Appendix I.1 - Funding (Stretch Case)

Budget Authority in Escalated Dollars

Project Title	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
HL-01 H Tank Farm											
H Tank Farm Operations	85,371	89,019	95,078	93,420	100,337	106,546	108,122	110,347	113,327	113,980	117,057
LI: Replacement Evaporator	12,835	3,567	-	-	-	-	-	-	-	-	-
HL-01 Total	**98,205**	**92,586**	**95,078**	**93,420**	**100,337**	**106,546**	**108,122**	**110,347**	**113,327**	**113,980**	**117,057**
HL-02 F Tank Farm	**58,928**	**60,993**	**59,966**	**63,928**	**68,328**	**70,471**	**71,464**	**74,184**	**76,187**	**73,509**	**75,493**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	1,108	3,824	3,169	3,311	3,552	3,673	-	-	4,038	4,059	4,168
WR: Tank Closure	124	350	16	3,113	4,745	1,653	-	-	8,712	8,757	391
HL-03 Total	**1,232**	**4,174**	**3,185**	**6,424**	**8,297**	**5,326**	**-**	**-**	**12,750**	**12,816**	**4,559**
HL-04 Feed Preparations & Sludge Operations	**53,328**	**52,037**	**50,722**	**56,097**	**62,734**	**66,549**	**70,173**	**69,739**	**71,622**	**72,071**	**74,017**
HL-05 Vitrification											
Vitrification Ops	127,626	116,698	111,727	126,400	132,185	133,344	141,166	146,986	145,944	150,235	155,255
Failed Equip. Storage Vaults	-	-	1,143	-	-	-	-	-	-	-	-
HL-05 Total	**127,626**	**116,698**	**112,870**	**126,400**	**132,185**	**133,344**	**141,166**	**146,986**	**145,944**	**150,235**	**155,255**
HL-06 Glass Waste Storage	**436**	**603**	**684**	**712**	**2,056**	**2,078**	**1,472**	**839**	**5,941**	**16,421**	**24,851**
HL-13 Salt Disposition											
Salt Disposition Ops	15,620	10,175	17,543	4,982	-	-	-	-	-	-	-
LI: Salt Alternative	-	-	-	29,465	84,345	135,123	150,278	150,768	150,895	143,752	98,761
HL-13 Total	**15,620**	**10,175**	**17,543**	**34,447**	**84,345**	**135,123**	**150,278**	**150,768**	**150,895**	**143,752**	**98,761**
HL-09 LI: Tk Fm Services Upgrade I	**1,632**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-10 LI: Storm Water Upgrades	**2,508**	**3,533**	**138.3381**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-11 LI: Tk Fm Services Upgrade II	**838**	**2,141**	**10,455**	**6,303**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-12 LI: Waste Removal											
LI: WR from Tanks	24,739	21,796	23,046	25,458	3,688	11,196	12,300	1,827	33,060	46,395	78,879
LI: Vit Upgrades	12	653	616	-	-	-	7,063	7,276	14,945	15,255	15,667
LI: Pipe, Evaps & Infrastructure	-	-	-	993	5,995	15,870	12,536	-	-	-	-
HL-12 Total	**24,751**	**22,449**	**23,662**	**26,452**	**9,683**	**27,066**	**31,899**	**9,103**	**48,005**	**61,651**	**94,546**
FA-24 Facility Decontamination/Decommissioning	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HLW TOTAL	**385,103**	**365,388**	**374,304**	**414,182**	**467,965**	**546,502**	**574,574**	**561,967**	**624,670**	**644,434**	**644,540**
HLW w/o Salt Total	**369,483**	**355,213**	**356,760**	**379,735**	**383,619**	**411,379**	**424,296**	**411,199**	**473,775**	**500,682**	**545,779**
Solid Waste Facilities											
ETF	16,510	15,098	16,115	17,302	18,705	20,455	22,088	23,838	20,579	23,997	20,586
SS	1,595	857	1,099	2,055	4,454	2,317	2,229	2,314	2,377	7,353	15,734
SW TOTAL	**18,105**	**15,955**	**17,214**	**19,356**	**23,159**	**22,772**	**24,317**	**26,152**	**22,956**	**31,351**	**36,321**
Life Cycle Cost	**403,208**	**381,344**	**391,518**	**433,538**	**491,123**	**569,274**	**598,891**	**588,119**	**647,626**	**675,785**	**680,861**

Appendix I.1 - Funding (Stretch Case)

Budget Authority in Escalated Dollars

Project Title	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
HL-01 H Tank Farm											
H Tank Farm Operations	119,449	121,885	125,176	126,890	130,316	132,077	130,807	134,339	132,865	133,522	130,107
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	-	-
HL-01 Total	**119,449**	**121,885**	**125,176**	**126,890**	**130,316**	**132,077**	**130,807**	**134,339**	**132,865**	**133,522**	**130,107**
HL-02 F Tank Farm	**77,532**	**79,625**	**81,775**	**83,983**	**85,395**	**83,308**	**83,179**	**74,895**	**75,360**	**77,395**	**76,200**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	13,689	25,357	23,265	13,911	14,287	14,673	15,069	15,476	5,298	5,441	5,588
WR: Tank Closure	16,677	1,262	10,845	11,870	53,794	68,725	33,204	56,055	25,896	52,498	73,618
HL-03 Total	**30,366**	**26,619**	**34,109**	**25,781**	**68,081**	**83,398**	**48,273**	**71,530**	**31,194**	**57,938**	**79,205**
HL-04 Feed Preparations & Sludge Operations	**76,015**	**68,871**	**70,731**	**72,640**	**74,602**	**76,616**	**78,685**	**80,809**	**82,991**	**85,232**	**87,533**
HL-05 Vitrification											
Vitrification Ops	160,620	160,312	168,042	175,531	172,995	182,082	189,295	193,042	193,907	202,727	215,510
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	-	-
HL-05 Total	**160,620**	**160,312**	**168,042**	**175,531**	**172,995**	**182,082**	**189,295**	**193,042**	**193,907**	**202,727**	**215,510**
HL-06 Glass Waste Storage	**10,030**	**1,876**	**1,927**	**7,844**	**8,101**	**8,366**	**8,640**	**8,923**	**9,216**	**9,518**	**9,830**
HL-13 Salt Disposition											
Salt Disposition Ops	45,821	79,791	84,288	86,322	80,006	82,458	83,648	97,864	101,945	104,750	108,222
LI: Salt Alternative	57,843	-	-	-	-	45,370	62,127	47,853	-	-	-
HL-13 Total	**103,664**	**79,791**	**84,288**	**86,322**	**80,006**	**127,829**	**145,775**	**145,718**	**101,945**	**104,750**	**108,222**
HL-09 LI: Tk Fm Services Upgrade I	-	-	-	-	-	-	-	-	-	-	-
HL-10 LI: Storm Water Upgrades	-	-	-	-	-	-	-	-	-	-	-
HL-11 LI: Tk Fm Services Upgrade II	-	-	-	-	-	-	-	-	-	-	-
HL-12 LI: Waste Removal											
LI: WR from Tanks	79,058	87,912	69,532	71,273	88,983	73,598	87,587	99,917	83,321	71,891	37,161
LI: Vit Upgrades	28,158	18,590	12,728	19,608	20,137	20,681	14,160	14,542	-	-	-
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	-	-
HL-12 Total	**107,216**	**106,502**	**82,260**	**90,881**	**109,120**	**94,278**	**101,746**	**114,459**	**83,321**	**71,891**	**37,161**
FA-24 Facility Decontamination/Decommissioning	-	-	-	-	-	**43,183**	**36,285**	-	-	-	-
HLW TOTAL	**684,891**	**645,482**	**648,307**	**669,872**	**728,616**	**831,137**	**822,685**	**823,716**	**710,799**	**742,974**	**743,768**
HLW w/o Salt Total	**581,228**	**565,690**	**564,019**	**583,550**	**648,611**	**703,308**	**676,910**	**677,998**	**608,854**	**638,224**	**635,546**
Solid Waste Facilities											
ETF	21,843	21,875	25,438	32,919	25,062	25,243	30,249	25,667	32,191	27,072	28,746
SS	24,306	35,875	53,592	42,606	39,905	55,953	56,416	52,257	61,883	62,422	69,203
SW TOTAL	**46,150**	**57,751**	**79,030**	**75,525**	**64,967**	**81,196**	**86,664**	**77,924**	**94,074**	**89,494**	**97,949**
Life Cycle Cost	**731,041**	**703,232**	**727,337**	**745,397**	**793,584**	**912,333**	**909,350**	**901,640**	**804,873**	**832,468**	**841,717**

Appendix I.1 - Funding (Stretch Case)

Budget Authority in Escalated Dollars

Project Title	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
HL-01 H Tank Farm											
H Tank Farm Operations	131,934	135,496	135,599	137,435	135,521	77,245	79,331	54,085	-	-	-
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	-	-
HL-01 Total	**131,934**	**135,496**	**135,599**	**137,435**	**135,521**	**77,245**	**79,331**	**54,085**	**-**	**-**	**-**
HL-02 F Tank Farm	**49,586**	**28,415**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	5,739	-	-	-	-	-	-	-	-	-	-
WR: Tank Closure	56,324	33,610	28,025	39,253	79,511	75,545	31,596	37,813	1,622	-	-
HL-03 Total	**62,063**	**33,610**	**28,025**	**39,253**	**79,511**	**75,545**	**31,596**	**37,813**	**1,622**	**-**	**-**
HL-04 Feed Preparations & Sludge Operations	**89,896**	**92,323**	**47,408**	**48,688**	**50,003**	**51,353**	**7,911**	**-**	**-**	**-**	**-**
HL-05 Vitrification											
Vitrification Ops	210,093	219,342	227,868	226,638	223,911	226,014	34,258	-	-	-	-
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	-	-
HL-05 Total	**210,093**	**219,342**	**227,868**	**226,638**	**223,911**	**226,014**	**34,258**	**-**	**-**	**-**	**-**
HL-06 Glass Waste Storage	**10,153**	**10,486**	**10,831**	**11,186**	**11,554**	**11,934**	**12,326**	**3,320**	**3,031**	**3,113**	**3,197**
HL-13 Salt Disposition											
Salt Disposition Ops	110,447	107,014	11,141	-	-	-	-	-	-	-	-
LI: Salt Alternative	-	-	-	-	-	-	-	-	-	-	-
HL-13 Total	**110,447**	**107,014**	**11,141**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-09 LI: Tk Fm Services Upgrade I	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-10 LI: Storm Water Upgrades	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-11 LI: Tk Fm Services Upgrade II	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-12 LI: Waste Removal											
LI: WR from Tanks	16,201	12,572	19,883	14,803	16,540	3,648	10,653	4,478	-	-	-
LI: Vit Upgrades	-	-	-	-	-	-	-	-	-	-	-
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	-	-
HL-12 Total	**16,201**	**12,572**	**19,883**	**14,803**	**16,540**	**3,648**	**10,653**	**4,478**	**-**	**-**	**-**
FA-24 Facility Decontamination/Decommissioning	**-**	**-**	**-**	**-**	**-**	**-**	**218,584**	**256,231**	**-**	**-**	**-**
HLW TOTAL	**680,374**	**639,259**	**480,754**	**478,003**	**517,040**	**445,739**	**394,660**	**355,928**	**4,653**	**3,113**	**3,197**
HLW w/o Salt Total	**569,926**	**532,245**	**469,613**	**478,003**	**517,040**	**445,739**	**394,660**	**355,928**	**4,653**	**3,113**	**3,197**
Solid Waste Facilities											
ETF	40,738	31,015	30,116	30,929	31,764	32,622	5,025	-	-	-	-
SS	46,219	30,205	7,016	7,205	7,400	7,601	4,970	528	-	-	-
SW TOTAL	**86,957**	**61,220**	**37,132**	**38,134**	**39,164**	**40,223**	**9,996**	**528**	**-**	**-**	**-**
Life Cycle Cost	**767,331**	**700,479**	**517,886**	**516,138**	**556,204**	**485,962**	**404,655**	**356,455**	**4,653**	**3,113**	**3,197**

Appendix I.1 - Funding (Stretch Case)

Budget Authority in Escalated Dollars

Project Title	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	Cumulative FY99-End
HL-01 H Tank Farm										
H Tank Farm Operations	-	-	-	-	-	-	-	-	-	3,436,682
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	16,402
HL-01 Total	-	-	-	-	-	-	-	-	-	**3,453,083**
HL-02 F Tank Farm	-	-	-	-	-	-	-	-	-	**1,710,098**
HL-03 Waste Removal & Tank Closures										
WR Ops w/ Demo Projects	-	-	-	-	-	-	-	-	-	188,693
WR: Tank Closure	-	-	-	-	-	-	-	-	-	815,603
HL-03 Total	-	-	-	-	-	-	-	-	-	**1,004,297**
HL-04 Feed Preparations & Sludge Operations	-	-	-	-	-	-	-	-	-	**1,941,395**
HL-05 Vitrification										
Vitrification Ops	-	-	-	-	-	-	-	-	-	4,869,753
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	1,143
HL-05 Total	-	-	-	-	-	-	-	-	-	**4,870,896**
HL-06 Glass Waste Storage	**3,283**	**3,372**	**3,463**	**3,556**	**3,652**	**3,751**	**3,852**	**3,956**		**260,383**
HL-13 Salt Disposition										
Salt Disposition Ops	-	-	-	-	-	-	-	-	-	1,232,038
LI: Salt Alternative	-	-	-	-	-	-	-	-	-	1,156,583
HL-13 Total	-	-	-	-	-	-	-	-	-	**2,388,621**
HL-09 LI: Tk Fm Services Upgrade I	-	-	-	-	-	-	-	-	-	**1,632**
HL-10 LI: Storm Water Upgrades	-	-	-	-	-	-	-	-	-	**6,179**
HL-11 LI: Tk Fm Services Upgrade II	-	-	-	-	-	-	-	-	-	**19,737**
HL-12 LI: Waste Removal										
LI: WR from Tanks	-	-	-	-	-	-	-	-	-	1,231,395
LI: Vit Upgrades	-	-	-	-	-	-	-	-	-	210,090
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	35,394
HL-12 Total	-	-	-	-	-	-	-	-	-	**1,476,880**
FA-24 Facility Decontamination/Decommissioning	-	-	-	-	-	-	-	**18,112**	-	**572,395**
HLW TOTAL	**3,283**	**3,372**	**3,463**	**3,556**	**3,652**	**3,751**	**3,852**	**22,069**	-	**17,705,595**
HLW w/o Salt Total	**3,283**	**3,372**	**3,463**	**3,556**	**3,652**	**3,751**	**3,852**	**22,069**	-	**15,316,974**
Solid Waste Facilities										
ETF	-	-	-	-	-	-	-	-	-	713,789
SS	-	-	-	-	-	-	-	-	-	707,946
SW TOTAL	-	-	-	-	-	-	-	-	-	**1,421,735**
Life Cycle Cost	**3,283**	**3,372**	**3,463**	**3,556**	**3,652**	**3,751**	**3,852**	**22,069**	-	**19,127,330**

Appendix I.1 - Funding (Stretch Case)

Budget Authority in Constant FY99 Year Dollars

Project Title	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
HL-01 H Tank Farm											
H Tank Farm Operations	85,371	85,926	88,585	84,752	88,634	91,644	90,555	89,989	89,989	88,128	88,128
LI: Replacement Evaporator	12,835	3,443	-	-	-	-	-	-	-	-	-
HL-01 Total	**98,205**	**89,369**	**88,585**	**84,752**	**88,634**	**91,644**	**90,555**	**89,989**	**89,989**	**88,128**	**88,128**
HL-02 F Tank Farm	**58,928**	**58,873**	**55,871**	**57,996**	**60,359**	**60,615**	**59,853**	**60,497**	**60,497**	**56,836**	**56,836**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	1,108	3,691	2,953	3,004	3,138	3,159	-	-	3,206	3,138	3,138
WR: Tank Closure	124	338	15	2,824	4,191	1,422	-	-	6,918	6,771	294
HL-03 Total	**1,232**	**4,029**	**2,967**	**5,828**	**7,329**	**4,581**	-	-	**10,124**	**9,909**	**3,432**
HL-04 Feed Preparations & Sludge Operations	**53,328**	**50,229**	**47,258**	**50,892**	**55,417**	**57,241**	**58,771**	**56,873**	**56,873**	**55,724**	**55,724**
HL-05 Vitrification											
Vitrification Ops	127,626	112,643	104,097	114,672	116,767	114,695	118,230	119,869	115,889	116,161	116,886
Failed Equip. Storage Vaults	-	-	1,065	-	-	-	-	-	-	-	-
HL-05 Total	**127,626**	**112,643**	**105,162**	**114,672**	**116,767**	**114,695**	**118,230**	**119,869**	**115,889**	**116,161**	**116,886**
HL-06 Glass Waste Storage	**436**	**582**	**637**	**646**	**1,816**	**1,787**	**1,233**	**684**	**4,718**	**12,696**	**18,710**
HL-13 Salt Disposition											
Salt Disposition Ops	15,620	9,822	16,345	4,520	-	-	-	-	-	-	-
LI: Salt Alternative	-	-	-	26,731	74,508	116,225	125,862	122,953	119,821	111,148	74,354
HL-13 Total	**15,620**	**9,822**	**16,345**	**31,251**	**74,508**	**116,225**	**125,862**	**122,953**	**119,821**	**111,148**	**74,354**
HL-09 LI: Tk Fm Services Upgrade I	**1,632**	-	-	-	-	-	-	-	-	-	-
HL-10 LI: Storm Water Upgrades	**2,508**	**3,410**	**128.8910**	-	-	-	-	-	-	-	-
HL-11 LI: Tk Fm Services Upgrade II	**838**	**2,066**	**9,741**	**5,718**	-	-	-	-	-	-	-
HL-12 LI: Waste Removal											
LI: WR from Tanks	24,739	21,039	21,472	23,096	3,258	9,630	10,302	1,490	26,252	35,873	59,385
LI: Vit Upgrades	12	630	574	-	-	-	5,915	5,934	11,867	11,795	11,795
LI: Pipe, Evaps & Infrastructure	-	-	-	901	5,296	13,651	10,499	-	-	-	-
HL-12 Total	**24,751**	**21,669**	**22,046**	**23,997**	**8,553**	**23,281**	**26,716**	**7,423**	**38,119**	**47,668**	**71,180**
FA-24 Facility Decontamination/Decommissioning	-	-	-	-	-	-	-	-	-	-	-
HLW TOTAL	**385,103**	**352,692**	**348,742**	**375,752**	**413,383**	**470,069**	**481,221**	**458,288**	**496,031**	**498,272**	**485,252**
HLW w/o Salt Total	**369,483**	**342,870**	**332,397**	**344,501**	**338,875**	**353,843**	**355,359**	**335,336**	**376,210**	**387,123**	**410,898**
Solid Waste Facilities											
ETF	16,510	14,574	15,015	15,696	16,523	17,594	18,500	19,440	16,341	18,555	15,499
SS	1,595	827	1,024	1,864	3,935	1,993	1,867	1,887	1,887	5,686	11,846
SW TOTAL	**18,105**	**15,401**	**16,039**	**17,560**	**20,458**	**19,587**	**20,366**	**21,327**	**18,228**	**24,240**	**27,344**
Life Cycle Cost	**403,208**	**368,093**	**364,781**	**393,312**	**433,841**	**489,656**	**501,587**	**479,616**	**514,259**	**522,512**	**512,596**

Appendix I.1 - Funding (Stretch Case)

Budget Authority in Constant FY99 Year Dollars

Project Title	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
HL-01 H Tank Farm											
H Tank Farm Operations	87,565	87,001	87,001	85,874	85,874	84,747	81,725	81,725	78,703	77,013	73,070
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	-	-
HL-01 Total	**87,565**	**87,001**	**87,001**	**85,874**	**85,874**	**84,747**	**81,725**	**81,725**	**78,703**	**77,013**	**73,070**
HL-02 F Tank Farm	**56,836**	**56,836**	**56,836**	**56,836**	**56,273**	**53,454**	**51,968**	**45,563**	**44,640**	**44,640**	**42,796**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	10,035	18,100	16,170	9,415	9,415	9,415	9,415	9,415	3,138	3,138	3,138
WR: Tank Closure	12,225	901	7,537	8,033	35,449	44,097	20,745	34,101	15,340	30,280	41,345
HL-03 Total	**22,260**	**19,001**	**23,707**	**17,448**	**44,863**	**53,512**	**30,160**	**43,516**	**18,478**	**33,418**	**44,483**
HL-04 Feed Preparations & Sludge Operations	**55,724**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**
HL-05 Vitrification											
Vitrification Ops	117,746	114,431	116,795	118,792	113,998	116,832	118,267	117,437	114,862	116,929	121,034
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	-	-
HL-05 Total	**117,746**	**114,431**	**116,795**	**118,792**	**113,998**	**116,832**	**118,267**	**117,437**	**114,862**	**116,929**	**121,034**
HL-06 Glass Waste Storage	**7,353**	**1,339**	**1,339**	**5,309**	**5,338**	**5,368**	**5,398**	**5,429**	**5,459**	**5,490**	**5,521**
HL-13 Salt Disposition											
Salt Disposition Ops	33,590	56,955	58,583	58,419	52,721	52,909	52,261	59,536	60,388	60,418	60,780
LI: Salt Alternative	42,403	-	-	-	-	29,112	38,816	29,112	-	-	-
HL-13 Total	**75,993**	**56,955**	**58,583**	**58,419**	**52,721**	**82,021**	**91,077**	**88,647**	**60,388**	**60,418**	**60,780**
HL-09 LI: Tk Fm Services Upgrade I	-	-	-	-	-	-	-	-	-	-	-
HL-10 LI: Storm Water Upgrades	-	-	-	-	-	-	-	-	-	-	-
HL-11 LI: Tk Fm Services Upgrade II	-	-	-	-	-	-	-	-	-	-	-
HL-12 LI: Waste Removal											
LI: WR from Tanks	57,955	62,751	48,327	48,235	58,637	47,223	54,722	60,785	49,355	41,466	20,870
LI: Vit Upgrades	20,642	13,270	8,847	13,270	13,270	13,270	8,847	8,847	-	-	-
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	-	-
HL-12 Total	**78,597**	**76,021**	**57,173**	**61,504**	**71,907**	**60,493**	**63,568**	**69,631**	**49,355**	**41,466**	**20,870**
FA-24 Facility Decontamination/Decommissioning	-	-	-	-	-	**27,708**	**22,670**	-	-	-	-
HLW TOTAL	**502,075**	**460,744**	**450,595**	**453,343**	**480,135**	**533,294**	**513,993**	**501,107**	**421,046**	**428,535**	**417,714**
HLW w/o Salt Total	**426,082**	**403,789**	**392,012**	**394,924**	**427,414**	**451,274**	**422,917**	**412,460**	**360,658**	**368,117**	**356,935**
Solid Waste Facilities											
ETF	16,013	15,614	17,680	22,278	16,515	16,197	18,899	15,614	19,069	15,614	16,144
SS	17,818	25,608	37,248	28,834	26,296	35,902	35,247	31,791	36,657	36,004	38,866
SW TOTAL	**33,831**	**41,222**	**54,928**	**51,112**	**42,811**	**52,099**	**54,146**	**47,405**	**55,725**	**51,619**	**55,010**
Life Cycle Cost	**535,906**	**501,967**	**505,523**	**504,456**	**522,947**	**585,393**	**568,139**	**548,512**	**476,772**	**480,153**	**472,724**

Appendix I.1 - Funding (Stretch Case)

