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1998 Annual Report on Waste Generation and Waste Minimization Progress as Required by DOE Order 5400.1, Hanford Site



**United States
Department of Energy**

Richland, Washington

Approved for Public Release

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Christine Willingham

C. Willingham

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Standard Data Report

1998 Annual Report on Waste Generation and Pollution Prevention Progress as required by DOE Order 5400.1

Hanford Site

Operations Office: RL

Prepared for: DOE

Prepared by: Peter Segall

2/22/99

Standard Data Report

Hanford Site

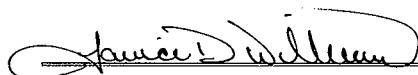
Signature Page



2/24/99

A. V. Beard, Program Manager, Richland Operations Office, DOE-RL

Date



2/23/99

J. D. Williams, Program Director, Waste Management, Fluor Daniel
Hanford, Inc.

Date



2/23/99

J. B. Buckley, Manager, Generator Services, Waste Management Federal
Services of Hanford, Inc.

Date

Standard Data Report

Hanford Site

General Site Information

Site Information:

Site Name: Hanford Site

Internet Email Address: anna_v_beard@rl.gov

Operations Office Name: RL

Lead PSO: EM

DOE Point of Contact Information:

DOE Point of Contact: Anna V. Beard

DOE Phone #: (509)376-7472

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DOE Employee address: Address: Department of Energy, Richland Office P.O. Box 550, Richland, WA 99352

Contractor Point of Contact Information:

Contractor Point of Contact: Peter Segall

Contractor Phone #: (509)372-0469

Contractor Fax #: (509)373-0743

Contractor Address: Waste Management Federal

Contractor Address: Services of Hanford, Inc. P.O. Box 700, Richland, WA 99352

Standard Data Report

Hanford Site

General Site Information

Hanford's missions are to safely clean-up and manage the site's legacy wastes, and to develop and deploy science and technology. Through these missions Hanford will contribute to economic diversification of the region.

Hanford's environmental management or clean-up mission is to protect the health and safety of the public, workers, and the environment; control hazardous materials; and utilize the assets (people, infrastructure, and site) for other missions. Hanford's science and technology mission is to develop and deploy science and technology in the service of the nation including stewardship of the Hanford Site. Pollution Prevention is a key to the success of these missions by reducing the amount of waste to be managed and identifying/implementing cost effective waste reduction projects.

Hanford's original mission, the production of nuclear materials for the nation's defense programs, lasted more than 40 years, and like most manufacturing operations, Hanford's operations generated large quantities of waste and pollution. However, the by-products from Hanford operations pose unique problems like radiation hazards, vast volumes of contaminated water and soil, and many contaminated structures including reactors, chemical plants and evaporation ponds.

The clean-up activity is an immense and challenging undertaking. Including characterization and decommissioning of 149 single shell storage tanks, treating 28 double shell tanks, safely disposing of over 2,100 metric tons of spent nuclear fuel stored on site, removing numerous structures, and dealing with significant solid waste, ground water, and land restoration issues.

Standard Data Report

Hanford Site

Site-Wide Recycling Activities

Recycle Category	Quantity
Paper Products:	
Office and Mixed Paper	430.40 mt
Corrugated cardboard	35.91 mt
Phone Books	4.80 mt
Newspapers/Magazines	4.67 mt
Aluminum Cans	0.00 mt
Glass	0.32 mt
Plastic	0.71 mt
Styrofoam	0.00 mt
Scrap Metals:	
Stainless steel	0.00 mt
Copper	0.00 mt
Iron	1,433.43 mt
Aluminum	0.00 mt
Lead	120.81 mt
Zinc	0.00 mt
Other: (see discussion below)	78.79 mt
Precious metals:	
Silver	0.00 mt
Gold	0.00 mt
Platinum	0.00 mt
Other: (see discussion below)	0.00 mt
Toner cartridges	13.27 mt
Batteries	36.88 mt
Engine oils	42.16 mt
Tires	22.82 mt
Food waste	0.00 mt
Concrete	3,810.00 mt
Wood (chips, compost)	246.85 mt
Other: (see discussion below)	597.01 mt

Explanation of "Other" recycling amounts:

Explanation of "Other" amounts: The scrap metal other is non-ferrous metals consisting of stainless steel, copper, brass, aluminum, zinc, and tin. Additional sanitary waste recycling activities noted under other are discussed in the Hanford CY 1998 Accomplishments. These recycling activities include items such as software (13.40 mt), gantry crane (100 mt), diesel and fuel oil (161.72 mt), excess equipment, furniture, and appliances (269.05 mt), intact and crushed fluorescent tubes (16.84 mt), excess chemicals (3.30 mt), miscellaneous lubricants (3.90 mt), and other miscellaneous items (18.80 mt).

