



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
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ATLANTA, GEORGIA 30303-8931

August 26, 2005

NMED No.: 050284

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. 70-1201/2005-002

Dear Mr. Freeman:

This refers to the inspection conducted from July 11 through 15, 2005, and July 25 through 27, 2005, at your 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 were: plant operations, maintenance and surveillance, operator training, and management organization and controls. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observation of activities in progress.

No violations were 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 made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

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

Sincerely,

Stephen Caudill for */RA/*

David A. Ayres, Chief  
Fuel Facility Inspection Branch 1  
Division of Fuel Facility Inspection

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

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.: 70-1201/2005-002

Licensee: Framatome ANP

Facility: Lynchburg Facility

Location: Lynchburg, VA

Dates: July 11 through 15, 2005, and July 25 through 27, 2005

Inspectors: N. S. Rivera, Fuel Facility Inspector  
J. G. Jimenez, Fuel Facility Inspector

Accompanied by: 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

## EXECUTIVE SUMMARY

### Framatome ANP NRC Inspection Report 70-1201/2005-002

This routine announced inspection included observations and evaluation of the licensee's plant operations, maintenance and surveillance, operator training, and management organization and controls. The inspection involved observations of work activities, reviews of selected records, and interviews with plant personnel. The report covers a two week inspection effort by two regional fuel facility inspectors.

No findings of significance were identified.

#### **Plant Operations**

- Plant activities were performed safely in accordance with regulatory and license requirements. Safety concerns were effectively communicated to managers (Paragraph 2.a).
- The change and configuration control system for facility modifications ensured that safety-significant modifications were reviewed, approved, and documented. However, the configuration management procedure did not provide guidance to make temporary changes into permanent ones (Paragraph 2.b).
- Written procedures were accessible to operators and included proper nuclear criticality safety considerations. Operators were capable of identifying safety controls and were adequately trained (Paragraph 2.c).

#### **Maintenance and Surveillance**

- The maintenance program was in conformance with the license. Maintenance work was conducted per procedures and with the appropriate authorizations (Paragraph 3.a).
- The criticality monitoring system was adequately calibrated, the documentation was properly maintained, and procedural compliance was evident for the work and for system restoration (Paragraph 3.b).

#### **Operator Training**

- The licensee provided adequate training in radiation protection, nuclear criticality safety, emergency preparedness, procedural compliance and in the general employee training (which complied with 10 CFR 19.12). On-the-job training demonstrated that the employees understood the subject matter and its implementation (Paragraph 4).

#### **Management Organization and Controls**

- Personnel changes did not adversely impact the responsibilities and functions specified in the license. The licensee's system to review and issue procedures adequately ensured that safety procedures were properly controlled and approved (Paragraph 5.a).

- The internal safety audits covered a wide range of safety concerns. The internal reviews and audits were adequate for detecting potential safety concerns. The Safety Review Board adequately reviewed facility information in order to address actual or potential safety issues and the addition of new processes (Paragraph 5.b).

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 periods of July 11 - 15, and July 25 - 27, 2005. On July 13, all plant operations involving nuclear material were temporarily suspended due to severe weather.

### **2. Plant Operations (Inspection Procedure (IP) 88020) O3**

#### **a. Management and Administration Practices Plant Activities**

##### **(1) Scope and Observations**

The inspectors verified that activities in the fuel manufacturing area were performed safely and in accordance with license requirements. During the plant tours, the inspectors noted that nuclear criticality safety (NCS) postings and procedures were properly posted or available to the operators. In the fuel process and storage areas, the inspectors noted that operators complied with approved written NCS limits and controls. The inspectors observed proper NCS spacing practices and controls in storage locations. Discussions with operations personnel illustrated the proper understanding of procedural and posting requirements. Also, the inspectors observed that plant personnel working in radiological controlled areas wore dosimetry and the proper personal protective equipment.

The inspectors attended the production morning meeting between management and the operators. The inspectors observed how the operators were communicating safety concerns to management. No problems were noted.

##### **(2) Conclusions**

No significant findings were identified.

