



College of Engineering  
UFTR Nuclear Facilities

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February 27, 2015

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

**2013-2014 Annual Report**

University of Florida Training Reactor (UFTR) – Facility License R-56, Docket No. 50-83

Please find enclosed the 2013-2014 annual report for the UFTR. This report is being submitted as required by our Technical Specifications, Section 6.6.1.

Sincerely,

A handwritten signature in black ink that reads 'Brian Shea'.

Brian Shea  
UFTR Reactor Manager  
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Enclosure

cc: Duane Hardesty, USNRC  
Reactor Safety Review Subcommittee

Sworn and subscribed this 27 day of February 2015

A 020  
NRK

University of Florida Training Reactor  
Annual Progress Report

September 1, 2013- August 31, 2014

Submitted by  
Brian Shea  
Reactor Manager

University of Florida  
Gainesville, FL

February 2015

## **Introduction**

As stated in the UFTR Technical Specifications, Section 6.6.1:

*Routine annual reports covering the activities of the reactor facility during the previous calendar year shall be submitted to the Commission within six (6) months following the end of each prescribed year. The prescribed year ends August 31 for the UFTR. Each annual operating report shall include the following information:*

- (1) a narrative summary of reactor operating experience including the energy produced by the reactor and the hours the reactor was critical*
- (2) the unscheduled shutdowns including, where applicable, corrective actions taken to preclude recurrence*
- (3) tabulation of major preventative and corrective maintenance operations having safety significance*
- (4) tabulation of major changes in the reactor facility and procedures, and tabulation of new tests of experiments, that are significantly different from those performed previously and are not described in the Safety Analysis Report, including conclusions that no unreviewed safety questions were involved*
- (5) A summary of the nature and amount of radioactive effluents released or discharged to the environs beyond the effective control of the facility operators as determined at or before the point of such release or discharge. (The summary shall include to the extent practicable an estimate of individual radionuclides present in the effluent. If the estimated average release after dilution or diffusion is less than 25% of the concentration allowed, a statement to this effect is sufficient.)*
- (6) A summarized result of environmental surveys performed outside the facility.*
- (7) A summary of exposure received by facility personnel and visitors where such exposures are greater than 25% of that allowed.*

The following discussion on the above seven sections covers the period from September 1, 2013 to August 31, 2014, except as noted otherwise.

## 1. Summary of Reactor Operation Experience

The UFTR was not operated during this reporting period.

## 2. Unscheduled Shutdowns

The UFTR was not operated during this reporting period and there were no unscheduled shutdowns.

## 3. Safety Significant Major Maintenance Operations

MLP 13-09, 9/17/2013 to 9/20/2013, AIM3BL air particulate detector removed from service since it was no longer serviceable.

MLP 14-03, 2/24/2014 to 9/15/2014, Ludlum 333-2 air particulate detector placed in service.

MLP 14-04, 3/26/2014 to 9/10/2014, Primary dump valve packing replacement.

MLP 14-05, 6/30/2014 to 9/1/2014, Secondary temperature monitor chart recorder evaluated to replace primary recorder.

MLP 14-06, 7/2/2014, Primary demin resin replacement.

MLP 14-09, 7/3/2014 to 7/7/2014, Area radiation monitor GM tube replacement.

MLP 14-12, 7/9/2014 to 9/3/2014, Primary demin housing replacement.

## 4. Major Changes in Reactor Facility, Procedures and Experiments

MLP 13-08, 9/12/2013 to 10/10/2013, Stack Exhaust chimney modification to accommodate a high plume exhaust system.

MLP 13-11, 12/3/2013 to 12/23/2013, Vehicle access door to reactor cell replaced.

MPL 14-01, 1/8/2014 to current, High plume exhaust system installed.

MLP 14-02, 1/23/2014 to 3/7/2014, Stack monitor detector housing replaced.

No major changes to procedures or experiments.

## 5. Radioactive Effluents

### Liquid Releases:

The UFTR is equipped with a waste water holdup tank. The radioactivity in the waste water is measured prior to release.

**Table I**  
Volume and Concentration of Waste Water Released

Date	Water Released (Gallons)	Activity Released ( $\mu\text{Ci/mL}$ )
January 28, 2014	928.4	1.68E-009

Argon-41 Releases:

The Argon-41 release concentration is measured every six months during facility operation. The facility was not operated during this reporting period and therefore there were no measurable Argon-41 releases.

**6. Environmental Surveys**

In addition to periodic radiation surveys using hand-held instruments, environmental monitoring is accomplished using radiation dosimetry badges. Areas monitored are located around the exterior of the reactor building and nearby buildings, including the Nuclear Sciences Center and the Journalism Building. This monitoring is performed by the Radiation Control Office of the Environmental Health and Safety Division at the University of Florida. The environmental dosimetry reports are tabulated and presented in Table II.

The environmental dosimetry badges closest to the reactor cell radioactive materials storage areas are at locations 1, 2, 5, and 7.

**Table II**  
Total Effective Dose Equivalent (TEDE) at Monitored Locations

Area No.	Quarterly TEDE (mrem)				Annual TEDE (mrem)
	Sep - Nov	Dec - Feb	Mar-May	Jun-Aug	
1	12	11	0	11	34
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	1	0	3	4
6	0	0	0	0	0
7	0	0	0	1	1
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
Room 101C	0	0	0	0	0
Room 103	0	0	0	0	0

## 7. Radiation Exposures

There were no exposures received to facility personnel or visitors where such exposures were greater than 25% of the permissible limit. Facility personnel dosimetry reports are tabulated and presented in Table III.

**Table III**  
Total Effective Dose Equivalents (TEDE) for the UFTR Staff

Individual	Quarterly TEDE (mrem)				Annual TEDE (mrem)
	Sep - Nov	Dec - Feb	Mar-May	Jun-Aug	
Berglund	0	0	0	0	0
Cronin	0	0	0	0	0
Jordan	0	0	0	0	0
Kluge	0	0	0	0	0
Lewis	0	0	0	0	0
Newman	0	0	0	0	0
Shea	0	0	0	0	0