ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

Idaho Nevada Northern New Mexico

Oak Ridge Paducah Portsmouth Savannah River

June 29, 2018

Ms. Anne Marie White
Assistant Secretary for Environmental Management (EM)
U.S. Department of Energy (DOE)
1000 Independence Avenue, SW
Washington, DC 20585

Dear Ms. White:

On May 3, 2018, the Chairs and Vice-Chairs of the EM Site-Specific Advisory Board (SSAB) passed the following recommendation concerning the Energy Communities Alliance (ECA) Report on Waste Management. This recommendation was subsequently approved by seven of the eight local boards of the EM SSAB.

Background

The ECA sponsored the wide-ranging report "Waste Management: A New Approach to DOE's Waste Management Must be Pursued." These recommendations would, if implemented, bring about major changes in longstanding national policies regulating the categorization, treatment, and disposition of DOE legacy radioactive waste. The environmental management of such wastes would henceforth be based, not on origin, but on the radioactive characteristics of the waste and the resulting risks to human health and to the environment.

The ECA Report underlines the urgency of pursuing a new approach. According to figures cited in the report, DOE's overall environmental waste liability has more than doubled to $372 billion over the past 20 years, of which EM's portion has grown over $90 billion from $163 billion to $257 billion. Reducing the lifecycle costs of these radioactive wastes and the burden on local communities requires a new decision approach based on risk management.

The systemic problems of the DOE/EM program identified by the ECA Report are clear and compelling. The present classification waste based on origin, rather than risk goes back to the beginnings of the nuclear weapons program. The economics of the program are currently unsustainable—somewhat akin to making the minimum payment on a growing credit card balance. The current classification categories in DOE Order 435.1 (Radioactive Waste Management) do not align with Nuclear Regulatory Commission domestic or International Atomic Energy Agency international standards. In principle, transition to a risk management approach would result in less "over-classification" of waste and reduce

the volume of wastes subject to higher levels of handling. According to the ECA Report, costs would be significantly reduced—estimated at $2.5 million per day.

The ECA Report itself is based on much prior research dealing with the same problem. The ECA is composed of representatives of local communities hosting DOE facilities and thus has a degree of local "buy-in." Furthermore, the Report ostensibly has the support of the Waste Management industry, as evidenced by remarks by industry leaders at the 2018 Waste Management Conference in Phoenix.

However, while the Report presents a coherent and consistent argument on behalf of a new approach, it would be difficult to determine the merits based on this policy study alone. The lack of empirical data is a significant drawback. There are no charts or figures in the study. The "new" system of classifying waste is not defined either in general terms or specific levels of radioactivity. Methods for determining or calculating the conversion of existing to new classes of waste are not presented. Global figures for total amounts of waste and total costs are presented narratively. But it is not possible to evaluate the differential impact by DOE facility or State. The Waste Isolation Pilot Plant (WIPP) facility plays a prominent role in the proposed solution as the recipient of significantly increased volumes and types of waste. But the specific amounts are not explained. WIPP is also expected to receive increased capital expenditures for expansion, but specific numbers are not provided. Information on the national return on investment is not provided (except the vague estimate of $2.5 million per day mentioned above). On the whole, the merits are asserted but not really evaluated or empirically justified.

The ECA Report sets forth policy changes to advance desirable and widely-accepted goals of cleaning up nuclear wastes nationally. But given the empirical shortcomings, the Report should be regarded, at this juncture, as a worthwhile, but preliminary policy study. A pro or con recommendation on the merits of the proposal is not possible at this time.

Recommendations

1. The Chairs recommend that DOE/EM undertake a comprehensive analysis of the ECA Report, including technical, financial, environmental, safety, transportation, and other implications of implementing its recommendations. This is for the purpose of evaluating the impact of such changes.

2. The Chairs recommend that DOE/EM evaluates the site-specific impact of implementing the recommended changes including both potential risks and benefits.

3. In undertaking its evaluation, the Chairs recommend that DOE/EM should address, at a minimum, the questions developed by the Chairs set forth in the attachment.

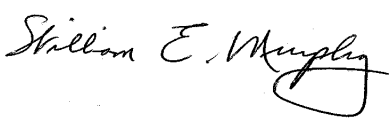
4. The Chairs recommend that DOE/EM provide a timeline for performing the analysis and brief its results on an ongoing basis to the Chairs and their respective SSABs for comment and input.

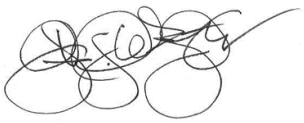


Steve Rosenbaum, Chair
Nevada SSAB

Dennis Wilson, Chair
Oak Ridge SSAB

Keith Branter, Chair
Idaho Cleanup Project CAB





Bill Murphy, Chair
Paducah CAB

Gil Allensworth, Chair
Savannah River Site CAB

Gerard Martinez y Valencia, Chair
Northern New Mexico CAB

Bob Berry, Chair
Portsmouth SSAB

cc: David Borak, EM-4.32

References

1. "***Waste Disposition: A New Approach to DOE's Waste Management Must Be Pursued,"*** **Energy Communities Alliance, September 2017.**

Attachment
Relevant Questions Concerning the ECA Report

Technical
What would the "risk" based classification look like?
Are there precedents for such a classification?
Would it replace or complement existing DOE classification system?
If risk is substituted for origin, what would be the technical definitions, based on what criteria?
Do changes require new federal legislative action? If by regulation, could the changes be challenged in court?
Would regulations regarding exposure to radioactivity for workers and the public need to be changed, if waste is recategorized?

Materials
How much waste would be removed from the High Level Waste (HLW) category under new definition?
How would volumetric changes be determined, on average or by individual containers?
How much of new Transuranic (TRU) and Low-Level Waste (LLW) derive from liquid waste?
How would TRU and LLW currently comingled with HLW be separated?
How much would be potentially directed to WIPP?
Would container volumes currently stored at WIPP be recalculated?
Provide charts/graphs showing quantities currently classified and quantities following classification.

WIPP
What is current WIPP capacity limit? What would be new limit if container contents were recalculated? Is this a manual or algorithmic recalculation?
What legal changes would be required? Do changes require action by state legislatures?
What burdens does WIPP expansion impose on the sites? Transportation and transportation safety, personal exposure, traffic, roads, environmental?
How would those burdens be mitigated?

Cost/Benefit
What is the economic impact of the changes?
What is the return on investment?
What is the cost/benefit impact for DOE sites?