Sanitary Waste

Routine		Cleanup/Stabilization	
812.89	mt	457.01	mt

Standard Data Report

Hanford Site

Total Site Generation - Routine vs. Cleanup/Stabilization Waste

Waste Type	Routine Waste	Unit	Cleanup/Stabilization Waste	Unit	Total Waste	Unit
High Level Waste (Liquid)	0.00	m3	0.00	m3	0.00	m3
High Level Waste (Solid)	0.00	m3	0.00	m3	0.00	m3
Transuranic Waste (Liquid)	0.00	m3	0.00	m3	0.00	m3
Transuranic Waste (Solid)	0.00	m3	12.08	m3	12.08	m3
Mixed Transuranic Waste (Liquid)	0.00	m3	0.00	m3	0.00	m3
Mixed Transuranic Waste (Solid)	0.00	m3	4.41	m3	4.41	m3
Low Level Waste (Liquid)	0.00	m3	0.00	m3	0.00	m3
Low Level Waste (Solid)	560.56	m3	17,459.69	m3	18,020.25	m3
Mixed Low Level Waste (Liquid)	0.00	m3	0.00	m3	0.00	m3
Mixed Low Level Waste (Solid)	138.18	m3	495.15	m3	633.33	m3
RCRA Regulated	7.70	mt	27.11	mt	34.81	mt
State Regulated	3.62	mt	72.82	mt	76.44	mt
TSCA Regulated	0.00	mt	9.97	mt	9.97	mt
Mixed TSCA	0.00	mt	1.41	mt	1.41	mt

Standard Data Report

Hanford Site

Site Waste Generation by PSO

PSO: EM

Waste Type	Routine Waste	Unit	Cleanup/Stabilization Waste	Unit	Total Waste	Unit
High Level Waste (Liquid)	0.00	m3	0.00	m3	0.00	m3
High Level Waste (Solid)	0.00	m3	0.00	m3	0.00	m3
Transuranic Waste (Liquid)	0.00	m3	0.00	m3	0.00	m3
Transuranic Waste (Solid)	0.00	m3	12.08	m3	12.08	m3
Mixed Transuranic Waste (Liquid)	0.00	m3	0.00	m3	0.00	m3
Mixed Transuranic Waste (Solid)	0.00	m3	4.41	m3	4.41	m3
Low Level Waste (Liquid)	0.00	m3	0.00	m3	0.00	m3
Low Level Waste (Solid)	560.56	m3	17,459.69	m3	18,020.25	m3
Mixed Low Level Waste (Liquid)	0.00	m3	0.00	m3	0.00	m3
Mixed Low Level Waste (Solid)	138.18	m3	495.15	m3	633.33	m3
RCRA Regulated	7.70	mt	27.11	mt	34.81	mt
State Regulated	3.62	mt	72.82	mt	76.44	mt
TSCA Regulated	0.00	mt	9.97	mt	9.97	mt
Mixed TSCA	0.00	mt	1.41	mt	1.41	mt

Accomplishments Report

Please Note: Only Accomplishments designated as FINAL will appear on this report !

Displaying sites: Hanford Site for calendar year 1998

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Programmatic Activities Programmatic Activities N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: 500 Tamper Seals were redeployed for use onsite.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Programmatic Activities Programmatic Activities N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: As an outreach to the community, 12 pollution prevention assessments were conducted for small businesses in the cities of Richland and Kennewick. The businesses evaluated included: (1) Two medical laboratories; (2) A 1-Hour photography shop; (3) An automotive repair facility; (4) A golf course; (5) A florist; (6) A restaurant; (7) A bakery; (8) A nuclear laundry facility; (9) A funeral home; (10) A sheet metal fabrication company; and (11) A sports manufacturing firm.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Programmatic Activities Programmatic Activities

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: Attended the Waste Minimization Complex-wide Coordinators Workshop in Denver in March. Presented the Richland Operations Office Accomplishments to approximately 50 participants from other Sites and Headquarters.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Programmatic Activities Programmatic Activities

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: Hosted the National Pollution Prevention Conference XIV in Seattle from June 1-4. Over 360 participants from Department of Energy, Department of Defense, industry, regulating agencies, and academia attended. There were 60 technical papers, 44 technical posters, a 50 vendor exhibition hall, training, industry tours, panel discussions, and an evening venue. A project close-out book was compiled for the Albuquerque Operations Office to assist in efforts for next years conference.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Programmatic Activities Programmatic Activities

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: Miscellaneous eye glasses, cases, lenses, sunglasses and hearing aids are collected and given to the Kennewick Lions Club for redeployment.

Hanford Site**Pollution Prevention Activity**

Programmatic Activities

Waste Type

Programmatic Activities

Cleanup/Stabilization

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: National Pollution Prevention Week (September 21-27, 1998) was held in conjunction with the cities of Richland and Kennewick. An article was published in the Hanford Reach covering information on waste reduction ideas. Two additional articles were written and forwarded to the Tri-City Herald (local newspaper). KEPR TV presented the following items: (1) Pollution Prevention and Air Quality; (2) A video on "How to Recycle and Save Energy in School"; (3) A Richland elementary class toured the Richland Landfill; (4) A presentation was delivered by the Cities of Richland and Kennewick on the Wellhead Protection Program; and (5) The household hazardous waste collection centers.

Hanford Site**Pollution Prevention Activity**

Programmatic Activities

Waste Type

Programmatic Activities

Cleanup/Stabilization

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: Several strategic Pollution Prevention Opportunity Assessments (P2OAs) were completed for the 1998 Fiscal Year. These P2OAs either had sitewide implications or were focused on reducing waste volumes for major generators in conjunction with the Department of Energy Strategic Reduction Goals. Laboratory Analyses were addressed at Hanford's High Level Analytical Laboratory. These included looking at partial compaction of mixed low level waste in laboratory hoods, pipette disposal, and providing an alternative product for a decontamination chemical. Laboratory Liquid waste was also addressed due to the high volume of liquids generated at Hanford's High Level Laboratory. These included a method change for ammonia analysis to ion chromatography, flushing reagent bottles, providing covering for open stairwells preventing running water to radiological areas. Paper waste generation was also addressed at this Laboratory. Ideas assessed included replacements of three products used for different operations. Another facility assessed this past year was the Hanford Effluent Treatment Facility. The major waste stream assessed in this facility was sludge waste product from their operations and leak related maintenance. The Hanford Tank Waste Remediation facility pit operations were assessed for reductions of Low Level Waste. This assessment looked at establishment of lay down areas with launderable tarps, use of acrylic vice plastic splashguards, and reducing by half the amount of plastics used for splash protection. Metal waste generation was assessed for the Tank Waste Remediation core sampling operations. This included examination of several chemical treatment methods and use of the container rule in order to reduce mixed waste volumes. Several site wide issues were also assessed this past year. Personal Protective Clothing was assessed for changes to paper clothing instead of cloth, reductions in the amounts of clothing used and replacing outer clothing with paper products. Finally, asbestos waste was addressed in this year's assessments. This included looks at thermal conversion of asbestos, and asbestos neutralizing.