Budget Authority in Constant FY99 Year Dollars

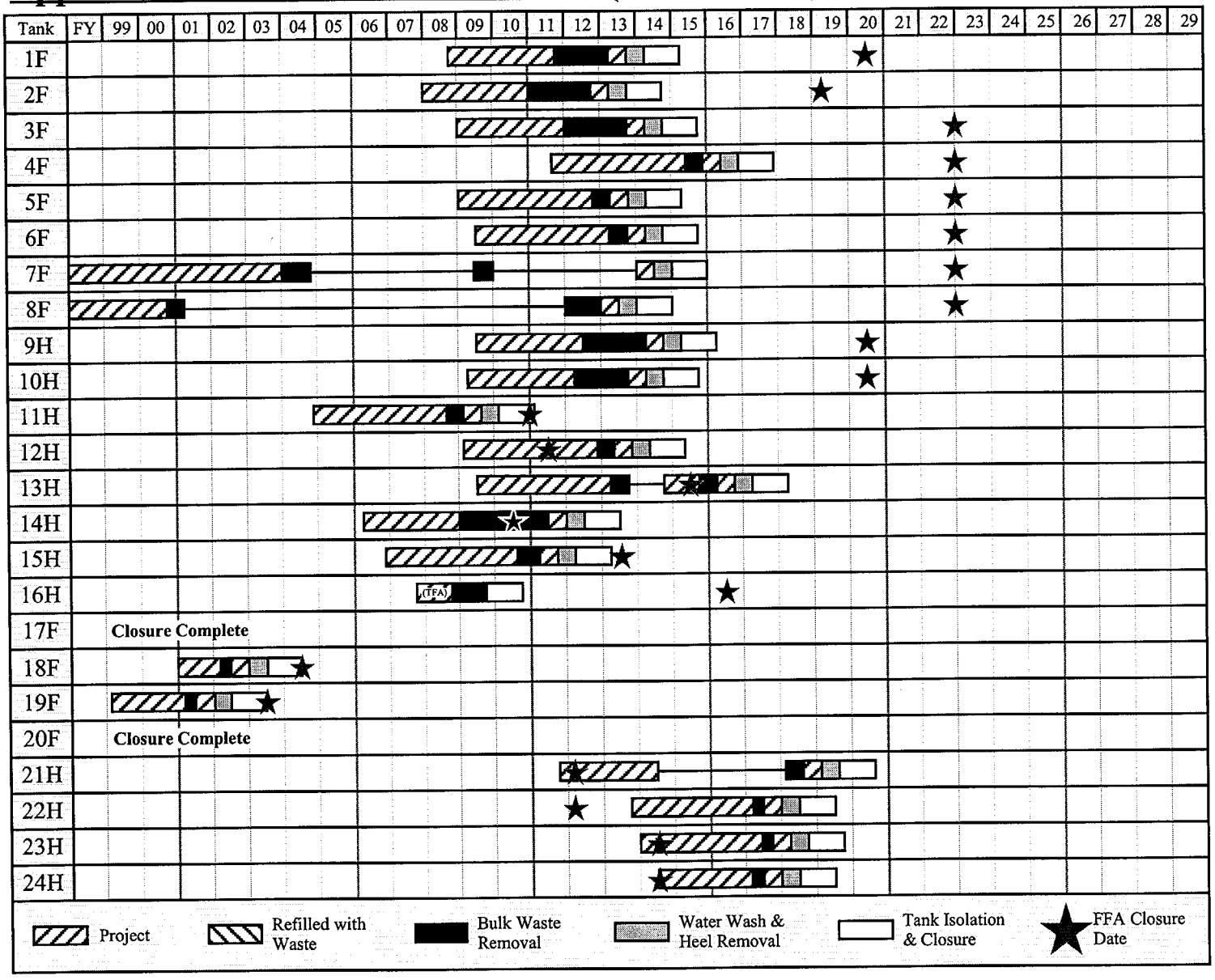
Project Title	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
HL-01 H Tank Farm											
H Tank Farm Operations	72,149	72,149	70,305	69,384	66,619	36,974	36,974	24,544	-	-	-
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	-	-
HL-01 Total	**72,149**	**72,149**	**70,305**	**69,384**	**66,619**	**36,974**	**36,974**	**24,544**	**-**	**-**	**-**
HL-02 F Tank Farm	**27,116**	**15,130**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	3,138	-	-	-	-	-	-	-	-	-	-
WR: Tank Closure	30,801	17,897	14,530	19,817	39,086	36,160	14,726	17,160	-	-	-
HL-03 Total	**33,939**	**17,897**	**14,530**	**19,817**	**39,086**	**36,160**	**14,726**	**17,160**	**717**	**-**	**-**
HL-04 Feed Preparations & Sludge Operations	**49,160**	**49,160**	**24,580**	**24,580**	**24,580**	**24,580**	**3,687**	**-**	**-**	**-**	**-**
HL-05 Vitrification											
Vitrification Ops	114,890	116,795	118,144	114,418	110,069	108,182	15,967	-	-	-	-
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	-	-
HL-05 Total	**114,890**	**116,795**	**118,144**	**114,418**	**110,069**	**108,182**	**15,967**	**-**	**-**	**-**	**-**
HL-06 Glass Waste Storage	**5,552**	**5,584**	**5,615**	**5,647**	**5,680**	**5,712**	**5,745**	**1,507**	**1,339**	**1,339**	**1,339**
HL-13 Salt Disposition											
Salt Disposition Ops	60,399	56,982	5,776	-	-	-	-	-	-	-	-
LI: Salt Alternative	-	-	-	-	-	-	-	-	-	-	-
HL-13 Total	**60,399**	**56,982**	**5,776**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-09 LI: Tk Fm Services Upgrade I	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-10 LI: Storm Water Upgrades	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-11 LI: Tk Fm Services Upgrade II	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-12 LI: Waste Removal											
LI: WR from Tanks	8,860	6,694	10,309	7,473	8,131	1,746	4,965	2,032	-	-	-
LI: Vit Upgrades	-	-	-	-	-	-	-	-	-	-	-
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	-	-
HL-12 Total	**8,860**	**6,694**	**10,309**	**7,473**	**8,131**	**1,746**	**4,965**	**2,032**	**-**	**-**	**-**
FA-24 Facility Decontamination/Decommissioning	**-**	**-**	**-**	**-**	**-**	**-**	**101,875**	**116,281**	**-**	**-**	**-**
HLW TOTAL	**372,065**	**340,391**	**249,261**	**241,319**	**254,164**	**213,354**	**183,938**	**161,525**	**2,056**	**1,339**	**1,339**
HLW w/o Salt Total	**311,667**	**283,408**	**243,484**	**241,319**	**254,164**	**213,354**	**183,938**	**161,525**	**2,056**	**1,339**	**1,339**
Solid Waste Facilities											
ETF	22,278	16,515	15,614	15,614	15,614	15,614	2,342	-	-	-	-
SS	25,275	16,083	3,638	3,638	3,638	3,638	2,316	239	-	-	-
SW TOTAL	**47,553**	**32,598**	**19,252**	**19,252**	**19,252**	**19,253**	**4,659**	**239**	**-**	**-**	**-**
Life Cycle Cost	**419,618**	**372,989**	**268,513**	**260,571**	**273,416**	**232,606**	**188,597**	**161,765**	**2,056**	**1,339**	**1,339**

Appendix I.1 - Funding (Stretch Case)

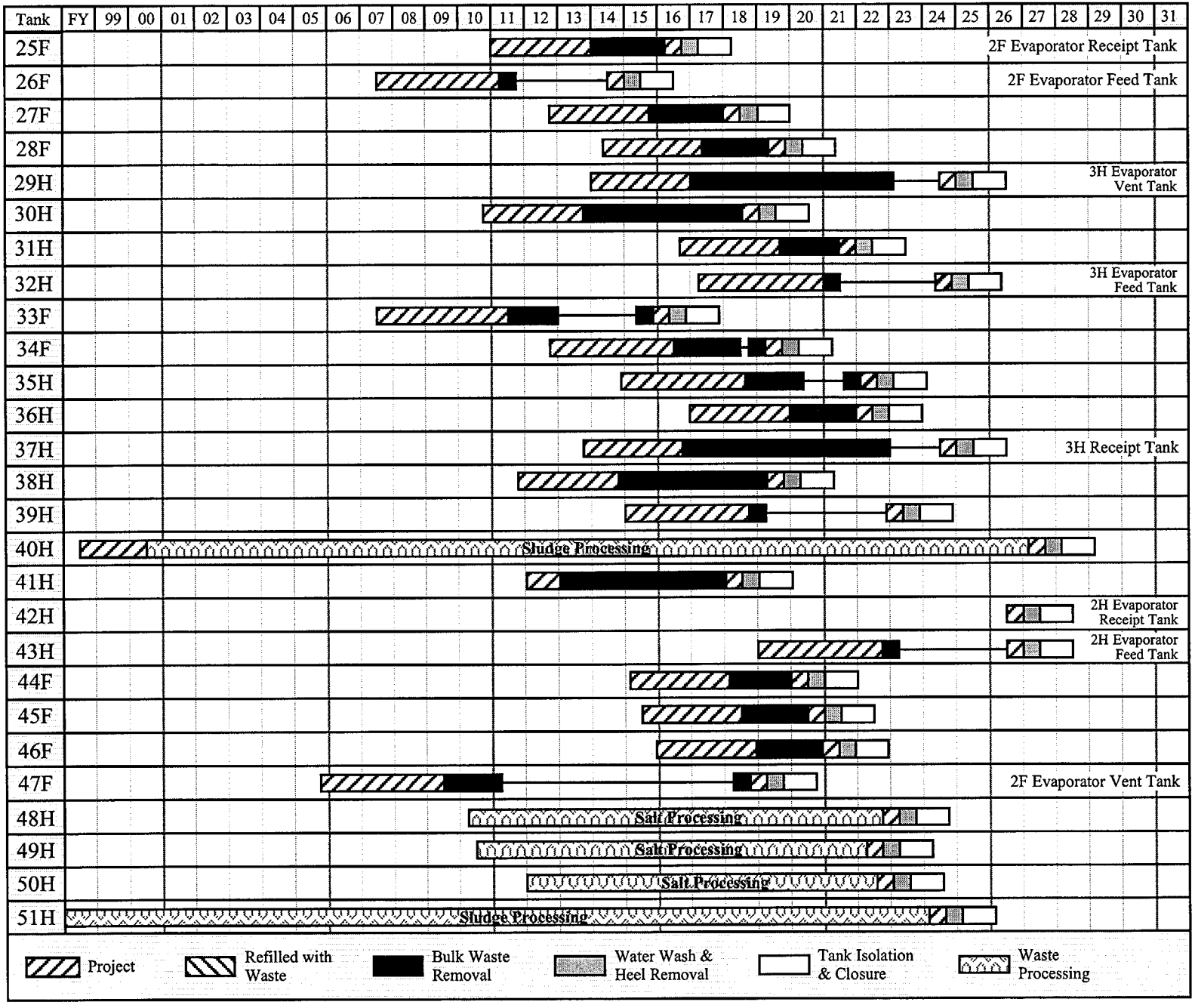
Budget Authority in Constant FY99 Year Dollars

Project Title	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	Cumulative FY99-End
HL-01 H Tank Farm										
H Tank Farm Operations	-	-	-	-	-	-	-	-	-	2,331,097
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	16,278
HL-01 Total	-	-	-	-	-	-	-	-	-	**2,347,375**
HL-02 F Tank Farm	-	-	-	-	-	-	-	-	-	**1,256,087**
HL-03 Waste Removal & Tank Closures										
WR Ops w/ Demo Projects	-	-	-	-	-	-	-	-	-	130,466
WR: Tank Closure	-	-	-	-	-	-	-	-	-	463,127
HL-03 Total	-	-	-	-	-	-	-	-	-	**594,309**
HL-04 Feed Preparations & Sludge Operations	-	-	-	-	-	-	-	-	-	**1,345,986**
HL-05 Vitrification										
Vitrification Ops	-	-	-	-	-	-	-	-	-	3,263,123
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	1,065
HL-05 Total	-	-	-	-	-	-	-	-	-	**3,264,188**
HL-06 Glass Waste Storage	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	-	**153,063**
HL-13 Salt Disposition										
Salt Disposition Ops	-	-	-	-	-	-	-	-	-	776,023
LI: Salt Alternative	-	-	-	-	-	-	-	-	-	911,044
HL-13 Total	-	-	-	-	-	-	-	-	-	**1,687,067**
HL-09 LI: Tk Fm Services Upgrade I	-	-	-	-	-	-	-	-	-	**1,632**
HL-10 LI: Storm Water Upgrades	-	-	-	-	-	-	-	-	-	**6,047**
HL-11 LI: Tk Fm Services Upgrade II	-	-	-	-	-	-	-	-	-	**18,364**
HL-12 LI: Waste Removal										
LI: WR from Tanks	-	-	-	-	-	-	-	-	-	837,072
LI: Vit Upgrades	-	-	-	-	-	-	-	-	-	148,783
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	30,347
HL-12 Total	-	-	-	-	-	-	-	-	-	**1,016,202**
FA-24 Facility Decontamination/Decommissioning	-	-	-	-	-	-	-	**6,132**	-	**274,666**
HLW TOTAL	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**7,471**	-	**11,964,985**
HLW w/o Salt Total	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**7,471**	-	**10,277,918**
Solid Waste Facilities										
ETF	-	-	-	-	-	-	-	-	-	477,477
SS	-	-	-	-	-	-	-	-	-	443,146
SW TOTAL	-	-	-	-	-	-	-	-	-	**920,624**
Life Cycle Cost	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**1,339**	**7,471**	-	**12,885,608**

Appendix I.2 Waste Removal Schedule (Stretch Case)



Appendix I.2 Waste Removal Schedule (Stretch Case)



Appendix I.3 - Material Balance (Stretch Case)

End of Month/Year	Influents (gallons)											Effluents (gallons)							Net-Out
	F Canyon			H Canyon								Space Recovery from Evaporation							
	LHW	HHW	F-Can Total	LHW	HHW	H-Can Total	DWPF Recycle	Other	Inhibited Water	Jet Dilution	Total In	2F Evaps	2H Evaps	3H Evaps	Total	Salt Solution to Processing	Sludge to ESP/DWPF	Tot-Out	
Oct 2000	0	32,924	32,924	1,650	12,285	13,935	144,715	50,026	62,222	12,440		105,434	-	113,303	218,737	-	19,656	Actuals	(see Note 2)
Nov 2000	0	16,883	16,883	0	17,800	17,800	119,758	11,356	83,278	56,760		1,089	-	(16,111)	(15,022)	-	21,762	Actuals	(see Note 2)
Dec 2000	0	49,491	49,491	1,439	21,376	22,815	115,928	31,692	0	14,560		(20,849)	-	(9,442)	(30,291)	-	15,795	Actuals	(see Note 2)
Jan 2001	28,500	20,625	49,125	3,828	11,025	14,853	70,320	16,875	113,410	13,207	277,790	72,376	-	34,507	106,883	-	8,635	115,518	(162,272)
Feb 2001	30,000	28,500	58,500	5,104	14,700	19,804	93,760	22,500	260,091	36,630	491,285	101,602	-	39,677	141,280	-	13,384	154,664	(336,621)
Mar 2001	28,000	25,500	53,500	5,104	15,220	20,324	79,567	22,500	-	54,625	230,516	125,909	-	-	125,909	-	12,220	138,129	(92,387)
Apr 2001	30,000	27,500	57,500	15,104	15,220	30,324	53,045	22,500	30,000	42,580	235,949	170,338	-	180,890	351,228	-	13,384	364,612	128,663
May 2001	25,000	28,500	53,500	25,104	15,220	40,324	32,687	22,500	10,000	39,745	198,756	166,684	-	-	166,684	-	13,088	179,772	(18,984)
Jun 2001	18,000	25,500	43,500	5,104	15,220	20,324	73,402	22,500	460,000	47,113	666,840	167,098	-	164,206	331,304	-	13,384	344,688	(322,152)
Jul 2001	15,000	27,500	42,500	5,104	15,220	20,324	93,760	22,500	-	25,749	204,833	85,603	-	-	85,603	-	13,088	98,691	(106,141)
Aug 2001	15,000	28,500	43,500	5,104	15,220	20,324	93,760	22,500	360,000	59,060	599,144	60,594	60,313	101,769	222,676	-	13,384	236,060	(363,083)
Sep 2001	18,000	25,500	43,500	5,104	15,220	20,324	93,760	22,500	-	58,869	238,953	86,686	199,393	-	286,079	-	13,384	299,463	60,510
FY01	207,500	336,923	544,423	77,749	183,726	261,475	1,064,462	289,949	1,379,001	461,338	3,144,066	1,122,564	259,706	608,799	1,991,070	-	171,164	1,931,597	(1,212,467)
Oct 2001	15,000	27,500	42,500	25,104	15,220	40,324	-	22,500	250,000	42,451	397,775	33,008	154,177	83,770	270,955	-	-	270,955	(126,820)
Nov 2001	15,000	28,500	43,500	5,104	15,220	20,324	-	22,500	-	41,657	127,981	86,730	154,864	-	241,594	Tank 50 emptied to Saltstone	-	241,594	113,613
Dec 2001	18,000	25,500	43,500	5,104	15,220	20,324	-	22,500	-	43,768	130,092	70,308	87,734	94,712	252,754		-	252,754	122,662
Jan 2002	24,000	5,000	29,000	13,052	15,220	28,272	-	22,500	297,297	93,061	470,130	41,947	213,214	-	255,161		-	255,161	(214,968)
Feb 2002	24,000	6,000	30,000	13,052	15,220	28,272	-	22,500	-	72,453	153,225	33,819	224,608	-	258,427		-	258,427	105,202
Mar 2002	27,000	3,000	30,000	13,052	14,700	27,752	-	22,500	-	51,104	131,356	63,449	181,697	-	245,146		-	245,146	113,789
Apr 2002	24,000	3,000	27,000	13,052	14,700	27,752	140,688	22,500	-	106,190	324,130	64,443	189,838	15,932	270,213	-	12,400	282,613	(41,516)
May 2002	23,000	6,000	29,000	13,052	14,700	27,752	140,688	22,500	182,520	34,443	436,903	62,249	236,054	18,779	317,083	400,000	12,400	729,483	292,580
Jun 2002	26,000	3,000	29,000	13,052	14,700	27,752	140,688	22,500	656,670	24,636	901,246	60,747	198,823	21,947	281,517	400,000	9,655	691,172	(210,075)
Jul 2002	8,000	18,000	26,000	13,052	14,700	27,752	140,688	10,000	-	38,561	243,001	57,423	203,289	23,699	284,411	40,381	8,877	333,668	90,667
Aug 2002	8,000	18,000	26,000	13,052	14,700	27,752	140,688	10,000	-	60,579	265,019	53,421	193,102	23,069	269,591		9,173	278,764	13,745
Sep 2002	8,000	3,000	11,000	13,052	14,700	27,752	140,688	10,000	-	72,163	261,603	49,258	184,848	22,475	256,582	-	9,173	265,755	4,152
FY02	220,000	146,500	366,500	152,780	179,000	331,780	844,128	232,500	1,386,487	681,066	3,842,461	676,802	2,222,248	304,383	3,203,434	840,381	61,678	4,105,492	263,031
Oct 2002	8,000	3,000	11,000	33,052	14,700	47,752	102,056	10,000	-	94,481	265,289	44,929	168,490	72,791	286,210	-	11,371	297,581	32,292
Nov 2002	8,000	3,000	11,000	33,052	14,700	47,752	102,056	10,000	-	42,599	213,407	38,058	159,369	123,856	321,283	-	12,400	333,683	120,277
Dec 2002	8,000	3,000	11,000	13,052	14,700	27,752	102,056	10,000	-	127,702	278,510	31,794	145,988	111,427	289,208	-	12,400	301,608	23,098
Jan 2003	8,000	3,000	11,000	5,104	14,700	19,804	102,056	-	-	61,416	194,276	67,797	142,939	103,871	314,607	-	12,400	327,007	132,732
Feb 2003	8,000	3,000	11,000	5,104	14,700	19,804	102,056	7,500	-	74,512	214,872	78,699	134,335	118,308	331,343	-	12,400	343,743	128,871
Mar 2003	8,000	3,000	11,000	5,104	14,700	19,804	102,056	10,000	-	62,763	205,623	74,696	136,224	119,639	330,560	-	12,400	342,960	137,337
Apr 2003	8,000	3,000	11,000	7,404	14,700	22,104	102,056	10,000	-	58,763	203,923	58,448	135,224	96,184	289,856	-	12,400	302,256	98,332
May 2003	8,000	3,000	11,000	7,404	14,700	22,104	102,056	10,000	-	46,061	191,221	78,409	143,819	168,220	390,448	-	12,400	402,848	211,628
Jun 2003	8,000	3,000	11,000	7,404	14,700	22,104	102,056	10,000	-	43,706	188,866	61,264	138,750	107,330	307,343	-	12,400	319,743	130,877
Jul 2003	8,000	3,000	11,000	6,732	13,132	19,864	102,056	10,000	106,000	60,129	309,049	55,229	141,977	110,772	307,978	-	12,400	320,378	11,329
Aug 2003	8,000	3,000	11,000	6,732	13,132	19,864	102,056	10,000	450,000	40,708	633,628	60,483	137,444	184,364	382,291	-	12,400	394,691	(238,937)
Sep 2003	8,000	3,000	11,000	6,732	13,132	19,864	102,056	10,000	-	58,931	201,851	55,331	140,978	157,615	353,924	-	12,400	366,324	164,473
FY03	96,000	36,000	132,000	136,876	171,696	308,572	1,224,672	107,500	556,000	771,771	3,100,515	705,137	1,725,537	1,474,377	3,905,051	-	147,771	4,052,822	952,309
Oct 2003	8,000	3,000	11,000	26,732	13,132	39,864	106,352	10,000	450,000	41,733	658,949	61,615	137,496	208,525	407,636	-	12,400	420,036	(238,913)
Nov 2003	8,000	3,000	11,000	6,732	13,132	19,864	106,352	10,000	400,000	59,690	606,906	63,620	141,941	190,171	395,731	-	12,400	408,131	(198,775)
Dec 2003	8,000	3,000	11,000	6,732	13,132	19,864	106,352	10,000	-	52,346	199,562	60,685	138,738	163,002	362,425	-	12,400	374,825	175,263
Jan 2004	8,000	3,000	11,000	6,732	13,132	19,864	106,352	10,000	340,000	51,615	538,831	64,229	142,814	148,016	355,058	-	12,400	367,458	(171,373)
Feb 2004	8,000	3,000	11,000	6,732	13,132	19,864	106,352	10,000	-	45,520	192,736	49,784	139,601	115,792	305,177	-	12,400	317,577	124,840
Mar 2004	8,000	3,000	11,000	6,732	13,132	19,864	106,352	10,000	-	135,143	282,359	39,200	143,484	106,180	288,863	-	12,400	301,263	18,904
Apr 2004	8,000	3,000	11,000	6,732	13,832	20,564	106,352	10,000	-	51,854	199,770	196,430	140,334	112,874	449,638	-	12,400	462,038	262,268
May 2004	8,000	3,000	11,000	26,732	13,832	40,564	106,352	10,000	-	40,505	208,421	199,045	144,090	94,227	437,363	-	8,000	445,363	236,942
Jun 2004	8,000	3,000	11,000	6,732	13,832	20,564	106,352	10,000	-	53,534	201,450	170,442	141,009	82,413	393,863	-	8,000	401,863	200,413
Jul 2004	8,000	3,000	11,000	6,732	13,832	20,564	106,352	10,000	-	43,679	191,595	140,066	144,649	73,318	358,032	-	8,000	366,032	174,437
Aug 2004	8,000	3,000	11,000	6,732	13,832	20,564	106,352	10,000	-	55,892	203,808	111,282	141,598	64,616	317,496	-	8,000	325,496	121,687
Sep 2004	8,000	3,000	11,000	6,732	13,832	20,564	106,352	10,000	-	45,933	193,849	100,718	145,094	55,874	301,685	-	8,000	309,685	115,837
FY04	96,000	36,000	132,000	120,784	161,784	282,568	1,276,224	120,000	1,190,000	677,444	3,678,236	1,257,116	1,700,848	1,415,008	4,372,967	-	126,800	4,499,767	821,530

Appendix I.3 - Material Balance (Stretch Case)

End of Month/Year	Influents (gallons)										Effluents (gallons)							Net-Out
	F Canyon			H Canyon							Space Recovery from Evaporation							
	LHW	HHW	F-Can Total	LHW	HHW	H-Can Total	DWPF Recycle	Other	Inhibited Water	Jet Dilution	Total In	2F Evaps	2H Evaps	3H Evaps	Total	Salt Solution to Processing	Sludge to ESP/DWPF	Tot-Out	
FY05	96,000	61,200	157,200	100,388	163,788	264,176	844,128	120,000	495,436	716,722	2,597,662	671,531	1,308,234	339,933	2,319,699	-	96,000	2,415,699	(181,962)
FY06	96,000	40,800	136,800	124,600	263,287	387,887	1,173,216	70,000	-	627,416	2,395,319	658,033	1,565,781	728,250	2,952,063	-	96,000	3,048,063	652,746
FY07	96,000	36,000	132,000	131,200	403,200	534,400	-	-	-	782,265	1,448,665	883,915	695,286	856,780	2,435,980	-	-	2,435,980	987,316
FY08	96,000	36,000	132,000	47,600	375,300	422,900	-	-	480,000	705,054	1,739,954	894,255	460,007	679,329	2,033,590	-	-	2,033,590	293,637
FY09	120,000	120,000	240,000	-	120,000	120,000	-	-	876,553	528,114	1,764,667	219,367	399,529	1,504,662	2,123,556	-	-	2,123,556	358,889
FY10 (mid)	60,000	60,000	120,000	-	60,000	60,000	329,040	-	154,616	233,890	897,545	-	268,613	161,469	430,080	-	42,969	473,051	(424,496)

