UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
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March 25, 2004

NMED 030231

Framatome ANP
ATTN: Mr. Robert Freeman
Plant Manager
Mount Athos Road Facility
P. O. Box 11646
Lynchburg, VA 24506-1646

SUBJECT: NRC INSPECTION REPORT NO. 70-1201/2004-01

Dear Mr. Freeman:

This refers to the inspection conducted from February 23 through 26, 2004, at the Lynchburg, Virginia facility. The purpose of the inspection was to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. At the conclusion of the inspection, the findings were discussed with those members of your staff identified in the report.

Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observation of activities in progress.

Within the scope of the inspection, violations or deviations were not identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

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

Sincerely,

/RA/

David A. Ayres, Chief
Fuel Facility Inspection Branch
Division of Fuel Facility Inspection

Docket No. 70-1201
License No. SNM-1168

Enclosure: (See Page 2)

Enclosure: NRC Inspection Report

cc w/encl:
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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	70-1201
License No.:	SNM-1168
Report No.:	70-1201/2004-01
Licensee:	Framatome ANP
Facility:	Lynchburg, Virginia Facility
Location:	Lynchburg, VA
Dates:	February 23-26, 2004
Inspector:	W. L. Britz, Fuel Facility Inspector C. D. Taylor, Health Physicist
Accompanied by:	E. A. Thompson, Health Physicist, NMSS D. A. Ayres, Chief, Fuel Facility Inspection Branch 1
Approved by:	D. A. Ayres, Chief Fuel Facility Inspection Branch 1 Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

Framatome ANP
NRC Inspection Report 70-1201/2004-01

This routine announced inspection focused on the observations and evaluation of the licensee's radiation protection, emergency preparedness and transportation areas. The inspection involved observation of work activities, a review of selected records, and interviews with plant personnel. The report covers a four day inspection effort by two regional fuel facility inspectors.

Based upon the results of this inspection, the licensee's radiation protection, emergency preparedness, and transportation programs were acceptable. The inspection identified the following aspects of the program as outlined below:

Radiation Protection

- The external and internal exposure monitoring programs were implemented in a manner to maintain doses as low as reasonably achievable. Exposures were less than the occupational limits in 10 CFR 20.1201 (Sections 2.a and 2.b).

- The respiratory protection program was implemented in a manner to ensure the issuance, storage, maintenance, and training on the use of respirators was in accordance with the established procedures (Section 2.c).

- The contamination survey program was appropriately implemented to protect workers, and identify potential work areas showing an internal or external hazard to workers. Except for a few minor documentation discrepancies, the licensee maintained positive control of sealed sources and leak testing was performed in accordance with the license and NRC requirements (Section 2.d).

- The inspectors noted that Table 11-3, *Record Management,* in the License Application, does not implement the requirements of 10 CFR Part 20 for required record retention times for surveys and reports. The discrepancy was discussed with NRC headquarters licensing who will resolve the issue (Section 2.d).

- Equipment used for detecting the presence of radioactive materials on smears, air samples, personnel, and within the workplace as well as the nuclear criticality detection system were properly maintained and performed the intended safety function in a reliable manner (Section 2.e).

- The licensee's performance in notification and reporting was in accordance with requirements. The Safety and Licensing Deficiency Reports selected for review did not require notification to NRC (Paragraph 2.f).

Emergency Preparedness

- Emergency preparedness program changes did not appear to impact the effectiveness of the emergency preparedness program (Section 3.a).

- The revised emergency procedures continued to implement the Emergency Plan. (Section 3.b).

- The licensee maintained an emergency response training program which provided instructions to those individuals expected to implement Emergency Procedure SL-1308 (Section 3.c).

- Based on documentation reviewed, the licensee maintained effective coordination with offsite support organizations on matters of mutual interest involving emergency preparedness (Section 3.d).

- The equipment used for emergency response was found to be adequate to ensure proper emergency operations support (Section 3.e).

Transportation

- Activities associated with the packaging, classification, shipments, receipt and records of nuclear materials were made according to the procedures and regulations (Section 4.a).

- Current Certificates of Compliance were on file and being used for the three shipping containers (Section 4.b).

- Management controls for the packaging and transporting of radioactive materials were being implemented in accordance with the licensee's quality assurance program (Section 4.c).