#### **b. NCS Safety Function Configuration Control NCS Change Control**

##### **(1) Scope and Observations**

The inspectors reviewed recent Criticality Safety Analyses (CSAs). The inspectors verified that the CSA for the fuel manufacturing processes reflected current changes.

The inspectors verified that recent Operational Change Requests (OCRs) for facility modifications were reviewed, approved, and documented in accordance with procedures. However, on July 13, the inspectors noted that a temporary OCR for the download system in the controlled area was requested for two months. The OCR was implemented on April 5 and it expired on June 5. By the time of the inspection, the licensee was not operating the system. The licensee communicated to the inspectors

that they made it a permanent change due to the benefits obtained by the change which included low exposures to the operators, and that the process was more efficient. The inspectors confirmed that exposures to the operators had in fact decreased. The inspectors reviewed the configuration management procedure and noted that the process was used for either a permanent or a temporary change. The only difference between a temporary OCR from the permanent found in the procedure was to estimate the timeframe the change was needed. The procedure did not provide a process for how to make a temporary OCR into a permanent OCR. The inspectors also noted that there was no indication in the temporary OCR package that it was made permanent and the reasons for the change. The inspectors also reviewed the operating procedures and noted that the temporary changes were still available. The licensee made the change to make it permanent in a letter and added it to the OCR package. The inspectors determined that this isolated issue was of low safety significance. However, due to the insufficiency of guidance on the configuration management procedure for the temporary procedures, this item will be tracked as inspection follow-up item (IFI) 2005-02-01.

(2) Conclusions

IFI 2005-02-01 was opened to track corrective actions to ensure guidance for temporary procedures is adequate.

c. Operating Procedures  
NCS Training  
Emergency Response

(1) Scope and Observations

The inspectors reviewed procedures for select nuclear fuel areas to verify that NCS requirements were included as specified in NCS evaluations. The reviewed procedures adequately identified NCS requirements, safety controls, and new changes.

The inspectors interviewed operators in the fuel manufacturing areas. The inspectors determined that they were capable of identifying the safety controls and changes performed in their areas. The inspectors also interviewed the supervisor on how he tracked that operators maintain their training current in order to perform the job assigned. No problems were identified.

(2) Conclusions

No significant findings were identified.



d. Reportable Event Follow-up Item

- (1) (Closed) Event Notification 41621 (NMED No. 050284): On April 22, the licensee received seven packages of nuclear services equipment from a commercial nuclear plant. Two of the packages exceeded the surface external radiation limits. The licensee determined the cause of the high radiation readings were from a discrete radioactive particle for one package, and inadequate shielding for equipment for the other package. The licensee asked the shipper to decontaminate any equipment that read in excess of 200 mR prior to shipment. The licensee informed the inspectors that part of the issue was due to different monitoring instruments used by the shipper and the licensee. No significant findings were identified and this item was closed.

3. **Maintenance and Surveillance (IP 88025) F1**  
**Plant Operations (IP 88020) O3**

- a. Conduct of Maintenance  
Work Control Procedures  
Work Control Authorizations  
Qualifications of Maintenance Personnel  
Criticality Alarm Monitoring System

(1) Scope and Observations

The inspectors reviewed the licensee's maintenance program to verify that was in accordance with the license, and that it ensured the equipment functioned as designed and in a safe manner. The inspectors also reviewed work being performed to verify that plant staff was following the relevant procedures, and that the proper work authorizations were obtained.

The inspectors interviewed selected employees to determine how maintenance was scheduled, performed, and verified, and also how systems undergoing maintenance were placed back in service. The employees interviewed were responsible for the calibration and functional tests on safety-related equipment, in particular the criticality accident alarm system (CAAS.) These jobs were described in detail to the inspectors beginning with the work order request, any special instructions, the procedures to follow, and the tests required for system restoration. The employees described step-by-step the procedures for the jobs, while adequately answering the questions asked by the inspectors. The employees showed knowledge of the safety implications of the maintenance work, and demonstrated the appropriate actions to take when the maintenance work did not proceed as planned.