Notes:

1) Discussion of the components of the Influents and Effluents is contained in Section 8.1.3 "HLW System Material Balance"
2) Actual values for October through December 2000 are obtained from the "HLW Morning Reports"

Appendix I.4 — Salt Solution Processing (Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT001	48	12/24/09	heel	-		4/1/10	59.0	4	17.6%	1,653	180	3,245	4
			21	104,000	ls								
			50	200,000	cs								
			47	900,000	ds								
SPT002	49	5/9/10	heel	250,000		6/20/10	62.2	4	17.5%	1,696		3,001	4
			14	452,533	ds								
			21	125,000	ls								
			47	400,000	ds								
SPT003	48	6/20/10	heel	2,160		9/12/10	61.6	4	17.6%	1,575		2,788	4
			50	250,000	cs								
			33	450,000	cs								
			47	500,000	ds								
SPT004	49	9/12/10	heel	16,634		12/6/10	56.5	4	17.9%	1,685	180	3,301	1
			47	623,000	ds								
			21	75,000	ls								
			33	306,500	cs								
			50	200,000	cs								
SPT005	48	12/6/10	heel	160		2/20/11	58.8	4	17.6%	1,596		2,826	2
			50	200,000	cs								
			33	400,000	cs								
			47	450,000	ds								
			42	95,000	cs								
			21	75,000	ls								
SPT006	49	2/20/11	heel	19,314		5/12/11	58.7	4	17.4%	1,580		2,797	2
			2	998,000	ds				15.0%				
			50	110,000	cs								
			21	95,000	ls								
SPT007	48	5/12/11	heel	18,960		7/29/11	67.4	4	15.2%	1,611		2,852	2
			2	812,977	ds								
			50	160,000	cs								
			8	230,542	cs								

Appendix I.4 — Salt Solution Processing (Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT008	49	7/29/11	heel	20,434		10/24/11	68.1	4	15.3%	1,610	180	3,169	2
			33	367,419	cs								
			21	70,000	ls								
			26	730,000	cs								
			50	20,000	cs								
SPT009	50	9/1/11	heel	14,040		1/19/12	64.4	4	15.0%	1,698		3,005	3
			1	1,100,000	ds			5					
			30	90,000	cs								
			21	18,000	ls								
SPT010	48	10/24/11	heel	20,620		4/14/12	71.2	5	15.6%	1,629		2,883	3
			1	570,082	ds								
			30	200,000	cs								
			8	373,934	cs								
			21	50,000	ls								
SPT011	49	1/19/12	heel	5,350		7/11/12	58.8	5	15.0%	1,575		2,787	3
			3	850,000	ds								
			26	315,000	cs								
			21	50,000	ls								
SPT012	50	4/14/12	heel	20,360		9/28/12	55.7	5	14.8%	1,613	180	3,173	3
			3	964,473	ds								
			26	218,600	cs								
			21	18,000	ls								
SPT013	48	7/11/12	heel	12,397		12/13/12	64.3	5	15.5%	1,498		2,651	5
			10	708,727	ds								
			30	200,000	cs								
			21	190,000	ls								
SPT014	49	9/28/12	heel	18,950		3/4/13	57.3	5	14.8%	1,674		2,963	5
			9	1,050,000	ds								
			30	103,000	cs								
			21	50,000	ls								

Appendix I.4 — Salt Solution Processing (Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT015	50	12/13/12	heel	19,476		5/21/13	63.9	5	15.3%	1,565		2,771	5
			9	858,273	ds								
			26	250,000	cs								
			21	50,000	ls								
SPT016	48	3/4/13	heel	-		8/11/13	41.1	5	13.7%	1,638		2,900	5
			41	995,997	ds								
			26	200,000	cs								
SPT017	49	5/21/13	heel	20,069		10/15/13	46.3	5	14.1%	1,677	180	3,286	6
			41	965,058	ds								
			26	237,395	cs								
SPT018	50	8/11/13	heel	-		12/23/13	52.8	5	14.5%	1,692		2,994	6
			41	850,000	ds				11.8%				
			30	220,000	cs								
			21	150,000	ls								
SPT019	48	10/15/13	heel	-		3/25/14	55.3	5	12.1%	1,653		2,926	6
			41	781,000	ds			6					
			30	239,965	cs								
			21	200,000	ls								
SPT020	49	12/23/13	heel	20,620		6/26/14	18.6	6	9.2%	1,658		2,934	7
			41	814,600	ds								
			30	387,000	ds								
SPT021	50	3/25/14	heel	18,800		8/20/14	48.4	6	11.7%	1,730		3,062	7
			30	391,129	cs								
			25	710,000	ds								
			35	100,000	cs								
SPT022	48	6/26/14	heel	19,804		11/15/14	48.1	6	11.7%	1,671	180	3,276	7
			25	870,000	ds								
			38	129,892	cs								
			42	202,816	cs								

Appendix I.4 — Salt Solution Processing (Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT023	49	8/20/14	heel	20,284		2/8/15	37.4	6	11.1%	1,642		2,907	7
			25	1,129,990	ds								
			42	72,256	cs								
SPT024	50	11/15/14	heel	17,974		4/23/15	47.3	6	11.7%	1,643		2,908	8
			25	935,692	ds								
			42	268,776	cs								
SPT025	48	2/8/15	heel	20,620		7/16/15	43.0	6	11.3%	1,659		2,937	8
			38	875,000	ds								
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			21	65,000	ls								
SPT026	49	4/23/15	heel	20,620		10/5/15	42.8	6	11.4%	1,659	180	3,255	8
			38	875,000	ds								
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			21	65,000	ls								
SPT027	50	7/16/15	heel	20,620		12/25/15	41.1	6	11.4%	1,643		2,908	9
			38	875,000	ds								
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			21	65,000	ls								
SPT028	48	10/5/15	heel	20,620		3/11/16	40.7	6	11.4%	1,633		2,890	9
			38	875,000	ds								
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			21	65,000	ls								

Appendix I.4 — Salt Solution Processing (Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT029	49	12/25/15	heel	12,220		5/27/16	39.8	6	11.2%	1,653		2,925	9
			38	415,604	ds								
			27	475,000	ds								
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			23	65,000	ls								
SPT030	50	3/11/16	heel	12,220		8/12/16	38.7	6	11.1%	1,625		2,876	9
			27	870,000	ds				17.3%				
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			23	65,000	ls								
SPT031	48	5/27/16	heel	3,820		10/26/16	38.0	6	17.2%	1,646	180	3,233	10
			34	100,000	cs			7					
			27	900,000	ds								
			35	75,000	cs								
			30	75,000	cs								
			23	65,000	ls								
SPT032	49	8/12/16	heel	20,048		12/13/16	38.5	7	17.2%	1,670		2,956	10
			34	100,000	cs								
			27	900,000	ds								
			35	75,000	cs								
			30	75,000	cs								
			41	65,000	ls								
SPT033	50	10/26/16	heel	-		1/31/17	42.9	7	17.7%	1,673		2,961	10
			27	594,140	cs								
			29	295,000	ds								
			34	128,674	ds								
			35	75,000	cs								
			41	65,000	ls								
			30	63,936	cs								

Appendix I.4 — Salt Solution Processing (Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT034	48	12/13/16	heel	-		3/24/17	46.5	7	18.0%	1,638		2,900	10
			37	1,221,750	ds								
SPT035	49	1/31/17	heel	-		5/17/17	40.4	7	18.0%	1,519		2,689	11
			29	900,000	ds								
			35	150,000	cs								
			23	106,720	ls								
SPT036	50	3/24/17	heel	20,620		7/4/17	36.4	7	17.1%	1,697		3,004	11
			29	445,000	ds								
			34	628,142	ds								
			37	48,870	ds								
			35	79,911	cs								
SPT037	48	5/17/17	heel	20,620		8/20/17	43.5	7	17.7%	1,726		3,055	11
			29	930,000	ds								
			30	50,000	cs								
			35	125,000	cs								
			42	96,923	cs								
SPT038	49	7/4/17	heel	-		10/12/17	32.8	7	16.6%	1,727	180	3,375	12
			29	839,980	ds								
			42	360,000	cs								
SPT039	50	8/20/17	heel	20,620		11/27/17	46.6	7	18.0%	1,604		2,840	12
			28	850,000	ds								
			42	270,000	cs								
			35	60,000	cs								
SPT040	48	10/12/17	heel	20,620		1/19/18	43.7	7	18.0%	1,566		2,772	12
			28	850,000	ds								
			42	168,725	cs								
			38	100,000	ls								
			35	50,000	cs								
SPT041	49	11/27/17	heel	-		3/11/18	43.0	7	18.0%	1,624		2,874	12
			28	965,000	ds								
			38	175,000	ls								
			35	60,000	cs								

Appendix I.4 — Salt Solution Processing (Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT042	50	1/19/18	heel	-		5/1/18	48.0	7	18.2%	1,543		2,732	13
			28	340,000	ds								
			38	800,000	ls								
			35	60,000	cs								
SPT043	48	3/11/18	heel	-		6/24/18	47.7	7	18.0%	1,672		2,959	13
			28	394,000	ds								
			43	805,000	cs								
SPT044	49	5/1/18	heel	-		8/19/18	49.9	7	18.2%	1,647		2,915	13
			43	275,012	cs								
			44	865,000	ds								
			35	50,000	cs								
SPT045	50	6/24/18	heel	-		10/14/18	46.9	7	18.0%	1,666	180	3,267	13
			44	1,170,000	ds								
			35	50,000	cs								
SPT046	48	8/19/18	heel	-		12/7/18	46.4	7	18.0%	1,646		2,913	14
			44	1,155,000	ds								
			35	50,000	cs								
SPT047	49	10/14/18	heel	-		1/30/19	50.3	7	18.0%	1,642		2,907	14
			44	138,665	ds								
			45	1,015,000	ds								
			35	50,000	cs								
SPT048	50	12/7/18	heel	18,800		3/29/19	49.6	7	18.0%	1,650		2,921	14
			45	1,098,000	ds				17.9%				
			35	50,000	cs								
			43	55,000	cs								
SPT049	48	1/30/19	heel	3,200		5/25/19	50.3	7	17.9%	1,637		2,898	14
			45	1,150,000	ds								
			29	50,000	cs								
SPT050	49	3/29/19	heel	1,812		7/21/19	45.9	7	18.2%	1,681		2,975	15
			45	508,018	ds								
			46	595,000	ds								
			29	100,000	cs								

Appendix I.4 — Salt Solution Processing (Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT051	50	5/25/19	heel	19,920		9/12/19	45.5	7	18.2%	1,740		3,080	15
			46	1,050,000	ds								
			29	150,000	cs								
SPT052	48	7/21/19	heel	1,200		11/4/19	44.8	7	18.3%	1,716	180	3,356	15
			46	1,050,000	ds			8					
			29	150,000	cs								
SPT053	49	9/12/19	heel	2,950		12/26/19	35.9	8	19.4%	1,723		3,050	16
			46	1,116,857	ds								
			29	102,056	cs								
SPT054	50	11/4/19	heel	17,920		2/6/20	45.4	8	19.0%	1,735		3,070	16
			31	1,075,000	ds								
			29	129,520	cs								
SPT055	48	12/26/19	heel	-		3/28/20	50.7	8	18.7%	1,753		3,103	16
			31	1,060,000	ds								
			29	161,750	cs								
SPT056	49	2/6/20	heel	20,620		5/23/20	47.5	8	18.7%	1,742		3,083	16
			31	1,060,000	ds								
			29	141,923	cs								
SPT057	50	3/28/20	heel	20,620		7/16/20	47.1	8	18.7%	1,715		3,036	17
			31	443,361	ds								
			36	685,000	ds								
			29	73,562	cs								
SPT058	48	5/23/20	heel	20,620		9/7/20	46.8	8	18.7%	1,702		3,013	17
			36	1,160,000	ds								
			29	41,923	cs								
SPT059	49	7/16/20	heel	20,620		10/29/20	47.0	8	18.7%	1,712	180	3,349	17
			36	1,160,000	ds								
			29	41,923	cs								
SPT060	50	9/7/20	heel	20,620		12/21/20	44.7	8	18.7%	1,715		3,036	18
			36	817,240	ds				18.7%				
			29	44,683	cs								
			37	340,000	ds								

Appendix I.4 — Salt Solution Processing (Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT061	48	10/29/20	heel	20,620		2/10/21	48.6	8	18.5%	1,722		3,047	18
			37	1,100,000	ds								
			29	101,923	cs								
SPT062	49	12/21/20	heel	20,620		4/6/21	16.5	8	17.6%	1,681		2,975	18
			37	681,000	ds			9					
			42	520,851	cs								
SPT063	50	2/10/21	heel	20,620		5/3/21	41.6	9	18.5%	1,699		3,007	18
			37	1,134,270	ds								
			29	67,653	cs								
SPT064	48	4/6/21	heel	20,620		6/21/21	35.5	9	19.6%	1,780		3,151	19
			43	1,000,000	cs								
			29	150,000	cs								
			IW	54,000									
SPT065	49	5/3/21	heel	20,620		8/1/21	136.4	9	15.9%	1,963		3,475	19
			32	948,909	cs								
			IW	263,135									
SPT066	50	6/21/21	heel	20,620		1/5/22	156.5	9	15.4%	2,065	180	3,974	19
			39	980,000	cs								
			IW	230,000									
SPT067	48	8/1/21	heel	20,620		7/8/22	22.5	9	15.4%	284		503	19
			39	137,546	cs								
			IW	3,190									

Appendix I.4 — Salt Solution Processing (Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s

Notes:

A) Each Salt Batch consists of a tank of blended dissolved salt solution to comprise a consistent feed stock. Each batch is individually tested and confirmed to meet processing qualification specifications.

B) Tank that is filled with a blended solution of feed stock ready for salt processing. The feed tanks for salt processing include Tanks 48, 49, and 50. Because of limited tank space at the time of initial salt processing, only Tanks 48 and 49 are available to feed.

C) Date when the first supernate solution is transferred into the salt processing feed tank.

D) The primary source of the supernate solution. The "heel" is the volume that is left over from the previous batch. "IW" refers to inhibited water.

E) The volume that is transferred from the source tank.

F) "cs" - Concentrated supernate. Does not originate from a solid salt cake.
"ls" - Light supernate. Generally supernate with a specific gravity of less than 1.2. Usually applied to DWPF recycle water.
"ds" - Dissolved salt solution. Originates from a salt cake dissolution process.

G) Date when the first salt solution is fed to the Salt Processing Facility.

H) Tetra-phenyl borate solution required to precipate the cesium to below Salt Stone waste acceptance criteria limits.

I) Sludge Batch number which is coupled with the salt processing batch.

J) Canister waste loading of precipitate hydrolysis aqueous (PHA).

K) Liquid volume of decontaminated salt solution from the Salt Processing Facility sent to Saltstone. Volume is shown for first salt batch in a fiscal year. This forecast volume would actually be received over the entire year at a rate of ~15 kgal per year.

L) Liquid volume of ETF concentrate sent to Saltstone.

M) Volume of grout that occupies vault storage space.

N) Corresponding Saltstone vault ID numbers. With a permanent roof, each cell measures 98.5 x 98.5 x 25 feet = 242,500 cu-ft. Existing Vault #1 has 6 cells, of which 3.5 are filled. Vault #4 has 12 cells, of which 1 is filled. New vaults will have 6 cells each. Vault # fill sequence to be 4, 1, 2, 3, 5, 6, 7, ... etc.

Appendix I.5 – Sludge Processing (Stretch Case)

	Waste Removal		ESP Pretreatment							DWPF Vitrification						
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Sludge Batch	Source Tanks	Sludge Content (kg)	Feed Prep Start Date	Feed Prep Total Dur. (months)	Total ESP Water Vol. (kgal)	Na (wt% dry)	Hg (wt% dry)	Total Solids (wt%)	Pretreated Volume (kgal)	Feed Volume (kgal)	Start Feed	Canister Yield	Feed Duration (years)	Finish Feed	Feed Tank	Sludge Loading (wt %)
1A	51	298,000			na	8.80		16.4	491	491	3/1/96	492	2.75	8/30/98	51	25.0
										-140	(Tk 51 heel @ 40 ")					
										351						
1B	42	420,861			na	7.77	0.30	16.5	460	460	10/1/98	678	3.00	9/30/01	51	25.0
	total	420,861								(Includes use of 20 cans of Tank 51 heel)						
2	8	182,451			1,977	8.75	0.30	16.0	456	456	4/1/02	471	2.00	4/1/04	40	28.0
	40	179,098								-140	(Assumes DWPF outage in 1stQ and 2ndQ FY02)					
	total	361,549								316						
3	7(70%)	288,957	12/8/02	16	3,156	8.70	0.10	16.0	540	540	4/1/04	459	2.50	9/29/06	51	29.0
	18(70%)	14,777														
	19(70%)	1,956														
	total	305,690														
4	7(30%)	123,839	9/6/08	13	1,199	9.44	1.60	16.0	451	451	10/1/09	420	2.39	2/20/12	40	30.5
	11	124,380								(Assume DWPF outage from FY07 - FY09 due to lack of feed)						
	18(30%)	6,333								(Assume coupled salt and sludge feed starts in April 2010)						
	19(30%)	838														
	total	255,390														
5	15	165,818	9/28/10	17	2,285	11.51	1.50	16.0	567	567	2/20/12	494	2.15	4/14/14	51	29.4
	26	154,896														
	total	320,714														
6	5	57,630	11/20/12	17	2,815	8.70	2.20	16.0	727	727	4/14/14	598	2.60	11/18/16	40	31.6
	6	38,708														
	12	189,715														
	13(30%)	125,280														
	total	411,333														
7	13(70%)	292,320	6/27/15	17	2,862	9.08	1.90	16.0	743	743	11/18/16	652	2.83	9/19/19	51	29.8
	4	65,477														
	33	62,401														
	total	420,198														
8	21	6,393	5/27/18	16	2,034	8.76	1.30	16.0	677	677	9/19/19	584	2.54	4/3/22	40	27.8
	22	13,265														
	23	59,110														
	34	77,119														
	39	89,474														
	47	137,763														
	total	383,124														
9	32	214,886	12/9/20	16	1,846	10.06	4.90	16.0	472	472	4/3/22	387	1.68	12/8/23	51	28.8
	43	51,940														
		266,826														

Appendix I.5 – Sludge Processing (Stretch Case)

	Waste Removal		ESP Pretreatment							DWPF Vitrification						
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Sludge Batch	Source Tanks	Sludge Content (kg)	Feed Prep Start Date	Feed Prep Total Dur. (months)	Total ESP Water Vol. (kgal)	Na (wt% dry)	Hg (wt% dry)	Total Solids (wt%)	Pretreated Volume (kgal)	Feed Volume (kgal)	Start Feed	Canister Yield	Feed Duration (years)	Finish Feed	Feed Tank	Sludge Loading (wt %)
10	ESP Heels (Tks 40,42,51)	158,377	9/14/22	15	1,877	8.24	4.90	16.0	913	913	12/8/23	679	2.95	11/19/26	40	31.6
	35 Other Insoluble Solids	138,956														
	total	219,000														
		516,333														
Totals		3,662,018			20,051	Total Estimated Washwater						5,914	Total Estimated Cans			

Notes:

General) Above based on the following yearly canister production values: FY01 220 cans/yr, FY02 150 cans/yr, FY03 210 cans/yr, FY04 220 cans/yr, FY05 150 cans/yr, FY06 200 cans/yr, FY07-FY09 DWPF Outage, FY10 100 cans/yr, FY11-End 230 cans/yr.

A) Each Sludge Batch must be individually tested and confirmed to meet waste qualification spedicfications

B) Sludge in these tanks will comprise the batch. Note: 100% of the sludge from Tanks 7, 18&19 will be moved to ESP to support Sludge Batch 3. However, 30% of this sludge will be combined with Tank 11 sludge to make Sludge Batch 4.

C) Amount of sludge from each source tank in the batch obtained from WCS data base

D) Feed Prep start date is the date that sludge is first moved into the the ESP feed tank (40 or 51) to begin preparation of the sludge batch (i.e. obtain proper alkali composition of the sludge slurry for feed to DWPF)

E) Total planned duration of transfers, washing, sampling, test glass production, and associated decants for the preparation of a sludge batch for feed to DWPF

F) Total estimated volume of sludge transfer water and wash water decants to obtain target soluble Na concentration for feed to DWPF

G) Amount of total Na in washed sludge (dry basis)

H) Amount of total Hg in washed sludge (dry basis)

I) Total solids (soluble and insoluble) in washed sludge

J) Volume of sludge at given wt% total solids before heel effects (Batch 1B is actual. Batch 2 is projected from detailed analysis. Batch 3 and beyond are based on ratio of batch sludge kg values converted to gallons and adjusted from an estimated 25 wt% solids to 16 wt% solids)

K) Volume of sludge available for feed after adding or subtracting pump heel

L) Start feed date based on depletion of previous batch down to pump heel

M) Estimated number of canisters produced given the pretreatment as shown. Numbers are actual for Batch 1A and estimated for remaining batches. Coupled Salt and Sludge Feed assumed to start with Batch 4.

N) Column O divided by the planned canister production during the period in which the batch is vitrified. See production note under General Section above.

O) Column N plus column P. Finish Feed means when the last transfer of feed is sent from the Feed Tank. The last canister for the batch will be poured later. The DWPF has approximately 25 canisters of feed in process. Therefore 25 more canisters will be produced from the batch after the last feed is sent to DWPF.

P) Batch feed tank

Q) Weight % of glass comprised of sludge oxides.

