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

MEMORANDUM

DATE: November 4, 1997

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

FROM: Patricia A. Bloomgren, Director Rebecca Lofgren for:
Division of Environmental Health

SUBJECT: Notice of Designation of Special Well Construction Area in St. Paul Park and Newport

The Minnesota Department of Health (MDH) is designating a SPECIAL WELL CONSTRUCTION AREA which includes portions of the cities of St. Paul Park and Newport, as shown on the attached map. The special well construction area designation becomes effective on November 10, 1997, and will remain in effect until further notice.

Groundwater in portions of the designated area has been contaminated as a result of spills, leaks, or disposal of chlorinated solvents and petroleum products at several industrial sites including the Ashland Refinery, the former Aero Precision Engineering Company, and the former Park Penta Corporation. Several groundwater contaminant plumes originating from these (and possibly other) sites have spread to the west and southwest toward the Mississippi River. Groundwater contaminants include petroleum products, several volatile organic chemicals (VOCs), and pentachlorophenol.

Contamination has been found in the Prairie du Chien bedrock formations. The top of the bedrock is found at or within several feet of the ground surface in most of the area. The water table occurs in this aquifer about 25 to 30 feet below the ground surface. The Prairie du Chien aquifer is approximately 110 feet thick in the designated area.

Lower contaminant concentrations have also been detected in the underlying Jordan aquifer. Limited groundwater monitoring in the Jordan aquifer indicates that pentachlorophenol (PCP) and VOCs are present at concentrations below the MDH's current Health Risk Limits (HRLs). The Jordan aquifer is approximately 70 to 100 feet thick in the area.

The St. Lawrence formation, which is a confining layer approximately 35 to 60 feet thick, underlies the Jordan aquifer. The Franconia-Ironton-Galesville aquifer underlies the St. Lawrence formation and is over 300 feet thick. Neither of these deeper hydrogeologic units has been monitored.

Ashland has implemented extensive remedial measures at the refinery and Park Penta sites. The Minnesota Pollution Control Agency (MPCA), using state Superfund money, has implemented remedial measures at the former Aero Precision facility. These remedial measures are expected to be effective, but it will be many years before groundwater is fully protected. The MDH and the MPCA are concerned about the public health effects that could result from the use of water-supply wells in the contaminated aquifers prior to the cleanup completion. The MDH and the MPCA are also 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. 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. Beginning at the intersection of Second Street and Hastings Avenue in Newport, the boundary of the special well construction area extends southeast on Hastings Avenue to Pleasant Avenue in St. Paul Park, then west on Broadway Avenue to the railroad tracks, then southeast on the railroad tracks to a point due east of Eleventh Avenue, then west to the Mississippi River, then north along the river to a point due west of Second Street in Newport, then east to the intersection of Second Street and Hastings Avenue. This area is entirely within Washington County, and includes parts of Sections 1, 2, 11, and 12 in Township 27 North, Range 22 West.

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 the 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 and/or pentachlorophenol 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 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 Mr. Ed Schneider at the MDH at 612/215-0827.

Well construction and well sealing plans may be submitted to:

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

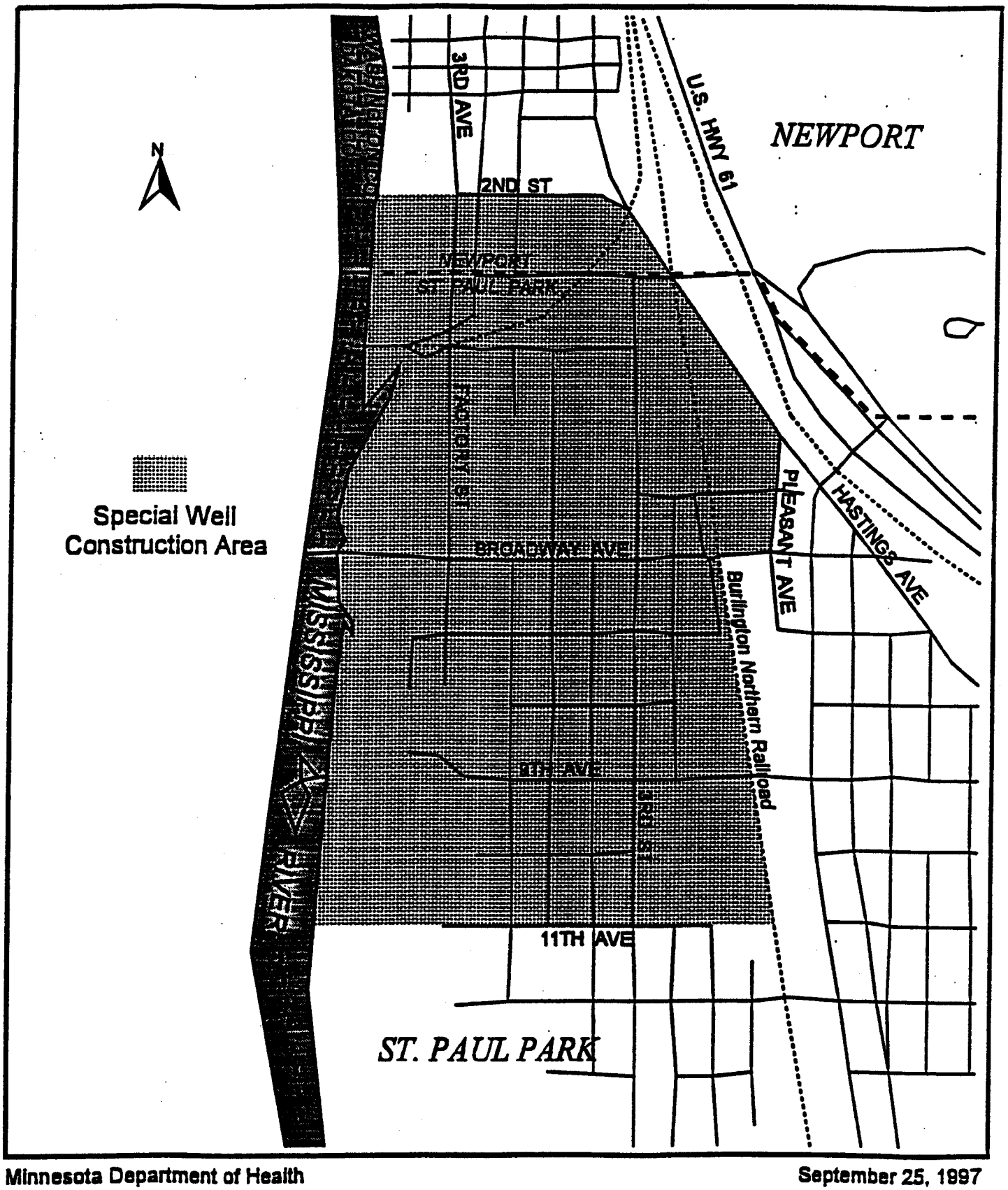
For additional information regarding plan review or water sampling, contact Mr. Patrick Sarafolean at the MDH at 612/215-0826.

For information regarding the investigation, monitoring, and remediation of the contamination associated with the St. Paul Park/Newport Special Well Construction Area contact:

Mr. Jim Lundy at the MPCA at 612/296-7822
Mr. Frank Wallner at the MPCA at 612/296-7443

PAB:ECS:mjc
Attachment

Special Well Construction Area
St. Paul Park and Newport



Minnesota Department of Health
Well Management Unit

September 25, 1997
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