



minnesota department of health

717 s.e. delaware st. minneapolis 55440

(612) 296-5221

BWB LLD  
coordinate with G.W. Se  
DW

RECEIVED

AUG 15 1980

MINN. POLLUTION CONTROL AGENCY

July 28, 1980

Ray Thron, Ph.D.  
Metropolitan Council  
300 Metro Square Building  
7th Street and Robert Street  
St. Paul, Minnesota 55101

SW-57

Dear Dr. Thron:

Re: Freeway Landfill, Dakota County.

As review of the Environmental Impact Statement and development of a proposed permit begins for the Freeway Landfill, the Department of Health wishes to raise some concerns that we will be discussing during the decision-making process.

Firstly, leachate from the Freeway Landfill may impact the City of Burnsville municipal water supply. A report, prepared by Bruce A. Liesch Associates, Inc. (5/22/78) for Burnsville, concluded that drawdowns of groundwater levels in the Prairie du Chien-Jordan aquifer due to pumpage of nine municipal wells may be sufficient to cause groundwater flow reversal. In the event that groundwater does flow from the Minnesota River, leachate from the Freeway Landfill may be drawn towards the municipal wells. Because of this serious threat to the Burnsville water supply, the City of Burnsville has installed two monitoring wells between the landfill and the well field on Cliff Road. The City has also retained Bruce A. Liesch Associates, Inc., to conduct a more intensive hydrogeologic and geochemical study of the Prairie du Chien-Jordan system to better define the extent and magnitude of groundwater flow reversal. A preliminary report should be available in November of 1980. In light of these developments and efforts, the Department of Health recommends that issuance of a permit be delayed until the preliminary report has been released and reviewed. Considering the potential impact on the City of Burnsville, a delay of a few months would seem appropriate.

Secondly, we feel the five-well monitoring system is inadequate, particularly because limestone underlies the landfill and there are no monitoring wells situated south of the landfill. Because of this, the City has had to install two monitoring wells in order to identify any potential leachate migration towards the well field. Since no leachate collection systems are planned for this landfill and leachate is being produced, it will be necessary to develop an adequate monitoring system be established to safeguard the Burnsville water supply.

It is my understanding that the proposed vertical expansion of the landfill will increase the duration of leachate production and the leachate concentration. One natural reaction might be that it is pointless to prevent leachate production and migration from any expansion. Rather, it is suggested that one needs to weigh very carefully decisions which will cause further degradation of groundwater.

3020267

July 28, 1980

A final decision concerning granting of a permit should not be made until the information provided by the Bruce A. Liesch study is available and evaluation of a monitoring system is completed. With the strong possibility of flow reversal, the placement of future wells in the Prairie du Chien-Jordan aquifer will have to be carefully evaluated. With the granting of a permit, a more extensive hydrologic study may be required to better define the extent of groundwater flow reversal due to pumpage of the municipal wells, the zone of influence of the municipal wells, and the changes in the flow patterns when quarry activities cease.

Sincerely yours,

Roger L. DeRoos, Ph.D., Director  
Division of Environmental Health

cc: Dale Wikre - Minnesota Pollution Control Agency ✓  
Dennis Quan - Minnesota Department of Natural Resources

0070258