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NUCLEAR REGULATORY COMMISSION
REGION II
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September 6, 2002

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

SUBJECT: NRC INSPECTION REPORT NO. 70-1201/2002-02

Dear Mr. Wilkerson:

This refers to the inspections conducted from August 5 through 9, 2002, at the Mount Athos Road 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 2.790 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 Facilities Branch
Division of Nuclear Materials Safety

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

Enclosure: (See Page 2)

Enclosure: NRC Inspection Report

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	70-1201
License No.:	SNM-1168
Report No.:	70-1201/2002-02
Licensee:	Framatome ANP
Facility:	Mount Athos Road Facility (MARF)
Location:	Lynchburg, VA
Dates:	August 5-9, 2002
Inspector:	W. B. Gloersen, Senior Fuel Facility Inspector
Approved by:	D. A. Ayres, Chief Fuel Facilities Branch Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

Framatome ANP
NRC Inspection Report 70-1201/2002-02

This routine unannounced inspection focused on the observations and evaluation of the licensee's plant operations, fire safety, management organization and controls, maintenance and training programs. 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 one regional fuel facility inspector.

Based upon the results of this inspection, the licensee's plant operations, fire safety, management organization and controls, maintenance and training programs were acceptable. The inspection identified the following aspects of the program as outlined below:

Plant Operations

- The facility was operated safely and in accordance with regulatory requirements and license conditions. No conditions that could create an undesirable situation or hazard in the event of adverse weather conditions were observed. Housekeeping was adequate to ensure routes of egress were clear in case of an emergency. The licensee reviewed and updated procedures at the required frequency. Appropriate safety management was included in the review and approval of procedure changes (Paragraph 2.a.3).

- Nuclear Criticality Safety control devices and measures were properly implemented. Proper spacing practices and controls, use of storage locations, and identification of special nuclear material were also observed (Paragraph 2.b.3).

Fire Protection

- While there is relatively low risk of fire at the Mount Athos Road Site, the licensee continued to ensure the capability, availability, and reliability of the fire protection and mitigation features to control the risk of fire to acceptable levels and in accordance with National Fire Protection Association standards. The licensee's Fire Hazards Analysis had identified a number of deficiencies which the licensee has either corrected or was in the process of correcting (Paragraph 3).

Management Organization and Controls

- The Safety Review Board adequately reviewed facility information in order to address actual or potential safety issues. The internal safety audits were conducted in a timely manner, and covered a wide range of safety concerns. The inspector concluded that the internal reviews and audits were detailed and thorough and provided assurance for the detection of potential safety concerns (Paragraph 4).

Training

- The training program met the requirements of Section 2.5, Training, of the License Application, and 10 CFR 19.12. Fire Brigade training was enhanced by adding live fire training to the program (Paragraph 5).

Maintenance/Surveillance

- Maintenance and calibration of safety systems were being performed in accordance with internal procedural requirements (Paragraph 6).

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

REPORT DETAILS

1. Summary of Plant Status

This report covered the efforts of one regional inspector during a one week period. Fuel manufacturing processes and routine Service Equipment Refurbishment Facility (SERF) operations were ongoing at Framatome during the inspection period. There were no plant upsets or unusual operational occurrences during the inspection.

2. Plant Operations (Inspection Procedure (IP) 88020)

a. Conduct of Operations - Routine Observations Housekeeping

(1) Inspection Scope

The inspector toured the licensee's facilities to observe various operational and work activities to verify that the facility was operated safely and in accordance with license conditions and regulatory requirements.

Housekeeping associated with the storage of equipment and materials throughout the facility was also reviewed to ensure significant potential hazards did not affect safety.

The inspector reviewed selected operational procedures and records, and nuclear criticality safety (NCS) postings, to verify operations were performed safely and in accordance with approved plant procedures and postings.

The inspector reviewed the licensee's process for implementing facility modifications to determine if modifications were performed in accordance with licensee change control requirements.

