Tecumseh Products Company

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May 7, 2012

RECEIVED

MAY 8 2012

BUREAU OF WATERSHED MGNT

William Fitzpatrick
Wisconsin Department of Natural Resources
PO Box 7921
Madison WI 53707-7921

Jean Greensley, US EPA
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Mail Code: LU-9J
Chicago, IL 60604-3507

Re: Reconnaissance Sampling Plan Downstream of Hayton Millpond Dam

Dear Mr. Fitzpatrick and Ms. Greensley:

On behalf of Tecumseh Products Company ("**Tecumseh**"), I have enclosed a Reconnaissance Sampling Plan ("**Sampling Plan**") prepared by TRC Environmental Corporation ("**TRC**") for the first river mile of the South Branch of the Manitowoc River downstream of the Hayton Millpond Dam ("**Downstream Area**").

The Sampling Plan was prepared at the request of Wisconsin Department of Natural Resources ("**WDNR**") and is consistent with the document protocol for materials prepared for the Hayton Area Remediation Project ("**HARP**") site. Although the Sampling Plan is consistent with the HARP site materials, we think it important to note that the Downstream Area is outside of the boundaries of the HARP site, which is limited by the terms of Consent Order No. 2004-COEE-010 ("**HARP Site Consent Order**") to "the areas contaminated with PCBs and other hazardous substances, located between the storm water outfall at Taft Avenue in New Holstein and the Hayton Millpond" (see paragraph 4 of the HARP Site Consent Order). The HARP Site Consent Order specifically does not "relate to . . . PCBs and other hazardous substances that have migrated beyond the boundaries of the Site," which would include the Downstream Area below the Hayton Millpond Dam. Tecumseh has nevertheless agreed to voluntarily prepare the Sampling Plan and perform the proposed sampling activities. In so doing, Tecumseh is not admitting liability for any conditions that may be encountered in the Downstream Area, which conditions (to the extent identified may not require further investigation or remediation) and may well be attributable to other sources.

Similarly, TRC, both in its capacity as Tecumseh's consultant and as a signatory to the HARP Site Consent Order, is not admitting liability for any conditions that may be encountered in the

Downstream Area, which conditions (to the extent identified may not require further investigation or remediation) and may well be attributable to other sources.

Sincerely,

Jason Smith

S. Jason Smith
Corporate Environmental Director

cc: Samantha R. Corson, Greenberg Traurig, LLP
Marc Faecher, TRC Environmental Corporation
Chris Harvey, TRC Environmental Corporation
Curtis B. Toll, Greenberg Traurig, LLP

South Branch of the Manitowoc River, Reconnaissance Study
Sampling and Analysis Plan

May 2012

Prepared by:

TRC

Chicago, Illinois

South Branch of the Manitowoc River, Reconnaissance Study Sampling and Analysis Plan

Prepared by:

TRC

230 West Monroe Street, Suite 2370
Chicago, Illinois 60606

TRC Project No. 192003

May 2012

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1.0 INTRODUCTION

On behalf of Tecumseh Products Company (Tecumseh), this Sampling and Analysis Plan (SAP) presents the proposed sampling approach to conduct the Wisconsin Department of Natural Resources (WDNR) requested reconnaissance level investigation of the South Branch of the Manitowoc River, downstream of the Hayton Millpond Dam.

1.1 Sampling and Analysis Plan Overview

This SAP describes work that will be performed to characterize soft sediment deposits in the first river mile of the South Branch of the Manitowoc River downstream from the Hayton Millpond Dam. This project study area will be known as the Reconnaissance Study Area (RSA).

The RSA is not part of the Hayton Area Remediation Project (HARP. Nevertheless, some of the methods and protocols that will be used to complete these activities are consistent with those used for HARP and have previously been described in the May 2005 HARP OU4 Phase I SAP, the November 2005 HARP OU4 Phase II SAP, the June 2008 Quality Assurance Project Plan (QAPP), the October 2005 HARP OU4 Phase I Technical Memorandum (Phase I Tech Memo) and the November 2005 HARP OU4 Phase II Technical Memorandum (Phase II Tech Memo). These documents will be cited accordingly.

The RSA has specific geomorphic characteristics that will be evaluated by the proposed sampling event. The sample locations proposed in this SAP are based on the river environment and reasonable sampling density for the reconnaissance level survey. The sample locations were selected to be representative of a portion of the river in the RSA such that data can be extrapolated to adjacent geomorphic settings. Channel gradient, meander bends, and depositional setting are parameters that have been considered in the sample location selection process.

This SAP presents the sampling objectives, quality assurance and safety plans, sample locations and procedures to collect sediment samples from the RSA, and reporting.

