DOE Opportunity: Science and Risk-Based HLW Interpretation Can Save Taxpayers Over $200 Billion in Environmental Cleanup; Prioritizes Safety to Workers and Host Communities

As local elected officials in communities hosting and immediately adjacent to the federal government’s nuclear weapons development and nuclear energy research sites, we have a paramount interest in and responsibility for the safety and health of our citizens and our environment. For more than 30 years we have worked with the Department of Energy (DOE), the federal agency responsible for managing and disposing of the defense or “legacy” nuclear waste in our communities created by these missions. Our goal is to ensure that the concerns of those of us most directly and immediately impacted by DOE policies are taken into account. Through the Energy Communities Alliance (ECA) we have long advocated for science- and risk-based decision-making to ensure transparency, to build trust, reduce risks sooner, prioritize safety and to define a path forward that is less susceptible to changing political winds.

With these goals in mind, ECA urges the new administration and DOE to continue pursuing the High-Level Radioactive Waste (HLW) Interpretation to allow nuclear waste disposal decisions to be made based on actual radiological characteristics and risk to human health arising from the waste, rather than existing artificial policy standards that base waste classification on origin. We believe this approach can reduce risk to human health and the environment for our communities, decrease years of operations; reduce the number, size and duration of nuclear waste storage facilities pending availability of a HLW repository; accelerate liquid nuclear waste tank cleanup, retrievals and closures; and move waste to safe storage and disposal facilities. A December 2020 DOE Report to Congress evaluating the “feasibility, costs and cost savings” of implementing the HLW Interpretation confirms those expectations and identifies up to $230 billion in potential cleanup cost savings – far exceeding any prior estimates.

Such an opportunity should not slip through the cracks.

DOE leadership under previous administrations, Republican and Democrat, recognized the challenges presented by how waste is classified in the US and the potential for a new approach consistent with international practices and guidelines supported by the International Atomic Energy Agency. The Blue Ribbon Commission on America’s Nuclear Future (BRC), established under President Obama, found that the U.S. waste classification system “is not sufficiently risk-based” and “[t]he definition of HLW, in particular, has attracted the most criticism.”

1 See The Blue Ribbon Commission Report to the Secretary of Energy, January 2012, pg. 98
standpoint,” and terms used to define HLW such as “highly radioactive,” “sufficient concentrations,” and “requires permanent isolation...have not been quantified.” This can be problematic, the report states, because this waste, “can have a broad range of characteristics-including characteristics that may be altered by time (decay) or by subsequent processing (which DOE has done with many of its defense wastes).”

Understanding that there might be technically-defensible, more efficient, safe and existing disposal pathways for some of the waste in our communities brought us together through ECA to push DOE and Congress to consider risk-based alternatives such as the HLW Interpretation. Since DOE released its request for public comment on their interpretation on the statutory definition of HLW in 2018, our communities expressed cautious support, asking that DOE provide a full evaluation, identify each disposal pathway, what needs to occur at potential sender and receiver sites, realistic cost savings and timeline, and make the benefits and challenges clear. We also recommended DOE provide States and local governments with the resources to analyze the change, educate their communities, and most importantly, invest in an engagement process that can truly create consensus.

DOE’s actions have reflected our recommendations. The Department proceeded in a measured step-by-step process to evaluate the HLW Interpretation, gather public comments and build support. The Department regularly reiterated that any changes would comply with state agreements, all applicable regulatory requirements and nothing will be accepted in a facility if it does not meet performance objectives. In 2019, directors of seven national laboratories wrote a letter stating, “Based on the perspective of the DOE’s Environmental Management National Laboratory Network, the HLW interpretation provides the best path to accelerating the safe long-term stabilization and disposition of a wide variety of reprocessing waste streams that exist across the DOE complex. The interpretation would provide immediate benefit to the health and safety of the worker, the surrounding communities, and the environment, and would establish consistent, risk-based approaches...In short, we strongly support the HLW Interpretation.” Staff at the Nuclear Regulatory Commission similarly noted to DOE their “agree[ment] with the concept...that radioactive waste may be classified and disposed of in accordance with its radiological characteristics.”

Last year, after completing an Environmental Assessment and, again, soliciting public comment at each step, DOE successfully applied its HLW Interpretation. Without incident DOE shipped eight gallons of DWPF recycle wastewater from the Savanah River Site in South Carolina to Waste Control Specialists in Andrews, Texas for treatment and disposal as low-level radioactive waste (LLW). The completed Environmental Assessment, however, analyzed treating and disposing of

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up to 10,000 gallons of DWPF so additional shipments could continue if the Initiative carries over into the new administration – as it should.

DOE also recently published two additional Federal Register Notices related to the HLW Interpretation. One notice announces the availability of a limited change to DOE Manual 435.1-1, Radioactive Waste Management Manual, to formally incorporate the Department’s interpretation of the statutory definition of HLW. In support of that effort, DOE made an administrative change to DOE Order 435.1, Radioactive Waste Management. The other notice aims to expand the use of the HLW Interpretation by announcing DOE’s intention to draft an environmental assessment on the disposal of certain SRS contaminated process equipment at a licensed commercial LLW disposal facility located outside of South Carolina.

Again, DOE confirmed it will solicit public input as they proceed.

It is reassuring that DOE continues to recognize numerous steps still needed to be taken ahead of any proposed actions for any proposed waste stream at any of the sites, including further data gathering, analysis and, most importantly, engagement with impacted parties. As the communities that face the greatest risk in any cleanup scenario, we ask that this important work continue.

Our communities understand the challenges of environmental cleanup, we feel the impacts directly of any DOE cleanup policy, and we are invested in the government’s success, no matter the Administration. We see that while progress is being made on the ground, the federal liability and the timeline to complete cleanup just continues to grow. DOE needs to continue to evaluate and implement the HLW Interpretation, and pursue smarter, risk-based, stakeholder-informed approaches that incorporate lessons learned over time, and most importantly, protect the health, safety, quality of life and economic future of the communities that have long and proudly supported our national missions.