

September 2015

Volume 4, Issue 3

Technical Presentation

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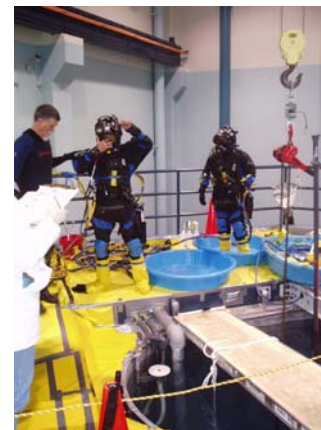
Scott Pennington gave a presentation on the replacement of the neutron reflector on the 1.1 Mw TRIGA research reactor located at the Nuclear Engineering Teaching Laboratory (NETL) at The University of Texas at Austin. The reactor is a water-filled pool design and became operational in 1992. The purpose of the reflector is to increase the neutron flux within the reactor core and, thus, increase the fission rate of the uranium-235 atoms.



In 1999, the reflector was discovered to have pressurized and bulged due to a small water leak. The reflector was vented in early 2000 to allow reactor operations to continue and prevent further deformation. The venting caused flooding of the reflector, saturating the contained graphite and filling voids, ultimately reducing its effectiveness. Damage to reflector required eventual replacement. Funds obtained over several years permitted the purchase of a new reflector from the manufacturer, General Atomics.

The replacement process required a complete breakdown and removal of all reactor fuel and structural components followed by the complete reinstallation of the reactor core and support components. Based on radiation measurements made in the reactor pool, the NETL chose to perform the work under water to provide radiation shielding. Work in the 28-foot reactor pool was performed by underwater (surface supplied) divers from the university's Applied Research Laboratories (ARL). Prior to starting the work, the ARL divers spent approximately two days training with the extended pneumatic tools and remote tongs on a mockup in the ARL dive tank. The failure of TRIGA research reactor components is rare, and this is believed to be the first time underwater divers have been used to work on a research or test reactor. The work was successfully completed in less than one month and required less than forty hours of dive time. The radiation exposures to the divers were minimal.

For questions about the presentation, email info@LoneStarAHMP.org.



DID YOU KNOW...?

- A Styrofoam cup takes longer to degrade in a landfill as compared to a diaper, aluminum can or banana peel.
- There are approximately one million miles of water pipeline and aqueducts in the United States and Canada, enough to circle Earth 40 times.
- A dripping faucet could leak about 3,000 gallons of water each year at one drip per second rate.
- According to the Department of Energy, it takes 20-40% less energy to manufacture plastic grocery bags than paper ones.

Anniversary Celebration



The Lone Star Chapter 's sixth year luncheon celebration was a hit! Several members came out to Ser-rano's for some good food and fun!!

Congratulations to Michelle for winning the Bluetooth speaker!

Hope other members are able to join in next summer's annual celebration!!



Events and Meetings...

Join us:

- Meetings are held the first Friday of each month from 12:00 pm-1:00 pm
- **October 2nd** is our business meeting
- Community Service Project: Stream Clean is **October 24th** and RSVP by October 9th
- **November 6th** is elections results meeting.
- December is the annual holiday celebration luncheon.



Contact us if:

- You know anyone who would like to present or if you have a topic for a technical presentation
- You would like to post any event (personnel or professional) to our web page or newsletter



Elections for 2016

- * Nominations for Director-at-Large, Secretary or Vice President will be collected through September 25. Nominations can be sent to Tassie, Past President – thermann@tamu.edu
- * Candidates will be announced at the October 2 business meeting
- * The election will be open in October, and the new board will be announced at the November meeting
- * Visit the [Chapter website](#) for descriptions and duties of the open positions

About us...

The Lone Star Chapter of Alliance of Hazardous Materials Professionals is an organization that enhances professional development through networking with other local EHS professionals from a variety of industries, state agencies, and other private entities. The Lone Star Chapter promotes the CHMM/CHMP credential on a national and international level. National AHMP provides regulatory updates and professional conferences. By participating in our local training and being trained in new areas of the profession, members are able to earn CMPs for re-certification. The Lone Star Chapter is committed to opening the doors for many members and welcoming new ones.

Contact us...

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