

Radioactive and Mixed Waste Disposal/Forecast Update



Sydney Gordon

Waste Generator Coordinator

National Security Technologies (NSTec), LLC

Nevada Test Site (NTS) Generator Workshop

April 22, 2008



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

Outline

- NTS low-level waste (LLW) disposal history
- Fiscal Year (FY) 2008 volume summary
- FY 2009 preliminary forecast
- FY 2008 through 2010 mixed low-level waste (MLLW) forecast
- FY 2008 direct funding and volume allocation
- NTS FY 2008 projections
- NTS preliminary FY 2008 - 2013 projections

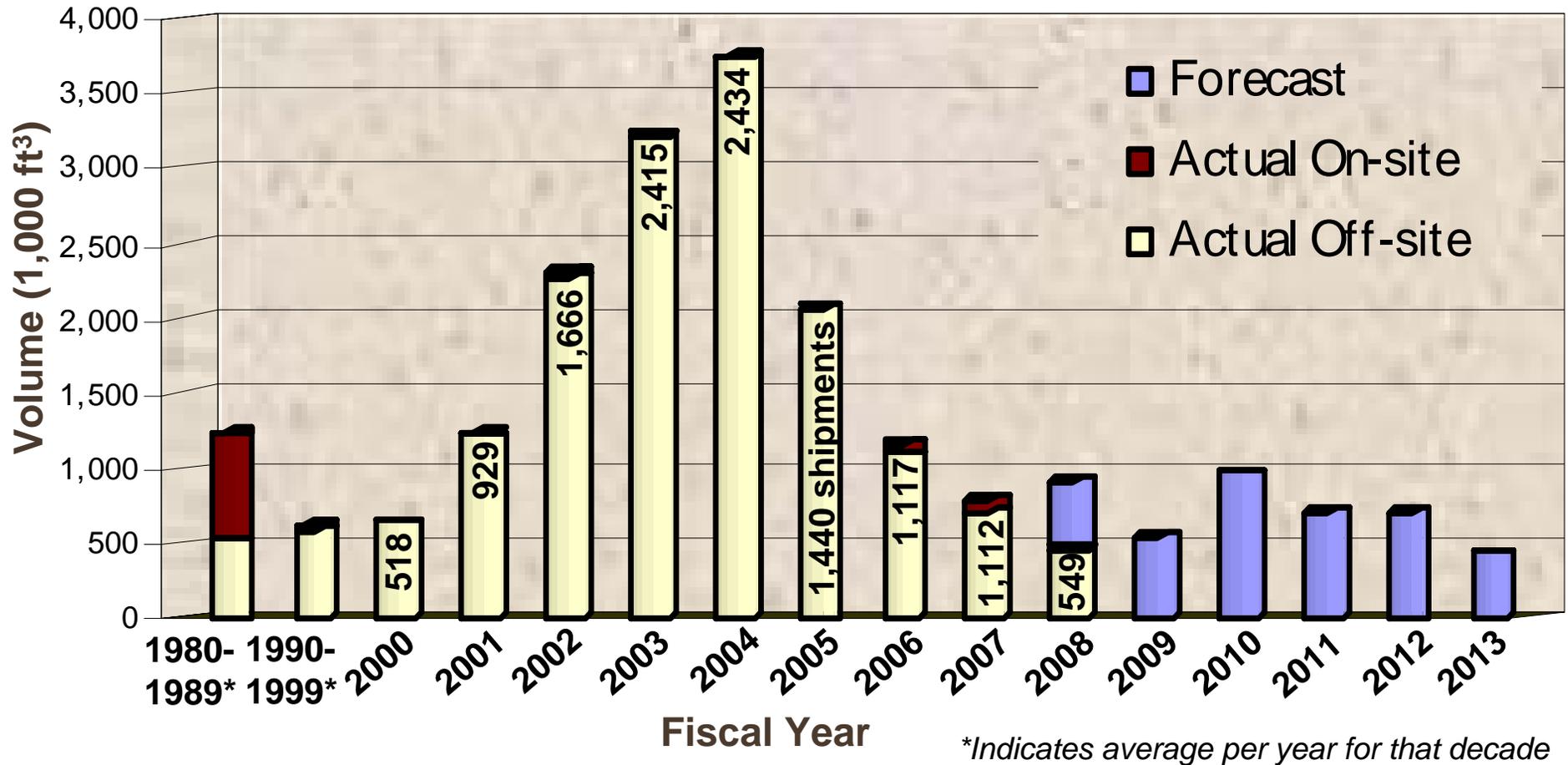


EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

NTS LLW Disposal History



FY 2004 (total) – 3,743,292 ft³
 FY 2005 (total) – 2,089,028 ft³
 FY 2006 (total) – 1,166,435 ft³
 FY 2007 (total) – 793,897 ft³

