

**PLEASE RESPOND BY:  
January 23, 2017**

January 5, 2017

COMSECY-17-0001

MEMORANDUM TO: Chairman Burns  
Commissioner Svinicki  
Commissioner Baran

FROM: Michael R. Johnson */RA by William M. Dean for/*  
Deputy Executive Director for Reactor  
and Preparedness Programs  
Office of the Executive Director for Operations

SUBJECT: STATUS OF RESEARCH AND TEST REACTOR LICENSE  
RENEWAL REVIEWS AND REQUEST FOR CLOSURE OF  
RELATED TASKING

In SECY-08-0161, "Review of Research and Test Reactor (RTR) License Renewal Applications," dated October 24, 2008, the staff described its plans to improve the review of license renewal applications for RTRs and complete the review of a "backlog" of 19 license renewal applications that were under review at the time. In its staff requirements memorandum dated March 26, 2009, the Commission directed the staff to develop a plan to complete the reviews of all outstanding RTR license renewal applications within 18 months; the Commission later approved an extension of this tasking to January 6, 2017.

The staff has provided updates on its progress in completing these reviews in several memoranda to the Commission and Notes to Commissioners' Assistants, as listed in Enclosure 1. As documented in these updates, the staff has developed multiple process improvements, including interim staff guidance to streamline the reviews based on the safety and security significance of each facility. The staff also separately developed a proposed rule for the Commission's consideration that would further streamline the license renewal process (SECY-16-0048, "Proposed Rulemaking: Non-Power Production or Utilization Facility License Renewal (RIN-350-AI96)," dated April 7, 2016).

The staff has completed 16 of the 19 backlog reviews, as summarized in the table below. Only one of the remaining three applications from the backlog is active. The University of Florida Training Reactor license renewal application is scheduled to be completed by March 2017 after the licensee corrects an error in its accident analysis. This review was near completion in 2012 when the licensee determined it was necessary to reconstitute its application with updated core and safety analyses, which were submitted between December 2012 and April 2014. Therefore, while this application is part of the backlog, the staff has reviewed it using its updated plans and procedures, consistent with other recently submitted applications, and is closely tracking the status of the review. The reviews for the Texas A&M University Aerojet-General

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Nucleonics (AGN) reactor and the Aerotest Radiography and Research Reactor have been suspended based on pending licensee requests (relocation of the reactor and license transfer, respectively). Additional detail on these three reviews is provided in Enclosure 2.

**Table 1: Status of 19 “backlog” RTR license renewal reviews.**

	<b>Facility</b>	<b>Date of Renewal</b>
1	Aerotest	Suspended pending license transfer review
2	Armed Forces Radiobiology Research Institute	November 30, 2016
3	Massachusetts Institute of Technology	November 1, 2010
4	National Institute of Standards and Technology	July 2, 2009
5	Pennsylvania State University	November 20, 2009
6	Reed College	April 24, 2012
7	Rensselaer Polytechnic Institute	June 27, 2011
8	Rhode Island Atomic Energy Commission	January 5, 2017
9	Texas A&M University (AGN)	Suspended – reactor in storage (October 24, 2016, license amendment)
10	Texas A&M University (TRIGA)	September 29, 2015
11	University of California – Irvine	July 8, 2016
12	University of Florida	Staff developing request for additional information; review expected to be complete in March 2017
13	University of Maryland	December 22, 2016
14	University of Missouri – Columbia	January 4, 2017
15	University of Missouri – Rolla	March 30, 2009
16	University of New Mexico	February 23, 2011
17	University of Utah	October 31, 2011
18	University of Wisconsin	March 28, 2011
19	Washington State University	September 30, 2011

Given this status, the staff considers that its ongoing activities have met the intent of the Commission’s direction to complete the reviews of the RTR license renewal applications that were part of the backlog at the time of SECY-08-0161. The staff has also used its process improvements to make progress on five additional license renewal applications that were not part of the backlog, issuing three to date and planning to complete the remainder in 2017. The staff will complete the review of the University of Florida Training Reactor license renewal application using the same process, including communication of the renewal (if approved) via a Daily Note.

The Commissioners

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Therefore, the staff requests that the Commission approve the closure of Work Item Tracking System task 200900073, which tracks the Commission direction to complete reviews of the outstanding RTR license renewal applications.

SECY, please track.

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Therefore, the staff requests that the Commission approve the closure of Work Item Tracking System task 200900073, which tracks the Commission direction to complete reviews of the outstanding RTR license renewal applications.

SECY, please track.

