



UNIVERSITY OF MISSOURI-ROLLA

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School of Mines and Metallurgy

Office of the Dean

301 Straumanis Hall  
Rolla, Missouri 65401  
Telephone (314) 341-4153

March 24, 1980

Mr. James G. Keppler  
Director  
United States Nuclear  
Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

REF: Docket 50-123

Dear Mr. Keppler:

Enclosed is a report of the actions taken or to be implemented to correct our procedures which were cited by Mr. N. E. DuBry as areas of noncompliance. The deficiencies in our records were primarily attributable to a vacancy in our health physics position due to a resignation and compliance requirements to recruit a replacement. We are confident that the change in past procedures for calibrations, tests, and surveys of the facility will serve to eliminate the past deficiencies in the records of the Reactor Facility.

The enclosures do not contain any information we would consider to be of proprietary in nature. We appreciate the thoroughness with which this inspection was conducted and appreciate the constructive criticisms and suggestions for improving our procedures and records offered by the inspector in this instance.

Sincerely yours,

T. J. Planje, Dean  
School of Mines & Metallurgy

TJP:ps

cc: Chancellor Marchello  
Dr. D. R. Edwards

Encl.

MAR 26 1980

possible conflicts of interest. At that time, all health physics duties were delegated to the health physicist. Obviously, this delegation has resulted in other difficulties. I have recommended to the Radiation Safety Officer that we combine the best features of the two approaches. The reactor staff is now responsible for the routine health physics calibrations, tests, and surveys. The staff is audited periodically by the health physicist. This change was affected on November 8, 1979, as per the attached memorandum from the Radiation Safety Officer to the Reactor Manager. This added step will provide the necessary checks without unduly complicating the procedures for health physics coverage. Except for the lack of filing, I can find no other indication of any degradation of our program at the reactor. There were no safety problems. We will continue to maintain and operate a safe facility and to complete the necessary documentation to verify this fact.

The inspector expressed some concern over other matters such as the response to IE Bulletin 79-19; a lecture on the current regulations for waste handling, packaging, and disposal; the license renewal; and procedures in water analysis. I have attached information on the first two items and the third item, license renewal, is being handled directly with the NRC in Washington. The fourth item is now the responsibility of the reactor staff and standard operating procedures cover all aspects of staff responsibilities.

SUMMARY. The inspector pointed out difficulties in reports and filing and in health physics coverage. Some of the difficulties were a result of the vacancy in the health physicist position which is now filled. By instituting a procedural change (the delegation of routine health physics activities to the reactor staff and the auditing of the staff by the health physicist) we have added another level of checks on the completeness of routine activities. This procedure has been instituted and has corrected the items listed in the inspection report.



UNIVERSITY OF MISSOURI-ROLLA

School of Mines and Metallurgy

Nuclear Engineering

Building C

Rolla, Missouri 65401

Telephone (314) 341-4720

March 21, 1980

MEMO TO: T. J. Planje  
Dean, School of Mines and Metallurgy

FROM: D. Ray Edwards  
Director, Nuclear Reactor

SUBJECT: NRC Report 50-123/79-03

With the assistance of the Reactor Staff and the health physics personnel, I have reviewed the items in question in Appendix A and B of the above report and hereby submit the following summation of my review:

APPENDIX A, ITEM 1. All permanent records are in accordance with TOCFR20.401(a). The records to which the inspector referred were spare badges and not a part of the permanent record.

APPENDIX A, ITEM 2. The wipe test records in question were complete but not filed since the health physicist had resigned and a new one was being hired. A new health physicist is now employed and the records are all appropriately filed.

APPENDIX B, ITEM 1. The only missing records in 1978 and 1979 were for the months of August, September and October, 1979. This was the period when the health physicist position was unfilled.

APPENDIX B, ITEM 2. The Building Survey records at the reactor are complete except for the month of December, 1978.

APPENDIX B, ITEM 3. There are four (4) missing pool water tests; during at least two of these months the equipment was not available.