Appendix I.6 - Canister Storage (Stretch Case)

End of FY	SRS Cans Produced		SRS Cans in GWSB #1 (2,159 max)			SRS Cans in Modular Storage (1 building @ 585)			SRS Cans Shipped to Repository		Net Cans Stored
	Yearly	Cum.	Added	Shipped	Cum.	Added	Shipped	Cum.	Each Year	Cumulative	At SRS
1996	64	64	64		64						64
1997	169	233	169		233						233
1998	250	483	250		483						483
1999	236	719	236		719						719
2000	231	950	231		950						950
2001	220	1,170	220		1,170						1,170
2002	150	1,320	150		1,320						1,320
2003	210	1,530	210		1,530						1,530
2004	220	1,750	220		1,750						1,750
2005	150	1,900	150		1,900	0		0			1,900
2006	200	2,100	200		2,100	0		0			2,100
2007	0	2,100	0		2,100	0		0			2,100
2008	0	2,100			2,100	0		0			2,100
2009	0	2,100			2,100	0		0			2,100
2010	100	2,200	100	(105)	2,095	0		0	105	105	2,095
2011	230	2,430	230	(205)	2,120	0	0	0	205	310	2,120
2012	230	2,660	230	(205)	2,145	0	0	0	205	515	2,145
2013	230	2,890	180	(205)	2,120	50	0	50	205	720	2,170
2014	230	3,120		(205)	1,915	230	0	280	205	925	2,195
2015	230	3,350		(205)	1,710	230	0	510	205	1,130	2,220
2016	230	3,580	159	(205)	1,664	71	0	581	205	1,335	2,245
2017	230	3,810	230	(205)	1,689	0	0	581	205	1,540	2,270
2018	230	4,040	230	(205)	1,714	0	0	581	205	1,745	2,295
2019	230	4,270	230	(205)	1,739	0	0	581	205	1,950	2,320
2020	230	4,500	230	(205)	1,764	0	0	581	205	2,155	2,345
2021	230	4,730	230	(205)	1,789	0	0	581	205	2,360	2,370
2022	230	4,960	230	(205)	1,814	0	0	581	205	2,565	2,395
2023	230	5,190	230	(205)	1,839	0	0	581	205	2,770	2,420
2024	230	5,420	230	(205)	1,864	0	0	581	205	2,975	2,445
2025	230	5,650	230	(205)	1,889	0	0	581	205	3,180	2,470
2026	230	5,880	230	(10)	2,109	0	(195)	386	205	3,385	2,495
2027	34	5,914	34	0	2,143	0	(205)	181	205	3,590	2,324
2028	0	5,914		(24)	2,119	0	(181)	0	205	3,795	2,119
2029	0	5,914		(205)	1,914	0	0	0	205	4,000	1,914
2030	0	5,914		(205)	1,709	0	0	0	205	4,205	1,709
2031	0	5,914		(205)	1,504	0	0	0	205	4,410	1,504
2032	0	5,914		(205)	1,299	0	0	0	205	4,615	1,299

Appendix I.6 - Canister Storage (Stretch Case)

End of FY	SRS Cans Produced		SRS Cans in GWSB #1 (2,159 max)			SRS Cans in Modular Storage (1 building @ 585)			SRS Cans Shipped to Repository		Net Cans Stored At SRS
	Yearly	Cum.	Added	Shipped	Cum.	Added	Shipped	Cum.	Each Year	Cumulative	
2033	0	5,914		(205)	1,094	0	0	0	205	4,820	1,094
2034	0	5,914		(205)	889	0	0	0	205	5,025	889
2035	0	5,914		(205)	684	0	0	0	205	5,230	684
2036	0	5,914		(205)	479	0	0	0	205	5,435	479
2037	0	5,914		(205)	274	0	0	0	205	5,640	274
2038	0	5,914		(205)	69	0	0	0	205	5,845	69
2039	0	5,914		(69)	0	0	0	0	69	5,914	0
2040	0	5,914			0		0	0	0	5,914	

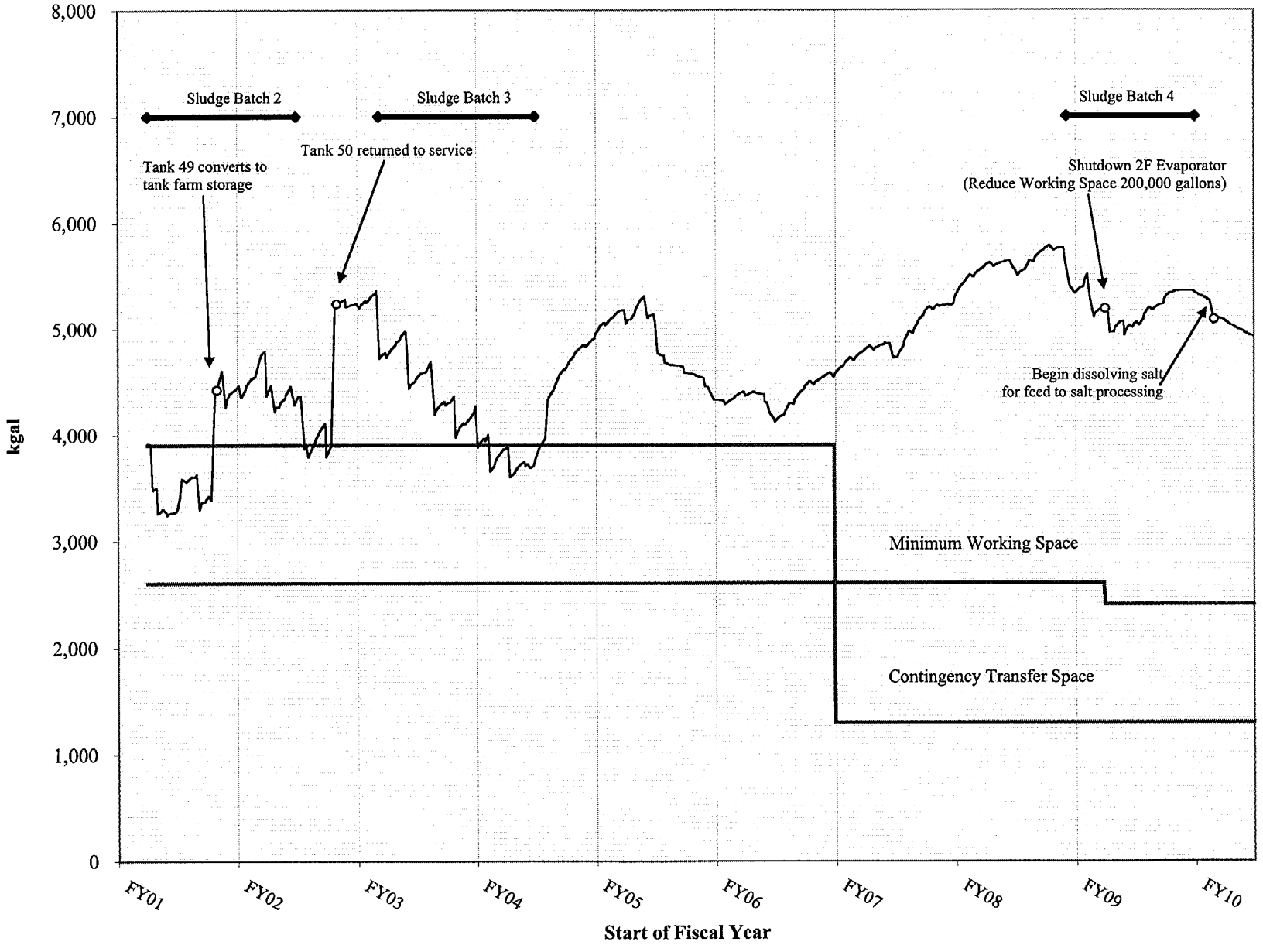
Notes:

1) GWSB #1 filling began in May 1996. Of its 2,286 canister storage locations, 5 positions store non-radioactive test canisters and 122 are unuseable with no viable repair technique. This yields a capacity of 2,159 usable storage locations, including 450 presently unusable location that require modification per an existing plan before they will be useable.
2) GWSB #1 is expected to reach maximum capacity in FY13.
3) Additional glass waste storage locations will be built as privatized modularized buildings, which will be $^1/_4$ of the size of GWSB #1. The first building, GWSB #2A, will be needed in 2013. Unless additional canisters are required to complete the program or shipments are delayed to the Federal Repository, this one modularized building should meet the programs needs.
4) This Plan assumes that canisters can be transported to the Federal Repository starting in FY10 at a rate of 105 canisters in FY10 and 205 canisters/yr thereafter, until the end of the program.
5) A canister load-out facility will be required to move the canisters from the GWSBs to a railcar. Assume one year for design (FY07) and three years for construction (FY08-10).
6) GWSB #1 will be emptied and available for D&D in FY39
7) GWSB #2A will be emptied and available for D&D in FY29.
8) This Plan does not include possible can-in-canister disposition of excess plutonium.
9) The Plan does not include additional locations in GWSB #2A for spent fuels materials. These materials could be added and included in these buildings, but would result in the overall need to build one additional privatized modularized building. As information becomes available on the needed locations for Spent Fuel materials needed locations would be included in the privatization proposals.

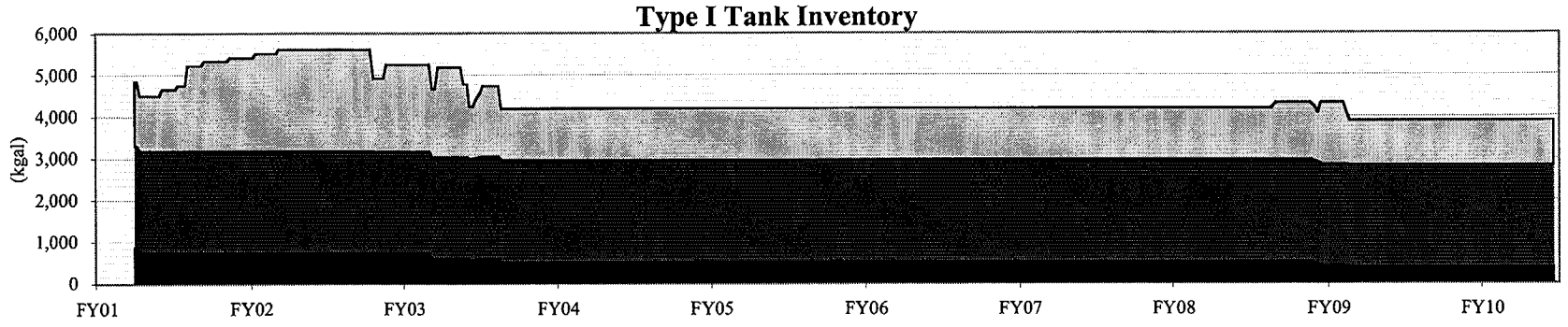
Appendix I.7 — Near Term Saltstone Operations (Stretch Case)

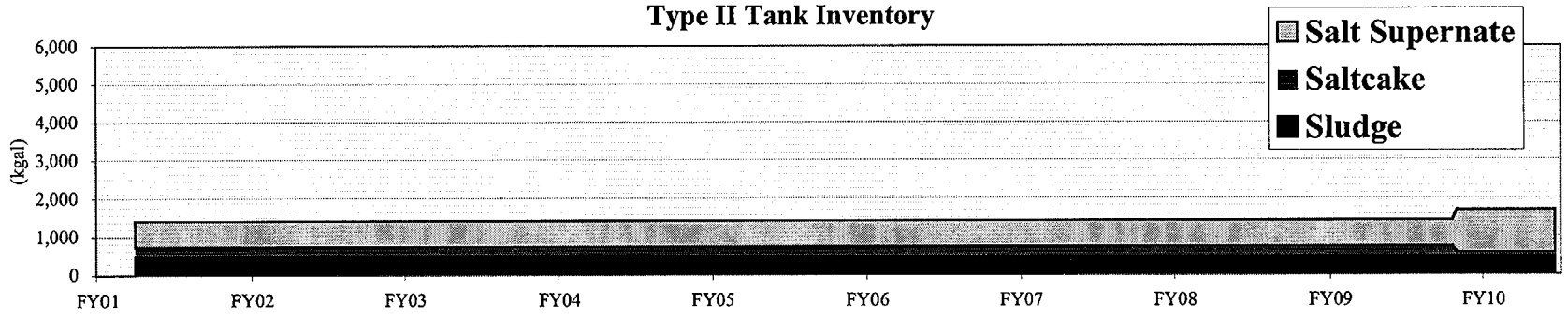
FY	Beginning of year Tk 50 Inventory (Kgal)	ETF Conc (Kgal)	Material Fed to Saltstone (Kgal)	End of year Tk 50 Inven. (Kgal)	Grout Produced (Kgal)	Cum Vault Cells Filled	Active Vault #	Notes:
FY01	(as of 3/1/01) 482	355 (Includes 250 kgal moved from Tank 49)	0	837	0	3.50	---	3.5 cells already filled at the start of FY01. (3.0 cells in Vault 1 and 0.5 cells in Vault 4) Saltstone Facility in partial lay-up (not operating).
FY02	837	180	(1,017)	0	1,800	4.49	4	Saltstone Facility operates to de-inventory Tank 50. Tank 50 mods required for return to waste storage in FY02
FY03	0	180	(180)	0	319	4.67	4	Saltstone Facility operates as required to support ETF.
FY04	0	180	(180)	0	319	4.84	4	Saltstone Facility operates as required to support ETF.
FY05	0	180	(180)	0	319	5.02	4	Saltstone Facility operates as required to support ETF.
FY06	0	180	(180)	0	319	5.19	4	Saltstone Facility operates as required to support ETF.
FY07	0	180	(180)	0	319	5.37	4	Saltstone Facility operates as required to support ETF.
FY08	0	180	(180)	0	319	5.55	4	Saltstone Facility operates as required to support ETF.
FY09	0	180	(180)	0	319	5.72	4	Saltstone Facility operates as required to support ETF.

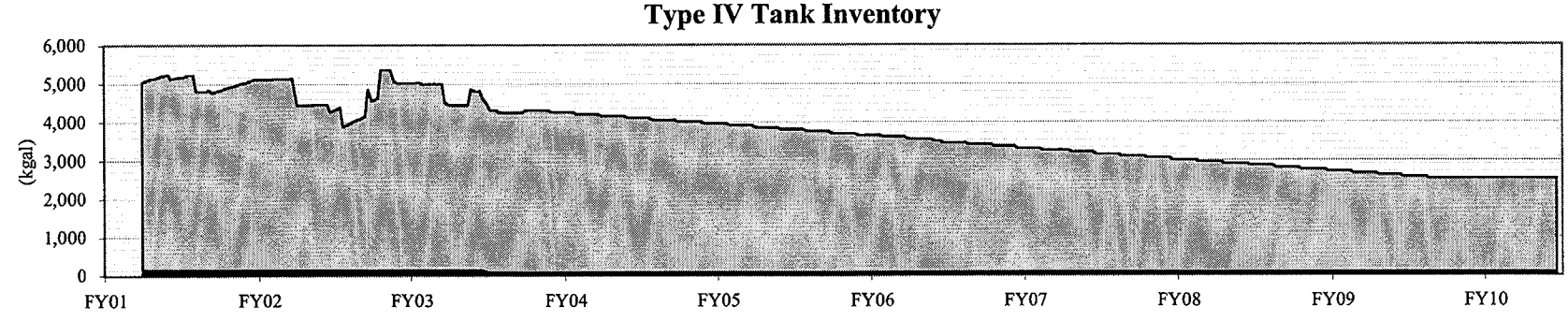
Appendix I.8 Useable Tank Space (Stretch Case)



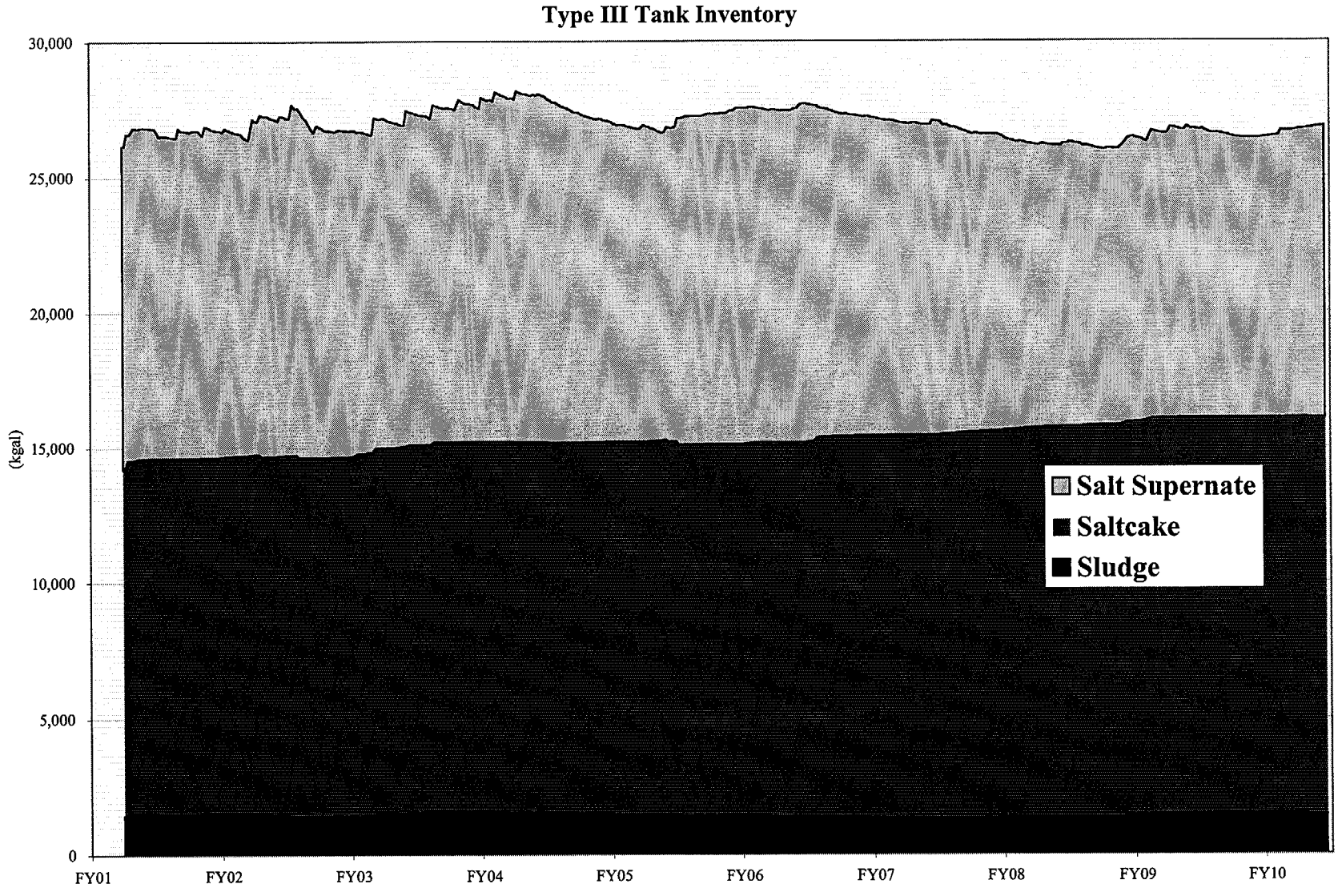
Appendix I.9 — Tank Inventory (Stretch Case)



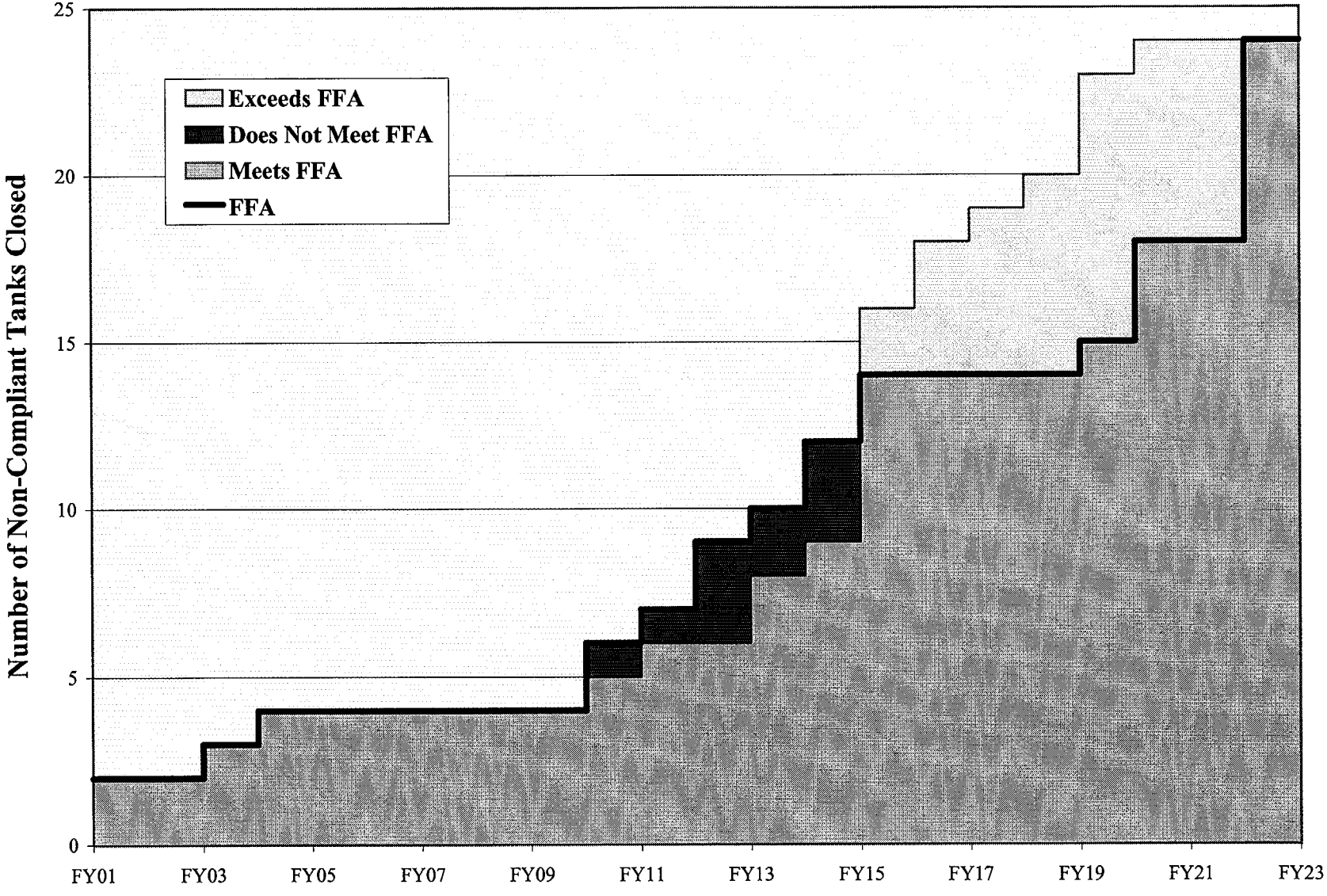




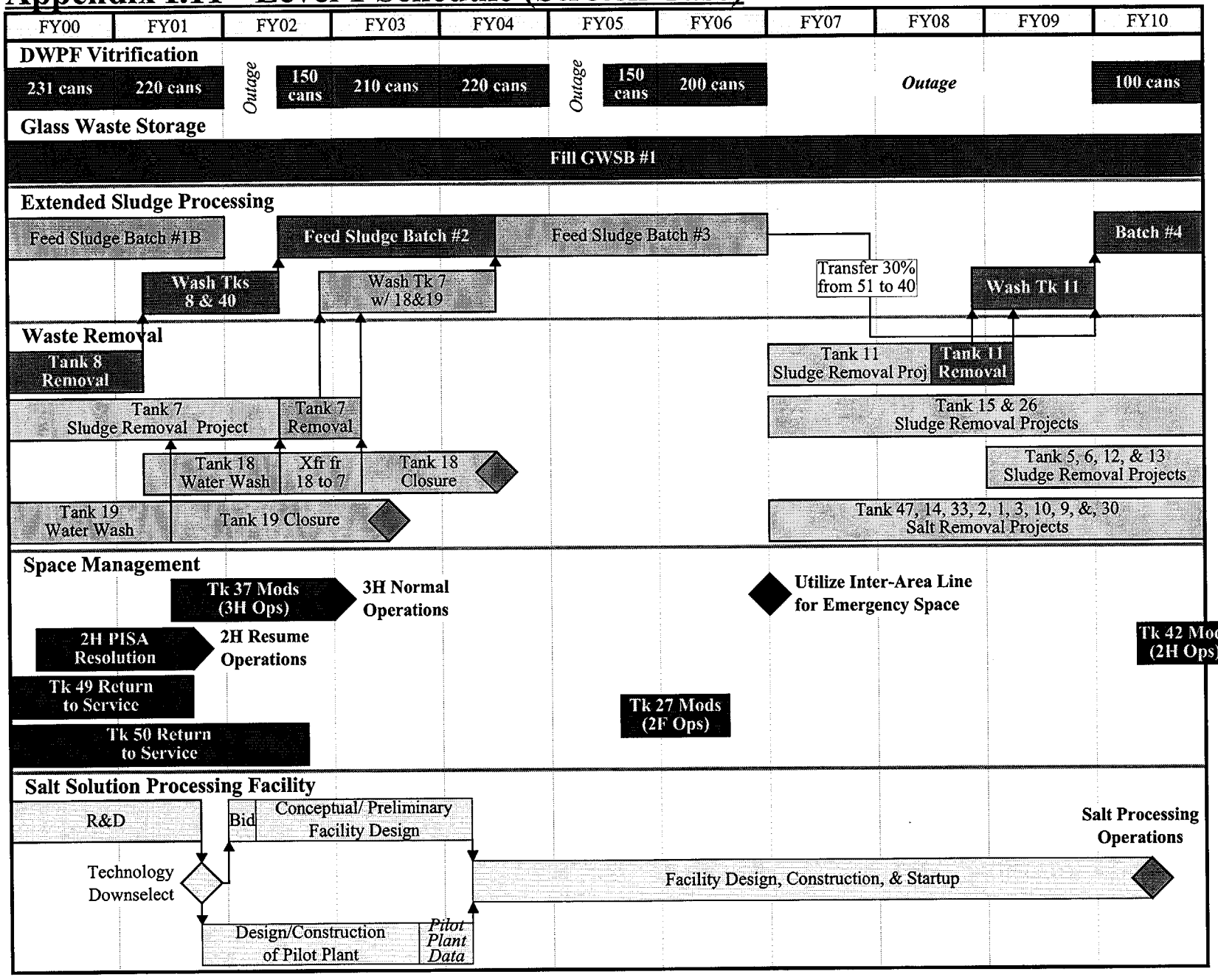
Appendix I.9 — Tank Inventory (Stretch Case)



Appendix I.10 - Tank Closures (Stretch Case)



Appendix I.11 - Level 1 Schedule (Stretch Case)



Appendix J – Super Stretch Case

Appendix J Super Stretch Case

Appendix J – Super Stretch Case

Appendix J provides the detailed production planning information for the Super Stretch Case. During the contract extension, additional scope was identified that would significantly improve the HLW program performance. The execution of these items would have to be funded by implementing additional savings or by obtaining additional funding from Congress. The additional scope is not currently authorized for execution. It would have to be change-controlled into the contract prior to execution. This additional scope was included in the third strategy -- the Super Stretch Case -- which:

1. Provides excellent risk reduction by expediting waste removal from "high risk" tanks,
2. Meets all regulatory commitments,
3. Starts salt processing activities by mid 2010, and
4. Processes an average of 250 canisters per year after salt processing becomes operational.

