Waste Operation and Emergency Response (HAZWOPER), 29 CFR 1910.120. The site-specific Health and Safety Plan and written documentation of up to date OSHA training shall be submitted to the project engineer prior to the start of the work. The contractor shall be responsible for development, delineation, and enforcement of the health and safety procedures pursuant to 29 CFR 1910.120.

Erosion Control

The Contractor's erosion control plan, as required under Subsection 107.20 of the Standard Specifications, shall include details for the methods of construction planned within the banks of the Little Menomonee River and for debris containment devices required. Any debris that falls into the river shall be removed. The Contractor will not be permitted to operate equipment on the riverbed of the Little Menomonee River.

To preclude contamination, which would detrimentally affect the Little Menomonee River, the Contractor shall use extreme care to prevent debris, concrete masonry and concrete dust particles from entering the river. Dust, dirt, and concrete debris accumulating in the work areas during structure removal and construction shall be removed at periodic intervals to prevent discharge of these materials into the river.

Management of Non-Hazardous Solid Waste, Item XXX.

A Description

This work shall consist of excavation, hauling, and disposal of contaminated soil and sediment excavated for this project and designated by the Environmental Consultant as contaminated material to be disposed as solid waste at the Department-designated solid waste landfill.

B Construction Methods

Subsection 205.3 of the Standard Specifications is supplemented with the following:

Contractor is responsible for excavating, segregating, loading, hauling, and disposing of solid waste materials. Excavations shall not extend beyond the construction limits unless directed by Engineer. The Environmental Consultant shall periodically examine excavated soil and debris material during excavations in order to assist with proper disposal. The Contractor shall assist the Environmental Consultant in collecting soil samples using excavation equipment. The Environmental Consultant may collect a minimum of one sample for every 50 cubic yards excavated. Following examination of soil material, the Environmental Consultant shall designate the material for hazardous waste or solid waste disposal.

The Contractor shall transport all material designated as non-hazardous solid waste to a Department-approved solid waste landfill for disposal. The Contractor shall be responsible for obtaining all necessary approvals for disposal. The Contractor shall be responsible for verifying that vehicles used to transport contaminated soil are licensed for such activity in accordance with applicable state and federal regulations. Contractor shall pay all fees for the disposal of solid waste. WDNR-approved licensed solid waste facilities for this contract include:

Waste Management - Orchard Ridge RDF
W124 N9355 Boundary Road
Menomonee Falls, Wisconsin 53051
(262) 253-8620

Superior - Emerald Park Landfill
W124 S10629 South 124th Street
Muskego, Wisconsin 53150
(414) 529-1360

The Contractor shall contact the chosen landfill and provide the landfill with additional information (e.g., credit application and billing information) to complete the landfill's approval process.

C Method of Measurement

Management of Solid Waste shall be measured by the ton of contaminated soil and sediment accepted by the disposal facility, as documented by load tickets from the scale at the facility.

D Basis of Payment

Management of Solid Waste, measured as provided above, will be paid at the contract unit price per ton of contaminated material disposed of by Contractor at the WDNR-approved solid waste disposal facility. The price shall be payment in full for the payment of all disposal tipping fees and taxes and the furnishing of all labor, tools, equipment, and incidentals necessary to complete

the work for the segregating, hauling, and for the disposal of the solid waste in accordance with the contract.

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