VIEW ARTICLE

Lesson ID:	2013-428
Submitted Date:	8/26/2013
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Reviewed By:	Conklin, Craig

TECHNOLOGY: Technology: NUHOMS®,TN-Metal,General Dry Storage

Applies to Areas: Program Development,Training Development,Equipment Setup,Fuel Loading and Verification,TC Movement,Safety,Human Performance,Survey Results,Rad-Safety,Equipment Packaging and Shipment,Fuel Movement,Equipment Failures,Shipping Equipment,TNUSERS.org Registered Users,Water Management,Dose Reduction/Shielding,Good Practices,TN Tech Bulletin,Planning

TITLE: TB 2013-4 Neutron Shield Tank (NST) Event at Susquehanna

ARTICLE:

TECHNICAL BULLETIN

Neutron Shield Tank (NST) Event at Susquehanna

August 2013

that Occurred on August 9, 2013

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Event Description

The loading crew connected a filled overflow bottle to the Neutron Shield Tank (NST) vent connection to Ensure Filled the NST and no water was observed to flow into the NST, thus the crew concluded that the NST was full. During fuel loading the crew routinely monitors the NST overflow bottle every two hours. After approximately six hours, the crew observed that the NST overflow bottle was empty. The crew then filled the overflow bottle and observed no additional flow into the NST. After fuel loading was completed and the Transfer Cask (TC) and Dry Shielded Canister (DSC) had been removed from the Spent Fuel Pool (SFP), the inner top cover was welded and bulk water was removed. Dose rates at the handrail of the Unit 1 equipment pit were elevated and after further investigation it was determined that the NST was empty. The fill hose from the overflow bottle had developed a hydraulic lock which prevented the water from freely flowing from the overflow bottle into the vent line without a separate vent path.

For more information:

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Recommendation

Transnuclear, Inc. (TN) recommends that when verifying that the NST is full, the user should flow demineralized water into the NST drain connection and verify water exits from the vent port into the overflow bottle to positively determine that the NST has been filled. Alternatively, when the NST drain connection is not accessible, the users should remove the TC NST pressure relief valve from the NST opposite the NST vent line and flow water into either the pressure relief port or the overflow tank until water is observed exiting the opposite port.

Contact

For further clarification please contact Michael Williams (Michael.Williams@AREVA.com) , Director, Field Services and Operations at 410-707-1404.