EM Packaging and Transportation Update

Southern States Energy Board
Radioactive Materials Transportation Committee
December 1, 2010

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Office of Environmental Management
FY11 Budget Overview for Packaging and Transportation

• Four areas supported:
  – Operations Support: Consists of programs and tools to assist the sites in making their shipments.
  – Stakeholders: Fund the State Regional Groups and NTSF.
  – Transportation Emergency Preparedness
  – Packaging Certification Program: certification of fissile and Type B packagings which conform with DOE and NRC requirements.

• No final decisions on funding levels at this time.

Continuing Resolution in effect until December 3.
LLW/MLLW Disposition Efforts - Highlights

- **American Recovery and Reinvestment Act** providing needed funding for solid waste disposition, soil and groundwater remediation, and facility decontamination and decommissioning projects
  - Increased volumes of LLW/MLLW are expected in next few years

- To ensure disposal plans are optimized, EM provided enhanced guidance to sites to ensure all disposal alternatives are evaluated
LLW/MLLW Disposition Efforts - Highlights

• Continued use of onsite disposal at large cleanup sites
• Continued optimized operations of DOE disposal facilities, especially for those wastes that cannot be disposed at commercial facilities
  – Nevada National Security Site (NNSS) [Formerly Nevada Test Site] operates as regional LLW and MLLW disposal facility
  – New site-wide EIS under development which will analyze continued use of NNSS as regional disposal facility
• Current Mixed Waste Disposal Unit at NNSS closes November 2010
  – State of Nevada approved new mixed waste disposal cell in July 2010
  – Construction initiated in August 2010 and is nearing completion
  – Operation scheduled 2nd quarter of FY 2011
  – RCRA storage permit received
**Shipments Numbers have Increased as a Result of ARRA**

<table>
<thead>
<tr>
<th>FY08 Shipments</th>
<th>FY09 Shipments</th>
<th>FY10 Shipments</th>
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<tbody>
<tr>
<td>• TRU 800</td>
<td>• TRU 970</td>
<td>• TRU 1,180</td>
</tr>
<tr>
<td>• LLW 6,650(^1)</td>
<td>• LLW 4,800(^1)</td>
<td>• LLW 16,150(^1)</td>
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<tr>
<td>• MLLW 720</td>
<td>• MLLW 530</td>
<td>• MLLW 420</td>
</tr>
<tr>
<td>• Other 430(^2)</td>
<td>• Other 400(^2)</td>
<td>• Other 250(^2)</td>
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<tr>
<td>Total 8,600</td>
<td>Total 6,700</td>
<td>Total 18,000</td>
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1  Shipment definition revised to reflect: 1 railcar = 1 shipment

2  “Other” includes non-rad HAZMAT

3  Through 4th Quarter FY10
Where does DOE’s LLW/MLLW go to be disposed?

- Monthly disposal volumes from all EM shipping sites (June 2009 -July 2010) were collected and analyzed by DOE/EM.
- Based on the first 6-months data:
  - 92.1% of EM’s LLW+MLLW volume was disposed at the DOE site where generated
  - 6.7% of EM’s LLW+MLLW was disposed at the Energy Solutions Clive, Utah, commercial facility
  - 1.2% of EM’s LLW+MLLW was disposed at NNSS
- In FY 2010 – completed 18,000 off-site shipments
Increasing Sustainability and Efficiency in the Use of Modes of Transportation

- Executive Order 13514 (October 5, 2009) established as federal policy an initiative to increase sustainability and efficiency in the use of modes of transportation (motor carrier, rail, air, truck, ship, etc).

- DOE/EM is examining ways to improve transportation efficiency

- A meeting was held at Radwaste Summit 2010 in September to open a dialog among representatives of DOE sites and transportation industry representatives from rail, motor carrier and intermodal facility operators

- Feedback from industry was positive and dialog among the parties continues with the expectation of improved efficiency and sustainability for future DOE shipments.
EM Offsite Transportation Events
FY 2010

- **October 2, 2009**: Paducah received a Notice of Violation (NOV) from the Kentucky Department for Environmental Protection. The NOV alleges inadequate hazardous waste determinations and that the ensuing hazardous waste was incorrectly shipped to an off-site disposal facility as non-hazardous waste without the required hazardous waste manifests. The NOV non-compliances include five instances where waste was shipped under non-hazardous bills of lading, but was later determined to be hazardous waste for various reasons. Six 2009 manifests lacked a transporters signature. Also a shipment of 22 drums to Utah in which 20 drums were identified as not being LDR compliant and the entire shipment was rejected and shipped back to PGDP. A written plan of action to address the NOV violations was prepared.

- **October 20, 2009**: LANL received a Notice of Noncompliance from the Tennessee Department of Environment and Conservation (TDEC). The Notice of Noncompliance was issued because LANL allegedly failed to obtain a license from the State of the Tennessee prior to the transport of a radioactive materials shipment to a waste processor in Tennessee. LANL applied for and was issued a one-time license by TDEC enabling the shipment to be completed.

