UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

July 19, 2018

Dr. Ronald J. Land
Site Manager
Framatome Inc.
2101 Horn Rapids Road
Richland, WA 99354-0130

SUBJECT: FRAMATOME INC. – NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT 70-1257/2018-003

Dear Dr. Land:

This letter refers to inspections conducted from April 1 – June 30, 2018, at the Framatome Inc., facility in Richland, Washington. The purpose of these inspections was to perform routine reviews of the Environmental Protection, Radiological Protection, and Radiological Waste Management programs. The enclosed report presents the results of these inspections. At the conclusion of the inspections, the results were discussed with members of your staff at an exit meeting held on May 10, 2018.

These inspections examined activities conducted under your license as they relate to public health and safety, the common defense and security, and compliance with the Commission's rules and regulations and with the conditions of your license. Within the programs mentioned above, the inspections consisted of selected examinations of procedures and representative records, observations of activities, and interviews with personnel. Based on the results of these inspections, the NRC has determined that no violations of more than minor significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice and Procedure," 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 Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

If you have any questions, please contact Noel Pitoniak of my staff at 404-997-4634.

Sincerely,

/RA/

Eric C. Michel, Chief
Projects Branch 2
Division of Fuel Facility Inspection

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

Enclosure:
NRC Inspection Report 70-1257/2018-003
w/Supplemental Information

cc:
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SUBJECT: FRAMATOME INC. – NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT 70-1257/2018-003

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U. S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No.:	70-1257
License No.:	SNM-1227
Report No.:	70-1257/2018-003
Licensee:	Framatome Inc.
Facility:	Richland Facility
Location:	Richland, Washington 99354
Dates:	April 1 – June 30, 2018
Inspectors:	R. Gibson, Senior Fuel Facility Project Inspector (Paragraph A.2) G. Goff, Fuel Facility Project Inspector (Paragraph A.3) P. Startz, Fuel Facility Project Inspector (Paragraph A.1)
Approved by:	E. Michel, Chief Projects Branch 2 Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

FRAMATOME INC.
NRC Integrated Inspection Report 70-1257/2018-003
April 1 through June 30, 2018

Inspections were conducted by regional inspectors during normal shifts in the area of radiological controls. The inspectors performed a selective examination of licensee activities that were accomplished by direct observation of safety-significant activities and equipment, tours of the facility, interviews and discussions with licensee personnel, and a review of facility records.

Radiological Controls

- No violations of more than minor significance were identified related to the Radiation Protection Program. (Paragraph A.1)

- No violations of more than minor significance were identified related to the Environmental Protection Program. (Paragraph A.2)

- No violations of more than minor significance were identified related to the Radiological Waste Management Program. (Paragraph A.3)

Supplemental Information

Key Points of Contact
List of Items Opened, Closed, and Discussed
Inspection Procedures Used
Documents Reviewed

REPORT DETAILS

Summary of Plant Status

The Framatome facility converts uranium hexafluoride (UF_6) into uranium dioxide (UO_2) for the fabrication of low-enriched fuel assemblies used in commercial light water reactors. During the inspection period, normal production activities were ongoing.

A. Radiological Controls

1. Radiation Protection (Inspection Procedure 88030)

a. Inspection Scope

The inspectors reviewed the licensee's radiation protection program to verify compliance with Chapter 4, Radiation Protection, of the license application (LA). The inspectors reviewed radiation protection program documents (see Supplemental Information), observed activities, and conducted interviews to verify that the program was being implemented in accordance with the Chapter 4 of the LA and 10 Code of Federal Regulation (CFR) 20 requirements.

The inspectors reviewed the Radiation Protection organization structure, interviewed a cross-section of staff regarding their responsibilities, and accompanied a variety of radiological personnel performing their duties to determine compliance with 10 CFR 20.2201 (a). The inspectors also performed these actions to verify the radiation protection program's functions and responsibilities are independent from operations.

