



Minnesota Department of Health

121 East Seventh Place
P.O. Box 64975
St. Paul, MN 55164-0975

MEMORANDUM

DATE: March 2, 1998

TO: Licensed and Registered Well Contractors
Local Government Officials in Effected Cities and Counties

FROM: *Patricia A. Bloomgren*
Patricia A. Bloomgren, Director
Division of Environmental Health

SUBJECT: Notice of Designation of Special Well Construction Area in the Vicinity of the East Bethel Sanitary Landfill

The Minnesota Department of Health (MDH) is designating a **SPECIAL WELL CONSTRUCTION AREA** which includes portions of the city of East Bethel, in Anoka County, as shown on the attached map. The Special Well Construction Area Designation becomes effective on March 15, 1998, and will remain in effect until further notice.

Groundwater in portions of the designated area has been contaminated as a result of operation of the East Bethel Sanitary Landfill. Groundwater contamination extends beneath most of the landfill site, and for several hundred feet beyond the landfill borders to the south and west. Several volatile organic chemicals (VOCs) have been detected off-site in excess of Health Risk Limits (HRLs).

Area geology consists of a surficial sand deposit, typically 20 to 60 feet deep, underlain in places by a discontinuous Grantsburg till deposit up to 20 feet thick, below which is an additional 10 to 30 feet of sand. Below this is 10 to 50 feet of Superior till. The top of the uppermost bedrock, the Franconia formation, is found at depths of 100 to 150 feet. The water table is found in the surficial sand at depths from 0 to 30 feet. Groundwater flow is generally to the south and southwest.

Contamination has been found in both the surficial and buried sand deposits above the Superior till. No contamination has been found in monitoring wells completed in the Franconia formation. Hard clay and silt layers in the Superior till appear to be acting as a confining layer.

The Minnesota Pollution Control Agency (MPCA) has implemented remedial measures at the now closed landfill, including a landfill cover system, passive gas venting system, and a groundwater pumpout system. The pumpout system runs seasonally, from April to the end of October.

The MDH and MPCA are concerned that the construction of new wells or modification of existing wells within the Special Well Construction Area may interfere with cleanup efforts, or may cause further spread of the contamination, especially during the winter when the pumpout system is idle. The MDH and the MPCA are also concerned about the public health effects that could result from the use of water-supply wells in the contaminated aquifers prior to completion of the cleanup effort. It is also important to assure that unused wells are properly sealed.

BOUNDARIES OF THE SPECIAL WELL CONSTRUCTION AREA

The location of the Special Well Construction Area is shown on the attached map. This area includes all of the east 1/2 of Section 8, the west 1/2 of Section 9, the west 1/2 of the northeast quarter of Section 9, and the west 1/2 of the southeast quarter of Section 9, Township 33 North, Range 23 West, in the city of East Bethel in Anoka County. Beginning at the intersection of State Highway 65 and Sims Road Northeast, the boundary of the Special Well Construction Area extends north on State Highway 65 approximately one mile to 221st Avenue Northeast, then east on 221st Avenue Northeast approximately one and one quarter miles, then south approximately one mile, then west approximately one and one quarter miles to the intersection of State Highway 65 and Sims Road.

REQUIREMENTS IN THE SPECIAL WELL CONSTRUCTION AREA

1. All wells regulated by the MDH are subject to the requirements of this Special Well Construction Area. This includes potable water-supply wells, irrigation wells, commercial and industrial water-supply wells, wells for heating and cooling, remedial wells, monitoring wells, and dewatering wells.
2. Construction of a new well, or modification of the depth of an existing well, may not take place until after the MDH has reviewed and approved plans for the proposed construction. In addition to the required permit application or notification, the plan must include the following information: street address; well depth; casing type, diameter, and depth; method of construction, including grout materials and grout method; pumping rate; and well use.
3. Special well construction and/or monitoring requirements may be imposed on a case-by-case basis in order to protect groundwater quality and prevent migration of contaminants. These requirements will be based on available knowledge of groundwater contamination and movement near the well site, and the proposed use and pumping rate of the well. Special requirements may include completion of the well in or below the Franconia formation, with casing and grout emplaced through all overlying formations.
4. Well construction or reconstruction will not be approved if the MDH, in consultation with the MPCA, concludes that the proposed construction or reconstruction may interfere with

cleanup efforts, cause further spread of contamination, or result in human exposure to contaminants at concentrations exceeding MDH's Health Risk Limits (HRLs).

5. If the proposed construction or reconstruction of a potable water-supply well is approved, the MDH may require that one or more water samples be collected and analyzed for VOCs before the well is grouted and put into service. If contamination is present in excess of HRLs, the well must be permanently sealed or reconstructed.
6. The permanent sealing of a well completed in bedrock may not take place until after the MDH has reviewed and approved plans for the proposed sealing. In addition to the required well sealing notification, the plan must include the following information: street address; original well depth; current well depth; casing type(s), diameter(s) and depth(s); methods for identifying and sealing any open annular space; methods for identifying and removing any obstructions; and grout material and methods.

PERSONS TO CONTACT:

For additional information regarding this Special Well Construction Area, contact Ed Schneider at the MDH at 612/215-0827.

Well construction and well sealing plans may be submitted to:

Patrick Sarafolean
Minnesota Department of Health
Well Management Section
121 East Seventh Place
P.O. Box 64975
St. Paul, Minnesota 55164-0975

For additional information regarding plan review or water sampling, contact Patrick Sarafolean at the MDH at 612/215-0826.

For information regarding the investigation, monitoring, and remediation of the contamination associated with the East Bethel Sanitary Landfill Special Well Construction Area contact:

Jean M. Olson at the MPCA at 612/296-7742

PAB:ECS:mr

Special Well Construction Area East Bethel Sanitary Landfill

