

Licensee Performance Review



Framatome Inc.
Richland, Washington

April 7, 2020
4:00 PM (EDT)

Agenda

NRC	Our Mission
NRC	Performance Review Process
NRC	Performance Review Results
FRAM	Response
NRC	Adjourn Business Portion
NRC	Question & Answer with Public
NRC	Adjourn Meeting



*Our
Mission*



How We Regulate



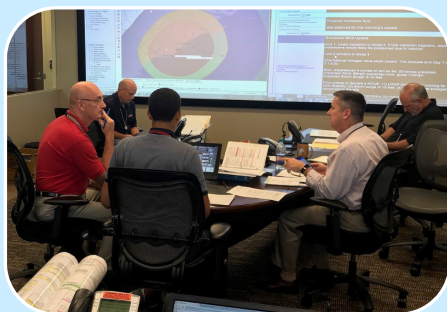
Inspections



Investigations



Allegations



Incident
Response



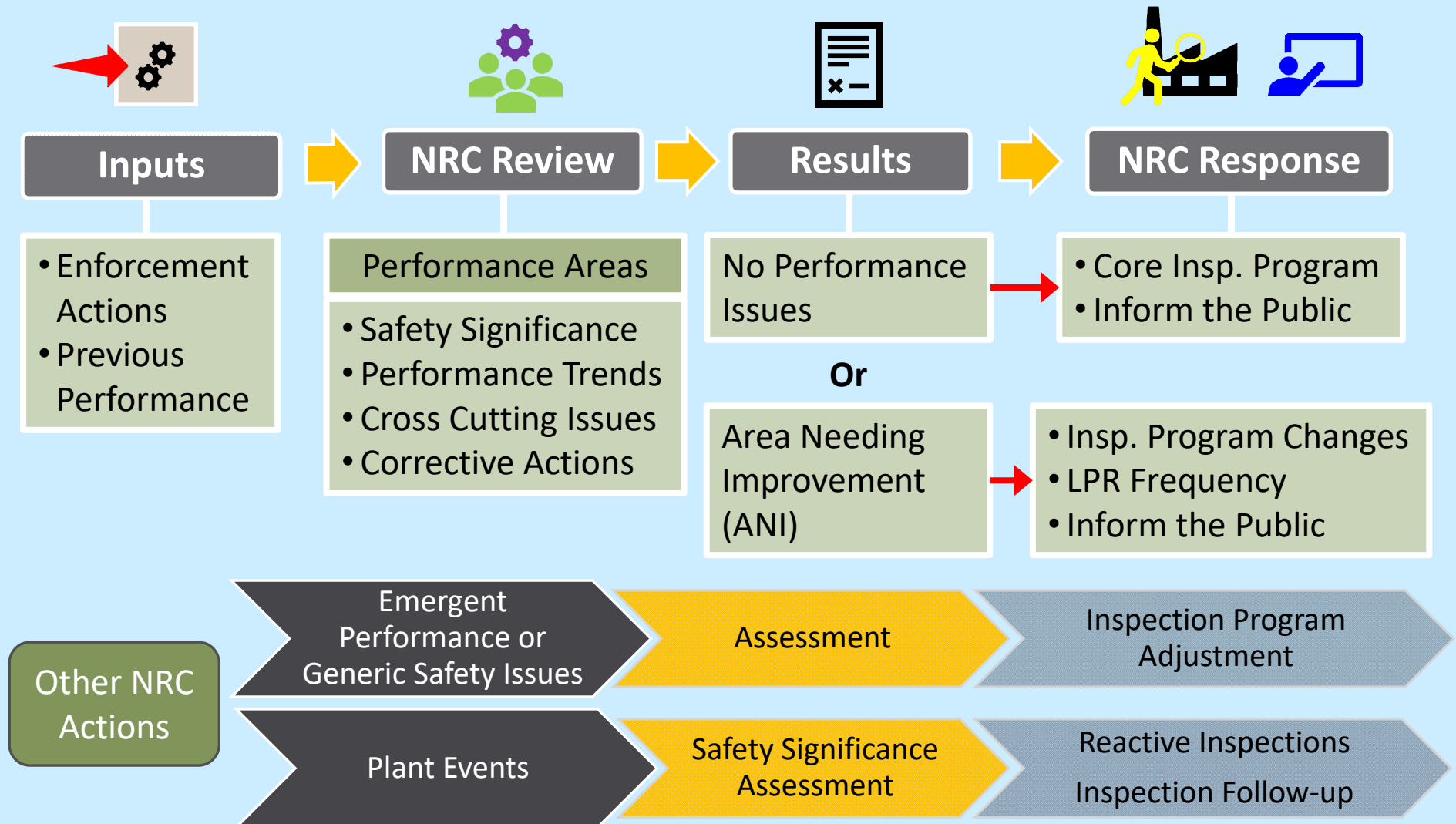
Enforcement



Performance
Assessment



Licensee Performance Review Process



LPR = Licensee Performance Review

Licensee Performance Areas

Safety Operations

Operational Safety

- Safety Controls
- Supporting Safety Programs



Criticality Safety

- Criticality Controls
- Program Oversight
- Criticality Incident Response



Fire Protection

- Prevention, Detection, & Mitigation
- Supporting Fire Safety Programs



Licensee Performance Areas

Radiological Controls

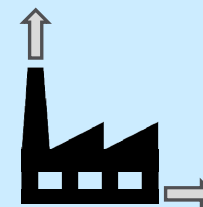
Radiation Protection

- Members of the Public
- Plant Workers



Effluent Control and Environmental Protection

- Program Implementation
- Liquid and Gaseous Effluents



Waste Management

- Processing, Handling, Storage & Transportation of Waste



Transportation

- Receipt, Packaging & Delivery of Radioactive Materials



Licensee Performance Areas

Facility Support & Other Areas

Maintenance and Surveillance

- Safety Controls
- Supporting Program Elements



Emergency Preparedness

