



Milw Co.  
FID# 241496530  
ERR/ERP

Wisconsin Gas Company  
626 East Wisconsin Avenue  
Milwaukee, WI 53202  
(414) 291-7000

November 3, 1993

Ms. Margaret Graefe  
Wisconsin Department of Natural Resources  
P. O. Box 12436  
Milwaukee, Wisconsin 53212

Dear Ms. Graefe:

Please find attached copies of our **Phase III Environmental Site Investigation, Former Third Ward Manufactured Gas Plant Site Work Plan Addendum 03 and 04** for the site located in the area of North Milwaukee Street and East Menomonee Street. These revisions involve Milwaukee River sediment testing in the vicinity of former manufactured gas plant operations. Field work was completed at the site on October 5, 1993 and data analysis is underway.

Please feel free to call me at 291-7000, EXT 5463 with any questions or comments.

Thank you for your attention and assistance.

Art Covi, PE  
Research Engineer  
Wisconsin Gas Company  
5400 N. Green Bay Avenue  
Milwaukee, Wisconsin 53209

ATTACHMENTS

**PHASE III ENVIRONMENTAL SITE INVESTIGATION  
FORMER THIRD WARD MANUFACTURED GAS PLANT SITE**

**WORK PLAN ADDENDUM 03**

**3-0887-302**

*Prepared for:*

**WISCONSIN GAS COMPANY  
Milwaukee, Wisconsin**

*Prepared by:*

**REMEDICATION TECHNOLOGIES, INC.  
St. Paul, Minnesota**

**NOVEMBER 1993**

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## 1.0 INTRODUCTION

This work plan addendum describes the scope of work for a river sediment sampling program at the Third Ward MGP site located in Milwaukee, Wisconsin (Site). This work plan addendum has been prepared by Remediation Technologies, Inc. (RETEC) in response to a request by the Wisconsin Gas Company (Wisconsin Gas), and supplements the RETEC document, Phase III Environmental Site Investigation Work Plan Former Third Ward Manufactured Gas Plant Site, April 1992. The following sections describe the three project tasks which will be completed in relation to the river sediment sampling program.

