

# **INL SNF PROGRAM**

*presented to*

**National Spent Nuclear Fuel Program  
Strategy Meeting  
Washington, DC  
March 4 - 5, 2008**

*presented by*

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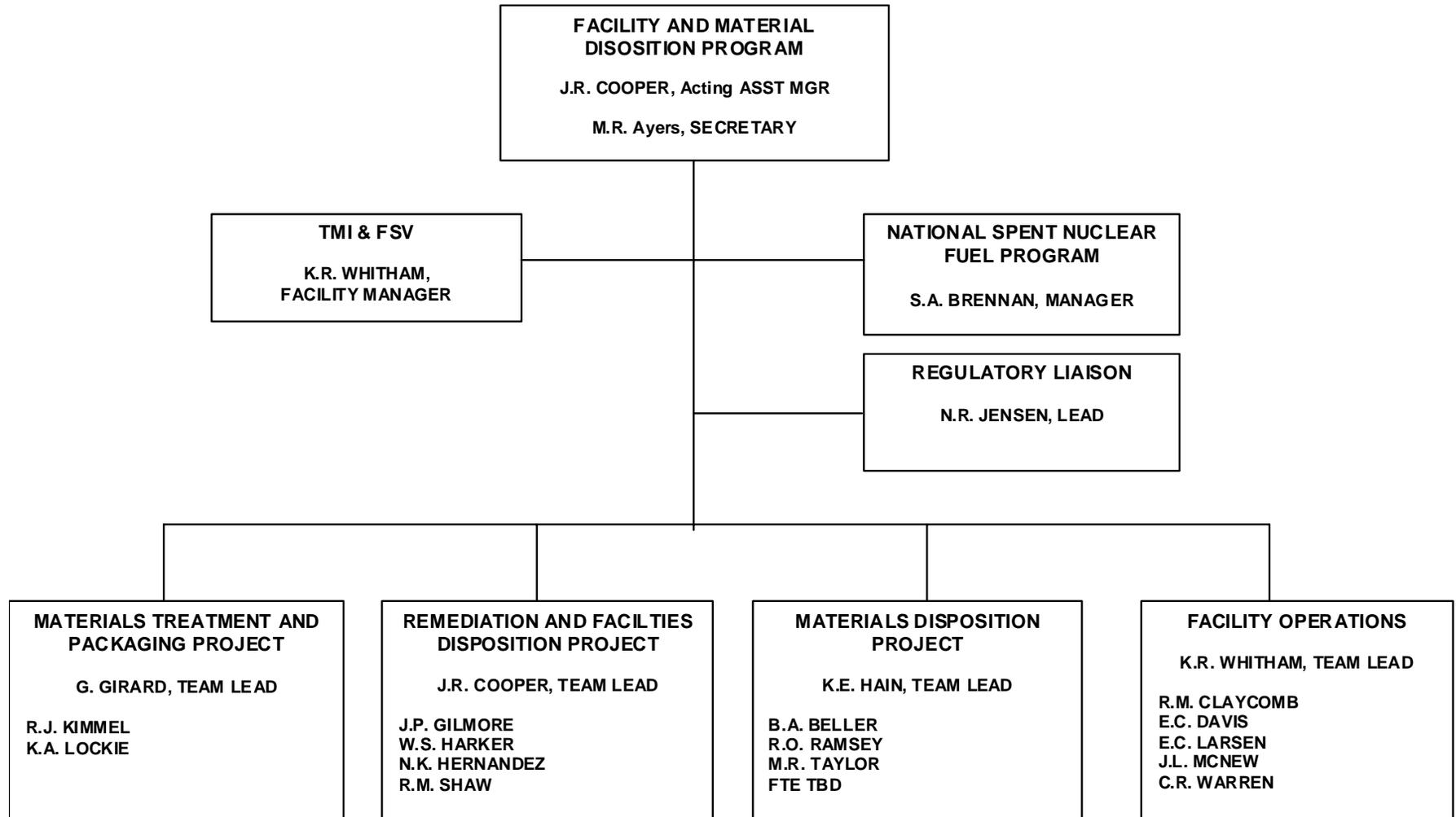
**March 4, 2008**

# **INL SNF Program**

- I. The DOE-ID Team**
- II. INL's SNF Programmatic End Goals**
- III. INL's SNF Management Strategy**
- IV. Near Term Projects**
- V. The Future**
- VI. Program Status and Risk**

# I. THE DOE-ID TEAM

## *FACILITY AND MATERIAL DISPOSITION PROGRAM ORGANIZATION CHART*



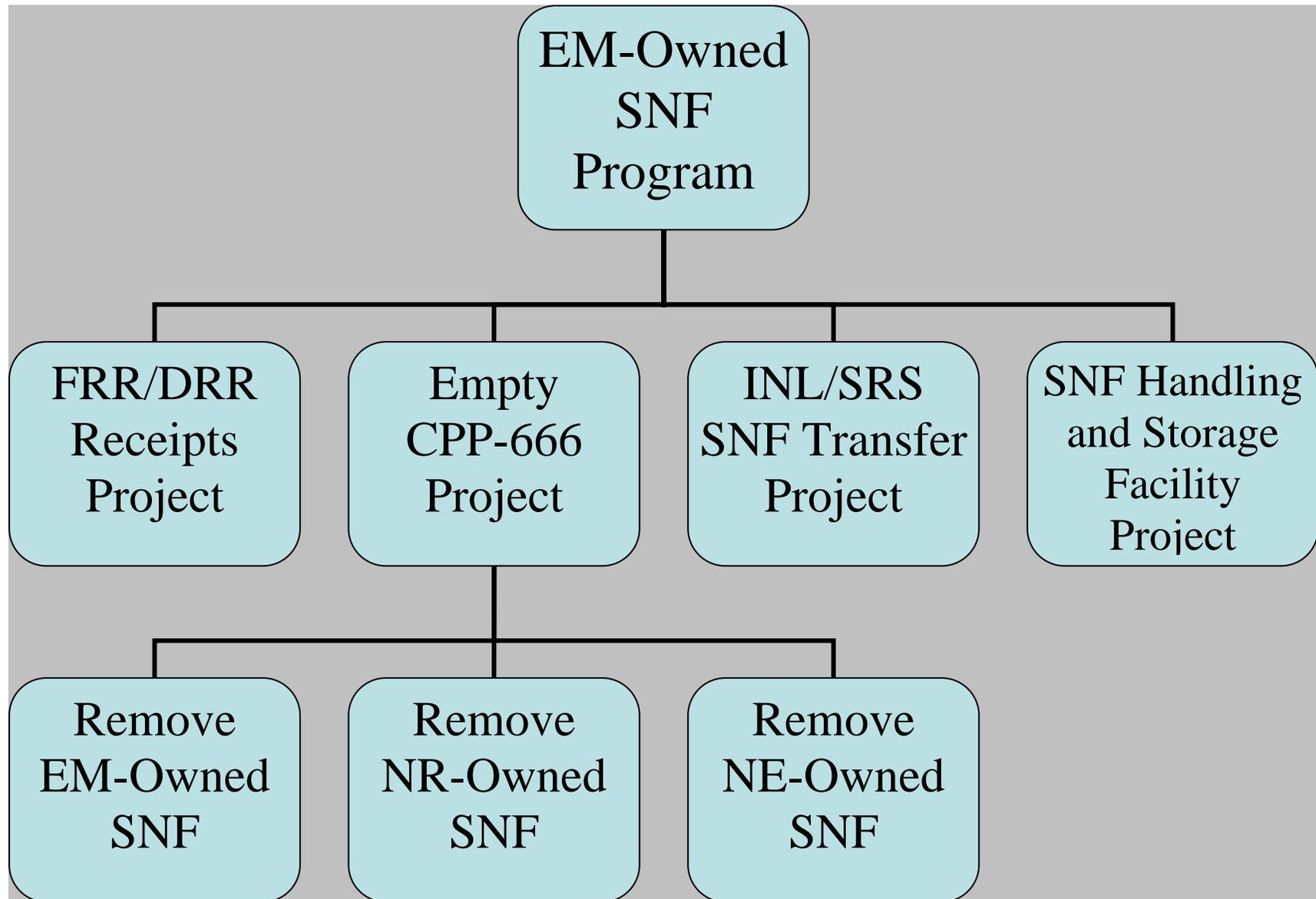
## **II. INL's SNF Programmatic End Goals**

- 1. Safe and efficient management of all materials within our custody.**
- 2. Protection of the Snake River Aquifer.**
- 3. Removal of all DOE-controlled legacy SNF from the states of Idaho and Colorado by 01/01/2035.**

### **III. INL's Spent Fuel Management Strategy**

- 1. Perform national responsibilities:**
  - **Receive government-owned and DRR fuels; and**
  - **Receive FRR fuels.**
  
- 2. Address vulnerabilities:**
  - **Place wet stored SNF into interim dry storage by 09/30/12 (required 12/31/23).**
  
- 3. Consolidate spent fuel storage areas:**
  - **Bring all SNF into a single management area at INTEC by 09/30/05.**
  
- 4. Make DOE-owned legacy SNF road-ready:**
  - **Package SNF in the DOE Standard Canister**
  - **Support removal from Idaho and Colorado by 01/01/35.**

## IV. Near Term Projects



## **IV. Near Term Project**

### **1. Min Safe SNF Program/Project**

**Provide the core competency and capability to provide safe, secure management of SNF facilities and materials**

- **Adequate personnel**  
(Numbers, skill mix, training)
- **Well maintained facilities**
  1. **Habitability** (facility integrity, utilities, HVAC, electrical, plumbing)
  2. **Safety-related systems** (monitoring equipment, alarms, response)
- **Well maintained materials**  
(managed according to appropriate procedures)
- **Fuel handling apparatus**  
(hand tools, mechanized equipment, cranes)
- **Safety** (nuclear and non-nuclear)
- **QA** (licensed [NQA-1] and non-licensed [3<sup>3</sup>P])
- **Security**

