



# ENERGY *SOLUTIONS*

Barnwell Facility Update  
Presented at  
Governor's Nuclear Advisory Council Meeting  
December 8, 2011

- Safety
- Compliance
- Barnwell Disposal Operations
- Barnwell Processing Facility
- Barnwell Environmental and Dosimetry Laboratory
- Nuclear Services Support Facility
- Hittman Trucking

- Barnwell Complex
  - First Aids - Zero
  - Total Recordable Case Rate (TRC) 0.0
  - Day Away, Restricted or Transferred (DART) 0.0
  - Days Away Case (DAC) 0.0
- National Safety Council
  - 2011 Perfect Record Award
- Hittman Trucking
  - National Private Truck Council – 2011 Awards
    - First Place Regional small trucking firm
    - First Place Regional large trucking firm
  - SaferStats score was .49 accidents per million miles

- 42 Years of Uninterrupted Operations
- *EnergySolutions* Operation Assessments/Observations
  - Internal Assessments
  - External Assessments
  - Independent Assessments
  - Management Field Observations
- DHEC Licensing and Oversight
  - Extensive license conditions
  - Inspections
  - On-site inspector
    - Daily shipment inspections
  - Engineers
    - Weekly site inspections
  - Staff
    - Unannounced semi-annual license inspections

# Barnwell Disposal Operations

- 235 Acres Owned by the State of South Carolina
  - EnergySolutions leases the site from South Carolina Budget and Control Board
  - EnergySolutions operates the disposal site under SC DHEC Radioactive Material License 097
- Atlantic Compact member
  - Acceptance of Class A/B/C waste shipments 7 days per week
  - Acceptance of large components and irradiated hardware shipments
- Institutional Activities
  - Site maintenance
  - Environmental monitoring