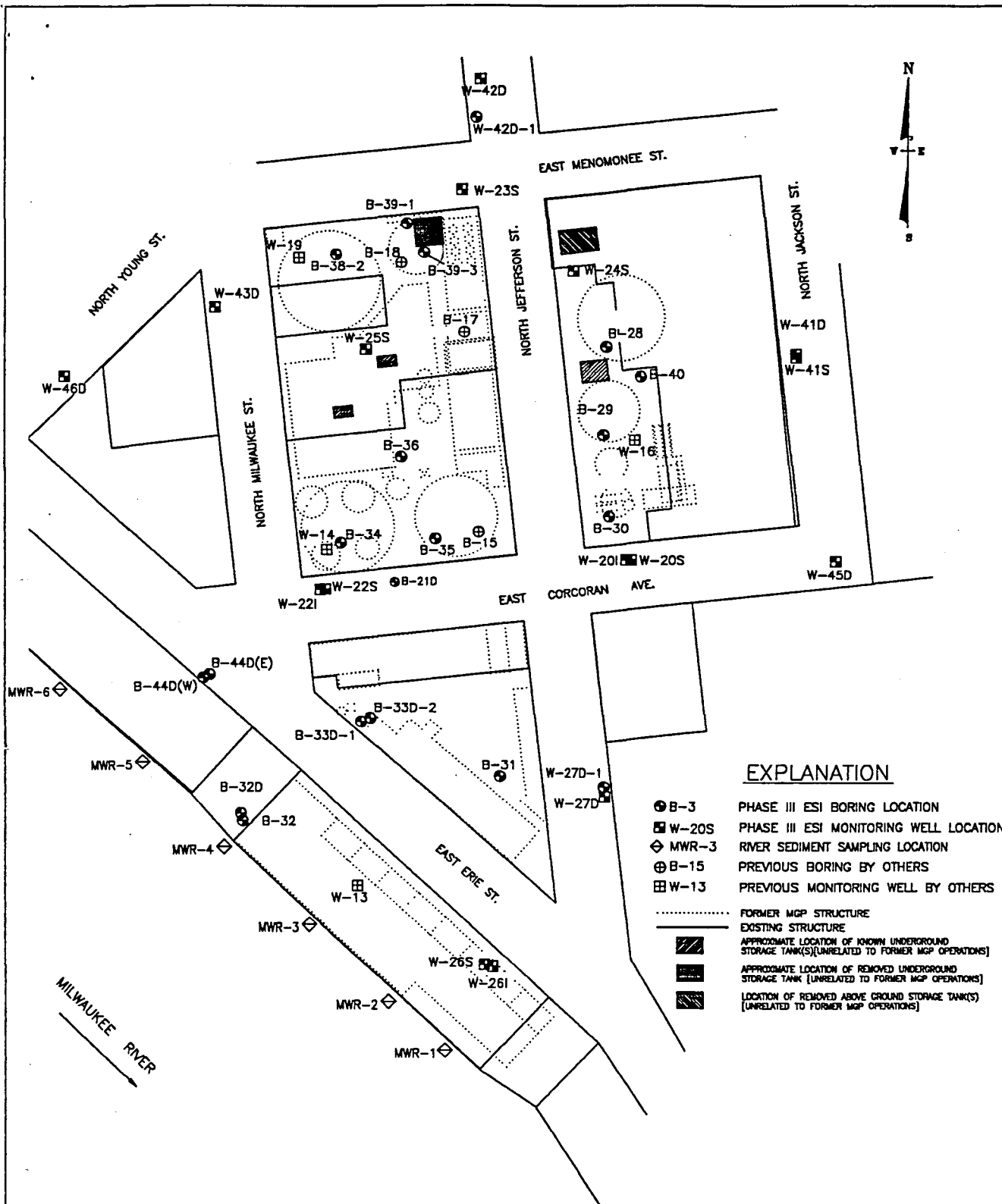
## 2.0 SCOPE OF WORK

### 2.1 Task 302 - Sediment Sample Collection

River sediment samples will be collected from six locations along the northern shoreline of the Milwaukee River. The proposed sampling locations are identified on attached Figure 2-1 and have been selected based upon historical maps of the Site. The sampling locations have been located such that adequate coverage of the former MGP process area is attained during the sediment sampling. The sediment sampling locations shown on Figure 2-1 may require relocation based upon the location of subsurface utilities or other field conditions.

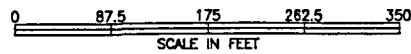
The river sediment samples will be collected with the use of a standard drilling rig mounted on a pair of small barges. The barges are approximately eight feet by 30 feet in size and will be connected such that the drilling rig can perform the drilling between the two barges. Each of the barges will be equipped with corner-jacks so the complete barge unit may be secured to the river bottom, thus providing a stable drilling platform. The barge/drill rig unit will be moved by rope or by tug boat depending on the location of the boring to be completed. A small row-boat will be available and may be used for transporting personnel and equipment to and from the shore. WTD Environmental Drilling (WTD) will be the subcontractor conducting the river borings. WTD will also notify the appropriate authorities (i.e., U.S. Coast Guard) to ensure that the drilling will not interfere with regular river activities. WTD will also conduct the utility clearances at the proposed drilling locations.

The borings will be approximately 10 to 15 feet in depth below the river bottom. Standard sampling equipment, including split-tube type sampling devices, will be utilized for collecting sediment samples. Applicable Wisconsin Department of Natural Resources (WDNR) forms will be completed for all borings completed. All borings will be abandoned in accordance with WDNR guidelines. All downhole sampling equipment will be decontaminated between sampling locations. Sediment samples will be collected continuously from the river bottom to the total depth of the boring. All samples will be field screened with an HNu Photoionization Detector (PID) equipped with an 11.7 eV lamp.



**EXPLANATION**

- ⊙ B-3 PHASE III ESI BORING LOCATION
- W-20S PHASE III ESI MONITORING WELL LOCATION
- ◇ MWR-3 RIVER SEDIMENT SAMPLING LOCATION
- ⊕ B-15 PREVIOUS BORING BY OTHERS
- ⊞ W-13 PREVIOUS MONITORING WELL BY OTHERS
- FORMER MGP STRUCTURE
- \_\_\_\_\_ EXISTING STRUCTURE
- ▨ APPROXIMATE LOCATION OF KNOWN UNDERGROUND STORAGE TANK(S) [UNRELATED TO FORMER MGP OPERATIONS]
- APPROXIMATE LOCATION OF REMOVED UNDERGROUND STORAGE TANK [UNRELATED TO FORMER MGP OPERATIONS]
- ▩ LOCATION OF REMOVED ABOVE GROUND STORAGE TANK(S) [UNRELATED TO FORMER MGP OPERATIONS]



**PHASE III ESI  
 DRILLING LOCATIONS  
 FORMER THIRD WARD MGP SITE  
 MILWAUKEE, WISCONSIN**

DRAWN BY	DATE	CHECKED BY	DATE	SCALE	DRAWING NUMBER	REV
R.K.K.	2/93			1"=175'	FIGURE 2-1	



The criteria for selecting samples for laboratory analyses will include relative depth, field screening results, and visual and olfactory indications of impacts. The sample collected from at or just above the bottom of the boring will be submitted for laboratory analyses. The second sample will be collected from the boring based upon the field screening, visual and olfactory conditions.

