



U.S. DEPARTMENT OF
ENERGY

Presentation to the SRS Citizens Advisory Board

SRS Performance Measures Update

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EM *Environmental Management*
safety ♦ performance ♦ cleanup ♦ closure

Purpose

- Share format changes to the Performance Measures Report as suggested by the CAB
- Provide an update of EM Performance Measures through August FY 2010

Acronyms

ARRA	American Recovery & Reinvestment Act
DRR	Domestic Research Reactor
D&D	Decommission & Demolition
FFA	Federal Facility Agreement
FRR	Foreign Research Reactor
GWSB	Glass Waste Storage Building
LEU	Low Enriched Uranium
HEU	Highly Enriched Uranium
LLW	Low Level Waste
LLMW	Low Level Mixed Waste
MLLW	Mixed Low level Waste
NU	Natural Uranium
SCDHEC	South Carolina Dept of Health & Environmental Control
SNF	Spent Nuclear Fuel
SRNS	Savannah River Nuclear Solutions
SRR	Savannah River Remediation
SWPF	Salt Waste Processing Facility
TRU	Transuranic Waste
TVA	Tennessee Valley Authority

Performance Measures - CAB suggested changes

1. Demonstrate alignment with Site Strategic Plan & EM Mission Achievement
2. For each measure, provide % Complete status & End State target year
3. Color-code FY2010 actuals to provide easier identification of those measures that are ahead, on or behind schedule
4. Show both ARRA and End State Targets for TRU, MLL, LL, Remediation and Facility D&D measures
6. Create graphical analysis and lifecycle projections for key performance measures

Progress towards to EM Mission Achievement

<u>EM Site Cleanup- Major Areas</u>	(as of 8/31/10)	<u>End State % Complete</u>
Nuclear Materials		
Dissolve, Blend, Ship Nuclear Materials		
Plutonium Dissolved		7%
LEU* Shipped to Tennessee Valley Authority vendor		56%
Spent Nuclear Fuel (from FRR & DRR) Dissolved		0%
Liquid Waste		
Disposition Radioactive Liquid Waste		
Produce Canisters		41%
Process Salt Solution		3%
Close Tanks		4%
Solid Waste		
Disposition Radioactive Solid Waste		
Transuranic (TRU) Waste Shipped		42%
Mixed Low-Level & Low-Level Waste Dispositioned		82%
Soil & Ground Water		
Complete Remediation of Waste Sites		72%
Facilities		
Decommission / Demolish Facilities		26%

* Note: LEU is the result of blending HEU with natural Uranium


Reformatted Reporting Structure

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Notes:

1

2

 On / Ahead
of Schedule

Behind Schedule


<u>End State Basis</u>	


EM Performance Measures – thru August FY 2010

<u>Nuclear Materials</u>		Unit of Measure	Cum Actuals thru FY 2009	FY 2010 Analysis		End State Analysis			
Measure				Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	End State	% Complete	Target Year to Complete
				8/31/10					
Plutonium & Enriched Uranium									
Plutonium Dissolved in H-Area for Disposition ¹	Containers	42		29	29	71	967	7%	2019
						See Note 3			
LEU Shipped to TVA Vendor (LEU = HEU blended with NU) ²	Trailers	297		20	20	317	564	56%	2019
SNF (from FRR & DRR) Dissolved (To begin in FY 2011)	Bundles	0		0	0	0	Being Developed	0%	2019

Nuclear Materials Notes:

- Quantities Since 2008, End State Quantity is Pre- Decisional (Includes LAP Containers)
- LEU = Low Enriched Uranium
HEU = Highly Enriched Uranium
NU = Natural Uranium
SNF = Spent Nuclear Fuel
FRR = Foreign Research Reactor
DRR - Domestic Foreign Reactor
LAP = Low Activity Plutonium
- Start-up of HB-Line South will double through-put capacity of plutonium disposition

 On / Ahead of Schedule

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End State Basis

Nuclear Materials End State Quantities and Target Year to Complete are based on 2008 Certified Life Cycle Plan

