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1409 EMIL STREET, P.O. BOX 9538, MADISON, WIS. 53716 • TEL. (608) 257-4848

August 10, 1979  
C 7606W

Mr. Carl Pedretti, Chairman  
Town of Onalaska  
Town Hall  
Rt. 2  
Onalaska, WI 54650

Re: Groundwater Monitoring  
Onalaska Sanitary Landfill

Dear Mr. Pedretti:

Please find attached the groundwater monitoring results for the second quarter of 1979. The samples were obtained on June 4, 1979 from the landfill wells, the Cecil R. Miller home and garden wells and the Sportsman's Club well east of the landfill.

#### Groundwater Flow Directions

Horizontal groundwater flow directions were generally to the south and southwest with groundwater discharging into the Black River. Based on the horizontal flow directions shown on Drawing C 7606-A18 the Miller wells are downgradient of the landfill.

Vertical groundwater movement was in an upward direction with a gradient of  $2 \times 10^{-2}$ .

#### Groundwater Quality

Analyses of the samples are shown on the attached laboratory report. Wells 5 and the Sportsman's Club well are located upgradient and would be expected to reflect background water quality or natural conditions. Groundwater observation wells located within and downgradient of the landfill (2, 2A, 3A and 4) generally show elevated concentrations with respect to specific conductance, chemical oxygen demand, chloride and total hardness. These trends are similar to those reported in our letter of May 1, 1979. Well 1, located immediately north of the landfill,

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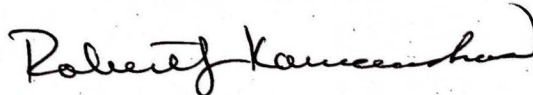
also shows variable increases with respect to specific conductance, chemical oxygen demand, chloride, total hardness and sulfate compared to the upgradient wells. No trends are apparent in the data for the parameters pH, dissolved iron, nitrate and sulfate.

Similar to previous reporting periods, the Miller home well exhibits increased conductivity, chloride and total hardness concentrations compared to background water quality Well 5 and the Sportsman's Club. Increases are apparent in the garden well with respect to conductivity and total hardness only. The relatively high sulfate concentration in the Sportsman's Club well was also observed during the April sampling period.

Based on the data obtained from the June samples, the conclusions reported in May, 1979 are still applicable. If you should have any questions or require further clarification, please do not hesitate to contact us.

Very truly yours,

WARZYN ENGINEERING INC.



Robert J. Karnauskas  
Hydrogeologist

RJK/jas

Encls: Groundwater Contour Map - June 14, 1979  
Analytical Laboratory Results

cc: Chuck Goebel, DNR-Madison (w/encls.)  
Jim Boettcher, DNR-LaCrosse (w/encls.) ✓  
Jeff Miller, DNR-Eau Claire (w/encls.)  
Gene Mitchell, DNR-Madison (w/encls.)

WISCONSIN

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OFFICE OF THE STATE ENGINEER  
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MADISON, WISCONSIN

TO THE HONORABLE SENATOR  
STATE OF WISCONSIN  
MADISON, WISCONSIN

RE: [Illegible text]  
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