## **IV. Near Term Projects**

### **2. FRR / DRR SNF Receipts Project**

**FRR SNF Program – Planning NA-managed**

**DRR SNF Program – Planning NE-managed**

**Be prepared to receive up to:**

- 2-3 FRR SNF casks/yr through FY2019**
- 2-3 DRR SNF casks/yr through FY2027**

## **IV. Near Term Projects**

### **3. Empty CPP-666**

- 1. EM-Owned fuel out by 09/30/09 (Scope 1 - 265 FUs; Scope 2 – 3,178).  
02/27/08 – Completed 190 transfers of 1,929 FUs to empty CPP 666 of  
EM-managed SNF (60.7% by FU completed).**
  
- 2. NR-Owned SNF out by 09/30/12.  
09/26/06 – EM/NR MOA signed.  
02/20/07 – NR-IBO letter of acceptance for the LCB and CE to DOE-  
ID/EM received.  
03/15/08 – First shipment of SNF**
  
- 3a. NE-Owned EBR-II SNF out by 09/30/XX – TBN.  
03/29/07 – EM&NE confirmed NE ownership of EBR-II SNF managed  
at INTEC in CPP-666.**
  
- 3b. NE-Owned ATR SNF out by 09/30/XX – TBN.  
02/22/07 – First EM/NE planning mtg.**

## **IV. Near Term Projects**

### **4. Execute the INL/SRS SNF Swap**

**Scope: ROD for the 1995 SNF EIS**

- **SRS – Regional disposition facility for DOE-owned Al-clad SNF**
- **INL – Regional disposition facility for DOE-owned non Al-clad SNF**

<b>Parameters</b>	<b>INL to SRS</b>	<b>SRS to INL</b>
MTHM	3.3	20.2
Fuel Handling Units	4,200	2,000
No. of Shipments	200-525 (210)	55-200 (120)

- **Estimated Cost: \$XM above baseline.**
- **Project Time: 2009 – 2022 (6-13 years)**

**08/17/06 – CD-0/CD-1 for the Enriched Uranium Disposition Project at SRS signed.**

**01/29/07 – Memo from EM-2 directing INL and SRS to establish an IPT and prepare a project plan.**

**04/30/07 – Draft Project Plan.**

## **IV. Near Term Projects**

### **5. Restart INL SNF Handling and Storage Project**

**Scope: Meet the terms of the SA. Prepare all legacy SNF for transfer and ship to the repository by 12/31/34.**

- 1. Select a method to receive, extract, sort, repackage, store until ready to ship, load into truck or train SNF casks, and ship the wide spectrum of INL SNF to the repository within the required timeframe.**
- 2. Package approximately 286 MTHM SNF into an estimated 1,575 standard canisters**

## **IV. Near Term Projects**

### **5. Restart INL SNF Handling and Storage Project (Con't)**

#### **Methods:**

- 1. Build dedicated facility**
- 2. Retrofit (convert and refurbish) existing facilities**
- 3. Other**

#### **Other Evaluations:**

- 1. Regulatory authority**
- 2. Changing RW WAC**

#### **Plan <sup>1</sup>**

<b>CD-0</b>	<b>Approve Mission Need</b>	<b>2007</b>
<b>CD-1A</b>	<b>Alternatives Selection</b>	<b>2009</b>
<b>CD-1</b>	<b>Project Engineering and Design Authorization</b>	<b>2013</b>
<b>CD-2</b>	<b>Performance Baseline</b>	<b>2015</b>
<b>CD-3</b>	<b>Construction Start</b>	<b>2016</b>
<b>CD-4</b>	<b>Start Operations</b>	<b>2019 <sup>2</sup></b>

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<sup>1</sup> Schedule logic based on *Cost Analysis for CD-1, SNF Dry Storage Project*; C/P/E Environmental Services, LLC; February 2007.

<sup>2</sup> Conflicts with current planning.

## **V. The Future**

### **1. Projected Accomplishments**

- DOE-ID initiates SNF returns to NRF on 03/15/08.**
- EM/HQ selects SNF management option in CD-1A in FY09.**
- Empty CPP-666 by 09/30/2012.  
[EM-owned SNF out by 09/30/09.]**
- INL initiates SNF transfer with shipment to SRS in FY10.**

# **V. The Future**

## **2. Needs**

- EM/HQ to determine if sodium-bonded SNF should be treated.**
- EM/HQ to determine if epoxied SNF should be treated.**
- EM/HQ to determine project priority (funding) for the SRS/INL SNF swap.**
- EM/HQ to determine new complex-wide SNF program path forward.**

# **VI. Program Status and Risk**

## **Status**

- **All SNF EA milestones completed on time or early.**

## **Vulnerabilities**

- **Last vulnerability under DNFSB 94-1 to be remedied by 12/31/00. Completed 04/28/00.**
- **Current risk to public, workers, and environment – low. Fuels are well managed.**

## **Future Risk**

- **Long term funding impacts uncertain.**
- **Repository operational date uncertain.**
- **Receipt of off-site SNF can be impacted by SA compliance.**
- **EM focus and determinations.**