EM Performance Measures – thru August FY 2010

<u>Liquid Waste</u>		Unit of Measure	Cum Actuals thru FY 2009	FY 2010 Analysis		End State Analysis			
Measure				Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	End State	% Complete	Target Year to Complete
				8/31/10					
DWPF Canisters Poured & Tested									
Canisters Produced	Canisters	2,795		179	190	2,974	7,235	41%	2028
Tank Preparation and Closure									
Bulk Waste Removal Complete	Tanks	7		0	2	7	51	14%	
Heel Removal Campaign Complete	Tanks	4		0	2	4	51	8%	
Annuli Prepared for Closure ²	Tanks	0		0	2	0	43	0%	
Three Agency Preliminary Approval ³	Tanks	4		0	2	4	51	8%	
Three Agency Final Approval ³	Tanks	2		0	2	2	51	4%	
Tanks Isolated	Tanks	2		0	1	2	51	4%	
Operationally Closed	Tanks	2		0	0	2	51	4%	2029
SPF Salt Solution Processed									
Salt Solution Processed	k Gallons	2,967		1,005	2,220	3,972	120,690	3%	2028
Radioactivity									
Curies Stabilized in Canisters ⁴	k Curies	23,800		6,469	7,254	30,269	385,000	8%	2028

Liquid Waste Notes:

1. GWSB # 3 Contingency Capacity - TBD
2. 43 of 51 Tanks Require Annuli Preparation
3. Approval to Cease Waste Removal
4. Estimate based on Sludge Batch Sampling

5. Canister Storage Space Available: 1616 (As of end 8/31/2010)



On / Ahead
of Schedule



Behind Schedule

End State Basis

Liquid Waste End State Quantity and Target Year to Complete are based on Rev 15 System Plan



EM Performance Measures – thru August FY 2010

<u>Liquid Waste</u>		Unit of Measure	Cum Actuals thru FY 2009	FY 2010 Analysis		End State Analysis				
Measure				Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	End State	% Complete	Target Year to Complete	
				8/31/10						
DWPF Canisters Poured & Tested										
Canisters Produced	Canisters	2,795		179	190	2,974	7,235	41%	2028	
Tank Preparation and Closure										
Bulk Waste Removal Complete	Tanks	7		0	2	7	51	14%		
Heel Removal Campaign Complete	Tanks	4		0	2	4	51	8%		Tanks 5 and 6 planned for late CY 2010. No impacts to Federal Facility Agreement (FFA) Commitments.
Annuli Prepared for Closure ²	Tanks	0		0	2	0	43	0%		
Three Agency Preliminary Approval ³	Tanks	4		0	2	4	51	8%		Tanks 18 and 19 planned for late CY 2010. No impacts to Federal Facility Agreement (FFA) Commitments.
Three Agency Final Approval ³	Tanks	2		0	2	2	51	4%		
Tanks Isolated	Tanks	2		0	1	2	51	4%		Tank 18 to complete in CY2010. Tank 19 in progress for completion CY2011. No impacts to FFA Commitments.
Operationally Closed	Tanks	2		0	0	2	51	4%	2029	
SPF Salt Solution Processed										
Salt Solution Processed	k Gallons	2,967		1,005	2,220	3,972	120,690	3%	2028	Performance has not impacted Liquid Waste or other Programs. Contingency maintained to support facility operations.
Radioactivity										
Curies Stabilized in Canisters ⁴	k Curies	23,800		6,469	7,254	30,269	385,000	8%	2028	

Liquid Waste Notes:

1. GWSB # 3 Contingency Capacity - TBD
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3. Approval to Cease Waste Removal
4. Estimate based on Sludge Batch Sampling

5. Canister Storage Space Available: 1616 (As of 8/31/2010)

 On / Ahead of Schedule
 Behind Schedule

End State Basis

Liquid Waste End State Quantity and Target Year to Complete are based on Rev 15 System Plan


EM Performance Measures – thru August FY 2010


<u>Solid Waste</u>	Unit of Measure	Cum Actuals thru FY 2009
<i>Measure</i>		
TRU, MLLW & LLW		
RH-TRU Waste Shipped for Disposal		17
CH-TRU Waste Shipped for Disposal		<u>6,165</u>
Total Transuranic Waste Shipped	Cubic Meters	6,182
LL & MLL Waste Disposed ¹		
Legacy		
Newly Generated		
Total	Cubic Meters	105,564

FY 2010 Analysis	
Actuals FYTD	Annual Target
8/31/10	
0	1
<u>456</u>	<u>520</u>
456	521
7,194	7,655

End State (Lifecycle) Analysis			
Cum Act thru 2010 (FYTD)	End State	% Complete	Target Year to Complete
17	68		
<u>6,621</u>	<u>15,590</u>		
6,638	15,658	42%	2038
112,758	137,579	82%	2038

1. LL = Low Level
MLL = Mixed Low Level

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End State Basis

Solid Waste End State Quantities and Target Year to Complete are based on 2008 Certified Life Cycle Plan

