Westinghouse Columbia Fuel Fabrication Facility
April 2016 Update

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Westinghouse

Nuclear Safety Culture is part of our DNA

NUCLEAR SAFETY CULTURE is defined as the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment.

Westinghouse Traits

Leadership Safety Values and Actions Leaders demonstrate a commitment to safety in their decisions and behaviors.	**Problem Identification and Resolution** Issues potentially impacting safety are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.	**Personal Accountability** All individuals take personal responsibility for safety.
Decision-Making Decisions that support or affect nuclear safety are systemic, rigorous, and thorough.	**Continuous Learning** Opportunities to learn about ways to ensure safety are sought out and implemented.	**Environment for Raising Concerns** A safety-conscious work environment (SCWE) is maintained where personnel feel free to raise safety concerns without fear of retaliation, intimidation, harassment, or discrimination.
Work Processes The process of planning and controlling work activities is implemented so that safety is maintained.	**Respectful Work Environment** Trust and respect permeate the organization.	**Questioning Attitude** Individuals avoid complacency and continuously challenge existing conditions and activities in order to identify discrepancies that might result in error or inappropriate action.
Effective Safety Communication Communications maintain a focus on safety.		

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Our Priorities and Expectations are Safety, then Quality, then the rest

SAFETY

↳ ***QUALITY***

↳ ***DELIVERY & COST***

Strong Nuclear **Safety / Quality** Culture to convert NF&CM into a high-performing organization

↳

- ***ZERO events***
- ***ZERO escapes***

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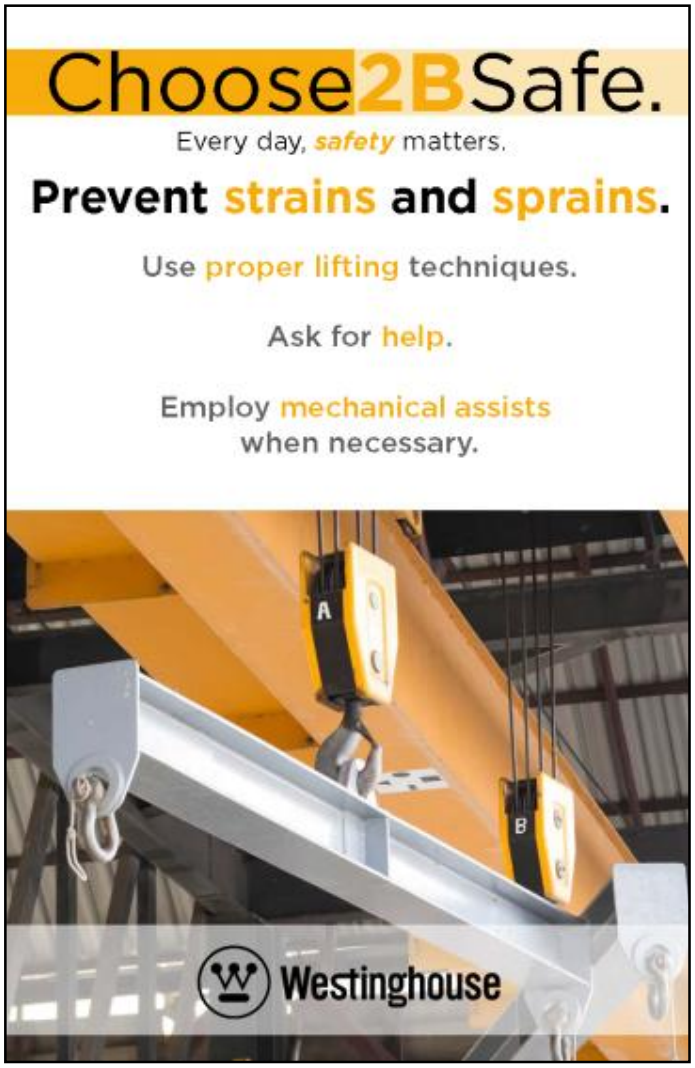
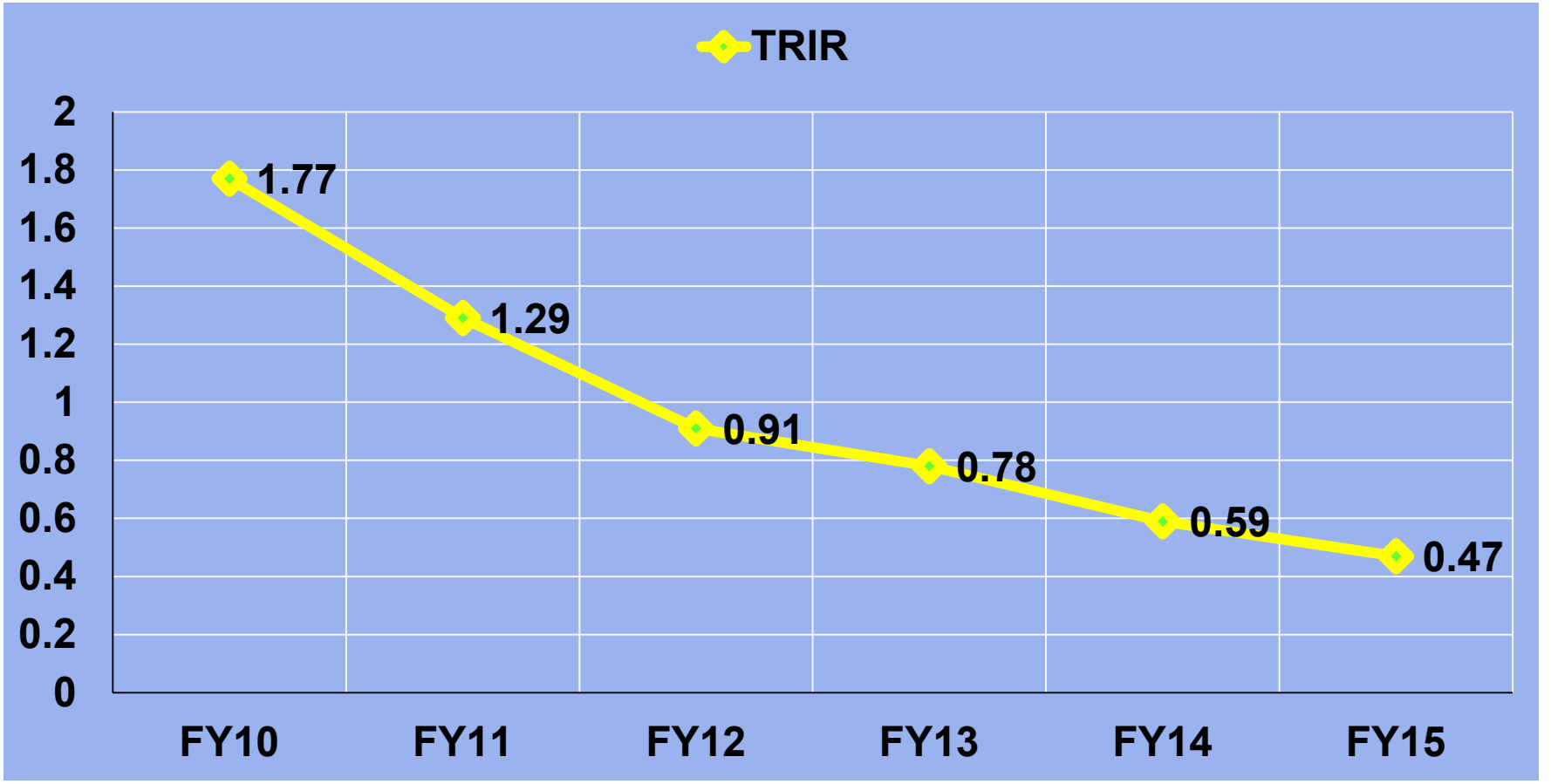


