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† Also licensed in Iowa

January 2, 2002

VIA FACSIMILE and U.S. MAIL

263-8483

Andrew F. Boettcher
Hydrogeologist, Remediation and
Redevelopment Program
Department of Natural Resources
2300 N. Dr. ML King Drive
P.O. Box 12436
Milwaukee, WI 53212-0436

Re: Revised Scope of Work for Downgradient Investigation Activities at the
Village of Whitefish Bay Former Landfill Site on Good Hope Road

Dear Andy:

As I indicated in our telephone conversation today, a couple of developments have occurred with respect to the proposed final steps for completing the downstream plume investigation in the vicinity of the former Village of Whitefish Bay landfill on Good Hope Road. Both SIGMA Environmental Services, Inc. and National Resources Technology, Inc., consultants respectively for the Village and for Presidio Properties, met with you in July to discuss the elements of what we all expect to be the final step in the investigative stage of this project. Since that time, one of those elements, sampling under 55th Street to the west of Presidio Properties, has been undertaken by the manager for those properties. The goal is to determine whether contaminants are migrating onto the Presidio property from the west. The other development is a slight revision in the scope of activities contemplated for the landfill and points south of the landfill.

Specifically, as indicated in the enclosed proposal from SIGMA, the scope of work will include a nested well complex approximately one-half (½) of the distance between Green Tree Road and Mill Road. These two new wells will be sampled for groundwater elevation and groundwater quality. In addition all wells from the landfill southward will be checked for groundwater elevation simultaneously, and selected wells on the landfill and the Webster School property will be sampled for groundwater quality. We believe that this collection of data will provide sufficient information with which to meaningfully prepare remediation plans, if necessary.

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I indicated that the Village intends to seek a Site Assessment Grant, and we would appreciate any further comments from you as soon as possible. Thank you for your attention to this matter.

Sincerely,



Dennis L. Fisher

cc: James Thomas (w/encls.)
Mafizul Islam (w/o encls.)
CMT5869.WPD;1

December 31, 2001

Project # 3125

Mr. Dennis Fisher
Meissner, Tierney, Fisher & Nichols
The Milwaukee Center, 19th Floor
111 East Kilbourn Avenue
Milwaukee, WI 53202-6622

RE.: Revised Scope of Work and Cost Estimate for Downgradient Investigation Activities and Groundwater Monitoring, Former Good Hope Landfill Site, Milwaukee, Wisconsin

Dear Dennis:

Per our discussion on December 28, 2001 Sigma Environmental Services, Inc. (Sigma) has revised the scope-of-work and associated cost presented in the July 25, 2001 proposal to complete supplemental investigation activities in areas downgradient of and within the former Good Hope Road Landfill. Please note that activities associated with the 55th Street investigation have been eliminated from this scope-of-work.

The investigation activities are designed to further define the downgradient extent of the groundwater plume immediately south of the Webster Middle School and provide additional groundwater flow and analytical information across the areas of groundwater impact to support, if appropriate, remediation of downgradient groundwater impacts by the natural attenuation method. The recommended scope of work and associated costs are broken into three separate tasks and presented below.

Task 1: Well/Piezometer and Staff Gauge Installation

- Install one well nest (a shallow water table well and a deep piezometer) at the intersection of Hassel Lane and North 52nd Street to further delineate the downgradient extent of the groundwater plume.
- Collect and perform analysis one soil sample for total organic content and pH to determine contaminant transport parameters.
- Install two staff gauges on Lincoln Creek (one at Green Tree Road bridge and one at Mill Road bridge) to obtain surface water elevation data and assess the interaction of the shallow groundwater flow system with the surrounding surface water bodies (Lincoln Creek and the newly constructed detention pond).

Task 2: Groundwater Monitoring

- Collect one complete round of water level data from all existing and newly installed monitoring wells and piezometers (42 sampling points) to evaluate horizontal and vertical gradients of the shallow and deeper reaches of the groundwater flow system.



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December 31, 2001
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- Collect one round of groundwater quality data (volatile organic compound [VOC] analysis) from the newly installed well nest (2 sampling points) and select monitoring well/piezometer locations (six from the landfill area and six from the MPS site) to evaluate the groundwater quality conditions with respect to chlorinated organic compounds.
- Complete in situ hydraulic conductivity tests (slug test) in three wells (two shallow wells and one deep well) to further evaluate groundwater flow parameters.
- Repair/replacement of several well covers/protective casings damaged due to vandalism.
- Complete re-surveying of the repaired wells and survey of newly installed wells/piezometers, staff gauge, and wells installed by the MMSD on the landfill site.

