

Memorandum

To: Bill Bombich
From: Bill Gregg
RE: Superior MGP Phase II

Date: October 1, 2001
File: 09413-098 Superior MGP\Admin\Draft
Technical Memo
CC:

ENSR's Superior MGP Phase I report identifies several areas for soil and groundwater investigations. These areas include gas holder bases and a tar receiver tank. Figure 1 shows the proposed locations of eight monitor wells, nine test trenches, and six soil borings to provide soil and groundwater samples for the Phase II investigation. This scope of work is intended to meet the following project objectives:

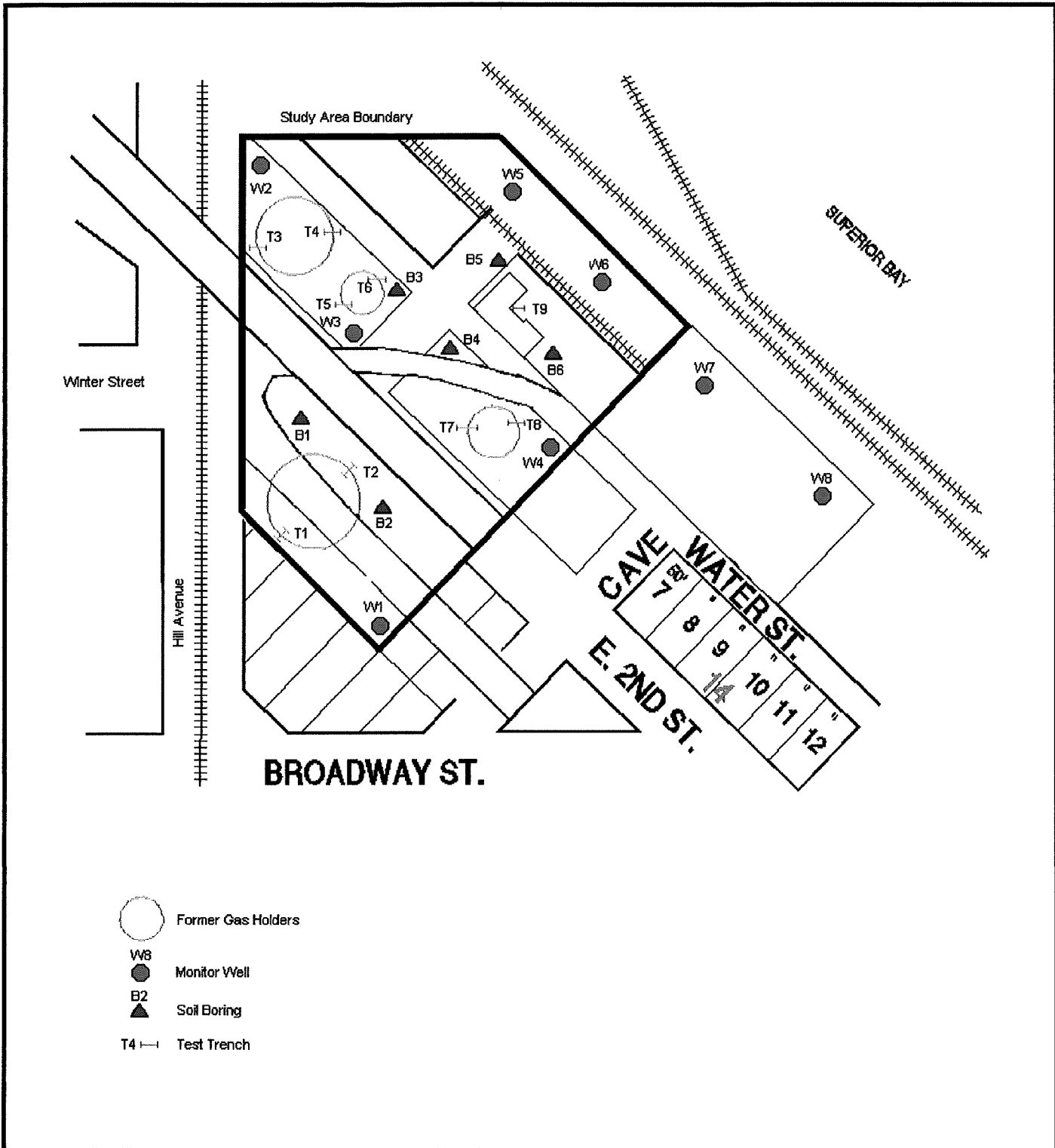
1. Identify any MGP wastes on site that may be a continuing source of chemicals to soil, groundwater, and/or sediment in Superior Bay
2. Identify MGP chemicals in groundwater and determine the potential for "off-site" impacts
3. Identify the need for remedial actions

The Phase II Investigation will be conducted in general conformance with WDNR Phase II Environmental Assessment guidance, WDNR's publication "Assessing Sediment Quality at Manufactured Gas Plant Sites", and NR 716. ENSR will prepare a Phase II work plan containing sampling and analysis plans, a health and safety plan, and community relations plans. The work plan will be submitted to WDNR by October 15, 2001, with the understanding that the fieldwork will be completed shortly thereafter, prior to the onset of winter. Major elements of the work plan are summarized below:

- Soil borings will be installed using a hydraulic push drilling method, such as Geoprobe®.
- Monitor wells will be drilled with hollow stem augers and completed as 2-inch diameter, PVC wells with 10-foot screens. Wells MW-1 through MW-4 will be screened across the water table and wells MW-5 through MW-8 will be screened in the basal fill material.
- Soils samples will be collected continuously from the ground surface to the bottom of each boring or well. The final depths are anticipated to be approximately 20 feet. Borings will terminate in the native soil beneath fill.
- Soil samples will be field screened with a PID using a headspace screening technique.
- Monitoring wells will be developed upon completion, and sampled two weeks after initial development. After sampling, slug tests will be performed for each well.
- Test trenches will be installed with a backhoe and will provide additional samples for laboratory chemical analysis. Soil cuttings and excavated fill and soil will be replaced in the test trenches.
- Monitoring wells, test trenches, and soil borings will be surveyed for location and measuring point elevations for water level measurements.
- Approximately 30 soil and 20 water samples will be analyzed for PAH, BTEX, cyanide, metals, and pH.
- QA/QC samples will include trip blanks (one per each VOC sample batch), field blanks for water samples (10%), equipment blanks for soil samples (10%), duplicates (10%), and laboratory control samples.
- A second round of groundwater samples will be collected approximately 90 days after the initial sampling round.

- The Phase II Investigation report will be prepared within 60 days of the receipt of laboratory analytical data for the first round of groundwater sampling.
- The second round groundwater analytical results will be submitted in a monitoring report within 30 days of the receipt of the analytical results.

The schedule assumes WDNR is available to meet in October to discuss the results of the Phase I Report, and the content of the Phase II work plan. The field work for Phase II can be completed during the first week of November, and the initial monitoring round will be done before Thanksgiving. The second groundwater monitoring round would then take place in mid to late February.



- Former Gas Holders
- W8 Monitor Well
- B2 Soil Boring
- T4 Test Trench

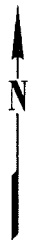


FIGURE 1
PHASE II WELLS, BORINGS AND TEST TRENCHES
 Superior Water Light & Power MGP
 Superior, Wisconsin

SOURCE: Base Map from SWL & P Company Records

PREPARED BY: CMB:	DATE: Oct 2001	PROJECT NO: 09413-098	REV: 0
FILE NO.: FIG1.DOC	CHECKED: WMG		