1.2 Sampling Objectives

The objectives of the RSA sampling event are as follows:

- To assess the depth of soft sediment and the depositional environment in the South Branch of the Manitowoc River downstream from the Hayton Millpond Dam.

- To characterize the concentration of PCBs in the soft sediment in the South Branch of the Manitowoc River downstream from the Hayton Millpond Dam.

2.0 QUALITY ASSURANCE PROJECT PLAN

The RSA sampling will adhere to the Quality Assurance Project Plan (QAPP) that was developed by TRC for HARP. The HARP QAPP includes information on project organization, responsibilities, sampling procedures, quality control checks, data management, and reporting. The QAPP is updated annually based on the work to be performed. The HARP QAPP is incorporated into this SAP by reference.

2.1 Decontamination Procedures

The decontamination procedures to be used at the site are the same as those referenced in the HARP QAPP. Generally, non-disposable and non-dedicated sampling equipment will be decontaminated prior to initial use, between sample intervals, between sampling locations, and at the end of the sampling event. Decontamination procedures will include washing and scrubbing with a laboratory grade soap solution (such as Alconox), triple rinsing (tap water followed by two deionized or distilled water rinses), and air dried.

2.2 Laboratory Quality Assurance

Analysis of the environmental samples will be performed by Pace Analytical Services laboratory in Green Bay, Wisconsin, which is a WDNR certified laboratory. Quality Control (QC) samples include field blanks and sample replicates to evaluate the possible introduction of contamination during the sampling process and to assess reproducibility of results or concentration variability in sediments. These samples will be collected and labeled in accordance with methods described in the HARP QAPP.

2.3 Data Quality Objectives and Requirements

The overall Quality Assurance and Quality Control (QA/QC) objective during RSA sampling is the use and implementation of procedures for sample collection, field documentation, sample custody, analytical methodology, field and laboratory QA/QC, and reporting that provide results which are legally defensible and based on sound engineering and science. The overall QA/QC objective of the laboratory analytical program is to generate data that is scientifically defensible and of known precision and accuracy. Laboratory Data Quality Objectives (DQO) for RSA, expressed in terms of precision, accuracy, and completeness are the same as given in the HARP QAPP.

Sampling precision and bias will be assessed through the collection of field duplicate samples. In general, one (1) field duplicate per twenty (20) environmental samples or a minimum of one (1) per sampling event will be submitted to the laboratory. The variation between field duplicate results should be no greater than ±20 percent for conventional parameters and ±35 percent for organics. Duplicates with Relative Percent

Difference (RPD) values in excess of these limits may be indicative of imprecision resulting from sampling techniques and results should be evaluated accordingly. Steps will be taken to correct potential sources of imprecision for any additional sampling but in these cases, re-sampling will not occur. Accuracy in the field will be assessed by analysis of equipment blank rinsate samples. Equipment rinsate blanks which consist of deionized water rinsates of sampling equipment or containers, will be analyzed to indicate potential sample contamination from contaminated equipment. At least one equipment rinsate blank will be taken per sampling event.

3.0 HEALTH AND SAFETY PLAN

The RSA sampling activities will adhere to the Health and Safety Plan (HASP) that was developed by TRC for HARP activities. The HARP HASP includes safety precaution information and emergency procedures. The HARP HASP is updated as needed based on the work to be performed. The HARP HASP is incorporated into this SAP by reference.

4.0 SAMPLING PROCEDURES

Prior to site mobilization and sampling, the site will be cleared through Diggers Hotline and the site will be marked to indicate where identified underground utilities that cross the river. Landowners will be contacted prior to field activities.

Three samples will be collected at each sampling transect, shown in Figure 1. At each transect, one sample will be collected from within 5 feet of the left (looking downstream) bank of the river, one sample from the approximate center of the river, and one sample from within 5 feet of the right bank of the river.

4.1 Sample Nomenclature

The sample locations in the RSA will use the following naming system:

In-channel samples will have the prefix "IC" following the Reach ID

For in-channel samples on the left side of the creek:

MR IC [#001-499]L

Example: MR IC 002L

For in-channel samples on the right side of the creek:

MR IC [#500-899]R

Example: MR IC 502R

For in-channel samples (center of the creek):

MR IC [#900-999]C

Example: MR IC 902C

4.2 In-Channel Sediment Sampling

Sediment samples will be collected using a 3-inch diameter polycarbonate piston corer that will be pushed into the sediment. As the core is advanced, the piston is held at the original sediment/water interface. Once the core is advanced to the desired depth or to refusal, the piston and the core are withdrawn together. Once it is retracted from the sediment, the clear core liner will be cut longitudinally down two sides with electric or manual shears. The core will then be visually logged and the sample will be processed.

