

Briefing on American Recovery and Reinvestment Act Cleanup Waste from the Separations Process Research Unit Project

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EM Environmental Management

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Overview: DOE-EM's American Recovery and Reinvestment Act (ARRA) Funding

- DOE-EM has received \$6 billion in ARRA funding
- Funding is distributed to 18 sites to create jobs and accelerate cleanup activities
- ARRA funded activities will generate greater volume of waste in the near term for treatment and/or disposal



Disposal Policy – DOE Radioactive Waste Management Manual M435.1-1

- Preference is disposal on site where generated
- If onsite disposal is not practical, disposal at another DOE site
- Commercial facilities are also considered
 - If cost effective and in the Federal Government's best interest
 - If protective of public and worker health and safety and the environment



Waste disposal is a significant cost element

- o Much of the waste and material generated through site cleanup is high volume, with low (or no) radioactivity
 - Contaminated Soil
 - Demolition debris
 - Scrap metal and surplus equipment from radiological areas

- o EM endeavors to optimize project plans, including consideration of:
 - All available disposal alternatives – including commercial
 - Strategies to disposition low-activity materials and wastes



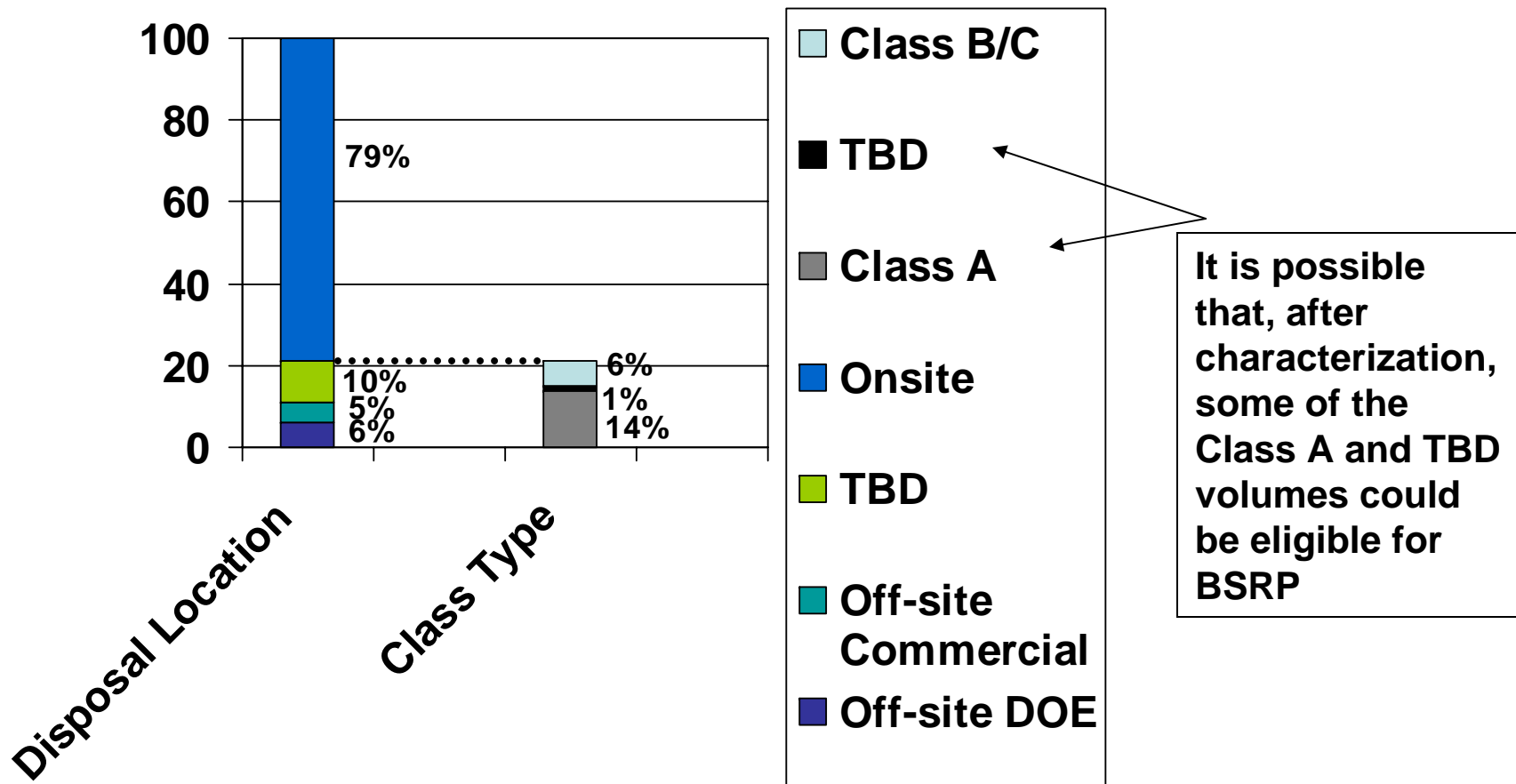
Offsite Waste Disposition Options Available to DOE Waste Generators