Key Milestone	Rev 12 Super Stretch Case
Total Number of Canisters Produced	5,871
DWPF Sludge Production (in average canisters per year)	
• FY01	255
• FY02	150
• FY03	240
• FY04	240
• FY05	150
• FY06	115
• FY07	200
• FY08	200
• FY09	200
• FY10	150
• FY11 to End of Program	250
Key Risk Reduction Dates	
Date when all "high risk" tanks are emptied	FY14
Date when all "non-compliant" tanks are emptied	FY15
Date when all "non-compliant" tanks are closed	FY18
Date Salt Processing Becomes Operational	FY10
Date by which salt processing is completed	FY22
Date by which sludge processing is completed	FY23
Regulatory Commitments	
Are all STP commitments met?	Yes
Are all FFA regulatory commitments met?	Yes
Estimated Life-Cycle Costs	
• Costs in escalated dollars ($ in billions)	$17.6
• Costs in constant 1999 dollars ($ in billions)	$12.3
Canister Storage Locations	
• Make additional 450 GWSB #1 locations usable	FY03-05
• Begin work on additional Canister Storage locations – 2 Privatized Modules	Module #1 FY04 Module #2 FY07
• Place the two Privatized Modules into Radioactive Operations	Module #1 FY07 Module #2 FY10
Waste Removal	
• Tank 7 ready for sludge removal	7/02
• Tank 11 ready for sludge removal	4/05
• Tank 26 ready for sludge removal	9/07

Appendix J – Super Stretch Case

Key Milestone	Rev 12 Super Stretch Case
Tank Closures	
• Complete closure of Tank 19	4/03
• Complete closure of Tank 18	4/04
• Complete closure of 5th Tank	FY08
• Complete closure of 6th Tank	FY09
• Complete closure of 7th Tank	FY10
• Complete closure of 24th Tank	FY19
Key Space Management Activities	
• Reuse Tank 49 for waste storage	7/01
• Reuse Tank 50 for waste storage	9/02
• Tank 37 modification completed for 3H Evaporator Drop Tank	9/02
Repository Activities	
• Start shipping canisters to the Federal Repository	FY10
• Complete shipping canisters to Federal Repository	FY39
Facility Deactivation Complete	FY40

This appendix provides the following data: Funding Requirements, Waste Removal and Tank Closure Schedule, Material Balance, Salt Processing Batch makeup, Sludge Batch makeup, Canister Storage requirements, Near Term Saltstone Operations, Usable Tank Space estimates, an Inventory of the amound of waste in Types I, II, III, & IV tanks, a chart of Non-Compliant Tank Closures with respect to the FFA, and a Level 1 Schedule.

Appendix J.1 - Funding (Super Stretch)

Budget Authority in Escalated Dollars

Project Title	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
HL-01 H Tank Farm											
H Tank Farm Operations	85,371	89,019	95,078	93,420	100,337	106,546	108,122	110,347	113,327	113,266	115,576
LI: Replacement Evaporator	12,835	3,567	-	-	-	-	-	-	-	-	-
HL-01 Total	**98,205**	**92,586**	**95,078**	**93,420**	**100,337**	**106,546**	**108,122**	**110,347**	**113,327**	**113,266**	**115,576**
HL-02 F Tank Farm	**58,928**	**60,993**	**59,966**	**63,928**	**68,328**	**70,471**	**71,464**	**74,184**	**76,187**	**73,509**	**75,493**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	1,108	3,824	3,169	3,311	3,552	3,673	3,786	3,931	4,037	4,058	4,168
WR: Tank Closure	124	350	16	3,113	4,745	1,653	-	-	16,187	10,660	8,547
HL-03 Total	**1,232**	**4,174**	**3,185**	**6,424**	**8,297**	**5,326**	**3,786**	**3,931**	**20,224**	**14,718**	**12,714**
HL-04 Feed Preparations & Sludge Operations	**53,328**	**52,037**	**50,722**	**56,097**	**62,734**	**66,549**	**70,173**	**69,739**	**71,622**	**72,071**	**74,017**
HL-05 Vitrification											
Vitrification Ops	127,626	116,698	111,727	126,400	132,185	133,344	141,166	146,986	145,944	150,235	155,255
Failed Equip. Storage Vaults	-	-	1,143	-	-	-	-	-	-	-	-
HL-05 Total	**127,626**	**116,698**	**112,870**	**126,400**	**132,185**	**133,344**	**141,166**	**146,986**	**145,944**	**150,235**	**155,255**
HL-06 Glass Waste Storage	**436**	**603**	**684**	**712**	**2,056**	**2,078**	**1,472**	**839**	**10,824**	**21,366**	**30,190**
HL-13 Salt Disposition											
Salt Disposition Ops	15,620	10,175	17,543	4,982	-	-	-	-	-	-	-
LI: Salt Alternative	-	-	-	29,465	84,345	135,123	150,278	150,768	150,895	143,752	98,761
HL-13 Total	**15,620**	**10,175**	**17,543**	**34,447**	**84,345**	**135,123**	**150,278**	**150,768**	**150,895**	**143,752**	**98,761**
HL-09 LI: Tk Fm Services Upgrade I	**1,632**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-10 LI: Storm Water Upgrades	**2,508**	**3,533**	**138.3381**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-11 LI: Tk Fm Services Upgrade II	**838**	**2,141**	**10,455**	**6,303**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-12 LI: Waste Removal											
LI: WR from Tanks	24,739	21,796	23,046	28,690	11,082	25,192	28,897	38,905	53,401	63,677	78,814
LI: Vit Upgrades	12	653	616	-	-	-	7,063	7,276	14,945	15,255	15,667
LI: Pipe, Evaps & Infrastructure	-	-	-	993	5,995	15,870	12,536	-	-	-	-
HL-12 Total	**24,751**	**22,449**	**23,662**	**29,683**	**17,077**	**41,063**	**48,496**	**46,181**	**68,346**	**78,932**	**94,481**
FA-24 Facility Decontamination/Decommissioning	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HLW TOTAL	**385,103**	**365,388**	**374,304**	**417,413**	**475,359**	**560,499**	**594,957**	**602,976**	**657,369**	**667,849**	**656,488**
HLW w/o Salt Total	**369,483**	**355,213**	**356,760**	**382,966**	**391,013**	**425,375**	**444,678**	**452,208**	**506,474**	**524,097**	**557,727**
Solid Waste Facilities											
ETF	16,510	15,098	16,115	17,302	18,705	20,455	22,088	23,838	20,579	23,997	20,586
Saltstone	1,595	857	1,099	2,055	4,454	2,317	2,229	2,314	2,377	7,353	15,734
SW TOTAL	**18,105**	**15,955**	**17,214**	**19,356**	**23,159**	**22,772**	**24,317**	**26,152**	**22,956**	**31,351**	**36,321**
Life Cycle Cost	**403,208**	**381,344**	**391,518**	**436,769**	**498,517**	**583,271**	**619,274**	**629,128**	**680,325**	**699,200**	**692,809**

Appendix J.1 - Funding (Super Stretch)

Budget Authority in Escalated Dollars

Project Title	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
HL-01 H Tank Farm											
H Tank Farm Operations	117,928	121,112	123,570	126,074	129,478	126,503	123,278	126,607	130,025	128,298	130,120
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	-	-
HL-01 Total	**117,928**	**121,112**	**123,570**	**126,074**	**129,478**	**126,503**	**123,278**	**126,607**	**130,025**	**128,298**	**130,120**
HL-02 F Tank Farm	**77,532**	**79,625**	**80,153**	**82,317**	**81,429**	**80,992**	**72,926**	**73,379**	**73,803**	**75,796**	**66,347**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	13,688	25,356	23,264	16,229	16,667	14,672	15,068	15,475	5,297	5,440	5,587
WR: Tank Closure	8,752	14,794	14,007	23,435	72,883	85,460	41,373	11,292	21,838	46,199	42,255
HL-03 Total	**22,440**	**40,151**	**37,271**	**39,664**	**89,551**	**100,132**	**56,441**	**26,767**	**27,135**	**51,639**	**47,842**
HL-04 Feed Preparations & Sludge Operations	**76,015**	**68,871**	**70,731**	**72,640**	**74,602**	**76,616**	**78,685**	**80,809**	**82,991**	**85,232**	**87,533**
HL-05 Vitrification											
Vitrification Ops	160,620	160,312	168,042	175,531	172,995	182,082	189,295	193,042	193,907	202,545	212,556
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	-	-
HL-05 Total	**160,620**	**160,312**	**168,042**	**175,531**	**172,995**	**182,082**	**189,295**	**193,042**	**193,907**	**202,545**	**212,556**
HL-06 Glass Waste Storage	**20,619**	**12,832**	**13,262**	**13,707**	**14,167**	**14,643**	**15,135**	**15,643**	**16,168**	**16,712**	**17,273**
HL-13 Salt Disposition											
Salt Disposition Ops	45,821	79,791	84,288	86,322	80,006	82,458	83,648	97,864	101,945	104,750	108,222
LI: Salt Alternative	57,843	-	-	-	-	45,370	62,127	47,853	-	-	-
HL-13 Total	**103,664**	**79,791**	**84,288**	**86,322**	**80,006**	**127,829**	**145,775**	**145,718**	**101,945**	**104,750**	**108,222**
HL-09 LI: Tk Fm Services Upgrade I	-	-	-	-	-	-	-	-	-	-	-
HL-10 LI: Storm Water Upgrades	-	-	-	-	-	-	-	-	-	-	-
HL-11 LI: Tk Fm Services Upgrade II	-	-	-	-	-	-	-	-	-	-	-
HL-12 LI: Waste Removal											
LI: WR from Tanks	64,453	74,538	54,046	88,400	98,000	76,048	71,014	74,593	60,492	42,483	13,642
LI: Vit Upgrades	28,158	18,590	12,728	19,608	20,137	20,681	14,160	14,542	-	-	-
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	-	-
HL-12 Total	**92,611**	**93,128**	**66,774**	**108,008**	**118,137**	**96,729**	**85,174**	**89,135**	**60,492**	**42,483**	**13,642**
FA-24 Facility Decontamination/Decommissioning	-	-	-	-	-	**43,183**	**36,285**	-	-	-	-
HLW TOTAL	**671,429**	**655,822**	**644,091**	**704,263**	**760,365**	**848,708**	**802,995**	**751,100**	**686,467**	**707,454**	**683,535**
HLW w/o Salt Total	**567,765**	**576,031**	**559,803**	**617,941**	**680,359**	**720,879**	**657,219**	**605,382**	**584,522**	**602,704**	**575,313**
Solid Waste Facilities											
ETF	21,843	21,875	25,438	32,919	25,062	25,243	30,249	25,667	32,191	27,072	28,746
Saltstone	24,306	35,875	53,592	42,606	39,905	55,953	56,416	52,257	61,883	62,422	69,203
SW TOTAL	**46,150**	**57,751**	**79,030**	**75,525**	**64,967**	**81,196**	**86,664**	**77,924**	**94,074**	**89,494**	**97,949**
Life Cycle Cost	**717,579**	**713,573**	**723,121**	**779,788**	**825,332**	**929,904**	**889,659**	**829,024**	**780,541**	**796,948**	**781,483**

Appendix J.1 - Funding (Super Stretch)

Budget Authority in Escalated Dollars

Project Title	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
HL-01 H Tank Farm											
H Tank Farm Operations	133,634	135,511	135,614	54,075	-	-	-	-	-	-	-
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	-	-
HL-01 Total	**133,634**	**135,511**	**135,614**	**54,075**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-02 F Tank Farm	**49,588**	**28,416**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	-	-	-	-	-	-	-	-	-	-	-
WR: Tank Closure	62,258	54,170	132,850	106,648	911	-	-	-	-	-	-
HL-03 Total	**62,258**	**54,170**	**132,850**	**106,648**	**911**	**-**	**-**	**-**	**-**	**-**	**-**
HL-04 Feed Preparations & Sludge Operations	**89,896**	**46,162**	**23,704**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-05 Vitrification											
Vitrification Ops	200,547	203,167	32,471	-	-	-	-	-	-	-	-
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	-	-
HL-05 Total	**200,547**	**203,167**	**32,471**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-06 Glass Waste Storage	**17,854**	**10,799**	**11,152**	**11,517**	**3,065**	**3,148**	**3,233**	**3,320**	**2,984**	**3,064**	**3,147**
HL-13 Salt Disposition											
Salt Disposition Ops	110,447	107,014	11,141	-	-	-	-	-	-	-	-
LI: Salt Alternative	-	-	-	-	-	-	-	-	-	-	-
HL-13 Total	**110,447**	**107,014**	**11,141**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-09 LI: Tk Fm Services Upgrade I	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-10 LI: Storm Water Upgrades	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-11 LI: Tk Fm Services Upgrade II	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-12 LI: Waste Removal											
LI: WR from Tanks	18,977	22,402	39,086	6,622	-	-	-	-	-	-	-
LI: Vit Upgrades	-	-	-	-	-	-	-	-	-	-	-
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	-	-
HL-12 Total	**18,977**	**22,402**	**39,086**	**6,622**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
FA-24 Facility Decontamination/Decommissioning	**-**	**-**	**196,488**	**230,330**	**89,515**	**2,302**	**-**	**-**	**-**	**-**	**-**
HLW TOTAL	**683,200**	**607,640**	**582,505**	**409,190**	**93,492**	**5,450**	**3,233**	**3,320**	**2,984**	**3,064**	**3,147**
HLW w/o Salt Total	**572,753**	**500,626**	**571,364**	**409,190**	**93,492**	**5,450**	**3,233**	**3,320**	**2,984**	**3,064**	**3,147**
Solid Waste Facilities											
ETF	40,738	31,015	30,116	-	-	-	-	-	-	-	-
Saltstone	46,219	29,058	3,741	-	-	-	-	-	-	-	-
SW TOTAL	**86,958**	**60,074**	**33,857**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Life Cycle Cost	**770,158**	**667,714**	**616,363**	**409,190**	**93,492**	**5,450**	**3,233**	**3,320**	**2,984**	**3,064**	**3,147**

Appendix J.1 - Funding (Super Stretch)

Budget Authority in Escalated Dollars

Project Title	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	Cumulative FY99-End
HL-01 H Tank Farm										
H Tank Farm Operations	-	-	-	-	-	-	-	-	-	2,972,235
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	16,402
HL-01 Total	-	-	-	-	-	-	-	-	-	**2,988,637**
HL-02 F Tank Farm	-	-	-	-	-	-	-	-	-	**1,675,753**
HL-03 Waste Removal & Tank Closures										
WR Ops w/ Demo Projects	-	-	-	-	-	-	-	-	-	195,359
WR: Tank Closure	-	-	-	-	-	-	-	-	-	784,520
HL-03 Total	-	-	-	-	-	-	-	-	-	**979,878**
HL-04 Feed Preparations & Sludge Operations	-	-	-	-	-	-	-	-	-	**1,713,575**
HL-05 Vitrification										
Vitrification Ops	-	-	-	-	-	-	-	-	-	3,934,679
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	1,143
HL-05 Total	-	-	-	-	-	-	-	-	-	**3,935,821**
HL-06 Glass Waste Storage	**3,232**	**3,319**	**3,409**	**3,501**	**3,595**	**3,692**	**3,792**	**3,895**		**343,140**
HL-13 Salt Disposition										
Salt Disposition Ops	-	-	-	-	-	-	-	-	-	1,232,038
LI: Salt Alternative	-	-	-	-	-	-	-	-	-	1,156,583
HL-13 Total	-	-	-	-	-	-	-	-	-	**2,388,621**
HL-09 LI: Tk Fm Services Upgrade I	-	-	-	-	-	-	-	-	-	**1,632**
HL-10 LI: Storm Water Upgrades	-	-	-	-	-	-	-	-	-	**6,179**
HL-11 LI: Tk Fm Services Upgrade II	-	-	-	-	-	-	-	-	-	**19,737**
HL-12 LI: Waste Removal										
LI: WR from Tanks	-	-	-	-	-	-	-	-	-	1,203,034
LI: Vit Upgrades	-	-	-	-	-	-	-	-	-	210,090
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	35,394
HL-12 Total	-	-	-	-	-	-	-	-	-	**1,448,519**
FA-24 Facility Decontamination/Decommissioning	-	-	-	-	-	-	-	**18,112**	-	**616,216**
HLW TOTAL	**3,232**	**3,319**	**3,409**	**3,501**	**3,595**	**3,692**	**3,792**	**22,007**	-	**16,117,708**
HLW w/o Salt Total	**3,232**	**3,319**	**3,409**	**3,501**	**3,595**	**3,692**	**3,792**	**22,007**	-	**13,729,087**
Solid Waste Facilities										
ETF	-	-	-	-	-	-	-	-	-	613,448
Saltstone	-	-	-	-	-	-	-	-	-	675,822
SW TOTAL	-	-	-	-	-	-	-	-	-	**1,289,270**
Life Cycle Cost	**3,232**	**3,319**	**3,409**	**3,501**	**3,595**	**3,692**	**3,792**	**22,007**	-	**17,406,978**

Appendix J.1 - Funding (Super Stretch)

Budget Authority in Constant FY99 Year Dollars

Project Title	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
HL-01 H Tank Farm											
H Tank Farm Operations	85,371	85,926	88,585	84,752	88,634	91,644	90,555	89,989	89,989	87,577	87,013
LI: Replacement Evaporator	12,835	3,443	-	-	-	-	-	-	-	-	-
HL-01 Total	**98,205**	**89,369**	**88,585**	**84,752**	**88,634**	**91,644**	**90,555**	**89,989**	**89,989**	**87,577**	**87,013**
HL-02 F Tank Farm	**58,928**	**58,873**	**55,871**	**57,996**	**60,359**	**60,615**	**59,853**	**60,497**	**60,497**	**56,836**	**56,836**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	1,108	3,691	2,953	3,004	3,138	3,159	3,171	3,206	3,206	3,138	3,138
WR: Tank Closure	124	338	15	2,824	4,191	1,422	-	-	12,853	8,242	6,434
HL-03 Total	**1,232**	**4,029**	**2,967**	**5,828**	**7,329**	**4,581**	**3,171**	**3,206**	**16,059**	**11,380**	**9,572**
HL-04 Feed Preparations & Sludge Operations	**53,328**	**50,229**	**47,258**	**50,892**	**55,417**	**57,241**	**58,771**	**56,873**	**56,873**	**55,724**	**55,724**
HL-05 Vitrification											
Vitrification Ops	127,626	112,643	104,097	114,672	116,767	114,695	118,230	119,869	115,889	116,161	116,886
Failed Equip. Storage Vaults	-	-	1,065	-	-	-	-	-	-	-	-
HL-05 Total	**127,626**	**112,643**	**105,162**	**114,672**	**116,767**	**114,695**	**118,230**	**119,869**	**115,889**	**116,161**	**116,886**
HL-06 Glass Waste Storage	**436**	**582**	**637**	**646**	**1,816**	**1,787**	**1,233**	**684**	**8,595**	**16,520**	**22,729**
HL-13 Salt Disposition											
Salt Disposition Ops	15,620	9,822	16,345	4,520	-	-	-	-	-	-	-
LI: Salt Alternative	-	-	-	26,731	74,508	116,225	125,862	122,953	119,821	111,148	74,354
HL-13 Total	**15,620**	**9,822**	**16,345**	**31,251**	**74,508**	**116,225**	**125,862**	**122,953**	**119,821**	**111,148**	**74,354**
HL-09 LI: Tk Fm Services Upgrade I	**1,632**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-10 LI: Storm Water Upgrades	**2,508**	**3,410**	**128.8910**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-11 LI: Tk Fm Services Upgrade II	**838**	**2,066**	**9,741**	**5,718**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-12 LI: Waste Removal											
LI: WR from Tanks	24,739	21,039	21,472	26,028	9,789	21,669	24,202	31,728	42,404	49,234	59,336
LI: Vit Upgrades	12	630	574	-	-	-	5,915	5,934	11,867	11,795	11,795
LI: Pipe, Evaps & Infrastructure	-	-	-	901	5,296	13,651	10,499	-	-	-	-
HL-12 Total	**24,751**	**21,669**	**22,046**	**26,929**	**15,085**	**35,320**	**40,616**	**37,661**	**54,272**	**61,030**	**71,131**
FA-24 Facility Decontamination/Decommissioning	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HLW TOTAL	**385,103**	**352,692**	**348,742**	**378,683**	**419,915**	**482,107**	**498,292**	**491,732**	**521,996**	**516,376**	**494,247**
HLW w/o Salt Total	**369,483**	**342,870**	**332,397**	**347,432**	**345,407**	**365,882**	**372,430**	**368,779**	**402,175**	**405,227**	**419,893**
Solid Waste Facilities											
ETF	16,510	14,574	15,015	15,696	16,523	17,594	18,500	19,440	16,341	18,555	15,499
Saltstone	1,595	827	1,024	1,864	3,935	1,993	1,867	1,887	1,887	5,686	11,846
SW TOTAL	**18,105**	**15,401**	**16,039**	**17,560**	**20,458**	**19,587**	**20,366**	**21,327**	**18,228**	**24,240**	**27,344**
Life Cycle Cost	**403,208**	**368,093**	**364,781**	**396,244**	**440,372**	**501,694**	**518,658**	**513,059**	**540,225**	**540,616**	**521,591**

Appendix J.1 - Funding (Super Stretch)

Budget Authority in Constant FY99 Year Dollars

Project Title	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
HL-01 H Tank Farm											
H Tank Farm Operations	86,449	86,449	85,886	85,322	85,322	81,170	77,021	77,021	77,021	74,000	73,078
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	-	-
HL-01 Total	**86,449**	**86,449**	**85,886**	**85,322**	**85,322**	**81,170**	**77,021**	**77,021**	**77,021**	**74,000**	**73,078**
HL-02 F Tank Farm	**56,836**	**56,836**	**55,709**	**55,709**	**53,659**	**51,968**	**45,563**	**44,640**	**43,718**	**43,718**	**37,262**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	10,034	18,099	16,169	10,983	10,983	9,414	9,414	9,414	3,138	3,138	3,138
WR: Tank Closure	6,416	10,560	9,735	15,860	48,028	54,835	25,849	6,869	12,936	26,647	23,731
HL-03 Total	**16,450**	**28,659**	**25,905**	**26,843**	**59,011**	**64,249**	**35,263**	**16,283**	**16,074**	**29,784**	**26,869**
HL-04 Feed Preparations & Sludge Operations	**55,724**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**	**49,160**
HL-05 Vitrification											
Vitrification Ops	117,746	114,431	116,795	118,792	113,998	116,832	118,267	117,437	114,862	116,825	119,376
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	-	-
HL-05 Total	**117,746**	**114,431**	**116,795**	**118,792**	**113,998**	**116,832**	**118,267**	**117,437**	**114,862**	**116,825**	**119,376**
HL-06 Glass Waste Storage	**15,115**	**9,160**	**9,218**	**9,277**	**9,336**	**9,396**	**9,456**	**9,516**	**9,577**	**9,639**	**9,701**
HL-13 Salt Disposition											
Salt Disposition Ops	33,590	56,955	58,583	58,419	52,721	52,909	52,261	59,536	60,388	60,418	60,780
LI: Salt Alternative	42,403	-	-	-	-	29,112	38,816	29,112	-	-	-
HL-13 Total	**75,993**	**56,955**	**58,583**	**58,419**	**52,721**	**82,021**	**91,077**	**88,647**	**60,388**	**60,418**	**60,780**
HL-09 LI: Tk Fm Services Upgrade I	-	-	-	-	-	-	-	-	-	-	-
HL-10 LI: Storm Water Upgrades	-	-	-	-	-	-	-	-	-	-	-
HL-11 LI: Tk Fm Services Upgrade II	-	-	-	-	-	-	-	-	-	-	-
HL-12 LI: Waste Removal											
LI: WR from Tanks	47,249	53,205	37,564	59,826	64,579	48,796	44,368	45,379	35,833	24,504	7,661
LI: Vit Upgrades	20,642	13,270	8,847	13,270	13,270	13,270	8,847	8,847	-	-	-
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	-	-
HL-12 Total	**67,891**	**66,475**	**46,410**	**73,095**	**77,849**	**62,065**	**53,214**	**54,225**	**35,833**	**24,504**	**7,661**
FA-24 Facility Decontamination/Decommissioning	-	-	-	-	-	**27,708**	**22,670**	-	-	-	-
HLW TOTAL	**492,206**	**468,125**	**447,665**	**476,617**	**501,057**	**544,568**	**501,691**	**456,931**	**406,633**	**408,048**	**383,886**
HLW w/o Salt Total	**416,213**	**411,170**	**389,082**	**418,198**	**448,335**	**462,548**	**410,614**	**368,284**	**346,245**	**347,630**	**323,107**
Solid Waste Facilities											
ETF	16,013	15,614	17,680	22,278	16,515	16,197	18,899	15,614	19,069	15,614	16,144
Saltstone	17,818	25,608	37,248	28,834	26,296	35,902	35,247	31,791	36,657	36,004	38,866
SW TOTAL	**33,831**	**41,222**	**54,928**	**51,112**	**42,811**	**52,099**	**54,146**	**47,405**	**55,725**	**51,619**	**55,010**
Life Cycle Cost	**526,037**	**509,348**	**502,593**	**527,730**	**543,868**	**596,667**	**555,837**	**504,336**	**462,358**	**459,666**	**438,896**

