



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

DAVID W. SALYERS, P.E.
COMMISSIONER

BILL LEE
GOVERNOR

July 5, 2019

The Honorable Andrew R. Wheeler
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Re: State of Tennessee perspective on a letter from Thomas L. Cubbage III to Andrew R. Wheeler dated June 21, 2019, regarding discharge limits for landfill wastewater from existing and proposed CERCLA mixed-waste landfills in Oak Ridge, Tennessee

Dear Administrator Wheeler:

Thank you for the opportunity to provide amplifying comments prior to your decision on the focused feasibility study for wastewater management at the existing Environmental Management Waste Management Facility (EMWMF) and the proposed Environmental Management Disposal Facility (EMDF) in Oak Ridge, Tennessee. I would like to start by reaffirming that the Tennessee Department of Environment and Conservation (TDEC) fully supports the position stated in Regional Administrator Mary Walker's letter dated March 21, 2019.

Refocusing the Dispute

TDEC appreciates the positions put forward in the June 21, 2019 letter by U.S. Department of Energy (DOE) Under Secretary Cubbage, but the discussion has drifted from the issues of the originally disputed. The U.S. Environmental Protection Agency (EPA), TDEC and DOE have been in a longstanding disagreement regarding wastewater discharges from the existing EMWMF landfill. In that light, TDEC would like to reiterate the formal dispute issues that were elevated to you for a decision.

The landfill wastewater dispute concerns two primary issues.

- 1) The first issue is how to select radionuclide effluent limits for EMWMF and EMDF that meet the CERCLA Threshold Criteria of *protection of human health and the environment and compliance with ARARs (Applicable or Relevant and Appropriate Requirements)*. TDEC supports the Region 4 position that:
 - A) Wastewater from the current and proposed landfills must meet the CERCLA protectiveness threshold requirement;
 - B) DOE must apply Clean Water Act (CWA) regulations (including the requirement to meet the more stringent of technology-based effluent limits (TBEL) and water-quality based

effluent limits (WQBEL) as relevant and appropriate requirements under CERCLA to derive discharge standards for Atomic Energy Act (AEA) radioactive contaminants; and

- C) Tennessee water quality standards including narrative criteria are “relevant and appropriate” to discharges of radionuclides at the Oak Ridge Reservation (ORR)
- D)
- 2) The second dispute issue elevated for resolution relates to what authority should govern the selection of protective discharge limits for contaminated wastewater, including radioactive wastewater, for these CERCLA remedial actions at EMWMF and EMDF. TDEC supports the Region 4 position that:
 - A) Congress/CERCLA authorized EPA to make remedy selection decisions at Federal Facilities on the National Priorities List;
 - B) There is no technical, policy, or legal rationale for treating radiation risks differently from other risks addressed under CERCLA or allowing radiation risks that exceed the CERCLA risk range for carcinogens as provided in EPA guidance for cleanup of radionuclides; and
 - C) CERCLA and the Federal Facility Agreement (FFA) for the ORR provide EPA final authority to make remedy selection decisions, including protectiveness and ARARs determinations, at the ORR Superfund site.

Rebuttal

As noted above, TDEC appreciates the positions in the June 21, 2019 letter by Under Secretary Cabbage but would like to clarify some points raised in that letter. First, the general theme of Mr. Cabbage’s letter is that the dispute questions DOE authority to self-regulate under the Atomic Energy Act of 1954 (AEA). *The dispute arises from a CERCLA cleanup action*, proposed by DOE to be carried out in accordance with the FFA. As such, remedial decisions must meet the CERCLA Threshold Criteria. The dispute relates to the issue of protectiveness under CERCLA, which is defined by EPA in its regulations and guidance. When operating under CERCLA, all other federal agencies are required to adhere to the EPA policies and not to apply their own policies to reach inconsistent positions, see 42 USC 59620(a)(2). There is a difference of opinion between the agencies as to risk and dose levels. However, EPA’s authority under CERCLA does not reach independent determinations of the protectiveness of DOE Orders or NRC rules at non-Superfund sites under AEA authority.

Also, DOE’s Derived Concentration Standards (DCS), a dose-based approach to risk mitigation, do not account for fish ingestion or water immersion. These are completed exposure pathways because the existing landfill discharges, as would the proposed landfill, into Bear Creek, which is classified as a recreational stream. Mr. Cabbage implies that DCS are globally protective, but their lack of consideration of these completed pathways leads TDEC to conclude that DCS do not adequately protect human health for this CERCLA action.