Hanford Site**Pollution Prevention Activity Waste Type Cleanup/Stabilization**

Programmatic Activities	Programmatic Activities	N
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Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: The "Hanford Site Pollution Prevention Program and Awareness Plan" was revised and issued. Changes to the plan include: (1) A revised site organization chart; (2) Revised goals; and (3) Updated discussion of the 18 pollution prevention program objectives.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Programmatic Activities Programmatic Activities

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: The 1998 revision to the Return-on-Investment Cost Guide was completed and issued. Life cycle waste avoidance costs for LLW, MLLW, TRU waste, sanitary and hazardous wastes and liquid wastes has been reviewed and revised as applicable. For each waste type a flow chart has been developed with a cost provided in each block where available.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Programmatic Activities Programmatic Activities

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: The Fiscal Year (FY) 1998 Pollution Prevention Accomplishments book was issued and highlights 59 pollution prevention activities implemented at Hanford. As a result of these pollution prevention accomplishments, Hanford saved over \$44 million, which reduced radioactive and mixed waste by over 5500 cubic meters, sanitary waste by over 3,200 metric tons, process wastewater by over 59,000 cubic meters and hazardous waste by over 180 metric tons. In FY 1998 approximately \$1.5 million was allocated to complete 17 Return on Investment projects. These projects resulted in annual cost savings of more than \$12 M. This represents savings of greater than 800 percent return on investment.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Programmatic Activities Programmatic Activities

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.00 m3	0.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: The Hanford Site won two of the National Pollution Prevention (P2) awards presented at the National P2 conference, continuing to be a multiple award winner since inception of the awards more than five years ago. Mary Betsch, Waste Management Hanford, received the award for Public Outreach and Partnership for her work with local small businesses to conduct pollution prevention opportunity assessments. Pacific Northwest National Laboratory was also recognized for their work in the affirmative procurement area.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Recycle/Reuse

HAZ

Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	11.40 mt	0.00 mt	11.40 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	96,900.00	0.00	96,900.00

Accomplishment: 200 railroad ties were reclaimed and used at other Environmental Restoration Contract projects instead of being disposed of as a hazardous waste.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Recycle/Reuse

HAZ

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.01 mt	0.08 mt	0.00 mt	0.00 mt	0.09 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
764.00	5,460.00	0.00	0.00	6,224.00

Accomplishment: Aerosol cans are redeployed or volume reduced.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	HAZ	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.21 mt	0.00 mt	0.00 mt	0.00 mt	0.21 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
880.00	0.00	0.00	0.00	880.00

Accomplishment: Chemical solution was redeployed for use on the site.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	HAZ	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.91 mt	0.00 mt	0.91 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	2,009.00	0.00	2,009.00

Accomplishment: CLINO was redeployed for use onsite.

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
113.01 mt	0.00 mt	0.00 mt	7.80 mt	120.81 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
178,562.00	0.00	0.00	12,324.00	190,886.00

Accomplishment: Excess bulk lead (bricks, sheets, etc.) is collected and sent to an off-site recycler.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	HAZ	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.27 mt	0.00 mt	0.00 mt	0.00 mt	0.27 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
19,110.00	0.00	0.00	0.00	19,110.00

Accomplishment: Freon R-11 was redeployed for use on the site

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	HAZ	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	6.84 mt	0.00 mt	6.84 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	96,000.00	0.00	96,000.00

Accomplishment: Halon 1301 was accumulated by Fire Systems Maintenance and sold to an offsite vendor through Excess.

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	4.36 mt	6.80 mt	11.16 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	9,633.00	15,028.00	24,661.00

Accomplishment: Machine coolants are recycled within the Fabrication Services.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	HAZ	Y

Waste Reduction

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	2.25 mt	0.00 mt	2.25 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	27,115.00	0.00	27,115.00

Accomplishment: Nine canisters of spent granular activated carbon was shipped off site for regeneration from 200-ZP-1.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**
Recycle/Reuse HAZ N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.16 mt	0.00 mt	0.16 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	354.00	0.00	354.00

Accomplishment: Paints and varnishes were redeployed onsite.

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	2.52 mt	0.00 mt	0.00 mt	2.52 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	4,008.00	0.00	0.00	4,008.00

Accomplishment: Recycling of excess chemicals and materials

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	HAZ	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
5.57 mt	0.00 mt	0.00 mt	0.00 mt	5.57 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
12,320.00	0.00	0.00	0.00	12,320.00

Accomplishment: Resin was redeployed for use on the site.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	HAZ	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.35 mt	0.31 mt	0.40 mt	0.28 mt	1.34 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
2,776.00	2,448.00	3,168.00	2,200.00	10,592.00

Accomplishment: Shop towels are provided through a closed-loop contract that returns the towels to the vendor for laundering.