Appendix J.1 - Funding (Super Stretch)

Budget Authority in Constant FY99 Year Dollars

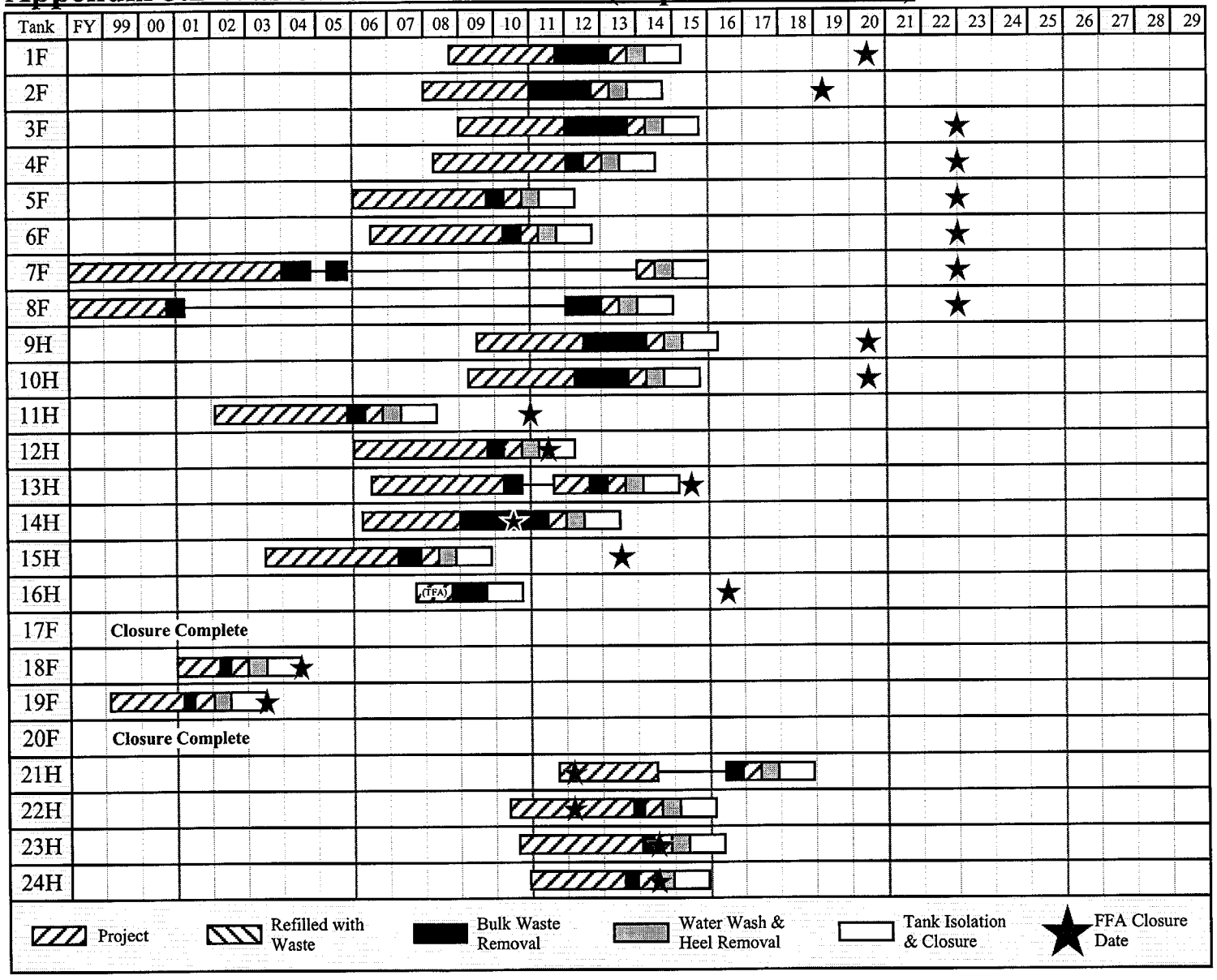
Project Title	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
HL-01 H Tank Farm											
H Tank Farm Operations	73,078	72,156	70,313	27,299	-	-	-	-	-	-	-
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	-	-
HL-01 Total	**73,078**	**72,156**	**70,313**	**27,299**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-02 F Tank Farm	**27,117**	**15,131**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-03 Waste Removal & Tank Closures											
WR Ops w/ Demo Projects	-	-	-	-	-	-	-	-	-	-	-
WR: Tank Closure	34,046	28,844	68,880	53,841	448	-	-	-	-	-	-
HL-03 Total	**34,046**	**28,844**	**68,880**	**53,841**	**448**	**-**	**-**	**-**	**-**	**-**	**-**
HL-04 Feed Preparations & Sludge Operations	**49,160**	**24,580**	**12,290**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-05 Vitrification											
Vitrification Ops	109,670	108,182	16,835	-	-	-	-	-	-	-	-
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	-	-
HL-05 Total	**109,670**	**108,182**	**16,835**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-06 Glass Waste Storage	**9,763**	**5,750**	**5,782**	**5,814**	**1,507**	**1,507**	**1,507**	**1,507**	**1,318**	**1,318**	**1,318**
HL-13 Salt Disposition											
Salt Disposition Ops	60,399	56,982	5,776	-	-	-	-	-	-	-	-
LI: Salt Alternative	-	-	-	-	-	-	-	-	-	-	-
HL-13 Total	**60,399**	**56,982**	**5,776**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-09 LI: Tk Fm Services Upgrade I	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-10 LI: Storm Water Upgrades	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-11 LI: Tk Fm Services Upgrade II	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
HL-12 LI: Waste Removal											
LI: WR from Tanks	10,378	11,928	20,265	3,343	-	-	-	-	-	-	-
LI: Vit Upgrades	-	-	-	-	-	-	-	-	-	-	-
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	-	-
HL-12 Total	**10,378**	**11,928**	**20,265**	**3,343**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
FA-24 Facility Decontamination/Decommissioning	**-**	**-**	**101,875**	**116,281**	**44,003**	**1,102**	**-**	**-**	**-**	**-**	**-**
HLW TOTAL	**373,611**	**323,555**	**302,016**	**206,579**	**45,958**	**2,609**	**1,507**	**1,507**	**1,318**	**1,318**	**1,318**
HLW w/o Salt Total	**313,212**	**266,572**	**296,240**	**206,579**	**45,958**	**2,609**	**1,507**	**1,507**	**1,318**	**1,318**	**1,318**
Solid Waste Facilities											
ETF	22,278	16,515	15,614	-	-	-	-	-	-	-	-
Saltstone	25,275	15,473	1,940	-	-	-	-	-	-	-	-
SW TOTAL	**47,553**	**31,988**	**17,554**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Life Cycle Cost	**421,164**	**355,542**	**319,571**	**206,579**	**45,958**	**2,609**	**1,507**	**1,507**	**1,318**	**1,318**	**1,318**

Appendix J.1 - Funding (Super Stretch)

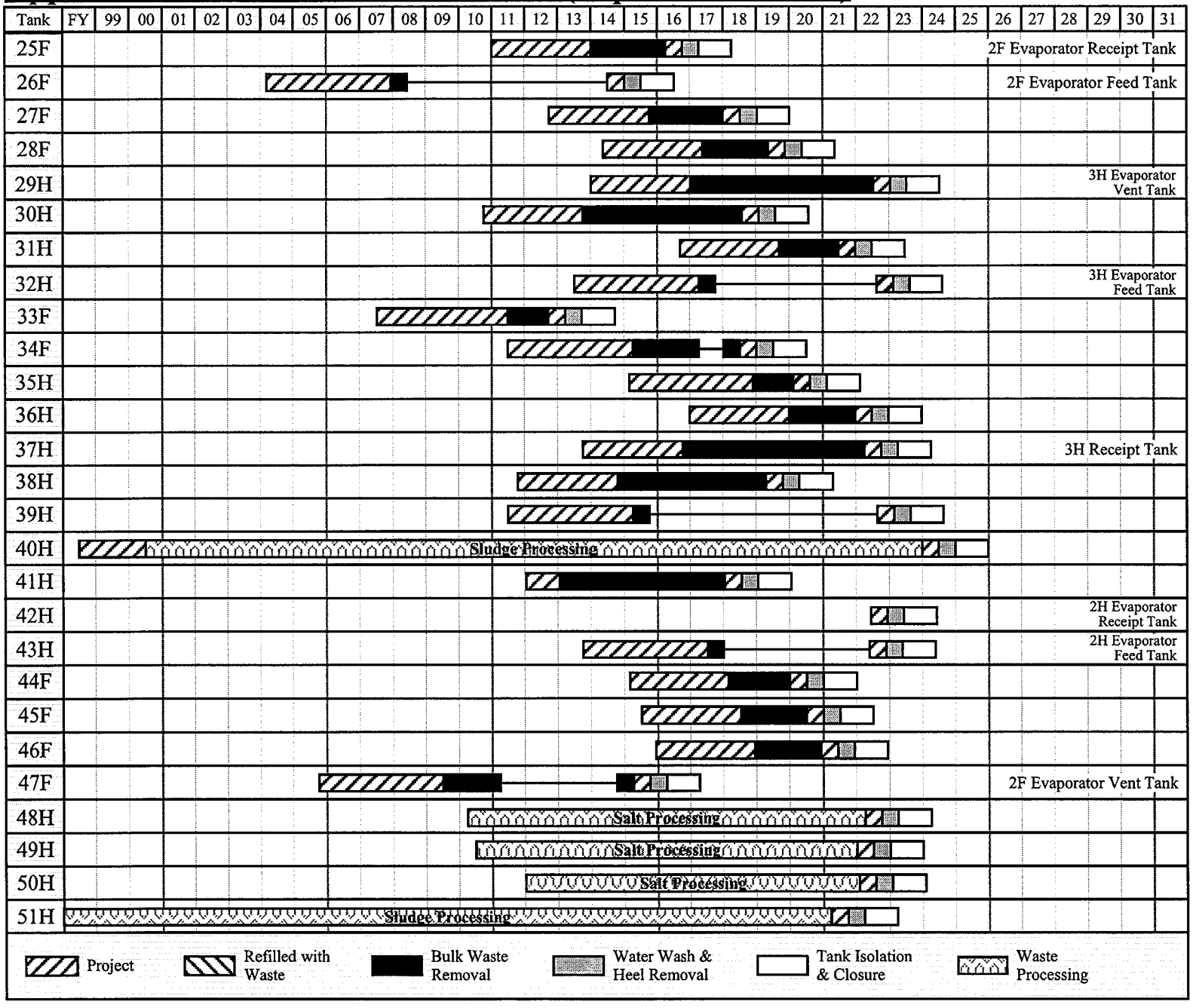
Budget Authority in Constant FY99 Year Dollars

Project Title	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	Cumulative FY99-End
HL-01 H Tank Farm										
H Tank Farm Operations	-	-	-	-	-	-	-	-	-	2,101,622
LI: Replacement Evaporator	-	-	-	-	-	-	-	-	-	16,278
HL-01 Total	-	-	-	-	-	-	-	-	-	**2,117,900**
HL-02 F Tank Farm	-	-	-	-	-	-	-	-	-	**1,235,028**
HL-03 Waste Removal & Tank Closures										
WR Ops w/ Demo Projects	-	-	-	-	-	-	-	-	-	136,834
WR: Tank Closure	-	-	-	-	-	-	-	-	-	463,969
HL-03 Total	-	-	-	-	-	-	-	-	-	**600,803**
HL-04 Feed Preparations & Sludge Operations	-	-	-	-	-	-	-	-	-	**1,231,689**
HL-05 Vitrification										
Vitrification Ops	-	-	-	-	-	-	-	-	-	2,797,582
Failed Equip. Storage Vaults	-	-	-	-	-	-	-	-	-	1,065
HL-05 Total	-	-	-	-	-	-	-	-	-	**2,798,647**
HL-06 Glass Waste Storage	1,318	1,318	1,318	1,318	1,318	1,318	1,318	1,318	-	**212,696**
HL-13 Salt Disposition										
Salt Disposition Ops	-	-	-	-	-	-	-	-	-	776,023
LI: Salt Alternative	-	-	-	-	-	-	-	-	-	911,044
HL-13 Total	-	-	-	-	-	-	-	-	-	**1,687,067**
HL-09 LI: Tk Fm Services Upgrade I	-	-	-	-	-	-	-	-	-	**1,632**
HL-10 LI: Storm Water Upgrades	-	-	-	-	-	-	-	-	-	**6,047**
HL-11 LI: Tk Fm Services Upgrade II	-	-	-	-	-	-	-	-	-	**18,364**
HL-12 LI: Waste Removal										
LI: WR from Tanks	-	-	-	-	-	-	-	-	-	846,517
LI: Vit Upgrades	-	-	-	-	-	-	-	-	-	148,783
LI: Pipe, Evaps & Infrastructure	-	-	-	-	-	-	-	-	-	30,347
HL-12 Total	-	-	-	-	-	-	-	-	-	**1,025,646**
FA-24 Facility Decontamination/Decommissioning	-	-	-	-	-	-	-	6,132	-	**319,772**
HLW TOTAL	1,318	1,318	1,318	1,318	1,318	1,318	1,318	7,450	-	**11,255,289**
HLW w/o Salt Total	1,318	1,318	1,318	1,318	1,318	1,318	1,318	7,450	-	**9,568,222**
Solid Waste Facilities										
ETF	-	-	-	-	-	-	-	-	-	428,292
Saltstone	-	-	-	-	-	-	-	-	-	427,369
SW TOTAL	-	-	-	-	-	-	-	-	-	**855,661**
Life Cycle Cost	1,318	1,318	1,318	1,318	1,318	1,318	1,318	7,450	-	**12,110,950**

Appendix J.2 Waste Removal Schedule (SuperStretch Case)



Appendix J.2 Waste Removal Schedule (SuperStretch Case)



Appendix J.3 - Material Balance (Super Stretch Case)

End of Month/Year	Influents (gallons)											Effluents (gallons)							Net-Out
	F Canyon			H Canyon								Space Recovery from Evaporation							
	LHW	HHW	F-Can Total	LHW	HHW	H-Can Total	DWPF Recycle	Other	Inhibited Water	Jet Dilution	Total In	2F Evaps	2H Evaps	3H Evaps	Total	Salt Solution to Processing	Sludge to ESP/DWPF	Tot-Out	
Oct 2000	0	32,924	32,924	1,650	12,285	13,935	144,715	50,026	62,222	12,440		105,434	-	113,303	218,737	-	19,656	Actuals	(see Note 2)
Nov 2000	0	16,883	16,883	0	17,800	17,800	119,758	11,356	83,278	56,760		1,089	-	(16,111)	(15,022)	-	21,762	Actuals	(see Note 2)
Dec 2000	0	49,491	49,491	1,439	21,376	22,815	115,928	31,692	0	14,560		(20,849)	-	(9,442)	(30,291)	-	15,795	Actuals	(see Note 2)
Jan 2001	28,500	20,625	49,125	3,828	11,025	14,853	109,386	16,875	113,410	13,207	316,856	72,376	-	34,507	106,883	-	10,038	116,921	(199,935)
Feb 2001	30,000	28,500	58,500	5,104	14,700	19,804	145,848	22,500	260,091	36,630	543,373	101,602	-	39,677	141,280	-	13,384	154,664	(388,709)
Mar 2001	28,000	25,500	53,500	5,104	15,220	20,324	131,463	22,500	-	54,625	282,412	125,909	-	-	125,909	-	13,384	139,293	(143,119)
Apr 2001	30,000	27,500	57,500	15,104	15,220	30,324	85,410	22,500	30,000	42,580	268,314	170,338	-	180,890	351,228	-	13,384	364,612	96,298
May 2001	25,000	28,500	53,500	25,104	15,220	40,324	125,667	22,500	10,000	39,745	291,736	166,684	-	-	166,684	-	13,384	180,068	(111,668)
Jun 2001	18,000	25,500	43,500	5,104	15,220	20,324	110,281	22,500	460,000	47,113	703,719	167,098	-	164,206	331,304	-	13,384	344,688	(359,031)
Jul 2001	15,000	27,500	42,500	5,104	15,220	20,324	145,848	22,500	-	25,749	256,921	85,603	-	-	85,603	-	13,384	98,987	(157,934)
Aug 2001	15,000	28,500	43,500	5,104	15,220	20,324	145,848	22,500	360,000	59,060	651,232	60,594	60,313	101,769	222,676	-	13,384	236,060	(415,171)
Sep 2001	18,000	25,500	43,500	5,104	15,220	20,324	131,812	22,500	-	58,869	277,005	86,686	199,393	-	286,079	-	13,384	299,463	22,458
FY01	207,500	237,625	445,125	74,660	132,265	206,925	1,131,563	196,875	1,233,501	377,578	3,591,568	1,036,890	259,706	521,049	1,817,646	-	117,110	1,934,756	(1,656,811)
Oct 2001	15,000	27,500	42,500	25,104	15,220	40,324	-	22,500	250,000	42,451	397,775	33,008	154,177	83,770	270,955	-	-	270,955	(126,820)
Nov 2001	15,000	28,500	43,500	5,104	15,220	20,324	-	22,500	-	41,657	127,981	86,730	154,864	-	241,594	Tank 50 emptied to Saltstone	-	241,594	113,613
Dec 2001	18,000	25,500	43,500	5,104	15,220	20,324	-	22,500	-	43,768	130,092	70,308	87,734	94,712	252,754		-	252,754	122,662
Jan 2002	24,000	5,000	29,000	13,052	15,220	28,272	27,232	22,500	297,297	85,529	489,830	55,350	171,486	-	226,836		3,100	229,936	(259,895)
Feb 2002	24,000	6,000	30,000	13,052	15,220	28,272	108,928	22,500	-	86,267	275,967	12,506	342,971	66,350	421,828		12,400	434,228	158,261
Mar 2002	27,000	3,000	30,000	13,052	14,700	27,752	108,928	22,500	-	38,936	228,116	81,949	182,189	-	264,138		12,400	276,538	48,422
Apr 2002	24,000	3,000	27,000	13,052	14,700	27,752	108,928	22,500	-	113,493	299,673	148,184	264,830	26,067	439,081		12,400	451,481	151,808
May 2002	23,000	6,000	29,000	13,052	14,700	27,752	108,928	22,500	182,520	40,759	411,459	84,564	306,453	-	391,017	400,000	12,400	803,417	391,958
Jun 2002	26,000	3,000	29,000	13,052	14,700	27,752	108,928	22,500	656,670	35,279	880,129	70,651	231,146	29,754	331,551	400,000	12,400	743,951	(136,178)
Jul 2002	8,000	18,000	26,000	13,052	14,700	27,752	108,928	10,000	-	44,952	217,632	77,713	158,978	29,970	266,662	40,381	12,400	319,443	101,810
Aug 2002	8,000	18,000	26,000	13,052	14,700	27,752	108,928	10,000	-	68,740	241,420	66,004	267,733	37,099	370,835		12,400	383,235	141,815
Sep 2002	8,000	3,000	11,000	13,052	14,700	27,752	108,928	10,000	-	66,093	223,773	-	131,688	-	131,688	-	12,400	144,088	(79,685)
FY02	220,000	146,500	366,500	152,780	179,000	331,780	898,656	232,500	1,386,487	707,924	3,923,847	786,967	2,454,249	367,722	3,608,939	840,381	102,300	4,551,620	627,771
Oct 2002	8,000	3,000	11,000	33,052	14,700	47,752	114,936	10,000	-	104,623	288,311	-	264,031	117,697	381,727	-	12,400	394,127	105,817
Nov 2002	8,000	3,000	11,000	33,052	14,700	47,752	114,936	10,000	-	62,596	246,284	-	191,692	173,405	365,097	-	12,400	377,497	131,213
Dec 2002	8,000	3,000	11,000	13,052	14,700	27,752	114,936	10,000	-	117,484	281,172	-	139,525	99,495	239,020	-	12,400	251,420	(29,752)
Jan 2003	8,000	3,000	11,000	5,104	14,700	19,804	114,936	10,000	-	77,223	232,963	78,005	180,726	151,205	409,936	-	12,400	422,336	189,372
Feb 2003	8,000	3,000	11,000	5,104	14,700	19,804	114,936	10,000	-	96,487	252,227	178,144	145,793	123,015	446,952	-	12,400	459,352	207,126
Mar 2003	8,000	3,000	11,000	5,104	14,700	19,804	114,936	10,000	-	33,602	189,342	103,811	191,929	68,140	363,881	-	12,400	376,281	186,938
Apr 2003	8,000	3,000	11,000	7,404	14,700	22,104	114,936	10,000	-	78,647	236,687	221,124	194,011	210,647	625,782	-	12,400	638,182	401,495
May 2003	8,000	3,000	11,000	7,404	14,700	22,104	114,936	10,000	-	96,054	254,094	92,929	140,473	114,929	348,331	-	12,400	360,731	106,637
Jun 2003	8,000	3,000	11,000	7,404	14,700	22,104	114,936	10,000	106,000	70,550	334,590	85,159	183,960	140,367	409,486	-	12,400	421,886	87,296
Jul 2003	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	450,000	39,061	644,861	189,371	145,819	91,283	426,474	-	12,400	438,874	(205,987)
Aug 2003	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	-	83,605	239,405	149,371	135,871	107,965	393,207	-	12,400	405,607	166,203
Sep 2003	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	450,000	54,261	660,061	285,824	228,270	89,372	603,466	-	12,400	615,866	(44,196)
FY03	96,000	36,000	132,000	136,876	171,696	308,572	1,379,232	120,000	1,006,000	914,193	3,859,997	1,383,738	2,142,100	1,487,520	5,013,359	-	148,800	5,162,159	1,302,162
Oct 2003	8,000	3,000	11,000	26,732	13,132	39,864	114,936	10,000	400,000	59,257	635,057	162,430	127,007	215,096	504,533	-	12,400	516,933	(118,125)
Nov 2003	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	-	71,924	227,724	107,982	110,937	222,984	441,904	-	12,400	454,304	226,580
Dec 2003	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	340,000	58,751	554,551	205,563	131,119	86,627	423,309	-	12,400	435,709	(118,842)
Jan 2004	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	-	57,777	213,577	194,640	222,176	79,894	496,710	-	12,400	509,110	295,533
Feb 2004	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	-	91,030	246,830	150,700	215,797	60,654	427,151	-	12,400	439,551	192,720
Mar 2004	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	298,816	43,666	498,282	119,936	168,844	-	288,780	-	12,400	301,180	(197,102)
Apr 2004	8,000	3,000	11,000	6,732	13,832	20,564	114,936	10,000	357,669	32,779	546,948	124,735	133,458	-	258,193	-	12,400	270,593	(276,355)
May 2004	8,000	3,000	11,000	26,732	13,832	40,564	114,936	10,000	200,000	92,331	468,831	65,164	133,485	-	198,648	-	12,400	211,048	(257,783)
Jun 2004	8,000	3,000	11,000	6,732	13,832	20,564	114,936	10,000	-	24,051	180,551	64,167	174,566	-	238,732	-	12,400	251,132	70,581
Jul 2004	8,000	3,000	11,000	6,732	13,832	20,564	114,936	10,000	-	26,226	182,726	43,212	141,143	-	184,355	-	12,400	196,755	14,029
Aug 2004	8,000	3,000	11,000	6,732	13,832	20,564	114,936	10,000	-	75,623	232,123	32,941	134,007	-	166,948	-	12,400	179,348	(52,775)
Sep 2004	8,000	3,000	11,000	6,732	13,832	20,564	114,936	10,000	-	35,944	192,444	95,634	123,654	-	219,289	-	12,400	231,689	39,245
FY04	96,000	36,000	132,000	120,784	161,784	282,568	1,379,232	120,000	1,596,485	669,359	4,179,644	1,367,104	1,816,193	665,255	3,848,552	-	148,800	3,997,352	(182,294)

Appendix J.3 - Material Balance (Super Stretch Case)

