

ENCLOSURE 2

M170172

RAJ-II Letter Authorization Pre-Application Presentation – Open
Portion

Non-Proprietary Information – Class I (Public)

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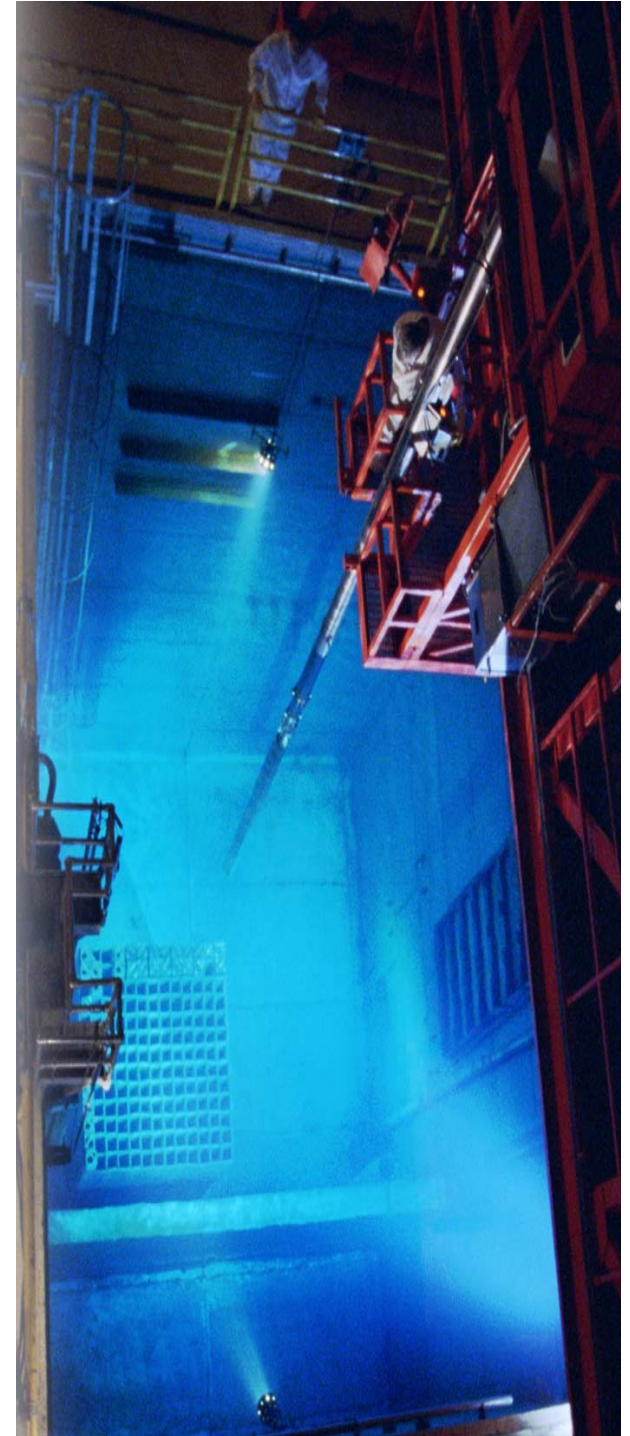
Pre-Application Meeting to Discuss Model No. RAJ-II Letter Authorization to Allow the Shipment of GNF FeCrAl Clad Rods in Lead Test Assemblies

June 21, 2017

GNF

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Purpose – Pre-application meeting to discuss future submittal of the Model No. RAJ-II letter authorization to allow the shipment of FeCrAl clad rods in Lead Test Assemblies (LTA)

Open Portion of Meeting

- Introduction/Opening Remarks Jim Harrison
- Schedule Needs for Letter Authorization Jim H
- Characteristics of FeCrAl Cladding Russ Fawcett
 - a. Introduce FeCrAl Cladding Material
 - b. Summary of FeCrAl LTA Goals and Objectives

Closed Portion of Meeting

- Overview of Differences Between FeCrAl Lead Test Rod Segments and Current CoC Russ F & Kate Martin
- Discuss Approach and Content of the Letter Authorization in the Following Areas:
 - a. Structural Evaluation Kate Martin
 - b. Thermal Evaluation Mine Yilmaz
 - c. Containment Evaluation No Impact
 - d. Shielding Evaluation Chris Kmiec
 - e. Criticality Evaluation Chris Kmiec
 - f. Package Operations No Impact
 - g. Maintenance No Impact