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.06 mt	0.10 mt	0.09 mt	0.25 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	215.00	1,164.00	998.00	2,377.00

Accomplishment: Toner cartridges are returned directly to the manufacturer for recycling. In the 3rd Quarter, imaging kits and fusers were added to the contract.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**

Recycle/Reuse

HAZ

Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.49 mt	0.00 mt	0.00 mt	0.00 mt	0.49 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
4,000.00	0.00	0.00	0.00	4,000.00

Accomplishment: Two 55-gallon drums of excess floor cleaner reclaimed during a building deactivation were provided to Bechtel Hanford, Inc. Facilities Services for use as a product at other Bechtel Hanford, Inc. projects.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**

Recycle/Reuse

HAZ

Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.57 mt	0.00 mt	0.00 mt	0.00 mt	0.57 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
4,000.00	0.00	0.00	0.00	4,000.00

Accomplishment: Two 55-gallon drums of excess floor wax claimed as a result of a building deactivation were provided to Bechtel Hanford, Inc. Facilities Services for use as a product at other Bechtel Hanford, Inc. projects.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	HAZ	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.09 mt	0.00 mt	0.09 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	791.00	0.00	791.00

Accomplishment: Unneeded CERTANE 2000 recycled within Bechtel for use at 100-DR.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	HAZ	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.02 mt	0.00 mt	0.00 mt	0.09 mt	0.11 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
76.00	0.00	0.00	1,000.00	1,076.00

Accomplishment: Unneeded paint was reused for other projects onsite.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	HAZ	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.38 mt	0.73 mt	1.11 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	1,508.00	2,908.00	4,416.00

Accomplishment: Used antifreeze is reclaimed at the 1171 Facility for reuse.

Hanford Site**Pollution Prevention Activity**

Recycle/Reuse

Waste Type

HAZ

Cleanup/Stabilization

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.02 mt	0.00 mt	0.00 mt	0.02 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	40.00	0.00	0.00	40.00

Accomplishment: Vinyl Spackling was redeployed onsite.

Hanford Site**Pollution Prevention Activity**

Recycle/Reuse

Waste Type

HAZ

Cleanup/Stabilization

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	2.25 mt	0.00 mt	0.00 mt	2.25 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	4,977.00	0.00	0.00	4,977.00

Accomplishment: Water treatment chemicals are either recycled on site or returned to the manufacturer.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	LLW	Y

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	12.00 m3	12.00 m3

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	200,000.00	200,000.00

Accomplishment: A 9000 cubic feet per minute exhaustor was sent from the 200 East Area for use in future exhausting of the E and DR Reactors rather than sending for disposal.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	MLLW	Y

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m ³	0.00 m ³	0.03 m ³	0.00 m ³	0.03 m ³

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	1,800.00	0.00	1,800.00

Accomplishment: 1 can of polyvinyl chloride (PVC) "purple primer" was transferred to the Environmental Restoration and Disposal Facility for use rather than designating for disposal as MLLW.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.00 mt	1.40 mt	1.40 mt

Sayings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	5,949.00	5,949.00

Accomplishment: 120 unneeded 90 mil liners stored at the 1330N waste pad were given to various Hanford Site generators.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.00 mt	0.00 mt	0.00 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: A gas cylinder containing methane/nitrogen was returned directly to offsite vendor rather than being disposed.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**
Recycle/Reuse SAN Y

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.01 mt	0.00 mt	0.00 mt	0.00 mt	0.01 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
200.00	0.00	0.00	0.00	200.00

Accomplishment: A sealant was redeployed to Fluor Daniel Northwest.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.00 mt	110.00 mt	110.00 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	450,920.00	450,920.00

Accomplishment: A surplus N-Reactor gantry crane was transferred off site to Gunderson Northwest.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
2.70 mt	0.00 mt	0.00 mt	0.00 mt	2.70 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
900.00	0.00	0.00	0.00	900.00

Accomplishment: A three ton truck load of non-asbestos insulation was salvaged during deactivation activities and provided to another Hanford Site contractor for re-use.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.07 mt	0.00 mt	0.00 mt	0.00 mt	0.07 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
225.00	0.00	0.00	0.00	225.00

Accomplishment: An operable clothes dryer was salvaged and provided to another Hanford Site contractor for reuse.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
10.81 mt	7.30 mt	9.50 mt	8.30 mt	35.91 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
1,405.00	949.00	1,235.00	996.00	4,585.00

Accomplishment: Cardboard collected from Bechtel Hanford Incorporated and Project Hanford Management Contract is recycled by an offsite vendor.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**
Recycle/Reuse SAN Y

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.00 mt	3,810.00 mt	3,810.00 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	504,000.00	504,000.00

Accomplishment: Concrete from the 105-C Reactor Interim Safe Storage Project was reused as backfill at C Reactor.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	30.00 mt	0.00 mt	30.00 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	7,129.00	0.00	7,129.00

Accomplishment: Excess equipment no longer needed was recycled. Dollar value is derived by adding the cost of the items when new and multiplying that total by 0.2 (20%) to arrive at the estimated current market value of the items. Items include: Radiation monitoring equipment, computers, fax machines, copiers, tanks, pumps, water clarifier, diving suit and equipment, radios, etc.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
1.03 mt	0.00 mt	0.00 mt	0.00 mt	1.03 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
3,000.00	0.00	0.00	0.00	3,000.00

Accomplishment: Excess oils were drained from product tanks around the B-Plant facility and were re-deployed to another on site facility for their use instead of disposal. A total of 310 gallons were redeployed. This activity should only be a one time project.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Recycle/Reuse SAN N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
289.01 mt	328.54 mt	736.41 mt	158.26 mt	1,512.22 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
77,201.00	94,107.00	194,494.00	40,453.00	406,255.00

