

Barnwell County South Carolina Spent Nuclear Fuel Shipment Exercise
Sponsored by Barnwell County South Carolina Emergency Services
with Support from the
U.S. Department of Energy Savannah River Site
and the
Transportation Emergency Preparedness Program
September 1, 2004

EXECUTIVE SUMMARY

The joint exercise involved responders from Aiken and Barnwell Counties Emergency Management, Barnwell County E-911 Dispatch Center, the Barnwell County Emergency Operations Center, the City of Barnwell Fire and Police Departments, Barnwell County Emergency Medical Services, the Barnwell County Hospital and Nursing Home, the Barnwell County Coroner, the Barnwell County Sheriff's Office, South Carolina Department of Transportation, South Carolina Law Enforcement Division, South Carolina Department of Health and Environmental Control, the Savannah River Site Fire Department Hazmat Team, The Savannah River Site DOE Radiological Assistance Program (RAP) Team, the Savannah River Site Operations Center, and the Savannah River Site Emergency Response Organization. Additional support was provided by the U.S. Department of Energy and Westinghouse Savannah River Company. An exercise plan, schedule, and a Master Sequence of Events List (MSEL) were developed. The Exercise Plan included briefing presentations providing an overview of the Barnwell County TEPP Exercise Plan. Briefings were conducted with the Barnwell County Local Emergency Planning Committee and key members of the County and City of Barnwell first responders and emergency services. The exercise plan included a section on identifying necessary training to ensure that responders were prepared to respond and mitigate a transportation incident involving radioactive materials. The exercise plan identified the following needed training: refresher training on Modular Emergency Response Radiological Transportation Training (MERRTT) Incident Command System, Hazard Recognition, Initial Response Actions, and Incident Control. Additionally, the Barnwell County Hospital Emergency Department Staff were provided Radiological Training for Hospital Personnel modules. The training was offered to all agencies involved. In addition to the aforementioned training, a tabletop drill training session was conducted a week prior to the major exercise executed on September 1, 2004. The exercise scenario was a terrorist incident involving a collision between a gasoline tractor-tanker and a tractor-trailer carrying a simulated Type B Spent Nuclear Fuel Cask. The impact caused the gasoline tanker to explode in the middle of road, and the tractor-trailer carrying the Spent Nuclear Fuel (SNF) Cask remained upright, but was just off the shoulder of the road. As a result of the collision, the gasoline tanker was engulfed by fire that spread to the trailer portion of the SNF shipment. The gasoline tanker truck driver was a fatality. The SNF Shipment driver was unharmed, however, the SNF Shipment assistant driver sustained injuries and 13 local residents were hurt. There was no breach of the Type B Spent Nuclear Fuel Cask. A secondary improvised explosive device with attached radiological material was located adjacent to the county hospital and nursing home. The improvised explosive device with radiological material did not detonate, but was defused by the SLED EOD Team. Agencies responding to the event arrived in a timely fashion, with high levels of cooperation between all participating agencies from county, city, state and federal organizations. The exercise was observed by officials from various county, state and federal agencies. Thirteen objectives were selected from the Federal Emergency Management Agency (FEMA) Program Manual on Hazardous Materials Exercise Evaluation Methodology (HM-EEM). In the opinion of the Controller/evaluators, all thirteen objectives were met. The Exercise Controller/Evaluation Team identified several noteworthy practices that the various agencies can continue to build upon. However, the exercise also identified several areas needing improvement.