- Emergency Plan Implementation
- Evaluation of Emergency Drills



Plant Modifications

- Configuration Management Program
- Request for NRC Approval



Plant Events

- Safety Assessment and Follow-up



Safeguards

- Material Control, Physical Protection, Classified Material & Information Security



Framatome Inc., Facility

Licensed Activities

- Possess Special Nuclear Material (Low Enriched Uranium)
- Process and develop uranium products
- Operate on-site laboratories
- Treat and discharge plant effluents

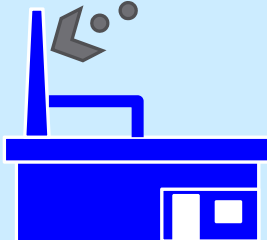
NRC FORM 374		U.S. NUCLEAR REGULATORY COMMISSION	Page 1 of 5
MATERIALS LICENSE			
Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.			
Licensee			
Framatome Inc.		License Number: SNM-1227, Amendment 13	
2101 Horn Rapids Road		Expiration Date: April 24, 2049	
Richland, WA 99354-0130		Docket Number: 70-1257	
1. Byproduct, Source, and/or Special Nuclear Material	2. Chemical and/or Physical Form	3. Maximum Amount that Licensee May Possess At Any One Time	
A. Uranium enriched in U-235 to any enrichment	A. Any	A. 350 g U-235	
B. Uranium enriched up to 5.00 wt. % U-235	B. Uranium Compounds	B. See Sensitive Conditions	
4. Authorized Place of Use: The licensee's existing facilities in Richland, Washington.			
<div style="border: 1px solid black; padding: 5px;"> <p>This license contains SENSITIVE SECURITY-RELATED Information. Upon removal of the Sensitive Conditions on Page 5, this document is decontrolled.</p> </div>			
Enclosure 1			

