

BOOZ·ALLEN & HAMILTON INC.

841 CHESTNUT STREET • SUITE 707 • PHILADELPHIA, PENNSYLVANIA 19107 • TELEPHONE: (215) 928-7900 • FAX: (215) 928-7901

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April 23, 1997
B-09075-0129

Mr. Larry Brown
U.S. Environmental Protection Agency
841 Chestnut Street [3HW43]
Philadelphia, PA 19107

Subject: EPA Contract No. 68-W4-0010, Work Assignment # ESS-017
Final Fact Sheet #10

Dear Mr. Brown:

Attached are 60 copies of final Fact Sheet #10 for the Palmerton Zinc Site. Additional copies of the fact sheet have been prepared for a saturation mailing to the town of Palmerton and Rural Route #2 (Stoney Ridge residences).

If you have any questions regarding this deliverable, please contact me at (215) 928-7902.

Sincerely,



BOOZ·ALLEN & HAMILTON INC.

Ann Marie Cullen
Senior Consultant

Attachment

cc: Elaine Spiewak, Acting Project Officer
Donna Kotsch, Community Relations Coordinator
BA&H Central File

PALMERTON ZINC SUPERFUND SITE

PALMERTON, PA

APRIL 1997 - FACT SHEET

QUESTIONS & ANSWERS ABOUT EPA'S UPCOMING GROUND WATER STUDY



If drinking water wells currently are not contaminated, why is EPA planning to install monitoring wells?

In order for EPA to characterize ground water in the Palmerton area, as well as ensure that current and future residential drinking water wells are not in danger of becoming contaminated, additional monitoring wells will have to be installed at the site. By installing these monitoring wells, EPA will be able to gather information about the types and amounts of any contamination in ground water, the direction that the ground water flows, and other relevant details.

EPA also believes that although most drinking water wells are very deep, they could potentially be affected by contamination in the ground

water. This is due to the fact that contaminated ground water can enter a well depending upon:

- the nature of the material in which the well is installed
- the depth of the well, and
- the depths of the openings to that well.

Samples from the monitoring wells will help EPA determine if contamination has the potential to move into or already has moved into the deep aquifer, from which most residents draw their water. During past investigations, EPA has found contamination in the shallow aquifer. Studies conducted in 1986 and 1987 showed site contamination in the shallow aquifer in the area surrounding the site at varying depths down to approximately 90 feet.

GROUND WATER WELLS

Later this year, EPA will begin installing monitoring wells at the East and West plants at the Palmerton Zinc Superfund Site. EPA will use samples from the monitoring wells to determine the types and amounts of contaminants in the aquifers beneath the surface of the site and in the surrounding area. EPA believes that contamination has not been found in residential drinking water supply wells in the area because these wells draw water from a deep aquifer that lies below the contaminated shallow aquifer.

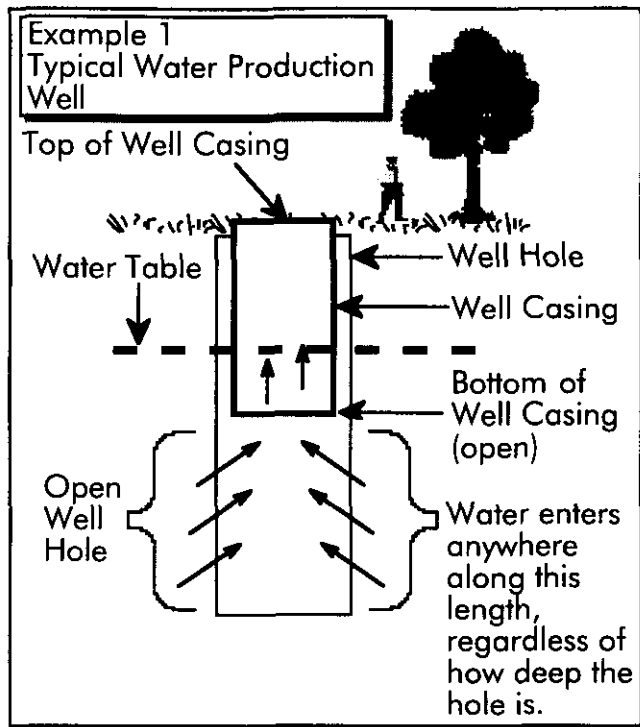
As part of the area's ground water study, EPA is investigating the types of wells used to supply drinking water to area residents. This fact sheet describes, in general, the types of wells used for this purpose and the type of monitoring wells EPA plans to install at the site.