- **November 23, 2009**: A shipment of Low Level Waste originating from ANL arrived at the Nevada Test Site; however, the driver had traveled through Las Vegas Valley, which is not an approved route. Use of the carrier was suspended.

- **May 27, 2010**: Two shipments from OR to EnergySolutions reversed shipping papers - error discovered before arrival and drivers traded shipping papers - as a result, OR initiated a new checklist to prevent reoccurrence.
EM Offsite Transportation Events
FY 2011

• November 12, 2010: A shipment of radioactive waste was sent from the Separations Process Research Unit (SPRU) site to the Energy Solutions disposal site in Clive, UT. Upon arrival at the disposal site, a review of the shipping manifest by Energy Solutions personnel identified a potential error in the curie estimate for the shipment and the manifest for the shipment. Energy Solutions halted the unloading and disposal of the waste and notified SPRU personnel of the issue. SPRU personnel are verifying the curie calculations and the shipment manifest. The shipment was secured by Energy Solutions personnel at the Clive facility. Radiological characterization calculations were reviewed and recalculated. Fact findings and critiques are ongoing.

• November 15, 2010: Energy Solutions requested a review of fifteen containers shipped from Oak Ridge ETTP for disposal between February 23 and March 15, 2010. The results of testing upgraded software by Energy Solutions indicated the possibility that the containers had been misclassified. The shipper has stopped shipments pending the review. These containers were classified and shipped as Class A, when they should have been identified as Class C, which Energy Solutions is not licensed to dispose in Utah. The non-conservative error in the software had been discovered and corrected by ETTP in March 2010, and 78 containers in storage with a default assignment of Class A were corrected to Class C; however, a backward-looking extent of condition had not been performed.
Update on the GTCC LLW Disposal EIS

- Draft EIS scheduled for issuance in January 2011
- Analyzes approximately 12,000 m$^3$ of wastes requiring disposal over several decades
- Alternatives include geologic disposal at WIPP and construction/operation of new disposal facilities (trench, vault, and boreholes) at existing DOE sites and generic commercial locations
  - Combinations of disposal methods may be appropriate based on the different waste types
- 120 day comment period with Public Hearings to be held in Washington, D.C. and at each of the sites being evaluated in the Draft EIS: Carlsbad, Hanford, Idaho, Los Alamos, Nevada, and Savannah River
- Goal is to issue Final EIS in 2012 (approx. 1 year after issuance of Draft EIS)
- Before issuing a Record of Decision, DOE must submit a Report to Congress on disposal alternatives and await Congressional action

For additional information on the GTCC EIS visit [http://www.gtcceis.anl.gov/](http://www.gtcceis.anl.gov/)
Mercury Management Project

• The Mercury Export Ban Act of 2008 requires DOE to provide storage and long-term management of mercury (non-radioactive) generated in the U.S. The responsibility for site(s) selection has been assigned to EM.

• Draft EIS Published in January 2010

• Sites analyzed in the EIS are Hanford (WA), Idaho National Lab (ID), Grand Junction (CO), Hawthorne (CA), Savannah River (SC), Andrews (TX), and Kansas City (MO)

• WCS facility in Andrews, TX is the preferred site

• Critical Milestones
  - Final EIS, Record of Decision, and selection of mercury storage site(s)  Fall 2010
  - Mercury storage facility ready to accept mercury  01/01/13
  - DOE mercury storage facility operating under RCRA permit  01/01/15

For additional information on the GTCC EIS visit:  http://www.mercurystorageeis.com
Latest DOE LLW/MLLW Forecasts

- DOE updates its life-cycle LLW/MLLW forecasts annually
  - Information publically available in the Waste Information Management System (WIMS)
- Expect the next call for data letter out in November 2010 and population of data in WIMS by next Spring.
- EM issued its latest Prospective Shipment Report on November 23
  - Information represents 1 year snapshot – updated every 6 months
- Nearly 4.3 million m$^3$ of LLW/MLLW will be generated FY2010-2015
  - Vast majority targeted to be disposed on site
  - DOE plans to continue use of Nevada National Security Site and, as appropriate, commercial disposal
  - Disposal locations for some large volume streams remain TBD

WIMS can be found at [http://wims.arc.fiu.edu/WIMS](http://wims.arc.fiu.edu/WIMS)
Georgia Commodity Flow Survey

• A commodity flow survey of hazardous materials was conducted along Interstate 20 in Columbia County Georgia on June 9-10, 2010

• Participants included the Georgia Emergency Management Agency, Georgia Department of Public Safety, Columbia County Emergency & Operations Division, and local volunteers.

• Over a 24-hr period, approximately 6,100 commercial vehicles passed the survey point, including 336 HAZMAT vehicles carrying over 6.39 million pounds of hazardous materials, including two radioactive materials shipments (fresh fuel rods and LSAILI).
Questions?