(2) Observations and Findings

The inspector observed that specific operations were performed safely and in accordance with approved plant procedures and NCS postings. Discussions with operations personnel revealed an understanding of the procedural and posting requirements. The inspector did note that six out of ten NCS postings used less than definitive words such as "may" or "should" instead of "will" and "shall." The licensee acknowledged the inspector's comments.

The inspector also reviewed selected procedures used in the facility and found that the procedures were reviewed and updated at the required frequency. The inspector also found that the appropriate safety management was included in the review and approval of procedure changes. The inspector found no instances of outdated procedures available for use by the licensee's staff.

Selected outside areas were examined and inspected. The inspector did not observe conditions that could create an undesirable situation or hazard in the event of adverse weather conditions such as high winds, cold weather, or flooding, or blocked evacuation pathways. The inspector noted radiological signs, postings, and procedures were

properly posted or readily available. The inspector observed conditions and determined that equipment and devices used to confine and contain radioactive contamination and airborne radioactivity in the SERF areas were in proper working condition, and that proper personal protective clothing and dosimetry were issued and properly worn. The inspector noted that emergency egress routes were adequately clear of debris.

(3) Conclusions

The facility was operated safely and in accordance with regulatory requirements and license conditions. No conditions that could create an undesirable situation or hazard in the event of adverse weather conditions were observed. Housekeeping was adequate to ensure routes of egress were clear in case of an emergency. The licensee reviewed and updated procedures at the required frequency. Appropriate safety management was included in the review and approval of procedure changes.

b. Implementation of Process Safety and Storage Controls

(1) Inspection Scope

The inspector reviewed nuclear criticality control devices and measures in effect during this inspection period to ensure that the licensee's program provided a high degree of reliability for the prevention of an inadvertent criticality.

(2) Observations and Findings

The inspector examined the fuel processing and storage areas and observed that personnel complied with approved, written NCS limits and controls. The inspector verified NCS limits were posted and available to the operators. Proper spacing practices and controls, use of storage locations, and identification of special nuclear material (SNM) were also observed during tours of the facility.

(3) Conclusions

NCS control devices and measures were properly implemented. Proper spacing practices and controls, use of storage locations, and identification of SNM were also observed.

3. **Fire Safety (IP 88055)**

Fire Protection Systems
Fire Safety Hazards Analysis

(a) Scope

The inspector performed walk-down inspections, reviewed test results, and interviewed plant personnel about the inspection, testing, and maintenance (ITM) of key fire safety systems and equipment important to safety. The appropriate ITM ensures the availability and reliability of fire safety systems or equipment for the performance of their

intended safety functions. The inspector also reviewed the Mount Athos Road (MAR) Site Fire Safety Hazards Analysis, dated November 16, 2001.

(b) Observations and Findings

On the basis of the walk-down examinations and review of functional test records for selected fire protection systems and equipment, the inspector determined that the overall ITM for selected fire protection systems or equipment was appropriate. The walk-down included the following types of equipment:

- Plant fire alarm system
- Smoke detectors
- Automatic sprinkler systems
- Fire hose houses
- Fire hydrants and control valves
- Portable fire extinguishers

The inspector noted no deficiencies in the material condition of the equipment examined during the walk-down inspection. The inspector verified that functional tests of selected systems were performed as required.

The inspector also reviewed the licensee's Fire Hazards Analysis (FHA) which was performed by an independent fire hazards specialist. The inspector noted selected areas needing improvement that were identified in the FHA:

- Improve housekeeping standards in the Pellet Receiving Bay
- Upgrade the fire brigade training to include live fire training
- Install an automatic sprinkler system in the Grid Cage Fabrication Area
- Install smoke detectors in the non-sprinkled areas of the facility (except the Pellet Receiving Bay)
- Re-locate the natural gas shut-off valve from the inside of the fuel assembly shipping container loading area to the outside of the building.

The inspector verified that the licensee had implemented the recommendations provided in the FHA. Although the inspector noted quantities of combustible materials in the Pellet Receiving Bay, the licensee had removed the non-essential combustible materials. The combustible materials noted by the inspector mainly consisted of packing material from the pellet shipping containers. In addition to re-locating the natural gas regulator to the outside of the Pellet Receiving Bay building, the licensee also installed a natural gas shut-off valve approximately 50 feet from the building exterior just outside the protected area fencing to allow for the prompt shut-off of the utility in the event of a line break within the process building.

