

July 17, 2015

Dr. Kelly Jordan
Director of the University of Florida Training Reactor
Nuclear and Radiological Engineering Department
P. O. Box 11830
University of Florida
Gainesville, FL 32611

SUBJECT: UNIVERSITY OF FLORIDA – U.S. NUCLEAR REGULATORY COMMISSION
INSPECTION REPORT NO. 50-083/2015-201

Dear Dr. Jordan:

From June 15-17, 2015, the U.S. Nuclear Regulatory Commission (NRC or the Commission) completed an inspection at your University of Florida Training Reactor facility. The enclosed report documents the inspection results, which were discussed with you, Mr. Brian Shea, Reactor Manager, and other members of your staff on June 17, 2015.

The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the NRC has determined that a Severity Level IV violation of NRC requirements occurred. The violation was evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violation is being cited in the Notice because it constitutes a failure to meet regulatory requirements that has more than minor safety significance and the licensee failed to identify the violation.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with Title 10 of the *Code of Federal Regulations*, Section 2.390, "Public inspections, exemptions, requests for withholding," a copy of this letter, its enclosure, and your response will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (Agencywide Documents Access and Management System (ADAMS)). ADAMS is accessible from the NRC Web site at

K. Jordan

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<http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). To the extent possible, your response should not include any personal privacy or proprietary information so that it can be made available to the public without redaction.

Should you have any questions concerning this inspection, please contact Mr. Ossy Font at (301) 415-2490 or electronic mail at Ossy.Font@nrc.gov.

Sincerely,

/RA/

Kevin Hsueh, Chief
Research and Test Reactors Oversight Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-083
License No. R-56

Enclosures:

1. Notice of Violation
2. Inspection Report No. 50-083/2015-201

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DATE	7/10/2015	7/17/2015

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NOTICE OF VIOLATION

University of Florida
University of Florida Training Reactor

Docket No. 50-083
License No. R-56

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted from June 15-17, 2015, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.54(q)(2) requires the licensee "follow and maintain the effectiveness of an emergency plan." The licensee's Emergency Plan (E-Plan) requires emergency response agencies and Gainesville Fire and Rescue (fire) department orientation and facility familiarization tour on a biennial basis. The E-Plan also requires that any deficiencies in the E-Plan that could potentially impact reactor safety or the health and safety of the public be immediately reported to the University Radiation Control Committee (RCC) and the Dean of the College of Engineering.

Contrary to the above, the fire department and emergency medical services (EMS, ambulance) under the Alachua County Emergency Management have not participated in activities to meet this requirement and this deficiency has not been reported to the RCC or the Dean.

This is a Severity Level IV violation Section 6.6.d.1.

Pursuant to the provisions of 10 CFR 2.201, the University of Florida is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the NRC Inspector of the facility that is the subject of this Notice within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

ENCLOSURE 1

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 17th day of July, 2015

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION

Docket No: 50-083

Report No: 50-083/2015-201

Licensee: University of Florida

Facility: University of Florida Training Reactor

Location: Gainesville, Florida

Dates: June 15-17, 2015

Inspectors: Ossy Font
Patrick Isaac

Approved by: Kevin Hsueh, Chief
Research and Test Reactors Oversight Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

ENCLOSURE 2

EXECUTIVE SUMMARY

University of Florida
University of Florida Training Reactor
Inspection Report No. 50-083/2015-201

The primary focus of this announced inspection was the onsite review of selected aspects of the University of Florida's (the licensee's) Class II training reactor safety program including: operations logs and records, requalification training, and emergency preparedness since the last U. S. Nuclear Regulatory Commission (NRC) inspection of these areas. A Severity Level IV violation of NRC requirements was identified.

Operations Logs and Records

- Operations logs and records were maintained as required by the licensee's administrative procedures.

Requalification Training

- Operator requalification was conducted as required by the Operator Requalification Plan.

Emergency Preparedness

- The emergency preparedness program was generally being conducted in accordance with the Emergency Plan (E-Plan). One violation was noted for failure to maintain the effectiveness of the E-Plan.