The inspectors reviewed a sample of radiological procedures (see Supplemental Information) to evaluate if recently revised procedures had been reviewed and approved in compliance Chapters 4 and 11 of the LA. The inspectors reviewed samples of the Radiological Protection Program audits to determine if the licensee's performance was audited in accordance with 10 CFR 20.1101 and Chapter 4 of the LA.

The inspectors reviewed the licensee's training program through reviewing samples of initial and refresher training for radiological technicians, supervisors, and health physics personnel to verify training was in accordance with Chapter 11 of the LA. The inspectors observed radiological technicians performing sample collection, preparation, documentation, and other work-area radiological analysis activities to evaluate the effectiveness of the licensee training program and via demonstration of on-the-job performance skills.

Inspectors reviewed random samples of radiological work area air monitoring reports and surface contamination smear data reports to determine if the monitoring and surveying program was being implemented in accordance with 10 CFR 20.1902 and .2103, and Chapter 4 of the LA. Inspectors observed sample collections, sample identification, sample preparations, sample analysis, analysis equipment operations and calibrations, and data management practices to determine compliance with approved procedures. Inspectors also observed analysis equipment tracking of serialized samples and the transfer of analysis data from the equipment into the Laboratory Information Management System in order to verify compliance with approved procedures. The

inspectors observed the archiving of health physics data and reviewed samples of archived data to verify no contamination or radiation levels exceeded designated action levels.

The inspectors examined selected portable survey instruments and fixed monitoring equipment to determine operability and calibration status. The inspectors evaluated if radiological instruments and equipment used for quantitative radiation and contamination measurements were calibrated at the proper frequency as required in 10 CFR 20.1501.

The inspectors reviewed radiological signs and postings at entrances to radiological areas and at permanent and temporary Radiation Work Permit (RWP) controlled areas to determine if postings were performed in accordance with Chapter 4 and 10 CFR 20 requirements. The inspectors also conducted walk downs of the Dry Conversion Facility (DCF), UO_2 building, and other work areas to verify the areas were posted and radioactive material areas were controlled in accordance with 10 CFR 20 requirements. The inspectors reviewed the Notice to Employees, NRC Form 3, to determine if it was posted in high traffic areas, near employee entrances/exits, in accordance with 10 CFR 19.11.

The inspectors conducted interviews and reviewed samples of 2017 internal and external employee radiological exposure data to verify that exposure records were maintained in accordance with 10 CFR 20.2106. Inspectors also evaluated the employee radiation exposure data to determine if the Total Effective Dose Equivalent, Lens Dose Equivalent, and Shallow Dose Equivalent results were within the approved licensee action levels and below the 10 CFR 20 regulatory limits of 5 rem/year, 15 rem/year, and 50 rem/year, respectively. Inspectors also reviewed the external whole body counting program to verify compliance with Chapter 4 of the LA.

b. Conclusion

No violations of more than minor significance were identified.

2. Effluent Control and Environmental Protection (Inspection Procedure 88045)

a. Inspection Scope

The inspectors evaluated whether the licensee had established and maintained a radiation program in compliance with Chapter 9, Environmental Protection, of the LA. Specifically, the inspectors reviewed radiation protection program documents (see Supplemental Information), observed activities, and conducted interviews to verify that the program was being implemented in accordance with the Chapter 9 of the LA and 10 CFR 20 regulations.

The inspectors reviewed the quality assurance program for effluent control and environmental protection to verify that the licensee was performing the required audits and presenting the annual audit results to the management team per Chapter 11 of the LA. The inspectors reviewed the findings from these audits to verify entry into the licensee's corrective action program (CAP). The inspectors reviewed events or findings identified in the licensee's CAP program to verify that deviations from procedures and unforeseen process changes were documented and investigated.