(c) Conclusions

While there is relatively low risk of fire at the MAR site, the licensee continued to ensure the capability, availability, and reliability of the fire protection and mitigation features to control the risk of fire to acceptable levels and in accordance with National Fire

Protection Association standards. The licensee's FHA had identified a number of deficiencies which the licensee has either corrected or was in the process of correcting.

4. Management Organization and Controls (IP 88005)

Internal Reviews and Audits
Safety Committees
Quality Assurance Programs

(a) Inspection Scope

The functioning of the Safety Review Board was reviewed to verify that safety issues were being given proper consideration. The licensee's system for performing internal reviews and audits was examined to determine its adequacy for detecting potential safety concerns.

(b) Observations and Findings

The inspector reviewed the minutes from the quarterly Safety Review Board meetings for the fourth quarter 2001and the first quarter 2002. The inspector found that each meeting included of a review of new or revised facilities, NRC inspection findings, safety-related audit and inspection findings, and licensing deficiency reports. The inspector also found that both nuclear and industrial safety functions were adequately represented in each meeting. The inspector found that the items reviewed were given appropriate consideration and management attention. The inspector reviewed the licensee's semiannual nuclear safety audits for 2001 and 2002. The inspector also reviewed the licensee's internal Quality Assurance Audit Report for the first quarter of 2002 and two fire safety audits conducted during the fourth quarter 2001 and first quarter 2002. The inspector noted that the nuclear safety and fire safety audits were conducted as required, covered a wide range of concerns, and were detailed and thorough.

(c) Conclusion

The Safety Review Board adequately reviewed facility information in order to address actual or potential safety issues. The internal safety audits were conducted in a timely manner, and covered a wide range of safety concerns. The inspector concluded that the internal reviews and audits were detailed and thorough and provided assurance for the detection of potential safety concerns.

5. Training (IP 88010)

a. 10 CFR 19.12 Training
General Emergency Fire Brigade Training

(1) Inspection Scope

The licensee's General Employee Training (GET) was reviewed to verify compliance with Section 2.5, Training, of the License Application, and with 10 CFR 19.12

requirements. Selected changes to the Emergency Fire Brigade Training Program were also reviewed.

(2) Findings and Observations

The inspector reviewed the lesson plans and training materials for the licensee's GET, radiological worker, and controlled area access training. The training included industrial safety concepts, radiological safety, criticality safety, emergency response, chemical safety, and fire safety. The inspector also observed the conduct of GET refresher training during this inspection. The inspector noted that the instructor was not sure why the hazardous chemical trichloroethylene (TCE) was prohibited from the MAR site. Safety principles and safe practices were emphasized. The inspector noted that the training incorporated the subject areas required by the License Application and 10 CFR 19.12, and was acceptable.

The inspector also noted that the Fire Brigade Training program had been enhanced by adding the requirement for the Fire Brigade to participate in live fire training at least once each calendar year.

(3) Conclusions

The inspector concluded that the training met the requirements of Section 2.5, Training, of the License Application, and 10 CFR 19.12. Fire Brigade training was enhanced by adding live fire training to the program.

b. Followup on Previously Identified Issues

(1) Inspection Scope

The inspector reviewed the licensee's actions to address an inspector followup item from a previous inspection to verify that appropriate actions were taken and were adequate and complete.

(2) Observations and Findings

Inspector Followup Item (IFI)70-1201/2001-05-01: Verify the adequacy of the licensee's corrective actions to resolve software problems and the inconsistencies between the database information and Procedure QC - 1440 training requirements.

The inspector reviewed the licensee's response to the IFI and determined that the licensee had revised procedure QC-1440, MAR Site Training Activities, Revision 13, July 1, 2002 to indicate the Training Requirement Document (TRD) was the controlling document for training requirements and not QC-1440. The inspector determined that the corrective actions were acceptable and complete.

(3) Conclusions

This item is closed.

