

March 2, 2000

Dr. Joseph Cecchi
Chair, Chemical and Nuclear Engineering Department
University of New Mexico
Albuquerque, NM 87131-1341

SUBJECT: NRC INSPECTION REPORT NO. 50-252/00-201

Dear Dr. Cecchi:

This refers to the inspection conducted on February 14-16, 2000, at your AGN Research Reactor Facility. The inspection included a review of activities authorized for your facility. The enclosed report presents the results of that inspection.

Various aspects of your safety program were inspected including selective examinations of procedures and representative records, and interviews with personnel. Based on the results of this inspection, no significant safety issues were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this letter, please contact us.

Sincerely,

/RA/

Ledyard B. Marsh, Chief
Events Assessment, Generic Communications
and Non-Power Reactors Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No. 50-252
License No. R-102

Enclosure: NRC Inspection Report No. 50-252/00-201

cc w/encl:
Please see next page

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University of New Mexico

Docket No. 50-252

cc:

City Manager
City of Albuquerque
City Hall
Albuquerque, NM 87101

Dr. William Vernetson
Director of Nuclear Facilities
202 Nuclear Reactor Building
Department of Nuclear
Engineering Sciences
University of Florida
Gainesville, FL 32611

Dr. Robert Busch, Chief Reactor Supervisor
University of New Mexico
Albuquerque, NM 87131-1341

Dr. Norman Roderick, Reactor Administrator
University of New Mexico
Albuquerque, NM 87131-1341

Mr. James De Zetter, Radiation Safety Officer
Radiation Control Program Director,
State of New Mexico
University of New Mexico
Albuquerque, NM 87131-1341

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

Docket No: 50-252
License No: R-102
Report No: 50-252/00-201
Licensee: University of New Mexico
Facility: AGN-201M Research Reactor
Location: Albuquerque, New Mexico
Dates: February 14 - 16, 2000
Inspector: Craig Bassett
Approved by: Ledyard B. Marsh, Chief
Events Assessment, Generic Communications
and Non-Power Reactors Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

EXECUTIVE SUMMARY

This routine, announced inspection included onsite review of various aspects of the licensee's programs concerning radiation protection, security, and the transportation of radioactive materials as they relate to the licensee's five watt Class II research reactor. The licensee's programs were directed toward the protection of public health and safety and were in compliance with NRC requirements. No safety concerns or violations of regulatory requirements were identified.

Organization and Staffing

- The licensee's organization and staffing remain in compliance with the requirements specified in the Technical Specifications.

Review and Audit Functions

- Audits were being conducted by the Reactor Safeguards Advisory Committee in compliance with the requirements specified in the Technical Specifications.

Radiation Protection Program

- Surveys were being completed and documented acceptably to permit evaluation of the radiation hazards present.
- Postings generally met the regulatory requirements.
- Personnel dosimetry was being worn as required and doses were well within the licensee's procedural action levels, and NRC's regulatory limits.
- Radiation monitoring equipment was being maintained and calibrated as required.
- The Radiation Protection and ALARA Programs satisfied regulatory requirements.
- There were no measurable releases of radioactive effluents from the facility.

Transportation of Radioactive Materials

- The licensee did not ship any radioactive material from the facility under the reactor license.

Safeguards and Security

- The NRC-approved security program at the facility was acceptably carried out.

Material Control and Accountability

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

Report Details

Summary of Plant Status

Although the licensee's non-power reactor (NPR) was not operated during this inspection, a review of the applicable records indicated that the reactor continued to be operated at various power levels up to the maximum authorized level of five watts for physics experiments and to support research.

1. Organization and Staffing (69001)

a. Inspection Scope

The inspector reviewed the following regarding the licensee's organization and staffing to ensure that the requirements of the Technical Specification (TS) were being met:

- organizational structure
- management responsibilities
- staffing requirements for the research reactor facility

b. Observations and Findings

Through discussions with licensee representatives, the inspector determined that management responsibilities and the organization at the facility had not changed since the previous NRC inspection in October 1998 (Inspection Report No. 50-252/98-202).

Through review of records and logs and through discussions with licensee personnel, the inspector determined that the staffing at the facility was acceptable to support the work and ongoing activities. The staffing met the requirements of the TS.

c. Conclusions

The licensee's organization and staffing remain in compliance with the requirements specified in the TS.

