

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 030-939/85-01(DRSS)

Docket No. 030-939

Expired License No. 34-12756-01

Category F

Priority 6

Licensee: Central State University
Department of Biology
Wilberforce, Ohio 45384

Inspection Conducted: January 31, 1985

Inspectors: T. L. Simmons *T. L. Simmons*
Radiation Specialist

3/14/85
Date

J. R. Mullauer *James Mullauer*
Radiation Specialist

3/15/85
Date

Approved By: D. J. Sreniawski *D. J. Sreniawski*
Nuclear Materials Safety
Section 2

3/18/85
Date

Inspection Summary

Inspection on January 31, 1985 (Report No. 030-939/85-01(DRSS))

Areas Inspected: Special, unannounced inspection, limited to survey of facility for residual contamination and radiation. Twenty-seven wipes were taken and analyzed for removable activity. The facility was surveyed to identify fixed contamination or materials remaining.

Results: No residual fixed or removable contamination was found. One 55 gallon drum was noted to contain an undetermined amount of byproduct material (i.e., H-3 and C-14) located in a secure posted storage area of laboratory room No. 140. Several empty lead pigs and glassware were also noted on the shelves in the storage area. One item of noncompliance was identified: 10 CFR 30.3, possession of licensed material without a valid, specific license.

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DETAILS

1. Persons Contacted

Arthur Thomas, Ph.D., President
Melvin Johnson, Ph.D., Chairman, Department of Biology
Willie James Washington, Ph.D., Department of Biology
Dr. Jackson, Ph.D., Dean

2. Instrumentation Used in Survey

Measurements of beta radiation levels were made with a Ludlum 14C, S/N 28236 with a Ludlum 44-9 pancake probe, S/N 13241. This instrument was last calibrated on December 12, 1984. Measurements of gamma radiation levels were made with a Ludlum Mo. 19 Micro R Meter, NRC S/N 014809 last calibrated on January 14, 1985. Wipes were counted at Argonne National Laboratory using liquid scintillation technique.

3. Radiation Survey Results

Floor, wall and counter areas of laboratory Nos. 139 and 140 where material was reportably last used were surveyed with the above survey instruments. All readings for beta radiation were consistent with normal variation in background and construction materials of the building. All readings for gamma radiation varied between 5-8 micro R per hour. The storage room where radioactive waste is stored in one 55 gallon drum showed the same radiation levels as above except for the highest surface reading on the drum which measured 50 micro R per hour.

4. Survey for Removable Contamination

Twenty-seven wipes were taken of the facilities and counted for beta activity. Analysis showed negative results for all wipes. (See attached analysis.)

5. Discussion

An inspection of the University in 1970 reported use of C-14, H-3, I-131 and P-32, less than one millicurie each. Dr. Washington stated that he believes all waste that was generated were placed in the 55 gallon drum. Dr. T. J. Craft would have all receipt and disposal records if any, however he no longer works for this University. In 1970, the inspector reported the following on waste disposal.

The licensee places all liquid waste in their two hoods and it is allowed to evaporate down. These hoods are filtered and have a positive air flow across the face of the hoods. Since the majority of their liquid wastes consist of scintillation liquids, these are allowed to evaporate down until they have a slurry. This slurry, along with all other waste, is placed in metal containers in the waste storage room. The licensee has made one shipment of waste

since the beginning of their program, and consisted of two five gallon cans of waste which was transferred to Radiological Services Inc., New York. At the time of the inspection, the licensee had two additional cans on hand, but only one of these cans was partially filled.

This license expired on April 30, 1978. In a letter dated April 9, 1979, signed by Dr. Johnson, the University requested an extension of the expired license to allow for preparation and submission of a renewal application. The NRC in letter dated May 1, 1979 denied this request and informed the University that an application for a new license would be required. All written correspondence stopped at this point. Since 1979, Region III personnel made several telephone contacts with Dr. Johnson requesting a closeout survey and certificate of disposal of material. These requests were never fulfilled thus prompting this special inspection.

6. Exit Interview

The purpose of the inspection and results were discussed over the phone with Dr. Thomas on February 11, 1985. Dr. Thomas was not aware of the situation with their NRC license as he was just appointed president of the University in January, 1985. Dr. Thomas expressed interest in obtaining a new NRC license and would work with Dr. Johnson to coordinate their efforts. The inspector explained that in the mean time, the University would receive a notice of violation for possession of licensed material without a valid NRC license.