End of Month/Year	Influents (gallons)											Effluents (gallons)							Net-Out
	F Canyon			H Canyon								Space Recovery from Evaporation							
	LHW	HHW	F-Can Total	LHW	HHW	H-Can Total	DWPF Recycle	Other	Inhibited Water	Jet Dilution	Total In	2F Evaps	2H Evaps	3H Evaps	Total	Salt Solution to Processing	Sludge to ESP/DWPF	Tot-Out	
FY05	96,000	61,200	157,200	100,388	163,788	264,176	844,152	120,000	480,000	808,591	2,674,119	824,937	1,689,525	1,232,522	3,746,983	-	74,400	3,821,383	1,147,267
FY06	96,000	40,800	136,800	125,200	265,200	390,400	606,576	70,000	600,000	522,335	2,326,111	457,131	1,218,608	1,652,892	3,328,630	-	50,161	3,378,791	1,052,683
FY07	96,000	36,000	132,000	131,200	403,200	534,400	1,173,216	-	900,000	663,535	3,403,151	559,593	984,968	1,033,192	2,577,753	-	128,520	2,706,268	(696,882)
FY08	96,000	36,000	132,000	47,600	375,300	422,900	1,173,216	-	1,385,000	592,668	3,705,784	528,317	857,614	1,605,738	2,991,672	-	125,842	3,117,512	(588,274)
FY09	120,000	120,000	240,000	-	120,000	120,000	1,173,216	-	276,553	375,472	2,185,241	565,445	954,833	225,763	1,746,043	-	315,840	2,061,883	(123,358)
FY10	120,000	120,000	240,000	-	120,000	120,000	1,348,800	-	3,722,873	610,398	6,042,071	-	1,492,146	884,812	2,376,957	3,000,000	315,840	5,692,797	(349,269)
FY11	120,000	-	120,000	-	-	-	2,194,032	-	4,046,005	870,100	7,230,137	-	1,193,065	2,617,829	3,810,891	6,000,000	253,820	10,064,712	2,834,575
FY12	80,000	-	80,000	-	-	-	2,194,032	-	3,891,748	606,271	6,772,051	-	2,208,273	120,278	2,328,551	6,000,000	168,000	8,496,552	1,724,501
FY13	-	-	-	-	-	-	2,194,032	-	8,362,510	1,011,148	11,567,692	-	2,285,394	2,227,247	4,512,640	5,872,990	168,000	10,553,630	(1,014,064)
FY14	-	-	-	-	-	-	2,194,032	-	3,714,774	759,632	6,668,438	-	2,266,477	639,927	2,906,404	6,000,000	157,660	9,064,064	2,395,626
FY15	-	-	-	-	-	-	2,194,032	-	3,077,313	841,674	6,113,019	-	2,257,175	341,199	2,598,374	6,000,000	159,360	8,757,735	2,644,716
FY16	-	-	-	-	-	-	2,194,032	-	4,523,266	645,597	7,362,895	-	3,229,225	2,625,150	5,854,376	5,967,440	159,360	11,981,176	4,618,282
FY17	-	-	-	-	-	-	2,194,032	-	2,366,990	637,276	5,198,299	-	2,365,812	-	2,365,812	5,938,037	187,860	8,491,709	3,293,411
FY18	-	-	-	-	-	-	2,194,032	-	3,734,653	480,504	6,409,188	-	502,724	-	502,724	5,948,227	195,360	6,646,312	237,125
FY19	-	-	-	-	-	-	2,194,032	-	3,787,009	866,750	6,847,791	-	4,061,304	2,171,215	6,232,519	5,980,573	190,320	12,403,411	5,555,621
FY20	-	-	-	-	-	-	2,194,032	-	4,466,201	802,043	7,462,276	-	2,408,461	1,730,451	4,138,910	6,000,000	175,200	10,314,111	2,851,835
FY21	-	-	-	-	-	-	2,194,032	-	5,352,575	671,685	8,218,293	-	2,298,705	415,141	2,713,846	5,999,200	131,134	8,844,179	625,886
FY22	-	-	-	-	-	-	2,148,323	-	2,465,802	547,313	5,161,438	-	3,137,424	-	3,137,424	6,794,221	160,704	10,092,349	4,930,911
FY23	-	-	-	-	-	-	777,053	-	607,990	306,920	1,691,963	-	906,418	-	906,418	6,834,221	160,704	7,901,343	6,209,380

Notes:

1) Discussion of the components of the Influents and Effluents is contained in Section 8.1.3 "HLW System Material Balance"

Appendix J.4 — Salt Solution Processing (Super Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT001	48	12/24/09	Heel	-		4/1/10	59.0	5	17.6%	1,653	180	3,245	4
			21	104,000	ls								
			50	200,000	cs								
			47	900,000	ds								
SPT002	49	5/9/10	Heel	250,000		6/20/10	62.2	5	17.5%	1,696		3,001	4
			14	452,533	ds								
			21	125,000	ls								
			47	400,000	ds								
SPT003	48	6/20/10	Heel	2,160		9/12/10	61.6	5	17.6%	1,575		2,788	4
			50	250,000	cs								
			33	450,000	cs								
			47	500,000	ds								
SPT004	49	9/12/10	Heel	16,634		12/6/10	56.5	5	17.9%	1,685	180	3,301	1
			47	623,000	ds								
			21	75,000	ls								
			33	306,500	cs								
			50	200,000	cs								
SPT005	48	12/6/10	Heel	160		2/20/11	58.8	5	17.6%	1,596		2,826	2
			50	200,000	cs								
			33	400,000	cs								
			47	450,000	ds								
			42	95,000	cs								
			21	75,000	ls								
SPT006	49	2/20/11	Heel	19,314		5/12/11	58.7	5	17.4%	1,580		2,797	2
			2	998,000	ds			6	15.0%				
			50	110,000	cs								
			21	95,000	ls								
SPT007	48	5/12/11	Heel	18,960		7/29/11	67.4	6	15.2%	1,611		2,852	2
			2	812,977	ds								
			50	160,000	cs								
			8	230,542	cs								

Appendix J.4 — Salt Solution Processing (Super Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT008	49	7/29/11	Heel	20,434		10/24/11	68.1	6	15.3%	1,610	180	3,169	2
			33	367,419	cs								
			21	70,000	ls								
			26	730,000	cs								
			50	20,000	cs								
SPT009	50	9/1/11	Heel	14,040		1/19/12	64.4	6	15.0%	1,698		3,005	3
			1	1,100,000	ds								
			30	90,000	cs								
			21	18,000	ls								
SPT010	48	10/24/11	Heel	20,620		4/14/12	71.2	6	15.6%	1,629		2,883	3
			1	570,082	ds								
			30	200,000	cs								
			8	373,934	cs								
			21	50,000	ls								
SPT011	49	1/19/12	Heel	5,350		7/11/12	58.8	6	15.0%	1,575		2,787	3
			3	850,000	ds								
			26	315,000	cs								
			21	50,000	ls								
SPT012	50	4/14/12	Heel	20,360		9/28/12	55.7	6	14.8%	1,613	180	3,173	3
			3	964,473	ds								
			26	218,600	cs								
			21	18,000	ls								
SPT013	48	7/11/12	Heel	12,397		12/13/12	64.3	6	15.5%	1,498		2,651	5
			10	708,727	ds								
			30	200,000	cs								
			21	190,000	ls								
SPT014	49	9/28/12	Heel	18,950		3/4/13	57.3	6	14.8%	1,674		2,963	5
			9	1,050,000	ds								
			30	103,000	cs								
			21	50,000	ls								

Appendix J.4 — Salt Solution Processing (Super Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT015	50	12/13/12	Heel	19,476		5/21/13	63.9	6	15.3%	1,565		2,771	5
			9	858,273	ds								
			26	250,000	cs								
			21	50,000	ls								
SPT016	48	3/4/13	Heel	-		8/11/13	41.1	6	13.7%	1,638		2,900	5
			41	995,997	ds								
			26	200,000	cs								
SPT017	49	5/21/13	Heel	20,069		10/15/13	46.3	6	14.1%	1,677	180	3,286	6
			41	965,058	ds								
			26	237,395	cs								
SPT018	50	8/11/13	Heel	-		12/23/13	52.8	6	14.5%	1,692		2,994	6
			41	850,000	ds			7	11.8%				
			30	220,000	cs								
			21	150,000	ls								
SPT019	48	10/15/13	Heel	-		3/25/14	55.3	7	12.1%	1,653		2,926	6
			41	781,000	ds								
			30	239,965	cs								
			21	200,000	ls								
SPT020	49	12/23/13	Heel	20,620		6/26/14	18.6	7	9.2%	1,658		2,934	7
			41	814,600	ds								
			30	387,000	ds								
SPT021	50	3/25/14	Heel	18,800		8/20/14	48.4	7	11.7%	1,730		3,062	7
			30	391,129	cs								
			25	710,000	ds								
			35	100,000	cs								
SPT022	48	6/26/14	Heel	19,804		11/15/14	48.1	7	11.7%	1,671	180	3,276	7
			25	870,000	ds								
			38	129,892	cs								
			42	202,816	cs								
SPT023	49	8/20/14	Heel	20,284		2/8/15	37.4	7	11.1%	1,642		2,907	7
			25	1,129,990	ds								
			42	72,256	cs								

Appendix J.4 — Salt Solution Processing (Super Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT024	50	11/15/14	Heel	17,974		4/23/15	47.3	7	11.7%	1,643		2,908	8
			25	935,692	ds								
			42	268,776	cs								
SPT025	48	2/8/15	Heel	20,620		7/16/15	43.0	7	11.3%	1,659		2,937	8
			38	875,000	ds								
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			21	65,000	ls								
SPT026	49	4/23/15	Heel	20,620		10/5/15	42.8	7	11.4%	1,659	180	3,255	8
			38	875,000	ds								
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			21	65,000	ls								
SPT027	50	7/16/15	Heel	20,620		12/25/15	41.1	7	11.4%	1,643		2,908	9
			38	875,000	ds								
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			21	65,000	ls								
SPT028	48	10/5/15	Heel	20,620		3/11/16	40.7	7	11.4%	1,633		2,890	9
			38	875,000	ds								
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			21	65,000	ls								

Appendix J.4 — Salt Solution Processing (Super Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT029	49	12/25/15	Heel	12,220		5/27/16	39.8	7	11.2%	1,653		2,925	9
			38	415,604	ds								
			27	475,000	ds								
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			23	65,000	ls								
SPT030	50	3/11/16	Heel	12,220		8/12/16	38.7	7	11.1%	1,625		2,876	9
			27	870,000	ds			8	17.3%				
			34	100,000	cs								
			35	75,000	cs								
			30	75,000	cs								
			23	65,000	ls								
SPT031	48	5/27/16	Heel	3,820		10/26/16	38.0	8	17.2%	1,646	180	3,233	10
			34	100,000	cs								
			27	900,000	ds								
			35	75,000	cs								
			30	75,000	cs								
			23	65,000	ls								
SPT032	49	8/12/16	Heel	20,048		12/13/16	38.5	8	17.2%	1,670		2,956	10
			34	100,000	cs								
			27	900,000	ds								
			35	75,000	cs								
			30	75,000	cs								
			41	65,000	ls								
SPT033	50	10/26/16	Heel	-		1/31/17	42.9	8	17.7%	1,673		2,961	10
			27	594,140	cs								
			29	295,000	ds								
			34	128,674	ds								
			35	75,000	cs								
			41	65,000	ls								
			30	63,936	cs								

Appendix J.4 — Salt Solution Processing (Super Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT034	48	12/13/16	Heel	-		3/24/17	46.5	8	18.0%	1,638		2,900	10
			37	1,221,750	ds								
SPT035	49	1/31/17	Heel	-		5/17/17	40.4	8	18.0%	1,519		2,689	11
			29	900,000	ds								
			35	150,000	cs								
			23	106,720	ls								
SPT036	50	3/24/17	Heel	20,620		7/4/17	36.4	8	17.1%	1,697		3,004	11
			29	445,000	ds								
			34	628,142	ds								
			37	48,870	ds								
			35	79,911	cs								
SPT037	48	5/17/17	Heel	20,620		8/20/17	43.5	8	17.7%	1,726		3,055	11
			29	930,000	ds								
			30	50,000	cs								
			35	125,000	cs								
			42	96,923	cs								
SPT038	49	7/4/17	Heel	-		10/12/17	32.8	8	16.6%	1,727	180	3,375	12
			29	839,980	ds								
			42	360,000	cs								
SPT039	50	8/20/17	Heel	20,620		11/27/17	46.6	8	18.0%	1,604		2,840	12
			28	850,000	ds								
			42	270,000	cs								
			35	60,000	cs								
SPT040	48	10/12/17	Heel	20,620		1/19/18	43.7	8	18.0%	1,566		2,772	12
			28	850,000	ds								
			42	168,725	cs								
			38	100,000	ls								
			35	50,000	cs								
SPT041	49	11/27/17	Heel	-		3/11/18	43.0	8	18.0%	1,624		2,874	12
			28	965,000	ds								
			38	175,000	ls								
			35	60,000	cs								

Appendix J.4 — Salt Solution Processing (Super Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT042	50	1/19/18	Heel	-		5/1/18	48.0	8	18.2%	1,543		2,732	13
			28	340,000	ds								
			38	800,000	ls								
			35	60,000	cs								
SPT043	48	3/11/18	Heel	-		6/24/18	47.7	8	18.0%	1,672		2,959	13
			28	394,000	ds								
			43	805,000	cs								
SPT044	49	5/1/18	Heel	-		8/19/18	49.9	8	18.2%	1,647		2,915	13
			43	275,012	cs								
			44	865,000	ds								
			35	50,000	cs								
SPT045	50	6/24/18	Heel	-		10/14/18	46.9	8	18.0%	1,666	180	3,267	13
			44	1,170,000	ds								
			35	50,000	cs								
SPT046	48	8/19/18	Heel	-		12/7/18	46.4	8	18.0%	1,646		2,913	14
			44	1,155,000	ds								
			35	50,000	cs								
SPT047	49	10/14/18	Heel	-		1/30/19	50.3	8	18.0%	1,642		2,907	14
			44	138,665	ds								
			45	1,015,000	ds								
			35	50,000	cs								
SPT048	50	12/7/18	heel	18,800		3/29/19	49.6	8	18.0%	1,650		2,921	14
			45	1,098,000	ds			9	17.9%				
			35	50,000	cs								
			43	55,000	cs								
SPT049	48	1/30/19	heel	3,200		5/25/19	50.3	9	17.9%	1,637		2,898	14
			45	1,150,000	ds								
			29	50,000	cs								
SPT050	49	3/29/19	heel	1,812		7/21/19	45.9	9	18.2%	1,681		2,975	15
			45	508,018	ds								
			46	595,000	ds								
			29	100,000	cs								

Appendix J.4 — Salt Solution Processing (Super Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT051	50	5/25/19	heel	19,920		9/12/19	45.5	9	18.2%	1,740		3,080	15
			46	1,050,000	ds								
			29	150,000	cs								
SPT052	48	7/21/19	heel	1,200		11/4/19	44.8	9	18.3%	1,716	180	3,356	15
			46	1,050,000	ds								
			29	150,000	cs								
SPT053	49	9/12/19	heel	2,950		12/26/19	35.9	9	19.4%	1,723		3,050	16
			46	1,116,857	ds								
			29	102,056	cs								
SPT054	50	11/4/19	heel	17,920		2/6/20	45.4	9	19.0%	1,735		3,070	16
			31	1,075,000	ds								
			29	129,520	cs								
SPT055	48	12/26/19	heel	-		3/28/20	50.7	9	18.7%	1,753		3,103	16
			31	1,060,000	ds								
			29	161,750	cs								
SPT056	49	2/6/20	heel	20,620		5/23/20	47.5	9	18.7%	1,742		3,083	16
			31	1,060,000	ds								
			29	141,923	cs								
SPT057	50	3/28/20	heel	20,620		7/16/20	47.1	9	18.7%	1,715		3,036	17
			31	443,361	ds								
			36	685,000	ds								
			29	73,562	cs								
SPT058	48	5/23/20	heel	20,620		9/7/20	46.8	9	18.7%	1,702		3,013	17
			36	1,160,000	ds								
			29	41,923	cs								
SPT059	49	7/16/20	heel	20,620		10/29/20	47.0	9	18.7%	1,712	180	3,349	17
			36	1,160,000	ds								
			29	41,923	cs								
SPT060	50	9/7/20	heel	20,620		12/21/20	44.7	9	18.7%	1,715		3,036	18
			36	817,240	ds			10	18.7%				
			29	44,683	cs								
			37	340,000	ds								

Appendix J.4 — Salt Solution Processing (Super Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s
SPT061	48	10/29/20	heel	20,620		2/10/21	48.6	10	18.5%	1,722		3,047	18
			37	1,100,000	ds								
			29	101,923	cs								
SPT062	49	12/21/20	heel	20,620		4/6/21	16.5	10	17.6%	1,681		2,975	18
			37	681,000	ds								
			42	520,851	cs								
SPT063	50	2/10/21	heel	20,620		5/3/21	41.6	10	18.5%	1,699		3,007	18
			37	1,134,270	ds								
			29	67,653	cs								
SPT064	48	4/6/21	heel	20,620		6/21/21	35.5	10	19.6%	1,780		3,151	19
			43	1,000,000	cs								
			29	150,000	cs								
			IW	54,000									
SPT065	49	5/3/21	heel	20,620		8/1/21	136.4	10	15.9%	1,963		3,475	19
			32	948,909	cs								
			IW	263,135									
SPT066	50	6/21/21	heel	20,620		1/5/22	156.5	10	15.4%	2,065	180	3,974	19
			39	980,000	cs								
			IW	230,000									
SPT067	48	8/1/21	heel	20,620		7/8/22	22.5	10	15.4%	284		503	19
			39	137,546	cs								
			IW	3,190									

Appendix J.4 — Salt Solution Processing (Super Stretch Case)

	Waste Removal					Salt Processing		DWPF		Saltstone			
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Salt Batch	Feed Tank	Date to Begin Blending	Source Tank	Feed Volume (kgal)	Feed Type	Start Feed to Salt Processing	TPB Used (kgal)	Sludge Batch	PHA Waste Loading (wt%)	Decontaminated Salt Solution to Saltstone (kgal)	ETF to Saltstone (kgal)	Grout Produced (kgal)	Vault #s

Notes:

A) Each Salt Batch consists of a tank of blended dissolved salt solution to comprise a consistent feed stock. Each batch is individually tested and confirmed to meet processing qualification specifications.

B) Tank that is filled with a blended solution of feed stock ready for salt processing. The feed tanks for salt processing include Tanks 48, 49, and 50. Because of limited tank space at the time of initial salt processing, only Tanks 48 and 49 are available to feed.

C) Date when the first supernate solution is transferred into the salt processing feed tank.

D) The primary source of the supernate solution. The "heel" is the volume that is left over from the previous batch. "IW" refers to inhibited water.

E) The volume that is transferred from the source tank.

F) "cs" - Concentrated supernate. Does not originate from a solid salt cake.
"ls" - Light supernate. Generally supernate with a specific gravity of less than 1.2. Usually applied to DWPF recycle water.
"ds" - Dissolved salt solution. Originates from a salt cake dissolution process.

G) Date when the first salt solution is fed to the Salt Processing Facility.

H) Tetra-phenyl borate solution required to precipate the cesium to below Salt Stone waste acceptance criteria limits.

I) Sludge Batch number which is coupled with the salt processing batch.

J) Canister waste loading of precipitate hydrolysis aqueous (PHA).

K) Liquid volume of decontaminated salt solution from the Salt Processing Facility sent to Saltstone. Volume is shown for first salt batch in a fiscal year. This forecast volume would actually be received over the entire year at a rate of ~15 kgal per year.

L) Liquid volume of ETF concentrate sent to Saltstone.

M) Volume of grout that occupies vault storage space.

N) Corresponding Saltstone vault ID numbers. With a permanent roof, each cell measures 98.5 x 98.5 x 25 feet = 242,500 cu-ft. Existing Vault #1 has 6 cells, of which 3.5 are filled. Vault #4 has 12 cells, of which 1 is filled. New vaults will have 6 cells each. Vault # fill sequence to be 4, 1, 2, 3, 5, 6, 7, ... etc.

Appendix J.5 – Sludge Processing (Super Stretch Case)

	Waste Removal		ESP Pretreatment							DWPF Vitrification						
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Sludge Batch	Source Tanks	Sludge Content (kg)	Feed Prep Start Date	Feed Prep Total Dur. (months)	Total ESP Water Vol. (kgal)	Na (wt% dry)	Hg (wt% dry)	Total Solids (wt%)	Pretreated Volume (kgal)	Feed Volume (kgal)	Start Feed	Canister Yield	Feed Duration (years)	Finish Feed	Feed Tank	Sludge Loading (wt %)
1A	51	298,000			na	8.80		16.4	491	491 -140 351	3/1/96 (Tk 51 heel @ 40 ")	492	2.75	8/30/98	51	25.0
1B	42 total	420,861 420,861			na	7.77	0.30	16.5	460	460	10/1/98 (Includes use of 80 cans of Tank 51 heel)	738	3.00	9/30/01	51	25.0
2	8 40 total	182,451 179,098 361,549			1,977	8.75	0.30	16.0	456	456 -140 316	1/1/02 (Assumes DWPF outage in 1stQ FY02)	471	2.19	3/10/04	40	28.0
3	7(70%) 18(70%) 19(70%) total	288,957 14,777 1,956 305,690	11/16/02	16	3,156	8.70	0.10	16.0	540	540	3/10/04	395	2.54	9/24/06	51	29.0
4	7(30%) 11 18(30%) 19(30%) total	123,839 124,380 6,333 838 255,390	9/6/05	13	1,199	9.44	1.60	16.0	451	451	10/1/06	406	2.03	10/10/08	40	30.5
5	15 26 total	165,818 154,896 320,714	5/19/07	17	2,285	11.51	1.50	16.0	567	567	10/10/08 (Assume coupled salt and sludge feed starts in April 2010)	469	2.47	3/30/11	51	29.4
6	5 6 12 13(30%) total	57,630 38,708 189,715 125,280 411,333	11/5/09	17	2,815	8.70	2.20	16.0	727	727	3/30/11	598	2.39	8/19/13	40	31.6
7	13(70%) 4 33 total	292,320 65,477 62,401 420,198	3/27/12	17	2,862	9.08	1.90	16.0	743	743	8/19/13	652	2.61	3/28/16	51	29.8
8	21 22 23 34 39 47 total	6,393 13,265 59,110 77,119 89,474 137,763 383,124	12/4/14	16	2,034	8.76	1.30	16.0	677	677	3/28/16	584	2.34	7/29/18	40	27.8
9	32 43	214,886 51,940 266,826	4/5/17	16	1,846	10.06	4.90	16.0	472	472	7/29/18	387	1.55	2/14/20	51	28.8

Appendix J.5 – Sludge Processing (Super Stretch Case)

	Waste Removal		ESP Pretreatment							DWPF Vitrification						
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Sludge Batch	Source Tanks	Sludge Content (kg)	Feed Prep Start Date	Feed Prep Total Dur. (months)	Total ESP Water Vol. (kgal)	Na (wt% dry)	Hg (wt% dry)	Total Solids (wt%)	Pretreated Volume (kgal)	Feed Volume (kgal)	Start Feed	Canister Yield	Feed Duration (years)	Finish Feed	Feed Tank	Sludge Loading (wt %)
10	ESP Heels (Tks 40,42,51)	158,377	11/21/18	15	1,877	8.24	4.90	16.0	913	913	2/14/20	679	2.72	11/1/22	40	31.6
	35 Other Insoluble Solids	138,956														
	total	219,000														
		516,333														
Totals		3,662,018			20,051	Total Estimated Washwater						5,871	Total Estimated Cans			

Notes:

General) Above based on the following yearly canister production values: FY01 255 cans/yr, FY02 150 cans/yr, FY03 240 cans/yr, FY04 240 cans/yr, FY05 150 cans/yr, FY06 115 cans/yr, FY07-FY09 200 cans/yr, FY10 150 cans/yr, FY11-End 250 cans/yr.

A) Each Sludge Batch must be individually tested and confirmed to meet waste qualification spedicfications

B) Sludge in these tanks will comprise the batch. Note: 100% of the sludge from Tanks 7, 18&19 will be moved to ESP to support Sludge Batch 3. However, 30% of this sludge will be combined with Tank 11 sludge to make Sludge Batch 4.

