

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION

Docket No: 50-284

License No: R-110

Report No: 50-284/98-201

Licensee: Idaho State University

Facility: Idaho State University Reactor Laboratory

Location: Lillibridge Engineering Building
Pocatello, ID 83209

Dates: June 24 and 25, 1998

Inspector: C. H. Bassett
Senior Non-Power Reactor Inspector

Approved by: Seymour H. Weiss, Director
Non-Power Reactors and Decommissioning
Project Directorate
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

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EXECUTIVE SUMMARY

Idaho State University
Report No: 50-284/98-201

This routine, announced inspection included onsite review of various aspects of the licensee's programs concerning transportation of radioactive materials and material control and accounting as they relate to the Aerojet General Nuclear AGN-201 research reactor.

Transportation

- Radioactive material was transferred to the Campus Technical Safety Office for shipment and/or disposal using the broad scope license according to procedure.

Material Control and Accounting

- No deficiencies were identified in the licensee's Material Control and Accounting program.

Other Issues

- One Unresolved Item was identified concerning a licensee-identified apparent violation of Technical Specification 6.4.3.a that requires an audit of facility operation once every 12 months.

REPORT DETAILS

Summary of Plant Status

Although the reactor was not operating during the inspection, a review of applicable records showed that the reactor continued to be used to support research, reactor operator training, and educational demonstrations. No safety concerns were noted.

1. **Transportation (86740)**

a. Inspection Scope

The inspector interviewed licensee personnel and reviewed various records to verify compliance with the requirements of 10 CFR 71.5 for shipments of licensed material.

b. Observations and Findings

Through records review and discussions with licensee personnel, the inspector determined that the licensee transfers solid waste to the Campus Technical Safety Office (TSO) for shipment and/or disposal under the campus broad scope license. The transfers appeared to be in compliance with procedure. Various isotopes were produced using the reactor, but these were either maintained for use within the reactor facility or transferred to another license. No shipments of any type of radioactive material had been made from the reactor facility using the NRC reactor license. One shipment of special nuclear material had been received.

c. Conclusions

Radioactive material was transferred to the Campus TSO for shipment and/or disposal under the broad scope license according to procedure.

2. **Material Control and Accounting (85102)**

a. Inspection Scope

To verify compliance with 10 CFR Part 70, the inspector reviewed:

- storage areas,
- annual inventory results, and
- associated records and reports.

b. Observations and Findings

The inspector verified through a review of records that all nuclear material received was accurately accounted for and properly stored. The licensee had received one shipment of special nuclear material (SNM) but had made no shipments between April 1, 1997 and March 31, 1998.

Physical inventories were conducted at least annually as required by 10 CFR 70.51(d). The licensee's last inventory was completed on March 30, 1998.

Exhibits I and II (attached to this report) summarize the licensee's uranium and plutonium material balances from April 1, 1997 through March 31, 1998.

c. **Conclusion**

No deficiencies were identified in the licensee's Material Control and Accounting program.

3. **Other Issues**

a. Inspection Scope

The inspector reviewed a memorandum from the licensee concerning an apparent licensee-identified deficiency.

b. Observation and Findings

During this inspection, the inspector reviewed a memorandum that outlined the details of a licensee identified apparent violation of Technical Specification (TS) 6.4.3.a which requires that an audit of the conformance of facility operation to the TSs and applicable license conditions be performed at least once every 12 months. The audit was originally scheduled for January 1998 but was not performed until June 1998; because the results of the audit were not available during the inspection and any followup actions that might be required as a result of the audit had not been initiated or completed, the inspector informed the licensee that this issue will be reviewed during a subsequent inspection. The issue will be identified in the interim as an Unresolved Item (URI) 50-284/98-201-01.

c. Conclusions

One Unresolved Item was identified concerning a licensee-identified apparent violation of TS 6.4.3.a which requires an audit of facility operation once every 12 months.

