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February 23, 1994

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Ms. Cynthia Wanless, R.S.
Tacoma-Pierce County Health Department
3629 South D Street
Tacoma, Washington 98408-6897

**RE: TOTAL LEAD RESULTS FOR NORTHWEST WIRE ROPE AND
EQUIPMENT, 2301 LINCOLN AVENUE, TACOMA, WASHINGTON**

We are responding to your concerns regarding the total lead results for the quarterly ground-water monitoring occurring at Northwest Wire Rope & Equipment, Inc.

You have indicated concern over the total lead concentrations in monitoring well MW-002, which have fluctuated from less than 5 parts per billion (ppb) to 15 ppb over the six groundwater sampling events, as shown in Table 1. These fluctuations are most likely due to matrix interference caused by silt in the groundwater sample. This issue was addressed in the fifth quarter sampling report dated October 1993 (page 2, first paragraph), where the sample was reported to be "cloudy brown with suspended particles." I discussed the procedure with the laboratory, and they indicated that everything in the sample bottle delivered to them must be considered "the sample," regardless of its constituents. In other words, if there is silt in the sample, it will be analyzed as part of the water sample, which results in matrix interference and elevated lead concentrations.

TABLE 1

SUMMARY OF TOTAL LEAD CONCENTRATIONS IN GROUNDWATER

Quarter	Total Lead Result (ppb)
1	< 5
2	12
3	6
4	4
5	15
6	3
MTCA Cleanup Level	5

400 NORTH 34TH STREET • SUITE 100
P.O. BOX 300303
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SHANNON & WILSON, INC.

I spoke with the field technician who performed all of the groundwater sampling at this site, and he indicated that all of the wells at the site are silty. This corresponds with our knowledge of the geology at the site, as it is in the Tacoma tideflats area, which is largely river-deposited silt. It is our experience that an extreme event, such as gasoline in the free phase, is required to truly elevate lead levels in the groundwater. This was certainly not the case at the Northwest Wire Rope & Equipment facility.

Lead is known to adsorb onto soil particles, particularly small particles such as silt. The Model Toxics Control Act lead cleanup level for soil is 250 parts per million (ppm) (250,000 ppb) for residential areas and 1,000 ppm (1,000,000 ppb) for industrial areas. The difference between the soil cleanup levels and the groundwater cleanup level of 5 ppb is so dramatic that additional sampling would not likely provide further data useful to the Tacoma-Pierce County Health Department (TPCHD) in evaluating the site. It seems reasonable to assume that elevated lead levels are due to matrix interference from the silt based on visual assessment of the groundwater samples, current knowledge of soil adsorption processes, the laboratory's reported analysis procedures, and the fluctuation of results over the six quarters.

We would again urge the TPCHD to issue a "no further action" status for this site based on the currently available analytical results. Please contact me at (206) 633-6889 if you have any questions or comments regarding the information presented to you.

Sincerely,

SHANNON & WILSON, INC.



Brian L. Clark
Environmental Engineer

BLC:RC/blc

cc: Ron Kline
Northwest Wire Rope & Equipment

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TOTAL P.03