



## Salt Mantis Demonstration Begins on Tank S-112

A demonstration project is now under way inside single-shell tank S-112 to determine the viability of a tool known as the Salt Mantis to break up stubborn tank waste that won't yield to other technologies.

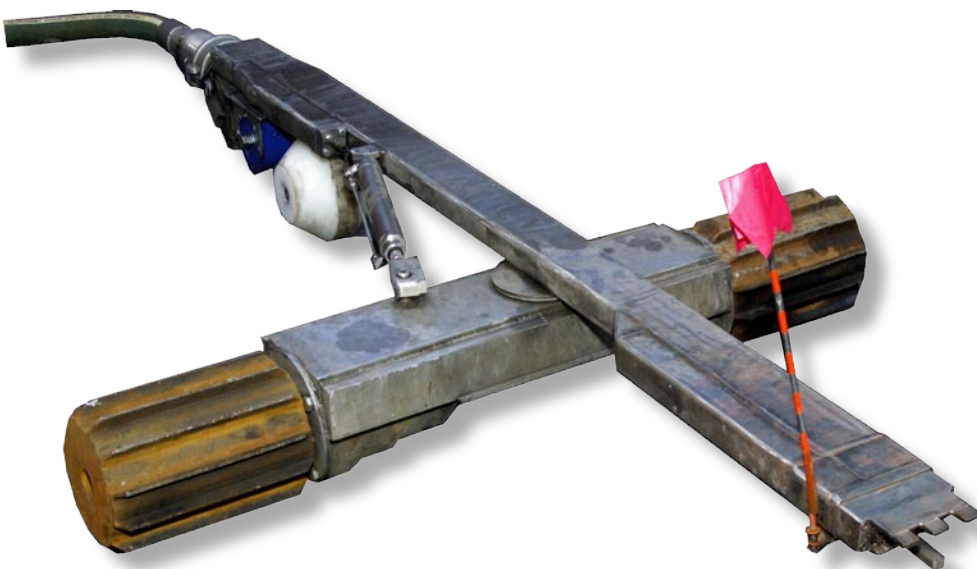
The Salt Mantis uses a sophisticated nozzle system on a track device that shoots about six gallons of water per minute at a pressure of up to 35,000 pounds per square inch. It is manufactured by TMR Incorporated in Boulder, Colorado, and was originally designed for the nuclear industry to be used in the decontamination of contaminated buildings. It was brought to Hanford under a special contract to test its effectiveness.

The Salt Mantis was tested at the Cold Test Facility north of Richland prior to its deployment in S-112 to train the operating crews and learn as much about it as possible before deployment.

Approximately 30,000 gallons of hardened waste remains on the bottom of S-112 after the removal of more than 584,000 gallons of liquid and sludge, using a technique known as saltcake dissolution. Retrieval operations were recently halted when the limit of the dissolution technology was reached.

"We knew when we reached the limits of the saltcake dissolution that we would need additional technologies to complete the project and this demonstration will tell us if the Salt Mantis will be effective in mobilizing the waste so it can be pumped out," said Rick Raymond, of S-Farm Retrieval Operations.

Raymond noted that several different tools are necessary to retrieve waste from single-shell tanks. Waste forms differ from tank to tank, and methods used in one tank, such as acid dissolution or modified sluicing, are not always appropriate for use in other tanks.



*After extensive training and rehearsal, tank farm workers installed the Salt Mantis into single-shell tank S-112. The Salt Mantis is being tested to determine its ability to break up and mobilize the hardened waste material at the bottom of the tank.*