

INITIAL COMMENTS ON THE BLUE RIBBON COMMISSION'S DRAFT REPORT TO
SECRETARY OF ENERGY OF JULY 29, 2011

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Southwest Research and Information Center (SRIC) has previously submitted written comments regarding 40 years of U.S. nuclear waste policies on March 24, 2010;¹ a one-page summary² and written presentation³ on the continuing Waste Isolation Pilot Plant (WIPP) experience for the July 7, 2010 Disposal Subcommittee meeting; a one-page summary,⁴ written presentation,⁵ and powerpoint presentation⁶ for the January 27, 2011 Commission meeting.

I appreciate that the Commissioners and staff always have treated me and others with respect. However, since its formation, SRIC has been very concerned about the imbalance in the Commission membership, especially that it has no tribal, state, or citizen group members from downwind and downstream affected communities. That imbalance is reflected in several omissions and inadequacies in the draft report.

Regarding the draft report, SRIC currently has initial comments and recommendations regarding building trust and confidence, long-term on-site spent nuclear fuel (SNF) storage, off-site storage, geologic disposal, and defense high-level waste (HLW).

1. Building trust and confidence

Among the lessons of 40 years of nuclear waste policy, SRIC's March 24, 2010 paper stated:

“Perceived political decisions by Presidents, Congress, and the DOE have heightened public opposition to waste programs, while failing to create operating sites. That history engenders much mistrust, which will take time, substantially improved public participation, and better performance to overcome.” (p. 7).

Given that reality, SRIC agrees with the draft report that “The United States has traveled nearly 25 years down the current path only to come to a point where continuing to rely on the same approach seems destined to bring further controversy, litigation, and protracted delay.” (pp. iii).

¹ http://www.brc.gov/sites/default/files/comments/attachments/perspective_-_blue_ribbon_commission_final_by_don_hancock.pdf

² http://www.brc.gov/sites/default/files/meetings/attachments/srcic_summary070710.pdf

³ http://www.brc.gov/sites/default/files/meetings/attachments/srcic_statement_070710.pdf

⁴ http://www.brc.gov/sites/default/files/meetings/presentations/srcic_summary012711.pdf

⁵ http://www.brc.gov/sites/default/files/meetings/presentations/srcic_statement012711_tables.pdf

⁶ http://www.brc.gov/sites/default/files/meetings/presentations/012711_srcic_presentation.pdf

The draft report omits the Department of Energy (DOE) current disposal siting efforts for “Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC-like Waste.”⁷ Those efforts to find disposal sites are not consistent with the process that the draft report recommends; have resulted in substantial opposition from states, citizen groups, and many commentators; and have further undermined trust and confidence. SRIC understands that DOE has now decided to delay the GTCC process until after the Commission submits its final report. SRIC agrees with that decision but continues to believe that the GTCC process should not have proceeded during the Commission’s lifetime and that process has further damaged trust and confidence.

An additional reality of the last 25 years and an omission from the draft report is that there is not trust and confidence in some nuclear utilities because of efforts to develop consolidated interim storage (CIS) facilities. The nuclear utilities that made up Private Fuel Storage obtained a Nuclear Regulatory Commission (NRC) license for their CIS facility on Skull Valley Goshute land in 2006, despite significant opposition from some tribal members, many people inside and outside the state, Utah government officials and congressional delegation, and some federal agencies. Various nuclear utilities had previously promoted a CIS facility on the Mescalero Apache Reservation in New Mexico, which failed because of opposition from tribal members, many New Mexicans, and governmental officials.

Another reality, as the draft report points out, is that Finland and Sweden are proceeding with disposal sites on a “consent-based” approach where there is existing nuclear infrastructure. But the draft report omits examining two major U.S. “consent-based” nuclear disposal sites and whether U.S. nuclear power plants could host long-term storage or disposal.

