Radioactively contaminated water from our operations at Santa Susana (primarily AIHL, SRE, and RMDF) is transferred to RMDF and stored, pending evaporation or other disposal, in a 5000-gallon tank. The tank is outdoors, surrounded by a security fence and a low berm, unprotected from the weather, unguarded against the consequences of a major leak or rupture, and unshielded to reduce radiation exposures. This is not a satisfactory situation.

During the Great Rain of '78, when we had great difficulty handling the amounts of contaminated water that were being generated at several facilities, this difficulty was compounded by the fact that rain running off the roof of the adjacent building, and rain falling directly into the holdup tank enclosure, collected in the sump and was automatically pumped into the holdup tank. This problem was alleviated by breaking away part of the berm to allow the water to drain out. Since this berm and the sump pit provide the only protection against release of water from overflow and leakage, a work order to repair the berm was issued soon after the end of the rains.

Unfortunately, the work order was not completed in time to prevent the overflow incident reported in the enclosed IL. Considering the fortuitous and timely discovery of the overflow, the consequences were minimal compared to the potential for release.

The berm and sump pit, when empty, provide retention capacity for about 2000-3000 gallons of water. The 5000-gallon tank usually contains 3000-5000 gallons of contaminated water. Thus, the facility does not provide adequate protection against total release of the holdup tank contents.

The radiation exposure rate at the security fence around the tank averages approximately 50 mR/hr, and because of the large physical size of this source, extends significantly beyond the enclosure. While the area surrounding the tank is not frequently occupied, this radiation contributes to the personnel exposures accumulated at the RMDF.

These problems and potential hazards could be eliminated by construction of a concrete block wall enclosing the tank, with a weather tight roof.
We have had many bad experiences with contaminated water at Santa Susana, and I would like to avoid the next one, if possible. Please establish the ways and means for this facility upgrading and coordinate the design and installation with me and J. M. Harris, as quickly as possible.

R. V. Tuttle, Manager
Radiation and Nuclear Safety

RJT:cc

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