- Closing Summary



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Schedule

Ship Date – Early December 2017

Letter Authorization Approved – Mid Nov 2017

Submit Letter Authorization Request – Mid July

Pre-Submittal Meeting – Mid June

GNF FeCrAl Introduction Call – April 6

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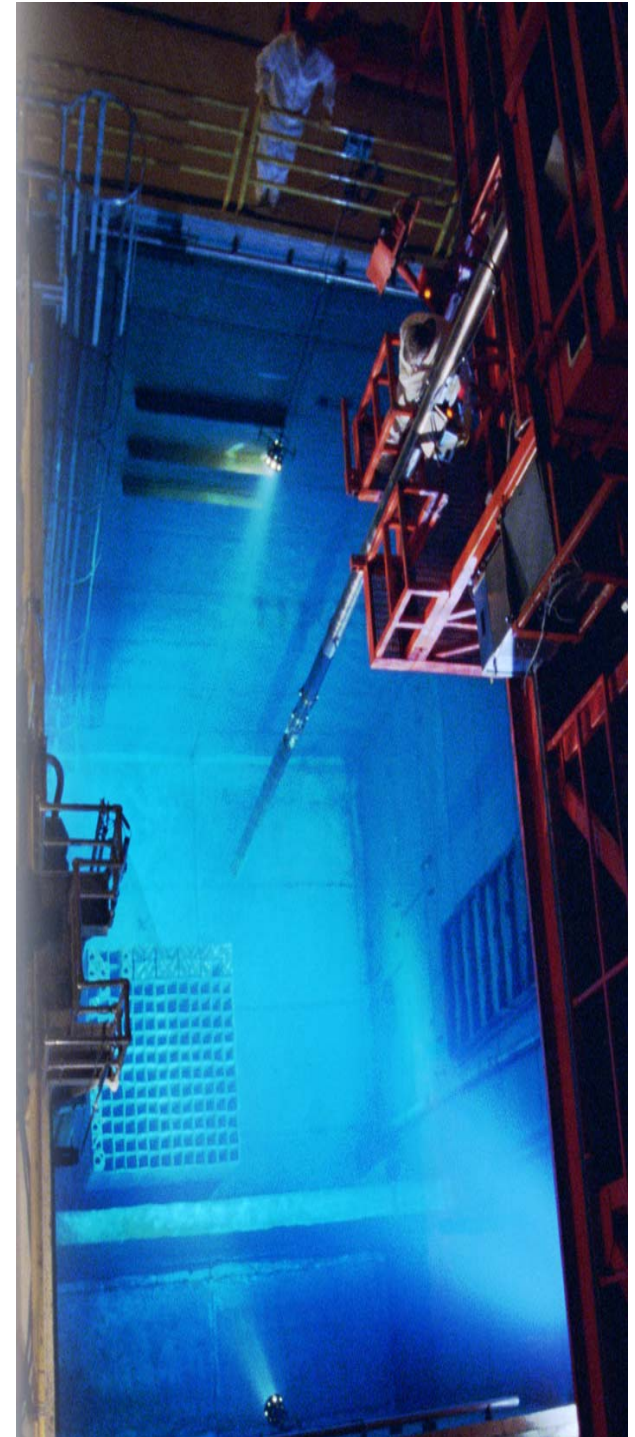
Overview of GNF's ATF Lead Test Assembly (LTA) Program

