UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

September 5, 2003

Mr. Robert E. Link, Site Manager
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

SUBJECT: NRC INSPECTION REPORT 070-01257/03-005

Dear Mr. Link:

On August 18-22, 2003, the NRC conducted a routine inspection at the Framatome ANP facility in Richland, Washington. The purpose of the inspection was to determine whether activities authorized by your license were conducted safely and in accordance with NRC requirements. The areas examined during the inspection were operational safety and environmental protection. Within these areas, the inspection consisted of a selective examination of procedures, representative records, equipment, facilities and interviews with personnel. An exit briefing was conducted on August 22, 2003, with members of your staff.

Based on the results of the inspection, no violations or deviations 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 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 inspection, please contact Wayne Britz at (817) 860-8194 or the undersigned at (817)860-8191.

Sincerely,

/RA RJEvans for/

D. Blair Spitzberg, Ph.D., Chief
Fuel Cycle & Decommissioning Branch

Docket No.: 070-01257
License No.: SNM-1227

Enclosure:
NRC Inspection Report
070-01257/03-005

cc w/enclosure:
Thomas Scott Wilkerson, Vice President, Operations
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Charles Perkins, Richland Operations Manager
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Donald W. Parker, Manager
Environmental, Health, Safety & Licensing
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Loren J. Maas, Manager
Licensing and Compliance
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Calvin D. Manning, Manager
Nuclear Criticality Safety
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Washington Radiation Control Program Director

bcc w/enclosure: (via ADAMS e-mail distribution):
EECollins
CLCain
DBSpitzberg
WLBritz
DAAyers, RII
PLHiland, RIII
GFSanborn
RWise
LJBerg, SPIB/NMSS
SMFrant, FCFB/NMSS
PSLee, FCFB/NMSS
JWLubinski, SPIB/NMSS
LARoche, FCFB/NMSS
NBHolbrook
FCDB
RIV Materials Docket File

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	070-01257
License No.:	SNM-1227
Report No.:	070-01257/03-005
Licensee:	Framatome ANP, Inc.
Facility:	Framatome ANP, Inc.
Location:	Richland, Washington
Dates:	August 18-22, 2003
Inspector:	Wayne L. Britz, Fuel Facility Inspector Fuel Cycle Decommissioning Branch
Accompanied by:	Elmo Collins, Director Division of Nuclear Materials Safety, RIV
	David Ayers, Chief, Fuel Facilities Branch Division of Nuclear Materials Safety, RII
Approved By:	D. Blair Spitzberg, Ph.D., Chief Fuel Cycle/Decommissioning Branch
Attachment:	Supplemental Inspection Information

EXECUTIVE SUMMARY

Framatome ANP, Inc.
NRC Inspection Report 070-01257/03-005

This routine, announced inspection included a review of selected aspects of the licensee's programs for operational safety and environmental protection.

Operational Safety

- Operations involving the processing of special nuclear material were in accordance with established safety requirements (Section 1).

Environmental Protection

- Gaseous and liquid uranium radioactive releases to the environment were small fractions of the 10 CFR Part 20 limits and resulted in doses well below public dose limits. The technetium-99 content in the radioactive liquid effluents discharged have been a significant fraction of the sanitary sewerage release limits and are being managed by the licensee to assure the limits are not exceeded. The licensee was implementing the environmental monitoring program in accordance with the license conditions (Section 2).

Follow-up

- The inspector reviewed the licensee's corrective action commitments in response to the April 2-3, 2002, loss of criticality control event. The longer term corrective actions were still in progress, with completion dates ranging from October 2004 to May 2005. The licensee is making progress in implementing the corrective actions. Consequently, the NRC will review the status of the corrective actions during a future inspection (Section 3.1).

- The inspector reviewed the status of the licensee's investigation and followup of four licensee identified compliance issues involving: (1) high radiation areas, (2) improper handling of caustic material resulting in a spill on an operator, (3) a NRC 10 CFR Part 71.95 reportable transportation incident for improper shipment packaging, and (4) improper work planning on demolition of hoods containing asbestos. The high radiation area and transportation incident corrective actions were not complete. Consequently, the NRC will review the status of the corrective actions during a future inspection (Section 3.2).

Report Details

Summary of Plant Status

The dry conversion, powder production, fuel pellet production, rod and bundle operations, ammonia recovery facility (ARF), lagoon uranium recovery (LUR), modular extraction/recovery facility (MERF), and the solids processing facility (SPF) were in operation. Solid waste uranium recovery (SWUR) was not in operation.

1 Operational Safety (88020; TI2600/003)

1.1 Inspection Scope

The inspector reviewed general facility operations to verify adherence to operational safety requirements documented in license conditions and operating procedures.