According to Pennsylvania Department of Environmental Protection (PADEP) records, most area public drinking water wells extend to depths of approximately 300 feet or deeper. However, well casings installed within the holes drilled for these wells may only extend down between 30 and 97 feet from the surface. A well casing is a solid tube, usually of steel or plastic, that lines the hole where a well was drilled. Although these drinking water wells may be very deep, many are essentially open holes below the well casings, leading into the deep aquifer.

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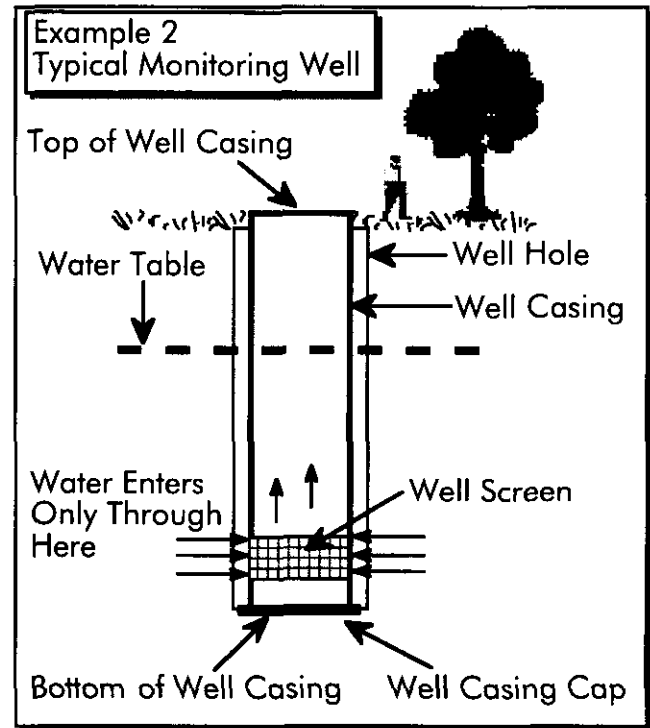
depth of the well below the casing. General descriptions of two types of ground water wells follow:

1 A 50-foot well casing installed in a well hole 200 feet deep will allow water to enter the well hole anywhere along the 50- to 200-foot levels. Any water that enters the well hole between 50 and 200 feet will be drawn upwards into the bottom of the well casing at the 50-foot level. See the picture titled Example 1 for more information. *Palmerton public drinking water wells most closely resemble this type of well.*



2 A perforated screen installed on a section of the well casing will allow water to enter the well hole only along the length of the well screen at the depth that the well screen is installed. The depth and length of the well screen determines where the water enters the well casing. For example, a well that is drilled 100 feet deep can be screened at a depth of 90 to 95 feet by placing a five-foot long

section of well screen in the casing between the 90- to 95-foot depth level, and closing the bottom of the well casing. Thus, ground water will enter the well casing only at a depth between 90- to 95-feet. This is a basic design for a monitoring well, installed to sample water from specific depths only, and not necessarily for water production. See the picture titled Example 2 for more information.



EPA believes that the Palmerton public drinking water wells, though deep, could potentially be affected by ground water contamination far above the bottom of these individual wells, depending upon the depth of the well casing of each and the presence of contamination in ground water. By installing monitoring wells, EPA will be able to sample the ground water to determine if any contamination exists anywhere in or near the deep aquifer. If contamination of the deep aquifer presents a threat to area residents, EPA will develop a plan to best protect residents from the contamination.

FOR MORE INFORMATION

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Remedial Project Manager
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215-566-3201