# Class A/B/C Waste Disposal

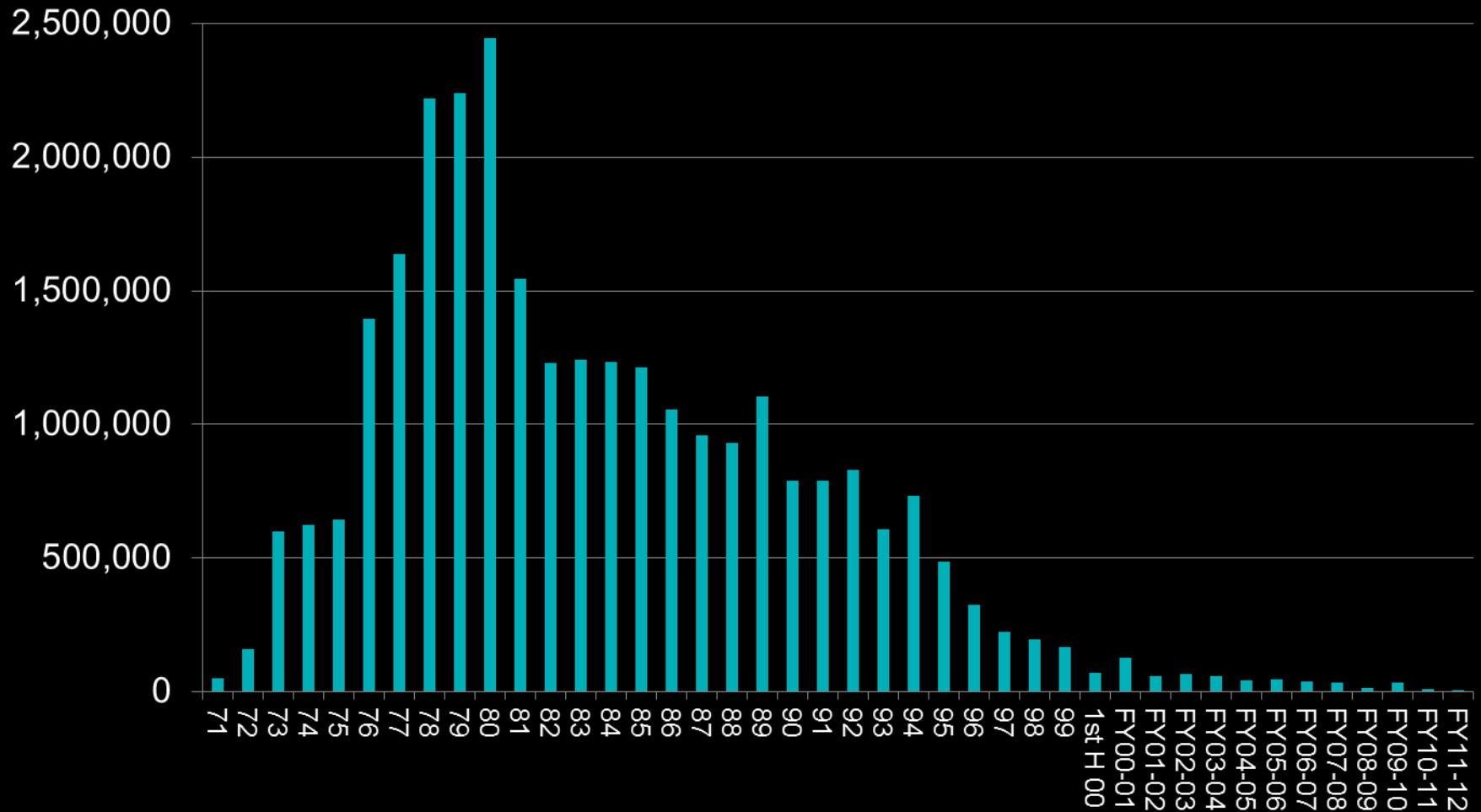


# Large Component Disposal



# Barnwell Disposal Volumes

■ Volume (cu ft)





# Recent Waste Volumes

<b>Fiscal Year</b>	<b>2008/2009 (ft<sup>3</sup>)</b>	<b>2009/2010(ft<sup>3</sup>)</b>	<b>2010/2011(ft<sup>3</sup>)</b>	<b>2011/2012(ft<sup>3</sup>)</b>
Routine Utility Waste	12,108	6,637	10,983	615
Non-Utility Waste	148	60	67	0
Steam Generators	0	27,304	0	0
Irradiated Hardware	58	0	0	116
<b>Fiscal Year Total</b>	<b>12,314</b>	<b>34,001</b>	<b>11,050</b>	<b>731</b>

- *EnergySolutions* employees in South Carolina: 267
  - Barnwell Disposal - 34
  - BPF - 6
  - NSSF - 14
  - Hittman Trucking - 38
  - Aiken - 85
  - Columbia - 90
- Average length of employment at the Barnwell Complex
  - Over 20 years

# Decommissioning Activities

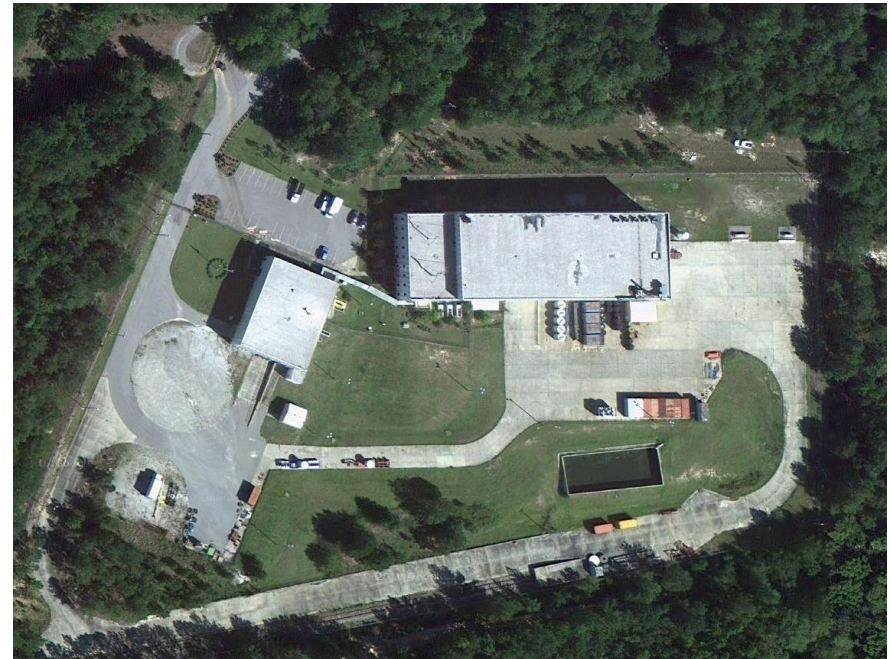
- Phase I
  - Phase 7, 8, 9 Cap Construction - Complete
  - Phase 1 & 2 Cap Repairs - Complete
  - Building and Equipment Disposition - Complete
  - SE Pond Construction - Complete
  - Site Grading & Grassing – Complete
  - All Completed Trenches Capped - Complete
- Phase II
  - Building and Equipment Decommissioning
  - Site Stabilization
  - Final Site Survey
  - Project Management