Industrial Safety
Performance continues to improve year after year



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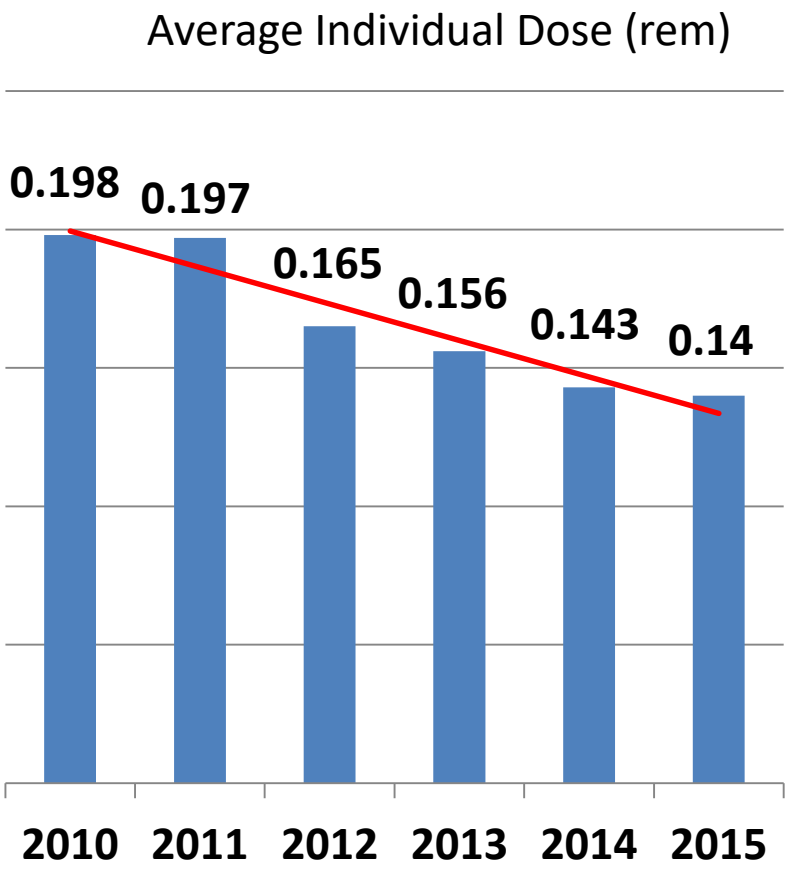
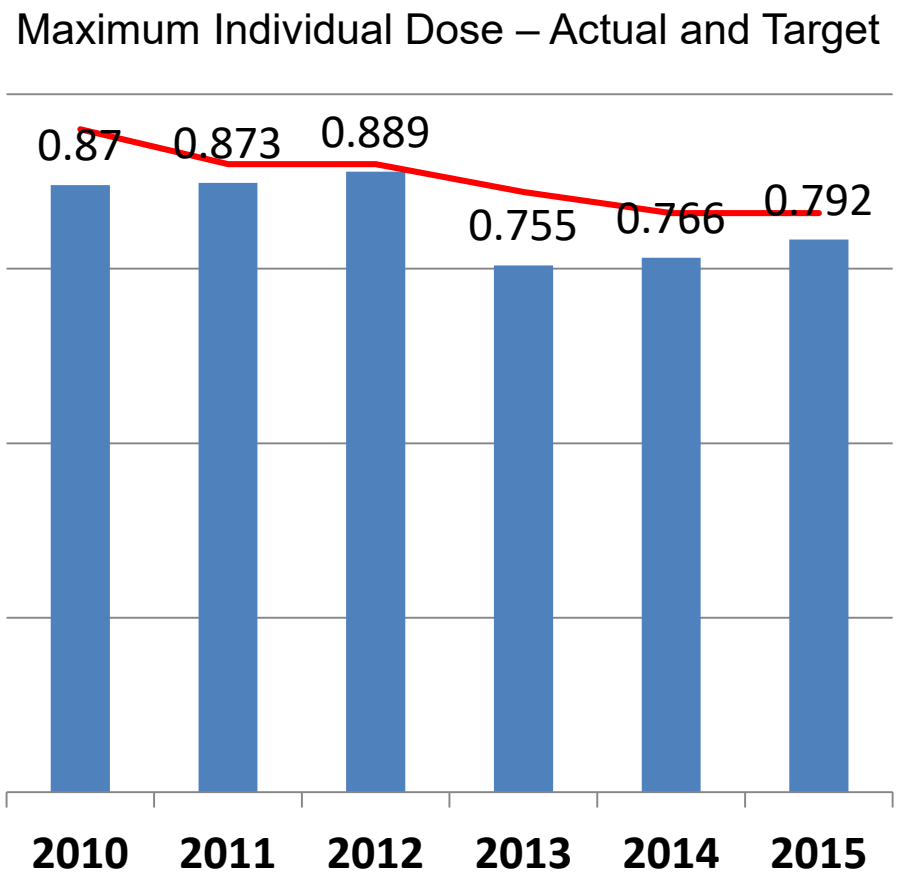
TRIR = Total Recordable Incident Rate
FY = Fiscal Year (starts April 1 and ends March 31)

Safety – ALARA
We actively drive down exposures



Employee exposure continues to decline due to ALARA program.



NRC limit for individual dose is 5 rem.

Westinghouse Organization

Operating Plants Business

Delivers operating plant products and services, including global field services, instrumentation and control, welding and machining, and installation-related functions

New Plants and Major Projects

Delivers both new-plant projects and major projects for new and operating plants on a global basis

Decommissioning, Decontamination and Remediation

Deploys global technologies and forms local partnerships to carry out long-term projects

Nuclear Fuel and Components Mfg.

Designs and delivers fuel for PWR, BWR, VVER and AGR reactors; manufactures fuel-handling equipment, cranes and nuclear components

Engineering Center of Excellence

Supports all product lines by driving common engineering capabilities and accelerating innovation