The sediment core will be advanced through the full thickness of soft sediment or up to a maximum of 3 feet at each sample location. If 12 inches or more of soft sediment is present at a sample location, the upper 12 inches of the sediment core will be

composited and placed in a sample jar. If less than 12 inches of soft sediment is present at a sample location, the full thickness of soft sediment will be composited and placed in a sample jar. If soft sediment is not present in the sediment core, up to three attempts will be made at the sample location to collect a core that contains soft sediment.

Each sediment sample will be analyzed for the following:

- Total PCBs; and
- Total organic carbon.

Physical data collected at each location will include the following:

- The water depth;
- The distance that the core is pushed or driven into the sediments;
- The thickness of soft sediment;
- The conditions of refusal (physical impediment or resistance);
- The visual description of the deposit; and
- The recovery length.

4.3 Sample Location and Field Positioning

Prior to mobilizing to the field, the coordinate locations of the sediment sampling locations will be identified. The sample locations will be determined in the field using a hand-held global positioning system (GPS) unit with sub-meter accuracy.

5.0 SAMPLE LOCATION RATIONALE

TRC will collect 3 sediment samples at each of 5 sampling transects, for a total of 15 investigative samples. Table 1 summarizes the quantity of proposed samples, and Figures 1 shows the sampling transect locations. The locations of the proposed samples were determined using the following guidelines:

- A typical straight section of the river.
- River bends or wide sections of the river that may have higher rates of sediment accumulation.

6.0 DATA REVIEW AND TECHNICAL MEMORANDUM

Following the field investigation and receipt of laboratory analytical results, the data will be compiled, analyzed, and incorporated into a RSA technical memorandum. The technical memorandum will document the investigative activities conducted and will describe the methods employed during the reconnaissance level investigation.

The RSA technical memorandum will include a base map that shows the sampling locations. The analytical and physical results will be presented on figures and tables attached to the technical memorandum. The logs for sediment sampling locations, as well as laboratory analytical reports, will be appended to the technical memorandum. In addition, other appropriate data collected during the field investigation will be appended to the memorandum to document the quality of work performed.

7.0 SCHEDULE

Pending WDNR and USEPA approval of this SAP, as well as landowner access approvals, the RSA investigation activities are scheduled to start in June 2012. The results will be submitted to WDNR and USEPA in the technical memorandum upon completion of the reconnaissance level study.

8.0 REFERENCES

Earth Tech and Ann Arbor Technical Services. 2005. *HARP OU4 Sampling and Analysis Plan.* May.

NRT. 2005. *HARP OU4 Phase II Sampling and Analysis Plan.* November.

