

State of Wisconsin

DEPARTMENT OF NATURAL RESOURCES

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S. Glor
J. Schmidt - SEP

Carroll D. Besadny
Secretary

BOX 7921
MADISON, WISCONSIN 53707

July 31, 1985

IN REPLY REFER TO: 4430

Mr. Roger F. Hatcher, Ph.D.
Hatcher, Inc.
9025 Forest Hill Ave.
P.O. Box 3527
Richmond, VA 23235

RE: Proposed Changes in Saukville/Freeman Chemical Co. Groundwater Monitoring Program: Installation of Bedrock Piezometers and Replacement of Shallow Piezometers

Dear Mr. Hatcher:

The Bureau of Solid Waste Management of the Department of Natural Resources has completed a review of proposed changes to the Saukville/Freeman Chemical Co. Groundwater Monitoring Program outlined in your letter of July 17, 1985. As we discussed with Mr. George Bain on July 24, 1985, the Department has determined that the installation of bedrock piezometers and replacement of shallow piezometers is acceptable as represented in your diagram (see enclosed). The Department believes this represents a substantial improvement in the monitoring program for the Saukville/Freeman Chemical Company program. The proposed changes are outlined as follows:

1. Deep piezometers: The Department's main concern has been to determine the extent of contamination of the bedrock aquifer. Towards this end, installation of the four deep piezometers (50-100 feet dolomite) on the Freeman Chemical Company property and two between the Freeman property and the municipal pumping wells is acceptable.
2. Replacement of shallow piezometers: A number of the present piezometers are screened at the dolomite/glacial till interface. As such these wells are neither water table wells nor bedrock wells and do not sample groundwater that is representative of either formation. The Department agrees that the following wells in this category will be abandoned and replaced with properly screened shallow piezometers.

PZ-1, PZ-4, PZ-6, PZ-14, on the Freeman Chemical Company property
PZ-18, PZ-19, on the Oaubinstein property
PZ-16, offsite near the school house

Placing a new shallow piezometer between the Freeman property line and the Laubenstein well (PW-8) is an excellent suggestion.

The old well should be abandoned by overdrilling to remove the packing and the well filled with bentonite using a tremie tube. DNR guidelines for proper abandonment are found in the enclosed DNR "Guidelines for Monitoring Well Installation."

3. Shallow wells to be abandoned with no replacement: Piezometers 10/11, 12, and 13 south of the Freeman property are also screened at the dolomite/till interface and do not sample groundwater from either geologic formation. In the past these wells have shown no levels of contamination. The Department agrees that these wells can be abandoned.

There are four monitoring wells on the Freeman Chemical Company property that are highly contaminated with organic compounds. These are PZ-2/3, PZ-5, and PZ-9. Piezometer 9 was also found to be contaminated with algal growth, and piezometers 2 and 5 may actually act as conduits for contaminants to the bedrock. These four wells should be properly abandoned.

4. Monitoring wells that will remain: piezometers 7/8 are properly screened and will remain in place. Private wells PW-3 and PW-6 should remain as part of the monitoring program.

The Department remains pleased at the efforts of Hatcher, Inc. to properly assess the extent of contamination on the Freeman Chemical Company property and in the Village of Saukville, Wisconsin.

If there are any questions or comments regarding this investigation, please contact Mr. Ken Satyshur at (608) 266-7017.

