May 15, 2018

Maurice Heath
Office of Nuclear Materials Safety and Safeguards
U. S. Nuclear Regulatory Commission
Washington, DC 20555

U.S. NUCLEAR REGULATORY COMMISSION FEDERAL REGISTER NOTICE AND PUBLIC MEETING REGARDING THE VERY LOW-LEVEL RADIOACTIVE WASTE SCOPING STUDY AND GREATER THAN CLASS C WASTE (STC-18-009)

Dear Mr. Heath:

The Organization of Agreement States (OAS) Executive Board (Board) reviewed the above document and offers the following comments.

The NRC requested comments on nine questions. We have responded to each question below.

1. *The United States does not have a formal regulatory definition of VLLW. What should the NRC consider in developing its own regulatory definition for VLLW? Is there another definition of VLLW that should be considered? Provide a basis for your response*.
   The definition of VLLW should not be based on activity or concentration, but on the resultant dose that it produces at the disposal facility. The European Union defines VLLW as less than 100 Bq/g, but if the nuclide were discrete radium, this concentration would not meet an acceptable dose criterion. Most references of VLLW refer to TENORM, which the NRC does not regulate. However, the same principles can be applied.

2. *The existing regulatory framework within 10 CFR 61.55 divides low-level radioactive waste into four categories: Class A, Class B, Class C, and Greater Than Class C. Should the NRC revise the waste classification system to establish a new category for VLLW? What criteria should NRC consider in establishing the boundary between Class A and VLLW categories?*
   The Board believes that it is not imperative to create a new definition for VLLW. The definitions of Class A through C wastes are confusing and not easily interpreted. Creating another Class would add to the confusion. It would be difficult to determine which radionuclides at what concentrations would be acceptable for disposal at a

RCRA Class C or D facility when the geologic conditions of the United States are so varied. Waste acceptance should be based on the characteristics of the disposal facility and an acceptable dose limit, not an arbitrary activity or concentration of radionuclides.

3. *The NRC's alternative disposal request guidance entitled, ''Review, Approval, and Documentation of Low-Activity Waste Disposals in Accordance with 10 CFR 20.2002 and 10 CFR 40.13(a),'' which is undergoing a revision, allows for alternative disposal methods that are different from those already defined in the regulations and is most often used for burial of waste in hazardous or solid waste landfills permitted under the Resource Conservation and Recovery Act (RCRA). Should the NRC expand the existing guidance to include VLLW disposal or consider the development of a new guidance for VLLW disposal? Why or why not?*
   The Board believes that the guidance should be revised. Once acceptable dose criteria are established, then results of the modeling would determine what can be disposed as VLLW. All Class A waste would be eligible.

4. *If the NRC were to create a new waste category for VLLW in 10 CFR part 61, what potential compatibility issues related to the approval of VLLW disposal by NRC Agreement States need to be considered and addressed? How might defining VLLW affect NRC Agreement State regulatory programs in terms of additional responsibilities or resources?*
   If the NRC were to create a new waste category for VLLW in 10 CFR part 61, it should be designated Compatibility Category C or D to allow states the flexibility to implement standards that are acceptable to the state and the communities that host these disposal facilities.

5. *Following the Low-Level Radioactive Waste Policy Amendments Act of 1985, states formed regional compacts for the disposal of low-level radioactive waste. If the NRC were to create a new waste category for VLLW, does it fall within regional compact authority to control VLLW management and disposal? How might defining VLLW affect regional compacts in terms of additional responsibilities or resources?*
   The Board defers to those states that host the Compact LLRW disposal facilities.

6. *Environmental Protection Agency imposed waste analysis requirements for facilities that generate, treat, store, and dispose of hazardous wastes are defined in 40 CFR parts 264 through 270. How would NRC incorporate and apply waste analysis requirements for VLLW at RCRA Subtitle C and D facilities? Should the NRC impose concentration limits and/or treatment standards for VLLW disposal?*
   The NRC should provide acceptable dose criteria, including an all controls fail scenario dose criterion and provide a range of acceptable model parameters based on some generic geologic regions of the US. If a site has unique characteristics, then site-specific parameters could be used if sufficient justification is provided. The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) Radiation Task Force developed guidance on such disposals in its publication *Waste Generation and Disposal: Awareness, Management, and Disposal Guidance for Solid Waste Containing Technologically Enhanced Naturally Occurring Radioactive*

Material (TENORM). Enclosure 1 is an excerpt from the document on modeling parameters and could be applied to any radionuclide.

7. *Are there any unintended consequences associated with developing a VLLW waste category?*
   Allowing disposal of VLLW in RCRA facilities most likely will divert wastes from current LLW facilities which could impact the viability of those facilities and disposal capacity for Class A, B and C LLW.

8. *What analytical methods/tools should be used to assess the risk of disposing of VLLW at licensed LLW disposal facilities or RCRA Subtitle C and D facilities? (i.e., generic or site specific)*
   Risk should not be used, as the risk of even background radiation is high compared to chemical risks acceptable by the EPA. A range of acceptable dose criteria should be established. If the disposal facility is in an Agreement State, then the dose criterion and modeling parameters should be acceptable to the state. Generic parameters for typical geologic regions could be established.

We appreciate the chance to comment on this subject, and stand ready to answer any questions you may have.

Sincerely,

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