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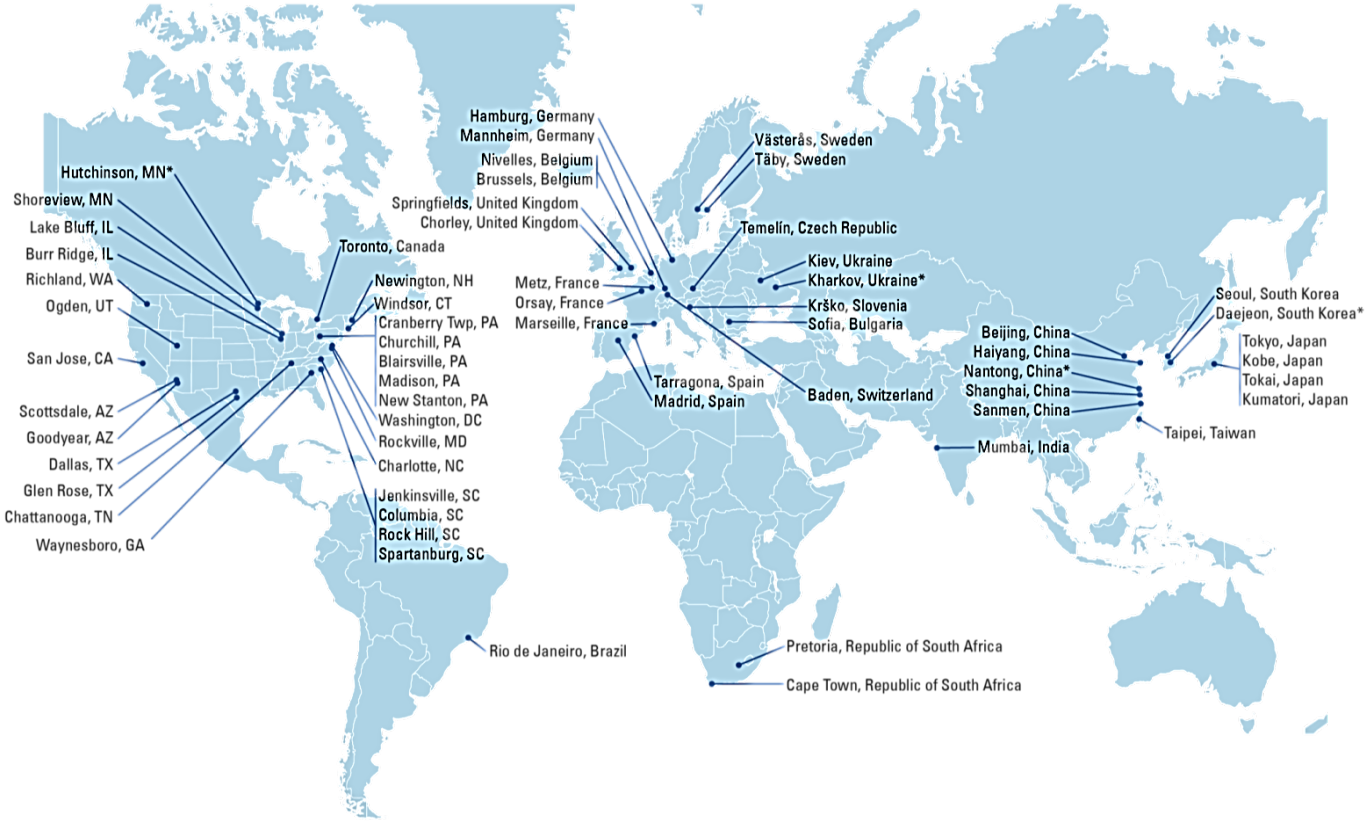
Westinghouse technology is the basis for nearly 50 percent of nuclear power plants operating worldwide!

Westinghouse Global Commitment

- Approximately 12,000 employees in 19 countries
- Focused solely on nuclear technology
- Original equipment manufacturer (OEM) for PWRs and BWRs
- Apply world-based operating experience (OE)



Global Technology with Local Execution

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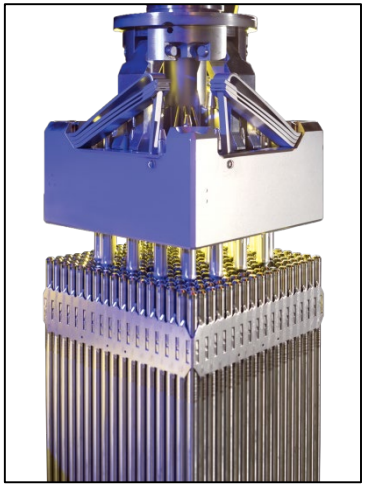
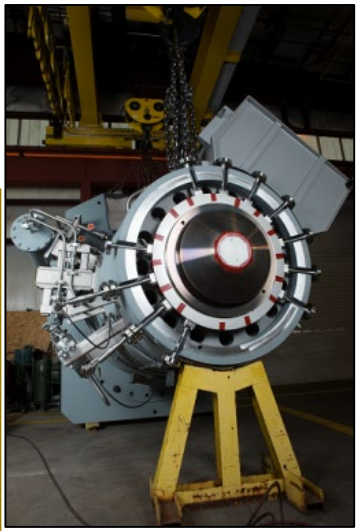
Nuclear Fuel and Components Manufacturing

- Manufacturing
  - Fuel
  - Fuel-handling equipment and cranes
  - Components
- Global Nuclear Supply Chain





SCM Supply Chain Management

Goal: single focus for Westinghouse manufacturing and supply chain; all pieces in lock step