Russ Fawcett
June, 2017

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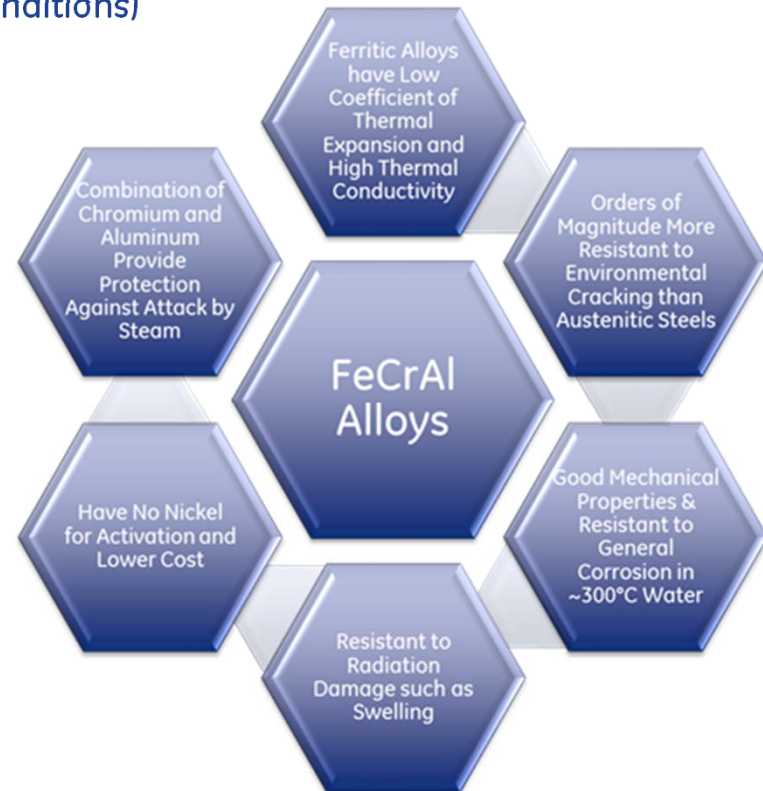
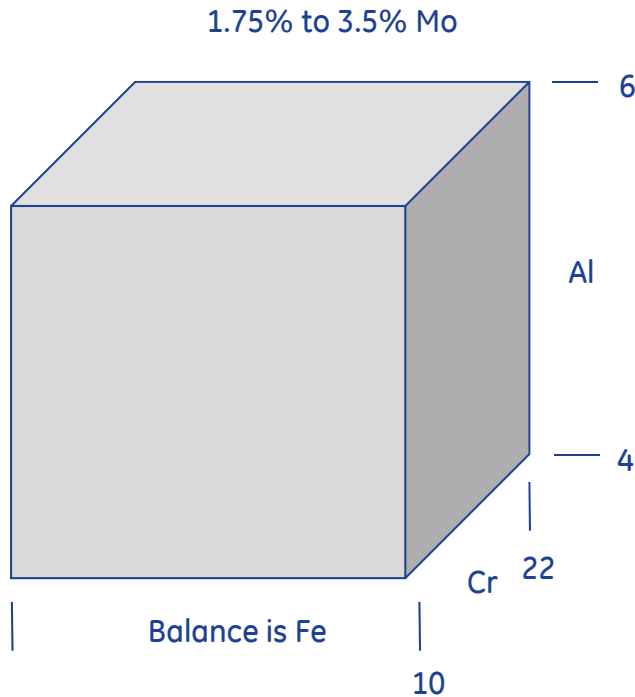
DOE Phase 2 Accident Tolerant Fuel Program

The objective of GNF's Phase 2 ATF program is to: 1) install GNF FeCrAl clad lead fuel rods (LFR) into a commercial reactor for material characterization, 2) better describe how a transformation to ferritic steel cladding would impact safety and operation, and 3) develop the material characterization to support a BWR fuel assembly design that is matched to the material.