1.2 Observations and Findings

Work operations were observed and discussed with personnel. The inspector observed general operations in the Dry Conversion Facility (DCF), the UO_2 Building, the fuel storage warehouses and the downloading of hydrofluoric acid for shipment offsite. The construction area for the vibratory fuel loader and the addition of a process line to receive low enriched uranium down-blended from Department of Energy high enriched uranium at the Richland facility were reviewed. The work was observed for the proper postings, work planning, maintenance and radiation work permits and protective clothing as required. The inspector found the operations to be in conformance with regulations and procedures.

The operations in the UF_6 cylinder receipt facility were reviewed. The process from receipt, weigh, assay for uranium concentration, documentation into the material control and accountability records and storage were discussed with the facility operator. The use of standard operating procedures, standard work instructions and the computer were demonstrated. The assay's detector calibration was discussed with the instrumentation engineer. Personnel were knowledgeable of the operations and procedures.

The progress toward adding tanks to the ARF to replace the lagoons was reviewed. A replacement tank for Lagoon 5A had been installed since the previous inspection. Two additional tanks were onsite and will be placed in position for future operations. One lagoon remains in operation. The other lagoons are in the process of having their liquid and/or solid inventory removed. The ARF is scheduled to replace the lagoons by September 2004.

The physical condition of the safety equipment and the housekeeping in the DCF and UO_2 Building were observed to be good.

1.3 Conclusions

Operations involving the processing of special nuclear material were in accordance with established safety requirements.

2 Environmental Protection (88045)

2.1 Inspection Scope

The environmental monitoring program was reviewed to assess the effectiveness of the licensee's program to monitor and maintain compliance with applicable requirements.

2.2 Observations and Findings

The inspector reviewed the environmental surveillance program required by the license conditions, Section 2.6.4, *Environmental Protection Inspections*, and Section 5.2, *Environmental Monitoring*, and the licensee's Safety Manual, EMF-30, Chapter 4.0, *Environmental Standards*. The review included the licensee's implementation of the program, facility tours, procedure reviews, records of environmental sampling and internal audit results.

The inspector's review of environmental records included: gaseous and liquid effluent monitoring reports, waste effluent monitoring and sampling for the wastes to the Richland Wastewater Treatment Facility, sludge and effluent sampling at the City of Richland sewer system, soil and forage samples, ambient air sampling and groundwater sampling from the wells. Liquid waste effluent sludge and water samples were being analyzed by the licensee's analytical laboratory. The inspector reviewed the analytical laboratory procedures, calibrations and laboratory cross check programs.

10 CFR Part 70.59, *Effluent monitoring reporting requirements*, requires the licensee to submit semi-annual reports to the NRC for both liquid and gaseous effluents released from the site. The gaseous effluents analyzed contained measurable uranium and the liquid effluents contained uranium and technetium-99. Sample results for calendar year 2002 indicated that the licensee was in compliance with applicable discharge limits.

There were no significant changes during the past year in the results of uranium measurements in the soil, forage, ambient air and radioactive wastes to or at the Richland Wastewater Treatment Facility. The sampling frequencies were performed in accordance with License Condition 5.2, *Environmental Monitoring.*

The inspector reviewed the licensee's public dose assessment to ensure that licensed site operations did not result the radioactive gaseous and liquid environmental releases exceeding a total effective dose equivalent of 100 millirems per year to individual members of the public as specified in 10 CFR 20.1301(a), *Dose Limits for Individual Members of the Public,* and a total effective dose equivalent in excess of 10 millirems per year from air emissions as specified in 10 CFR 20.1101(d), *Radiation Protection Programs*. The licensee's *2002 ALARA Report*, EMF-2924, dated May 28, 2003, reported

a calculated maximum gaseous effluent dose to the public of 0.005 millirems. The radioactive liquid effluent is discharged via the site to the City of Richland sewer system where the waste is processed and discharged to the Columbia River. The uranium content in the radioactive liquid effluents discharged were either undetectable or a small fraction of the sewer release limits of 10 CFR Part 20. The technetium-99 content in the radioactive liquid effluents discharged have been a significant fraction of the sewer release limits and are being managed by the licensee to assure the limits are not exceeded. The technetium-99 releases in the liquid effluents for calendar year 2002 totaled 0.710 curie. The regulatory limit of technetium-99 to the sanitary sewerage system is 1-curie per year. The calculated dose to the public from the gaseous radioactive releases to the environment were a small fraction of the 10 CFR Part 20 dose limits to the public. The licensee does not calculate a dose to the public from the liquid radioactive releases to the sanitary sewerage system because the dilution of the releases in the City of Richland sewerage system and the Columbia River results in an insignificant contribution to offsite doses.

The licensee's environmental audit program was reviewed and was consistent with License Condition 2.6.4, *Environmental Protection Inspections.* The environmental program audits were thorough and corrective actions were tracked to resolution.

2.3 Conclusions

Gaseous and liquid uranium radioactive releases to the environment were small fractions of the 10 CFR Part 20 limits and resulted in doses well below public dose limits. The technetium-99 content in the radioactive liquid effluents discharged have been a significant fraction of the sanitary sewerage release limits and are being managed by the licensee to assure the limits are not exceeded. The licensee was implementing the environmental monitoring program in accordance with the license conditions.

