

2010 Accomplishments Report

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 75 percent SRS operational footprint reduction by 2012.

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, mixed and sanitary 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 (LLW)	Any radioactive waste not classified as high-level or TRU waste
Hazardous Waste (HW)	Any toxic, corrosive, reactive or ignitable material that could damage the environment or negatively affect human health
Mixed Waste (MW)	Waste that is both radioactive and hazardous
Sanitary Waste	Waste that includes non-radioactive, municipal wastes and typical industrial wastes

Safety

First aid cases remained low throughout Solid Waste Management with only 10 reported, four of which were insect bites.

There were no recordable injuries for 2010.



Transuranic Waste

In 2010, SWM continued the use of the remediation facilities in both F- and H-Canyon. The remediation of Transuranic (TRU) waste requires repackaging of miscellaneous waste containers into Waste Isolation Pilot Plant (WIPP) compliant packaging and/or the removal of prohibited items.

By the end of 2010, a total of 451 drums were remediated through F-Canyon. Twenty-eight Large Steel Boxes (LSBs) were shipped to H Canyon for remediation during

2010. In addition, SRS disposed of 872 drums and 173 Standard Waste Boxes (1,045 to WIPP and an additional 65 containers were reclassified as low-level waste/mixed waste). By the end of 2010, SRS had disposed of 31,705 containers. More than 1,100 of these shipments have been completed since the SRS Ship-to-WIPP program was initiated in 2001.

The excavation of Pad 1 culverts continued. 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 67 of the 83 culverts had been successfully removed from their exhumed concrete vaults.

Solid Waste Management began Phase 3 soil removal on Pad 1 and began culvert mining on the remaining Pad 1 drums.

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



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



Low-Level Waste



Engineered Trench 1 was used to store 1,000 m³ of waste safely.

At SRS, the Low-Level Waste (LLW) disposition program involves the disposal of LLW at approved facilities. In 2010, SRS safely disposed of over 13,734 cubic meters of LLW generated at SRS.

In calendar year 2010, 806 fifty-five-gallon drums of depleted uranium oxide (DUO) totalling 169.3 cubic meters were shipped to Oak Ridge National Laboratory (ORNL) for reuse.

SWM completed closure of Engineered Trench 1 (ET-1) sump and completed all boxed waste shipments into ET-1. This 1,000 cubic meters of waste had been staged with closure in mind to conserve high-value vault capacity while maximizing use of the ET-1.

Mixed Low-Level Waste

HW/MW made the first two shipments of formerly TRU waste to a TSD vendor for treatment and disposal as Mixed Low-Level Waste (MLLW). A total of 38.91 cubic meters was sent in calendar year 2010. The shipment in December to a Florida treatment site marked the 1,000 cubic meter milestone of the 5,000 cubic meters in the Site's TRU program that will be dispositioned through the Recovery Act.



Above: SWM employees prepare the MLLW drums for transportation.

Date	Waste Type	Description
29 April 2010	TRU to MLLW	Shipment to Perma-Fix (20.91 m ³)
9 December 2010	TRU to MLLW	Shipment to Perma-Fix (18 m ³)

Mixed Waste

In CY 2010, SWM received into the HW/MW Storage facilities 95 containers (57.65 cubic meters) of Mixed Waste. SWM also shipped off-site for treatment and disposal 111 containers (44.28 cubic meters) of mixed waste. SWM also assisted the Site in recovering, packaging, shipping and properly disposing of a five-gallon pail of SRS mixed waste samples at an off-site vendor, preventing a regulatory violation for the Site.



Right: SWM employees review Lab Pack shipment forms before sending the mixed waste off-Site.

Date	Waste Type	Description
24 March 2010	Mixed Waste	Mixed Waste LDR/PCB shipment to Perma-Fix (3.74 m ³)
20 May 2010	Mixed Waste	Mixed Waste LDR/PCB shipment to EnergySolutions (2.96 m ³)
13 September 2010	Mixed Waste	Mixed Waste sample in Alabama
29 September 2010	Mixed Waste	Mixed Waste direct shipment #1 (.71 m ³)
3 November 2010	Mixed Waste	Mixed Waste LDR/PCB shipment to Perma-Fix (7.29 m ³)

Sanitary Waste



Above: The Material Recovery Facility in North Augusta, SC allows SRS to recycle its waste.

