

Overview of the Draft Report of the Blue Ribbon Commission on America's Nuclear Future

September 2011



Origins and Purpose

- Blue Ribbon Commission on America's Nuclear Future established by the President's Memorandum for the Secretary of Energy January 29, 2010
- Conduct a comprehensive review of policies for managing the back end of the nuclear fuel cycle and recommend a new strategy
- Deliver recommendations to the Secretary of Energy January 29, 2012



Members

- **Lee Hamilton**, Co-Chair - Director of The Center on Congress at Indiana University, former Member of Congress (D-IN)
- **Brent Scowcroft**, Co-Chair – President, The Scowcroft Group, and former National Security Advisor to Presidents Gerald Ford and George H.W. Bush
- **Mark Ayers**, President, Building and Construction Trades Department, AFL-CIO
- **Vicky Bailey**, Former Commissioner, Federal Energy Regulatory Commission; Former Indiana PUC Commissioner; Former DOE Assistant Secretary for Policy and International Affairs
- **Albert Carnesale**, Chancellor Emeritus and Professor, UCLA
- **Pete V. Domenici**, Senior Fellow, Bipartisan Policy Center; former U.S. Senator (R-NM)
- **Susan Eisenhower**, President, Eisenhower Group, Inc.

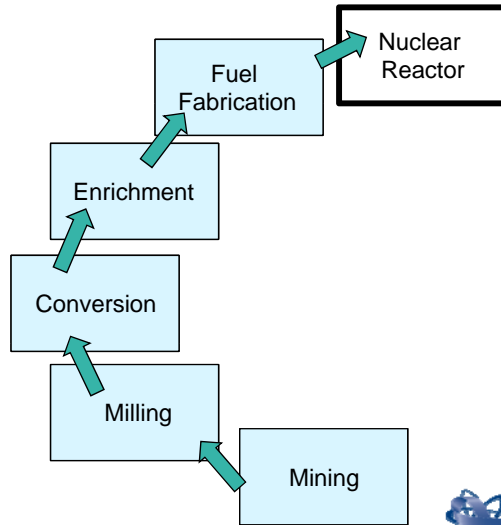


Members

- **Chuck Hagel**, Distinguished Professor at Georgetown University, Former U.S. Senator (R-NE)
- **Jonathan Lash**, President, Hampshire College; former President, World Resources Institute
- **Allison Macfarlane**, Assoc. Professor of Environmental Science and Policy, George Mason Univ.
- **Richard A. Meserve**, President, Carnegie Institution for Science, and former Chairman, U.S. NRC
- **Ernie Moniz**, Professor of Physics and Cecil & Ida Green Distinguished Professor, MIT
- **Per Peterson**, Professor and Chair, Dept. of Nuclear Engineering, Univ. of California – Berkeley
- **John Rowe**, Chairman and Chief Executive Officer, Exelon Corporation
- **Phil Sharp**, President, Resources for the Future; former Member of Congress (D-IN)



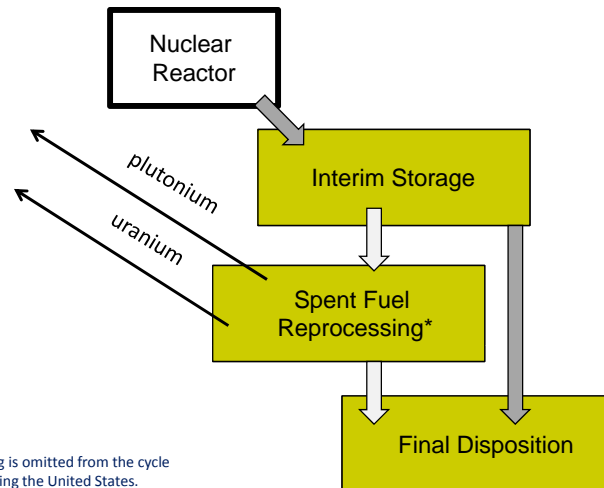
Background – Nuclear Fuel Cycle Front End of Cycle



http://www.eia.doe.gov/cneaf/nuclear/page/images/intro_fig1.jpg



Nuclear Fuel Cycle Back End of Cycle



*Spent Fuel Reprocessing is omitted from the cycle in most countries, including the United States.

