

April 19, 1993

WATER
RESOURCES
DEPARTMENT

Steve Schneider
Schneider Equipment, Inc.
21881 River Road NE
St. Paul, OR 97137

Dear Steve:

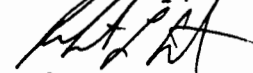
I have had an opportunity to review the information you forwarded to me concerning the City of Troutdale "Drinker" well. I apologize for the delay in responding. Robinson and Nobel intend to convert the well to a multi-completion piezometer. Due to the fact that there is no contamination verified in any of the target aquifers, I have no concern about the construction of a multi-completion piezometer. I would, however, like to see some modifications in Robinson and Noble's initial design.

The design changes are as follows:

1. I would recommend that prior to installation of the piezometer, that the current well be cleaned out of any sand and debris to the original depth of 591 feet. The sand in the bottom of the well has sufficient permeability to allow commingling of water from the bottom water producing zone upwards. This allows waste of the lower water zone. Once the sand is removed, the lower zone could be monitored, or the bottom could be abandoned with a impermeable material.
2. I would also recommend that the bentonite layers used to seal each interval off be extended to 20 feet. The 10 foot placement may not adequately seal off each interval. Also, due to the depth of placement, a greater amount of bentonite may allow for a more positive placement.

Our Department would be interested in any measurements taken from this well. If you have any questions concerning this letter, please give me a call.

Sincerely,



Rob Carter
Well Construction Specialist

cc: Mark Norton, GW/Hydrology
Ken Lite, GW/Hydrology



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*w-mc, OT
remark-conversion*

**State of Oregon
Water Resources Department**

INTEROFFICE MEMORANDUM

Date: 4-8-93

TO: Marc Norton, Ken Lite
FROM: Rob Carter, Well Construction Specialist
SUBJECT: Multi-Completion Piezometer

Steve Schneider forwarded the attached information to me. He may be bidding on a job to install a multi-completion piezometer well near the City of Troutdale. The proposed completion would allow for study of 3 separate water bearing zones.

According to the attached water quality report, the existing well is clean. As the well is to be a multi-completion piezometer, we are looking at an "other hole" designation. Due to the commingling currently taking place, however, I think that we have some room to make suggestions. I thought that you or Ken might have interest in the data that could be generated from this type of well.

Please look over the attached information and return to me soon with any comments.

Thanks,

Rob

- ① Thicker bentonite seal between zones
- ② Only if the well is cleaned to full depth