



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Remediation - Oak Ridge
761 Emory Valley Road
Oak Ridge, Tennessee 37830

September 25, 2018

Mr. John Michael Japp
Oak Ridge Office of Environmental Management
U.S. Department of Energy
Post Office Box 2001
Oak Ridge, Tennessee 37831

Dear Mr. Japp

Response to September 6, 2018, letter from DOE – Request for Approval to Use Polyurethane Foam for Administrative Waste Acceptance Criteria Void Space Mitigation for the East Tennessee Technology Park at the Environmental Management Waste Management Facility

The Tennessee Department of Environment and Conservation, Division of Remediation-Oak Ridge Office, has reviewed the above referenced request pursuant to the Federal Facility Agreement for the Oak Ridge Reservation. Based on the contents of the letter, the State agrees to the use of polyurethane foam for administrative Waste Acceptance Criteria (WAC) void space mitigation at the Environmental Management Waste Management Facility (EMWMF) for the following facilities at the East Tennessee Technology Park: K-131, K-631, K-1210, K-1220, K-633, and associated tie lines.

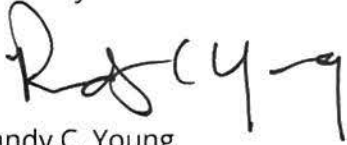
Any future requests to utilize polyurethane foam for administrative WAC void space mitigation at the EMWMF must be made on a case-by-case basis and will only be considered by the State once additional testing of the foam has occurred and the foam has been certified to be suitable for the intended purpose of preventing differential settling of the EMWMF cap for the duration of the hazard presented by the waste disposed. At a minimum, additional testing should include:

- longer term compressibility tests on larger samples, as recommended in Argonne National Laboratory's *Study of Degradation of Commercial Rigid Polyurethane Foam Used for Filling of Process Gas Equipment (PGE) and Pipes and Corrosion Behavior of Pipes at the K-25/K-27 (ANL-06/32)*;
- evaluation of the strength of foam formed in-situ, as opposed to formed by the manufacturer, as per the Argonne Study;
- evaluation of the potential impacts of leachate and associated chemicals on the long-term stability of the foam; and

- evaluation of the potential for bacteria and fungi known to degrade polyurethane to be encountered in the landfill environment.

Questions or comments concerning the contents of this letter should be directed to Angel Perkey at the above address or by phone at (865) 220-6559.

Sincerely

A handwritten signature in black ink that reads "Randy C. Young". The signature is written in a cursive style with a horizontal line at the end.

Randy C. Young
FFA Project Manager

xc: Constance Jones - EPA
Karen Deacon - DOE
Pat Halsey - DOE
Shelley Kimel - SSAB
Amy Fitzgerald - ORRCA
Ron Woody - ORRCA
Traci Cofer - ORRCA