

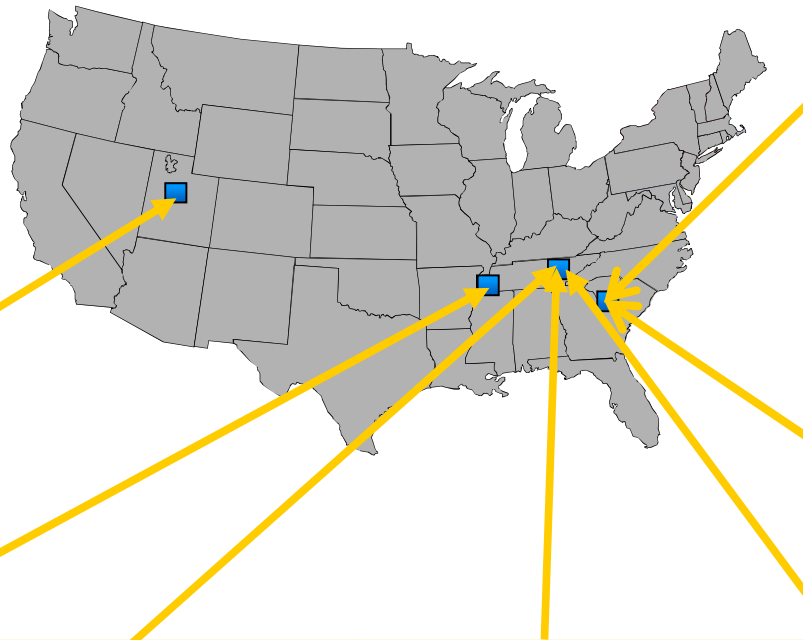
The logo consists of two curved lines, one blue and one green, arching over the text. The text 'ENERGY SOLUTIONS' is centered, with 'ENERGY' in blue and 'SOLUTIONS' in white. Two horizontal lines, one blue and one green, extend from the left and right sides of the text.

ENERGY SOLUTIONS

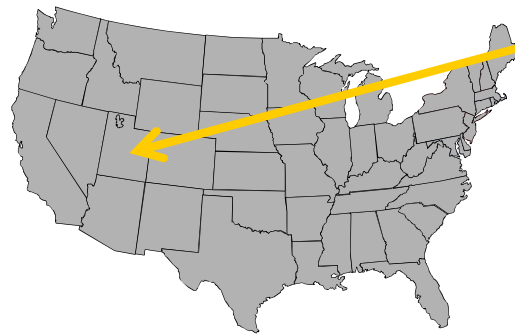
Processing Capabilities
February 2012

Facilities

- ❖ Six (6) Licensed Operations Facilities
- ❖ Two (2) Disposal Facilities
- ❖ Logistics Operations



Clive Disposal



- ❖ Class A Low-level Waste Disposal
- ❖ Mixed Low-level Waste Treatment
- ❖ Mixed Low-level Waste Disposal



Clive Disposal

Mixed Waste: Treatment and Disposal

- ❖ Stabilization
- ❖ Solidification
- ❖ Vacuum Thermal Desorption (VTD)
- ❖ Macroencapsulation



Bear Creek Operations

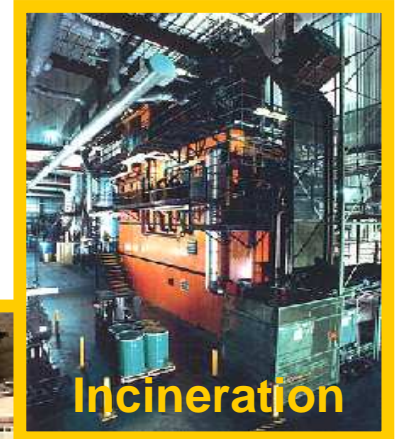


Bear Creek Operations



Oak Ridge, TN

- ❖ Incineration (2 units)
 - Solids, Liquids, Oils, and Sludges
- ❖ Compaction
 - Largest LLW Compactor in U.S.
- ❖ Metal Melt Furnace
 - Produce 10,000 Kg Shield Blocks for High Energy Physics Labs
- ❖ RCRA Part B Mixed Waste Permit
- ❖ Waste Certification & Transfer Operations for Clive Disposal
- ❖ Green is Clean



Incineration



Compaction



Metal Melt

Transfer Station Operations



- ❖ Commodity DAW and Metals “Commercially Certified” for Clive disposal:
 - Ensures full compliance with Clive WAC and license conditions
- ❖ Customer Benefit:
 - Speed of processing/disposition (less than 45 day average to disposal)
 - Use of Bear Creek’s Utah Site Access Permit



Incineration

- ❖ Capacity: 1600 lbs/hr each
- ❖ Processing: Solids, Oils, Sludges and Liquids
- ❖ Incineration Licensing:
 - Ash attribution model decouples generator ID after incineration providing operational and ALARA efficiencies
 - Authorization to “burn/recycle” gases and radioactive sources and standards



Metals Recycling



- ❖ Shield Block Contracts with MSU and KEK
- ❖ Capacity: >10M lbs per year
- ❖ Processing: Carbon, Stainless other soft metals less than 2% by mass
- ❖ Products (Beneficial Reuse: All products back to nuclear industry):
 - Irradiated hardware storage canister
 - Security barriers



Lead Casting/Recycling



- ❖ Outlet for contaminated lead recycling
- ❖ Products for sale to the nuclear industry:
 - DOT Type A Packages
 - Process Shields for Liners
 - Specialty Shields for Accelerators
 - Transfer Bells