NRC On-site Core Inspection Effort

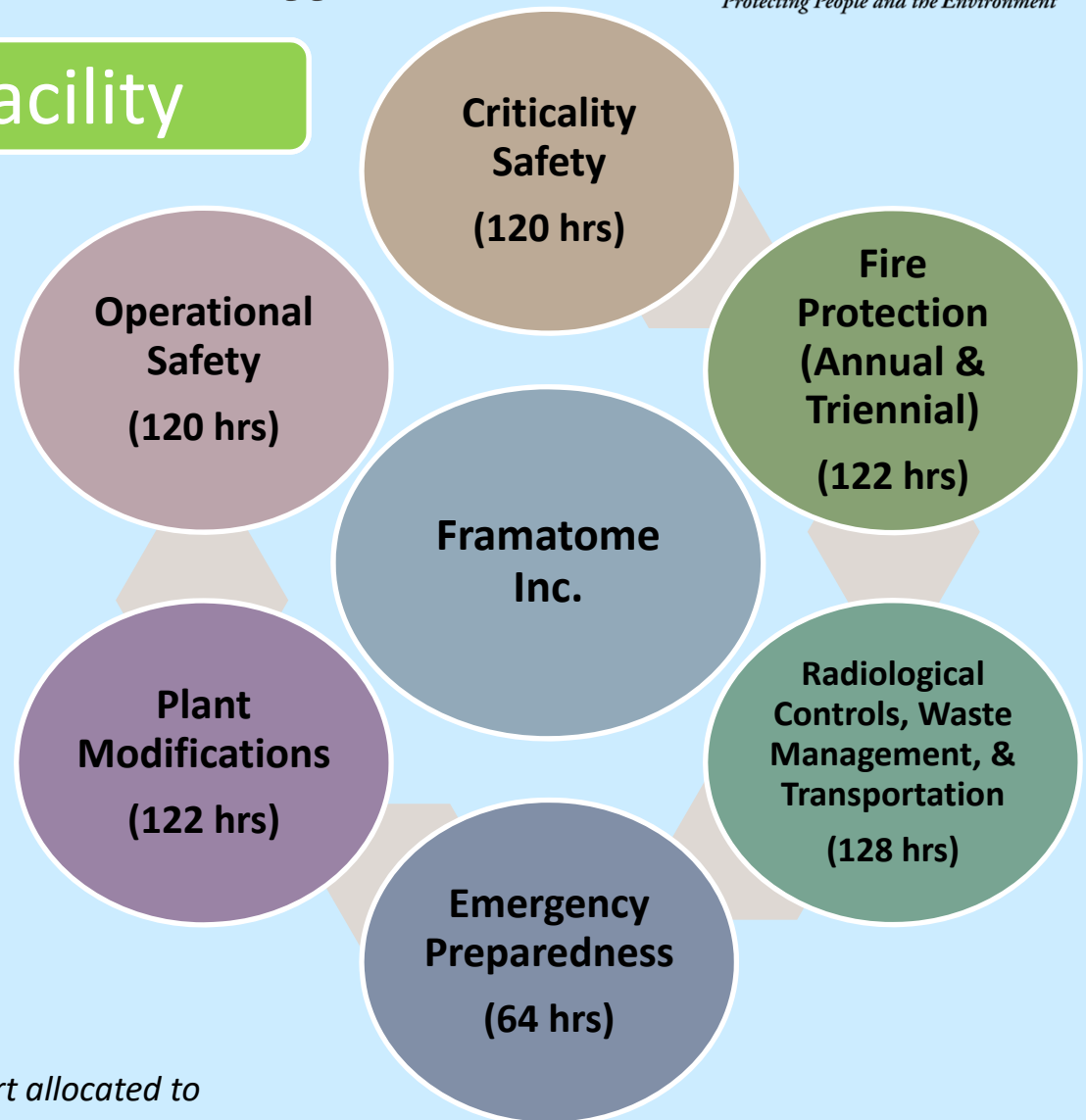
Category III Fuel Facility



Region 2
Inspectors
(676 hrs)



Category III Fuel Facility

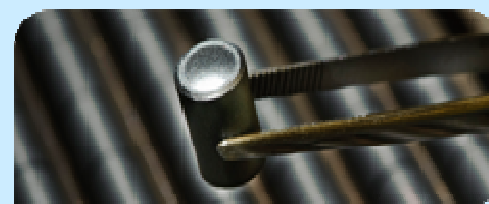


Note: The hours above represent the estimated effort allocated to on-site routine inspections every two years.