2. Review and Audit Functions (69001)

a. Inspection Scope

The inspector reviewed the following to ensure that the audits and reviews stipulated in the requirements of the TS were being completed:

- Radiation Control Committee (RCC) meeting minutes
- Reactor Safeguards Advisory Committee (RSAC) meeting minutes
- TS duties specified for the RCC and the RSAC including review and audit functions

b. Observations and Findings

The inspector reviewed the RCC's and RSAC's meeting minutes from January 1998 to the present. These meeting minutes showed that each committee met as required by the TS with a quorum being present. The inspector also noted that the RCC and the RSAC had considered the types of topics outlined by the TS.

It was noted that the RSAC committee completed audits of the radiation protection and security programs as required by the TS. The inspector noted that the audits and the resulting findings were acceptable. If the findings contained recommendations for possible changes, the licensee responded and took corrective actions as necessary.

c. Conclusions

Audits were being conducted by the RSAC according to the requirements specified in the TS.

3. Radiation Protection Program (69001)

a. Inspection Scope

The inspector reviewed the following to verify compliance with 10 CFR Part 20 and the applicable licensee TS requirements and procedures:

- health physics survey records
- radiological signs and posting
- dosimetry records
- calibration and periodic check records for radiation monitoring instruments
- the Radiation Protection Program
- the ALARA Program
- the 1998 and 1999 Annual Reports

The inspector also toured the licensee's facility and observed the use of dosimetry and radiation monitoring equipment. Licensee personnel were interviewed as well.

b. Observations and Findings

(1) Surveys

Monthly and other periodic contamination and radiation surveys were completed by Radiation Safety Division staff as required by TS. Results were evaluated to ensure that the survey results had not exceeded set action levels.

(2) Postings and Notices

10 CFR 19.11 requires the licensee to post current copies of various documents including the regulations in 10 CFR 20, the facility license, procedures, and any notice of violation as applicable. If posting such documents is not practicable, the

licensee may post a notice that describes the document and states where it may be examined. The licensee is also required to post a current copy of NRC Form-3.

Copies of current notices to workers required by 10 CFR Part 19, with the exception of NRC Form-3, were posted in appropriate areas in the facility. The copies of NRC Form-3 that were posted were noted to be somewhat outdated. When this issue was pointed out, the licensee promptly posted current copies of NRC Form-3 provided by the inspector.

The licensee was informed that failure to post current copies of NRC Form 3 was an apparent violation of 10 CFR 19.11. However, this failure was a violation of minor significance and is being treated as a Non-Cited Violation (NCV), consistent with Section IV of the NRC Enforcement Policy (NCV 50-252/00-201-01).

Postings at the entrances to the controlled areas, including the Reactor Room, were acceptable for the hazards present. The facility's radioactive material storage areas were properly posted. No unmarked radioactive material was noted.

(3) Dosimetry

The licensee used a National Voluntary Laboratory Accreditation Program (NVLAP) accredited vendor to process personnel dosimetry. Examination of the records for the past two years through the date of the inspection showed that all exposures were well within NRC limits and the licensee action levels. Most of the records suggested no exposure above background. Dosimetry was acceptably used by facility personnel.

(4) Radiation Monitoring Equipment

The calibration of portable survey meters was typically completed by Radiation Safety Division personnel. Calibration frequency met TS requirements and records were maintained as required.

(5) Radiation Protection Program

The licensee's Radiation Protection Program was established in the University of New Mexico (UNM) Radiation Safety Manual, Revised July 1999. The program included requirements that all personnel who had unescorted access to the facility receive training in radiation protection, policies, procedures, requirements, and facilities. Completion of this training was verified by the person's supervisor or by the person in charge of the laboratory using radioactive materials. The program appeared to be acceptable.

(6) ALARA Program

The ALARA Program was also outlined and established in the UNM Radiation Safety Manual. The ALARA program provided guidance for keeping doses as low as reasonably achievable and was consistent with the guidance in 10 CFR 20.

