NRC FORM 591M PART 1
(10-2003) 10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED:	2. NRC/REGIONAL OFFICE
Washington University in St Louis **660 S. Euclid Avenue** **St. Louis, MO 63110-1093** REPORT NUMBER(S) **2010-001**	**U.S. Nuclear Regulatory Commission** **Region III** **2443 Warrenville Road** **Suite 210** **Lisle, Illinois 60532-4351**

3. DOCKET NUMBER(S)	4. LICENSEE NUMBER(S)	5. DATE(S) OF INSPECTION
030-02271	**24-00167-11**	**February 22-25, 2010**

LICENSEE:

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. 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.

[ ] 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) was/were discussed involving the following requirement(s) and Corrective Action(s):

[ ] 4. During this inspection certain of your activities, as described below and/or 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.
(Violations and Corrective Actions)

Licensee's Statement of Corrective Actions for Item 4, above.

I hereby state that, within 30 days, the actions described by me to the inspector 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'S REPRESENTATIVE			
NRC INSPECTOR	**K.J. Lambert/S. J. Mulay**	S J Mulay for KJL	03/08/10

NRC FORM 591M PART 3
(10-2003) 10 CFR 2.201

Docket File Information

U.S. NUCLEAR REGULATORY COMMISSION

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE Washington University in St. Louis REPORT NUMBER(S) 2010-001	2. NRC/REGIONAL OFFICE Region III 2443 Warrenville Road, Suite 210 Lisle, IL 60532

3. DOCKET NUMBER(S)	4. LICENSE NUMBER(S)	5. DATE(S) OF INSPECTION
030-02271	24-00167-11	February 22-25, 2010

6. INSPECTION PROCEDURES USED	7. INSPECTION FOCUS AREAS
87134	03.01-03.07 (as designated below)

SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S)	2. PRIORITY	3. LICENSEE CONTACT	4. TELEPHONE NUMBER
2110	2	Susan Langhorst, PhD., RSO	314-362-2988

[X] Main Office Inspection — Next Inspection Date: Feb 2012

[X] Field Office Danforth campus

[ ] Temporary Job Site Inspection

PROGRAM SCOPE

The overall focus of this inspection was a review of the licensee's research and development, radwaste storage and disposal and cyclotron production programs. A review of the medical program was not performed and should be completed during the next inspection.

This large university program maintains approximately 850 active research laboratories primarily utilizing carbon-14, phosphorous-32, sulfer-35, tritium and cyclotron produced florine-18 in a variety of research activities in campus-wide locations. Approximately 319 approved authorized users oversee about 1200 laboratory radiation workers. The university operates 3 Cyclotrons to produce radioactive materials, including F-18 FDG, O-15, and C-11 for medical applications or research. The cyclotron produced products are all used under the university's license and are not sold or used by a consortium. The licensee's radwaste is stored for decay-in-storage or for consolidation at a separate facility on the university campus.

Performance Observations

Approximately twenty research laboratories were toured and reviewed during the inspection. The inspectors performed confirmatory lab surveys, and randomly reviewed lab inventories, in-lab waste storage, survey instrument operation and calibration, area postings, work area labeling, work area designation, and radiation surveys of unrestricted areas. Interviews conducted with available laboratory workers revealed sufficient knowledge of spill and emergency procedures, area survey techniques, etc. Overall laboratory security was adequately maintained.

The inspectors observed a laboratory audit that was performed by a member of the radiation safety staff. The audit was conducted in sufficient detail to identify compliance issues. Reviews of initial and renewal applications for authorized user approval was performed by the Radiation Safety Department for review by the research subcommittee prior to actual research use. The reviews include training (initial and refresher), past experience with use of licensed material, designation of lab category, etc.

Personal dosimetry was exchanged monthly or quarterly with authorized users/workers depending on type and quantity of material used. Records reviewed for 2008 and 3rd quarter 2009, did not indicate exposures in excess of 10 CFR Pt. 20 limits.

Cyclotron operations were reviewed including, security of material, safety procedures, posting, surveys and TLD placement in unrestricted areas. Areas of elevated dose rates were posted and secured from unrestricted access. The inspectors toured the radwaste building and observed monthly pickup of wastes from labs. Radwaste manifests and shipping papers were reviewed for 2008 and 2009 shipments.

BB