EPA Comments on Three DOE Public Meeting "FACT SHEETS"

A. Site Selection

1. First page, Green Box on Left. The text states:

   DOE has worked collaboratively with the U.S. Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC) on a science-driven approach that ensures a safe and protective design for the proposed engineered disposal facility.

EPA Comment: This is an incorrect statement. EPA has not worked with DOE on anything specific regarding "design." EPA has been presented with a layout of the cells but has never approved any design elements. This fact sheet should be about site selection. Therefore, please change the text to:

   DOE has worked collaboratively with the U.S. Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC) on a science-driven approach to identify a suitable location for the proposed engineered disposal facility. The selection of Site 7c also presents the best location to plan for a safe and protective design.

2. First page, Considerations for Site Selection, first paragraph. The text states:

   DOE, in coordination with EPA and TDEC, evaluated the geology, groundwater flow, and anticipated land use associated with each site.

EPA Comment: Please change text to:

   DOE, in coordination with EPA and TDEC, evaluated the geology, groundwater elevation and flow direction, and anticipated land use associated with each site

3. First page, Considerations for Site Selection, third paragraph. The text states:

   After collecting extensive geologic and groundwater data from numerous investigations, DOE selected this site due to its isolation from flooding concerns, significant groundwater resources, and streams. Data reveals that groundwater flows from Pine Ridge toward Bear Creek, with some lateral flow to the northern tributaries, while mostly avoiding the EMDF site.

EPA Comment: Please change the text to:

   After collecting extensive geologic and groundwater data from numerous investigations, DOE selected Site 7c due to its isolation from flooding concerns, its anticipated low groundwater level across the site, and its distance from Bear Creek and the adjacent tributaries. The exact nature of groundwater elevation and flow beneath Site 7c will be determined in a post-Record of Decision groundwater elevation field study.

4. Second page, EMDF Design. The text states:

   The 25-acre disposal cell area will be constructed in three phases and contain four waste cells (below).

EPA Comment: Please verify this text as the ROD states in one instance that five waste cells will be constructed.

5. Second page, EMDF Design, second paragraph. The text states :

   The facility's design will use engineering features to ensure waste remains isolated from the surrounding environment.

EPA Comment: All of the design aspects of the EMDF have not been reviewed by EPA and therefore EPA cannot support this generalized statement. Please change the text to read:

> The DOE has proposed a design for the liner/leachate collection system at the EMDF that will use engineering features to ensure hazardous waste remains isolated from the surrounding environment. Refinement of the design will occur following the groundwater field demonstration.

6. Third page, Going Beyond Simulations, first paragraph. The text states:

> To ensure the safest and most informed facility design, DOE will conduct a field demonstration to approximate groundwater conditions after the EMDF is constructed.

EPA Comment: This reads that the test will occur **following** EMDF construction. Please change the text to:

> To ensure the safest and most informed facility design, DOE will conduct a field demonstration test to determine if the groundwater level will drop in elevation beneath a covered portion of Site 7c as is anticipated by DOE following full landfill construction.

7. Third page, Going Beyond Simulations, second paragraph. The text states:

> The field demonstration will take place in the knoll area where the undeveloped site's currently measured groundwater elevations are higher than the preliminary design liner system elevations.

EPA Comment: The "knoll area" is not identified in the referenced figure. Please indicate this location on the map.

8. Fourth page, Key Points - 1. The text states:

> Engineers and scientists from DOE, EPA, and TDEC collected and analyzed extensive data to make informed decisions for the site selection and design for the EMDF to ensure it is safe and protective.

EPA Comment: Please change the text to:

> Engineers and scientists from DOE, EPA, and TDEC collected and analyzed extensive data to make informed decisions for the selection of Site 7c as the EMDF location to ensure it is safe and protective. The final design of the EMDF will occur following the results of the groundwater field demonstration.

9. Fourth page, Key Points - 3. The text states:

> A field demonstration project to simulate the expected conditions at the disposal facility will provide added assurance that the protective design functions as planned.