3 Followup (92701)

3.1 (Discussed) VIO 70-1257/0203-01: Failure to maintain double contingency control for criticality safety; VIO 70-1257/0203-02, Failure to maintain configuration control for criticality safety; VIO 70-1257/0203-03, Operator failure to follow procedure requiring drum inspection and management failure to provide adequate supervision; VIO 70-1257/0203-04, Failure to identify necessary criticality safety controls in the CSA and CSS; VIO 70-1257/0203-05, Failure to include CSA and CSS requirements in the SOP.

The inspector reviewed the status of the licensee's response to NRC Reactive Team Inspection Report 70-1257/0203 dated June 13, 2002, and Notice of Violation and Proposed Imposition of Civil Penalty dated August 28, 2002. The licensee had developed an action plan and status report which contained the topical headings of: (1) management and supervisory accountability, (2) worker training and qualification, (3) procedural work-arounds, (4) adequacy of root cause evaluations, (5) requirements flow-down, and (6) configuration management system adequacy. The inspector reviewed the licensee's progress on the corrective actions and discussed their status with the licensee.

The licensee was working on the corrective action list. The schedule for two of the licensee's commitments had been extended by the licensee's new management team which determined that additional monitoring of the implementation of the commitments should be undertaken. Monthly metrics to track the safety, quality and production of operations were being developed. The inspector reviewed the 2003 metrics developed for one product area and will continue to review the metrics as they are developed. The long-term corrective actions, standard operating procedure restructuring, revision of nuclear criticality safety postings, reducing criticality safety administrative controls and implementing a new document control system were actively being worked on. The licensee is making good progress on implementing the corrective actions. The completion dates for these items are October 2004 and May 2005.

The implementation and effectiveness of the actions identified in the action plan will be reviewed during future inspections.

3.2 (Discussed) IFI 70-1257/0303-01: Review the licensee's investigation and followup on four licensee identified compliance issues involving: (1) high radiation areas, (2) improper handling of caustic material resulting in a spill on the operator, (3) a NRC 10 CFR Part 71.95 reportable transportation incident for improper packaging for shipment, and (4) improper work planning on demolition of hoods containing asbestos.

The inspector reviewed the status of the four corrective actions. The high radiation area and transportation incident corrective actions were not complete. Consequently, the NRC will review the status of the corrective actions during a future inspection.

4 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at the conclusion of the inspection on August 22, 2003. The licensee did not identify any of the information discussed at the meeting as proprietary.

ATTACHMENT

PARTIAL LIST OF PERSONNEL CONTACTED

R. K. Burklin, Manager, Radiation Protection
J. M. Deist, Criticality Safety
S. S. Koegler, Manager, Waste Projects
R. E. Link, Site Manager
T. Longmire, Manager, Training
L. J. Maas, Manager, License and Compliance
C. D. Manning, Criticality Safety, Regulatory Compliance
C. Perkins, Operations Manager
J. B. Perryman, Environmental Engineer
T. J. Tate, Supervisor, Radiological Safety

INSPECTION PROCEDURES USED

IP 88020	Regional Nuclear Criticality Safety
TI 2600/003	Operational Safety Review
IP 88045	Environmental Protection
IP 92701	Followup

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened None

Closed None

Discussed

70-1257/0203-01	VIO	Failure to maintain double contingency control for criticality safety.
70-1257/0203-02	VIO	Failure to maintain configuration control for criticality safety.
70-1257/0203-03	VIO	Operator failure to follow procedure requiring drum inspection and management failure to provide adequate supervision.
70-1257/0203-04	VIO	Failure to identify necessary criticality safety controls in the CSA and CSS.
70-1257/0203-05	VIO	Failure to include CSA and CSS requirements in the SOP.
70-1257/0303-01	IFI	Review the licensee's investigation and followup on four licensee identified compliance issues involving: (1) high radiation areas, (2) improper handling of caustic material resulting in a spill on the operator, (3) a NRC 10 CFR Part 71.95 reportable transportation incident for improper packaging for shipment, and (4) improper work planning on demolition of hoods containing asbestos.

LIST OF ACRONYMS USED

ADAMS	agency-wide documents access and management systems
ALARA	as low as reasonably achievable
ARF	ammonia recovery facility
CFR	Code of Federal Regulations
CSA	criticality safety analysis
CSS	criticality safety specification
DCF	dry conversion facility
ELO	Engineering Laboratory Operations Building
IFI	inspection followup item
LUR	Lagoon Uranium Recovery
MERF	modular extraction/recovery facility
SOP	standard operating procedure
SWUR	Solid Waste Uranium Recovery facility
TI	Temporary Instruction
UF_6	uranium hexafluoride
UO_2	uranium dioxide
VIO	violation