The inspectors reviewed procedures and observed performance of tasks to verify that the procedures were clearly written and delineated responsibilities related to effluent controls. The inspectors observed Health and Safety Technicians (HSTs) performing effluent controls and environmental protection activities in order to verify that the technicians were familiar with their responsibilities as they performed their tasks in accordance with approved procedures. Also, the inspectors reviewed training records to verify that the HSTs were trained in accordance with the Chapter 11.

The inspectors reviewed the semi-annual effluent reports for the calendar year 2017 and the second half of calendar year 2016 to evaluate the licensee's compliance with effluent requirements of 10 CFR 70.59. The inspectors reviewed the semi-annual effluent reports that were used to calculate the maximum possible dose to a member of the public at the licensee's fence line from gaseous effluent release to verify compliance with the regulatory limits specified in 10 CFR 20.1101 (d).

The inspectors reviewed a sample of the calibration and control program for flow indicators on effluent stack differential pressure indications to verify that effluent stack filters were being replaced within the required frequency as per procedure SOP-40032, Version 21.0, "Radioactive Gaseous Effluent Sampling," Version 21.0, and the ambient air procedure SOP-40043, "Ambient Air Sampling For Radioactivity," Version 7.0. The inspectors conducted a walk-down of ventilation stacks and ambient air stations and observed HSTs collecting samples from both systems to verify that effluent equipment and systems were operable and maintained in accordance with the requirements of these procedures.

The inspectors also conducted a walk-down of the liquid process and sanitary sewerage waste stream and observed an HST collecting samples from the lift station to verify that equipment was maintained and operated in accordance with the procedure (see Supplemental Information) and 10 CFR 20.2003. The inspectors reviewed the effluent monitoring results to verify that the values specified in Appendix B of 10 CFR Part 20 were not exceeded.

The inspectors reviewed records for soil, forage, and effluent sludge sample collection and discussed the results with licensee staff to verify that the levels were within regulatory limits. The inspectors interviewed the environmental engineer and staff to verify their knowledge regarding effluent systems operation, sampling requirements, and activities conducted in accordance with approved procedures.

b. Conclusion

No violations of more than minor significance were identified.

3. Radioactive Waste Processing, Handling, Storage, and Transportation (Inspection Procedure 88035)

a. Inspection Scope

During the inspection, there were no observable activities related to the processing, handling, packaging, and shipment of low-level radioactive waste (LLRW) or mixed waste (MW).

The inspectors evaluated whether the licensee had established and maintained a radiation program in compliance with the LA. The inspectors reviewed radiological waste program documents (see Supplemental Information), observed activities, and conducted interviews to verify that the program was being implemented in accordance with the license application and 10 CFR 20 and 10 CFR 61 regulations.

The inspectors reviewed procedures to determine compliance with the requirements of 10 CFR Part 20 and 10 CFR Part 61 applicable to LLRW or MW waste form (characterization), classification, stabilization, handling, storage, and shipment manifests/tracking. The inspectors also reviewed procedures to verify whether the licensee had established and maintained these procedures in accordance with the license application requirements in Chapter 11.

The inspectors observed storage of radioactive waste and the condition of the storage vessels (containers) in order to verify compliance with procedures (see Supplemental Information). The inspectors interviewed radiological waste handlers in order to determine that the personnel were familiar with their responsibilities as per the procedures and requisite training.

The inspectors reviewed the quality assurance program for radioactive waste management to verify that the licensee was performing the required audits as per 10 CFR 20, Appendix G. The inspectors noted that any findings from such audits would be entered into the licensee's corrective action program for resolution.

The inspectors reviewed the licensee's method for classifying low-level radioactive waste and mixed waste to verify compliance with 10 CFR 61.55 and 10 CFR 20, Appendix G. The inspectors reviewed the licensee's program for ensuring that waste was properly packaged to ensure the waste form met the requirements of 10 CFR 61.56 and 10 CFR 20, Appendix G.