The Fernald Plant in Ohio and Rocky Flats Plant in Colorado are two “consent-based” nuclear production facilities where disposal was decided and accomplished for substantial amounts of nuclear waste at the generator locations. While the “consent” processes and results were different at those two major nuclear weapons facilities, in both cases communities and state governments consented, among other things, to losing thousands of well-paying jobs, allowed about 80 percent of the uranium nuclear waste (Fernald) and substantial amounts of plutonium nuclear waste (Rocky Flats) to be disposed at those sites, and to forego future major economic development opportunities. That the Commission did not look at and learn from those U.S. examples is a significant omission in its work. Even when it finally has come to Denver, the Commission did not ask for insights and lessons learned from the Rocky Flats experience, including the continuing controversies about the remaining plutonium contamination in the soil at and near the site.

Given its support for the “consent-based” approach and the several nuclear industry members of the Commission, it also is a significant omission that the draft report does not address why consent has not occurred around U.S. nuclear power plants. Based on the international and U.S. experience, should CIS and disposal siting focus on those U.S. nuclear utility sites? Some relevant questions not examined by the draft report include:

⁷ DOE, 2011. *Draft Environmental Impact Statement for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC-Like Waste* (DOE/EIS-0375-D). February 2011. <http://www.gtcceis.anl.gov/documents/index.cfm>

- Why have utilities and nearby communities not volunteered for CIS facilities?
- Why have utilities and nearby communities not volunteered for disposal facilities?
- What role has the promise of off-site storage and disposal played in obtaining “consent” for siting nuclear power plants?
- Should new nuclear plants provide adequate on-site spent fuel storage for all of the SNF that will be generated during their operating lifetime?

Another serious omission is that the draft report does not address many Western realities. The large majority of uranium mining and milling facilities were in the West, especially in New Mexico, Wyoming, Colorado, Arizona, and Utah, along with the resulting contamination and multi-generational health effects that persist. Major nuclear weapons facilities are in California, Colorado, Idaho, Nevada, New Mexico, and Washington, where contamination and multi-generational health effects persist. Nuclear weapons were tested in New Mexico and (primarily) Nevada, with resulting contamination and multi-generational health effects that persist today. Effects from all of those nuclear activities will continue for generations. By many measures, people in the West bear a disproportionate burden of the nuclear legacy of waste; contamination of air, water, and soil; and multi-generational health effects.

People in the West also are well aware, as the Western Governor’s Association White Paper points out, that more than 88% of the SNF currently at operating and shutdown reactor sites has been generated east of the 100th meridian.⁸ Yet all three sites recommended by the federal government in the 1980s for site characterization for geologic disposal were west of the 100th meridian. The Mescalero and Goshute sites selected by nuclear utilities for CIS facilities are west of the 100th meridian, and also targeted tribal lands. Some relevant questions not examined in the draft report include:

- Why do those with the jobs, electricity, and profits from nuclear power want to transport, store, and dispose of SNF in the West?
- Why are those with the most experience in managing spent fuel unwilling to take the long-term risks of long-term storage and disposal?
- What are the technical reasons that long-term storage facilities cannot be sited in the East?
- What are the technical reasons that suitable geologic disposal sites cannot be found in the East?

Answering those questions and others could have provided significant information about why there is not trust and confidence in the federal government and nuclear utilities and how a “consent-based” approach could actually build on past successes and failures in the U.S.

Building trust and confidence recommendations for the final report

- Building trust and confidence in the federal government and nuclear utilities is essential for the nation’s nuclear waste program.
- Additional investigation is needed about U.S. “consent-based” nuclear waste disposal sites, including Fernald and Rocky Flats.

⁸ WGA Ad Hoc Committee on the Blue Ribbon Commission, 2011. *Recommendations for Consideration by the Blue Ribbon Commission on America’s Nuclear Future*, p. 2.

- Additional investigation is needed about whether a “consent-based” approach could result in long-term storage and disposal facilities at or near U.S. nuclear power plants.

