

Initial	Announced	X	Unannounced	X	Routine	Special	Other
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**NRC FORM 591M PART 3** (10-2003) 10 CFR 2.201 **U.S. NUCLEAR REGULATORY COMMISSION**

*Docket File Information*  
**SAFETY INSPECTION REPORT  
AND COMPLIANCE INSPECTION**

<b>1. LICENSEE</b> The Curators of the University of Missouri The Chancellor University of Missouri-Kansas City Kansas City, Missouri 64110 <b>REPORT NO:</b> 2011-001	<b>2. NRC/REGIONAL OFFICE</b> U.S. Nuclear Regulatory Commission Region IV, 612 East Lamar Blvd, Suite 400 Arlington, Texas 76011-4125
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<b>3. DOCKET NUMBER</b> 030-32693	<b>4. LICENSE NUMBER</b> 24-00513-37	<b>5. DATE OF INSPECTION</b> September 21-29, 2011
<b>6. INSPECTION PROCEDURES USED</b> 87126	<b>7. INSPECTION FOCUS AREAS</b> 03.01-03.07	<b>8. INSPECTOR</b> Latischa M. Hanson

**SUPPLEMENTAL INSPECTION INFORMATION**

<b>1. PROGRAM CODE</b> 01100	<b>2. PRIORITY</b> 3	<b>3. LICENSEE CONTACT</b> Susan T. Masih, RSO	<b>4. TELEPHONE NUMBER</b> (816) 235-5289
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**Main Office Inspection** 5115 Oak Street, Kansas City, Missouri – UMKC Campus Next Inspection Date: 09/2014

**Field Office** \_\_\_\_\_

**Temporary Job Site Inspection** \_\_\_\_\_

**PROGRAM SCOPE**

**Persons Contacted:** Susan Masih, RSO, Health Physicist; William P. Leutzinger ("Bill") - Director, UMKC Environmental Health & Safety Dept.; Nilofer Qureshi, Ph.D., UMKC Radiation Safety Committee Chair; Ted Knous, Ph.D., Associate Vice Chancellor for Research Services, "Institutional Official"; **Hospital Hill Campus:** Ken Cheung, Ph.D., AU; Ravi Shukla, graduate student (Dr. Cheng's Lab); **Volker Campus:** Hongmin Chen, Ph.D.; AU- Chemistry Dept.; Michelle Paquette, Ph.D., postdoctoral fellow – Physics Lab; Crisanne Arnold, Administrative Assistant – EHS.

This was an unannounced, routine inspection of an academic type A broad scope licensee, owned & operated by the State of Kansas. The licensee performs research & development (R&D) on a campus that has a current student population of approximately 15,000. The licensee reported 138 trained & approved radiation workers who are under the supervision of an authorized user (AU). The RSO reported that the radiation safety committee (RSC) has 40 approved user permits, of which approximately 23 currently active.

The licensee conducts R&D as defined in 10 CFR 30.4, primarily using na-22, c-14, h-3, s-35 (less than 50 mCi) by principal investigators (PI) & instructional students under their supervision. No possession discrepancies were noted. Animal research has not been conducted since the last inspection in 2009, but a PI is currently submitting documentation to the RSC for approval for future use. One PI was recently approved by the RSC for c-252 use (Physics Lab) & another for p-33 use (Chemistry Lab). The inspector conducted a walk-through of these chemistry and physics labs located at Volker & Hospital Hill campuses and conducted interviews with PI's & postdoctoral fellows regarding the licensee's radiation safety program. All were found to be knowledgeable & no violations were noted. Interviews conducted with health & safety personnel included discussions regarding: radiation surveys & survey instrumentation use, package receipt procedures, training, required dosimetry, laboratory audits, emergency contact procedures & RAM security; no violations were noted.

The licensee has 142 personnel monitoring devices which include OSLs, TLDs (finger & wrists), supplied to the licensee by Mirion (QSA Global) & distributed in two use groups: 1) quarterly/non-active users & 2) monthly/active users. The majority of the users registered exposures of "M", with no recordings above regulatory limits.

The licensee's main waste disposal room was walked-down by the inspector at the Troost Avenue address, which has a health & safety employee office located next to it that has a glass viewing window. The authorized health & safety staff are the only ones with entry keys & any entry/egress can be easily monitored. Rad waste collection drums were properly labeled & sealed, rad waste logs were reviewed & were maintained in accordance with regulatory requirements. The licensee periodically ships rad waste to Chase Environmental, in accordance with complying with license condition. Rad waste shipping records were reviewed & found to be in accordance with regulatory requirements.

A review of required records included: leak tests, training, area surveys & contamination control, audits, inventories, equipment calibration, inspection & maintenance documentation, personnel monitoring, receipt & transportation documentation, RPP program & utilization logs.

The previous 2008 inspection was clear. No violations were noted with this inspection & a clear 591 was issued from the office.

SUNSI Review By: LMH  Non-Public  Sensitive – Official Use Only

Supervisory Review By: *AW*  Public  Non-Sensitive