Summary

Licensee Performance Review Summary (2018-2019)

- Framatome conducted activities safely and securely
- No area needing improvement (ANI) was identified in the performance assessment areas
- NRC will conduct core (routine) inspection program in the next performance assessment cycle



Framatome's Remarks



Richland Fuel Manufacturing Facility

Licensee Performance Review

April 7, 2020

CONTENT

- 01 . Framatome Richland Site Overview
- 02 . Our Continuous Improvement Organization
- 03 . Our Safety Culture
- 04 . Summary / Conclusion

Celebrating More Than 50 Years of Fueling the Future

- Founded by Jersey Nuclear in 1969, we celebrated our golden anniversary in 2019
- The facility employs approximately 575 employees and 25-30 contractors
 - We operate 24 hours a day, 7 days a week
- Received the first 40-year fuel fabrication license from the U.S. NRC; license to manufacture fuel until 2049
- Provide fuel to U.S. reactors and export to several in the Pacific rim
- Most flexible fuel manufacturing facility in the world
 - Manufacturing both boiling water and pressurized water reactor designs
- Manufactured more than 60,000 fuel assemblies



Fuel fabricated at the Richland site accounts for approximately 5 percent of the utility-generated electricity in the U.S.

framatome

Richland

Delivering a secure supply of nuclear fuel products for more than 50 years



First 40-year NRC
fuel fabrication
license extension



The most
Modern
and **Flexible**
fuel fabrication
Facility
in the world

\$7M+
Annual
Investments
on facility upgrades
and improvements

10+
Types
of PWR and
BWR fuel

Utilizing a
Global Team
of Experts
with unmatched
industry experience



Environmentally
friendly
Patented Dry
Conversion
process
to
UF₆ **UO₂**



Recognized for
14 **Consecutive**
Years with
No Areas
Needing
Improvement
The highest positive
rating provided
by the **NRC**



North America Standards of
Operational Excellence



SAFETY. First and foremost,
the critical success factor for our
people, products and services.



QUALITY. First time, every time.



PERFORMANCE. Fueled by
our people and innovation for
our customers.



DELIVERY. Reliable,
predictable and consistent.

Continuous Improvement Organization

Focused on Operational Excellence

Safety is our overarching value and drives everything we do

- Recently surpassed 900 days without a lost time injury onsite
 - Equates to approximately 3 million hours worked
- Longest duration since safety metrics have been recorded

OSHAS 18001 certified since 2005

Richland Site Continuous Improvement Processes



Lean Six Sigma

- Based on Lean philosophy; right the first time, every time!
- Application of the Lean Six Sigma methodology

DevonWay – problem identification/resolution

- Trending and actions on low impact events
- Rigorous problem analysis and solving

Human Performance

- Observation Program – reinforce good behavior and corrective action for areas needing improvement
 - Employees submitted on average 1,200 'Good Catches' per year
- Here & Now team meetings
- Human performance training lab – more than 400 personnel participated in workshop focused on error-prevention tools

Richland Site Continuous Improvement Processes



Radiological and Environmental Controls

- In more than 50 years of operation, no plant employee has been exposed over NRC exposure limits.
- ALARA program resulted in 2019 Collective Total Effective Dose Equivalent that was lowest in 26 years.
- Remote monitoring systems installed to improve ALARA.
- Control system updates in uranium recovery processes.
- Radio Frequency Identification (RFID) technology deployed in Dry Conversion and Specialty Fuels facilities to track movement of personnel and monitoring of internal dose.
- Continued pursuit of environmental excellence through ongoing improvement via ISO 14001 environmental management system. Certified since December 2005.