“Green is Clean”



- The original “BSFR” program focused on only releasing material with non detectable amounts of contamination
- Bear Creek continues to offer “Green is Clean” services for clients
 - Pedigree analysis of material to ensure non-detect
 - Sampling and characterization to ensure non detectable levels
 - Disposition to TN Subtitle D landfill with accurate record of disposal

“Safe Check”



- Safe Check, our most popular used BWAP line.
- Safe Check waste processing is the same as Green is Clean waste processing with the exception of the release criteria.
- For Safe Check processing, landfill specific release limits have been approved and are used to ensure that residual activity is below levels determined to be appropriate for Subtitle D landfill disposal (i.e., conditional release).
- This processing method includes the assay of waste to determine the concentrations (if present) of nuclide specific activity and comparison to the conditional release criteria for landfill disposal.
- The current release criteria are based on an assessed dose of one mrem per year, or less, to the maximally exposed individual.

RCRA Permit TNHW-129



- ❖ RCRA Temporary Authorization (TA) Permit TNHW-129 approved in April '08
- ❖ TA currently includes two categories of mixed waste
 - Macroencapsulation of up to 4,800 cubic feet of radioactive elemental lead and hazardous debris per day
 - Sorting and Segregation of waste up to 4,800 cubic feet per day



Instrumentation Service



Product Lines:

- Calibration/Repair of Customer Owned Equipment
- Rental of EnergySolutions Provided Equipment



- Our site can be directly access at <http://shopping.netsuite.com/instrumentation> or via the company home page (via Customer Portal/Instrumentation at www.energysolutions.com).

Instrumentation Service (cont..)

Calibration Repair:

- Fully Licensed Instrument Services Facility (ISF)
- NIST Traceable Calibrations
- ASME NQA-1, 10CFR50 App B QA Program
- DOECAP and NUPIC Audited
- Electronic Database/Records Tracking
- Experience technical staff

Instrument Rental:

- Large Inventory/Variety of Rental Equipment
- Radiation Survey Meters, Contamination Monitors, Air Sampling Equipment, Laboratory and Analytical Equipment, Waste Assay Systems
- Weekly and Monthly Rental Rates
- Long-Term/Project Rates Available

Memphis Operations



- ❖ Barge, Rail, Road Access
- ❖ “Safeshop” Customer Hotshop Rental
- ❖ Rad Equipment Storage
- ❖ Outage Equipment Service Center
- ❖ EnergySolutions Project Service Center
 - Equipment Decontamination
 - Container Decontamination
 - Tank Segmentation
 - Large Component Staging



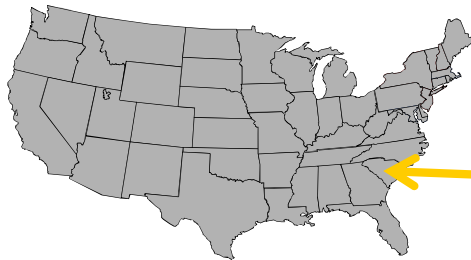
- ❖ Only commercial facility in North America with capability to cast, roll, machine and form depleted uranium
- ❖ Toll Rolling services include specialty metals and metal matrix composites (e.g., borated aluminum) MSC is currently processing specialty metals for:
- ❖ MSC is currently processing specialty metals/fabricating shielded containers for:
 - Aerospace
 - Medical Applications
 - Wireless telecommunications
 - Metals manufacturing
 - Materials research
 - Nuclear applications



TN OSHA VPP
Star Site



Barnwell Processing Facility



❖ Radwaste Processing

- Dewater Liners
- Sort/Segregate/Compact
- Decontaminate
- Water Processing

❖ Systems Demonstration

- Radioactive and non-radioactive system deployment support



Hittman Transportation



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



Heritage Railroad Short-Line



Located in Oak Ridge, TN

11.5 Mile of Track

12 acre fenced Transload Facility

2 acre specialty loading area

Certified Scales

~250 Car Storage Area

Barge Head on Clinch River 1.5 miles from Bear Creek

Operating Subcontractor – Walden Ridge Railroad (provides power and maintenance)

Connector Route between EnergySolutions Facilities

On DOE ETTP Footprint

Connected to Y-12 Via Truck Route



Rail Logistics



- Assets
 - 200 - High Sided Gondolas (100 ton)
 - 109 - Mill Gondolas (108 ton)
 - 24 - ABC Intermodal Cars (177 ton)
 - 23 – 89' Two Position Flat Cars (100 ton)
- Capabilities
 - HAZMAT Brokerage
 - Transloading Operations
 - Project Management
 - Establishment of Rail Transload Yards
 - Dedicated Trains for Exclusive Use Shipments
 - Classified Load Management
 - Heavy Lift Operations and Engineering
 - HRCQ Shipments



Cask Operations



- Key Assets
 - Proprietary NRC Type B Shipping Casks
 - 10-160B
 - 8-120B
 - 3-60B
 - DOT Type A and IP-II Shipping Casks
 - 8-120A
 - 10-142
 - 14-170 Series
 - 14-190
 - 14-195H
 - 21-300
- Capabilities
 - Cask Rental
 - Cask Sales and Maintenance
 - Specialty Package Design, Fabrication, and Licensing



Conclusions

- We provide the most extensive set of processing capabilities in the world
- Use of the international supply chain for recycling and volume reduction provides proven and cost effective solutions
- We look forward to working with you to help solve your problems

Peaceful nuclear power generation depends on global cooperation and resources





ENERGY *SOLUTIONS*

END