Accomplishment: Ferrous (1,433 metric tons), or non-ferrous metals (78.73 metric tons), from Bechtel Hanford Incorporated (BHI), Project Hanford Management Contract (PHMC) and Pacific Northwest National Laboratory are sold to a local recycler. Tin (0.06 metric ton) from BHI and PHMC is recycled through an offsite vendor.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Recycle/Reuse SAN Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.18 mt	0.00 mt	0.00 mt	0.00 mt	0.18 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
250.00	0.00	0.00	0.00	250.00

Accomplishment: Forty cases of unused floor tile were salvaged during deactivation activities and provided to another Hanford Site contractor for reuse.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Recycle/Reuse SAN N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
1.40 mt	0.00 mt	0.00 mt	0.00 mt	1.40 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
50.00	0.00	0.00	0.00	50.00

Accomplishment: Forty-one cylinders of compressed air were declared excess and are being sold for reuse.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	34.00 mt	0.00 mt	34.00 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	7,124.00	0.00	7,124.00

Accomplishment: Four Conex boxes (20x12x40) of "disposal hardware" (e.g., hoses, fittings, gloves, bags, pumps, personal protective equipment, plastic, gear, etc.), from the N-Reactor deactivation activities, was transferred to other Environmental Restoration Contractor projects rather than being designated for disposal as solid sanitary waste.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
54.20 mt	0.00 mt	0.00 mt	0.00 mt	54.20 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
10,839.00	0.00	0.00	0.00	10,839.00

Accomplishment: Fuel Oil for the 384 Powerhouse was shipped back to the vendor for use. This was a one time only activity.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**
Recycle/Reuse SAN Y

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.40 mt	0.00 mt	0.00 mt	6.00 mt	6.40 mt

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
72.00	0.00	0.00	3,192.00	3,264.00

Accomplishment: Furniture was salvaged and provided to another Hanford Site contractor for reuse.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**
Recycle/Reuse SAN N

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.01 mt	0.16 mt	0.15 mt	0.32 mt

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	2.00	20.00	20.00	42.00

Accomplishment: Glass from Bechtel Hanford Incorporated and Pacific Northwest National Laboratory is recycled through an offsite vendor.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
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Recycle/Reuse

SAN

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	8.15 mt	0.00 mt	8.69 mt	16.84 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	978.00	0.00	1,766.00	2,744.00

Accomplishment: Intact and crushed fluorescent tubes are shipped to an off-site recycler. Reported values include recycling efforts by Bechtel Hanford Incorporated, Project Hanford Management Contract, and Pacific Northwest National Laboratory.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
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Recycle/Reuse

SAN

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
1.72 mt	1.00 mt	0.60 mt	0.58 mt	3.90 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
345.00	200.00	120.00	116.00	781.00

Accomplishment: Miscellaneous lubricants were recycled through an offsite vendor. In the 4th quarter, miscellaneous lubricants were redeployed onsite.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
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Recycle/Reuse

SAN

Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.00 mt	0.50 mt	0.50 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	266.00	266.00

Accomplishment: Miscellaneous shop material of electrical couplings, conduit, conduit fittings, spools of wiring, pvc, and steel pipe fittings were returned to the 105-NB shop for use after the material was identified for excess.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.37 mt	107.15 mt	0.00 mt	0.00 mt	107.52 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
74.00	21,430.00	0.00	0.00	21,504.00

Accomplishment: Mixed fuels (diesel fuel and oil) are recycled through an offsite vendor.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.91 mt	1.50 mt	1.03 mt	0.00 mt	3.44 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
787.00	1,487.00	1,011.00	0.00	3,285.00

Accomplishment: Moving boxes are redeployed instead of being disposed or the cardboard recycled.

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
14,287.00	12,916.00	14,802.00	13,948.00	55,953.00

Accomplishment: Paper from Bechtel Hanford Incorporated and Project Hanford Management Contract is sold to a local recycler.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**

Recycle/Reuse	SAN	N
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Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.01 mt	0.61 mt	0.09 mt	0.71 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	2.00	78.00	12.00	92.00

Accomplishment: Plastics from Bechtel Hanford Incorporated and Project Hanford Management Contract are recycled through an offsite vendor. Plastic #7 Resin Crushed Water Bottles were shipped to an offsite vendor for recycle.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**
Recycle/Reuse SAN N

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.95 mt	0.00 mt	0.73 mt	1.68 mt

Savings

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	123.00	0.00	95.00	218.00

Accomplishment: Propylene Glycol was redeployed onsite

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	3.30 mt	0.00 mt	0.00 mt	3.30 mt

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	2,235.00	0.00	0.00	2,235.00

Accomplishment: Recycling of excess chemicals and materials.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.38 mt	0.00 mt	0.38 mt

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	1,000.00	0.00	1,000.00

Accomplishment: Seven Resource Conservation and Recovery Act empty Chemical Containers (e.g. Large Sodium Hydroxide totes) were sent back to the manufacturer.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.11 mt	0.00 mt	0.00 mt	0.00 mt	0.11 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
230.00	0.00	0.00	0.00	230.00

Accomplishment: Six 5-gallon containers of unused compressor oil were salvaged during deactivation activities and provided to another Hanford Site contractor for reuse.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	1.60 mt	0.00 mt	1.60 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	616.00	0.00	616.00

Accomplishment: Six pallets of excess bentonite drilling materials were recycled to other on site drill crews.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
4.80 mt	0.00 mt	0.00 mt	0.00 mt	4.80 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
624.00	0.00	0.00	0.00	624.00

Accomplishment: Telephone books were taken to a local recycler. (note - revenue was donated to a local school).