REPORT DETAILS

Summary of Facility Status

The University of Florida's (the licensee's) 100 kilowatt modified Argonaut training reactor was following, but had not completed, its startup plan during the inspection. The licensee began following the startup plan to return to normal operation since late 2014.

1. Operations Logs and Records

a. Inspection Scope (IP 69001)

The inspectors reviewed the following to ensure that reactor operations were conducted in accordance with procedures as required by Technical Specifications (TS) 6.3 and that records were maintained as required by TS 6.7:

- University of Florida Training Reactor (UFTR) 2013-2014 Annual Report for September 1, 2013, through August 31, 2014
- UFTR Operating Log Records from January 1, 2015, through June 15, 2015
- Memorandum to Reactor Safety Review Subcommittee re: UFTR Plan to Return to Normal Operations, dated October 29, 2014
- UFTR Operating Procedure A.1, "Pre-Operational Checks," Rev. 19, approval dated October 2014
- UFTR Operating Procedure A.2, "Reactor Start-Up," Rev. 13, approval dated November 2005
- UFTR Operating Procedure A.3, "Operation at Power," Rev. 13, approval dated September 2006
- UFTR Operating Procedure A.9, "Reactor Startup Using Inverse Multiplication," Rev. 0, approval dated December 2014

b. Observations and Findings

The inspectors reviewed daily operations log records from January 1, 2015, to present. Reactor operations were carried out in accordance with written procedures as required by TS 6.3. Information on the operational status and maintenance of the facility was recorded in the log book.

A new procedure, SOP A.9, was added for initial reactor startup following a change in core configuration. The purpose of the new procedure is to enhance the operators' ability to estimate accuracy of startup prediction as well as ensuring appropriate level of management engagement during the startup and initial approach to criticality.

c. Conclusion

Reactor operations were conducted in accordance with TS and procedural requirements. Logs and associated records were being maintained as required.

2. Requalification Training

a. Inspection Scope (IP 69001)

To verify that the licensee was complying with the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55 to implement and maintain an operator requalification program, the inspectors reviewed the following:

- Operator training records from 2014 to present
- Operator written examination records from 2014 to present
- UFTR Form 0.8A, "Requalification Training Program Attendance Record," dated June 4, 2015
- UFTR Biennial "Evaluation and Recertification of Licensed Operators," dated April 6, 2015
- UFTR Biennial Comprehensive Examination, dated March 25, 2015
- UFTR Annual Operational Test Evaluation and Grading Sheet, dated March 25, 2015
- Memorandum to Reactor Safety Review Subcommittee re: UFTR Plan to Return to Normal Operations, dated October 29, 2014
- UFTR Operating Log Records from January 1, 2015, through June 15, 2015

b. Observations and Findings

There were two senior reactor operators (SROs) licensed to operate the research reactor at the facility. The inspectors noted that, following the extended shutdown, the licensee had completed all the training, comprehensive written requalification exams, and operating tests as required by the NRC approved UFTR Requalification Program. The inspector follow-up item, IFI 50-083/2013-201-01, which was opened to review the licensee's actions to ensure facility operators are proficient prior to restart of the reactor is closed.

c. Conclusion

Operator requalification was being completed and being maintained up-to-date as required by the licensee's operator requalification program.

3. Emergency Preparedness

a. Inspection Scope (IP 69001)

The inspectors reviewed selected aspects of the following to verify compliance with the "Emergency Plan for the University of Florida Training Reactor," Rev. 15, dated February 16, 2007:

- Emergency Plan Audit for 2011 and 2013
- Memorandum of Understanding (MOU) with Alachua County Emergency Management, dated August 14, 2013
- MOU with Emergency Medical Services, dated August 14, 2014
- Emergency Supplies and Equipment Cabinet
- Emergency Procedures, dated December 2010
- Emergency drills for 2014 and 2015
- Training records for licensee staff and support personnel

b. Observations and Findings

The inspectors reviewed the Emergency Plan (E-Plan) in use at the reactor and verified that it was reviewed biennially as required. The inspectors also reviewed the UFTR emergency procedures and surveillances.