6. Maintenance/Surveillance (IP 88025)

a. Conduct of Maintenance
Surveillance Testing
Calibrations of Equipment

(1) Inspection Scope

Maintenance activities were reviewed to determine compliance with licensee internal procedures for conducting maintenance, performing surveillance tests, and calibrating equipment.

(2) Observations and Findings

The inspector reviewed maintenance activities important to safety with the Equipment Maintenance Supervisor. The inspector reviewed the licensee's process for tracking and prioritizing maintenance. During this inspection, there was no scheduled maintenance of equipment important to safety.

The inspector reviewed the calibration records for the licensee's criticality alarm and annunciator system (CAAS). The inspector found that these calibrations were performed at the proper annual frequency in accordance with SL-1520, Calibration and Maintenance of the Criticality Alarm System, Revision 2, September 28, 2001. The inspector also verified that the quarterly functional tests were performed as required by SL-1520. The inspector noted that detection equipment found to be outside tolerance ranges for sensitivity was promptly removed from service and repaired. In addition, the inspector toured the calibration facility and verified the locations of the 12 criticality detectors located throughout the facility.

The inspector also reviewed the response time for the criticality monitoring system detectors. The CAAS consisted of the NMC GA-3M and GA-7M detector modules. According to the manufacturer's specifications, the time constant (which is inversely proportional to the field strength) for the GA-3M was approximately 2 seconds full scale while the time constant for the GA-7M detector module was less than 100 milliseconds full scale. The inspector noted that the CAAS had four GA-7M and eight GA-3M detector modules. The GA-7M detector modules were located in the Pellet Loading Room (PLR) and pellet storage vault which was considered the highest criticality risk area of the facility. The GA-3M detector modules were located in the fuel bundle storage and assembly areas and in non-uranium bearing portions of the facility.

In addition, the inspector reviewed the work control procedures, qualification records, and load test records associated with the installation of a new five ton Konecrane. The crane was installed on March 19, 2002. The inspector verified that the individuals performing the maintenance activities on the five ton Konecrane had been qualified on SL-1317, Crane, Sling, and Lifting Fixture Inspection and Testing, Revision 4, March 2, 2000 and the load test had been performed in accordance with approved procedures.

(3) Conclusions

Maintenance and calibration of safety systems were being performed in accordance with internal procedural requirements.

7. Exit Interview

The inspection scope and results were summarized on August 9, 2002, 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. PARTIAL LIST OF PERSONS CONTACTED

Licensee

*O. Garriss, Supervisor, Maintenance
V. Holaday, Manager, General Manufacturing
*G. Johnson, Supervisor, Uranium Product Center
G. Lindsey, Health Physicist
*M. Moore, Manager, Facilities and Maintenance
*S. Newsom, Supervisor, Radiation Safety
*L. Tupper, Manager, Licensing and Compliance
*S. Wilkerson, Site Plant Manager, MAR Facility

Other licensee employees contacted included engineers, technicians, and office personnel.

*Attended exit meeting on August 9, 2002

2. INSPECTION PROCEDURES USED

IP 88005	Management Organization and Controls
IP 88010	Operator Training/Retraining
IP 88020	Regional Nuclear Criticality Safety Inspection Program
IP 88025	Maintenance/Surveillance
IP 88055	Fire Protection

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Item Number	Status	Description
70-1201/2001-05-01	Closed	IFI: Verify the adequacy of the licensee's corrective actions to resolve software problems and the inconsistencies between the database information and Procedure QC - 1440 training requirements (Paragraph 5.b).

4. LIST OF ACRONYMS USED

CAAS	Criticality Alarm and Annunciator System
CFR	Code of Federal Regulations
FHA	Fire Hazards Analysis
GET	General Employee Training
IFI	Inspector Followup Item
ITM	Inspection, Testing, and Maintenance
MAR	Mount Athos Road (Site)
NCS	Nuclear Criticality Safety
NMC	Nuclear Measurements Corporation
PLR	Pellet Loading Room

SERF	Service Equipment Refurbishment Facility
SNM	Special Nuclear Material
TCE	Trichloroethylene
TRD	Training Requirement Document