Sincerely,
Bureau of Solid Waste Management

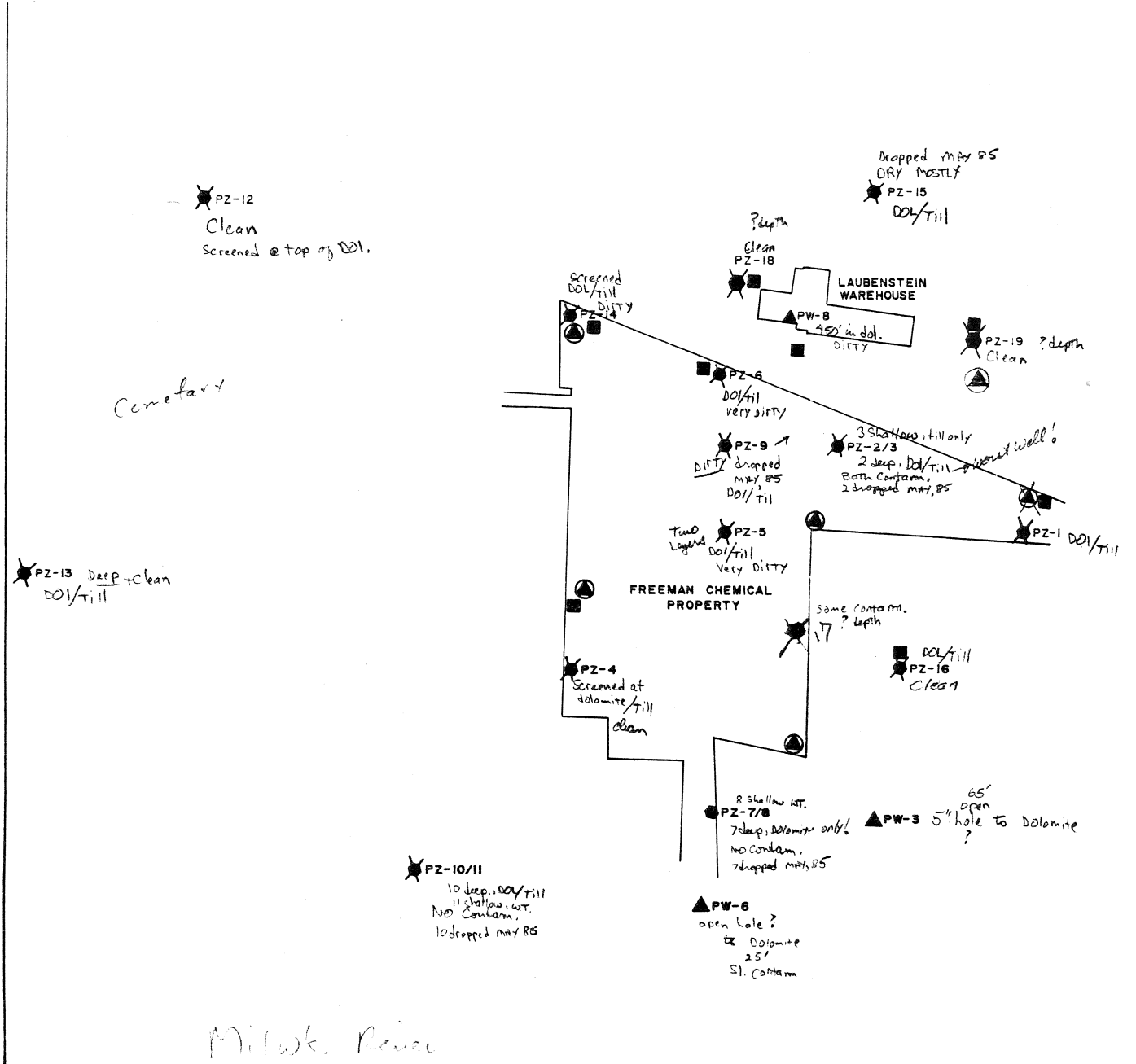


Richard E. O'Hara, Chief
Hazardous Waste Management Section

REO:KS:db/4033U

Encl.

cc: Paul Didier - SW/3
Richard Thompson - Waters Instruments
Russell Cerk - Freeman Chemical Corp.
Ronald Horn - Freeman Chemical Corp.
Rick Schuff - SW/3
Mark Giesfeldt - SW/3
Ken Satyshur - SW/3
Skip Glor/Jim Schmidt - SED
Ted Bosch - SED



● PZ-12
Clean
Screened @ top of Dol.

Dropped May 85
DRY MOSTLY
● PZ-15
DOL/Till

? depth

Clean
● PZ-18

LAUBENSTEIN WAREHOUSE
PW-8
45' in dol.
DITTY

● PZ-19 ? depth
Clean

● MW-2
500' 12"
Contaminated.

PROPOSED CHANGES IN GROUND-WATER MONITORING POINTS

SCALE 1"=200'

HATCHER INCORPORATED
RICHMOND, VIRGINIA

Shallow - start screen a few feet below surface make it 5-10 ft. so that shallow till will intersect.

Cemetery

● PZ-13 Deep + clean
DOL/Till

● PZ-6
DOL/Till
very dirty

● PZ-9
DITTY
Dropped May 85
DOL/Till

3 Shallow, till only
● PZ-2/3
2 deep, Dol/Till
Both Contam.
2 dropped May 85

Two Layers
● PZ-5
DOL/Till
Very DITTY

● PZ-1 DOL/Till

FREEMAN CHEMICAL PROPERTY

some contam.
● PZ-7
? depth

● PZ-16
Clean

● PZ-4
Screened at dolomite/till
clean

8 shallow wt.
● PZ-7/8
7 deep, Dolomite only!
NO Contam.
7 dropped May 85

65' open hole to Dolomite
▲ PW-3 5" hole ?

● PZ-10/11
10 deep, DOL/Till
11 shallow, wt.
NO Contam.
10 dropped May 85

▲ PW-6
open hole ?
ex Dolomite
25'
Sl. Contam

● MW-1
500', 12" hole
NO Contam. (?)

Milwk. River