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STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF WATER RESOURCES
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MEMORANDUM

TO: Phillip G. Retallick

THRU: Sarah W. Cooksey

FROM: Guy Lee, IV

cc: Gerald L. Esposito
Robert J. Zimmerman
Robert R. French
Diane Wehner
Michael A. Apgar

SUBJECT: Standard Chlorine of Delaware's Proposal to Terminate the Direct Discharge of Treated Recovered Groundwater.

DATE: January 16, 1990

Executive Summary: Standard Chlorine of Delaware is proposing to terminate the direct discharge from the groundwater recovery system through implementing water conservation practices. Their proposal involves using the air stripper effluent as make up water for the draft air cooling tower. Implementation of Standard's proposal would result in increased air emissions of less than 7.5 lbs. of benzene and its derivatives per day. To discuss the ramifications of Standard's proposal, I would appreciate if the appropriate person in the Air Permits Group could contact me at 736-5731 during Thursday or Friday.

Background: Standard Chlorine of Delaware is directed by the January 22, 1988, Consent Order (Civil Action 88-11) to remediate contaminated groundwater resulting from the January 1986 spill. Standard is presently operating four (4) recovery wells (with plans to expand to five) and treats the recovered groundwater in an air stripper. The tops of the air stripper (including stripped benzene and its derivatives) are combusted in boiler # 3. The air stripper bottoms (treated water) are presently being discharged to the Delaware River. The stripper is designed to operate at a maximum water flow rate of up to .36 MGD and to reduce the average concentration of benzene and its derivatives in the recovered water to less than 2.5 mg/L. In operating at the maximum flow rate under design conditions the average loading of benzene and its derivatives feed to the cooling tower will not exceed 7.5 lbs/day.

Follow Up: Allowing the recovered groundwater to replace potable water in the proposed application should be found environmentally acceptable. The benefits to be gained in implementing the proposed water conservation practice should offset the impacts that would result from the reciprocal increase in air emissions. Providing that the DAWM does not have any substantial Standard Chlorine's proposal, the DWR will modify the NPDES permi recovered groundwater to be used as cooling tower feed.

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