The inspectors verified the records documenting the maintenance work described by the employees. These records were maintained on the Preventive Maintenance Control system. The inspectors reviewed this system and verified that work orders, test results, and records for the maintenance work were available. Through the computer system it was possible to follow how the work was authorized and after concurrence is that an employee can proceed with the work. The general rules and procedures to proceed with a maintenance job were also reviewed by the inspectors, and they adequately

addressed the safety concerns present at the facility. They also gave the employees a clear understanding of the steps to follow to accomplish the job.

The inspectors reviewed the qualifications of a selection of the maintenance mechanics to verify they were capable to complete the demands of the job in a safe and professional manner. All the necessary qualifications were in place, plus all of the required training was properly administered.

(2) Conclusions

No significant findings were identified.

b. Calibration of Equipment  
Maintenance of NCS Control Systems

(1) Scope and Observations

The inspectors reviewed the calibration activities and documents at the facility to verify that procedures were being followed, that equipment was being properly calibrated, and that adequate records were maintained detailing the work. The inspectors reviewed the calibration of the CAAS. The inspectors also interviewed the employees responsible for this work to verify that they had performed an adequate job. The employees guided the inspectors through the process, from taking the system out of service until testing it to bring it back on-line. Through the interview, the inspectors determined that the employees had a sound knowledge of the importance of the system, they followed the procedure, took the necessary radiological precautions when calibrating the CAAS equipment, and demonstrated a good understanding that the values obtained from the calibration.

(2) Conclusions

No significant findings were identified.

**4. Operator Training/Retraining (IP 88010) F2**

a. 10 CFR 19.12 Training  
General NCS Training  
General Radiological Training  
General Emergency Training  
Operating Procedures Training  
On the Job Training

(1) Scope and Observations

The inspectors reviewed the Licensee's General Employee Training (GET), general training in the different subject areas and on-the-job (OJT) activities to verify compliance with the license application and with 10 CFR 19.12 requirements. The inspectors reviewed the licensee's lesson plan for GET and the GET Refresher Course. The class

provided basic information that an employee would need to safely work at the facility. The examples provided were clear and easy to relate to the different areas being covered. Some of the topics covered by the GET were Fire Safety, Hazardous Waste, Personnel Protective Equipment, Hazards Communications, and Controlled Area Access Training. New employees were required to complete a written test to pass the class. The inspectors reviewed a mock test. The test questions were randomly selected from a pool by a computer program. The test remains the same for a period of time then it is changed. The mock test reviewed contained a good selection of questions that adequately tested the employee's knowledge of safety measures to be aware while working at the facility. The inspectors also selected tests administered to maintenance and operations personnel. The guidelines for grading the tests were in accordance with the licensee's policy and the questions were similar to the mock test reviewed by the inspectors.

The radiological training material was also reviewed by the inspectors. This training presented in a simple fashion without complicated theory the basics of radiological safety. It contained information of where radiation comes from, what are the terms used to describe radiological activities, how to prevent or minimize exposure, ALARA practices, and specific examples of radiation hazards at the facility.

The NCS training presentation package was reviewed by the inspectors. The material for this training discussed the following topics: definition of criticality and fission, radioactive materials processed on site, general criticality safety rules, emergency alarm and evacuation, CAAS issues, control methods, and NCS postings, rules and policies. This information was presented on the slides in an easy format to follow and understand. All of the subjects were adequately referenced to the processes present at the facility, and the examples provided were adequate.

The inspectors reviewed the licensee's Role Training Profile, a program that integrates all the aspects of the training program more efficiently. The program contained qualification guides that had all the requirements needed by a specific employee to be fully qualified to work in any given area. The guides also keep track of training, retraining scheduled and training not completed yet. The inspectors reviewed a selection of the documents that were a part of the qualification guides for selected employees and found them adequate.

This training information was integrated with the computer system that grants access to the controlled access areas. The inspectors reviewed this system in operation and verified that it worked as planned.

The inspectors observed employees being trained on the job to review the adequacy of the licensee's OJT and the operating procedures training. The employees observed walked the inspectors through the procedure being currently trained on. The employees pointed out the safety concerns and precautions related to the process. The inspectors were able to verify that the employee was also aware of the radiological and criticality concerns to the designated work area. The inspectors were also able to observe the qualified operator interact with the trainee and verify the adequacy of the training. The Role Training Profile also keeps tracks of the procedures an employee has read and understood. This information was also included as part of an employee's qualification

guide. Whenever a procedure was revised, it was sent to the corresponding employees for reading and to sign saying that they understood it. Once everyone had concurred on it the procedure was made official and brought to the operating floor.