Attachment:
List of Persons Contacted
Inspection Procedures Used
List of Items Opened, Closed, Discussed

REPORT DETAILS

1. Summary of Plant Status

This routine, announced inspection included a review of selected aspects of the licensee's program for radiological protection, emergency preparedness, and transportation. There were no plant upsets or unusual operational occurrences during the onsite inspection. On February 24 and 26, 2004, David Ayres, Chief of Fuel Facility Inspection Branch 1, in the Division of Fuel Facility Inspection, Region II, met with senior site management and toured the facility.

2. Radiation Protection (Inspection Procedure (IP) 83822) R1

a. External Exposure Control (R1.04)

(1) Inspection Scope

The inspector reviewed radiation protection procedures, and discussed with the licensee representatives personnel exposure data to determine if exposures were in compliance with the regulatory requirements, and if controls were in place to maintain occupational doses As Low As Reasonably Achievable (ALARA).

(2) Observations and Findings

Based on the interviews, procedural reviews, and observations of plant personnel inside radiation control areas, the licensee's monitoring program was consistent with the requirements in 10 CFR Part 20.

Table 1 below displays the maximum assigned dose equivalents exposure data for calender year (CY) 2001 and 2002, and the projected exposures for CY 2003 based on data as of December 2003. No regulatory or license limits were exceeded.

Table 1 - Exposure Data for CY 2001 - CY 2003

Year	Deep Dose Equivalent (DDE)	Shallow Dose Extremity (SDE)	Total Effective Dose Equivalent (TEDE)	Collective TEDE (person-rem)	Committed Effective Dose Equivalent (CEDE)
2001	.482 rem	1.90 rem	.935 rem	16.391	.617 rem
2002	.353 rem	.862 rem	.599 rem	18.860	.337 rem
2003	.388 rem	1.37 mrem	.679 rem	12.54	.560 rem

***Note**: The projected annual exposures for CY 2003 are based on Safety Review Board meeting minutes dated January 9, 2004.

During the inspection, the inspector toured the middle room of the service equipment refurbishment facility 4 (SERF 4) and observed personnel wearing the appropriate dosimetry. All areas observed were adequately restricted and posted. The inspector interviewed and reviewed documentation on individual personnel monitoring for

employees and contractors. The inspector determined that the licensee had implemented the external monitoring program in accordance with their procedures and the regulations.

(3) Conclusion

The external exposure monitoring programs were implemented in a manner to maintain doses as low as reasonably achievable. Exposures were less than the occupational limits in 10 CFR 20.1201.

b. Internal Exposure Control (R1.05)

(1) Inspection Scope

The inspector reviewed licensee procedures for assessing internal exposure to determine if controls were in place to monitor occupational doses, and verify that the administrative limits were established to control occupational dose ALARA. Exposure data were examined to determine if exposures resulting from various plant operations exceeded limits in 10 CFR Part 20.

(2) Observations and Findings

The inspector reviewed internal procedures for establishing and meeting exposure goals for special projects and elevated samples (i.e. bioassays, lapels, fixed air samplers and potential exposures). The inspector concluded that the procedures contained action limits which were set below federal limits to ensure personnel exposures did not exceed occupational limits in 10 CFR 20.1201. In addition, the inspector determined that the licensee had evaluated and responded promptly to these issues and initiated corrective action and timely follow-up.

The licensee used a dose tracking management system, HIS-20, that collected data from lapel air samplers, fixed air-samplers, bioassays, and personnel monitoring devices. The data on employees working in the radiological control areas were tracked via a computer check in/out system that recognized the employees identification number. The data were downloaded daily into the database dose tracking management system. The results were evaluated and trended monthly for compliance purposes. During the inspection, the following areas were reviewed and discussed with the licensee:

- the weekly air probe downloads and printouts,
- the record verification process by the employee or supervisor, and revisions to account for employee's internal dose,
- the proper wearing of dosimetry on the body, with protective clothing, and for extremity purposes;
- bioassays; and
- the highest total personnel exposures for the year (2002) including follow-up if doses exceeded administrative limits or regulatory limits.

No problems were identified.

(3) Conclusions

The internal exposure monitoring programs were implemented in a manner to maintain doses as low as reasonably achievable. Exposures were less than the occupational limits in 10 CFR 20.1201.

c. Respiratory Protection (R1.06)

(1) Inspection Scope

Respiratory protection equipment issuance, storage, maintenance, and training verification were examined for adequacy in assuring that equipment was being adequately maintained and obtained by certified users only.

(2) Observations and Findings

Interviews with technicians in the radiation protection program disclosed that the licensee had not actively used respirators for radiological concerns since the last inspection. The licensee indicated that when respirators were used, it was because of a build-up of nonradiological organic vapors due to welding activities in the SERF areas. Personnel in the pellet loading room were not required to wear respirators in their work areas but used portable lapel air samples.

