

Interoffice Correspondence

CONFIDENTIAL

Subject: Woodbury Disposal Site

cc: D. R. Guthrie - 220-148  
D. W. Johnson/M. C. Goldsmith - 42-5W  
J. C. Justner - 21-2W (9)  
G. G. Mueller - 42-2W (80)  
J. W. Pearson - 42-2W (60)  
D. E. Pederson - 21-2W (18)

April 26, 1973

TO: J. T. LING - ENVIRONMENTAL ENG. & POLLUTION - 42-5W

FROM: C. E. KIESTER - ENVIRONMENTAL ENG. & POLLUTION CONTROL - 42-5W

The following is a very brief history of the 3M Woodbury disposal site. In 1960 the site was purchased by St. Paul Terminal Warehouse. All of the pumpable and nonpumpable 3M wet scrap in the St. Paul area, including the HF tars from Chemolite, were disposed of in pits on this site. In August, 1961, 3M purchased the site from St. Paul Terminal. In November, 1963, as a result of a complaint from the Woodbury Village, HF tar disposal on this site was discontinued. In April, 1966, H. Schussler, a neighbor immediately on the west side of the site, complained of a taste and odor in his well water. It was subsequently determined by 3M that the taste and odor was due to chemical contamination. A program was immediately started by 3M to evaluate the extent of the problem and develop a program for its solution. A private hydrologist, Eugene Hickok, was retained for this study. As a result of this study, a program was established to retain and remove the contamination that had entered the ground water from the wet scrap landfilled on this site. The program involved installation of a series of barrier wells, removal wells, and observation wells and continuous monitoring of these wells and residential wells on property bordering this site.

At the present time there are 3 barrier wells, 4 removal wells, and 9 observation wells pumping a total of about 2300 gallons per minute of water through a 6-mile force main and sewer to the Mississippi River. Attached is a sketch map of the site showing these well locations.

Since we have been pumping and gathering data for about the last 5 years, and in order to provide more detail to management on the length of pumping that will be required, a program was initiated in the summer of 1972 to provide the following information:

1. Has the program been effective?
2. At the present rate of pumping, how long will it take to correct the problem?
3. How can the rate of removal be accelerated?

A private hydrologist, Bruce Liesch, previously with Eugene Hickok, was retained for the study.

Exhibit  
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State of Minnesota v. 3M Co.,  
Court File No. 27-CV-10-28862

April 26, 1973

As a result of his study, the following conclusions were reached:

1. The contamination appears to have been retained on our site and is being effectively controlled; however, an additional barrier well is required to insure that there will be no underground migration of the contamination between barrier wells No. 2 and No. 3. Included with this will be 3 new observation wells.
2. At the present rate of pumping, depending on recharge from normal precipitation, it would take several hundred years to totally remove the contamination from the ground and the ground water.
3. In order to accelerate the removal of the contamination, a direct recharge system using the water from the No. 1 Barrier Well was proposed. The existing open pits would be filled with water and this water allowed to permeate down through the soil to the ground water, thereby accelerating the "washout" rate of the contamination still in the soil. It is estimated that this could reduce the time of pumping so that the program will be complete 10 to 15 years from now.

The following is the estimated cost for this new proposed program.

Barrier Well No. 4	\$ 55,000
Observation Wells	15,000
Artificial Recharge	<u>30,000</u>
Total Project Cost	\$100,000

About \$248,000 remains in the original AFE that was authorized for this project.

At the present time, the annual costs of this program are about \$50,000. It is estimated that the proposed program would increase this annual expenditure to about \$70,000.

It is planned that all phases of this program would be complete and in operation by the end of September, 1973. Following the completion of this work, the AFE should be closed and any future requirements be authorized separately.

As a result of a meeting with you, G. G. Mueller, J. C. Juettner, D. E. Pederson, D. W. Johnson, M. C. Goldsmith and the writer on April 24, it was agreed to proceed with this program.

If you need any additional information, please let me know.

  
CEK/cel