Safety Achievements / Improvements



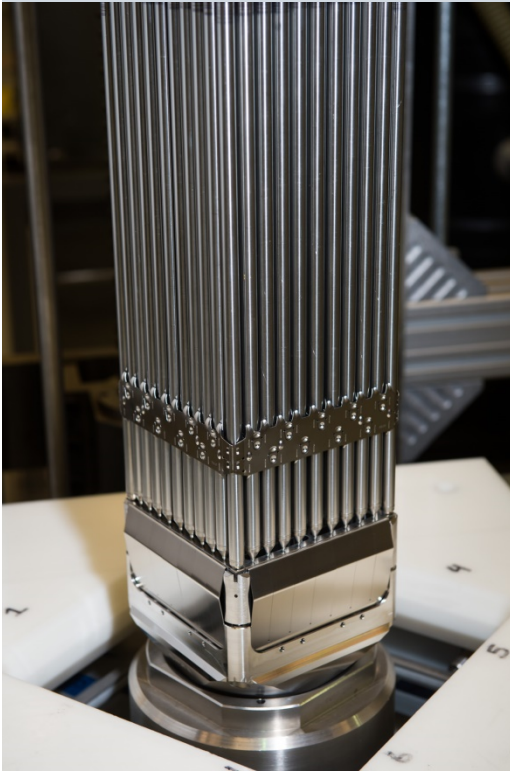
- All legacy mixed waste drums have been disposed.
- Major recycling/re-use activities involving NRC-licensed and support processes (hydrofluoric acid, ammonium hydroxide, used oil, used machine coolants, paper/cardboard, scrap metals, wood, and batteries).
- Continued improvement in groundwater quality since removal / remediation of surface impoundment system. All six down-gradient monitoring wells consistently below Federal primary drinking water limit for fluorides (4 ppm); last sampling (Nov. 2019) shows no wells above Federal uranium drinking water limit of 30 ppb.
- Approximately 500 Class 7 radioactive material shipments completed over CYs 2018/2019 without incident.
- Continued usage of TN Americas for expert transportation services (logistics, container fleet management, carrier management, transportation security, packaging licensing, etc.).

Safety Achievements / Improvements



- Multi-year site-wide fire alarm system upgrades have been completed, and all areas are now active.
- Criticality accident alarm system has been replaced and was put online in 2018.
- Criticality safety training continues to include at-the-workstation interactive discussions between production and maintenance personnel and criticality safety staff.
- Close to 130 plant projects completed in 2018-2019, approximately one-third of which supported safety improvements.
- Startup of a new uranium recovery facility is in progress to replace aging uranium recovery facility. Commercial operation scheduled this year.
- EHS&L Audit/Inspection schedule lists 85 different audits / inspections / assessments; only 32 specifically NRC-required. Based on required frequencies, over 150 actual audit / inspection activities occur per year.

Conclusions



- Framatome continues to facilitate and drive for improvements in safety and regulatory compliance
- The Richland Site Management strives for operational excellence daily and promotes a culture of continuous improvement
 - Employees are encouraged and engaged in submitting their ideas to improve the site and processes
- We are committed to complying with our U.S. NRC and state approved operating licenses and all other applicable regulations

framatome

Thank You!



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Informal Question and Answer Session between the NRC and the Public

Closing Remarks

Feedback

Please e-mail your feedback regarding the
2020 Framatome LPR Public Meeting to
either:

Richard.Gibson@nrc.gov or

Gregory.Goff@nrc.gov

List of Publicly Available Documents

- 2018 Quarterly Inspection Report 2018-002 – ML18110A023
- 2018 Quarterly Inspection Report 2018-002 – ML18200A240
- 2018 Quarterly Inspection Report 2018-004 – ML18297A090
- 2018 Quarterly Inspection Report 2018-005 – ML19025A017

- 2019 Quarterly Inspection Report 2019-002 – ML19109A002
- 2019 Quarterly Inspection Report 2019-003 – ML19214A116
- 2019 Quarterly Inspection Report 2019-004 – ML19301A076
- 2019 Quarterly Inspection Report 2019-005 – ML20030A261