



SOLID WASTE MANAGEMENT

2009 Accomplishments Report

a supplement to the srs environmental report

1st Lead Recycle Shipment 152,000 lbs.
September 29, 2009



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American Reinvestment and Recovery Act



On February 17, 2009, President Barack Obama signed into law the American Reinvestment and Recovery Act (ARRA) to stimulate the U.S. economy.

Six billion dollars were invested across the U.S. Department of Energy (DOE) Environmental

Management (EM) program, including \$1.6 billion at the Savannah River Site to create jobs, stimulate the economy, accelerate cleanup, and reduce the EM program footprint at SRS. This investment provides funding for the expeditious transformation of the Site to address possible future energy and research missions.

Through aggressive acceleration of the waste disposition schedules, the plan achieves a 67 percent SRS operational footprint reduction by 2011.

Contracting activities to perform this work have taken place throughout South Carolina and Georgia. The result of this strategic community involvement plan resulted in the creation of thousands of jobs across the Site, and on-the-job training for those new employees.

Moreover, hundreds of local, regional, and national small business contracts were awarded in the first few months of the Recovery Act, injecting millions of stimulus dollars right where it is needed — the American economy.

The ARRA project at SRS sets the stage for a renovation of government resources while creating or retaining an estimated 3,000 jobs across the Site.



Solid Waste Management (SWM) is responsible for managing several categories of waste across SRS. These categories are transuranic, low-level, hazardous, sanitary, and mixed waste. The only category at SRS not handled by SWM is high-level waste.

Each day, SWM reduces the volume of waste generated site-wide by safely treating, storing, and disposing of waste in the most environmentally-efficient and cost-effective manner possible.

Waste Type	Description
Transuranic (TRU) Waste	Waste contaminated with radioactive isotopes that have decay rates and activities exceeding defined levels
Low-Level Waste	Any radioactive waste not classified as high-level or TRU waste
Hazardous Waste	Any toxic, corrosive, reactive, or ignitable material that could damage the environment or negatively affect human health
Mixed Waste	Waste that is both radioactive and hazardous
Sanitary Waste	Waste that includes non-radioactive, municipal wastes, and typical industrial wastes

First aid cases remained low throughout Solid Waste Management with only three reported, two of which were insect bites. One Days Away/Restricted/Transfer-Days Away (DART-DA) was reported for 2009, which involved a rotator cuff injury to an employee.

The implementation of the Safety Improvement Compensatory Actions and Measures (SICAM) program in late September resulted in a review of all procedures and work packages to ensure employee safety. There were no regulatory violations in SWM during 2009.

Transuranic Waste (TRU)

In 2009, SWM continued the use of the remediation facilities in F-Canyon and H-Canyon. The remediation of Transuranic Waste (TRU) waste requires repackaging of miscellaneous waste containers into Waste Isolation Pilot Plant (WIPP) compliant packaging or the removal of prohibited items.

By the end of 2009, a total of 48 drums were remediated through F-Canyon. In December, the first large steel box was shipped to H-

Canyon for remediation. In addition, SRS disposed of 1,629 drums and 191 Standard Waste Boxes (1,820 to WIPP and an additional 14 containers were re-classified as low-level waste/mixed waste). By the end of 2009, SRS had disposed of 30,660 containers. More than 1,000 of these shipments have been completed since the SRS Ship-to-WIPP program was initiated in 2001.

In June 2009, the excavation of

83 buried culverts and six large concrete boxes, located on E-Area's Pad 1, began thanks to funding provided by the ARRA.

The pad contains Pu-238 waste from the Mound Site and Los Alamos National Laboratory, which was shipped to SRS in the early 1970s. By December, drums from 22 of the 83 culverts had been successfully removed from their exhumed concrete vaults.

Background: TRU Waste Culverts were excavated from E Area's Pad 1 after nearly forty years of earthen storage.

