



NPR EXPLORER

NEWS AND NOTES FOR THE RESEARCH AND TEST REACTOR COMMUNITY

Spring 2011

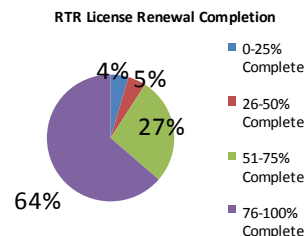
US Nuclear Regulatory Commission Vol. I No. 4

Mo-99 Production Joint Venture

On March 1, 2011 NorthStar Medical Radioisotopes signed an agreement with the University of Missouri Research Reactor (MURR) to help alleviate the molybdenum-99 (Mo-99) supply shortages experienced domestically due to the temporary and eventual shut-down of the two main global

producers. MURR will irradiate Mo-98, a stable non-radioactive isotope. The process will generate significantly less waste than the traditional method which uses uranium. The Mo-99 produced at MURR will be transferred to NorthStar's TechneGen Generator System. Production is expected

to begin during the 3rd quarter of 2011 with generator shipments to follow. NorthStar will ultimately ramp up to 3,000 6-day curies per week. The goal is to reduce the dependency on foreign sources of Mo-99.



License Renewals

On February 18, 2011 the NRC issued a renewed Facility Operating License No. R-102 for the University of New Mexico AGN-201M Reactor.



On March 25, 2011 the NRC issued a renewed Facility License No. R-74 for the University of Wisconsin Nuclear Reactor.



Both are 20 year licenses.

Japan Earthquake Response

On March 11, 2011 a 9.0 magnitude earthquake off the coast of Japan resulted in a 46 ft tsunami that



flooded the Fukushima Dai-ichi nuclear power plants. The design basis accidents for the nuclear facility are based on an 8.0 magnitude earthquake and a 19 ft tsunami. The resulting inundation disabled all the backup generators which were providing power for core cooling pumps following the earthquake. The station's backup batteries picked up the emergency electrical loads, including the core cooling, until they ran out approximately 8 hours later. At 9:45am on March 11 the NRC Operations Center transitioned to the

Monitoring Mode in response to a tsunami warning that was issued for the west coast of the United States



as a result of the Japanese earthquake. Once the tsunami warning expired with no apparent damage to NRC-licensed facilities, the NRC Headquarters Operations Center (Ops Center) remained fully staffed as the situation at the Fukushima Dai-ichi facility continued to deteriorate.

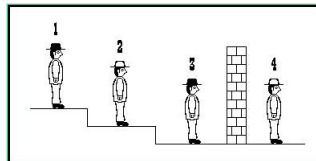
Even though Non-Power Reactors (NPRs) in Japan were initially reported as being unaffected by the earthquake or tsunami, NRC staff from the NPR branches were called to assist in the Ops Center in a variety of roles due to their expertise. They participated as liaisons to the Executive Support Team, liaisons with other Federal agencies, members of the Reactor Safety Team and the Protective Measures Team, director of the Liaison Team, and Executive Team response advisors.

As a result of the aftermath at the Fukushima Dai-ichi facility, and based on the information gathered and the lessons learned, the NRC Commissioners voted to conduct an immediate inquiry into the safety of US nuclear power plants. This review found no immediate safety concerns. The Commission also voted to establish a task force to examine the agency's regulatory requirements, pro-

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Mind Teaser

Four prisoners are caught and are to be punished. The judge allows them to be freed if they can solve a puzzle. The four prisoners are lined up on some steps (shown below). They are all facing in the same direction. A wall separates the fourth prisoner from the other three. They can only see the persons in front of them. They are wearing hats and are told that there are two white hats and two black hats. They don't know what color hat they are wearing. They are told to shout out the color of their hat as soon as they know. They are not allowed to turn around or move, talk to each other or take their hats off. Who is the first person to shout out and why?



Answers on the back

Did You Know?? The peace symbol was created in 1958 as a nuclear disarmament symbol by the Direct Action Committee, and was first shown that year at peace marches in England. The symbol is a composite of the semaphore signals N and D (left, respectively), representing nuclear disarmament.



grams, processes, and implementation and to make any recommendations for improvements needed to the regulatory system. Based on the outcome of the reviews the NRC will evaluate the applicability to NPRs.

Responding to domestic concerns, NRC Chairman Gregory Jaczko testified in both houses of Congress to assure them that US nuclear power plants are safe and to inform them of the newly-created task force. The NRC continues to review the safety of nuclear power plants based on lessons learned.

For up-to-date information on NRC Actions please visit <http://www.nrc.gov/japan/japan-info.html>.