2. Long-term on-site storage

The draft report states: “Simply put, it will take years to more than a decade to open one or more consolidated storage facilities and even longer to open one or more permanent disposal facilities. This means that interim storage of substantial quantities of spent fuel at operating reactor sites can be expected to continue for some time.” (p. 49). One of the seven lessons in SRIC’s March 24, 2010 paper was: “Irradiated fuel will continue to stay at reactor sites and HLW will remain at DOE sites for decades more.” (p. 7). The final report should augment that factual statement in several ways.

The draft report also acknowledges that, while nuclear plants operate, tons of spent fuel are added to on-site interim storage each year. Thus, the amount of spent fuel stored at existing reactors will substantially increase, *more than doubling*, by 2050, according to the draft report. (p. 38).

However, the draft report omits emphasizing that any new nuclear plants further increase the amount of stored spent fuel and should be at the end of any storage and disposal queue. In light of that reality, any new reactors should provide on-site storage for the total amount of spent fuel that they will generate during their operating lifetime and that storage could be maintained for years after the plant shuts down.

The draft report discusses “Hardened On-Site Storage” (HOSS) and states: “NRC should examine the advantages and disadvantages of options such as ‘hardened’ on-site storage (HOSS) that have been proposed to improve security at existing sites.” (p. 50). Such a recommendation is insufficient. The reality of the Fukushima disaster and the earthquake in Virginia show that the nuclear utilities and the regulators are not fully prepared for major events. Those current events affect trust and confidence in nuclear utilities and the federal government. The fact that many national and local organizations, including SRIC, from all 50 states agree on the “Principles for Safeguarding Nuclear Waste at Reactors” shows broad community support. In addition, improved storage in spent fuel pools and HOSS substantially increases security and safety (not just from terrorists) and will increase trust and confidence.

Long-term on-site recommendations for the final report

- It will take decades to open permanent disposal facilities (and any off-site consolidated storage facilities). This reality and the continuing generation of spent fuel means that interim storage of substantial quantities of SNF at operating reactors will continue for as long as they operate and for years more.
- Nuclear utilities should implement spent fuel pool storage improvements and HOSS, and the NRC should issue regulations for those safety and security improvements.
- New reactors should provide on-site storage for the total amount of spent fuel that they will generate during their operating lifetime.

3. Off-site consolidated interim storage

The draft report states the Commission's first key storage recommendation: "***we recommend that the United States proceed promptly to develop one or more consolidated interim storage facilities.***" (p. 36).

SRIC disagrees with both the timeframe and the policy. The timeframe that the federal government and nuclear utilities have had for the past 30 years is to "proceed promptly" with off-site consolidated interim storage. That was the federal government policy after the passage of the Nuclear Waste Policy Act in its efforts to site Monitored Retrievable Storage in Tennessee and other states, including Wyoming. That has been the timeframe for the utilities that have tried to site CIS facilities over the past two decades. The imperative to "proceed promptly" has contributed to undermining trust and confidence because it appears that timing is more important than public participation, consent, technical adequacy, and other more important aspects.

The federal government and nuclear industry policy have failed to develop any operating CIS facilities. Many people have opposed such facilities for the last 30 years. Continuing with the same failed approach does not build trust and confidence and will not succeed in establishing such storage facilities because of the continuing strong opposition. Instead, the final report should support the alternative of HOSS, which has demonstrable and substantial public support. As already noted, the draft report does not address the alternative of consolidated storage at or near to existing reactors.

The draft report is correct that the current situation of litigation and rising taxpayer liabilities "has been expensive, time-consuming, not conducive to resolving the current impasse in the nation's nuclear waste management program, and detrimental to the full and open communication among parties needed for integrated planning concerning spent fuel management." (p. 95). But off-site consolidated interim storage facilities likely will not be established, so they also are not able to address the liability situation, as the draft report suggests. (p. 41). Instead, SRIC supports a broad-based public process to develop alternative means of addressing how to modify federal-utility contracts to resolve liability issues and costs of long-term on-site storage.

Off-site consolidated interim storage recommendations for the final report

- The federal government and nuclear utilities should not develop off-site consolidated interim storage facilities. Instead, HOSS facilities should be implemented.
- A broad-based process should begin to revise nuclear utility contracts to address liability and costs and other long-term on-site storage issues.