http://www.eia.doe.gov/cneaf/nuclear/page/images/intro_fig1.jpg



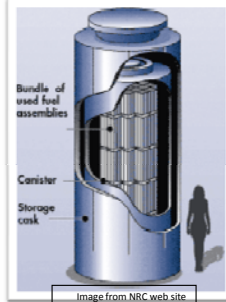
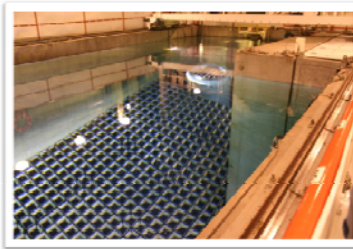
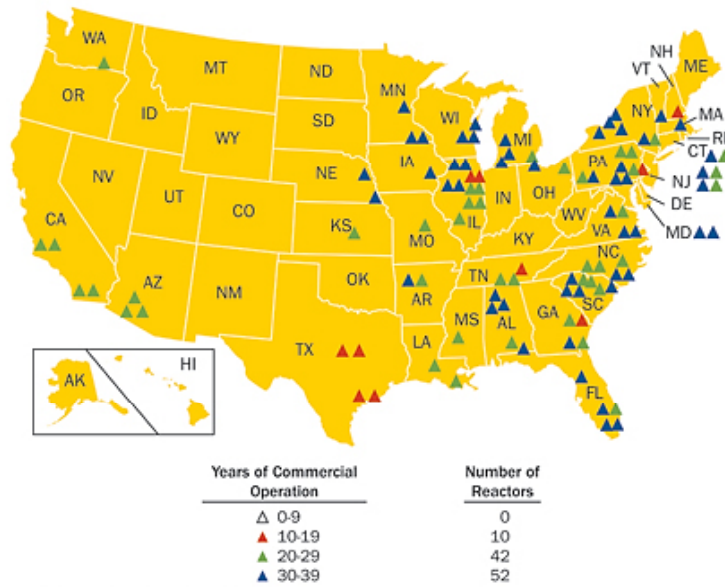


Image from NRC web site

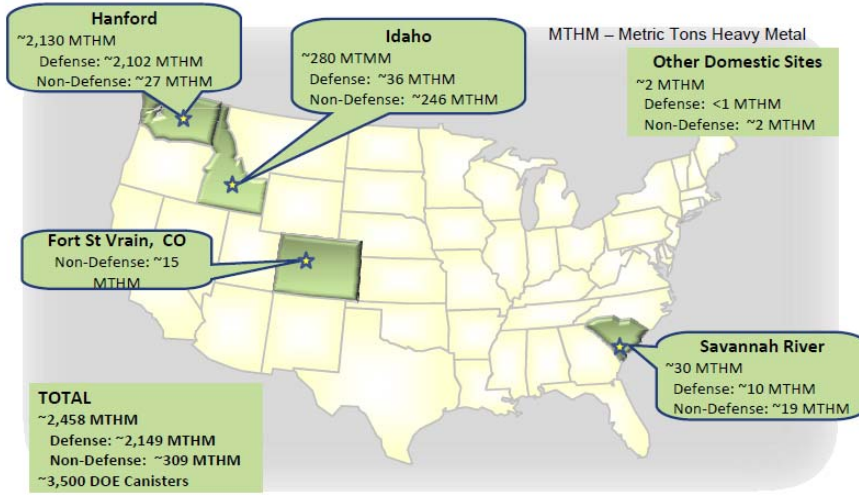
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U.S. Commercial Nuclear Power Reactors—Years of Operation



Source: U.S. Nuclear Regulatory Commission

Current **DOE SNF** Inventory (2010)