EPA Comment: Please change the text to:

> Following Record of Decision approval, a field demonstration test will be conducted to determine if groundwater levels drop beneath a covered portion of Site 7c to verify the expected conditions following landfill construction. The results of this test may influence final landfill design.

B. Waste Acceptance Criteria

1. First page, Green Box on Left. The text states:

DOE has worked collaboratively with the U.S. Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC) on a science-driven approach that ensures a safe and protective design for the proposed engineered disposal facility.

EPA Comment: This is an incorrect statement. EPA has not worked with DOE on anything specific regarding "design." EPA has been presented with a layout of the cells but has never approved any design elements. Therefore, please change the text to:

DOE has worked collaboratively with the U.S. Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC) on a science-driven approach to identify a suitable location for the proposed engineered disposal facility. The selection of Site 7c also presents the best location to plan for a safe and protective design.

2. Second page, What is prohibited… first text box. The text states:

Waste must be generated from Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-related cleanup on DOE's Oak Ridge Reservation.

EPA Comment: Please change the text to:

Only hazardous waste generated from Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-related cleanup actions on DOE's Oak Ridge Reservation is allowed for disposal.

3. Third page, EMDF Waste Lot Concentration Limits. First paragraph. The text states:

The scenario involves a person drilling a well through the EMDF cover system and into the waste and then tilling the excavated waste into a garden near the disposal facility. Due to the thickness of the cap, there is no direct exposure to the waste under any evaluated future residential scenario, including constructing a basement.

EPA Comment: These concepts do not make sense. Why would drilling a water well through the cap never reach waste if it fails to reach water? All water wells are drilled until they reach water. Also, how does constructing a basement on the landfill (in the cap) not expose an intruder/future resident from reaching the hazardous waste? Please rewrite for clarity and explain how the public is protected in each scenario.

4. Third page, EMDF Waste Lot Concentration Limits. Second paragraph. The text states:

The full table and listing is available in the Draft Record of Decision available at: https://doeic.science.energy.gov/uploads/F.0615.031.0206.pdf.

EPA Comment: The webpage is not accessible. Please check to make sure it is available and working before the public meeting is held.

5. Third page, EMDF Landfill Inventory Limits. Third paragraph. The text states:

DOE conducted an additional analysis for the 1,000-year to 10,000-year timeframe to determine if any less mobile radionuclides should be considered or require Landfill Inventory Limits. Only one additional isotope, beyond the three identified, presents a risk during this extended time period based on the projected inventory to be disposed of in the landfill.

EPA Comment: What is the radionuclide and how will it me managed? You leave the reader wondering what DOE isn't telling them. Rewrite this paragraph and make it clear what radionuclide might be a problem and how it will be managed as part of the WAC.

6. Fourth page, What is a WAC Compliance Plan? first paragraph. The text states:

> DOE will develop a WAC Compliance Plan to explain the basis for WAC use and describe implementation.

EPA Comment: The text should be changed to:

> DOE will develop a WAC Compliance Plan in consultation and with the approval of EPA and TDEC to explain the basis for WAC use and describe implementation.

C. Discharge Limits

1. First page, Green Box on Left. The text states:

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2. First page, Setting Protective Limits… Third paragraph. The text states:

> Fishing does not usually occur in Bear Creek due to its restricted location on the ORR and the low number and small size of fish in the stream. However, to ensure the highest protection, EMDF landfill wastewater discharges into Bear Creek are being established at levels that will be safe for recreational fishing at the stream.

EPA Comment: This is an incorrect statement. Two academic publications document fisherpersons outside of the DOE Reservation fishing along Bear Creek where there are no access controls. TDEC has conducted a survey of fisherpersons along Bear Creek outside of the reservation. Therefore, this section should be rewritten:

> Although fishing has been noted off of the DOE-controlled property along Bear Creek, it appears to be limited with caught fish frequently being of small size and limited in number. However, to ensure the highest protection to the public, EMDF landfill wastewater discharges into Bear Creek are being established at levels that will be safe for recreational fishing in the uncontrolled reaches of the stream.