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
1.09 mt	0.00 mt	0.00 mt	0.00 mt	1.09 mt

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
142.00	0.00	0.00	0.00	142.00

Accomplishment: The activated carbon was redeployed for use on the site.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.40 mt	0.20 mt	0.20 mt	0.80 mt

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	18,620.00	7,696.00	6,832.00	33,148.00

Accomplishment: Toner, fax, printer and other office machine cartridges from Bechtel Hanford Incorporated are recycled by returning them to the vendor rather than disposing of them. Cost savings are determined by the difference in price of purchasing a new unit without returning an old unit.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
3.26 mt	3.18 mt	2.87 mt	2.76 mt	12.07 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
650.00	636.00	580.00	550.00	2,416.00

Accomplishment: Toner, fax, printer, and other office machine cartridges are sent to a local contractor for recycling rather than disposing of them.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.20 mt	0.00 mt	0.00 mt	0.00 mt	0.20 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
250.00	0.00	0.00	0.00	250.00

Accomplishment: Twenty bags of insulation coating were salvaged during deactivation activities and provided to another Hanford Site contractor for re-use.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.00 mt	0.70 mt	0.70 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	11,492.00	11,492.00

Accomplishment: Twenty-eight micron filters were reclaimed from material slated for excess at 100-N and sent to the Effluent Treatment Facility for use in their pumping operations.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.22 mt	0.00 mt	0.22 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: Unneeded CERTANE 2075 recycled within Bechtel Hanford, Inc. at 100-DR

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
2.80 mt	7.50 mt	3.10 mt	0.00 mt	13.40 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
364.00	975.00	403.00	0.00	1,742.00

Accomplishment: Unusable software is sent to a plastics recycler.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	1.00 mt	0.00 mt	0.00 mt	1.00 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	460.00	0.00	0.00	460.00

Accomplishment: Used asphalt debris as clean back fill at 183-H clear well.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
113.40 mt	69.13 mt	15.35 mt	0.00 mt	197.88 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
28,350.00	17,283.00	3,836.00	0.00	49,469.00

Accomplishment: Used furniture and appliances are sent to a recycler.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
4.07 mt	7.65 mt	7.52 mt	22.92 mt	42.16 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
813.00	1,530.00	1,503.00	4,585.00	8,431.00

Accomplishment: Used oil is recycled offsite within a closed loop system.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**

Recycle/Reuse SAN N

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	3.98 mt	6.28 mt	12.56 mt	22.82 mt

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	3,579.00	5,653.00	12,562.00	21,794.00

Accomplishment: Used tires are returned to a vendor for retreading on a closed-loop contract.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	SAN	N

Waste Reduction				
Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
63.10 mt	113.04 mt	70.71 mt	0.00 mt	246.85 mt

Savings				
Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
8,202.00	14,695.00	9,192.00	0.00	32,089.00

Accomplishment: Wood is sent to a local landfill where it is chipped and used for landscaping and other purposes.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Recycle/Reuse	WW-MLLW	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	779.42 m3	779.42 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	130,000.00	130,000.00

Accomplishment: Mixed Low-Level leachate from the Environmental Restoration Disposal Facility was recycled and used as dust suppression.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**

Segregation MLLW Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	1.26 m3	0.00 m3	1.26 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	20,862.00	0.00	20,862.00

Accomplishment: 100 radioactively contaminated lead bricks removed from the 105-C building were decontaminated during a vendor technical demonstration. The results of the tech-demo were 0.2 cubic meters of rad waste for disposal and all of the decontaminated lead bricks were sent to recycle.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**

Segregation MLLW Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	169.90 m3	0.00 m3	0.00 m3	169.90 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	2,242,000.00	0.00	0.00	2,242,000.00

Accomplishment: Facility (300 Area) deconned numerous pieces of process tanks, machinery, floors, associated equipment and piping. The equipment was deconned to low level waste, thus savings Mixed Low Level Waste costs.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Segregation	MLLW	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	5.29 m3	0.00 m3	5.29 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	0.00	0.00

Accomplishment: The Lead Return-on-Investment Project recovered lead from 80 drums which was subsequently radiologically deconned, and shipped to Pacific Northwest National Laboratory for reuse.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Segregation	WW-LLW	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	42,200.00 m3	0.00 m3	42,200.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	19,516,800.00	0.00	19,516,800.00

Accomplishment: Contaminated water (1,140,000 gallons) was removed from the 100-N Basin and transported to the Effluent Treatment Facility for treatment.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Segregation

WW-LLW

Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	946.00 m3	946.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	166,200.00	166,200.00

Accomplishment: Low-level wastewater from the 105-C Interim Safe Storage Project was transported to the Effluent Treatment Facility for processing.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Segregation

WW-SAN

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
1.20 m3	0.80 m3	1.00 m3	0.00 m3	3.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
1,121.00	1,029.00	1,323.00	0.00	3,473.00

Accomplishment: Separated oil and water for reuse.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Source Reduction

HAZ

Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.01 mt	0.00 mt	0.01 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	100.00	0.00	100.00