EM Performance Measures – thru August FY 2010


<u>Area Completion</u>	Unit of Measure	Cum Actuals thru FY 2009
Measure		
Remediations & Facilities D&D'd		
Remediations Completed	Release Sites	368
Facilities -Decommission & Demolition		
Industrial Facilities- Major ¹		232
Nuclear Facilities		11
Radioactive Facilities		<u>7</u>
Total Facilities D&D'd	Major Facilities	250


FY 2010 Analysis	
Actuals FYTD	Annual Target
8/31/10	
5	1
3	4
0	0
<u>0</u>	<u>0</u>
3	4

End State (Lifecycle) Analysis			
Cum Act thru 2010 (FYTD)	End State	% Complete	Target Year to Complete
373	515	72%	2038
235	759		
11	191		
<u>7</u>	<u>40</u>		
253	990	26%	2032

Notes

1. Excludes smaller ancillary buildings

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End State Basis


Area Completion End State Quantities and Target Year to Complete are based on 2008 Certified Life Cycle Plan


EM Performance Measures – thru August FY 2010

Recovery Act (2009 - 2012)		Unit of Measure	2009 Actual	FY 2010 Analysis		End State ARRA Analysis			
Measure				Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	ARRA End State	% Complete	Target Year to Complete
Funding Spent				8/31/10					
SRNS			225,506	460,033	520,093	685,539	1,415,400	48%	2012
SRR			104	77,612	100,000	77,716	200,000	39%	2011
Total	\$ (000)		225,610	537,645	620,093	763,255	1,615,400	47%	2012
Solid Waste Disposition									
RH-TRU Waste Shipped for Disposal			17	0	1	17	39	44%	
CH-TRU Waste Shipped for Disposal			281	456	520	737	4,961	15%	
Total Transuranic Waste Shipped	Cubic Meters		298	456	521	754	5,000	15%	2012
PAD 1 - % TRU Waste Removed	%		0%	82%	100%	82%	100%	82%	2011
PAD 1 - % TRU Waste Disposed	%		0%	0%	0%	0%	90%	0%	2012
Mixed Low Level Waste Disposed ¹			325	68	78	393	755	52%	
Low Level Waste Disposed ¹			2,067	7,126	7,577	9,193	17,231	53%	
Total MLLW / LLW	Cubic Meters		2,392	7,194	7,655	9,586	17,986	53%	2011
Maintain Newly Generated Low Level Waste Below Target Level	Cubic Meters		Met	Met	< 400	Met	< 400	NA	
Nuclear Material Disposition									
Depleted Uranium Oxide Shipped	Drums		0	6,214	6,214	6,214	15,603	40%	2011

Recovery Act Notes:

- Legacy Waste disposition complete; Newly Generated Waste disposition is Ongoing

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ARRA End State Basis

Recovery Act End State Quantities and Target Year to Complete are based on ARRA Certified Baseline

EM Performance Measures – thru August FY 2010

Recovery Act (2009 - 2012)		Unit of Measure	2009 Actual	FY 2010 Analysis		End State ARRA Analysis			
Measure				Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	ARRA End State	% Complete	Target Year to Complete
				8/31/10					
Soil & Water Remediation									
Characterized for Remediation		Waste Sites	4	12	13	16	23	70%	2011
Remediation Systems Installed		Systems	2	3	6	5	12	42%	2011
Remediations Completed		Release Sites	2	5	1	7	14	50%	2011
Ground Water Plumes Remediated		# of Plumes	1	2	3	3	7	43%	2011
Facility Decommission & Demolition									
Industrial Facilities- Major			0	3	4	3	10		
Industrial Facilities- Ancillary				4	4	4	4		
Total Industrial Facilities				7	8	7	14	50%	2011
Radioactive Facilites			0	0	0	0	16	0%	2011
Total Facilities D&D'd		Facilities	0	7	8	7	30	23%	2011
Reactors Decommissioned		# Completed	0	0	0	0	3	0%	2012
Operational Footprint Reduction (75%)									
Site Remediated/ Footprint Reduction		Square Miles	0	75	109	75	233	32%	2012

