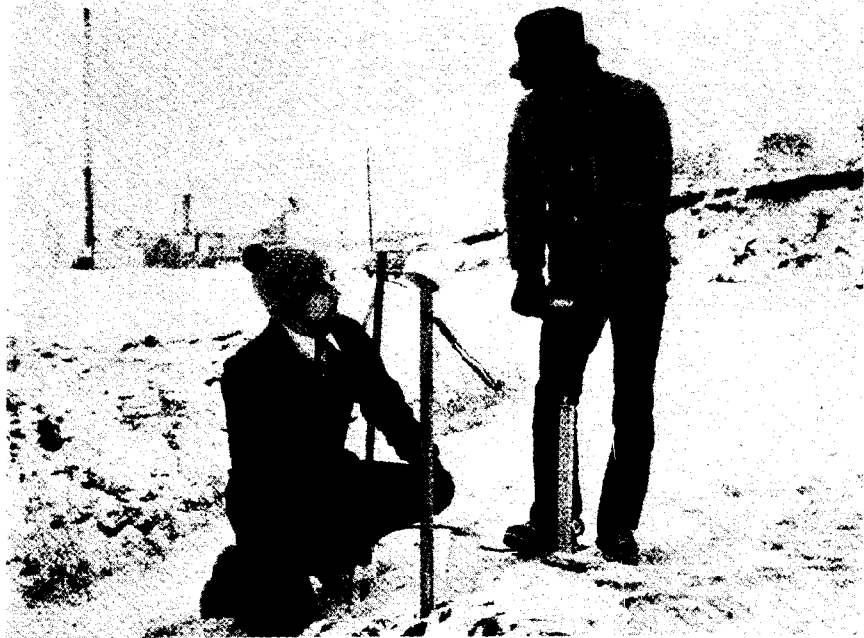


POLLUTION CONTROL

Waste Solution Sought Cont'd
Clipping from MEGAPHONE - April 2, 1979



Richard VonLangen, kneeling, and Yasuo Yokose, both of Pollution Control Facilities Engineering, test one of three lysimeters (small suction wells) around the pit where 3M is currently storing residues from the Chemolite incinerator and the waste water treatment facility. The lysimeters allow for monitoring of the quality of groundwater in the area.

**Exhibit
2745**

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

3MA00323984

2745.0001

POLLUTION CONTROL

Waste Solution Sought

There is an unchanging law of nature which states that matter can neither be created nor destroyed. Its form may be changed, but it will never disappear. Burn a material and it turns into gases and ash. Dissolve it and its molecules are separated from each other but not destroyed.

It is this physical law which causes problems for industries and governments as they search for methods to dispose of industrial and municipal wastes.

Potentially harmful wastes left over from industrial processes can be filtered from water and air, they can be treated with chemicals to render them harmless, they can be burned and greatly reduced in volume, but they will never totally disappear. There will always be a residue, some material left over from even the most efficient pollution control processes, and accommodations must be made for its disposal.

Advanced Treatment Systems

The wastewater treatment plant and chemical disposal incinerator at the 3M Chemolite plant in Cottage Grove are among the most advanced and efficient



Jeff Duviea checks a recorder which monitors the Company's wastewater treatment plant at Chemolite. The plant treats about 5 million gallons of water a day and removes more than 95 percent of the wastes from the water.

available. Yet there are residues from both of these systems.

The water treatment system cleans about five million gallons of water each day and removes 95 percent of the wastes from the water. In the process, though, it produces about 14,000 tons of sludge a year.

94 Percent Reduction

The multi-million dollar Chemolite incinerator – one of the most advanced in the world – disposes of about 14,000 tons of chemical wastes a year. It reduces that volume by about 94 percent to 2,500 tons of ash. This is the residue, the left-over material from the Chemolite incinerator.

So, in the process of cleaning many millions of gallons of water and disposing of 14,000 tons of chemicals, the Company's pollution control facilities are left with some 16,000 tons of waste residue. And, the disposal of this residue has put 3M at the center of a dilemma.

Until last year, the Company hauled these residues to the nearby Pine Bend landfill where they were disposed of along with municipal wastes from local communities.

But in 1978, the Minnesota Pollution Control Agency (MPCA) staff concluded that there was a potential hazard in mixing the Chemolite wastes with the municipal refuse. It was feared that acids formed by decomposition of the organic municipal wastes could dissolve metals such as lead and chromium in the Chemolite waste residue and carry these metals into the groundwater.

Former Landfill Unavailable

To prevent this possibility, the MPCA decided that the Chemolite material should be separated from the municipal refuse. But, the operator of the landfill was unable to separate the two, and 3M was forced to stop using the Pine Bend landfill.

When other landfill sites in the state also turned down the 3M waste residue, the Cottage Grove City Council granted

April 2, 1979

St. Paul Megaphone

(Over)

the Company a temporary permit to retain the material on the Chemolite plant property.

December 31 Deadline

The Cottage Grove municipal permit, another granted by Washington County and a stipulation agreement from the MPCA allow the Company to deposit the sludge and ash in a pit on the 820-acre Chemolite property until Dec. 31, 1979. At that time, 3M is to stop depositing waste residue at that site and remove all sludge and incinerator ash stored there.

Here is the dilemma: Other landfill sites in the state have refused the materials, surrounding states cannot provide a reliable, cost-effective solution, yet the December 31 deadline remains in effect. Temporary solutions to the problem have been found which will allow continuing the operations at Chemolite past that deadline, but until a permanent solution is found, the Company faces the possibility of curtailing or even closing its Chemolite operations.

3M is continuing to work with the government agencies involved to find a solution to the dilemma.

One avenue being pursued is a permanent permit for disposing of the waste residues on 3M property somewhere within Minnesota. Several possible sites, including Chemolite, are being considered, and the disposal procedure would be very similar to the one currently used at Chemolite.

Residues Remain Stable

The metals in the wastewater sludge and incinerator ash mixture cannot dissolve and leak into the groundwater because of the mixture's highly alkaline state. This alkalinity is significant because anything alkaline cannot be acidic and cannot dissolve the metals. They remain stable in the waste residue.

A portion of the pit at Chemolite has been lined with bentonite clay to channel any water from the mixture into a per-

forated pipe for collection and testing. In addition, three small suction wells - called lysimeters - have been sunk around the landfill pit for collection of water percolating through the soil.

Samples are also taken from Chemolite plant well number 4, the 3M well nearest the landfill. 3M and an independent tester selected by the City of Cottage Grove test the samples to verify their safety. The laboratory tests have demonstrated that the metals will not dissolve from the alkaline mixture.

A second solution being investigated is the elimination of the metals from the waste. If the metals can be kept from the waste residue, the sludge and ash can be disposed of through normal landfills, such as Pine Bend. The metals, which constitute a relatively small volume of waste, could be more easily disposed of.

'State Lacks Plan'

A third alternative is for the Company to obtain the permits needed to transport the waste residues out of the state to landfill sites in other states. This, according, to Dr. Russell Susag, 3M's director of environmental regulatory activities, would not be considered a permanent solution.

"Not only would it be extremely expensive, but it doesn't address the central point: that Minnesota needs an adequate plan for dealing with industrial wastes," he said. "The lack of such a plan not only endangers the future of the Chemolite operations, but also may affect the future of many Minnesota firms caught in a similar bind."

Recent coverage of the issue in local newspapers leaves the impression that 3M is currently considering the shutdown of Chemolite operations, but Peter Riehle, chemical resources plant manager, says that 3M is not currently considering such a move. In a message to Chemolite employees, he said, "3M is making every reasonable effort to keep our plant operating without interruption."

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