The inspectors performed walk-downs of LLRW and MW storage areas to verify compliance with approved procedures (see Supplemental Information) and 10 CFR 20, Appendix G for the labeling of containers (55-gallon drums and rectangular metal bins), structural integrity of containers, and proper arrangement for storage (stacking height and spacing between rows). The inspectors also observed that the licensee had an electronic database as its primary means of tracking/recording information for each waste container.

The inspectors also walked-down the radiological waste areas for assaying waste containers, volume reduction of waste, and cutting of solid waste materials to verify compliance with approved procedures (see Supplemental Information). The inspectors interviewed the waste operators in these areas in order to determine they were knowledgeable about the safety aspects of their work.

The inspectors reviewed the training for radiological waste workers to verify the training addressed the various aspects radiological waste handling, packaging, storage, and preparation for shipment. The inspectors reviewed the training records for select radiological waste workers to verify they were qualified and maintained their training current.

The inspectors conducted interviews with the licensee's subcontractor for waste shipments, Transnuclear Inc., and reviewed radiological waste shipment documentation such as a waste box manifest, certifications, and control and tracking papers in order to verify compliance with 10 CFR 20, Appendix G and applicable procedures (see Supplemental Information).

b. Conclusion

No violations of more than minor significance were identified.

B. Exit Meeting

The inspection scope and results were presented to members of the licensee's staff at various meetings throughout the inspection period and were summarized on May 10, 2018, to R. Land and staff. No dissenting comments were received from the licensee. Proprietary information was discussed but not included in the report.

SUPPLEMENTAL INFORMATION

1. KEY POINTS OF CONTACT

Name	Title
K. Aman	Laboratory Technician Specialist
G. Antonioli	Radiological Waste Technician
J. Bourgeois	IT Supervisor, Electrical
S. Brummett	Radiological Waste Operator
D. Button	Laboratory Technician Specialist
M. Connelley	Tech 5, Lead Waste Technician
R. Delawder	Health and Safety Technician
W. Doane	Manager, Nuclear Criticality Safety
D. Durham	Air Balance Supervisor
C. Gooldy	Radiation Safety Supervisor
M. Hilty	Air Balance Technician
J. Jones	Radiological Waster Operator
D. Kim	Effluent Systems Engineer
L. Kim	Production Support Manager
J. Kreitzburg	Criticality Safety Engineer
R. Land	Site Manager
R. Lansing	SURF Construction Manager
P. Lee	Preventive Maintenance Administrator/Coordinator
J. Luebke	Plant Engineer
C. Manning	Licensing & Compliance Manager
P. McBride	Health and Safety Technician
J. Morales	Support and Waste Operations Supervisor
J. Perryman	Environmental Manager
K. Rhoten	Instrument and Controls Technician
C. Royce	Health Physicist
Y. Sakach	Radiation Protection/Health Physics
M. Salisbury	ARF Engineer
S. Shoel	Air Balance Technician
L. Smith	Training Specialist
T. Tate	Manager, Environmental, Health, Safety, & Licensing
M. Taylor	Transportation Analyst (TRANSNUCLEAR)

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None

3. INSPECTION PROCEDURES USED

88030 Radiation Protection
88035 Radioactive Waste Processing, Handling, Storage, and Transportation
88045 Effluent Control and Environmental Protection

4. DOCUMENTS REVIEWED

Records:
2017 Annual Groundwater report – E06-09-010, Version 1.0
ALARA Committee Meeting minutes, dated March 28, 2018
Annual Radioactive Waste Audit, dated March 8, 2018
Compliance Groundwater Monitoring Plan – E06-07-009, Version 2.0
DOE/NRC Form 741 (Shipment to US Ecology)
E05-18-001, Version 2.0, Audit Report (HP-7)
Effluent reports air - July 1, 2016 to December 31, 2017
FRM 20287 (Shipment to US Ecology)
NRC Form 540 (Shipment to US Ecology)
PM04991, Container Storage Inspection – June 1, 2017, September 1, 2017, December 1, 2017, February 1, 2018
PM/IRM: C163I102, C163P104 from May 2017 – April 2018
Round Duct traverse report – April 28, 2018
Sludge Samples – Quarterly
Soil Samples – Quarterly
Waste Box Manifest
Waste/Hazardous Material Shipment Compliance Form

