



August 11, 2009

Mr. Thomas Wentland
Wisconsin Department of Natural Resources
1155 Pilgrim Road
Plymouth, WI 53073

**Subject: Phase 4 Soil and Sediment Management Documentation - West Silver Spring Drive
Bridges Over Little Menomonee River, Milwaukee, Wisconsin
(WisDOT ID #2090-08-70/2090-09-70)**

Dear Mr. Wentland:

This letter provides documentation of the Phase 4 soil and sediment management activities that occurred during the rehabilitation of the eastbound and westbound West Silver Spring Drive bridges over the Little Menomonee River in Milwaukee, Wisconsin.

Background

This site is located at West Silver Spring Drive and the Little Menomonee River in Milwaukee, Wisconsin (Figures 1 and 2). The Little Menomonee River and the surrounding floodplain are contaminated in the project area as a result of activities at the EPA-lead Moss-American Superfund Site, which is located at approximately 91st Street and Brown Deer Road. Railroad ties and other wood products were treated with creosote and stored at the 23-acre Moss-American site from 1921 until the mid-1970s. The creosoting process used at the plant consisted of impregnating wood products with a mixture of 50 percent No. 6 fuel oil and 50 percent coal-based creosote. Tronox, LLC (formerly Kerr-McGee, LLC), is responsible for the cleanup of the Moss-American facility. The plant operations contaminated site soil, groundwater, and sediment in the Little Menomonee River. The U.S. EPA placed the site on the National Priority List of hazardous waste sites in 1983. A Record of Decision (ROD) for the site was signed in September 1990. The U.S. EPA and the WDNR have determined a background level for carcinogenic polycyclic aromatic hydrocarbons (CPAHs) of 3.6 ppm, and have established a cleanup criterion of 15 ppm for the site.

As part of the planned rehabilitation of the West Silver Spring Drive/Little Menomonee River Bridges, it was necessary to excavate/dredge soil and sediment for bridge widening and the addition of two column piers. Previous sediment sampling has been conducted by Tronox near the bridges. A sample collected near the westbound bridge at a depth of 0 feet to 6 feet had an elevated CPAH concentration of 19 milligrams/kilograms (mg/kg). A sample collected near the eastbound bridge at a depth of 0 feet to 6 feet had a CPAH concentration of 21 mg/kg. The WDNR also performed a soil

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boring between the eastbound and the westbound bridge. The sample, called DNR #25, was collected at a depth of 0 feet to 6 feet and had a CPAH concentration of 28 mg/kg.

On March 25, 2008, RMT collected soil and sediment samples as part of the Phase 2.5 investigation. Four soil samples and one composite (from two locations) sediment sample were collected from areas of the planned excavation beneath the bridges (Figure 2). Samples were collected from the upper 2 feet. These samples were laboratory-analyzed for CPAHs. In addition, one composite (from the four locations) soil sample and the same composite sediment sample were collected for waste characterization Protocol B laboratory analysis. The results of the CPAH analyses are summarized in Table 1, and the laboratory data sheets are attached.

The results indicate that three of the four soil samples had CPAH concentrations below the U.S. EPA/WDNR-determined background concentration of 3.6 ppm. The sediment sample had a CPAH concentration below the U.S. EPA/WDNR-determined background concentration of 15 ppm. All results were below the U.S. EPA/WDNR-determined cleanup criterion of 15 ppm established for the site. The results of the waste characterization indicate that both the soil and the sediment are characteristically nonhazardous waste.

Excavation Management Plan

The excavation management plan was submitted to WDNR for review and the WDNR concurred with the submitted plan on June 30, 2008.

Phase 4 Excavation Activities

Abutment and sediment excavations began in late June 2009. Excavated materials were removed and disposed of at the Waste Management Orchard Ridge Recycling & Disposal Facility (Orchard Ridge) located in Menomonee Falls, Wisconsin, a WDNR licensed landfill. Approximately 540 cubic yards of soil and 40 cubic yards of sediments were estimated as being needed to be excavated and disposed. This total of 580 cubic yards, equates to approximately 870 tons of material. The actual total of material disposed of at Orchard Ridge is 782.12 tons. A copy of the landfill printout is attached.

