

# **Hanford Spent Nuclear Fuel and Capsule Disposition Status**

Presented by Sen Moy  
*National SNF Strategy Meeting*  
August 08, 2007

# Hanford Spent Nuclear Fuel and Capsule Disposition Status

- Cesium/Strontium Capsule Disposition
- Spent Nuclear Fuel Disposition
  - K Basins Spent Nuclear Fuel
  - Fast Flux Test Facility Spent Nuclear Fuel

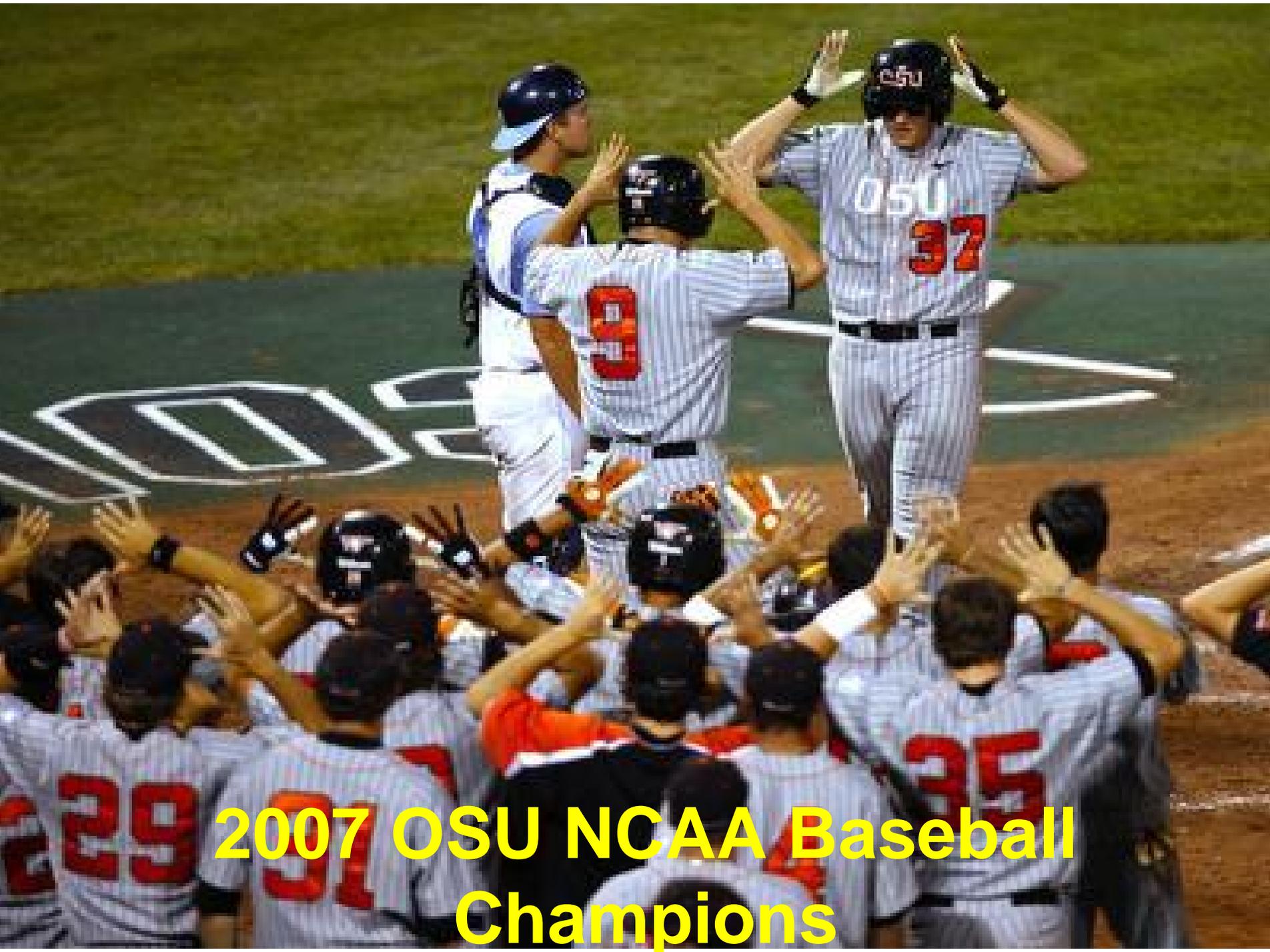


# July 11, 2006 SNF Meeting

## **OSU TRIGA FUEL**

- TRIGA fuel irradiated at Oregon State University\*
- Fuel stored in 13 Shielded Drums
- Scheduled to Consolidate at 200 Area Interim Storage Area in FY06
  - Overpacks fabricated for the drums
  - Overpacks to be emplaced in Storage Vaults
  - On-site Shipping authorization in review

\* 2006 NCAA Baseball Champions



**2007 OSU NCAA Baseball  
Champions**

# Cesium/Strontium Capsule Disposition

- 1,936 cesium and strontium capsules currently stored at WESF
  - 1335 capsules containing cesium chloride
  - 601 capsules containing strontium fluoride
  - 127 million curies in August 2003
- Capsules currently designated mixed high-level waste due to process impurities [barium, chromium, cadmium, silver, lead].

# Cesium/Strontium Capsule Disposition

- Tri-Party Agreement milestone M-92-05 required RL to assess viability of direct disposal of capsules by 6/30/07; and to submit change request to establish enforceable milestones leading to capsule disposition by 2028.

# Cesium/Strontium Capsule Disposition

- RL completed assessment to support 6/30/07 milestone date
  - National SNF Program (NSNFP) completed scoping performance assessment for direct disposal
  - Assessment based on use of 122 18" diameter x 10' long DOE Standardized Canisters to satisfy 1,970 watt/canister limit (based on 2025 start of shipping)

# Cesium/Strontium Capsule Disposition

- RL completed assessment to support 6/30/07 milestone date
  - Assessment indicate that the five hazardous constituents are below drinking water standards at the site boundary
  - NSNFP report recommended that the assessment be performed to the LA approved model
  - Assessment data to be used as a basis for removal of federal waste codes

# Cesium/Strontium Capsule Disposition

- Based on the assessment report, the Tri-Party Agreement milestone has been extended to June 30, 2017 to allow DOE to work this disposition path

# K Basins Spent Nuclear Fuel

- 386 Multi-Canister Overpacks (MCOs) containing K Basins fuel interim stored at the Canister Storage Building
- Up to 3 additional MCOs may be required for removal of remaining fuel from K-Basins
- Loading, drying, and shipment of final MCOs from K Basins planned in FY 2008

# Fast Flux Test Facility Fuel

- Off-load of non-sodium bonded fuel at FFTF into Interim Storage Casks (ISCs) completed. Final ISC containing non-sodium bonded fuel transferred to 200 Area in April 2006.



*Above: Interim Storage Cask receipt at 200 Area Interim Storage Area*

- Transfer of sodium bonded fuel to INL scheduled to start in late September 2007 through May 2008