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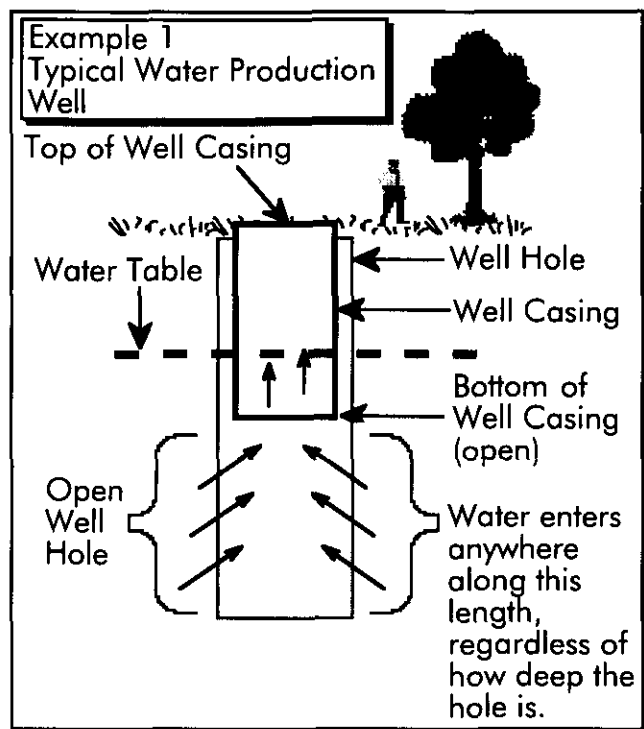
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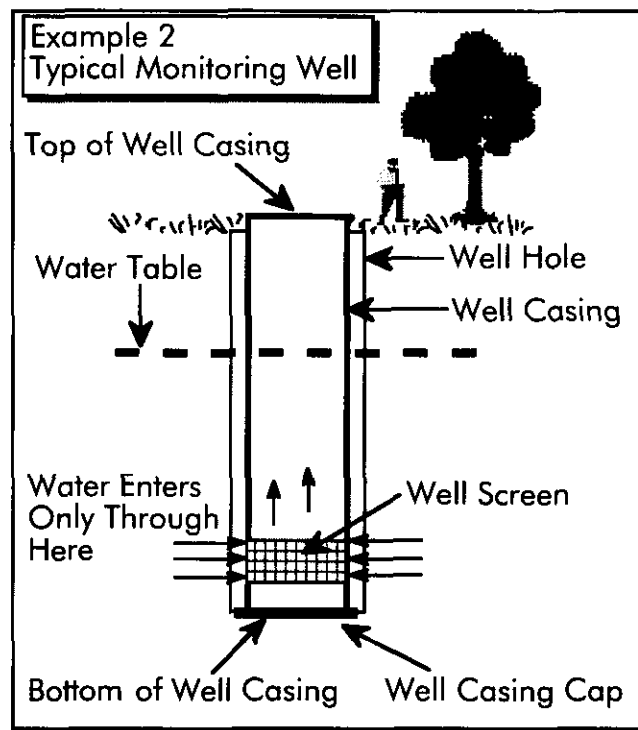
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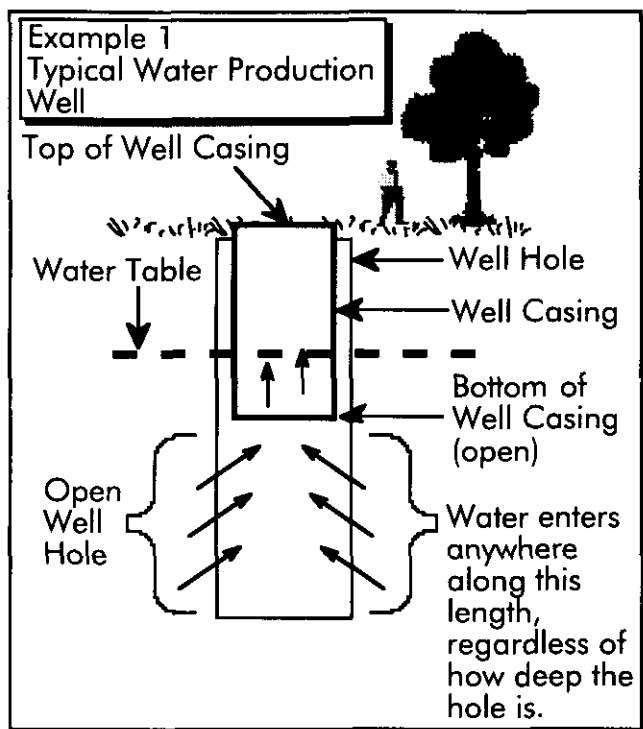