EM Environmental Management

safety ♦ performance ♦ cleanup ♦ closure

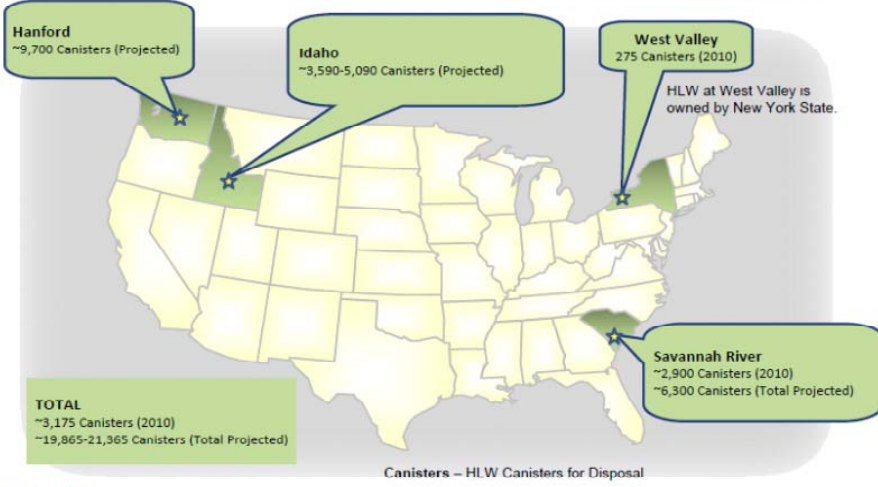
www.em.doe.gov

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Source: UK Nuclear Decommissioning Authority website – see <http://www.nda.gov.uk/ukinventory/waste/waste-now-hlw.cfm>

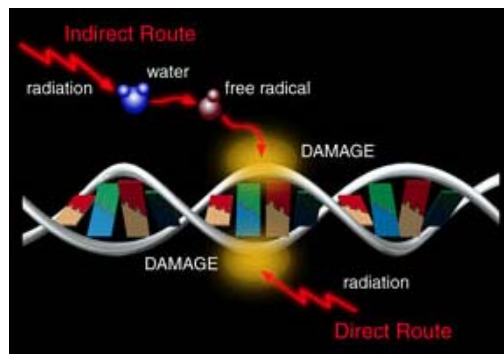
2010 DOE HLW Inventory

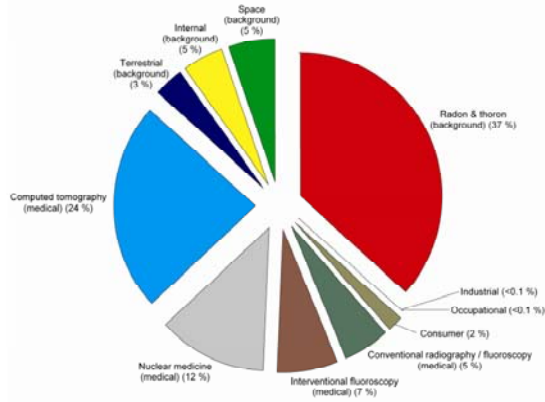


EM Environmental Management
safety ♦ performance ♦ cleanup ♦ closure

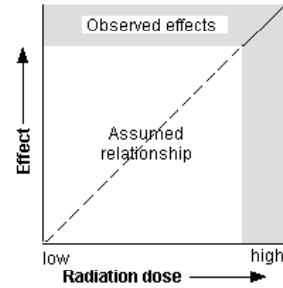
www.em.doe.gov

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The linear hypothesis



The average American receives about 620 mrem of radiation per year (source: NCRP); observed effects occur at levels of 10-20 rem and above

Activities to Date 2010

- **Full Commission meetings/Commissioner site visits:**
 - **March** – Where are we and how did we get here?
 - **May** – Getting the issues on the table; three subcommittees formed – Reactor & Fuel Cycle Technology; Transportation & Storage; Disposal
 - **July** – Hanford visit: a community’s perspective
 - **September** – Crosscutting issues: governance, siting, international implications, ethical & societal foundations
 - **October** – Visits to Sweden and Finland
 - **November** – International perspectives, working with the states, expert advice

Activities to Date 2011

- **Full Commission meetings/Commissioner site visits:**
 - **January** – Visits to SC/GA (Savannah River) and NM (WIPP)
 - **February** - Visits to Japan, Russia and France; meeting on crosscutting issues: organizational form and scope, siting, financial considerations
 - **March** – Issued staff-developed report on “What We’ve Heard”
 - **May** – NRC/DOE reviews post-Fukushima; discussion of draft subcommittee recommendations to the full Commission
 - **June** – Visits to UK, France; draft subcommittee reports issued
 - **July** – Draft report submitted to Secretary of Energy; public comment period begins



Draft Report – Overview of 7 Key Recommendations

1. A new approach to siting and development

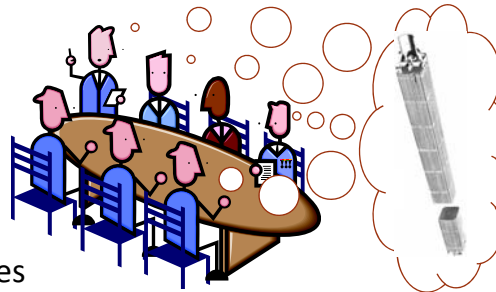
- Adaptive
- Staged
- Consent-based
- Transparent
- Standards-and science-based