## **2.2 Task 401 - Sample Analyses/Validation**

Two samples from each boring will be submitted for laboratory analyses of selected semi-volatile organic compounds. One sample from each boring will be submitted for Infrared Spectroscopy analyses (IR Spectroscopy). Analytical Technologies Inc. (ATI) of Fort Collins, Colorado will be the subcontractor laboratory. ATI is a Wisconsin Certified laboratory. ATI will provide data packages sufficient for validation. All sampling, decontamination and sample shipment procedures will be conducted in accordance with the following documents:

- Phase III Environmental Site Investigation Work Plan Former Third Ward Manufactured Gas Plant Site (April 1992);
- Phase III Environmental Site Investigation Quality Assurance Project Plan Former Third Ward Manufactured Gas Plant Site (May 1992); and
- Site Specific Health and Safety Plan Former Third Ward Manufactured Gas Plant Site (April 1992).

Upon receipt of the laboratory data packages, approximately four weeks after samples are collected, the data will be validated by RETEC and a memorandum will be prepared summarizing the results of the data validation effort. This memorandum will be included as an attachment to the sediment sampling report.

## **2.3 Task 601 - Sediment Sampling Report**

After the validation of the data is complete, a report will be prepared which summarizes the results of the river sediment sampling (i.e., Sediment Sampling Report). The Sediment Sampling

Report will be submitted Wisconsin Gas. The Sediment Sampling Report will include the following information:

- sampling methodology;
- a map showing the sampling locations;
- tabulated results of analytical data with discussion; and
- appendices containing supporting data (e.g., field forms, data validation memorandum and laboratory data summary sheets).

The Sediment Sampling Report will be submitted to the WDNR.



### **3.0 SCHEDULE**

It is estimated that the sediment sample collection task will require two to three days to complete. Approximately four weeks will be required to attain a validated data package from the subcontractor laboratory. Validation of the data will require two weeks. Preparation of the Sediment Sampling Report will require two weeks after receipt of the validated data package. Based upon these estimates, approximately nine weeks will be required to complete the sediment sampling tasks. The sediment sampling tasks will be considered complete at the time that the Sediment Sampling Report is provided to Wisconsin Gas.

**PHASE III ENVIRONMENTAL SITE INVESTIGATION  
FORMER THIRD WARD MANUFACTURED GAS PLANT SITE**

**WORK PLAN ADDENDUM 04**

**3-0887-302**

*Prepared for:*

**WISCONSIN GAS COMPANY  
Milwaukee, Wisconsin**

*Prepared by:*

**REMEDICATION TECHNOLOGIES, INC.  
St. Paul, Minnesota**

**NOVEMBER 1993**

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## FIGURE

FIGURE	PAGE
2-1 River Sediment Sampling Locations .....	2-2

## 1.0 INTRODUCTION

This work plan addendum describes the scope of work for a river sediment sampling program at the Third Ward MGP site located in Milwaukee, Wisconsin (Site). This work plan addendum has been prepared by Remediation Technologies, Inc. (RETEC) in response to a request by the Wisconsin Gas Company (Wisconsin Gas), and supplements the RETEC document, Phase III Environmental Site Investigation Work Plan Former Third Ward Manufactured Gas Plant Site, April 1992. This addendum summarizes changes to the river sediment sampling program completed at the Site. The proposed scope of work for the river sediment sampling program is described in the RETEC document, Phase III Environmental Site Investigation Former Third Ward Manufactured Gas Plant Site - Work Plan Addendum 03 (Work Plan Addendum 03). The sediment sampling work completed at the Site was revised from the scope of work presented in Work Plan Addendum 03. The changes to the scope of work are described in the following sections.