During coffer dam excavations no free product was noted. Prior to coffer dam excavation, the area was dewatered into a sedimentation basin construction on the rip-rap at the rivers edge. The excavated sediment and underlying materials were also dewatered, prior to disposal. The excavated material and sediment captured in the sedimentation basin during dewatering was placed into a box made of jersey barriers and lined with filter fabric, see attached photos. The materials were allowed to dewater for a minimum of 48 hours prior to disposal at Orchard Ridge.

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Findings and Conclusions

Excavated soils and sediments were removed and disposed of in accordance with the Excavation Management Plan as concurred to by the WDNR. No additional soils or sediments are planned to be excavated during these construction activities.

Feel free to contact me, at (608) 662-5274, with any questions.

Sincerely,

RMT, Inc.



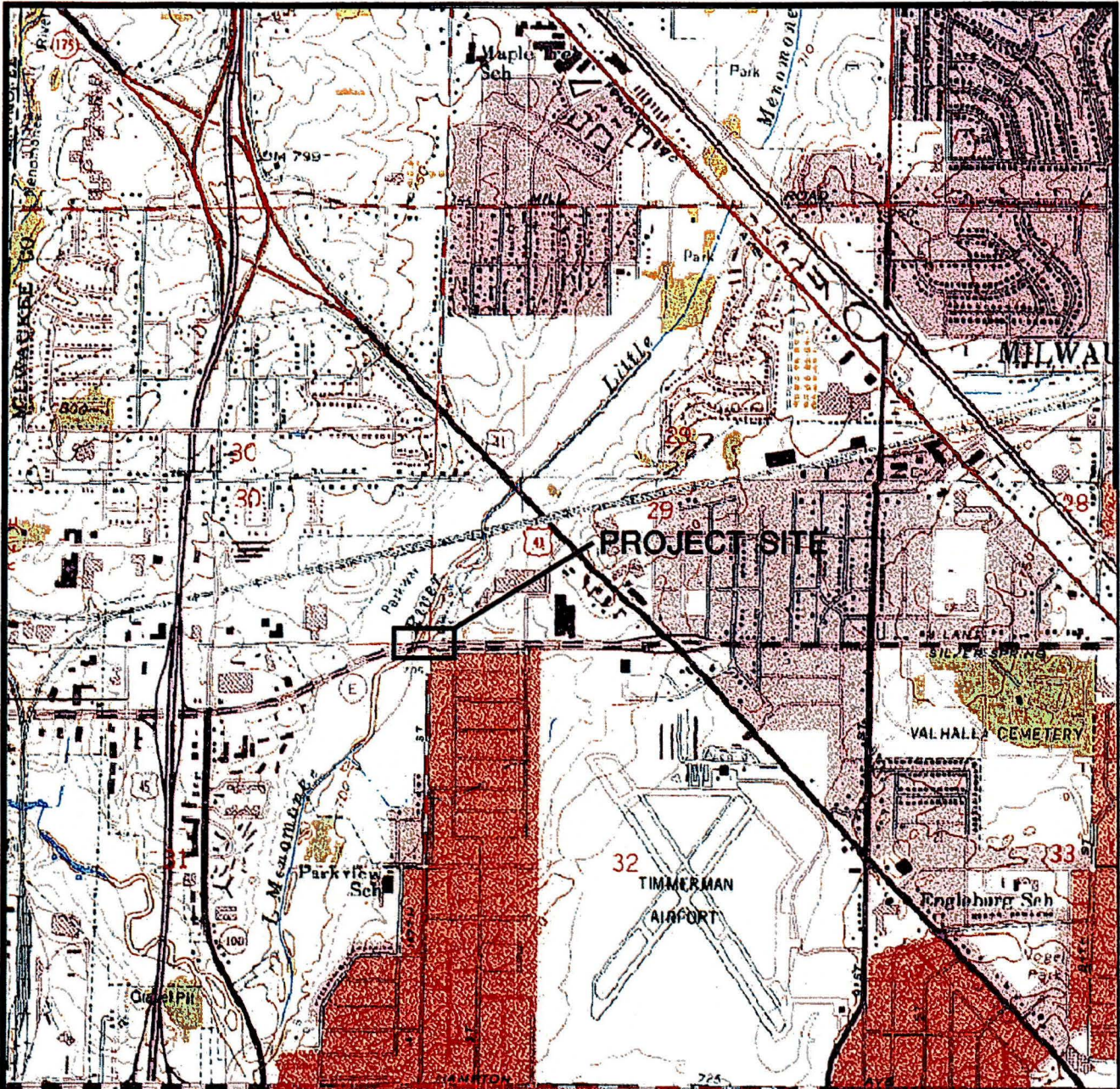
Daniel Haak
Project Engineer

Attachments: Figures

- 1 - Photographs
- 2 - WDNR Concurrence
- 3 - Landfill Printout

cc: Scott Friedl, Ayres
Mahmoud N. Malas, Milwaukee County
Ken Wade, WisDOT
Shar TeBeest, WisDOT
Dick Fish, RMT
Tim Petrick, RMT

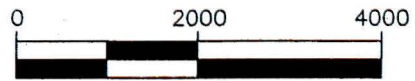
Figures



STATE LOCATION



SOURCE: USGS TOPOQUAD
 7.5 MIN. MENOMONEE
 FALLS, WI.