APPENDIX B, ITEM 4. There are ten (10) health physics instruments at the reactor. The only missing calibration reports are for the third quarter of 1979; again, this was the period when the health physicist position was unfilled.

DISCUSSION. The inspector pointed out the difficulty we have when a full-time health physicist is not available. At one time, the health physics functions at the reactor were performed by reactor personnel. Although there were no safety problems, earlier inspectors expressed concern over



UNIVERSITY OF MISSOURI-ROLLA

Radiation Safety Office

 Building C  
 Rolla, Missouri 65401  
 Telephone: (314) 341-4240

December 28, 1979

MEMO TO: Alva Elliott, Ron Jones, Mike Jones, N. Tsoulfanidis

FROM: Ray Bono

RE: Sealed Source Leak Tests

Sealed sources requiring leak checks are those sources that contain greater than 100 microcuries of beta and/or gamma emitting material, or greater than 10 microcuries of alpha emitting material. Exceptions are listed in the Broad License under Conditions 13. A through E.

The following is a list of the sources at UMR which require leak tests every six months. All leak tests are due no later than every May and November of each year.

<u>Source</u>	<u>Activity</u>	<u>Serial #</u>	<u>Authorized User</u>	<u>Location</u>
Plutonium-239 (PuBe)	5 Ci	M-1092	D.R. Edwards	Reactor Pool
Cobalt-60	15 mCi	B-90	D.R. Edwards	Reactor Safe
Plutonium-239 (PuBe)	5 Ci	820538-36B	D.R. Edwards	Reactor (Storage)
Plutonium-239 (PuBe)	5 Ci	M-169	D.R. Edwards	Reactor (Storage)
Cesium-137	10 mCi	373	N. Tsoulfanidis	Reactor Safe
Cesium-137	747 mCi	none	D.R. Edwards	Reactor Safe
Cobalt-60	65 mCi	none		Reactor Storage
Cesium-137	100 mCi	74-156	D.R. Edwards	Reactor Safe

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 Ray Bono



UNIVERSITY OF MISSOURI-ROLLA

Radiation Safety Office

 Building C  
 Rolla, Missouri 65401  
 Telephone (314) 341-4240

November 8, 1979

MEMO TO: Alva E. Elliott, Reactor Manager

FROM: Nick Tsoulfanidis, UMR Radiation Safety Officer

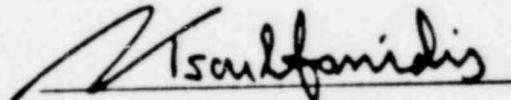
SUBJECT: Reactor Health Physics Activities

The resignation of Tom Froelich and the recent visit by the NRC inspector indicates that there should be change with regard to Health Physics activities in the UMR Reactor.

Effective immediately, Mr. Alva Elliott, the Reactor Manager, will be responsible for the following tasks:

<u>Function</u>	<u>Frequency</u>
Swipe test of sealed sources	6 months
Ram Calibration	quarterly
Health Physicist instruments calibration	quarterly
Swipe test of reactor building	monthly
Air releases	monthly
Water release	regeneration
Building survey	monthly
Routine pool water	monthly
By-product material released	monthly

The records of these activities will be inspected by the Radiation Safety Officer or the Health Physicist. Written approval or disapproval will be indicated. The inspection will be performed once a month in the Reactor building and a log of inspections will be kept.

  
 Nick Tsoulfanidis

cc: D.R. Edwards  
 N. Gale  
 J. Vaughn

University of Missouri - Rolla



Rolla, Missouri 65401

Memorandum To: Reactor Staff, Mark Williams, Ray Bono  
From: Nick Tsoulfanidis, Radiation Safety Officer  
RE: Lecture on Radioactive Waste Handling, Packaging and Disposal - Discussion of Current Regulations  
Date: December 4, 1979

On Monday, December 10, 1979, O. Olson, the MU Reactor Health Physicist, will give a lecture on the above subject at the NE Conference Room.

Please make every effort to attend.

Thank you.