Draft Report – Overview of 7 Key Recommendations

2. A new, single-purpose organization focused on nuclear waste in the United States

- Transportation
- Storage
- Disposal
- Congressional oversight, BOD
- \$ for defense wastes



Draft Report – Overview of 7 Key Recommendations

3. Have assured access to funding

- Near-term changes to handling of annual nuclear waste fee payments
- Longer-term access to balance of Nuclear Waste Fund

Draft Report – Overview of 7 Key Recommendations

4. Develop permanent deep geological disposal site(s) for spent fuel and high-level nuclear waste

- Expeditiously
- Safely



Draft Report – Overview of 7 Key Recommendations

5. Develop one or more consolidated interim storage facilities as part of managing back end of nuclear fuel cycle

- Expeditiously
- Safely
- “Stranded” fuel at shutdown plants - should be first-in-line

Draft Report – Overview of 7 Key Recommendations

6. Create stable, long-term support for research, development, and demonstration (RD&D)

- Advanced reactor and fuel cycle technologies
- Related workforce needs and skills development



Draft Report – Overview of 7 Key Recommendations

7. Need international leadership

- Address global non-proliferation concerns
- Improve the safety and security of nuclear facilities and materials worldwide



Draft Report – Additional Findings and Recommendations

- Current NRC and EPA division of regulatory responsibilities appropriate
 - Develop new site-independent safety standards
 - Solicit input from all relevant constituencies



Draft Report – Additional Findings and Recommendations

- Roles, responsibilities, and authorities of local, state, and tribal governments must be negotiated
 - All affected governments need meaningful participation
 - States and tribes should have authority over aspects of regulation
 - Local, state, tribal governments have responsibility along with federal government to work productively to advance the national interest



Draft Report – Additional Findings and Recommendations

- New organization responsible for developing consolidated interim storage and permanent disposal facilities should apply the same principles of decision making to all aspects of the waste management program
- Siting processes for future waste management facilities include flexible and substantial incentive program



Draft Report – Additional Findings and Recommendations

- Interim storage of spent fuel at existing reactor sites will continue
- No unmanageable safety or security risks with current storage (dry or wet)
- Active research needed to ensure safety and security



Draft Report – Additional Findings and Recommendations

- Assign National Academy of Sciences (NAS) to assess lessons learned from Fukushima and implications for conclusions in earlier NAS studies



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Draft Report – Additional Findings and Recommendations

- Current system of standards and regulations governing transport of spent fuel and other nuclear materials functioning well
 - Excellent safety record
 - Start planning transport at start of project for consolidated storage capacity



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Draft Report – Additional Findings and Recommendations

- Expediently resolve ongoing fuel litigation between the Department of Energy and the utilities

Standard contracts	76
Reactors covered by contracts	118
Cases filed through 2010	74
•Second-round	(6)
Claims	\$6.4 billion
Voluntarily withdrawn	7
Settled	12
Separate settlement agreements	8
Reactors covered by settlements	47
Final judgments	28
•Unappealable	(6)
•On appeal	(22)
Pending before the trial court	27
DOJ trials through 2010	27
Litigation costs through 2010 (Experts and support; no DOJ or DOE staff)	\$168 million
DOJ trials expected 2011 through 2012	12
Awards (including still on appeal)	\$2.2 billion
Damage payments through 2010	\$956 million
Estimated total damages (if acceptance starts in 2020)	\$16.2 billion
Estimated increase for each year slippage	\$500 million

Status of DOE-Utility
Standard Contract
Litigation



Schedule and Next Steps

- Outreach effort to solicit feedback on draft Commission report
 - Meetings co-hosted with regional state government groups
 - Invited talks to interested organizations
 - Comments due by 10/31/11
- Other visits and meetings as necessary
- Charter requires final report by 1/29/12



Contact Us

- We always welcome written input – submit to brc@nuclear.energy.gov
- Follow the work of the Commission – www.brc.gov
 - Meeting information
 - Webcasts/video archives
 - Comments
 - Commissioned papers