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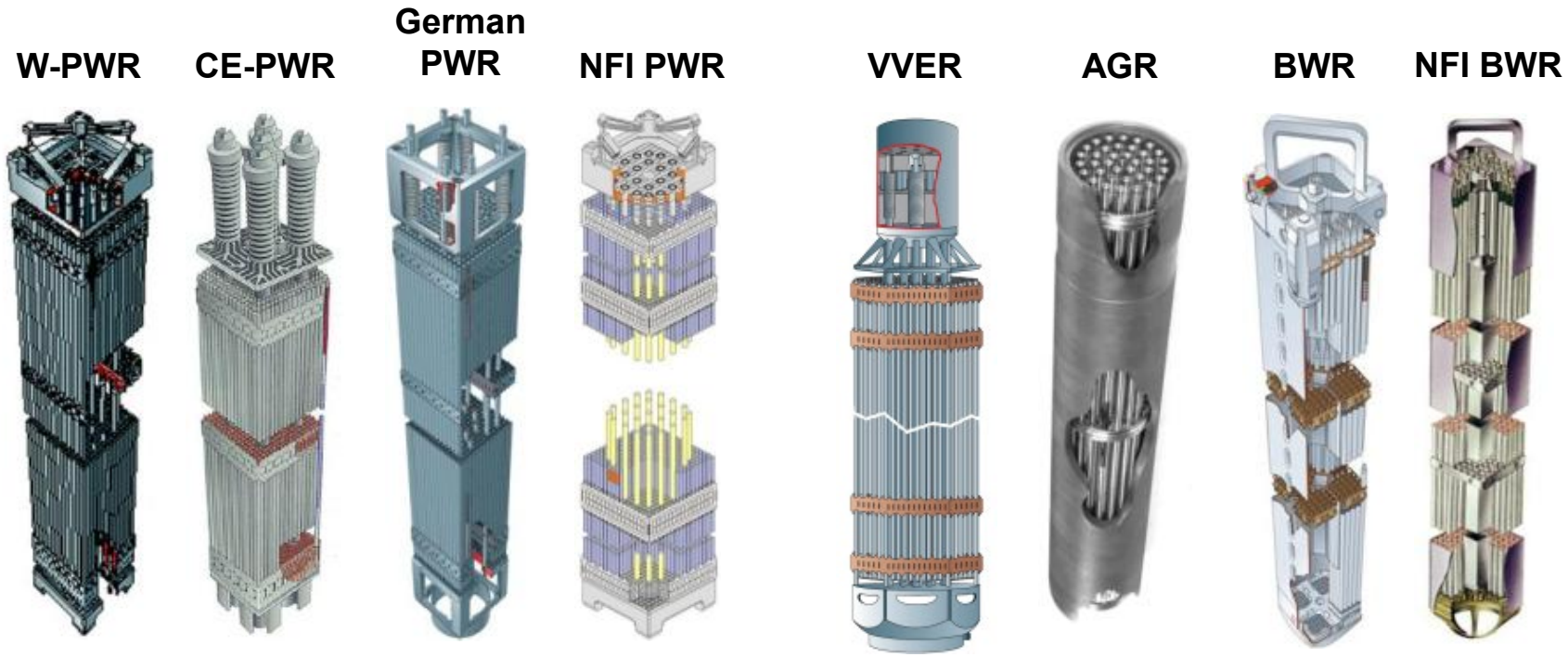
Nuclear Fuel Products

Westinghouse manufactures more types of fuel and components than any other supplier



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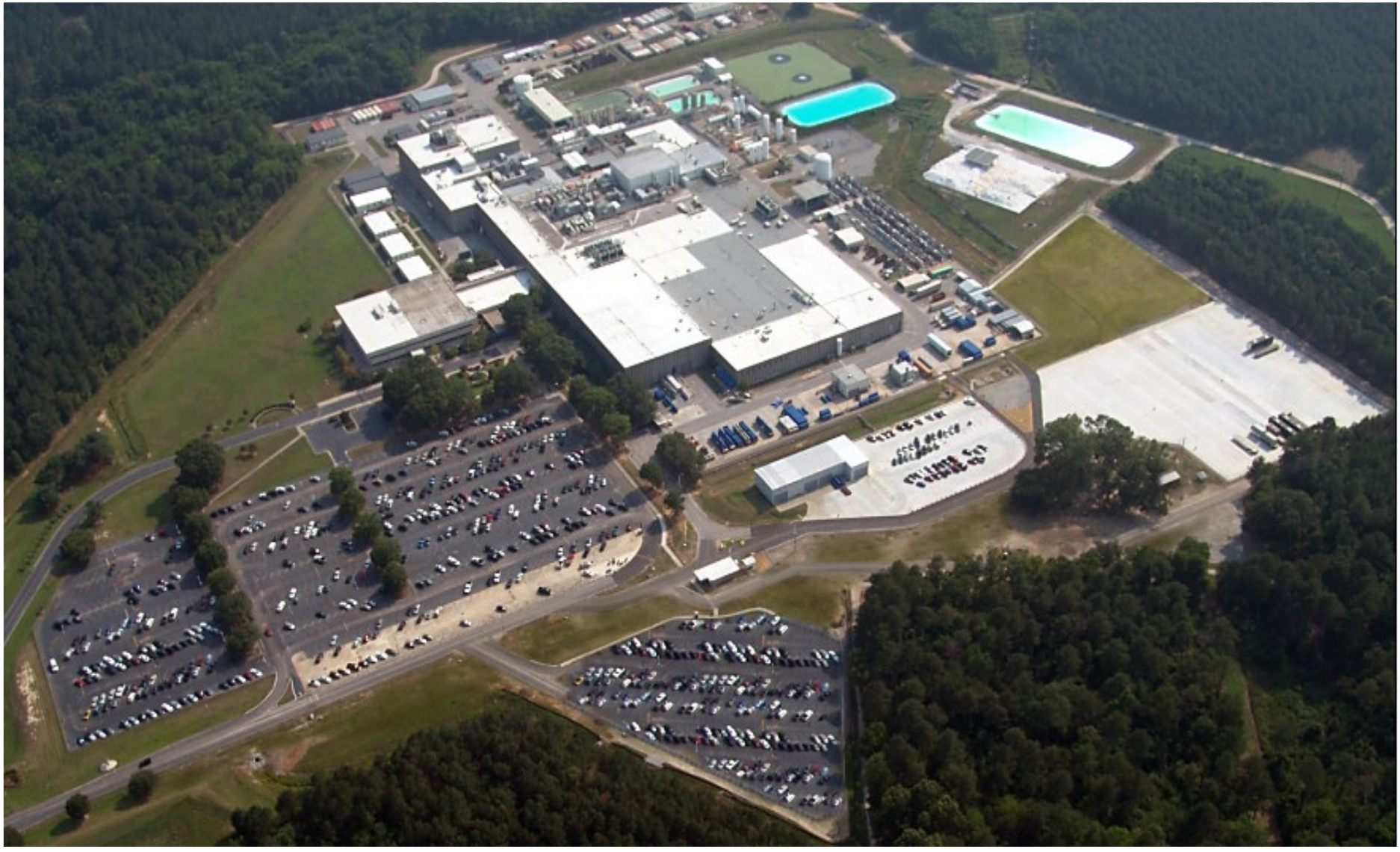
Columbia Plant



