





Introducing **AREVA Nuclear Materials, LLC**

Vermont Yankee NDCAP Meeting, June 22, 2017



New global structure forms competitive independent company

New AREVA (global)

AREVA Nuclear Materials (U.S.)

Uranium Mining



Uranium Enrichment



Uranium Sales



RadWaste Storage & Transportation



Decommissioning & Dismantling



Federal Services



Nuclear Medicine



Fuel Recycling



us.areva.com/ANM

AREVA has strong financial and market positions

Key Figures as of 12/31/16

€31.8 B
Backlog

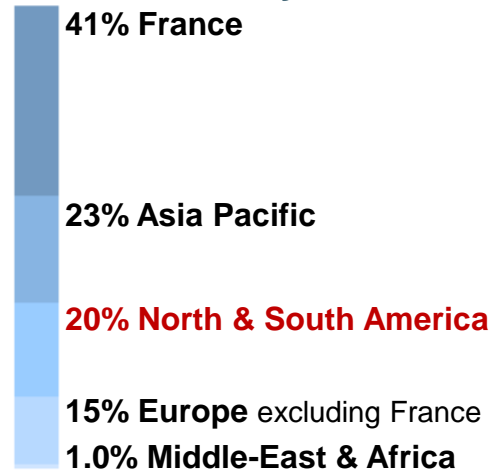
€4 B
Revenue

20,000
Employees in
the world

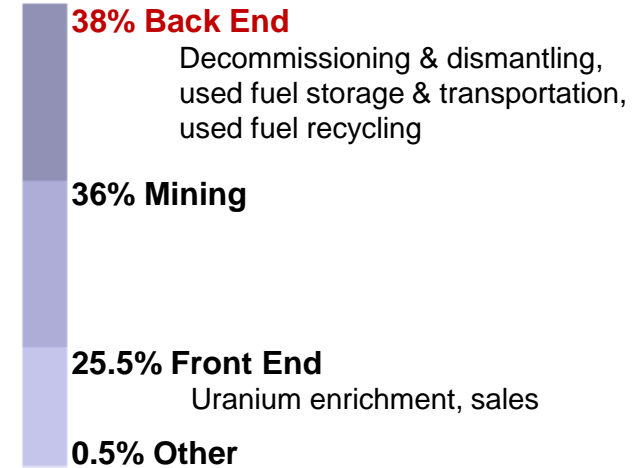
TOP 3
Worldwide
in all
activities

New AREVA (global)

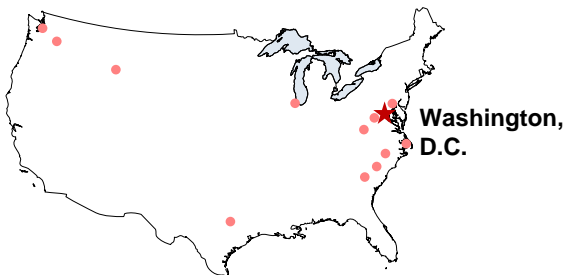
2016 revenue by market



2016 revenue by operations



AREVA Nuclear Materials (U.S.)



- \$900 million in 2016 sales from U.S. activities
- 600 U.S. employees
- 20+ years U.S. experience reactor decommissioning & dismantling
- U.S. market leader in used fuel storage systems

Vermont Yankee decommissioning uses experts for each stage

NorthStar project mgr

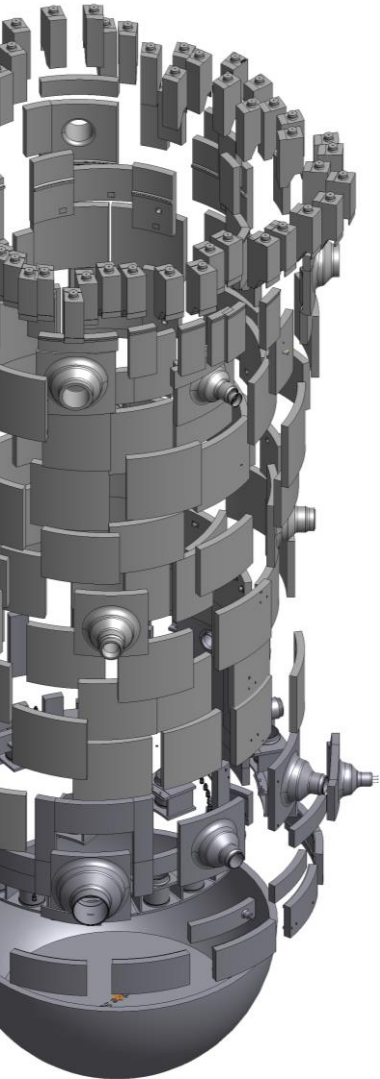
1. Engineering & License Support – Burns McDonnell
2. License Transfer / Termination – NorthStar
3. Decontamination – NorthStar
4. Vessel & Internals Segmentation – AREVA
5. Radwaste Packaging & Transport – AREVA
6. Demolition – NorthStar
7. Demo Waste Packaging & Transport – WCS
8. Radwaste Storage – WCS
9. Site Restoration – NorthStar
10. Used Fuel Storage Aging Management – AREVA

Fixed Price Contracts

AREVA performance and project costs are defined for each activity before work begins.

Any project expense exceeding the fixed price contract is carried by AREVA.