FY 2008 (as of 04-13-2008) – 484,544 ft³

www.em.doe.gov

FY 2008 LLW Volume Summary*

Field Office	1 st Quarter Update Forecast	Allocation	Volume Received	% of Allocation Received
Chicago	19,755	19,755	0	0
Duratek	N/A	N/A	0	N/A
Idaho	27,871	27,871	8,784	32%
Lexington (Paducah and Portsmouth)	325,089	325,089	158,780	49%
Livermore	49,451	49,451	19,477	39%
Los Alamos National Laboratory (LANL)	2,352	2,352	0	0%
Lovelace (to be processed by Duratek/Energy Solutions)	560	560	0	0
Naval Reactors/Knolls Atomic Power Laboratory through Nuclear Fuel Services	1,450	1,450	0	0
Nevada (NSTec and Stoller-Navarro)	23,477	23,477	31,262	133%
Nuclear Fuel Services	142,796	142,796	47,834	33%
Oak Ridge Reservation (Bechtel Jacobs, EnergX, ORNL)	48,687	48,687	31,369	64%
Oakland (Boeing)	160	160	153	96%
Pantex	2,320	2,320	0	0
PermaFix (includes Portsmouth, SRS, and LANL volumes)	N/A	N/A	16,680	N/A
Sandia – NNSA	5,675	5,675	768	14%
Savannah River Site (SRS)	1,700	1,700	100	6%
West Valley	78,833	78,833	59,052	75%
Waste Isolation Pilot Plant (WIPP) through NSTec	66	66	0	0
Y-12 Site Office (YSO) – NNSA	175,397	175,397	73,961	42%
Total	905,639	905,639	448,220	49%

*As of March 30, 2008 (in ft³)

FY 2008 MLLW Volume Summary*

Field Office	1 st Quarter Update Forecast	Volume Received		% of Forecast Received
		Actual	As LLW	
Idaho (includes 420 ft ³ MLLW through PermaFix)	45,427	6,593		15%
Lexington (includes 14,872 ft ³ of LLW through PermaFix)	39,730	0	14,872	37%
Livermore	320	0		0
Nevada	3,663	49		1%
Nuclear Fuel Services	180	0		0
Oak Ridge Reservation	8,488	0		0
Oakland	102	110		108%
Sandia – NNSA	500	130		26%
SRS (includes 163 ft ³ of LLW and 2,053 ft ³ of MLLW through PermaFix)	15,910	2,794	163	19%
West Valley	1,400	0		0
WIPP	8	0		0
YSO – NNSA	2,000	588		29%
Total	117,728	10,264	15,035	21%