- LLW and MLLW disposal at Nevada Test Site
- Class A (per NRC regulation 10 CFR 61.55) LLW and MLLW at Energy Solutions Clive, UT, commercial disposal facility
- Barnwell and Richland compact LLW disposal facilities if the generator is in a compact state
- Transfer low activity radioactive waste to a licensed commercial facility for “bulk survey and release” (BSRP) (licensed in Tennessee) and disposal in Subtitle C or D landfills



LLW Volume – Complex-wide Disposal Overview

The data here reflects baselined waste forecasts from 2009 WIMS dataset and provides a representative picture of LLW disposal plans.



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Separations Process Research Unit (SPRU)

- Located in Niskayuna, New York. Built 1947-1949 and closed in 1953. Used as a pilot plant to research the chemical process for plutonium extraction.
- After SPRU closed, equipment was flushed and drained and waste disposed off-site
 - Currently, pilot plant buildings being removed and residual soil contamination being cleaned up
- SPRU is located on the Knolls Atomic Power Laboratory (KAPL), and is managed by DOE
 - SPRU consists of 30 acres out of the 180 acre KAPL site



ARRA Activities at SPRU

- Cleanup by the end of 2011 accelerated in part due to ARRA funding
- SPRU received \$14.8 million to accelerate the remediation of radioactively-contaminated soil
- An additional \$37 million in ARRA funds will accelerate decontamination and demolition (D&D) of two contaminated buildings, six underground waste storage tanks, and a piping tunnel
- Project plans estimate approximately 42,000 cubic yards of waste will require offsite disposal
 - 36,000 cubic yards to Energy Solutions, LLC, in Clive Utah (Lower Level soil, Pilot Plant debris and soil)
 - 6,000 (North Field soil) TBD



Project Progress at SPRU

- Progress on Lower Level contaminated soil project
 - 70% complete
 - 5,700 cubic yards of soil shipped to *Energy Solutions*, Clive
- Progress on Pilot Plant decommissioning
 - 34% complete
- Excavation in the North Field is planned to start in mid-October, 2009.
- The project end date is November 2010.



SPRU North Field Soil

- BSFR disposition being considered using a commercial firm licensed by Tennessee (NRC Agreement State)
- Radioactivity resulting from drum storage prior to 1953 is found primarily in very low concentrations in upper 6” of soil
 - All soil samples from the North Field meet the acceptance criteria for the BSFR disposal program
 - Prior to shipping, soil will be analyzed by the cleanup contractor at SPRU against BSFR disposal limits
 - Additional analysis takes place by the BSFR vendor after the waste is shipped to ensure that the disposal limits are not exceeded
- No chemicals of concern in North Field soil