Respirators were checked-out/in by technicians from the radiation protection office. All cleaning and maintenance of the respirators including the self contained breathing apparatus (SCBA) was the responsibility of the radiation protection office. The inspector observed two storage locations for the respirators and the condition of the SCBA units. The inspector found that one of the storage locations for respirators was no longer referenced in the licensee's respirator training program as a valid respirator storage area. The inspector observed that some respirators in this storage area were not properly stored in sealed plastic bags. The licensee labeled the storage area "Not In Use" when notified of the discrepancy. The SCBAs were maintained in a state of readiness and the inspector reviewed documentation for visual and operational checks and noted no problems.

The licensee's technicians were responsible for verifying that employees met the requirements for using respirators. Technicians used the HIS-20 system for requirement verification. All employees and contractors were required to have a medical evaluation before using a respirator on site. Any employee whose training or medical information had expired was prohibited from using a respirator. During the inspection, no examples were observed of unauthorized use of equipment by untrained personnel or workers with expired training. The inspector had a technician demonstrate how the respirator's qualitative and fit testing were performed. The tests were performed in accordance with the licensee's procedures.

Initial and annual respirator training were conducted by the radiation protection office and training department. Initial respirator training consisted of an oral presentation, a video, and hands-on skills training for actual equipment. Annual training was computer-

based for all respirators. The radiation protection office and training department documented and maintained all training. No problems were noted with the training.

(3) Conclusions

The respiratory protection program was implemented in a manner to ensure the issuance, storage, maintenance, and training on the use of respirators was in accordance with established procedures.

d. Surveys (R1.08)

(1) Inspection Scope

The contamination control survey program was reviewed to determine if surveys were effective in the identification of contamination and performed in accordance with procedures.

(2) Observations and Findings

The results disclosed that the routine surveys were adequate in the identification of potentially contaminated areas. During the inspection, the inspector interviewed and observed one technician who performed area and contamination surveys in the middle room of the SERF 4 building. The technician described the check-in/out system to access the radiological controlled areas. The inspector discussed taking surveys to determine the radiation level at the time of the inspection. The results were again equivalent to levels for posting as a radiation area. The inspector reviewed randomly selected active and closed radiation work permits for adequacy in providing the appropriate level of protection to workers.

The licensee maintained positive control over a majority of its sealed sources. However some minor discrepancies, i.e. inaccurate data on some source inventories, were discovered in the licensee's documentation. The licensee indicated that the discrepancies would be addressed. The inspector reviewed randomly selected documentation for leak-testing and observed the calibration lab and equipment. The inspector noted no problems with the calibration procedures or the control of the sealed sources.

The inspectors noted that Table 11-3, *Record Management,* in the License Application, does not implement the requirements of 10 CFR Part 20 for required record retention times for surveys and reports. The discrepancy was discussed with NRC headquarters licensing who will resolve the issue.

(3) Conclusions

The contamination survey program was appropriately implemented to protect workers, and identify potential work areas showing an internal or external hazard to workers. Except for a few minor documentation discrepancies, the licensee maintained positive control of sealed sources and leak testing was performed in accordance with the license and NRC requirements. The inspectors noted that Table 11-3, *Record Management,* in

the License Application, does not implement the requirements of 10 CFR Part 20 for required record retention times for surveys and reports. The discrepancy was discussed with NRC headquarters licensing who will resolve the issue.

e. Radiation Protection Program Equipment (R1.03)

(1) Inspection Scope

Equipment used to identify the presence of radioactive materials on smears, air samples, and personnel was examined to determine if the selected equipment was adequately maintained and reliable to perform the intended safety function. Similarly, the inspector reviewed the nuclear criticality detection system calibration records for the last two years to verify that the system was being properly maintained.

(2) Observations and Findings

The inspector interviewed personnel performing operability checks on laboratory analytical equipment, survey meters and the criticality detection system. The documentation for selected equipment routine checks and calibrations was also reviewed. Based on interviews and documentation, the selected equipment was properly maintained and results from operability checks and calibrations indicated that the equipment provided reliable results.

(3) Conclusions

Equipment used for detecting the presence of radioactive materials on smears, air samples, personnel, and within the workplace as well as the nuclear criticality detection system were properly maintained and performed the intended safety function in a reliable manner.

f. Notifications and Reports (R1.09)

(1) Inspection Scope

The licensee's file containing Safety and Licensing Deficiency Reports (SLDR) was reviewed for determining the reportability of events to NRC and workers.