Accomplishment: Instituted a Product Substitution Campaign to replace hazardous products with less hazardous substitutes. Four products have been substituted in the processes at the Fast Flux Test Facility this past quarter. They include: 5 lbs of Demkote Silicon Lubricant, 3 lbs of Wall Power, 4.5 lbs of Trouble Shooter, and 0.125 lbs of Teksol. These products were being utilized in the electrical maintenance area and substitutes were judged based on the hazards associated with them, like products capable of use and compatibility for the job.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Source Reduction	HAZ	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
22.27 mt	0.00 mt	0.00 mt	0.00 mt	22.27 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
144,000.00	0.00	0.00	0.00	144,000.00

Accomplishment: The chlorofluorocarbon-12 (CFC-12) chlorofluorocarbon refrigerant was removed from 4 of the 8 chillers at the site and sold back to the vendor for \$10.00 a pound. The chillers contained approximately 7500 lbs. The CFC-12 was replaced with a CFC-free refrigerant, hydrofluorocarbon-134a (HFC-134a). This project was supplemented by Return-on-Investment funding.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Source Reduction	HAZ	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.13 mt	0.00 mt	0.13 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	600.00	0.00	600.00

Accomplishment: Waste Receiving and Processing Environmental Compliance has reviewed maintenance activities associated with chemical use and researched to locate less hazardous materials to perform activities. Of 191 products reviewed, 36 products were eliminated an additional 19 products have been restricted allowing no further purchase and 9 substitutions for less toxic materials were implemented.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Source Reduction LLW N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.08 m3	0.00 m3	0.00 m3	0.00 m3	0.08 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
39,944.00	0.00	0.00	0.00	39,944.00

Accomplishment: A request was submitted to Effluent Monitoring to reduce the number of Iodine-129 sampling performed on four stacks based on an iodine emission study. Effluent Monitoring gave approval to reduce sampling from weekly to quarterly, reducing the number of filters used.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Source Reduction LLW Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	3.07 m3	0.00 m3	0.00 m3	3.07 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	202.00	0.00	0.00	202.00

Accomplishment: Discontinued purging two near field monitoring wells 199-N-47 and 199-N-48.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Source Reduction

LLW

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	3.82 m3	0.00 m3	3.82 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	4,000.00	0.00	4,000.00

Accomplishment: During first quarter of CY 1998, approximately 2200 square meters (23,680 square feet) of radiological contaminated areas were effectively cleaned to lower levels. This cleaning allowed easier access for personnel and resources by reducing the personal protective equipment(PPE) needed for entry. Savings are primarily a reduction in contaminated PPE and equipment requiring disposal. NOTE: This accomplishment was not funded but achieved through excellent conduct of operation practices.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Source Reduction

LLW

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.01 m3	0.00 m3	0.01 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	220.00	0.00	220.00

Accomplishment: Reduced the amount of Low-Level Routine Waste by changing methodology for performance of Ammonia analyses. Changed Ion Chromatography from direct analysis. This was implemented as a Return-on-Investment and will also reduce MLLW and Liquid Wastestreams.

Hanford Site

Pollution Prevention Activity Waste Type Cleanup/Stabilization

Source Reduction

LLW

Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	27.00 m3	27.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	73,728.00	73,728.00

Accomplishment: Subcontractor working at the 105-C Interim Safe Storage Project wrapped their scaffolding in plastic prior to entering radiologically controlled areas, preventing it from becoming a rad waste.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Source Reduction	LLW	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
1.23 m3	0.00 m3	0.00 m3	0.00 m3	1.23 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
24,654.00	0.00	0.00	0.00	24,654.00

Accomplishment: Surveyed and cleaned the area to down post from a radiological controlled area to a radiological buffer area. Reduced waste from personal protective equipment and maintenance activities.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Source Reduction	LLW	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	4,104.00 m3	0.00 m3	0.00 m3	4,104.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	6,001,748.00	0.00	0.00	6,001,748.00

Accomplishment: The herbicide spraying program for tumbleweeds on the Hanford Site encompasses 1350 acres of land identified as "Underground Radioactive Material". Spraying has proven to be the most cost effective and efficient means in controlling the spread of radioactively contaminated weeds. The other preferred option is to remove the weeds using hand labor. Note: The savings value was changed as result of Richland Environmental Assurance, Permits and Policy Division and Bechtel Hanford Incorporated negotiations.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Source Reduction	LLW	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	5,805.00 m3	5,805.00 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	3,500,000.00	3,500,000.00

Accomplishment: Typically the below-grade structures outside of the C-Reactor Safety Storage Structure, which houses the reactor core, have low levels of contamination. The 105-C project team in conjunction with Department of Energy/Richland and the regulators (with support from other Environmental Restoration Contractor personnel), based on a model developed using RESRAD and RESRAD-Build software, were able to release to cleanup standards most of the below grade structures. This resulted in a waste avoidance of 2721 cubic meters of concrete and 3084 cubic meters of soil.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Source Reduction	MLLW	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	106.25 m3	0.00 m3	106.25 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	58,437.00	0.00	58,437.00

Accomplishment: Process tests are underway to determine the optimum level of bulking material that is

required to be added as feed to the Effluent Treatment Facility (ETF) dryer. Based on recommendations from the vendor, the ETF dryer has been operated under conditions that would limit the concentration of sodium nitrate in the feed to less than 28.5%. This was accomplished by the addition of a bulking sodium sulfate to the dryer feed. While this approach has been an effective method to operate the dryer, it has resulted in a significant addition to the amount of MLLW generated by the ETF. As a result, a testing program was undertaken to determine the minimum amount of bulking agent that was necessary to maintain dryer operations.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Source Reduction	MLLW	N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.08 m3	0.00 m3	0.08 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	1,264.00	0.00	1,264.00