4. Geologic disposal

The Commission's first recommendation is that the "***United States must proceed promptly to develop one or more permanent deep geological facilities for the safe disposal of spent fuel and high-level nuclear waste.***" (p. 30).

SRIC again disagrees with the timeframe because the imperative to "proceed promptly" has contributed to undermining trust and confidence because it appears that timing is more important than public participation, consent, technical adequacy, and other more important aspects.

Given the reality of more than 65,000 metric tons of SNF already in storage and the expectation of at least a doubling of that amount of waste by 2050, SRIC believes that it is unrealistic for one geologic repository to be sufficient.

Further, the draft report does not address SRIC's previous recommendation of January 27, 2011:

“The WIPP operational and decommissioning phases should be completed before additional geologic disposal sites are chosen. Successful performance would demonstrate the capability of the federal government and its contractors and provide a basis for public confidence. Without success of the first-of-its-kind facility, the prospects for public support for other disposal sites are not promising.” (p. 6).

Geologic disposal recommendations for the final report

- EPA should develop generic disposal standards through a robust, transparent public process.
- EPA and NRC should coordinate closely in the development of new repository performance and compliance regulations.
- Disposal site selection should not proceed until WIPP's operational and decommissioning phases are completed.
- Site selection should first focus in the Eastern states.

5. Defense High-Level Waste

The draft report provides little focus on defense HLW. Buried in the draft report is an important note: “[Note: As directed by the BRC co-chairs on May 13, 2011, the Disposal Subcommittee will investigate whether the United States should consider reversing the decision made in the 1980s to co-mingle defense and civilian waste for disposal.]” (p. 93).

SRIC believes as a matter of process and substance the Commission cannot recommend reversing that decision. From a process standpoint, there is no recommendation in the draft report so the issue has not been framed for the three months of public comment. Thus, it would be inappropriate to have a recommendation in the final report. Such a recommendation would not have been through the same public process as the rest of the report. Since the Commission draft report appropriately states that the nation cannot continue with the same failed approach, it should not itself use a truncated, rushed, and non-transparent process of making recommendations that are not fully vetted by intense public comment. Further, the Disposal Subcommittee has provided no description of what its public process will be even for fully describing the relevant factors for any future consideration of that issue. Thus, there is clearly not enough time for a deliberative, transparent process and recommendation.

From a practical standpoint, any such recommendation has the purpose “to expedite” disposal of defense HLW, and that is the primary reason cited in the Disposal Subcommittee Draft Report.⁹ However, the draft report has made no case that there is a technical reason that all aspects of the proposed new siting process should not apply to defense HLW. Like spent nuclear fuel, there is no disposal site for high-level defense waste. The only geologic disposal site that could theoretically be used for such high-level waste is WIPP. Thus, such a recommendation in

⁹ Draft Disposal Subcommittee Report, June 1, 2011, p. 6.

essence is a siting decision (explicitly or implicitly), which is something the Commission repeatedly says it is not doing. “The Commission is not a siting body.” (p. 2).

Defense HLW was created from reprocessing. SRIC strongly opposes reprocessing because of financial costs, environmental contamination, and proliferation risks. HLW is a major environmental and health problem at Hanford, WA; Idaho National Lab; Savannah River, SC; and West Valley, NY. It will take decades and hundreds of million dollars more to solidify and store that HLW. Rather than pursuing off-site storage or disposal, that waste, like SNF, should be stored as safely as possible as close to the generation site as possible. That fundamental principle is supported by the Alliance for Nuclear Accountability and many other organizations.

Defense High-Level Waste recommendations for the final report

- Defense high-level waste should be removed from tanks, solidified, and placed in robust on-site storage appropriate for many decades to a century.
- Communities and states with long-term HLW storage should be engaged in a broad-based process to determine what compensation, monitoring, and safety and security requirements are needed to maintain long-term storage or disposal.

Thank you for this opportunity to present some of our views. SRIC looks forward to further discussion about these important issues.