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ARRA End State Basis

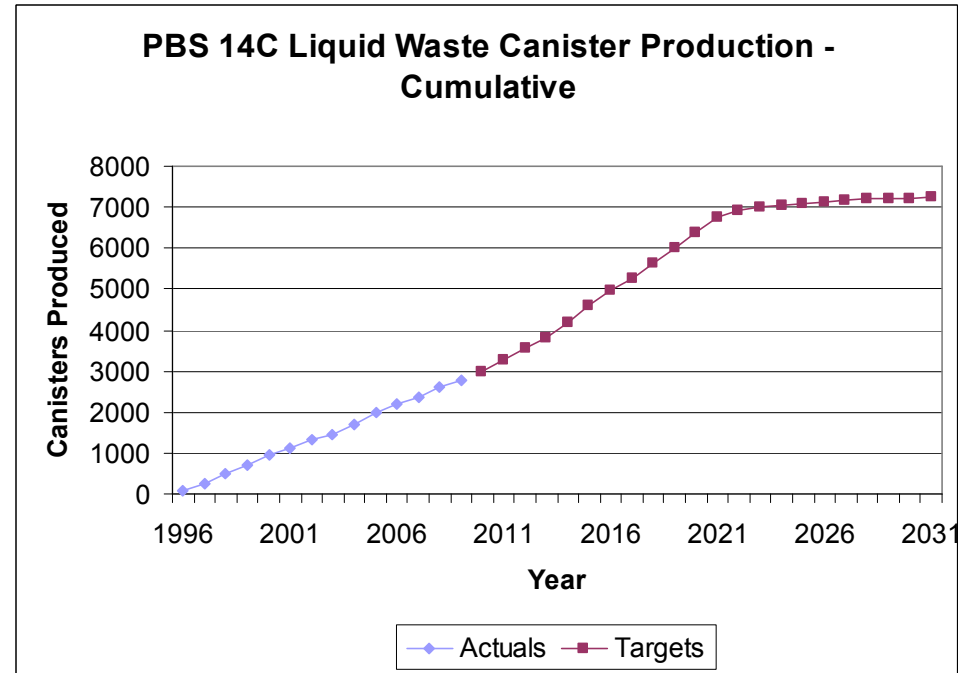
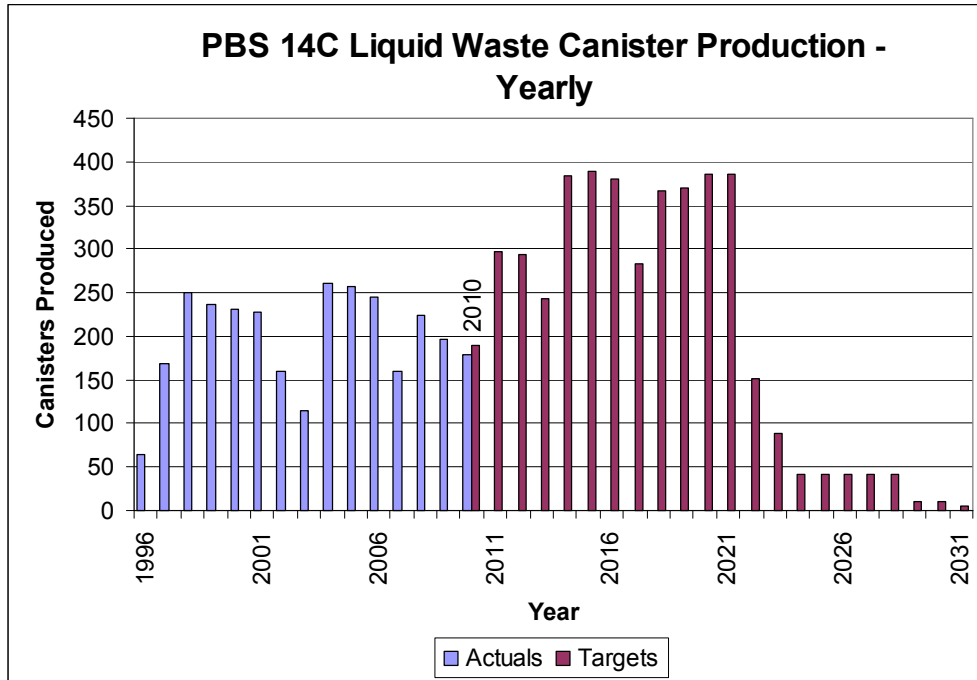
Recovery Act End State Quantities and Target Year to Complete are based on ARRA Certified Baseline

Work in Progress

For each major Performance Measure, a graphical depiction of the lifecycle (historical and forward looking) is being developed

The following measure for Liquid Waste – Canister Production is an example of how such projections will be demonstrated

Example Analysis: Liquid Waste Canister Production



End State Basis: Liquid Waste End State Quantity and Target Year to Complete are based on Rev 15 System Plan

Summary and Path Forward

- DOE-SR will continue to develop Lifecycle graphs for the key operational areas of EM operations
 - Target: End of 1st qtr FY11
- Performance Measure targets for FY11 are being finalized and will be reflected in October (1st month of FY11) report
- Starting in FY11, TRU measure will be separated into Legacy & Newly Generated categories
- Suggestions from the CAB for any additional improvements are welcomed