

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

Department of Natural Resources

DATE: October 1, 1996 FILE REF: 405011090
TO: Better Brite Superfund RI/FS File
FROM: Terry Evanson - RR/3
SUBJECT: Modification/Abandonment of Monitoring Wells Near the Zinc and Chrome Shops

I requested that Judy Fassbender review the status of monitoring wells at the Better Brite Chrome and Zinc Shops and provide me with recommendations on which wells should be abandoned. Judy sent me a letter, dated Oct. 1, with her recommendations. I have made the following decisions regarding monitoring wells at the sites.

1. Three wells located at 401 S. Sixth Street (Garcia residence) have protop stick-ups. The Garcia's want to construct a fence and move their garage. The protop stick-ups interfere with both of these activities. I have directed Judy to schedule a driller to install flush mounted casing tops on these three wells (W-1, W-1A, and MW-6A). This work will be done by October 11, 1996. The estimated cost (\$1,450) will be paid out of the well abandonment task in the Better Brite RI/FS contract.

2. Well abandonment is recommended for wells at the Chrome Shop that are in the area to be stabilized/solidified. Also, Judy recommends abandoning bedrock wells at both the Chrome and Zinc Shops because those wells are not contaminated but could serve as conduits for surface contamination if the wells become damaged in the future. I have decided to delay monitoring well abandonment to the RD/RA phase. Most private owners gave access permission for the monitoring wells until the end of 1996. Therefore, access agreements must be renegotiated with each home owner in the near future. Monitoring wells on property that we cannot negotiate access extensions will also require abandonment. It makes sense to perform all the well abandonments at the same time. Hydro-Search's estimated cost for well abandonment (by overdrilling and backfilling the holes) is \$19,665 for the following wells:

Zinc Shop

Chrome Shop

Wells in bedrock

- MW-4B
MW-5B
MW-6B

Wells in stabilized/solidified area

- W-1 W-9
MW-109 MW-109A
MW-109B B-105B

Wells in bedrock or of limited usefulness

- B-102 MW-108B
MW-106B MW-114
MW-107B

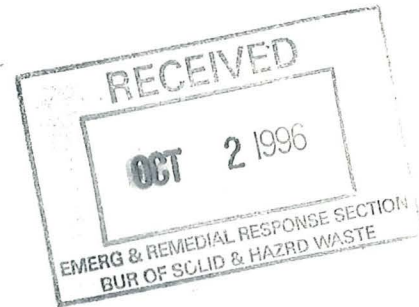
Additional costs would be incurred for abandonment of monitoring wells where access agreements cannot be extended.

TAE:tae/bb/wellaban

cc: Kathy Erdmann -NER

Judy Fassbender - HSI

October 1, 1996
(301483158/1010)



Ms. Theresa Evanson
Wisconsin Department of Natural Resources
101 S. Webster Street
P. O. Box 7921
Madison, WI 53707-7921

RE: Monitor Well Abandonment at Better Brite, DePere, Wisconsin

Dear Terry:

As you requested, Hydro-Search, Inc. (HSI) has evaluated the status of the monitor wells at Better Brite and provided cost estimates to convert several stick-up monitor wells to flush mounts and abandon the wells no longer required at the site. The results of our evaluation are summarized below.

ZINC SHOP

Three wells with stick-up protops are present near the Zinc Shop. These include W-1, W-1A and MW-6A. All three are located on Pamela Garcia's property and all can be converted to flush mount wells on a Monday or a Friday over the next month or so. The cost for the conversion of the three wells is estimated at \$1,450.

As for the status of the monitor well network at the Zinc Shop, it is likely desirable to abandon the deeper bedrock wells as they have been useful in confirming the low hydraulic conductivity of the bedrock, but are not useful for providing ground-water chemistry or gradient information because of the small amount of water entering the well.

Although the construction of the three deep bedrock wells (MW-4B, MW-5B, and MW-6B) at the Zinc Shop is good, there is always the potential for downward migration of contaminants and abandoning the deeper wells removes that possibility.

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Due to the widespread distribution of chromium impacts in ground water and the proximity of impacts to private homes and the municipal well, HSI recommends that the other monitor wells be maintained for use during the remedial action to provide ground-water chemistry and capture zone confirmation. The remaining wells include 11 water table wells and 7 shallow piezometers.

CHROME SHOP

Fourteen of the monitor wells at the Chrome Shop have stick-up protops. Eleven of these are located on the Chrome Shop property. The remaining three (W-5, W-9, and B-105B) are on private property adjacent to the Chrome Shop.

Two of the three wells (W-9 and B-105B) are proposed for removal during stabilization/solidification remedy implementation. The third (W-5) will likely remain as a monitoring point following the Remedial Action.