Columbia Plant Facts

- Opened in 1969
- 550,000 ft^2 facility
- 1156 acre site
- Approximately 1200 people; 900 in the plant
- Over $100 million of annual compensation
- Shipped all fuel assemblies for 3 of 4 new AP1000 China Plants and will build fuel assemblies for plants under construction in SC and GA
- Built first ever Small Modular Reactor Assembly

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Columbia Plant Facts

- ISO 9001 certified
- ISO 14001 certified
- Over 10% of electricity generated in the US and 50% of South Carolina's comes from nuclear fuel made at our plant
- Approximately 30% of clean energy produced in US comes from our fuel!

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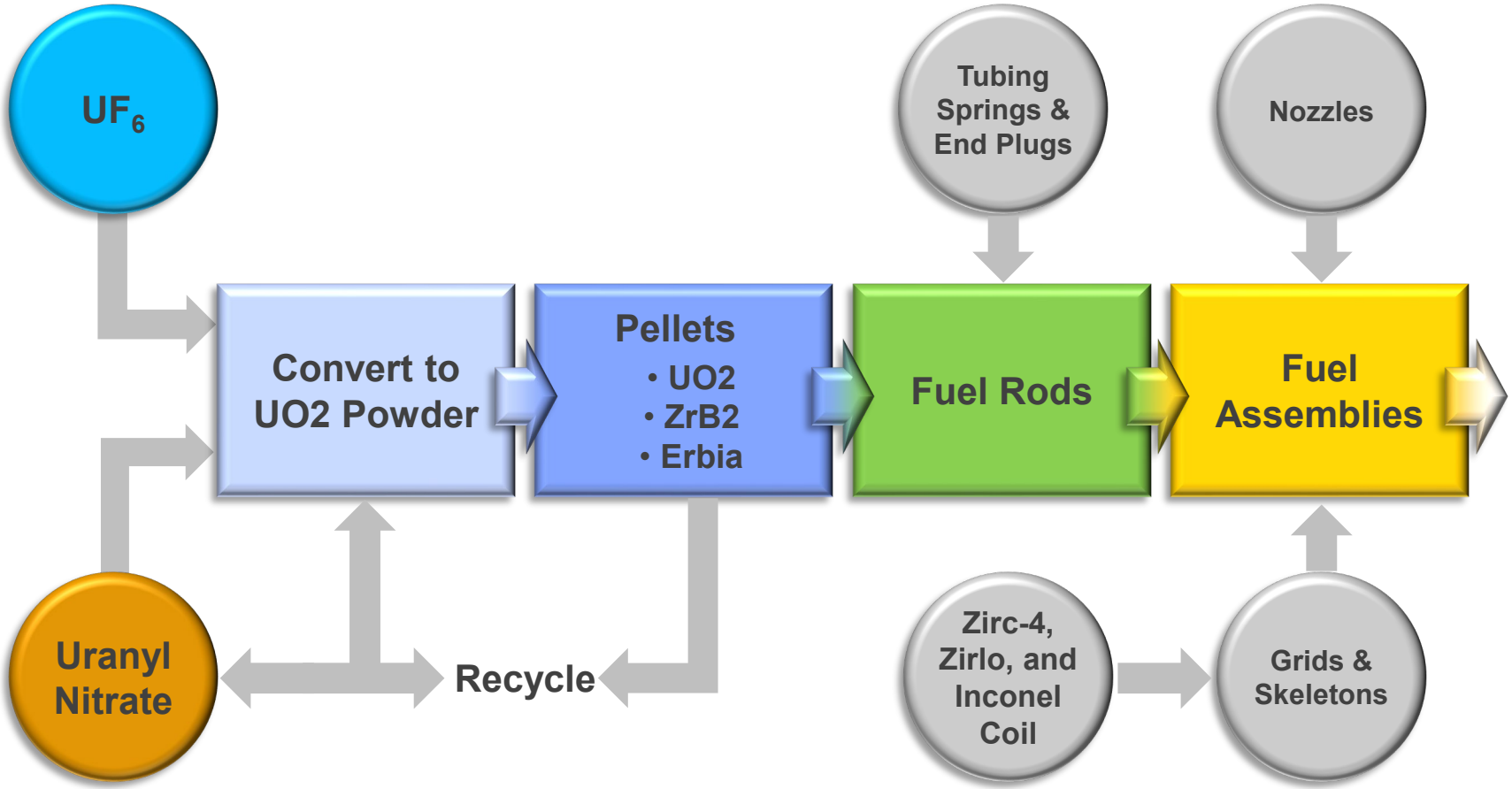
Columbia Plant
Fuel Fabrication Process