Procedures:
MCP-30108, Version 8.0, ALARA Program
MCP-30118, Version 6.0, ALARA Preparation of NRC & WDOH Semi-Annual Effluent Report
MCP-30235, Radioactive Solid Waste Packaging, Version 6.0, dated March 28, 2018
SOP – 40015, Version 10.0, Routine Urine Sampling Program
SOP – 40031, Version 12.0, Waste Effluent Monitoring & Sampling
SOP – 40032, Version 21.0, Radioactive Gaseous Effluent Sampling
SOP – 40034, Version 7.0, Richland WWTF Sludge Sampling
SOP – 40033, Version 10.0, Environmental Dosimetry
SOP – 40035, Version 7.0, Forage Sampling
SOP - 40174, Version 24.0, General Facility Radiation Procedure
SOP - 40256, ARF Ion Exchange System, Version 16.0, dated June 22, 2016
SOP - 40257, ARF Ion Exchange Feed Tank System, Version 4.1, dated September 1, 2017
SOP - 40383, Waste Assay Operation, Version 9.0, dated November 17, 2017
SOP - 40384, Waste Volume Reduction and Packaging Facility, Version 11.0, dated December 29, 2016
SOP - 40386, Special/Mixed/Hazardous/Dangerous Waste Handling and Storage, Version 11.0, dated March 28, 2018
SOP - 40387, LLRW and Ash Container Handling and Storage, Version 8.2, dated February 2, 2017
SOP - 40389, Preparing Low Level Radioactive Waste (LLRW), Special, Mixed and Hazardous Waste Materials Shipments, Version 8.0, dated March 28, 2018
SOP - 40885, UCAR Emergency Response, Version 4.0, dated January 12, 2018
SOP - 41075, Modular Extraction Recovery Facility (MERF), Version 7.0, dated June 23, 2017

SOP - 41108, Version 2.0, Analysis of Urine, Waste and Other Matrices for Impurities and Relative Isotopic Abundance by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
SOP – 42243, Version 7.0, Ambient Air Sampling for Radioactivity

Condition Reports Written as a Result of the Inspection:
2018-4825 (dated May 10, 2018)

Condition Reports Reviewed:
2017- 527, 677, 727, 882, 965, 3772, 3814, 3876, 4788, 4792, 5341, 6376

Other Documents:
Dangerous Waste Management Permit (Washington State), dated February 2, 2010
E04-NCSA-163, “Industrial Waste Water Treatment Facilities,” Version 29.0
E04-NCSA-780, “2.0 Criticality Safety Specifications and Non-criticality Safety IROFS,” Version 20.0
Examination: HRR-CRT-000780-003
FRM-20287, LLRW & MW Handling, Storage, and Shipping, Version 3.0
IROFS Database
ISA Summary (various sections related to RWM)
License Number – SNM-1227, Amendment 10
Operator Aid: AID-10397, “Reference 1068 Canberra, Model ADM606M Using Three Model GSP-100 Gamma Scintillation (NaI) Probes with ROI’s Set at 166-206 keV”, Version 4, dated November 28, 2016
Organizational Chart – Fuel Operations, Richland Operations
Organizational Chart – Fuel Operations, Richland Operations, Production Support
State of Washington Department of Ecology, “Managing Special Waste”, May 2010
Training Curricula: Waste Handling Movement & Storage, Hazardous Waste Shipment Preparations-WKS, Waste Inspector, Waste Segregation & Packaging, & Volume Reduction Facility-WKS
WAC 173-303-040, “Definitions”
WAC 173-303-073, “Conditional Exclusion of Special Wastes”
WAC 173-303-090, “Dangerous Waste Characteristics”