Right: A TRU waste shipment leaves the SRS destined for the Waste Isolation Pilot Plant in Calsbad, New Mexico.



Low-Level Waste



DUO drums are processed for overpacking and shipment.

At SRS, the Low-Level Waste (LLW) disposition program primarily involves the disposal of LLW at approved facilities. In 2009, SRS safely disposed of over 4,263 cubic meters of LLW generated at SRS. This work included disposals at on-Site facilities and some off-Site facilities.

Seven thousand drums containing Depleted Uranium Oxide (DUO) were processed and palletized during

2009. In December, 52 gondola-style railcars were loaded with 5,408 palletized DUO drums in F-Area and shipped to Energy Solutions in Clive, Utah.

Completion of overpacking and disposal of the remaining high fissile gram equivalent Naval Fuel drums was completed in 2009 thanks to ARRA funding.



Plutonium Uranium Extraction (PUREX)

In September 2009, the final shipment of Plutonium Uranium Extraction (PUREX) solvent that had been treated by M&EC was shipped to Nevada Test Site — meeting the site treatment plan three months ahead of schedule. Solid Waste Management shipped 401.7 cubic meters of mixed waste off-Site for treatment and disposal at approved treatment, storage, and disposal facilities in 2009. This consisted of legacy shipments of the last PUREX waste stream (336.7 cubic meters), tritiated oil, and tritiated equipment shipments (12.44 cubic meters). In addition, several normal land disposal restrictions (LDR) and mixed polychlorinated biphenyls (PCB) shipments were made.



Above: The final shipment of PUREX to the Nevada Test Site was completed on September 10, 2009.

“After more than 15 years of preparation, SRS employees celebrated yet another milestone along the road to final cleanup when the last shipments of legacy PUREX waste left the Site on September 10, 2009.”

-- SRNS News

Right: A truck carrying PUREX waste leaves SRS headed for the Nevada Test Site.





Solid Waste Management shipped 57 cubic meters of hazardous waste off-Site for treatment and disposal at approved treatment, storage and disposal (TSD) facilities in 2009, and made the first two moratorium lead recycle shipments of approximately 252,000 pounds of lead to TOXCO, Inc., in Oak Ridge, Tennessee for recycling.

Below: Solid Waste Management employees stand in front of a truck that has been loaded with labpack waste from the Savannah River National Laboratory.



“The lead we are sending to Toxco for recycle means more than just process waste reduction at SRS; we are sending the material to be reused. We are reducing high disposal fees at waste disposal sites, while ensuring that the most environmentally friendly action is taken.”

- John Harley, SRNS waste certification engineer

Below: The first shipment of 152,000 pounds of nuclear lead that was used for employee shielding in reactor buildings was shipped on September 29, 2009.





Sanitary Waste refers to non-radioactive municipal wastes (office waste, food garbage, refuse, and other solid wastes that are similar to those generated by most households) and typical industrial wastes (construction debris, scrap metals, wood wastes, etc.). In 2009, Solid Waste Management disposed of more than 85,000 tons of sanitary waste from SRS.



A recycling program is in place that allows SRS to use the City of North Augusta's Material Recovery Facility (MRF) as a disposal site for recyclable refuse. The MRF recovered approximately 1,000 tons of municipal waste materials in 2009, including white office paper, newspaper and magazines, cardboard, plastic, steel cans, aluminum cans, and glass. Using the MRF has afforded SWM the ability to locally recycle approximately 40 percent of the Sanitary Waste generated at SRS.

Below: Some of the 250 Solid Waste Management ARRA employees participated in the Department of Energy-Headquarters "Faces of the Recovery Act" Campaign.

U.S. DEPARTMENT OF ENERGY
Savannah River Site

AMERICAN RECOVERY AND REINVESTMENT ACT

SAVANNAH RIVER SITE

SAFETY

A **VALUE** YOU CAN PRACTICE AT **HOME**

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SWM

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