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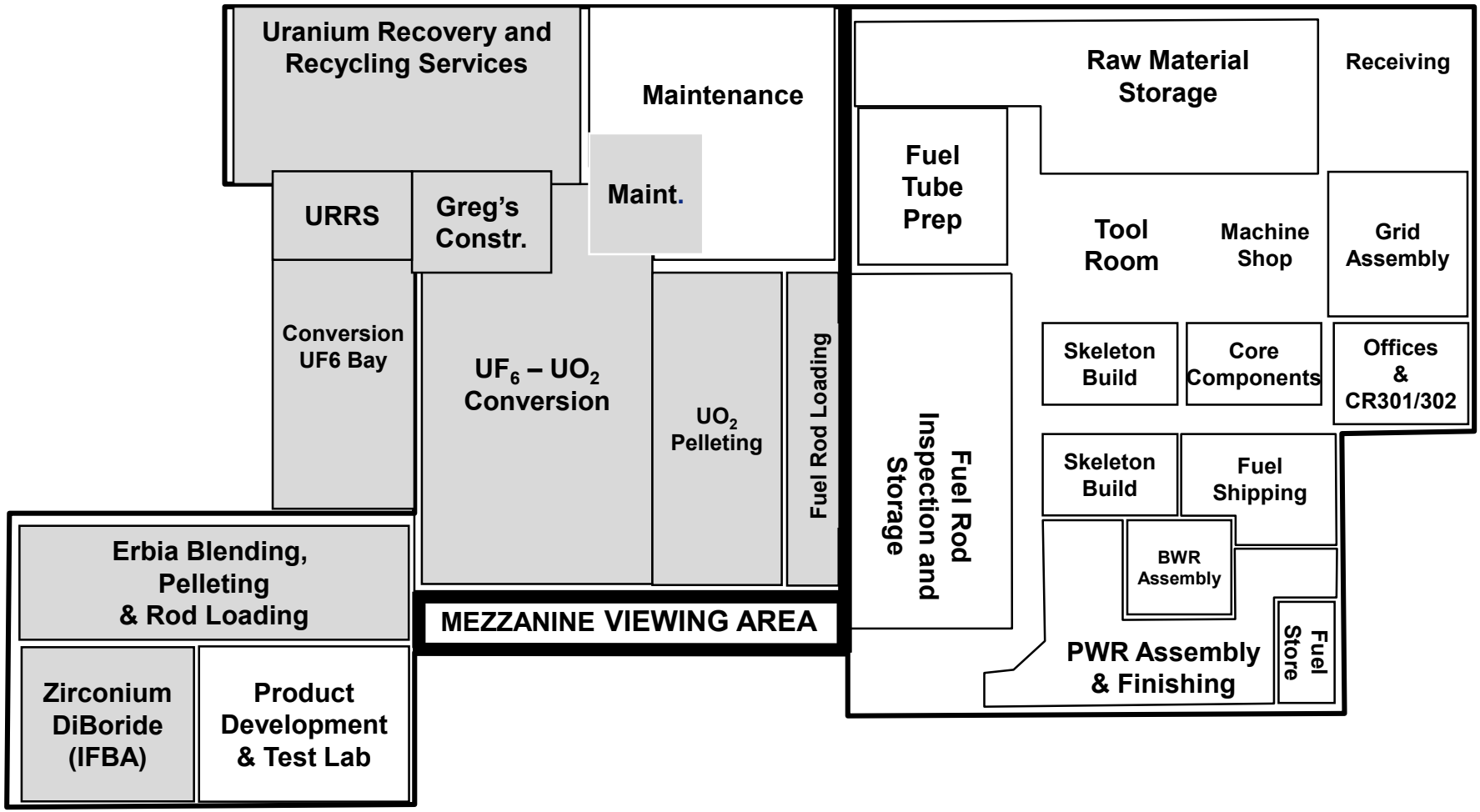
Columbia Plant Layout
Ground Floor Walkthrough



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Pictures of Columbia Plant

AP1000 – This is the full core of fuel for the Haiyang 1 plant in China

AP1000 – Pictures of unpacking and inspecting the Haiyang 1 fuel

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Social Responsibility – We recognize the value and are active in this area, too

- Good relations with local and state officials
- Security and Emergency Preparedness staff train extensively with local first responders - both fire and law enforcement – some examples:
  - Multi-Assault Counterterrorism Action Capabilities (MACTAC) program
  - Taught “Active Shooter Detection, Mitigation and Response” seminar and sponsored the event through the American Society for Industrial Security (ASIS)
  - Industrial Emergency Response Specialists
  - Initiated statewide group for industrial emergency preparedness to promote sharing of best practices, lessons learned and training opportunities
- Westinghouse is active in the local community
  - Wildlife and Industry Together, Mill Creek Elementary School, United Way, Adopt A Highway, Adopt A Waterway, Girls In Science, Women In Nuclear, NA-Young Generation of Nuclear (NAYGN), Governor’s School for Math and Science, many service projects, etc.)