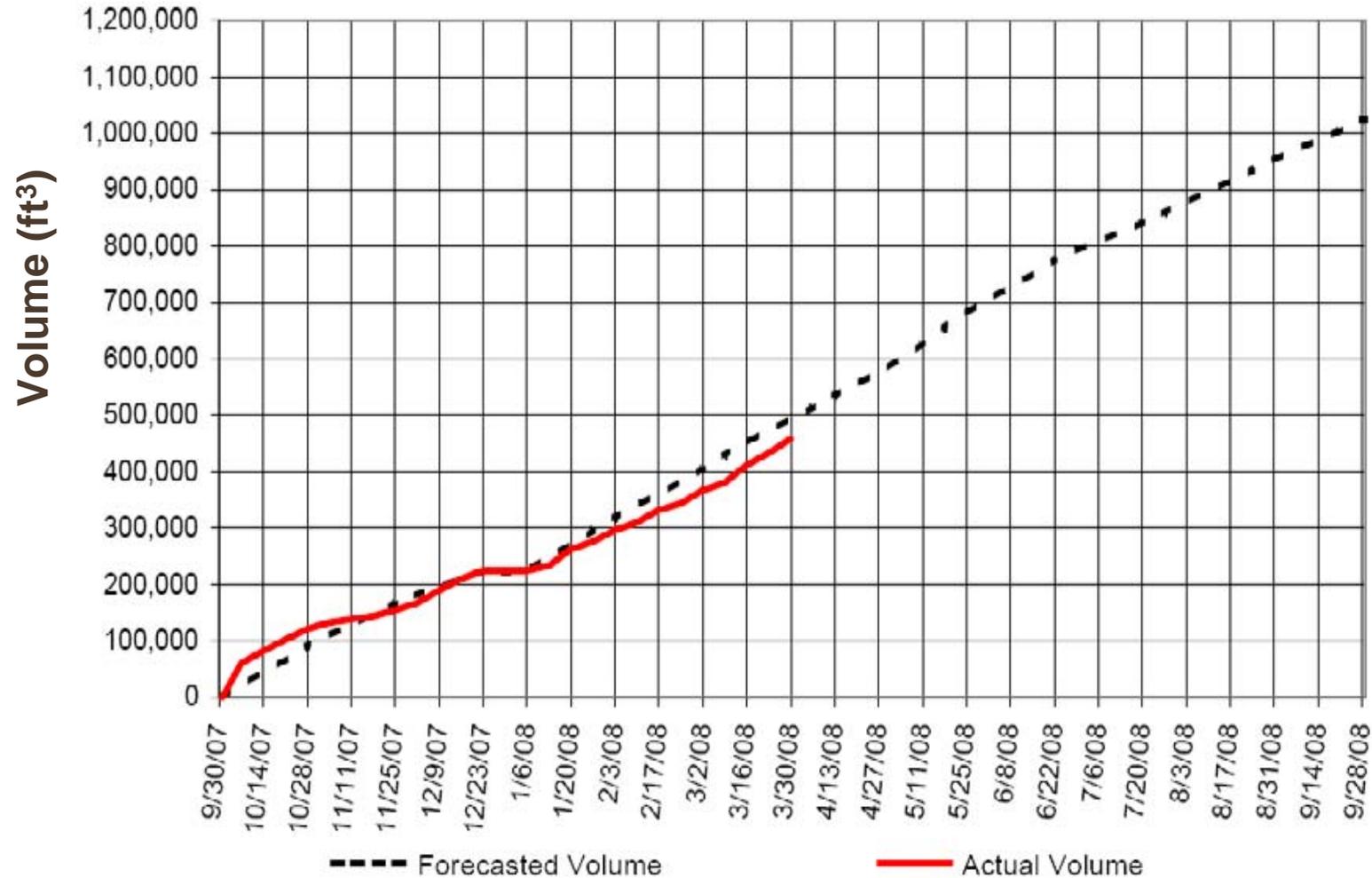
EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

*As of March 30, 2008 (in ft³)

www.em.doe.gov

FY 2008 LLW and MLLW Weekly Volumes*



*FY 2008 actual volume as of March 30, 2008 = 458,484 ft³
 FY 2008 forecasted volume through fiscal month of March = 473,464 ft³



Impact Due to 2nd Quarter FY 2008 Updates

- Total volume forecast for April through September increased to 927,186 cubic feet
- Average receipts of 154,500 cubic feet per month (exceeds capacity)
- Excess capacity totally consumed
- Totals for July, August, and September exceed 168,000 cubic feet
- May need to schedule shipments weekly
- Generator monthly shipment projections essential
- Surcharges may apply if overtime is required

