April 1962

M

PHASE ONE

CHEMOLITE WASTE DISPOSAL PROGRAM

The existing five acre waste pond at our Chemolite plant was used as a seepage pond since 1948. This pond was gradually filled up by sediments and could not be effectively cleaned after several years of operation. In 1955, based on the Minnesota Water Pollution Control Act, 3M requested permission from the State Water Pollution Control Commission to discharge the waste water overflow from the pond into the Mississippi River.

In August 1955, 3M's request was tentatively approved by the State Control Commission and a permit was issued to 3M for construction of necessary facilities to discharge the waste water to the river at a rate not exceeding 2200 gallon per minute (gpm), Bio-Chemical Oxidation Demand (BOD) not exceeding 100 parts per million parts (ppm), and phenol not exceeding 1 ppm. It was also stated that "additions to the plant or the waste disposal system for the purpose of providing additional treatment or reducing strength of the waste will be made without delay if tests on the effluent from the lagoons are unsatisfactory, or discharge from the lagoon will be discontinued.

In spite of our efforts to enlarge the existing waste pond and construct skimming basins, it was found that our plant waste effluent contained BOD of 250 ppm which exceeded the limit by 150% during a waste survey made by the State Health Department in 1958. The commission recommended that additional waste treatment facilities be provided to reduce the BOD to 100 ppm and demanded a construction time schedule to control the pollution. Preliminary estimates indicated that such waste disposal facilities might cost 3M over 1½ million dollars.

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C

Exhibit
1033
State of Minnesota v. 3M Co.,
Court File No. 27-CV-10-28862

From 1960 to 1961, 3M Central Engineering conducted an In-Plant Waste Survey in the entire plant to determine how much of "what" was coming from "where", and also conducted a series of pilot experiments in order to find a cheaper method of reducing the BOD to the desired level. Certain phases of these experiments will be continued until 1963. Currently, 3M is discharging 3500 gpm of waste water containing BOD of about 240 ppm. Evidence also indicated that the present waste pond has contaminated a nearby water supply well at our Chemolite plant site. We are convinced that contamination will gradually spread to other wells if no corrective measure is taken soon.

The St.Paul-Minneapolis Sanitary District is working on a 2½ million dollar expansion project to reduce the BOD of their waste from 130 ppm to 75 ppm by 1964. Because of the increasing pollution load on the river, the State Water Pollution Control Commission is recommending the final BOD level be lowered from 100 ppm to 75 ppm. The pressure from the state has been gradually built up to such an extent that some immediate action has to be taken in order to maintain the continuous discharge of our waste water to the river.

Upon the request of the Chemolite Management Committee, an overall, long range three-phase waste disposal program for our Chemolite plant has been worked out by 3M Central Engineering to assure maximum utilization of all the treatment facilities. This overall program, including cost estimates and estimated time schedules, is presented in Table I. The present proposed project, estimated at $350,000, will reduce the BOD from 250 ppm to 175 ppm. This project will not only temporarily relieve the pressure from the state officials, but it will also eliminate the pollution source which is contaminating the water supply.

TABLE 1

CHEMOLITE WASTE DISPOSAL PROGRAM

Time	Waste Flow, gpm.			Biochemical Oxygen Demand			Estimated Cost
	Cooling Water	Chemical Waste	Total	Chemical Waste ppm	Plant Effluent ppm	Pds/day	
1955 State Limits	-	-	2200	-	100	2635	
1962-Proposed New Limits	-	-	-	-	75	2000	
1958 State Survey	1500*	40	2240	730	250	6700	
Current Situation	1500	1500	3000	430	240	8600	
1962 1st Phase	1500	1500	3000	430	175	6250	$350.000
1965-66 2nd Phase	1700*	2100*	3800	-	100	4550	400,000
1969-70 3rd Phase	1900*	2800*	4700	-	75	4200	300,000

* Estimated Value