Task 3: Data Evaluation and Reporting

- Complete data tabulation, groundwater and surface water flow interpretation and contaminant evaluation.
- Prepare a report documenting plume delineation and flow systems interpretation.

Attached Table 1 presents the cost to complete the activities outlined above. Please note that the estimate of \$40,000 includes costs to prepare and attend two meetings, one with the WDNR and one with the Village of Whitefish Bay.

In addition costs for disposal of soil cuttings and development/purge water are estimated to total approximately \$5,000. Please note, yearly permit fees for wells located in the City of Milwaukee right-of-way are estimated to total approximately \$1,200.

Please feel free to call us if you have any questions or need further clarification.

Sincerely,

SIGMA ENVIRONMENTAL SERVICES, INC.



Mafizul Islam, P.E.
Senior Project Engineer



Randy E. Boness, P.G.
Senior Project Manager

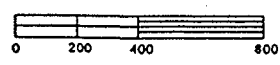
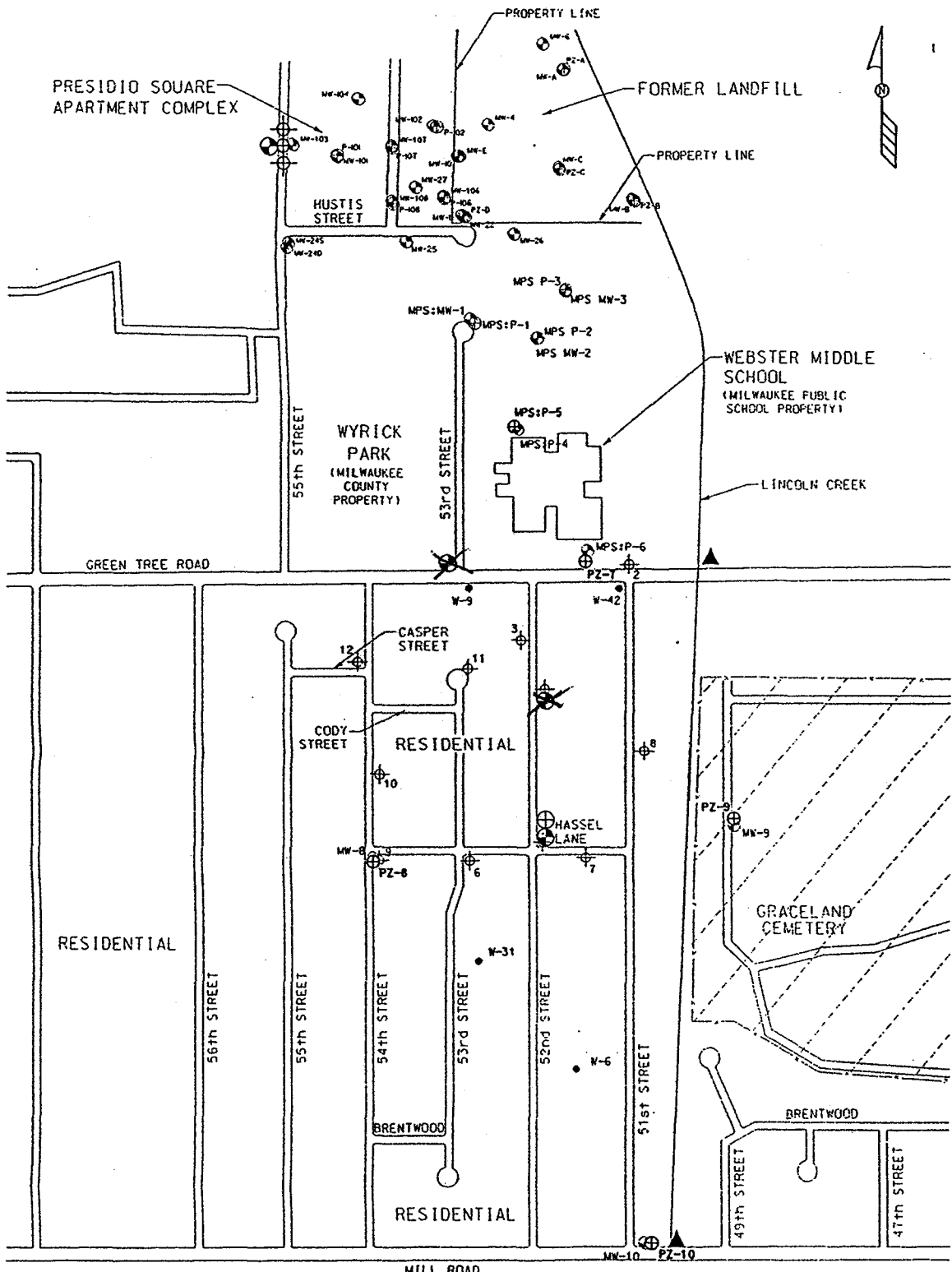
/Attachments