(2) Observations and Findings

The inspector observed that issues were being identified, corrective actions were timely, and the corrective actions adequately addressed the root causes. The incidents reviewed did not require notification to NRC. The licensee properly handled incidents which required worker notification to ensure that personnel were aware of the potential for exposure and work restrictions.

(3) Conclusions

The licensee's performance in notification and reporting of issues was in accordance with licensee requirements.

3. Emergency Preparedness (88050) (F3)

a. Review of Program Changes (F3.01)

(1) Inspection Scope

Changes to the emergency preparedness (EP) program since the last inspection were reviewed to determine the effectiveness on the program.

(2) Observations and Findings

There were some personnel changes since the previous inspection. Changes to the organization were reflected in the emergency call out list. The organizational changes should have minimal impact on the effectiveness of the response to emergencies as most of the personnel have been previously assigned to the emergency response organization. The program changes were reviewed by the inspectors and found acceptable.

(3) Conclusions

EP program changes did not appear to impact the effectiveness of the emergency preparedness program.

b. Implementing Procedures (F3.02)

(1) Inspection Scope

EP implementing procedures were reviewed to determine if procedures revised since the last inspection were adequate to implement the emergency plan.

(2) Observations and Findings

The inspectors reviewed the procedural changes made to the emergency plan in the February 19, 2003 revision to SL-1308, *Emergency Procedures,"* Revision 8, including 17 addendums. The procedure revisions reflected changes to the emergency organization and the emergency action levels dealing with security events. The reviewed changes did not result in a decrease in the effectiveness of the program or any inconsistencies between the emergency plan and implementing procedures.

(3) Conclusions

The revised emergency procedures continued to implement the Emergency Plan.

c. Training and Staffing of Emergency Organization (F3.03)

(1) Inspection Scope

Emergency response training was reviewed to determine if the licensee had provided training to response personnel in accordance with Emergency Procedure SL-1308.

(2) Observations and Findings

The inspector reviewed the training provided to response personnel during the year including first aid, hazardous materials, radiation monitoring and fire protection. An off-shift emergency exercise was conducted, issues were identified and follow up items were generated for corrective actions.

(3) Conclusion

The licensee maintained an emergency response training program which provided instructions to those individuals expected to implement Emergency Procedure SL-1308.

d. Offsite Support (F3.04)

(1) Inspection Scope

Licensee activities in the areas of training, agreements, and exercises were reviewed to determine if the licensee was periodically involving offsite support groups.

(2) Observations and Findings

Documentation disclosed that the licensee was maintaining contact with the offsite support groups including the fire department and a local hospital and had a current memorandum of understanding.

(3) Conclusions

Based on documentation reviewed, the licensee maintained effective coordination with offsite support organizations on matters of mutual interest involving emergency preparedness.

e. Emergency Equipment and Facilities (F3.06)

(1) Inspection Scope

The Emergency Operations Facility and equipment were inspected to determine whether the facility, emergency response equipment, instrumentation, and supplies were maintained in a state of operational readiness.

(2) Observations and Findings

The licensee's emergency preparedness facilities and emergency equipment were inspected. The equipment locations inspected contained appropriate equipment for the area and were properly maintained. Radiation detection equipment had current calibration stickers and was operational. No problems were noted.

(3) Conclusions

The equipment used for emergency response was found to be adequate to ensure proper emergency operations support.

4. Transportation (86740) (R4)

a. Preparation, Delivery, and Receipt of Packages for Shipment (R4.01),(R4.02),(R4.03) Records and Reports (R4.06)

(1) Inspection Scope

The inspector reviewed the transportation activities associated with the packaging, shipment, receipt, records and reports of radioactive material to verify that activities were in accordance with NRC and Department of Transportation (DOT) regulations in 10 CFR Part 20, 10 CFR Part 71 and 49 CFR Parts 171-180.

(2) Observations and Findings

The inspector reviewed procedures SL-1108, *Hazardous Material Shipping* and SL-1600, *Shipment and Receipt of Radioactive Material.* The licensee's performance was observed in container preparation, loading, and container and vehicle markings for a shipment involving fuel assemblies. The procedures for shipping radioactive materials were discussed with the licensee personnel. Personnel were familiar with and knowledgeable of the requirements and procedures for shipping and receiving radioactive materials. The inspector also reviewed shipping documentation for several shipments of fuel assemblies. Shipments involving fuel assemblies were made utilizing containers with a current NRC Certificate of Compliance (CoC). Shipping papers included the appropriate emergency response information and a twenty-four hour emergency response telephone number. Shipment receipts were documented. Based on the inspector's observations, the appropriate container and vehicle labeling/markings, radiation and contamination surveys, and records were made according to the procedures and regulations.