Since 1997, EPA policy (as amended in 2014) is that dose-based limits greater than 12 mrem per year are outside the risk range of 1×10^{-6} to 1×10^{-4} for excess lifetime cancer risk and are, therefore, not protective of human health and the environment for CERCLA cleanup programs. Based on the mentioned shortfalls, *TDEC supports the EPA Region 4 position that the CWA must be considered “relevant*

and appropriate" for radioactive contaminants associated with CERCLA cleanup actions on the ORR and that TBELs are in order. Additionally, a recent study contracted by TDEC indicates that the toxicity of uranium as a poisonous metal has the potential to pose even more exposure risk in Bear Creek Valley than its radioactivity.

Under CERCLA, the cost is a Balancing Criterion to be considered only after Threshold Criteria have been met. TDEC understands that proper wastewater management would add cost, as mentioned in the DOE letter, but concludes it is a requirement for protective onsite disposal. TDEC also notes this extra expense, cited as \$150 million in DOE's letter, further closes the cost gap between onsite disposal in a valley rife with water management challenges associated with an abundance of water close to a waste disposal site and offsite disposal at suitable facilities in the arid western U.S.

Finally, contrary to the portrayal of the existing CERCLA landfill in DOE's letter, continuous water management issues and the lack of an acceptable monitoring plan have characterized 17 years of contention among the three FFA parties (TDEC, EPA, and DOE). If there were no issues with the existing landfill, there would have been no dispute. The three FFA parties spent over two years in informal dispute unsuccessfully attempting to resolve differences over the proper approach to meet the CERCLA risk range. The Region's approach using the CWA as ARAR resolves this issue and demonstrates the CWA's relevancy and appropriateness in this circumstance.

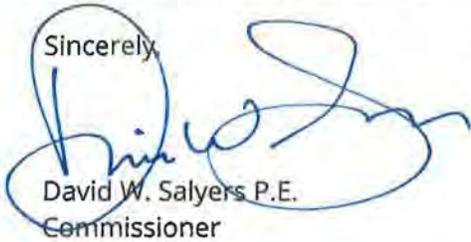
Conclusion

TDEC recognizes that DOE faces a challenging situation. In addition to the existing CERCLA landfill and the proposed new mixed-waste landfill, several waste burial sites contribute significant contamination to streams and groundwater in Bear Creek Valley: Bear Creek Burial Grounds, S3 Ponds, Boneyard/Burnyard, the Oil Landfarm, and others. With known but inadequately defined contaminant plumes emerging from these sources, it is readily apparent that protective limits are necessary when considering approval of another source of toxic, hazardous, and radioactive contaminants in the valley. Wastewater must be treated to minimize further impact.

Administrator Wheeler, I ask that you uphold your Regional Administrator's finding on the current dispute in its entirety. Both CERCLA Threshold Criteria must be met, or the entire CERCLA process is weakened and vulnerable. All federal agencies are subject to the same level of compliance as private parties as a matter of principle derived from CERCLA section 120. While DOE has independent authority under the Atomic Energy Act, there is no exception created for CERCLA to yield to the AEA and no basis for any federal agency cleaning up radionuclides or any other hazardous substances to evade the authority of EPA and the States in CERCLA cleanup. Radionuclides are carcinogenic and the protective risk range applies to all carcinogens without discrimination. If radionuclides are to be made a special category under CERCLA, then Congress should legislate. And unless legislation happens, EPA cannot abdicate its authority. Protection of human health and the environment is the primary concern when setting effluent limits to eliminate, reduce, or control risks through completed exposure pathways. It is our position that CWA is relevant and appropriate to the discharge of radionuclides, as are the use of TBELs.

Thank you for the opportunity to respond and for your vigilance on behalf of the people of Tennessee.

Sincerely,

A handwritten signature in blue ink, appearing to read "David W. Salyers", is written over the word "Sincerely," and extends to the right. The signature is fluid and cursive.

David W. Salyers P.E.
Commissioner

cc: Mary Walker, EPA
Franklin Hill, EPA
Connie Jones, EPA
Thomas L. Cabbage III, DOE
John Mullis, DOE
Pat Halsey, DOE
Amy Fitzgerald, ORRCA
Ron Woody, ORRCA
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