Staff Changes

Paul Doyle is retiring July 1st after 38 years of government service, 26½ at the NRC. After spending six years as reactor operator in the Navy's USS Pargo (SSN650) he received his B.S. degree in Nuclear Engineering from the University of Lowell (now U. of Massachusetts Lowell). He started at the NRC HQ in operator licensing. He became an examiner after RTR work was consolidated at HQ and proctored about 10 exams per year, about 200 in his career. He also implemented the Generic Fundamental Exam for Power Reactors and revision 2 of NUREG-1478. Additionally, he completed the license renewals for Idaho State University and the University of New Mexico.

MaryJane Ross-Lee is the new Director of the Division of Facilities and Security also known as the Mayor of White Flint. She was a member of the SESCO class and in 2009 she became the agency's lead for the Mo-99 working group and liaison to other federal agencies. Working on a short-term solution it became clear that a permanent domestic production was needed. In March 2010 a new branch, PRPB, was formed in DPR to work on this along with other areas including security, EP, and fuel conversion. Working across numerous NRC Offices as well as numerous agencies prepared her to fill the role as the Executive Team Response Advisor during the Japan incident, directing the executive support team.

Patricia Silva is currently the Acting Branch Chief for PRPB and lead for the Mo-99 working group. After receiving a B.S. degree in Chemical Engineering from New Mexico State University she worked for the Dept. of Army and Dept. of Commerce. She joined the NRC as a Chemical Safety Reviewer in NMSS/FCSS in 2002. She has held a number of positions including Technical Assistant for FCSS; Special Assistant for Materials for Chairman Klein; and is the Branch Chief for the Technical Support Branch in FCSS. With 24 years of federal service her objective in NRR is to enhance her leadership and management skills and gain experience in reactor regulation.

NPR in the NEWS

Rhode Island Nuclear Science Center

[June 2 - State legislator calls for nuclear reactor to close \(Audio\)](#)

[April 28 - Ray Rickman \(another shutdown article\)](#)

[April 14 - Officials maintain safety](#)

[April 18, -Nuclear Science Center no longer under the radar](#)

[April 11 - RI Nuke Safe, says director](#)

[April 9 - Head of RI's only nuclear reactor: it's safe](#)

[April 5 - Board defends RI nuclear reactor](#)

[April 1 - Time to Decommission RI Nuclear Science Center's Research Reactor](#)

[March 31 - Nuclear Danger: How safe is RI's nuclear reactor?](#)

[March 22 - State Senator: it's OK, no Fukushima in Rhode Island](#)

[March 22 - Press release: no reactor problems in RI](#)

MIT

[March 21 - Fukushima crisis puts new eyes on MIT nuclear reactor](#)

Future Workshops and Public Meetings

Fingerprint Final Rule - June 23, 2011 from 9 AM to 11 AM at NRC Headquarters

It is anticipated that the Final Rule to require fingerprint-based criminal records checks for individuals granted unescorted access to RTRs will be released early fall 2011. There were two public comment periods, one closing in October 2010 and the other in January 2011. The public meeting is to discuss implementation, receive feedback from licensees, and to seek volunteers to pilot individual implementation meetings.

For more information visit the NRC website and look under Public Meetings or contact Scott Sloan at 301-415-1619 or Scott.Sloan@nrc.gov

I&C Guidance - June 23, 2011 from 1 PM to 4 PM at NRC Headquarters

To ensure non-power reactors (NPR) have appropriate guidance for assessing I&C systems, the guidance

in the standard review plan for NPR is being updated. To facilitate evaluation of current digital technology being proposed as upgrades to existing facilities or at any new facilities, new requirements, Regulatory Guides, and Interim Staff Guidance are being developed for licensing Digital I&C systems for NPRs. The NRC will hold multiple workshops and public meetings to elicit participation from the members of the NPR community with the objective of informing participants of the guidance being developed and solicit input and opinion on the guidance for I&C license amendment requests. Meetings will be held in conjunction with other industry meetings, such as a select ANS conference in the summer 2011 and the TRTR annual meeting this fall.

Input and feedback is highly desired and the NRC will include webinar and teleconference features to make it easier for stakeholders to participate.

Regulatory Basis for Relicensing - TBD

The NRC recently awarded a contract to ICF International for the development of rulemaking to streamline NPR license renewal process. The objective is to develop, propose for comment, and implement rulemaking to provide the foundation upon which a streamlined process for the renewal of NPR licenses can be achieved. Key outcomes of this effort will prevent future backlogs of NPR license renewals and eliminate unnecessary regulatory burden on licensees. The rulemaking is intended to redefine the scope of NPR license renewal and any limitations of the process. The working group will be scheduling public meetings to obtain inputs from stakeholders.

For comments or suggestions for enhancing participation related to either the I&C guidance or the relicensing rule-making please call or email Duane Hardesty at 301-415-3724 or Duane.Hardesty@nrc.gov