4. **Exit Meeting Summary**

The inspection scope and results were summarized on June 25, 1998, with licensee representatives. The inspector discussed the findings for each area reviewed. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspector during this inspection.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Bennion, Reactor Administrator
T. Gansauge, Reactor Supervisor
T. Gesell, Radiation Safety Officer
J. Kunze, Dean, College of Engineering

INSPECTION PROCEDURES USED

IP 86740: Transportation of Radioactive Materials
IP 85102: Material Control and Accounting - Reactors

ITEMS OPENED, CLOSED, AND DISCUSSED

Open

50-284/98-201-01 URI An Unresolved Item was identified concerning a licensee-identified apparent violation of Technical Specification 6.4.3.a which requires an audit of facility operation once every twelve months.

Closed

None

LIST OF ACRONYMS USED

CFR Code of Federal Regulations
IP Inspection Procedure
NRC Nuclear Regulatory Commission
SNM Special Nuclear Material
TSO Technical Safety Office
URI Unresolved Item

EXHIBIT I

IDAHO STATE UNIVERSITY AGN-201 REACTOR FACILITY

Docket No. 50-284

License No. R-110

Material Balance for Period: April 1, 1997 - March 31, 1998

Reporting Identification Symbol: ZJK

Report Units: Grams

	High Enriched Uranium		Plutonium	
	Element	Isotope	Element	Isotope
Beginning Inventory: (October 1, 1995)	0	0	34	32
Receipts:	0	0	0	0
Production:	0	0	0	0
<u>Material to Account for:</u>	<u>0</u>	<u>0</u>	<u>34*</u>	<u>32*</u>
Removals:				
Shipments:	0	0	0	0
Fission and Transmutation:	0	0	0	0
Inventory Difference:	0	0	0	0
Decay:	0	0	0	0
Total Removals:	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Ending Inventory: (March 30, 1998)	<u>0</u>	<u>0</u>	<u>34</u>	<u>32</u>

* = Contained in the licensee's PuBe sources

EXHIBIT II

IDAHO STATE UNIVERSITY AGN-201 REACTOR FACILITY

Docket No. 50-284

License No. R-110

Material Balance for Period: April 1, 1997 - March 31, 1998

Reporting Identification Symbol: ZJK

Report Units: Grams

	<u>Low Enriched Uranium</u> Element	Isotope
Beginning Inventory: (October 1, 1995)	11013	2187
Receipts:		
From Oregon State University Corvallis, OR (ZRH)	170	34
Production:	0	0
<u>Material to Account for:</u>	<u>11183</u>	<u>2221</u>
Removals:		
Shipments:	0	0
Fission and Transmutation:	0	0
Inventory Difference:	0	0
Decay:	0	0
Total Removals:	<u>0</u>	<u>0</u>
Ending Inventory: (March 30, 1998)	<u><u>11183</u></u>	<u><u>2221</u></u>

U.S. Nuclear Regulatory Commission

INSPECTION FOLLOW-UP SYSTEM (IFS)
 POWER REACTOR, FUEL FACILITY & VENDOR DATA ENTRY FORM
 OPEN NEW ITEMS ONLY - (non escalated)

SITE NAME: Idaho State University

REPORT NO.:	UNIT	DOCKET NO.:
98-201	1	50-0284
-	2	-
-	3	-

SUBMITTED BY: C. Bassett DATE: 7/2/98
 REVIEWED BY: S. Weiss DATE: 7/2/98

Report Transmittal Date: _____
 Last Name: Bassett
 Lead Responsible Inspector RITS Initials: A Q U P D N D

Responsible Org. Code: _____
 ANY NEW ITEMS ?
 No - Stop here
 Yes - Continue

Item Seq. No.: 01 Item Type: U R I Severity Level: _____ Supplement No.: 1

ITEM STATUS: 0 Unit 1: _____ Unit 2: _____ Unit 3: _____

EA NO. _____

(Fill in the EA NO. if opening an 'EEI' item. The EA NO. can be obtained from EICS)

Title: Licensee-identified apparent violation of TS 6.4.3.a concerning conducting an annual audit

(110 Characters Max)

Inspection Procedure Number: 69001 SALP Functional Area: OPS Cause Code: 31-40 Closeout Org. Code: _____

NOV Summary/Comments: An Unresolved Item was identified concerning a licensee-identified apparent violation of TS 6.4.3.a which requires an audit of facility operation at least once every twelve months. The audit was scheduled for January 1998 but was not completed until June 1998.

* NGTE: See back for CODES