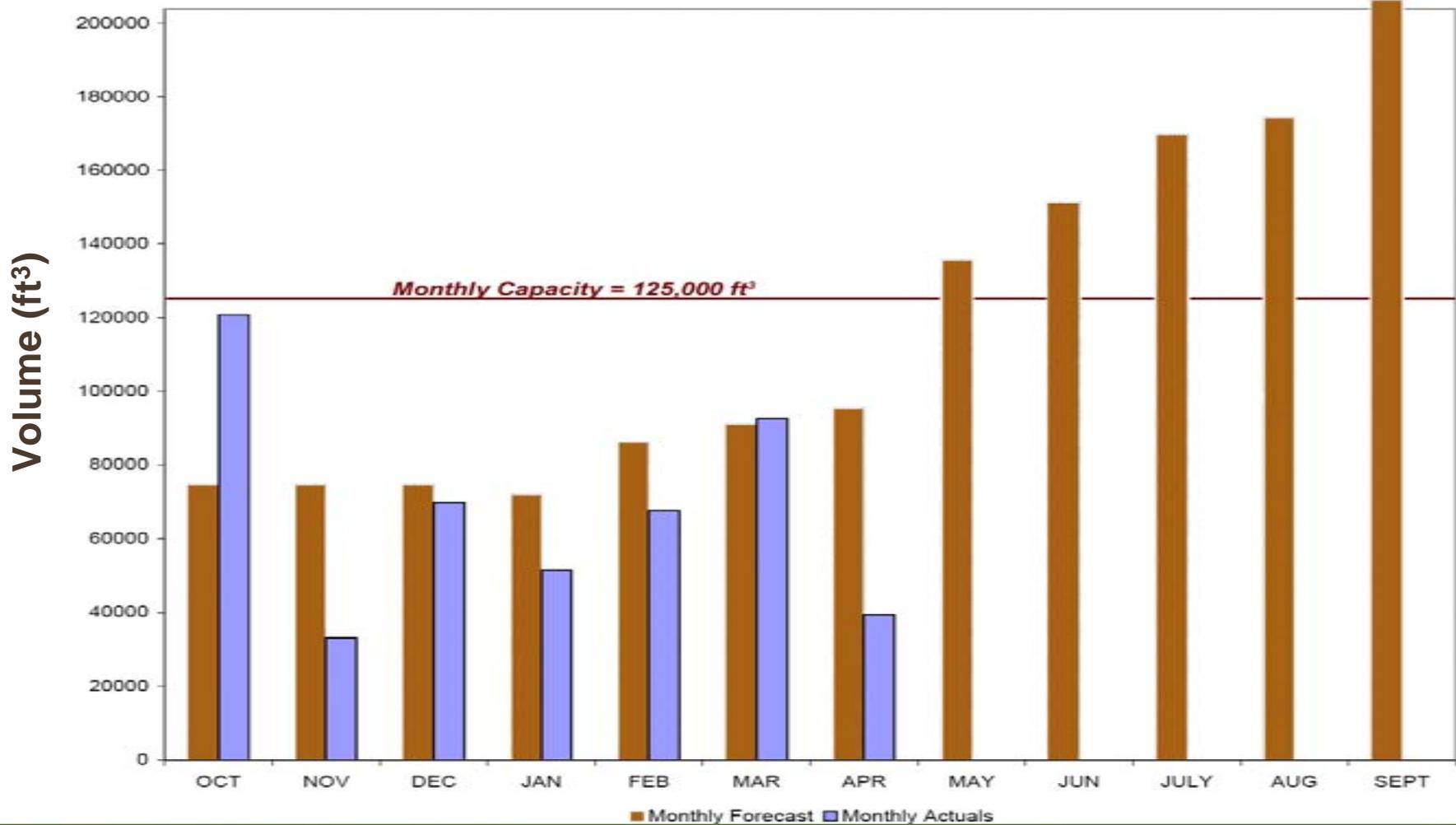


EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

FY 2008 LLW and MLLW Monthly Volumes*



*FY 2008 total volume received as of April 13, 2008 = 498,004 ft³

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

Sample Monthly Generator Shipment Projection

BWXT Y-12 Monthly Shipment Schedule for August 2 - September 6 -2007						
Shipment	Est.Arrival	Profile #s	Packaging Type/Quantity/Volume	Special Handling Needs		
Date	Date					
8/2/2007	8/6/2007	BWXT009 and 011	55-gal drums - 16; Boxes - 10 1,138ft3	None		
8/2/2007	8/6/2007	BWXT009 and 011	55-gal drums - 16; Boxes - 10 1,138ft3	None		
8/7/2007	8/9/2007	DUM02001	Sealands - 2, 2,560ft3	None		
8/7/2007	8/9/2007	BWXT001	Sealand - 1, 1,280ft3	None		
8/7/2007	8/9/2007	BWXT001	Sealand - 1, 1,280ft3	None		
8/21/2007	8/23/2007	DUM02001	Soft-sides - 8, 833ft3	None		
8/21/2007	8/23/2007	DUM02001	Soft-sides - 8, 833ft3	None		
8/28/2007	8/30/2007	DUM02001	Soft-sides - 8, 833ft3	None		
8/28/2007	8/30/2007	DUM02001	Soft-sides - 8, 833ft3	None		
8/28/2007	8/30/2007	BWXT001	Sealand - 1, 1,280ft3	None		
8/28/2007	8/30/2007	BWXT001	Sealand - 1, 1,280ft3	None		
8/29/2007	9/3/2007	MW-01	55-gal drums - 80, 640ft3	None		
9/6/2007	9/10/2007	BWXT013	Sealand - 1, 1,280ft3	None		
9/6/2007	9/10/2007	BWXT013	Sealand - 1, 1,280ft3	None		
9/6/2007	9/10/2007	BWXT013	Sealand - 1, 1,280ft3	None		
9/6/2007	9/10/2007	BWXT013	Sealand - 1, 1,280ft3	None		
9/6/2007	9/10/2007	BWXT013	Sealand - 1, 1,280ft3	None		
9/6/2007	9/10/2007	BWXT013	Sealand - 1, 1,280ft3	None		