AREVA brings knowledge and experience across all functions



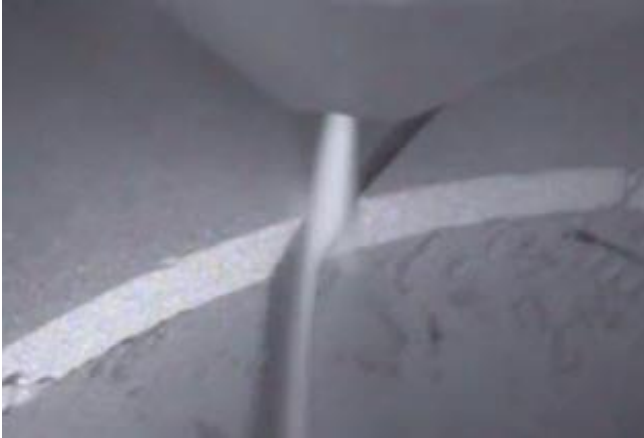
AREVA Decommissioning Experience

| Nuclear Reactor | Type | Size | Segmentation | Packaging | Dismantling | Waste Mgmt |
|------------------------|-------------|-------------|---------------------|------------------|--------------------|-------------------|
| Connecticut Yankee | PWR | 619 MWe | X | | X | X |
| Maine Yankee | PWR | 900 MWe | X | X | | X |
| Millstone 1 | BWR | 660 MWe | X | X | X | X |
| Rancho Seco | PWR | 918 MWe | X | X | | X |
| Stade | PWR | 640 MWe | X | X | X | |
| Wuergassen | BWR | 640 MWe | X | X | X | |
| Yankee Rowe | PWR | 180 MWe | X | | X | X |
| Vermont Yankee | BWR | 620 MWe | X | X | X | X |

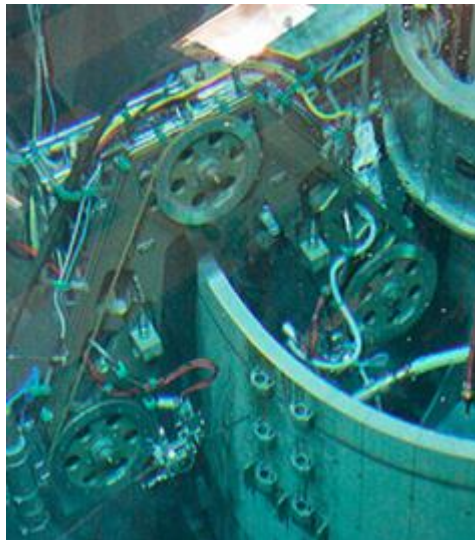
us.areva.com/DecomVY

AREVA segmentation and dismantling technology is effective and exact

Abrasive water jet slicing metal part



Cut pieces in waste storage container



Underwater band saw



Dismantling mixed oxide production facility

Potential 66% reduction in number of RadWaste canisters

Globally, AREVA manages **more than 3,000 shipments** of radioactive materials every year by road, rail and sea.

At Vermont Yankee, using two nested containers:

RadWaste Storage

RadWaste canister (RWC)

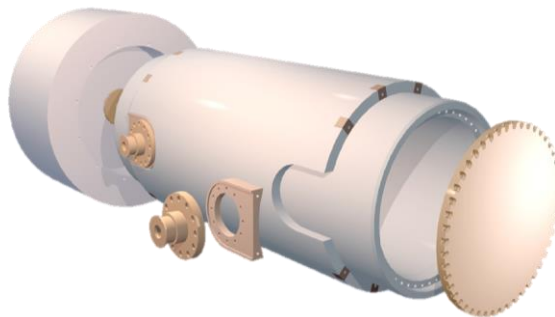
- Use of larger RadWaste canisters to minimize transportation and disposal volumes
- Loaded per a packaging plan based on all disposal and transportation regulatory requirements



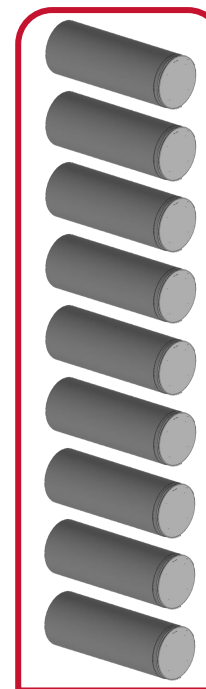
RadWaste Transport

NUHOMS® MP197HB transport cask

- NRC-licensed for rail, truck or marine transport
- Includes containment boundary, structural shell, gamma shielding material, solid neutron shield



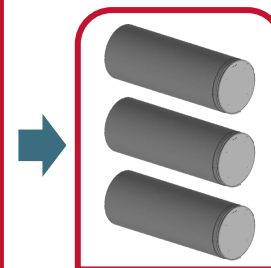
VY RadWaste Transportation



Current expectation

 = 10 Waste Packages

Request to NRC for approval of revised, larger RWC designed to hold segmented vessel internals



Using revised radwaste canister

More than 50 years' U.S. experience managing and storing used nuclear fuel

AREVA will apply expertise from decades of experience to conduct the Independent Spent Fuel Storage Installation (ISFSI) **aging management program**.



Dry casks have thick shielding to protect workers and the public from radiation

Image: NRC

- Ensures secure storage until U.S. Department of Energy (DOE) takes ownership and transports offsite
- Inspects dry cask storage system at regular intervals to address any aging concerns
- Monitors steel canister surface, stored used fuel condition, concrete overpack, ISFSI pad
- Nuclear Regulatory Commission (NRC): Used nuclear fuel can be maintained in dry storage safely and without significant environmental impact

Video: AREVA BWR segmentation and dismantling technology

Videos posted on our decommissioning webpage: us.aveva.com/Decom

For Vermont Yankee decommissioning information: us.aveva.com/DecomVY

