NRC FORM 591X PART 1
(11-2001) 10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/CERTIFICATE HOLDER	2. REGIONAL OFFICE
Location Inspected: RX Bldg. **University of Michigan** **Occupational Safety** **and Environmental Health** **1239 Kipke Drive** **Ann Arbor, MI 48109** REPORT NUMBER(S) **2007-002 -**	**US NRC - Region III** **2443 Warrenville Road** **Lisle, IL 60532**

3. DOCKET NUMBER(S)	4. LICENSE/CERTIFICATE NUMBER(S)	5. DATE(S) OF INSPECTION
030-06958	**21-00215-06 (Pool Irradiator)**	**March 10-13, 2008**

Inspection Procedures Used:	Inspection Focus Areas:
87122	**02.03 thru 02.11; 02.12e, 02.13 thru 02.14; 02.16 thru 02.19; and 02.21.**

LICENSEE/CERTIFICATE HOLDER:
The inspection was an examination of the activities conducted under your license/certificate as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license/certificate. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

X 1. Based on the inspection findings, no violations were identified.

X 2. Previous Violation(s) Closed

3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, NUREG-1600, to exercise discretion, were satisfied.

non-cited violation(s) were discussed involving the following requirement(s):

4. During this inspection certain of your activities, as described in the attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.

STATEMENT OF CORRECTIVE ACTIONS

I hereby state that, within 30 days, the actions described by me to the inspector and as described in the attachment will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE/ CERTIFICATE HOLDER	**Mark Driscoll, RSO**		
NRC INSPECTOR	**Darrel G. Wiedeman**		3/13/2008

NRC FORM 591X PART 3 (11-2001) 10 CFR 2.201	*Docket File Information*	U.S. NUCLEAR REGULATORY COMMISSION
	SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION	

1. LICENSEE/CERTIFICATE HOLDER **University of Michigan**	2. REGIONAL OFFICE **Region III, Lisle, IL 60532**
REPORT NUMBER(S) **2008-001**	

3. DOCKET NUMBER(S) **030-06958**	4. LICENSE/CERTIFICATE NUMBER(S) **21-00215-06 (Pool Irradiator)**	5. DATE(S) OF INSPECTION **3/ 10-13 /2008**

Supplemental Inspection Information

Program Code(s): **03521**	Priority: **2**	Licensee Contact: **Mark Driscoll, RSO**	Telephone No. : **734-647-2251**

☐ Main Office Inspection Next Inspection Date: **3/2010**

X Field Office **see this report for locations inspected**

☐ Temporary Job Site Inspection **see the end of this report for locations inspected**

Program Scope

Pool Irradiator

This irradiator is licensed under license No. 21-00215-06 and is used for research purposes to irradiate samples. The irradiator, is a custom made wet storage pool irradiator containing 9 cobalt-60 sealed sources. The pool is 16 feet deep, five feet in diameter, and holds 5,000 gallons of water. The source bundle is situated 11.5 feet below the water surface when in the shielded position and is raised above the water to irradiate materials (i.e., tissue, fruit flies, polymers, computer chips). The RPC has authorized 4 researchers to use the irradiator, however, Rob Blackburn is the principal authorized user. The facilities were as described in the license application . This irradiator is located in a specified building on the Ann Arbor campus. The irradiator unit is used daily to irradiate a variety of inanimate specimens.

The inspectors interviewed researchers, physicists, and observed licensed activities at the irradiator facility. The inspectors observed a researcher (authorized user) perform a door interlock test and electronic function tests of the console. No problems were noted with the safe operation of the irradiator. The last leak test was performed on August 6, 2007 and again on February 6, 2008, and showed <.005 microcuries of removable contamination. Water conductivity tests showed a consistent reading of 0.1-0.2 micro-mho/cm.

According to the licensee staff that were interviewed, since the last NRC inspection there have been no fires, explosions, fatalities, or over exposures to radiation. The inspectors did not identify anything contrary to the above statements by licensee staff. The entrance door to the irradiator was properly posted with HRA - Grave Danger and Caution Radioactive Material signs. Lights above the door "sources up" "source down" functioned properly and sign in the maze functioned properly. This inspection also consisted of a followup of the licensee's compliance with the Order Imposing Increased Controls (ICs) issued November 14, 2005, see Report 2008-002 for details.

No violations of NRC requirements were identified within the scope of this inspection.