Table 1
Off-site Well Installation and Groundwater Monitoring
Good Hope Road Landfill, Webster Middle School & Residential Subdivision
Milwaukee, Wisconsin

Task Description	Total Hours per Person							Consulting Costs		Subcontracting Costs		Total Cost
	Sr. Proj Eng \$100	Proj Hydro \$85	Sr Proj Scien \$100	Staff Scien/Eng. \$75	Field Tech \$55	CADD Tech \$60	Clerical \$40	Total Labor Costs	Equipment & Expenses	Sub-Contractor Expenses	Laboratory Analytical Expenses	
TASK 1 - Wells, Piezometer & Staff Gauge Installation/Development												
Project Coordination and Planning	8	4	4	8				\$2,140				\$2,140
City Permit and Utility clearance				8				\$600	\$300			\$900
Detention Pond/Creek Elevation Measurements & Flow Evaluation	8			20				\$2,300	\$200			\$2,500
Installation/Development of One Shallow Well and One Piezometer	4			30	8			\$3,090	\$330	\$6,000	\$150	\$9,570
TOTAL - TASK 1	20	4	4	66	8	0	0	\$8,130	\$830	\$6,000	\$150	\$15,110
TASK 2 - Groundwater Monitoring												
Project Coordination and Management	16		4	10				\$2,750				\$2,750
Water Level Measurement (42 sampling points)	2			2	18			\$1,340				\$1,340
Groundwater Monitoring Well Sampling (14 wells & 2 QA/QC)	4			4	40			\$2,900	\$760		\$1,500	\$5,160
Hydraulic Conductivity Testing	2			20				\$1,700	\$500			\$2,200
Elevation and Location Survey				4				\$300		\$1,200		\$1,500
TOTAL - TASK 2	24	0	4	40	58	0	0	\$8,990	\$1,260	\$1,200	\$1,500	\$12,950
TASK 3 - Data Evaluation and Reporting												
Project Coordination, Management & Meeting	16		6	12				\$3,100				\$3,100
Data Tabulation, Flow Interpretation & Contaminant Evaluation	4	6	4	40				\$4,310				\$4,310
Report Documenting Plume Delineation & Flow System Interpretation	12		8	20		16	6	\$4,700				\$4,700
TOTAL - TASK 3	32	6	18	72	0	16	6	\$12,110	\$0	\$0	\$0	\$12,110
CONSULTING COSTS												\$31,300
SUBCONTRACTING COSTS												\$8,900
TOTAL PROJECT COST												\$40,200

Note:

1. Cost for Disposal of Soil Cuttings and Purge/Development Water is not included in this estimate. It is estimated that cost to dispose of 22 drums of soil cuttings to a solid waste landfill and 1800 gallons of impacted water to Port Wash. Wastewater Treatment facility is approximately \$5,000.
2. City of Milwaukee yearly permit fee for wells located on the city ROW is not included. It is estimated that total yearly permit fee is approximately \$1,200.
3. The estimate includes costs for one meeting with the WDNR, one meeting with the Village. If field activities are implemented during adverse weather conditions, such as winter drilling and sampling, additional cost may be incurred.
4. Water level measurements will be collected from 42 sampling points (24 points located at landfill site, 10 points located at the MPS site and 8 located at the residential subdivision south of Green Tree Road). Groundwater samples will be collected from 14 wells/piezometers (6 from the landfill site, 6 from the MPS site, and one newly installed well/piezometer nest at the subdivision), and analyzed for VOCs only.



LEGEND	
	= PROPOSED MONITORING WELL
	= PROPOSED PIEZOMETER WELL
	= GEOPROBE BORING
	= PROPOSED STAFF GAUGE
	= ABANDONED WELL (FORMER RESIDENTIAL WELL)
	= MONITORING WELL
	= PIEZOMETER
	= GEOPROBE BORING (GAS PROBE)
	= CHAIN LINK FENCE

NOTES:
 1. BOUNDARIES ARE APPROXIMATE.
 2. THIS MAP WAS DEVELOPED FROM A MILWAUKEE COUNTY MAP, THIENSVILLE QUADRANGLE TOPOGRAPHIC MAP, AND SURVEY DATA.

VILLAGE OF WHITEFISH BAY MILWAUKEE, WI			 SIGMA ENVIRONMENTAL SERVICES INC.
DATE: 12-14-00	DR. BY: NKB	DR. # 3125-048	
PROPOSED SOIL AND GROUNDWATER SAMPLING LOCATIONS			SCALE: 1" = 400' FIGURE 1