(3) Conclusions

Activities associated with the packaging, classification, shipments, receipt and records of nuclear materials were made according to the procedures and regulations.

b. Certificates of Compliance (R4.04)

(1) Inspection Scope

The inspectors reviewed the licensee's CoCs, to ensure they were maintained current and complied with requirements in 10 CFR Part 71.

(2) Observations and Findings

The inspector reviewed documentation for the three shipping containers, Model B, DHTF and BW2901 used to transport fuel pellets or assemblies. Each shipping container's CoC was observed to be current. The transportation procedure checklist required container maintenance and pre-load inspection prior to use. Documentation for several fuel assembly shipments were reviewed and determined to be in accordance with CoC requirements. No problems were noted.

(3) Conclusions

Current Certificates of Compliance were on file and being used for three shipping containers.

c. Management Controls (R4.05)

(1) Inspection Scope

The inspectors reviewed the licensee's quality assurance program and audit program to verify the management controls for packaging and transporting radioactive materials.

(2) Observations and Findings

The inspectors reviewed the implementation of the licensee's NRC approved *Fuel Sector Quality Management Manual,* FQM Revision 1, approved by the NRC on July 22, 2003. The quality program was discussed with the quality assurance personnel. A recent audit, *Internal Audit Summary Report-Audit #03:41, Shipping and Handling/ Shipping Container Program,"* dated February 9, 2004, was reviewed. The report identified issues and corrective action reports were prepared. The licensee's quality assurance program and audit program was being properly implemented.

(3) Conclusions

Management controls for the packaging and transporting of radioactive materials were being implemented with the quality assurance and audit program.

d. Follow-up on Previously Identified Issues (F4.07)

(1) Inspection Scope

The inspectors reviewed documentation and interviewed personnel concerning an event (NMED No. 030231) that involved the licensee reporting receipt of a radioactive shipment of control rod drive mechanisms from Arkansas Nuclear one with external radiation levels greater than specified limits.

(2) Observations and Findings

On March 24, 2003, the licensee reported receiving a radioactive shipment of control rod drive mechanisms from Arkansas Nuclear one with external radiation levels greater

than specified limits. The inspector reviewed the licensee's follow-up documentation. The licensee documented the event by entering it into their SLDR system. The shipper was notified and the material was sent back to Arkansas One. The inspector reviewed the documentation and noted no problems with the paperwork.

(3) Conclusions

The licensee had promptly reported receiving a shipment of radioactive material that had exceeded the DOT specified radiation levels. The inspectors determined that the licensee had appropriately investigated and documented the incident in accordance with the licensee's procedures and license.

5. Exit Interview

The inspection scope and results were summarized on February 26, 2004 with those persons indicated in the attachment. Although proprietary documents and processes were occasionally reviewed during this inspection, the proprietary information is not included in this report. Dissenting comments were not received from the licensee.

ATTACHMENT

1. LIST OF PERSONS CONTACTED

Licensee

*T. Blanks, Radiation Protection Supervisor
*R. Freeman, Site Manager
*C. Holman, Manager, Environmental, Health, Safety and Licensing
*G. Lindsey, Health Physicist
B. Miner, Quality Manager
M. Cox, Quality engineer

Other Licensee employees contacted included technicians, production workers, security, and office personnel.

*Attended exit meeting on February 26, 2004

2. INSPECTION PROCEDURES USED

IP 83822	Radiation Protection
IP 86740	Transportation
IP 88050	Emergency Preparedness

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None

4. LIST OF ACRONYMS USED

ALARA	As Low as is Reasonably Achievable
CEDE	Committed Effective Dose Equivalent
CFR	Code of Federal Regulations
CoC	Certificate of Compliance
CY	Calendar Year
DDE	Deep Dose Equivalent
DOT	Department of Transportation
EP	Emergency Preparedness
NRC	Nuclear Regulatory Commission
rem	Roentgen Equivalent Man
SCBA	Self Contained Breathing Apparatus
SDE	Skin Dose Equivalent
SERF	Service Equipment Refurbishment Facility
SLDR	Safety and Licensing Deficiency Report
TEDE	Total Effective Dose Equivalent