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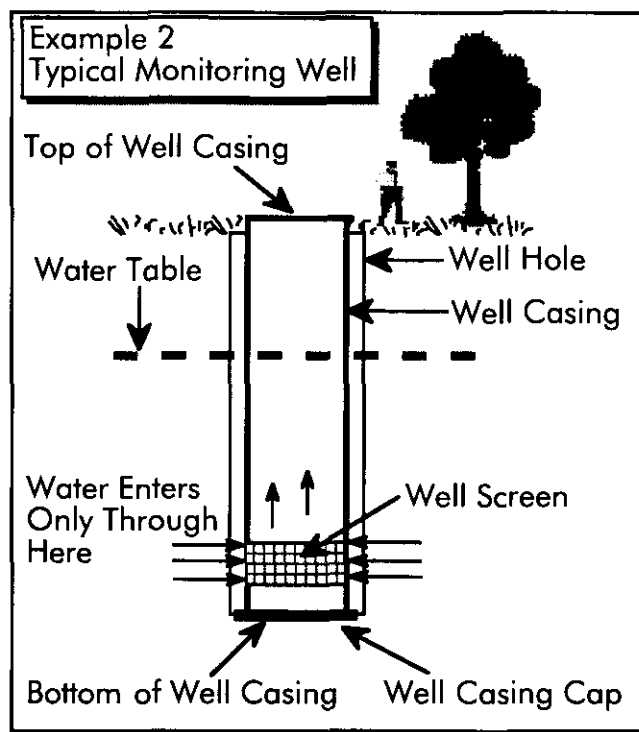
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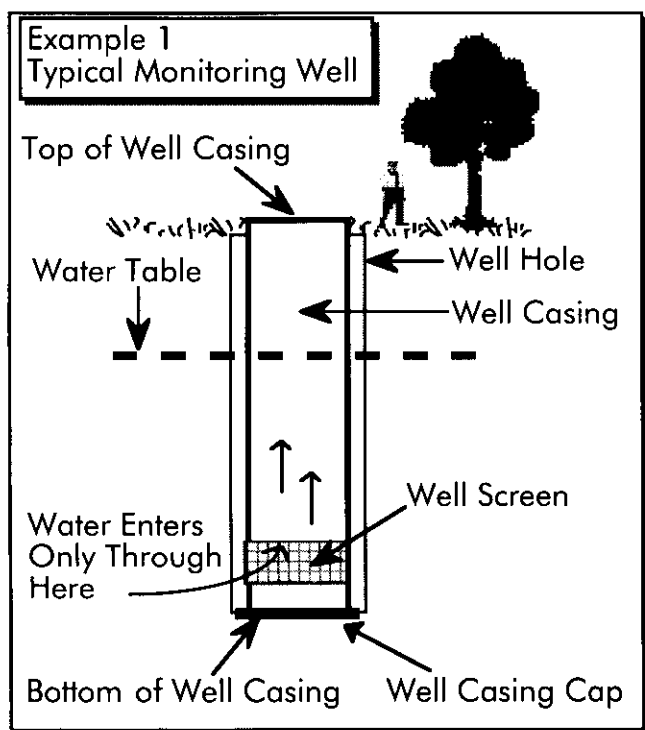
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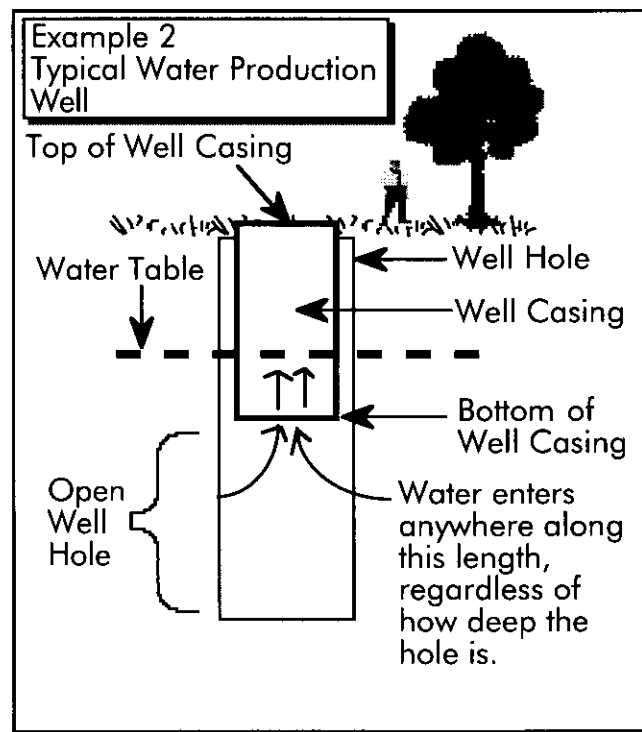
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