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 2010, Solid Waste Management disposed of more than 155,000 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 1,100 tons of municipal waste materials in 2010, including white office paper, newspaper and magazines, cardboard, plastic, steel cans, aluminum cans and glass. SRS has been able to locally recycle approximately 40 percent of sanitary waste generated by utilizing the MRF.

Lead Recycling

Recycling of contaminated lead continued in CY2010, culminating in recycling over 210,000 pounds. The shipments of lead helped SRS receive the U.S. Department of Energy's Recycling/Reuse 2010 Environmental Stewardship Award for its lead recycle program, an effort that saved taxpayers approximately \$350,000.

Right: SWM employees celebrate the 2010 shipments of contaminated lead, part of the ARRA-funded Solid Waste Management activities.



Date	Waste Type	Description
22 March 2010	Lead	F/H Area Lead Shipment (98,983 lbs)
22 September 2010	Lead	F/H Area Lead Shipment (114,279 lbs)



Hazardous Waste

Solid Waste Management received into the HW/MW storage facilities 42 containers (11.89 m³) of hazardous waste and shipped off-Site for treatment and disposal 35 containers (10.15 m³) of hazardous waste. In addition, SWM packaged and shipped off-Site over 850 containers of chemicals (8.25 m³) as lab packs for treatment and disposal.

Left: A SWM subcontractor prepares a container of hazardous waste for a disposal shipment.

Date	Waste Type	Description
27 January 2010	Hazardous Waste	Labpack/Direct Shipment #1 (4.96 m ³)
7 July 2010	Hazardous Waste	LDR/PCB Shipment #2 (2.41 m ³)
26 July 2010	Hazardous Waste	Labpack/Direct Shipment #2 (3.29 m ³)
25 August 2010	Hazardous Waste	Oxidizer Shipment (4.1 m ³)
15 December 2010	Hazardous Waste	HW LDR/PCB Shipment #1 (4.9 m ³)

SATA Range Shipments



HW/MW supported the closure of the Small Arms Training Area (SATA) by loading 9,504.96 tons of lead-contaminated soil in railroad cars. The soil will be dispositioned by an off-Site TSD facility.

Date	Waste Type	Description
7 October 2010	Lead-contaminated Soil	First rail car shipment to Clean Harbors (2,937.52 tons)
18 November 2010	Lead-contaminated Soil	Second rail car shipment to Clean Harbors (1,376.40 tons)
2 December 2010	Lead-contaminated Soil	Third rail car shipment to Clean Harbors (3,234.65 tons)
9 December 2010	Lead-contaminated Soil	Fourth rail car shipment to Clean Harbors (689.85 tons)
16 December 2010	Lead-contaminated Soil	Fifth rail car shipment to Clean Harbors (1,266.54 tons)

M-Area Lift Liners



The M-Area Lift Liners, which contained 346 cubic meters of volatile organic compounds (VOC) contaminated soil, were shipped off-Site to a treatment, storage and disposal facility. The shipment of the soil supported the completion of the remediation and closure of M-Area, including 19 waste units and 45 acres of contaminated soil. Completion of this remediation and closure contributed 12.5% towards SRS's overall Footprint Reduction Initiative.



Date	Waste Type	Description
16 June 2010	M-Area Lift Liners	Direct Shipment of M-Area Lift Liners to Clean Harbors (176 m ³)
23 June 2010	M-Area Lift Liners	Direct Shipment of M-Area Lift Liners to Clean Harbors (170 m ³)

Hazardous Gas Cylinder Shipment



HW/MW supported the cleanout of aged gas cylinders across the Site by conducting the first shipment of hazardous cylinders off-Site from treatment and proper RCRA disposal. Over 240 cylinders were packaged and shipped in July of 2010.

Left: SWM employees make final preparations for the hazardous gas cylinders to be shipped off-Site.

Date	Waste Type	Description
20 July 2010	CMC Cylinders	Direct shipment of CMC Cylinders (6.2 m ³)

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