SCALE: 1"=2000'



RMT

WISCONSIN DEPARTMENT OF TRANSPORTATION
 W. SILVER SPRING DRIVE
 MILWAUKEE, WISCONSIN

DRAWN BY: FITZGERE

APPROVED BY: *Hack*

PROJECT NO. 10909.01

FILE NO. 109090101.DWG

DATE: MARCH 2008

SITE LOCATION MAP

* Approximate soil/sediment sample locations (3/25/08)

STA. 150+97 LT - STA. 151+47 LT
EXISTING BEAM GUARD
TO BE REMOVED

STA. 152+91 LT - STA. 153+42 LT
EXISTING BEAM GUARD
TO BE REMOVED

STA. 152+93 LT - STA. 153+42 LT
EXISTING BEAM GUARD
TO BE REMOVED



LITTLE WISCONSIN RIVER

NW corner

NE corner

RIPRAP HEAVY
OVER GEOTEXTILE
FABRIC TYPE HR (TYP.)

B-40-247

CONCRETE PAVEMENT
APPROACH SLAB REQ'D

WEST SILVER SPRING DRIVE (NB)

CONCRETE PAVEMENT
APPROACH SLAB REQ'D

sediment *

BEAM GUARD REQ'D (TYP.)

WEST SILVER SPRING DRIVE (EB)

B-40-162

END CONSTRUCTION
STA. 154+03.70

BEGIN CONSTRUCTION
STA. 149+56.26

BEGIN PROJECT
STA. 151+38.23
Y = 414,046.27
X = 2,521,439.88

SW corner

sediment *

SE corner

END PROJECT
STA. 152+99.62

P.I. = 149+73.10
Y = 414,056.29
X = 2,521,254.89
DELTA = 25° 17' 16" (RT)
D = 2° 52' 57"
T = 444.08
L = 873.87
R = 1587.70
P.C. = 151+35.02
Y = 413,848.25
X = 2,520,872.55
P.T. = 154+08.83
Y = 414,077.57
X = 2,521,708.46

STA. 150+95 LT - STA. 151+46 RT
EXISTING BEAM GUARD
TO BE REMOVED

STA. 150+91 RT - STA. 151+45 RT
EXISTING BEAM GUARD
TO BE REMOVED

STA. 149+56.29 RT - STA. 150+71.62 RT
DRIVEWAY CURB HEAD REQ'D.

