

# MEBT Water to Vacuum Leak

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On Sept 14, 2014, while the Spallation Neutron Source (SNS) accelerator facility was not operating due to an unplanned mercury target change, the SNS medium energy beam transport region (MEBT) experienced a catastrophic failure when the water-cooled chopper target ruptured and flooded the MEBT vacuum envelope with cooling water. The MEBT is one of the most densely packed areas of the accelerator with minimal documentation, as it was received as a preassembled unit from LBNL. Full beam recovery took 34 days. We will review the design reliability of the target, reasons why it may have failed, our response to the event, our water removal efforts, and discuss lessons learned.

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