(7) Facility Tours

The inspector toured the Reactor Room and selected support laboratories and areas. Control of radioactive material and control of access to radiation areas were acceptable. The inspector also determined that no gaseous or liquid releases of radioactive material had been made from the research reactor facility.

c. Conclusions

Surveys were being completed and documented acceptably to permit evaluation of the radiation hazards that might exist. Postings generally met regulatory requirements. Personnel dosimetry was being worn as required and doses were well within the licensee's procedural action levels and the NRC's regulatory limits. Radiation monitoring equipment was being maintained and calibrated as required. The Radiation Protection Program and the ALARA Program satisfied regulatory requirements. No radioactive effluents had released from the research reactor facility.

4. **Transportation (86740)**

a. Inspection Scope

The inspector interviewed licensee personnel and reviewed various records to verify compliance with procedural requirements for transferring licensed material.

b. Observations and Findings

Through records review and discussions with licensee personnel, the inspector determined that the licensee had not shipped any radioactive material from the reactor facility under the reactor license. Such material would be transferred to the UNM's Broad Scope license and handled, shipped, and/or disposed of under that license.

c. Conclusions

No radioactive material was shipped from the reactor facility under the reactor license.

5. **Physical Security (81401, 81402, 81431)**

a. Inspection Scope

To verify compliance with the licensee's NRC-approved Physical Security Plan (PSP) and to assure that changes, if any, to the plan had not reduced its overall effectiveness, the inspector reviewed:

- logs, records, and reports
- the security organization
- access and key controls
- intruder detection and physical barriers

b. Observations and Findings

The inspector determined that the licensee's physical protection program conformed to NRC requirements and to the licensee's PSP and implementing procedures.

c. Conclusion

The NRC-approved security program at the facility was acceptably carried out.

6. Material Control and Accounting (85102)

a. Inspection Scope

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

- control of storage areas
- annual inventory results of Special Nuclear Material (SNM)
- associated records and reports

b. Observations and Findings

Records showed that SNM was adequately controlled and that physical inventories were conducted at least annually as required by 10 CFR 70.51(d). Nuclear Material Transaction Reports (DOE/NRC Form 741) and Material Status Reports (DOE/NRC Form 742) were being submitted by the licensee as required by 10 CFR 74.13(1).

c. Conclusion

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

7. Exit Interview

The inspection scope and results were summarized on February 16, 2000, with licensee representatives. The inspector discussed the findings for each area reviewed. The licensee acknowledged the findings. Although proprietary documents were reviewed during this inspection, the proprietary nature of these documents has been deleted from this report.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. Busch, Chief Reactor Supervisor
 K. Carpenter, Reactor Supervisor
 R. Becker, Assistant Radiation Safety Officer, UNM Safety, Health and Environmental Affairs (SHEA) Department
 G. Bello, Officer, UNM Campus Police Department
 J. De Zetter, Radiation Safety Officer (RSO), UNM SHEA Department
 F. McQuerry, Alarm System Technician, Physical Plant Department, UNM
 M. Medina, Officer, UNM Campus Police Department

INSPECTION PROCEDURES USED

IP 69001: Class II Non-Power Reactors
 IP 81401: Plans, Procedures, and Reviews
 IP 81402: Reports of Safeguards Events
 IP 81431: Fixed Site Physical Protection of Special Nuclear Material of Low Strategic Significance
 IP 85102: Material Control and Accounting - Reactors
 IP 86740: Inspection of Transportation Activities

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-252/00-201-01	NCV	Failure to post a current copy of NRC Form 3 as required by 10 CFR 19.11.
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Closed

50-252/00-201-01	NCV	Failure to post a current copy of NRC Form 3 as required by 10 CFR 19.11.
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LIST OF ACRONYMS USED

ALARA	As Low As Reasonably Achievable
AGN	Aerojet General Nuclear
CFR	Code of Federal Regulations
IP	Inspection Procedure
NCV	Non-Cited Violation
NVLAP	National Voluntary Laboratory Accreditation Program
NPR	Non-Power Reactor
NRC	Nuclear Regulatory Commission
PSP	Physical Security Plan
RCC	Radiation Control Committee
RSO	Radiation Safety Officer
RSAC	Reactor Safeguards Advisory Committee
SNM	Special Nuclear Material
TS	Technical Specifications
TRTR	Test, Research, and Training Reactor
UNM	University of New Mexico