Accomplishment: Reduced the amount of Mixed Waste generated by changing methodology for performance of Ammonia analyses. Changed to Ion Chromatography from direct analysis. This was implemented as a Return-on-Investment project and will also reduce LLW and Liquid waste volumes. They are reported separately.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Source Reduction	MLLW	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	59.40 m3	0.00 m3	59.40 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	636,000.00	0.00	636,000.00

Accomplishment: This project deployed a portable radiation mapping system in the B-Plant Canyon. The system uses a gamma camera with real-time response to produce a digitized image of scanned areas,

showing actual radiation fields and dose rates. The camera is capable of operation in a very high dose rate environment with relatively high energy gamma emissions.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**

Source Reduction

MLLW

N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	0.00 m3	0.01 m3	0.01 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	100.00	100.00

Accomplishment: Waste Receiving and Processing Facility Environmental Compliance has reviewed maintenance and operations activities associated with the process area (Buffer Zone) chemical use. As a result they have been successful at preventing most mixed waste generation by providing acceptable work controls which allow for release of regulated waste.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**

Source Reduction

SAN

Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 mt	0.00 mt	0.00 mt	0.03 mt	0.03 mt

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	0.00	70.00	70.00

Accomplishment: The amount of paperwork required to be generated for the necessary shipping papers of waste slated for the Environmental Restoration Disposal Facility was reduced in half to 1 sheet. Also reduced is the quantity of records to be stored.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Source Reduction	TRU	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.60 m3	0.00 m3	0.00 m3	0.00 m3	0.60 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
16,000.00	0.00	0.00	0.00	16,000.00

Accomplishment: During planning phase for sparging 6 mixed waste tanks, an opportunity was identified that could minimize or avoid generating a solid waste stream that would have designated as mixed transuranic waste. The sludge in the 340-A tanks was designated as a mixed waste (F-listed and Toxicity Characteristic Leachate Procedure toxic) and is also transuranic. The contact dose rate of the sludge was measured over 300mR/hr. A project to sluice the sludge from the tanks was being implemented to reduce the inventory of fissile inventory and lower the dose rate in and around the 340-A building. A high-pressure spray wand was placed inside the tanks and used to manually stir the sludge and several feet of water. When a good mix was achieved, the bottom drain on the tanks was opened to drain the mixed contents to the 340 vault tanks to be transferred to a railcar. The spray wand was to be used in 6 tanks, so it required the wand to be removed from one tank and moved to the next. This would have required the wand to be sleeved with plastic which would end up as a solid wastestream due to the residual tank waste that would have covered several feet of the spray wand. This would also contribute a significant dose to the operators handling the equipment and presents a high potential for personnel contamination and/or contamination spread in the facility. To reduce the exposure and eliminate generating a mixed transuranic waste, several possible methods for cleaning the wand between tanks were evaluated. Several wiping techniques were considered, but posed great risks and would generate additional solid wastes. It was decided to fabricate an in-tank device which would spray the wand as it was retracted from the tank. Six spray rings were fabricated by a craftsman using shop materials and installed on the temporary Plexiglas tank covers that were being installed for this project. A garden hose with quick-connect fittings was used for a water source. The spray rings proved to be extremely effective in cleaning the spray wand. The Health Physics Technician estimated it reduced the personnel dose rate by a factor of 10. There was no contamination spread or personnel contaminations during this entire project. The small amount of solid waste generated designated as LLW and was managed with existing procedures. The spray wand does not have a significant dose rate and is available for reuse in the facility.

Hanford Site

Pollution Prevention Activity	Waste Type	Cleanup/Stabilization
Source Reduction	WW-LLW	Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	0.00 m3	1.89 m3	0.00 m3	1.89 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	0.00	131,542.00	0.00	131,542.00

Accomplishment: This project eliminated the need to pipe 327 Basin Overflow water resulting from cask handling operations to the 340 facility. With the use of administrative procedures, waste can be returned to the basin upon the completion of cask handling operations and removal of the cask from the basin.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**
 Source Reduction WW-MLLW N

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
37.86 m3	0.00 m3	0.00 m3	0.00 m3	37.86 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
47,000.00	0.00	0.00	0.00	47,000.00

Accomplishment: Approximately 5000 gallons of runoff (rainwater and snowmelt) annually flood the 2706T building by accumulating along several exterior doors which eventually pass beneath the doors (at grade level) and enter the building. Once entering the building and physical contact is made with the floor areas and collection pits, the runoff (which is otherwise clean water) must be treated as F-listed waste by association. The runoff collected in the 2706T railroad sump is eventually pumped to the canyon tank system and into the double-shelled railcars for disposal. The modification entailed raising the exterior doors several inches and placing concrete landings on the inside and outside of the doors. By raising the doors and placing the respective concrete landings, the runoff is prevented from entering the building. This was a ROI funded project.

Hanford Site

Pollution Prevention Activity **Waste Type** **Cleanup/Stabilization**
 Source Reduction WW-MLLW Y

Waste Reduction

Quarter 1 Reduction	Quarter 2 Reduction	Quarter 3 Reduction	Quarter 4 Reduction	YTD Reduction
0.00 m3	16.70 m3	0.00 m3	0.00 m3	16.70 m3

Savings

Quarter 1 Savings	Quarter 2 Savings	Quarter 3 Savings	Quarter 4 Savings	YTD Savings
0.00	275.00	0.00	0.00	275.00

Accomplishment: Well sampling at the UP-1 wells was reduced from eight times a year to four times a year. This reduced the amount of purgewater being sent to the Liquid-Effluent Retention Facility by 4,400 gallons a year.

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