STA. 152+96 RT - STA. 153+49 RT
EXISTING BEAM GUARD
TO BE REMOVED

P.I. = 154+52.62
Y = 414,079.68
X = 2,521,752.39

PROJECT NO: 2090-08/09-70	HWY: W. SILVER SPRING DR. (CTH E)	COUNTY: MILWAUKEE	PLAN	SHEET	E
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FILE NAME : S:\05A1\951-1000\969\001\111\050\111\050101.dwg PLOT DATE : 6/21/2007 PLOT BY : jls@prr.com PLOT NAME : PLOT SCALE : 1" = 40' PLTSCALE: 1/400 INSDOT/CADD SHEET 40

Figure 2 Site Plan

Attachment 1
Photographs

Photographic Log



Client Name:		Site Location:	Project No.:
Wisconsin Department of Natural Resources		W. Silver Spring Drive over Little Menomonee River	00-10909.02
Photo No.	Date		
1	July 2009		
Description			
Looking west at coffer dams on south side of W. Silver Spring Drive.			

Photo No.	Date		
2	July 2009		
Description			
Sedimentation basin used for sediment capture during dewatering activities.			

Photographic Log

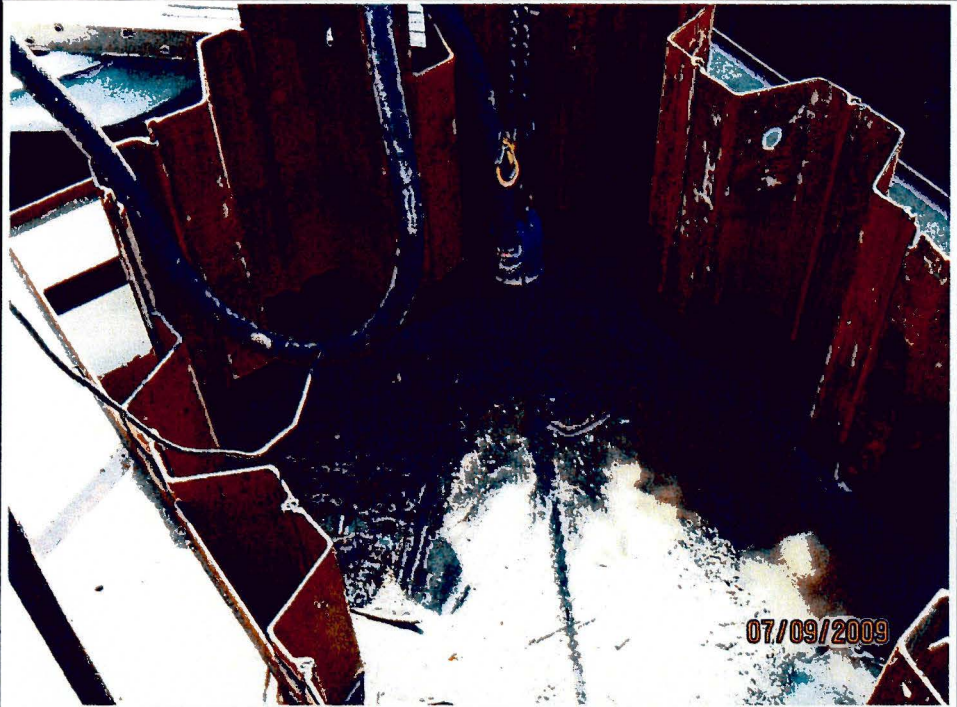

Client Name: Wisconsin Department of Natural Resources		Site Location: W. Silver Spring Drive over Little Menomonee River	Project No.: 00-10909.02
Photo No. 3	Date July 2009	 <p>07/09/2009</p>	
Description Dewatering of coffer dam.			