Four additional monitor wells should also be abandoned prior to the remedy implementation because they are located within the area proposed for stabilization. These include MW-109, MW-109A, MW-109B, and W-1.

Two wells (B-102 and MW-114) should also be abandoned. The PVC well casing at B-102 was damaged during regrading activities at the Chrome Shop. A bailer or other sampling device will no longer pass through the casing to allow for sample collection. B-102 is located near the MW-107 nest and, thus, is not an essential monitoring point.

MW-114 was installed to delineate the nature and extent of impacts initially detected at MW-113. MW-114 was found to be unimpacted and upgradient of MW-113. The chromium

levels at MW-113 are only slightly above standards and can be adequately monitored through MW-113 alone.

As at the Zinc Shop, it is advisable to abandon the bedrock wells at the Chrome Shop to reduce the potential for migration of impacts into bedrock. The bedrock wells at the Chrome Shop include MW-106B, MW-107B, MW-108B, and MW-109B. MW-109B was also recommended to be abandoned because of its location within the area planned to undergo stabilization.

Following abandonment of the recommended wells, the six stickup protop wells on the Chrome Shop property and W-5 could remain with the stickup construction.

If vandalism or aesthetics are a concern, the protops could be changed to flush mounts at an estimated cost of \$400 per well. HSI would not anticipate difficulties if the wells were not modified and remained with aboveground construction.

SUMMARY AND COST ESTIMATE

Three wells at the Zinc Shop should be modified to flush mount construction. All of the Chrome Shop wells could remain as currently constructed. Six wells at the Chrome Shop should be abandoned by overdrilling and backfilling because of their location within the anticipated stabilization area. An additional three wells at the Zinc Shop and five at the Chrome Shop could be abandoned because they will be unlikely to provide additional information necessary for site monitoring. The wells included in the recommended list for abandonment are indicated on Table 1.

The cost to modify the three Zinc Shop wells to flush mount construction is estimated at \$1,450. Additional wells could be converted at a cost of approximately \$400 per well. HSI

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will contract a reputable drilling firm familiar with the site conditions (Boart Longyear) to convert the wells to flush mounts but is not required to be present at the site to provide oversight.

Costs to abandon the six wells within the stabilization area at the Chrome Shop, three bedrock wells at the Zinc Shop, three bedrock wells and two additional wells at the Chrome Shop are estimated at \$19,665. In abandoning, the wells would be overdrilled and backfilled to ensure downward migration routes for contaminants are not present. Cuttings, consisting primarily of the well construction materials, would be drummed for disposal or incorporation into the solidification material.

The cost for well abandonment could be reduced if overdrilling is eliminated and the PVC well materials are backfilled and cut off below ground surface as required by NR141. Costs to abandon the wells in this manor are estimated at \$8,600 and minimal waste will be generated for disposal. Although this is more cost effective, it is less effective in assuring pathways for downward migration are eliminated.

HSI will provide oversight and documentation for whichever abandonment alternative is selected.

SCHEDULE

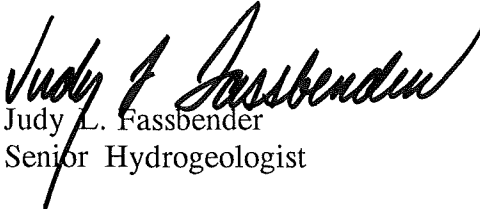
HSI can schedule the well conversion for any Monday or Friday as soon as we receive your authorization to proceed. The well abandonment could be conducted in conjunction with the conversions if desired. It is estimated that six field days will be required if the overdrilling option is selected and two to three days if the wells are abandoned without overdrilling. Two to three weeks may be required to allow time to schedule drilling services for the abandonment.

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Please let us know how you would like to proceed. As always, it is a pleasure working with you on this project.

Sincerely,

HYDRO-SEARCH, INC.


Judy L. Fassbender
Senior Hydrogeologist

JLF:gf

WELL STATUS SUMMARY

Stick-up Pro Tops

Zinc Shop

W-1*
W-1A*
MW-6A*

Chrome Shop

W-1 MW-106
W-5* MW-106B
W-9* MW-107
B-101 MW-107A
B-102 MW-107B
B-104A MW-113
B-105B* MW-114

* located on private property (not on Better Brite Property)

Wells to be abandoned because of stabilization/solidification

Chrome Shop

W-1
W-9
MW-109
MW-109A
MW-109B
B-105B

Wells to be abandoned because of limited usefulness

Zinc Shop

MW-4B
MW-5B
MW-6B

Chrome Shop

B-102 MW-108B
MW-106B MW-114
MW-107B