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**DISTRIBUTION: 200900073**

See next page

**ADAMS Accession Number: ML16358A335**

<b>OFFICE</b>	NRR/PRLB/PM	NRR/PRLB/BC	NRR/DPR/D	NRR/D	EDO
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<b>DATE</b>	12/23/16	12/23/16	12/23/16	12/23/16	1/5/17

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Memo to Commission from Michael R. Johnson, dated  
SUBJECT: STATUS OF RESEARCH AND TEST REACTOR LICENSE RENEWAL REVIEWS  
AND REQUEST FOR CLOSURE OF RELATED TASKING

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**PREVIOUS STATUS UPDATES ON  
RESEARCH AND TEST REACTOR RENEWAL PROGRESS**

**Memoranda to the Commission**

<b>Date</b>	<b>Accession No.</b>
May 27, 2009	ML091280572
October 26, 2009	ML092510202
March 3, 2010	ML100540480
June 4, 2010	ML101270291
September 30, 2010	ML101340433
December 11, 2011	ML112091574
April 4, 2013	ML13071A642

**Notes to Commissioners' Assistants**

<b>Date</b>	<b>Accession No.</b>
January 14, 2010	ML100150142
March 23, 2010	ML100810218
December 28, 2012	ML12363A095
October 9, 2014	ML14273A515
April 6, 2015	ML15092A956
October 19, 2015	ML15265A009
April 28, 2016	ML16104A093
October 24, 2016	ML16285A187

## **STATUS OF ONGOING RESEARCH AND TEST REACTOR LICENSE RENEWAL REVIEWS INCLUDED IN THE SECY-08-0161 "BACKLOG"**

### Active Review:

#### **University of Florida (UF)**

Application Date: July 18, 2002  
Projected Completion Date: March 2017  
Status:

The UF initiated an effort in 2012 to reconstitute its LRA with updated core and safety analyses. The UF submitted revisions to its safety analysis report (SAR) between December 2012 and April 2014. The revised SAR included reformatted technical specifications (TS), a new maximum hypothetical accident, and significant revisions to the accident analyses for fuel handling and reactivity insertions. Due to the significant SAR and TS revisions, the staff had to restart its review of the LRA.

During its review of the revised SAR, the staff discovered that the licensee did not fully analyze proposed changes to the reactivity addition transient accident. Confirmatory calculations showed that the transient could challenge safety systems. The staff's Safety Evaluation Report (SER) is complete with the exception of the analysis of the transient analysis and TSs. The staff is currently developing requests for additional information (RAIs) related to these open items. If the licensee's responses to the staff's RAIs are adequate and timely, the staff anticipates completing its review and issuing the renewed facility license by March 2017.

### Suspended Reviews:

#### **Texas A&M University (TAMU) Aerojet-General Nucleonics (AGN) Reactor**

Application Date: July 22, 1997  
Status:

The review of the TAMU AGN Reactor LRA is suspended pending a decision from the University about the relocation of the AGN reactor. There are currently two reactors located at TAMU. The University is demolishing the Zackery Engineering Building where the TAMU AGN Reactor was located. The second reactor is located at the TAMU Nuclear Science Center. The licensee plans to either construct a new building near the Nuclear Science Center or modify the Nuclear Science Center building to house the AGN.

To prepare for the relocation, the staff issued a license amendment in August 2016 that transferred the AGN reactor fuel and neutron source to the Nuclear Science Center license for storage. A second amendment issued in October 2016 placed the defueled AGN Reactor in storage at the Nuclear Science Center.

The staff will resume review of the TAMU AGN reactor LRA once the licensee submits a revised SAR describing the new location of the reactor. The staff anticipates holding a public meeting with the licensee to discuss the status of its proposed reactor relocation and SAR update in the second quarter of Fiscal Year (FY) 2017.

## **Aerotest Radiography and Research Reactor (ARRR)**

Application Date: February 28, 2005

Status:

The review of the ARRR LRA is suspended because of issues with foreign ownership, control, or domination, which is prohibited by Section 104d. of the Atomic Energy Act. Consequently, on July 24, 2013, the staff denied the LRA for the ARRR and issued an order prohibiting operation of the ARRR. The staff also denied an indirect license transfer application, which would have transferred ownership of the ARRR to Nuclear Labyrinth, LLC. In its safety evaluation, the staff found that neither Aerotest nor Nuclear Labyrinth (the applicants) demonstrated possession or reasonable assurance of obtaining the funds necessary to cover estimated operating costs for the period of the license.

On August 12, 2014, a hearing was conducted before a Commission-designated presiding officer, where the applicants presented new information relevant to the indirect license transfer application. Based on the hearing record, the Commission issued an order, dated December 23, 2015, remanding the license transfer application to the staff for further consideration. Following the remand, the applicants further supplemented the license transfer application. The staff's review of the license transfer application is ongoing. Aerotest and Nuclear Labyrinth's request for hearings on the denial of the LRA and the order prohibiting operation remain in abeyance pending a final decision on the license transfer application. The staff expects to complete its review of the license transfer application in FY 2017, and subsequently revisit decisions related to the license renewal review.