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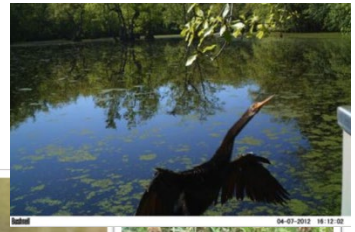
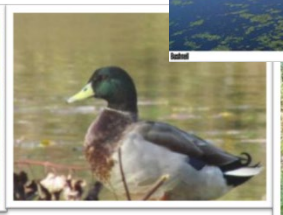
Social Responsibility – Some examples

WAIT – Earth Day Celebration

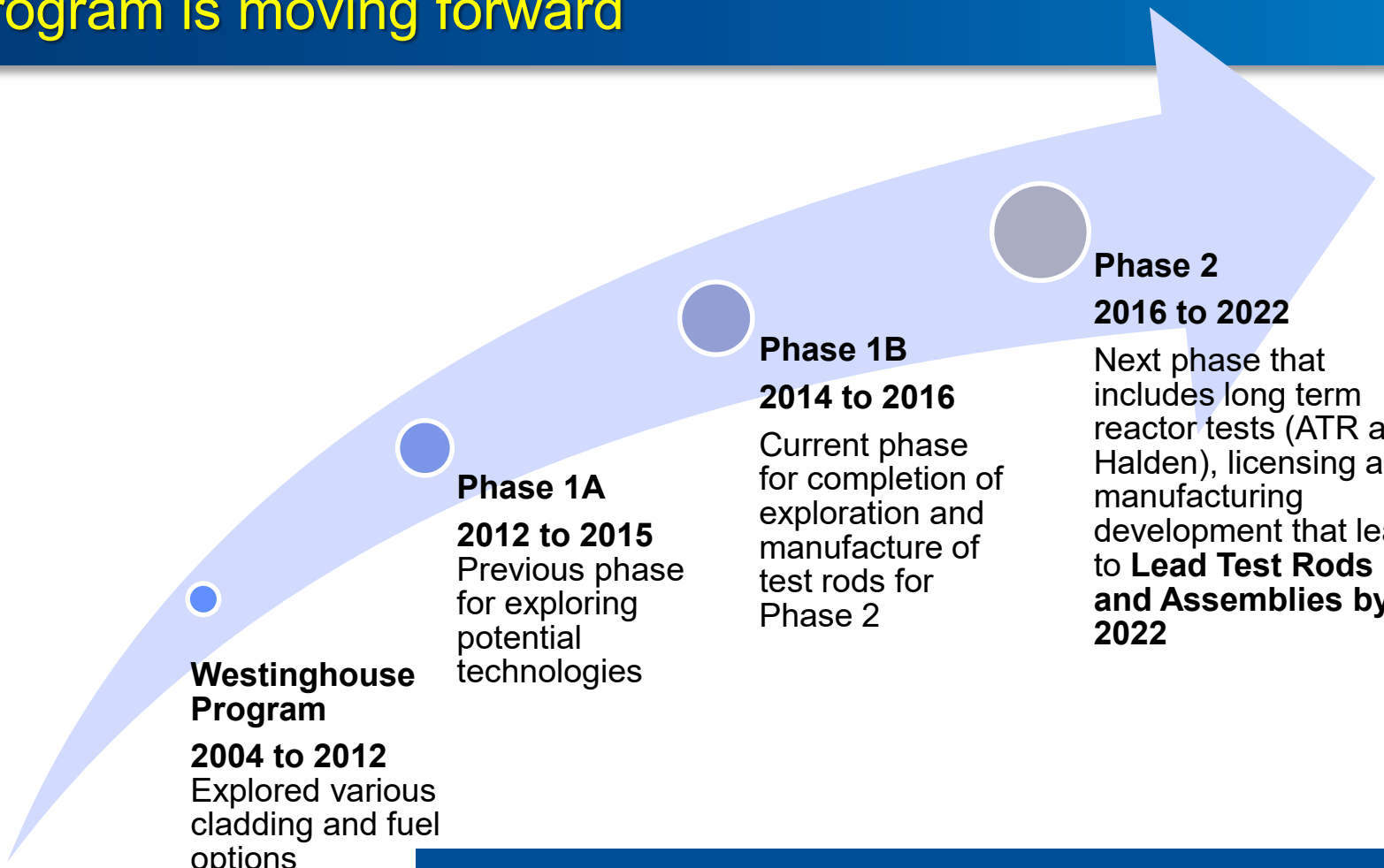
Adopt-a-Waterway

WAIT project with Mill Creek 5th graders





The Westinghouse and DOE Accident Tolerant Fuel (ATF) program is moving forward



Westinghouse Program

2004 to 2012
Explored various cladding and fuel options

Phase 1A

2012 to 2015
Previous phase for exploring potential technologies

Phase 1B

2014 to 2016

Current phase for completion of exploration and manufacture of test rods for Phase 2

Phase 2

2016 to 2022

Next phase that includes long term reactor tests (ATR and Halden), licensing and manufacturing development that lead to **Lead Test Rods and Assemblies by 2022**

Given the importance of ATF to the nuclear industry, Westinghouse has significantly accelerated its ATF program

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The 100,000th Fuel Assembly made at our plant

- We continue to drive for improved safety performance for our workers and for the environment
- We have provided fuel for electricity to supply the entire US for about 4 years
- To our knowledge, we have provided the most clean energy of anyone, ever

- And we still have a bright future!

Questions?