# Building Decommissioning



# Barnwell Processing Facility (BPF)

- 17-acre facility that consists of two primary buildings
  - 101 – 7,500 ft<sup>2</sup>
  - 201 – 20,000 ft<sup>2</sup>
  - 301 – 8,000 ft<sup>2</sup> future RCRA treatment facility
- Services provided
  - Volume reduction
  - Dewatering
  - Waste treatment
  - Decontamination
  - Water processing
- The BPF shares a boundary from the west with the Department of Energy Savannah River Site



# BPF Building 101

- Climate controlled concrete facility
  - 7,500 square feet
- Large open work bay for processing and compacting various radioactive material and waste streams
- Sort and Segregation Facility (SSF)
  - 700 square feet
- Super compactor



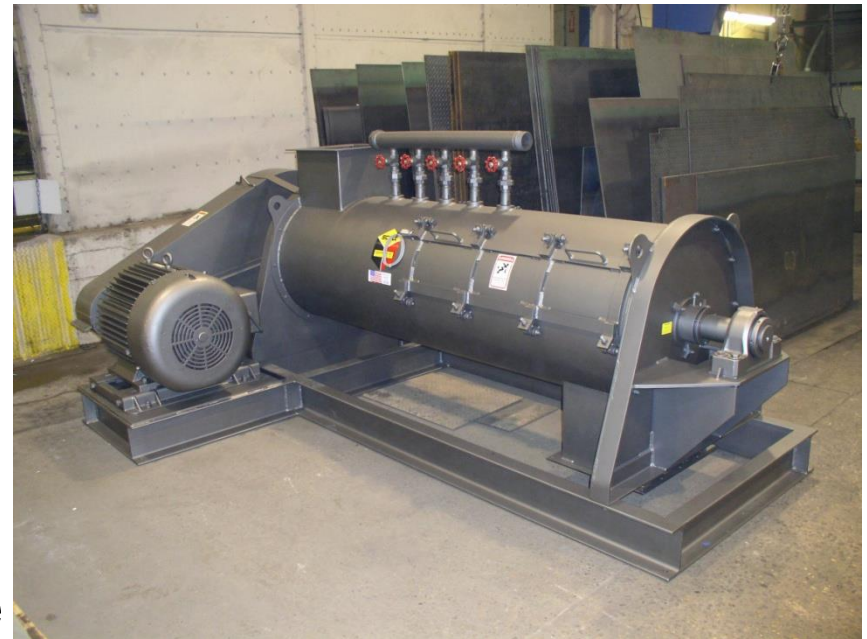
# BPF Building 201

- 20,000 square foot climate controlled concrete facility
- Open floor space for processing radioactive materials and waste
- Radiological waste testing laboratory
- 80-ton overhead bridge crane



# BPF Building 301 RCRA Treatment Facility (future)

- 8,000 square foot steel building with concrete floor and foundation
  - RCRA Part B permit
  - Building design is approved
  - Two unloading bays
  - Process area
  - 50-ton overhead bridge crane
  - 5,000 square foot future expansion





# Barnwell Environmental and Dosimetry Laboratory (BEDL)

- Environmental Monitoring
- Radiological Laboratory
- Radiation Dosimetry
- Engineering Support
- Site Characterization
- Hazardous Material Management



- *Containers*

- Answers for Special Packaging Needs
- Proven Design and Reliability
- Large Equipment Packaging
- High Rad
- Interim and Long-Term Storage
- Waste Shipping, Processing, & Disposal



# Hittman Trucking

- Two Locations

- Barnwell, SC
- Oak Ridge, TN

- Assets

- 81 Tractors
- Equipment
  - Flat Beds
  - Vans
  - Curtain Trailers
  - Cask Trailers
  - 80-ton Multi Axle Trailer



- Capabilities

- NRC NQA-1 Approved Program
- New and Used Nuclear Fuel Transport
- DOE Classified Shipments
- RAMQC Shipments
- Integrated Proprietary Cask Fleet
- Oversize/Overwidth Project Management





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**QUESTIONS?**