

Panel: Nuclear Spent Fuel and Waste Management (Grand Ballroom I)

Date/Time: Tuesday, February 19, 2013 / 14:00-15:15

Talking Points for: Thomas Isaacs, Strategic Advisor, Lawrence Livermore National Laboratory

The safe interim management and ultimate disposal of spent nuclear fuel and high-level radioactive waste: 1) are an ethical obligation of this generation; 2) have significant safety, non-proliferation, security, environmental, economic and public acceptance implications; and 3) provide an opportunity for a responsible, healthy, and vibrant nuclear power future.

- Spent nuclear fuel (SNF) is the inevitable result of operating nuclear power plants.
- The SNF must be carefully managed as it is a radioactive hazard for geologic time periods.
- Fortunately, we know how to safely store SNF and the high-level radioactive waste (HLW) from reprocessing for many decades, but because the waste is hazardous for so long, permanent disposal in a geologic repository is eventually required.
- While no operating repositories for SNF and HLW exist today, several countries have robust programs and we should see the operation of repositories in the coming decade.
- We know how to do the scientific and technical work to site and develop a safe repository, but dealing with the societal and institutional challenges are often quite difficult and time consuming.
- We are already seeing the closure of some nuclear plants; the stranded costs of leaving SNF on-site in these places are costly and as more plants retire, the costs will only grow.
- A successful program must include elements to both permanently dispose of the wastes and safely store them in the meantime.
- There are intimate ties between waste management and safety, environment, economics, non-proliferation, and public acceptance.
- There are many lessons that have been learned about how to maximize chances of success. In the U.S. Blue Ribbon Commission on America's Nuclear Future captured many of them.

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