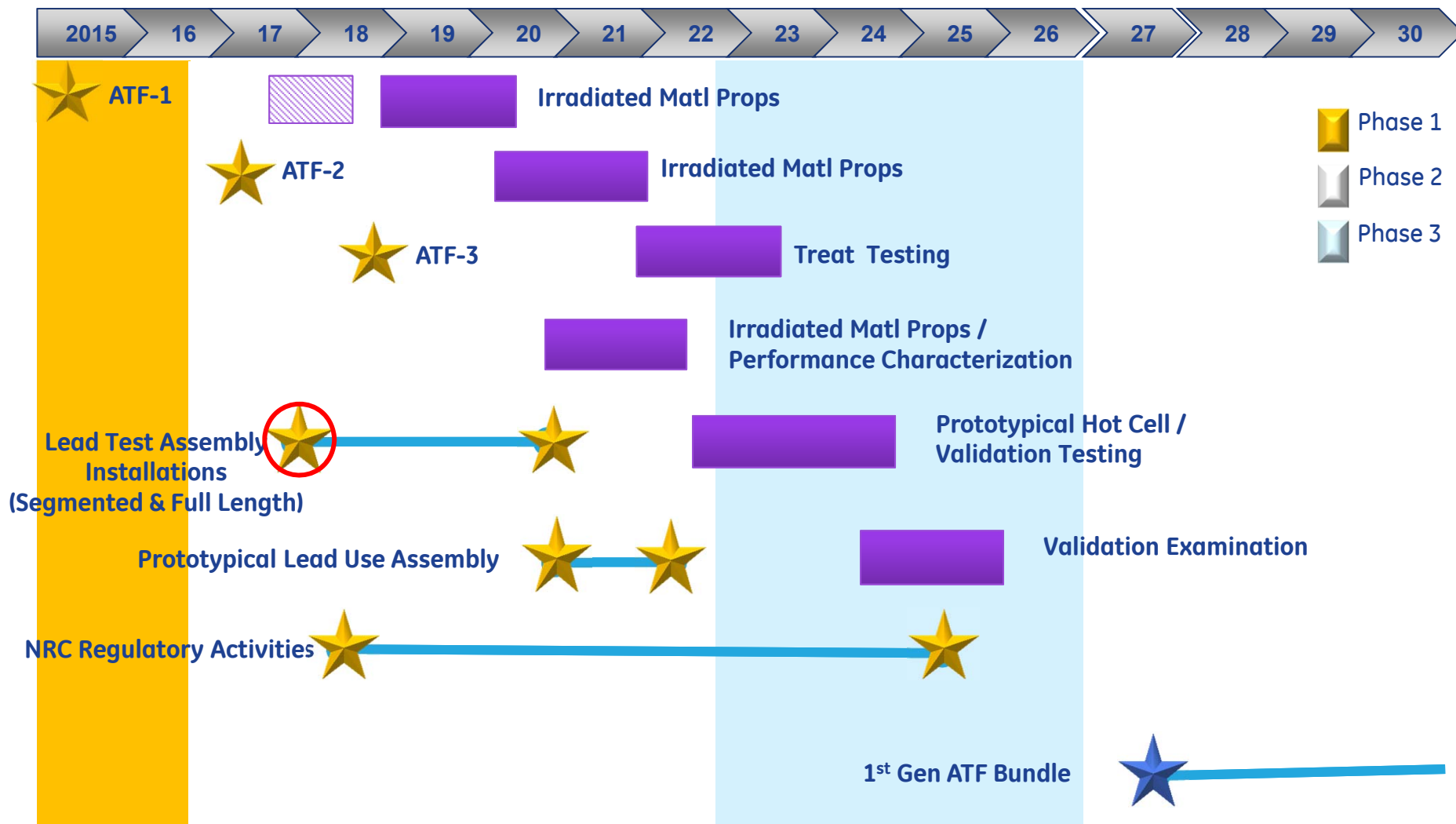
Ferritic steel cladding (FeCrAl) continues to be a promising candidate as an alternative to the current fuel system with high likelihood of **feasibility** and **safety & operational benefit**.

The FeCrAl Space

- GNF FeCrAl is considered to be in the ferritic stainless steel family
- The function of Cr is to provide corrosion resistance at normal operating conditions and AOO & DBA
- The function of Al is to provide high temperature oxidation resistance at BDBA conditions
- The purpose of Mo is high temperature strength (i.e. at accident conditions)



Looking Forward



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Initial Installation & RAJ-II Letter Authorization

- GE/GNF is partnering with SNC to install a small quantity of Lead Fuel Rods (LFR) into otherwise normal GNF2 fuel assemblies for installation into Plant Hatch, Unit 1 Cycle 29
 - GNF2 is GNF’s production 10x10 fuel assembly
 - GNF2 is operating in numerous BWRs domestically and normally transported in the RAJ-II
 - A few normal fuel rods are replaced by the subject GNF FeCrAl clad LFRs
- Several parameters associated with the LFRs fall outside of the RAJ-II CoC (e.g. cladding material & dimensions)
- As such, a Letter Authorization request is in the final stages of preparation and scheduled to be submitted to the NRC in July
 - All requirements of the RAJ-II SAR addressed