Waste Disposal Capacity for Oak Ridge Reservation Landfills

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Oak Ridge Reservation (ORR) Landfills

- DOE operates several landfills for safe and compliant disposal of ORR remediation, demolition, and sanitary waste.
- Operating landfills are permitted by Tennessee Solid Waste Division (SWD) or fall under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
- Each landfill has established criteria to determine whether waste is acceptable for disposal.
Landfills are located near the Y-12 National Security Complex.
Different landfills available for different waste streams

<table>
<thead>
<tr>
<th>Waste Disposal Facility</th>
<th>Type</th>
<th>Waste Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction/Demolition Landfill VII</td>
<td>TDEC Permit</td>
<td>Construction/Demolition debris</td>
</tr>
<tr>
<td>Industrial Landfill IV</td>
<td>TDEC Permit</td>
<td>Classified, sanitary industrial waste (including office waste, equipment, construction/demolition debris)</td>
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<tr>
<td>Industrial Landfill V</td>
<td>TDEC Permit</td>
<td>Sanitary industrial waste (including office/cafeteria waste, equipment, construction/demolition debris)</td>
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<tr>
<td>EMWMF</td>
<td>CERCLA</td>
<td>Low-level radiological and/or chemical soil and demolition debris, equipment, cleanup waste</td>
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<td>EMDF</td>
<td>CERCLA</td>
<td>In planning process</td>
</tr>
</tbody>
</table>
Waste disposal decisions follow waste hierarchy

- **Recycle/Reuse**: Materials identified and handled by the project

- **Sanitary Waste ORRL**: Classified, same type of waste as Landfill V
- **Landfill IV**: Sanitary materials, (including office/cafeteria waste, equipment, construction/demolition debris)
- **Landfill V**: Sanitary materials, (including office/cafeteria waste, equipment, construction/demolition debris)
- **Landfill VII**: Construction/Demolition debris

- **CERCLA Waste EMWMF**: Low-level radiological- and/or chemical-contaminated soil and demolition debris and equipment

- **Ship Offsite**: Waste that does not meet ORR disposal facilities acceptance criteria
Landfill IV (Classified Sanitary/Industrial)

- 4.2-acre landfill, opened in 1989
- Receives classified sanitary industrial waste from ORR sites
- Permitted total capacity of 89,000 cubic yards
- Currently about 50% full
- Constructed airspace approximately 71,000 cubic yards
Landfill V (Sanitary/Industrial)

- 25.9-acre landfill, opened in 1994
- Lined disposal areas receive office trash, cafeteria waste, and other sanitary waste from the ORR sites
- Approximate total capacity of 2.1 million cubic yards
- Currently about 40% full
- Constructed airspace approximately 1.3 million cubic yards
Landfill VII (Construction/Demolition Debris)

- 30.4-acre site, opened in 2001
- Unlined disposal areas receive building construction and demolition debris
- Approximate total capacity of 2.08 million cubic yards
- Currently about XX% full
- Constructed airspace approximately 1.1 million cubic yards
EMWMF (Low-level CERCLA Cleanup Waste)

- 28-acre landfill, opened in 2002
- Lined disposal cells receive low-level radiological and chemical waste from CERCLA cleanup of ORR and associated sites
- Approximate total capacity of 2.18 million cubic yards
- Planned final cap redesign will increase capacity to approximately 2.3 million cubic yards
- Currently about 75% full
Environmental Management Disposal Facility

- Currently in the CERCLA investigation/planning phase
- On-site alternatives – new Bear Creek Valley CERCLA disposal facility – Various sites under consideration
- Potential disposal site capacities range from 2.2M to 2.8M yd$^3$
Current and planned waste disposal capacity supports cleanup of the ORR

- ORR has sufficient permitted capacity for sanitary/industrial landfills
- EMWMF has sufficient capacity for the completion of ETTP Cleanup
- Additional capacity (EMDF) is necessary to support the future cleanup of Y-12 and ORNL
QUESTIONS?