*Nick*

Nick Tsoulfanidis

cc: O. Olson  
R. Edwards  
M. Gale

POOR ORIGINAL

12-10-1979

Lecture by O. Olson

HF Manager of MUR Research Reactor

Ray Bonn  
A. Watkinson  
John Z. Stillion  
Carl Sartin

list of attendees

m. Jones  
L.L. Jones  
Nick Tsoulfanidis  
D. Ray Edwards  
Mark H. Williams.

POOR ORIGINAL

In compliance with 79-19, Oreal Olson from MURR, U.M.C. gave a training lecture on Radioactive waste Handling, Packaging and Disposal. The following items were covered

1. 79-19 Oreal talked about the requirements
2. Responsibilities of individual users
  - a) Waste must be divided into liquid and solid (No free standing liquid)
  - b) Do not throw cold waste into radwaste containers
3. Responsibilities of Health Physics, in regards to Radwaste.
- 4) Containers used by UMR for waste
- 5.) Radwaste disposal
  - 1) Who is responsible
  - 2) Compliance with regulations and burial ground licenses
  - 3) Cost of disposal

... session.



UNIVERSITY OF MISSOURI-ROLLA

Radiation Safety Office

Building C  
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Telephone: (314) 341-4240

February 28, 1980

Director, Region III  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Subject: Response to NRC IE Bulletin 79-19

Dear Sir:

The following information is submitted as an amendment to the response submitted to you on 18 September 1979 in regard to NRC IE Bulletin 79-19. The information covers operations of the University of Missouri-Rolla (UMR) Campus and the UMR Research Reactor. The Research Reactor operates under license R-79. The UMR Campus laboratories and users are under license 24-513-32.

All nine items are listed again for the sake of completeness. However, only items 4, 6, 8 and 9 are different from the earlier response.

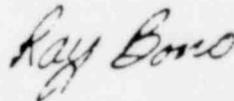
Our amended response is as follows:

1. Each of five health physics offices maintains a set of NRC and DOT regulations.
2. Each health physics office maintains a set of collection contractor requirements.
3. Each health physics office staff member, health physicist and health physics technician, is designated as responsible for the safe transfer, packaging and transport of low-level radioactive material. No other persons are so designated.
4. UMR health physics currently follows the general instructions listed in the "Handbook of Radiological Operations" which is applicable throughout the University of Missouri. Health physics will develop a Standard Operating Procedure to cover radioactive waste operations.
5. Health physics office staff members maintain an understanding of regulatory requirements by self-study and mutual assistance.
6. Employees who generate the wastes are instructed in their obligations by health physics by supplying the users with a "Handbook of Radiological Operations" and through periodic laboratory inspections.

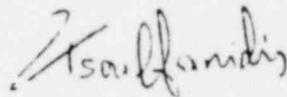
7. A regular audit of each of the five health physics offices is performed annually with waste management practices constituting a supplement of the audit.
8. A management-controlled audit of the activities associated with the transfer, packaging and transport of low-level radioactive waste was performed on December 20, 1979, and is on file in the health physics office.
9. This report is sent as an amendment to any previous response to Bulletin No. 79-19 and covers the UMR campus only (reactor included).
  - 1.) One waste shipment was made on May 3, 1978 with a total volume of 37.5 cubic feet. No other waste shipments have been made to date.
  - 2.) Quantity----- 0.0263 Ci  

Isotopes-----	C-14	Cs-134
	p-32	Eu-152
	p-33	Na-22
	H-3	Ag-110m
		K-40
  - 3.) Yes, liquid low-level radioactive waste was produced during scintillation counting. The scintillation liquid contained in vials was packed in vermiculite.

Sincerely yours,



Ray Bono  
Health Physicist



Dr. N. Tsoulfanidis  
Radiation Safety Officer

RB:NT/bjv

cc: NRC Office of Inspection & Enforcement  
Division of Fuel Facility & Materials  
Safety Inspection  
Washington, D. C. 20555

John Tolan  
N. Gale  
D. R. Edwards