

N306. TROD Cleans Up at Nine Mile Point 1

The Tethered Remote Operating Device (TROD) was developed to clean up a flooded radwaste area at Nine Mile Point 1 in the United States. It is a master-slave system capable of desludging waste barrels, removing floor deposits, washing walls and floors, transporting waste barrels, and performing small-scale demolitions. Managers at Nine Mile Point estimate it saved them around 118 man-rem.

TROD was initially deployed in May 1990; operations in the radwaste handling area continued until January 1991. TROD was used to:

- Empty storage drums
- Move barrel carriers
- Remove drum lids
- Modify the carrier system
- Desludge drums and floor spaces
- Remove debris

The completion of these tasks reduced the exposure levels from an initial high of 30 rem to somewhere between 10-150 mrem, allowing the workers to enter the area and complete the floor washing.

The use of remote-controlled, robotic equipment was the most important factor in maintaining radiation doses ALARA on this job. Much of the de-sludging, decontamination, and equipment removal were accomplished using TROD. As the radwaste operators became more familiar with the TROD's operation and capabilities, it became apparent how important this equipment would be in maintaining radiation doses as low as possible. Project managers soon realized that if tasks were well planned, TROD could do a lot of the work that would normally require personnel going into high radiation areas. Use of TROD saved an estimated 118 man-rem, possibly as much as 196 man-rem. Manual decontamination and recovery would have resulted in excessive radiation doses.

For more, "TROD Cleans Up at Nine Mile Point 1," by W. Gerriets, Nuclear Engineering International, pp. 32-34, March 1992.