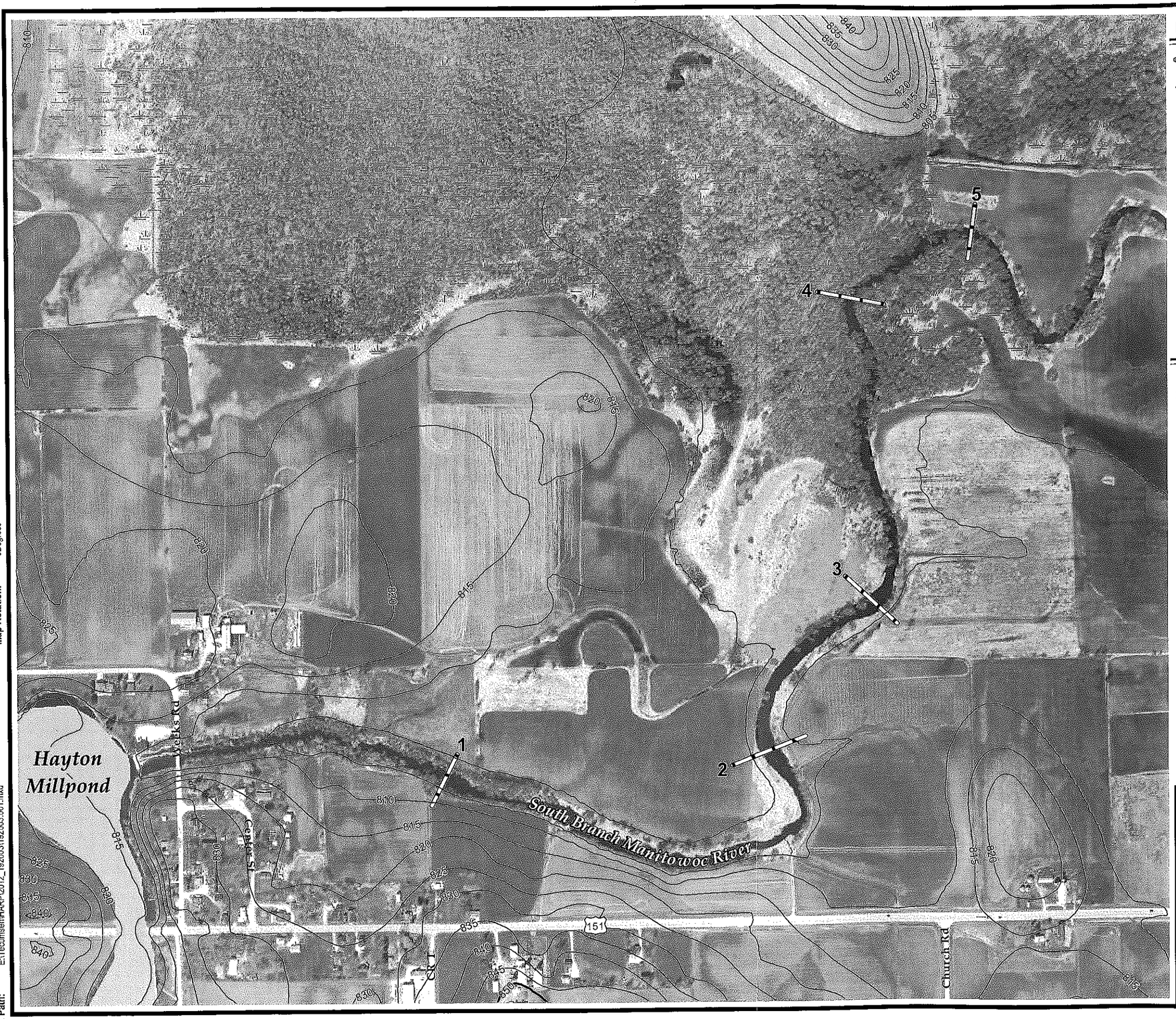
NRT. 2005. *Technical Memorandum, HARP OU4 Phase I In-Channel and Overbank Sampling – July and August 2005.* October.

NRT. 2006. *Technical Memorandum, HARP OU4 Phase II In-Channel and Overbank Sampling – November and December 2005.* March.

TRC. 2011. *Site-Specific Health and Safety Plan. Hayton Area Remediation Project, Operable Units 2/Lower and 3 Remediation, New Holstein, Calumet County, Wisconsin.* May.

TRC. 2008. *Quality Assurance Project Plan for Remedial Investigation. Hayton Area Remediation Project, Operable Units 2/Lower, 3 and 4, Between New Holstein and Chilton, Calumet County, Wisconsin.* Revision 2.

WDNR, Tecumseh Products and TRC. 2004. Consent Order No. 2004-COEE-010; Facility ID No. WID006116529.



LEGEND

- PROPOSED TRANSECT LOCATION
- TOPOGRAPHIC CONTOUR (5' INTERVAL)

NOTES

1. BASE MAP IMAGERY FROM CALUMET COUNTY, 2010.
2. TOPOGRAPHIC CONTOURS GENERATED FROM USGS – NATIONAL ELEVATION DATASET (1/3 ARCSECOND RESOLUTION).

N

0 500 1,000 Feet

1 " = 500 '
1:6,000

PROJECT:
SOUTH BRANCH MANITOWOC RIVER
CALUMET COUNTY, WISCONSIN

SHEET TITLE:
RECONNAISSANCE SAMPLING TRANSECT LOCATIONS SOUTH BRANCH MANITOWOC RIVER

DRAWN BY:	PAPEZ J	SCALE:	PROJ. NO. 192003
CHECKED BY:	RICE J	1: 6,000	FILE NO. 192003.001.mxd
APPROVED BY:	MCANAULTY S	DATE PRINTED:	**FIGURE 1**
DATE:	APRIL 2012		

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Printed By: JPAPEZ on 4/17/2012, 02:30:35 PM
Path: E:\Tecumseh\HAB\P\2012_192003\192003.001.mxd
Coordinate System: NAD 1983 HARN WISCRS Calumet County Feet (Ford US)
Map Rotation: 0Degrees

TRC - GIS

Table 1. Proposed Sampling Summary
Reconnaissance Sampling
South Branch - Manitowoc River
May 2012

Sample Transect	Number of Samples			Total
	Left Channel	Center Channel	Right Channel	
MR-1	1	1	1	**3**
MR-2	1	1	1	**3**
MR-3	1	1	1	**3**
MR-4	1	1	1	**3**
MR-5	1	1	1	**3**
Duplicate				**1**
Equipment rinsate blank				**1**
Total	**5**	**5**	**5**	17