Decommissioning Principles

Safety
Stewardship
Engagement

For more information on SONGS visit www.SONGScommunity.com
## NRC Submittal Status

<table>
<thead>
<tr>
<th>Item</th>
<th>Submittal Status</th>
<th>Approval Status</th>
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<tbody>
<tr>
<td>License Amendment Request Extend Cyber Security Program Milestone 8</td>
<td>Submitted June 16, 2016</td>
<td>Approved January 23, 2017</td>
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<tr>
<td>Exemption* Request Offsite Insurance</td>
<td>Submitted September 2015</td>
<td>Forecast 2Q 2017</td>
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<tr>
<td>Exemption* Request Onsite Insurance</td>
<td>Submitted October 2015</td>
<td>Forecast 2Q 2017</td>
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<tr>
<td>ISFSI Only License Amendment Request Tech Specs, Emergency Plan, Security Plan</td>
<td>Submitted December 2016</td>
<td>Forecast 2Q 2018</td>
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*Exemption is how the NRC currently handles a change in the regulatory status for decommissioning plants*
SITE ACTIVITIES UPDATE
ISFSI Project Expansion
ISFSI Design
Pad Construction
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) UPDATE
Environmental Impact Report (EIR) and Coastal Development Permit (CDP) Processes

**California State Lands Commission**

1. NOP → Scoping Period → Draft EIR Preparation → Draft EIR Meetings → Draft EIR Public Review Period → Final EIR Preparation → EIR Certification and Lease Decision → Public Hearing

**California Coastal Commission**

1. SCE Submit CDP Application → Prepare Staff Report → Public Hearing → Notice of Decision (NOD)

**Timeline**
- **JULY 2016**
- **2Q/3Q 2017**
- **3Q/4Q 2017**
- **1Q 2018**
SONGS Decommissioning Solutions

- SONGS Decommissioning Solutions (SDS) selected as DGC (joint venture of AECOM and Energy Solutions)
- Contract effective January 2017
- SDS staff mobilized to site
- Currently planning work
- Physical work to start in 2018
- Project duration 8 to 10 years
Addressing Questions

Tom Palmisano
Vice President Decommissioning & Chief Nuclear Officer
USED FUEL
Used Fuel Storage

CURRENT STATE

Spent Fuel Pools
2668 fuel assemblies

Existing ISFSI
50 canisters (1187 fuel assemblies)

EXPANDED ISFSI

73 canisters (2668 fuel assemblies) + existing 50 canisters (1187 fuel assemblies)

FUTURE STATE

To DOE: 3855 fuel assemblies in ~123 canisters
AREVA ISFSI Capacity Constraints

• Existing AREVA ISFSI has space for 93 modules
• 50 modules currently loaded with spent fuel, 1 with “Greater than Class C” (GTCC) waste from Unit 1
• 12 empty modules on the ISFSI scheduled to be used for Unit 2 & 3 GTCC
• Space available for 30 additional modules
• Insufficient capacity to empty either the Unit 2 or Unit 3 spent fuel pools
Holtec ISFSI

• Evaluation Process
  – Competitive bid process
  – Leading vendors in the industry
  – Demonstrated experience
  – NRC approved design

• 33 sites in the U.S. have the Holtec system in place, including:
  • Calloway
  • Humboldt Bay
  • Diablo Canyon
USED FUEL TRANSPORTATION
Fuel Readiness for Transportation

- Transfer estimated at 10 years from start to finish
- Some fuel qualified for transport now
- Other fuel qualifies over time

<table>
<thead>
<tr>
<th>Year</th>
<th>Units 2/3 Dry</th>
<th>Unit 1 Dry</th>
<th>Units 2/3 Wet</th>
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<tbody>
<tr>
<td>’15</td>
<td>33 CANISTERS</td>
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73 CANISTERS
Preliminary Timing
Rail Capacity

Main generator rotor shipped from San Onofre on a 12-axle rail car rated for 750,000 lbs. (375 tons)

Rotor weight 437,000 lbs. (218 tons)
Load Comparison

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight (LBS.)</th>
<th>Approximate Weight of Fuel*</th>
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<tbody>
<tr>
<td>Main Generator Rotor</td>
<td>437,000 (218 tons)</td>
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<tr>
<td>Holtec HI-STAR 190 with SONGS Fuel*</td>
<td>370,000 (185 tons)</td>
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<tr>
<td>AREVA MP197HB with SONGS Fuel*</td>
<td>282,000 (141 tons)</td>
<td></td>
</tr>
<tr>
<td>AREVA MP187 with SONGS Fuel*</td>
<td>282,000 (141 tons)</td>
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</table>

*Approximate weight of fully loaded San Onofre used fuel transportation cask shipment
Existing Railcar
U.S. Navy M-290

M-290 system 520,000 lbs. (260 tons) loaded
DOE Conceptual Design: Atlas Railcar

- The Atlas railcar conceptual design has 12 axles.
- The railcar has the same axles and trucks as the Navy’s M-290 design.
- The railcar will fit through AAR’s clearance Plate E.
- The Phase 1 Final Report and all drawings are available at: [https://curie.ornl.gov](https://curie.ornl.gov). Click on the “Search” tab and then enter “atlas railcar” in the search box.
DOE Concept Rail Car

- Awarded $8.63 million contract to AREVA Federal Services on August 2015
- For development of cask and buffer railcars
- Design specifications will accommodate SONGS canisters
BENEFITS OF CEP FEEDBACK
CEP-Inspired Initiatives

- Funding for off-site emergency responders
- Heightened focus on used fuel defense in depth
- Canister fabrication to address corrosion
- Plant tours open to the public
- Partnering to:
  - Advance legislation to enable off-site fuel storage
  - Accelerate state-level transportation planning

Thank you!