Photo No. 4	Date July 2009	 <p>07/09/2009</p>	
Description Clam shell scoop used to excavate sediments and underlying soils within coffer dam.			

Photographic Log



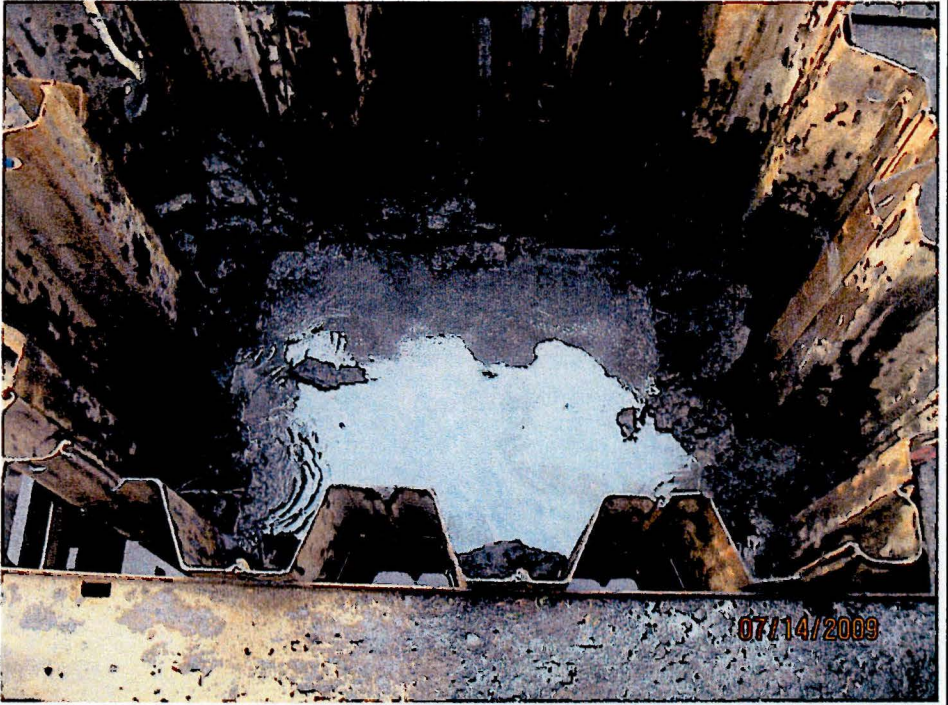

Client Name:		Site Location:	Project No.:
Wisconsin Department of Natural Resources		W. Silver Spring Drive over Little Menomonee River	00-10909.02
Photo No.	Date		
5	July 2009		
Description			
Sediment dewatering box lined with filter fabric, eastern side.			

Photo No.	Date		
6	July 2009		
Description			
Looking inside eastern coffer dam.			

Photographic Log

Client Name: Wisconsin Department of Natural Resources		Site Location: W. Silver Spring Drive over Little Menomonee River	Project No.: 00-10909.02
Photo No. 7	Date July 2009	 <p>07/14/2009</p>	
Description Looking inside western coffer dam.			
Photo No. 8	Date July 2009	 <p>07/14/2009</p>	
Description Sediment dewatering box lined with filter fabric, western side.			

Attachment 2
WDNR Concurrence

Dan Haak - Silver Spring Bridges

From: "Wentland, Thomas A - DNR" <Thomas.Wentland@Wisconsin.gov>
To: <Dan.Haak@rmtinc.com>
Date: 6/30/2008 9:01 AM
Subject: Silver Spring Bridges

Dan, I checked on disposal of sediment/soil from the Silver Spring/ Little Menomonee River bridge work and the answer I got was that since your results came back under 50 ppm all you need to do is get landfill approval for disposal. It may have to be handled as a special waste.

Thomas A. Wentland
Dept. of Natural Resources
Plymouth Service Center
1155 Pilgrim Road
Plymouth, WI 53073
920-892-8756 Ex. 3028

Attachment 3
Landfill Printout