A selection of training records from the current program was selected by the inspectors to verify the employees were up-to-date in their training and that the licensee was properly keeping track of everything. This was accomplished looking at the licensee's training computer program. The records reviewed were current and it kept track of training completion, renewal or any training overdue. The inspectors also reviewed the procedure training record for those employees and determined that they were in order, detailing all the procedures read and trained on with the procedure revision date to make sure the employees' training was current.

(2) Conclusions

No significant findings were identified.

**5. Management Organization and Controls (IP 88005) F4**  
**Plant Operations (IP 88020) O3**

a. Organizational Structure  
Procedure Controls

(1) Scope and Observations

The inspectors reviewed changes in personnel responsibilities and functions that occurred since the last inspection in order to verify that personnel qualification license requirements were met. The inspectors interviewed licensee personnel affected by new responsibilities and functions. The inspectors determined that experience and education requirements, as specified in the license, were satisfied.

The inspectors reviewed several procedures for operations and safety management systems to verify that they were reviewed in the appropriate time-frame and approved by the appropriate management. The inspectors noted that procedures were reviewed due to the installation of new equipment. The inspectors found that management and operational procedures were reviewed at the required frequency through the use of a computer database system. The inspectors observed that the appropriate safety management was included in the review and approval of procedure changes. The inspectors verified no instances of outdated procedures.

(2) Conclusions

No significant findings were identified.

b. Internal Reviews and Audits  
NCS Inspections, Audits and Investigations  
Safety Committees  
Quality Assurance Programs

(1) Scope and Observations

The inspectors reviewed the following audits:

- “Second Semi-Annual Nuclear Safety Audit of MAR,” for 2<sup>nd</sup> half Calendar Year (CY) 2004;
- “First Semi-Annual Nuclear Safety Audit of MAR,” for 1st half CY 2005;
- “Weekly Safety Audit,” for CY 2004 through July 2005.

The licensee’s NCS audits for the second half of CY 2004 and first half of CY 2005, and the weekly safety audits were conducted as required, covered a wide range of concerns, and were detailed and thorough. No findings of significance were identified.

The inspectors reviewed a selection of the most recent minutes from the Safety Review Board (SRB) meetings. The inspectors found that the first quarter of 2005 and the second quarter of 2005 meetings included a review of new or revised facilities, NRC inspection findings, safety-related audit and inspection findings, and licensing deficiency reports. The inspectors found that both nuclear and industrial safety functions were adequately represented in each meeting. The inspectors found that the items reviewed were given appropriate consideration and management attention. No findings of significance were identified.

Finally, the inspectors reviewed the effectiveness of the corrective action program. The inspectors noted that the computer tracking system of issues (WebCap) allowed the licensee to track issues. This system was capable to identify similar or recurrent issues since its implementation. The program started in recent years and thus it does not include information on issues from prior years. The licensee has worked in reviewing the old system in order to keep track of issues and perform proper analysis if an issue was similar or recurrent.

(2) Conclusions

No significant findings were identified.

**6. Exit Interview**

The inspection scope and results were summarized on July 15 and on July 27, 2005, with those persons indicated in the attachment. Although proprietary documents and processes were occasionally reviewed during this inspection, the proprietary information was not included in this report.

## **ATTACHMENT**

### **1. LIST OF PERSONS CONTACTED**

#### **Licensee**

R. Freeman, Site Manager  
C. Holman, Manager, Environmental, Health, Safety and Licensing

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

### **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

### **3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

<b><u>Item Number</u></b>	<b><u>Status</u></b>	<b><u>Description</u></b>
70-1201/2005-02-01	Open	IFI - Review and verify that the configuration management procedure provides guidance for disposing temporary operational change requests into permanent ones (Paragraph 2.b).
EN 41621	Closed	LER - The licensee reported receiving seven packages of nuclear services equipment from a commercial nuclear power plant where two of the packages exceeded the surface external radiation limits (Paragraph 2.d).