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

FY 2009 LLW Forecast – Preliminary

Location	ft ³
Chicago	38,000
Idaho	191,524
Knolls Atomic Power Laboratory	15,600
Lexington	109,249
Livermore	28,250
Nevada	15,804
Nuclear Fuel Services	186,600

Location	ft ³
Oak Ridge National Laboratory	2,714
Oak Ridge Reservation	72,359
Oakland	200
Pantex	2,800
Sandia – NNSA	4,000
SRS	73,850
WIPP	22
YSO – NNSA	120,250
Total	861,222



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

FY 2009 MLLW Forecast – Preliminary

Location	ft ³
Idaho	43,260
Lexington	4,029
Livermore	400
Nuclear Fuel Services	45
Oak Ridge Reservation	23,603
Sandia – NNSA	200
SRS	500
West Valley	1,000
YSO – NNSA	2,100
Total	75,137



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

FY 2008-2010 MLLW Forecast – Preliminary

Location	ft ³
Idaho	108,104
Lexington	25,000
Livermore	800
Oak Ridge Reservation	48,901
Sandia – NNSA	800
SRS	1,700
West Valley	2,650
WIPP	15
YSO – NNSA	5,500
Total FY 2008-2010	193,470
Grand Total FY 2006-2010 (50%) (as of March 30, 2008)	350,296

Note:
Pit 3 MLLW
capacity is
706,293 ft³



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

FY 2008 Direct Funding and Volume Allocation

- Fully funded by EM Headquarters
- Based on capacity volume of 1.5 million ft³ (LLW and MLLW)
- No generator access fees assessed to Department of Energy sites
- *Work for Others* sources will be charged disposal fees
- Special use costs (i.e. crane, weekend work, second crew, etc.) may be charged to the applicable generators
- Volume allocations based on 2nd Quarter FY 2008 updated forecasts
- Volume allocations reviewed quarterly versus receipts



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

NTS FY 2008 Projections

- FY 2008 total 1,360,026 ft³ (38,510 cubic meters)
- 94 percent is LLW
 - Many generators, but largest volumes projected from Lexington, YSO and Savannah River Site
- 30 percent is classified low-level material
 - Portsmouth and YSO are the largest contributors
- 6 percent is MLLW
 - Portsmouth, Advanced Mixed Waste Treatment Project (AMWTP), and EnergX are the largest contributors

Note: Forecast data as of April 15, 2008



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

NTS Preliminary LLW FY 2008-2013 Projections

- Forecasts from generators total 5.3 million ft³ over six years
 - Averages 880,000 ft³ per year
- Largest site contributors
 - Paducah, 25 percent
 - Idaho, 17 percent (Idaho Completion Project [ICP], Battelle Energy Alliance [BEA], and AMWTP)
 - YSO/NNSA, 14 percent (Oak Ridge)
 - Oak Ridge, 10 percent
 - Nuclear Fuel Services, 10 percent

Note: Forecast data as of April 15, 2008



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

NTS Preliminary MLLW FY 2008-2013 Projections

- Forecasts from generator sites total 262,184 ft³
 - Averages 72,925 ft³ per year through FY 2010
 - Approximately 100,000 ft³ per year projected to continue after the NTS MLLW closure in early FY 2011; primarily from transuranic waste characterization activities
- Largest site contributors:
 - Idaho, 41 percent (ICP, BEA, and AMWTP)
 - EnergX/Oak Ridge, 32 percent
 - Portsmouth, 15 percent

Note: Forecast data as of April 15, 2008



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov