



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

September 16, 2005

Framatome ANP  
ATTN: Mr. Ronald J. Land  
Plant Manager  
2101 Horn Rapids Road  
Richland, Washington 99352-5102

SUBJECT: NRC INSPECTION REPORT NO. 70-1257/2005-004

Dear Mr. Land:

The U.S. Nuclear Regulatory Commission (NRC) conducted an announced, routine inspection from August 15-18, 2005, at your Richland, Washington facility. The purpose of the inspection was to perform a review of the chemical safety program to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. At the conclusion of this inspection, the findings were discussed with those members of your staff identified in the enclosed report.

The inspection consisted of facility walkdowns, selective examinations of relevant procedures and records, examinations of safety-related structures, systems, equipment and components, interviews with plant personnel, and observations of plant conditions and activities in progress.

Based on the results of this inspection, no violations or deviations 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 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,

Alphonsa Gooden for //RA/

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

Docket No. 70-1257  
License No. SNM-1227

Enclosure: (See page 2)

Enclosure: NRC Inspection Report

cc w/encl:

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SIGNATURE	<i>NSR For</i>	<i>/RA/</i>	<i>/RA/</i>	<i>/RA/</i>	
NAME	<b>N. Ashkeboussi</b>	<b>N. Rivera</b>	<b>S. Subosits</b>	<b>A. Gooden</b>	
DATE	09/16/2005	09/16/2005	09/16/2005	09/16/2005	09/ /05
E-MAIL COPY?	NO	YES    NO	YES    NO	YES    NO	YES    NO

**U. S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket No.: 70-1257

License No.: SNM-1227

Report No.: 70-1257/2005-004

Licensee: Framatome ANP

Facility: Richland Facility

Location: Richland, Washington

Dates: August 15-18, 2005

Inspectors: N. Rivera, Fuel Facility Inspector  
S. Subosits, Fuel Facility Inspector (Trainee)

Accompanied by: N. Ashkeboussi, Nuclear Safety Intern, HQ

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

Enclosure

## EXECUTIVE SUMMARY

### Framatome ANP NRC Inspection Report 70-1257/2005-004

This routine announced inspection was conducted in the chemical safety area. The inspection involved observation of work activities, a review of selected records, and interviews with plant personnel. Based upon the results of this inspection, the chemical safety program was acceptable. The inspection identified the following aspects of the program as outlined below:

- The licensee's program to perform hazard assessments was properly implemented, and facility modifications were consistent with the engineering change notice packages (Paragraph 2.a).
- The operators were knowledgeable of the chemical safety hazards, personal protective equipment requirements, the emergency procedures, and the emergency equipment examined was adequate. Shipments of hydrogen fluoride and anhydrous ammonia were adequately monitored and the uranium concentrations were less than the license limits (Paragraph 2.b).
- Safety procedures were implemented during the performance of maintenance activities (Paragraph 2.c).
- The licensee's program for detection and monitoring devices was found to be adequate for monitoring the facility's chemical hazards. The licensee's management of change process was adequate to ensure that safety significant plant modifications undergo thorough preparation, and review prior to approval and implementation (Paragraph 2.d).
- The licensee evaluated and implemented corrective and compensatory measures to prevent recurrence of identified problems (Paragraph 2.e).
- The licensee's audit program adequately addressed chemical hazards but lacked guidance to perform confined space permit audits (Paragraph 2.f).

#### Attachment:

List of Persons Contacted

Inspection Procedures Used

List of Items Opened, Closed, Discussed

List of Acronyms

## REPORT DETAILS

### 1. **Summary of Plant Status**

This report covered the period of August 15-18, 2005. The dry conversion, ammonium diuranate (ADU), pelletizing, solid waste uranium recovery (SWUR), nuclear absorber fuel (NAF) rod fabrication facility and the waste streams were ongoing at Framatome during the inspection period. There were no plant upsets or unusual operational occurrences during this inspection.

### 2. **Chemical Safety (Inspection Procedures (IPs) 88056-88066)**

#### a. Hazard Identification and Assessment (IP 88057)

##### (1) Scope and Observations

The inspector reviewed the licensee's program to perform Hazard Assessments (HAs) to verify that assessments were performed in accordance with the license application. Based on interviews, documentation, and facility walkdowns, the inspector verified a formalized program was in place which included the following attributes: a schedule to perform HAs every five years based on the risk of chemical hazards at the facility, a system to ensure updates of drawings, procedures, surveillance and training impacted by the HA, and a system to communicate significant findings to management. The inspector also noted that the licensee reviewed the HA during the integrated safety analysis (ISA) process for the development of item relied on for safety (IROFS). The inspector reviewed selected areas of the re-analyzed HA for verification that the HA documentation had been updated. No problems were noted. The HA list also was included in the preventive maintenance system so that notification be provided to perform the review in advance of the five-year review due date. The inspector selected engineering change notices (ECNs) that were made since the last chemical safety inspection and performed walkdowns to verify that changes were consistent with the ECNs. No issues were identified.

##### (2) Conclusions

The licensee's program to perform HAs was properly implemented, and facility modifications were consistent with the ECN packages.

#### b. Standard Operating Procedures (SOP) (IP 88058), and Emergency Procedures (IP 88064)

##### (1) Scope and Observations

The inspector reviewed the Standard Operating Plans (SOPs) for the anhydrous ammonia (NH<sub>4</sub>) download operations to verify that operators were trained on SOPs and the uranium concentration was in accordance with the license requirements. The inspector observed operators using the SOPs and determined that the SOPs were user-friendly. The inspector conducted interviews with the operators and attended a pre-job briefing on the download of NH<sub>4</sub>. The operators were knowledgeable of the SOPs, the

requirements for personal protective equipment (PPE), the locations of the most significant hazard areas, and the emergency procedures for the shutdown of the transfer of  $\text{NH}_4$ . The inspector verified that the latest shipments of hydrogen fluoride (HF) and  $\text{NH}_4$  were adequately monitored and found to be below the concentrations listed in the license. The licensee validated the size of the shipments and concentration of uranium using checklists. The inspector examined the emergency response equipment and determined that the equipment was in adequate condition. No issues were identified.

(2) Conclusions

The operators were knowledgeable of the chemical safety hazards, PPE requirements, the emergency procedures, and the emergency equipment examined was adequate. Shipments of HF and  $\text{NH}_4$  were adequately monitored and the uranium concentrations were less than the license limits.

c. Site-Wide Safety Procedures (IP 88059), and Maintenance and Inspection (IP 88062)

(1) Scope and Observations

The inspector verified that safety procedures were adequately used during the performance of maintenance activities. Based on operator interviews and observations of ongoing activities, the inspector found that with one exception, safety procedures were followed. The exception was noted during the performance of a pH instrument calibration in the ADU process. The instrument was identified as an IROFS. The inspector observed that the instrument technician rinsed the pH probe and then grasped the elements of the probe that normally are in contact with the process. The technician then brought his glove up to his nose to sniff the glove in an attempt to verify no residual ammonia or ADU was present that could affect the calibration. Though the technician received no ill effects from this action, the inspector brought the observation to the licensee's attention for follow-up. In response, the licensee took immediate actions to retrain the technician regarding safety precautions while performing the calibration.

The inspector reviewed maintenance procedures to verify that maintenance activities were performed in accordance with procedures. No significant issues were identified. The licensee discussed with the inspector plans for making enhancements to both operations and maintenance procedures.

(2) Conclusions

Safety procedures were implemented during the performance of maintenance activities.

d. Detection and Monitoring (IP 88060), and Management of Change (IP 88063)

(1) Scope and Observations

The inspector reviewed the licensee's list of detection and monitoring devices for HF gas, and reviewed calibration records for the devices from the past year. The review determined that chemical hazards were adequately monitored in the plant.

The inspector interviewed the design authority manager on the licensee's management of change process to verify that safety significant modifications were reviewed, approved, and documented according to the applicable licensee management control procedures. The inspector walked down two plant modifications in the field and verified the as-built configuration versus the change package for recent modifications performed in the dry conversion and ADU process areas were current. The inspector confirmed that the safety controls were incorporated in the respective operating procedures and interviewed operators to verify that they were aware of the changes.

(2) Conclusions

The licensee's program for detection and monitoring devices was found to be adequate for monitoring the facility's chemical hazards. The licensee's management of change process was adequate to ensure that safety significant plant modifications undergo thorough preparation and review prior to approval and implementation.

e. Incident Investigation (IP 88065)

(1) Scope and Observations

The inspector reviewed the licensee's incident investigation program to verify that event identification, categorization, notifications, root cause analysis, findings, and recommendations were reviewed by safety and properly addressed to prevent recurrence. The inspector reviewed selected incident reports related to the chemical area and noted that the safety review of the events recommended compensatory actions that would prevent the problem from reoccurring. The inspector verified that the compensatory measures were in place and that the causal analysis had been performed. No issues were identified.

(2) Conclusions

The licensee evaluated and implemented corrective and compensatory measures to prevent recurrence of identified problems.

f. Audit and Inspection (IP 88066)

(1) Scope and Observations

The inspector reviewed recent audits and verified that findings were properly documented and resolved in a timely manner. With one exception, the inspector confirmed that audits were performed in accordance with audit procedure guidance.

The exception was the confined space audit. No guidance was included in the audit procedure for performing confined space permit audits. The licensee informed the inspector that the procedure would be reviewed and revised to provide guidance consistent with other audit procedures.

(2) Conclusions

The licensee's audit program adequately addressed chemical hazards but lacked guidance to perform confined space permit audits.

**3. Exit Interview**

The inspection scope and results were summarized with licensee management on August 18, 2005. Although proprietary documents and processes were occasionally reviewed during this inspection, proprietary information is not included in this report.

## ATTACHMENT

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

#### Licensee

V. Gallacher, Manager, Chemical and Waste  
R. Link, Manager, Environmental, Health, Safety and Licensing  
J. Payne, Manager, Technical Support and Maintenance  
T. Probasco, Manager, Safety, Security, and Emergency Preparedness  
E. VanderVeer, Supervisor, Waste Processing Operations

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

### 2. **INSPECTION PROCEDURES USED**

IP 88057	Hazard Identification and Assessment
IP 88058	Standard Operating Procedures
IP 88059	Site-Wide Safety Procedures
IP 88060	Detection and Monitoring
IP 88062	Maintenance and Inspection
IP 88063	Management of Change
IP 88064	Emergency Procedures
IP 88065	Incident Investigation
IP 88066	Audit and Inspection

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

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
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None

### 4. **LIST OF ACRONYMS USED**

ADAMS	Agency-Wide Document Access Management System
ADU	Ammonium Diuranate
CFR	Code of Federal Regulations
ECN	Engineering Change Notices
HA	Hazard Assessment
HF	Hydrofluoric Acid
IP	Inspection Procedure
IROFS	Item Relied on for Safety
ISA	Integrated Safety Analysis
NAF	Nuclear Absorber Fuel
NH <sub>4</sub>	Ammonia
NRC	Nuclear Regulatory Commission

PPE	Personal Protective Equipment
SNM	Special Nuclear Material
SOP	Standard Operating Procedures
SWUR	Solid Waste Uranium Recovery