## **2.0 SCOPE OF WORK**

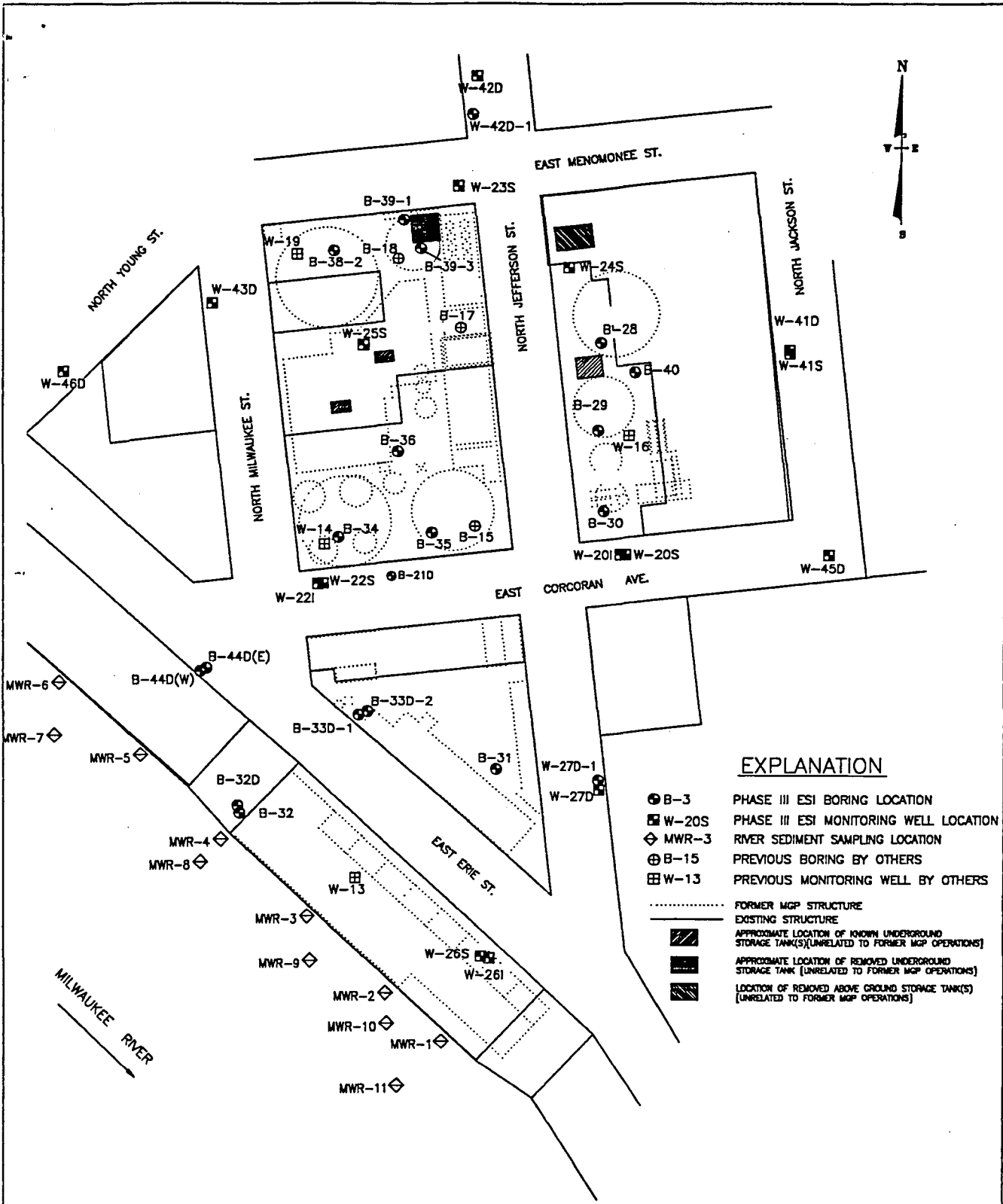
### **2.1 Task 302 - Sediment Sample Collection**

River sediment samples were collected from 11 locations along the northern shoreline of the Milwaukee River. The sampling locations are identified on attached Figure 2-1. The sampling locations were selected based upon historical maps of the Site and based upon field observations made during the river sediment sampling. The proposed scope of work provided in Work Plan Addendum 03 identified six river sediment sampling locations to be completed in the Milwaukee River. Based upon the revisions made to the scope of work, an additional five borings were completed at the Site (i.e., MWR-7 through MWR-11). The river sediment sampling locations provided on Figure 2-1 are approximate locations and final locations will be provided after the surveying work is completed.

The river sediment samples were collected in accordance with the procedures described in Work Plan Addendum 03.

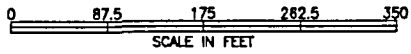
### **2.2 Task 401 - Sample Analyses/Validation**

River sediment sample analyses and data validation will be completed as described in Work Plan Addendum 03.



**EXPLANATION**

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PHASE III ESI  
DRILLING LOCATIONS  
FORMER THIRD WARD MGP SITE  
MILWAUKEE, WISCONSIN



REMEDICATION  
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