The inspectors reviewed the MOU between the UFTR and Alachua County Emergency Management. They assist with fire, emergency medical services (EMS, ambulance), and law enforcement. The inspectors also reviewed the MOU with the Emergency Medical Services, which encompasses University of Florida College of Medicine and Shands Teaching Hospital. Both MOUs stipulated that they would be available during an emergency and provide support for the facility.

Emergency call lists had been revised and updated as needed and were available in the control room and in the emergency cabinet. The inspectors also verified that emergency equipment, including decontamination material, was available and was being inventoried.

The inspectors met with the Radiation Safety Officer and the emergency room head Registered Nurse at Shands Teaching Hospital. The hospital was well equipped with plans, procedures, and an emergency cabinet that imitated the one at the UFTR. The hospital also had a decontamination room at the emergency bay area. The inspectors determined that the hospital was well prepared for a radiological emergency.

The E-Plan was distributed to all responding support organizations and the call list was updated semiannually.

Through records review and interviews with licensee personnel and support organizations, the inspectors determined that they generally were knowledgeable of the proper actions to take in case of an emergency. Training for staff, hospital personnel was generally being conducted, with an annual comprehensive drill involving support organization personnel. These activities had been documented and reviewed acceptably.

10 CFR 50.54(q)(2) requires the licensee "follow and maintain the effectiveness of an emergency plan." The E-Plan requires emergency response agencies and Gainesville Fire and Rescue (fire) department orientation and facility familiarization tour on a biennial basis. The fire department and emergency medical services (EMS, ambulance) under the Alachua County Emergency Management have not participated in activities to meet this requirement. The E-Plan also requires that any deficiencies in the E-Plan that could potentially impact reactor safety or the health and safety of the public be immediately reported to the University Radiation Control Committee (RCC) and the Dean of the College of Engineering.

Through interviews, the inspectors determined that the lack of participation from the fire department and the EMS had not been communicated to the RCC or the Dean. The licensee was informed that failure to maintain the effectiveness of the E-Plan was a violation (VIO) of 10 CFR 10 CFR 50.54(q)(2) (VIO 50-083/2015-202-01).

c. Conclusion

The emergency preparedness program was generally being conducted in accordance with the E-Plan. One violation was noted for failure to maintain the effectiveness of the E-Plan.

5. Exit Meeting Summary

The inspectors reviewed the inspection results with members of licensee management and UFTR staff at the conclusion of the inspection on June 17, 2015. The licensee acknowledged the findings and did not identify as proprietary any of the material provided to or reviewed by the inspectors during the inspection.

PARTIAL LIST OF PERSONS CONTACTED

M. Berglund	Operations and Maintenance Supervisor
D. Cronin	Licensing Engineer
K. Jordan	Facility Director
B. Shea	Reactor Manager
S. Stanford	Radiation Safety Officer

INSPECTION PROCEDURE USED

IP 69001	Class II Research and Test Reactors
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ITEMS OPENED, CLOSED, AND DISCUSSED

Open

50-083/2015-202-01	VIO	Failure to maintain the effectiveness of the E-Plan due to lack of participation from the fire department and EMS and failure to inform the RCC and Dean of the deficiency.
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Closed

50-083/2013-201-01	IFI	Review the licensee's actions to ensure facility operators are proficient prior to restart.
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LIST OF ACRONYMS USED

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
ADAMS	NRC's Agencywide Documents Access and Management System
E-Plan	Emergency Plan
IFI	Inspector Follow-up Item
IP	Inspection Procedure
MOU	Memorandum of Understanding
NRC	U.S. Nuclear Regulatory Commission
Rev.	Revision/Revised
SOP	Standard Operating Procedure
SRO	Senior Reactor Operator
TS	Technical Specifications
UFTR	University of Florida Training Reactor