C) Amount of sludge from each source tank in the batch obtained from WCS data base

D) Feed Prep start date is the date that sludge is first moved into the the ESP feed tank (40 or 51) to begin preparation of the sludge batch (i.e. obtain proper alkali composition of the sludge slurry for feed to DWPF)

E) Total planned duration of transfers, washing, sampling, test glass production, and associated decants for the preparation of a sludge batch for feed to DWPF

F) Total estimated volume of sludge transfer water and wash water decants to obtain target soluble Na concentration for feed to DWPF

G) Amount of total Na in washed sludge (dry basis)

H) Amount of total Hg in washed sludge (dry basis)

I) Total solids (soluble and insoluble) in washed sludge

J) Volume of sludge at given wt% total solids before heel effects (Batch 1B is actual. Batch 2 is projected from detailed analysis. Batch 3 and beyond are based on ratio of batch sludge kg values converted to gallons and adjusted from an estimated 25 wt% solids to 16 wt% solids)

K) Volume of sludge available for feed after adding or subtracting pump heel

L) Start feed date based on depletion of previous batch down to pump heel

M) Estimated number of canisters produced given the pretreatment as shown. Numbers are actual for Batch 1A and estimated for remaining batches. Coupled Salt and Sludge Feed assumed to start with Batch 5.

N) Column O divided by the planned canister production during the period in which the batch is vitrified. See production note under General Section above.

O) Column N plus column P. Finish Feed means when the last transfer of feed is sent from the Feed Tank. The last canister for the batch will be poured later. The DWPF has approximately 25 canisters of feed in process. Therefore 25 more canisters will be produced from the batch after the last feed is sent to DWPF.

P) Batch feed tank

Q) Weight % of glass comprised of sludge oxides.

Appendix J.6 - Canister Storage (Super Stretch Case)

End of FY	SRS Cans Produced		SRS Cans in GWSB #1 (2,159 max)			SRS Cans in Modular Storage (2 buildings @ 585)			SRS Cans Shipped to Repository		Net Cans Stored At SRS
	Yearly	Cum.	Added	Shipped	Cum.	Added	Shipped	Cum.	Each Year	Cumulative	
1996	64	64	64		64						64
1997	169	233	169		233						233
1998	250	483	250		483						483
1999	236	719	236		719						719
2000	231	950	231		950						950
2001	255	1,205	255		1,205						1,205
2002	150	1,355	150		1,355						1,355
2003	240	1,595	240		1,595						1,595
2004	240	1,835	240		1,835						1,835
2005	150	1,985	150		1,985	0		0			1,985
2006	115	2,100	115		2,100	0		0			2,100
2007	200	2,300	59		2,159	141		141			2,300
2008	200	2,500			2,159	200		341			2,500
2009	200	2,700			2,159	200		541			2,700
2010	150	2,850		(105)	2,054	150		691	105	105	2,745
2011	250	3,100		(205)	1,849	250		941	205	310	2,790
2012	250	3,350	25	(205)	1,669	225		1,166	205	515	2,835
2013	250	3,600	250	(205)	1,714	0		1,166	205	720	2,880
2014	250	3,850	250	(205)	1,759	0		1,166	205	925	2,925
2015	250	4,100	250	(205)	1,804	0		1,166	205	1,130	2,970
2016	250	4,350	250	(205)	1,849	0		1,166	205	1,335	3,015
2017	250	4,600	250	(205)	1,894	0	0	1,166	205	1,540	3,060
2018	250	4,850	250	(205)	1,939	0	0	1,166	205	1,745	3,105
2019	250	5,100	250	(205)	1,984	0	0	1,166	205	1,950	3,150
2020	250	5,350	250	(205)	2,029	0	0	1,166	205	2,155	3,195
2021	250	5,600	250	(205)	2,074	0	0	1,166	205	2,360	3,240
2022	250	5,850	250	(205)	2,119	0	0	1,166	205	2,565	3,285
2023	21	5,871	21	0	2,140	0	(205)	961	205	2,770	3,101
2024	0	5,871		0	2,140	0	(205)	756	205	2,975	2,896
2025	0	5,871		0	2,140	0	(205)	551	205	3,180	2,691
2026	0	5,871		0	2,140	0	(205)	346	205	3,385	2,486
2027	0	5,871		0	2,140	0	(205)	141	205	3,590	2,281
2028	0	5,871		(64)	2,076	0	(141)	0	205	3,795	2,076
2029	0	5,871		(205)	1,871	0	0	0	205	4,000	1,871
2030	0	5,871		(205)	1,666	0	0	0	205	4,205	1,666
2031	0	5,871		(205)	1,461	0	0	0	205	4,410	1,461
2032	0	5,871		(205)	1,256	0	0	0	205	4,615	1,256

Appendix J.6 - Canister Storage (Super Stretch Case)

End of FY	SRS Cans Produced		SRS Cans in GWSB #1 (2,159 max)			SRS Cans in Modular Storage (2 buildings @ 585)			SRS Cans Shipped to Repository		Net Cans Stored At SRS
	Yearly	Cum.	Added	Shipped	Cum.	Added	Shipped	Cum.	Each Year	Cumulative	
2033	0	5,871		(205)	1,051	0	0	0	205	4,820	1,051
2034	0	5,871		(205)	846	0	0	0	205	5,025	846
2035	0	5,871		(205)	641	0	0	0	205	5,230	641
2036	0	5,871		(205)	436	0	0	0	205	5,435	436
2037	0	5,871		(205)	231	0	0	0	205	5,640	231
2038	0	5,871		(205)	26	0	0	0	205	5,845	26
2039	0	5,871		(26)	0	0	0	0	26	5,871	0
2040	0	5,871			0			0	0	5,871	

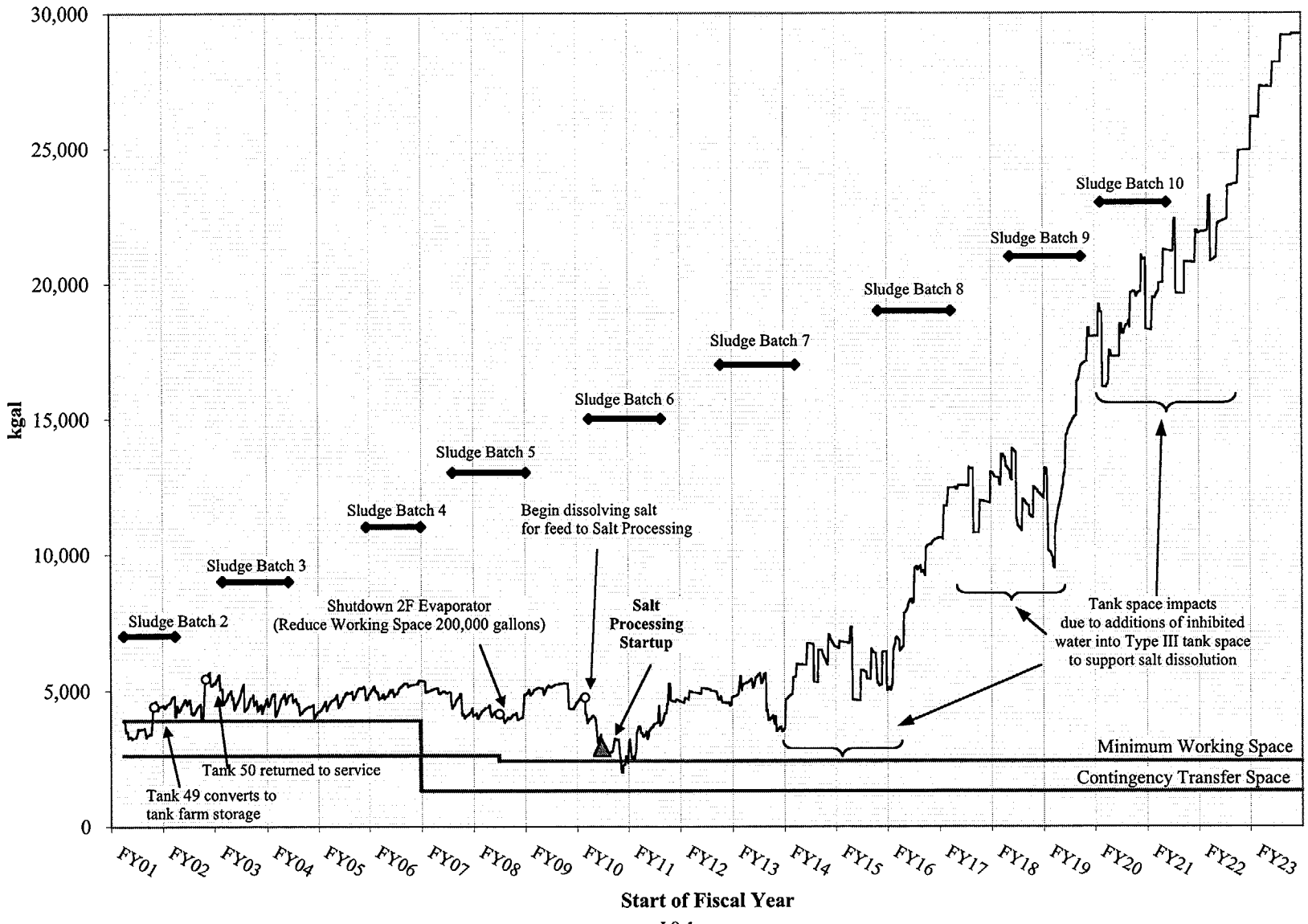
Notes:

1) GWSB #1 filling began in May 1996. Of its 2,286 canister storage locations, 5 positions store non-radioactive test canisters and 122 are unuseable with no viable repair technique. This yields a capacity of 2,159 usable storage locations, including 450 presently unusable location that require modification per an existing plan before they will be useable.
2) GWSB#1 is expected to reach maximum capacity in FY07.
3) Additional glass waste storage locations will be built as privatized modularized buildings, which will be $^1/_4$ of the size of GWSB #1. The first building, GWSB #2A, will be needed in FY07 and the second building, GWSB #2B, will be needed in FY10. Unless additional canisters are required to complete the program or shipments are delayed to the Federal Repository, these two modularized buildings should meet the programs needs.
4) This Plan assumes that canisters can be transported to the Federal Repository starting in FY10 at a rate of 105 canisters in FY10 and 205 canisters/yr thereafter, until the end of the program.
5) A canister load-out facility will be required to move the canisters from the GWSBs to a railcar. Assume one year for design (FY07) and three years for construction (FY08-10).
6) GWSB #1 will be emptied and available for D&D in FY39.
7) GWSBs #2A and 2B will be emptied and available for D&D in FY26 and FY29 respectively.
8) This Plan does not include possible can-in-canister disposition of excess plutonium.
9) The Plan does not include additional locations in GWSB #2A and 2B for spent fuels materials. These materials could be added and included in these buildings, but would result in the overall need to build one additional privatized modularized building. As information becomes available on the needed locations for Spent Fuel material it will be added into the privatized proposal.

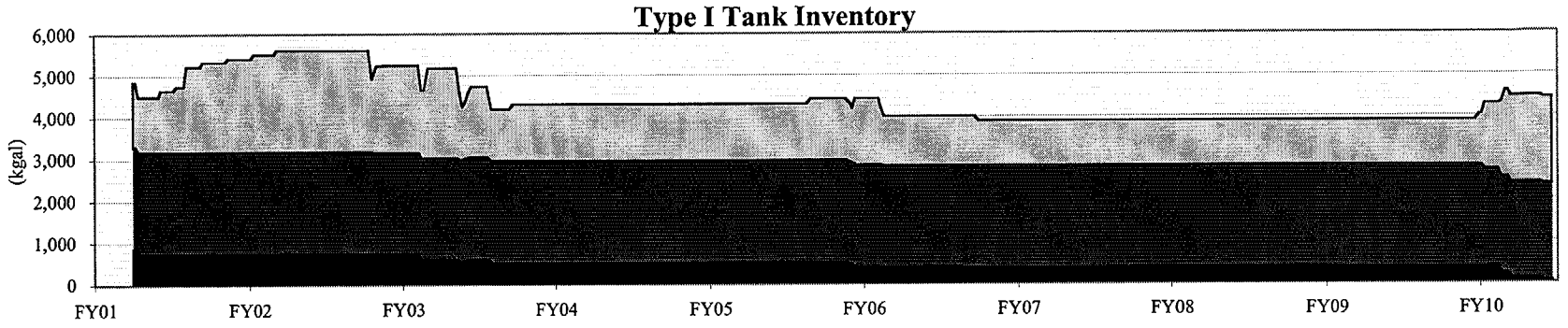
Appendix J.7 — Near Term Saltstone Operations (Super Stretch Case)

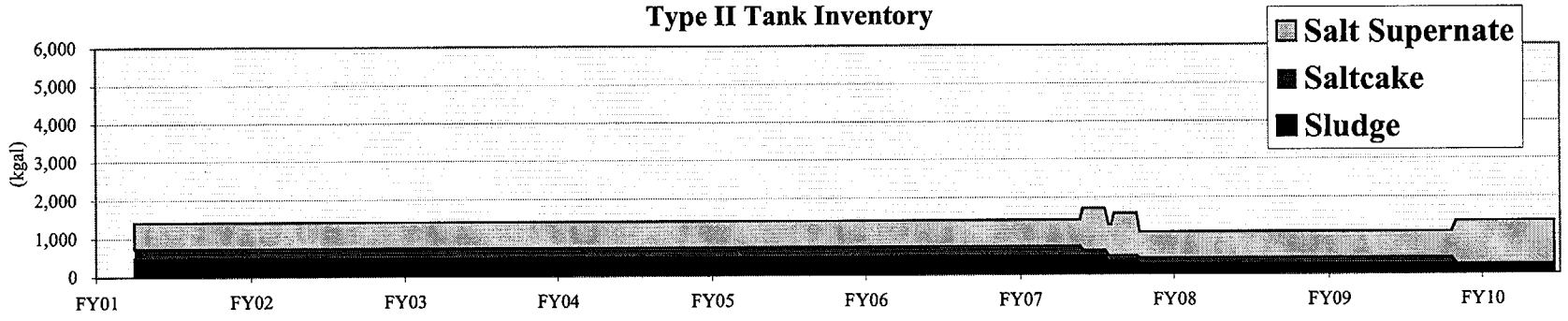
FY	Beginning of year Tk 50 Inventory (Kgal)	ETF Conc (Kgal)	Material Fed to Saltstone (Kgal)	End of year Tk 50 Inven. (Kgal)	Grout Produced (Kgal)	Cum Vault Cells Filled	Active Vault #	Notes:
FY01	(as of 3/1/01) 482	355 (Includes 250 kgal moved from Tank 49)	0	837	0	3.50	---	3.5 cells already filled at the start of FY01. (3.0 cells in Vault 1 and 0.5 cells in Vault 4) Saltstone Facility in partial lay-up (not operating).
FY02	837	180	(1,017)	0	1,800	4.49	4	Saltstone Facility operates to de-inventory Tank 50. Tank 50 mods required for return to waste storage in FY02
FY03	0	180	(180)	0	319	4.67	4	Saltstone Facility operates as required to support ETF.
FY04	0	180	(180)	0	319	4.84	4	Saltstone Facility operates as required to support ETF.
FY05	0	180	(180)	0	319	5.02	4	Saltstone Facility operates as required to support ETF.
FY06	0	180	(180)	0	319	5.19	4	Saltstone Facility operates as required to support ETF.
FY07	0	180	(180)	0	319	5.37	4	Saltstone Facility operates as required to support ETF.
FY08	0	180	(180)	0	319	5.55	4	Saltstone Facility operates as required to support ETF.
FY09	0	180	(180)	0	319	5.72	4	Saltstone Facility operates as required to support ETF.

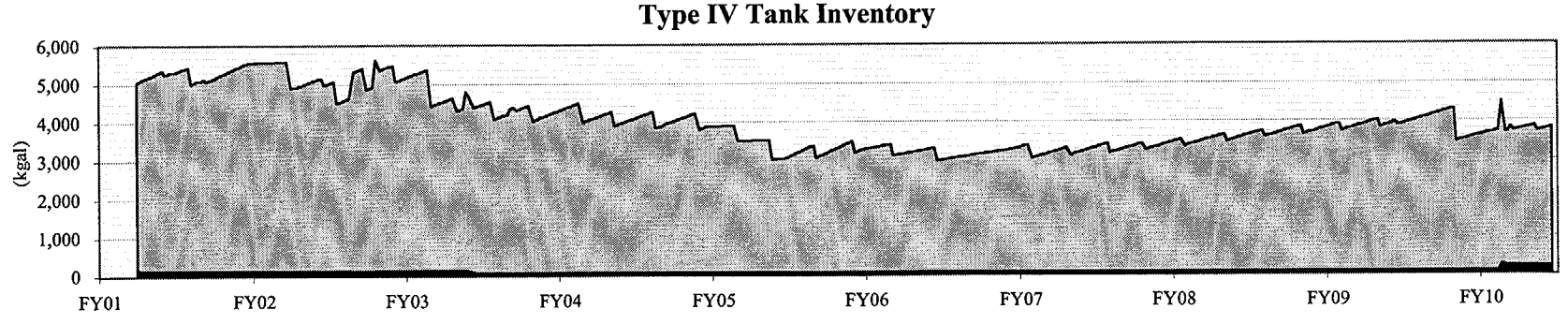
Appendix J.8 Useable Tank Space (Super Stretch Case)



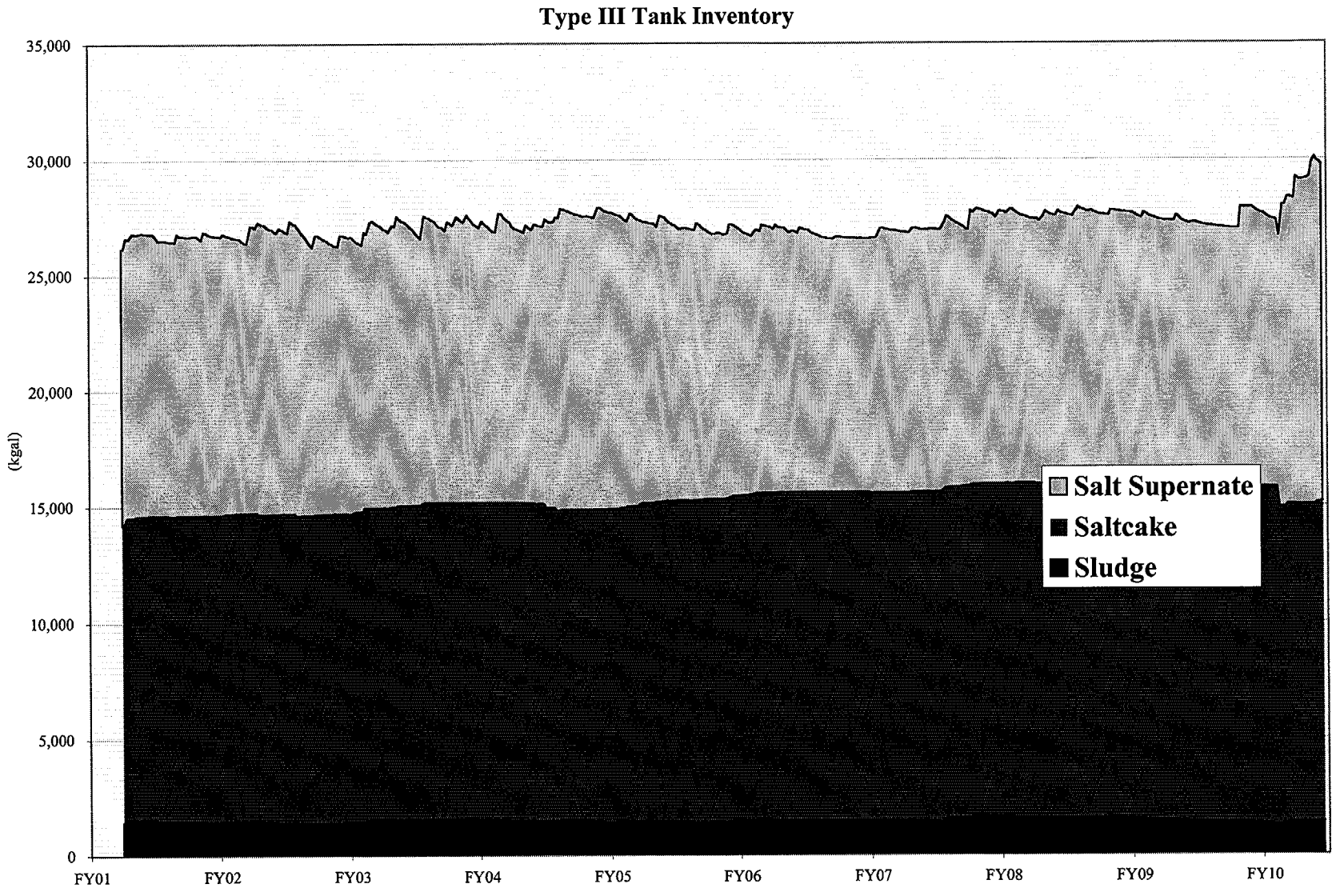
Appendix J.9 — Tank Inventory (Super Stretch Case)



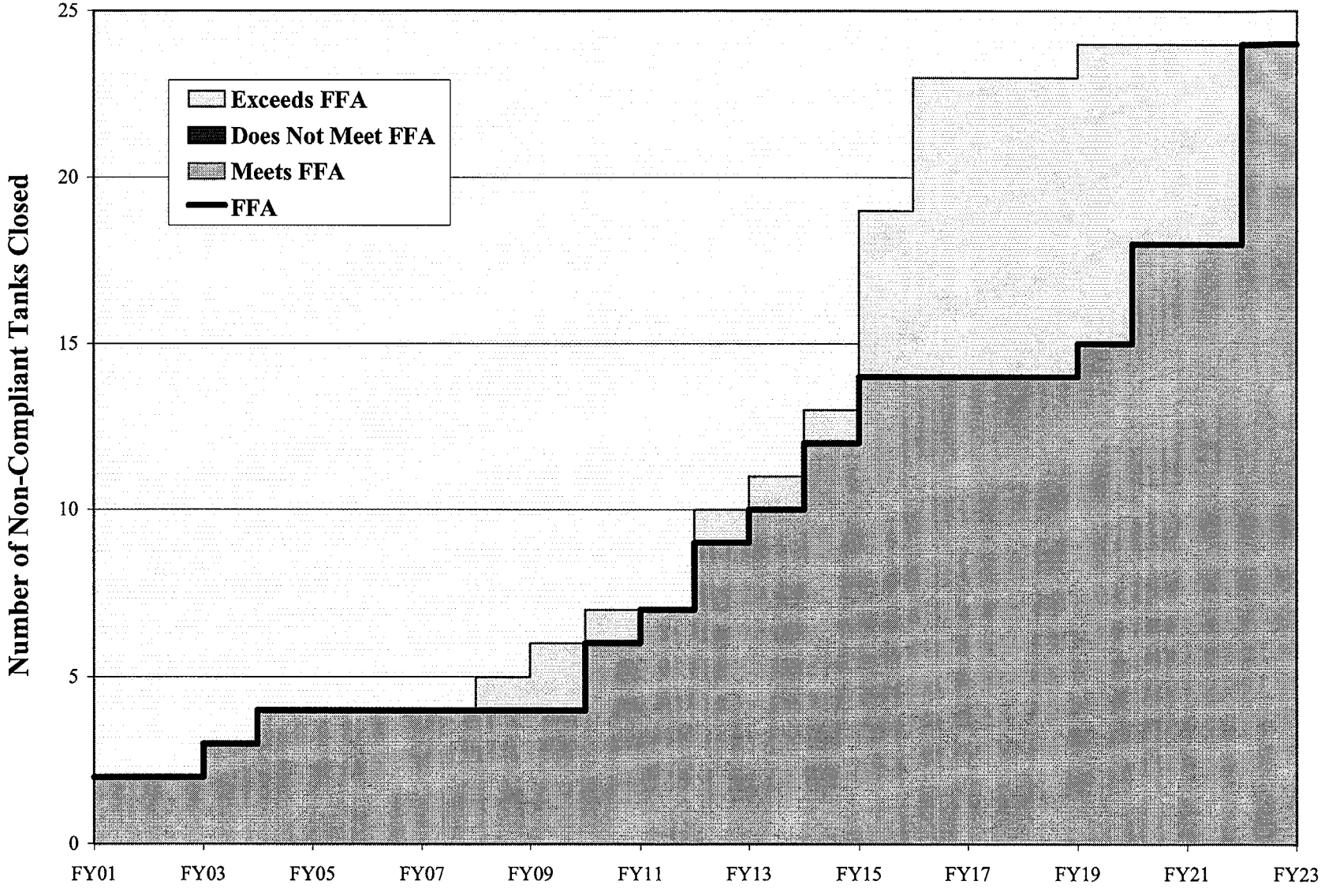




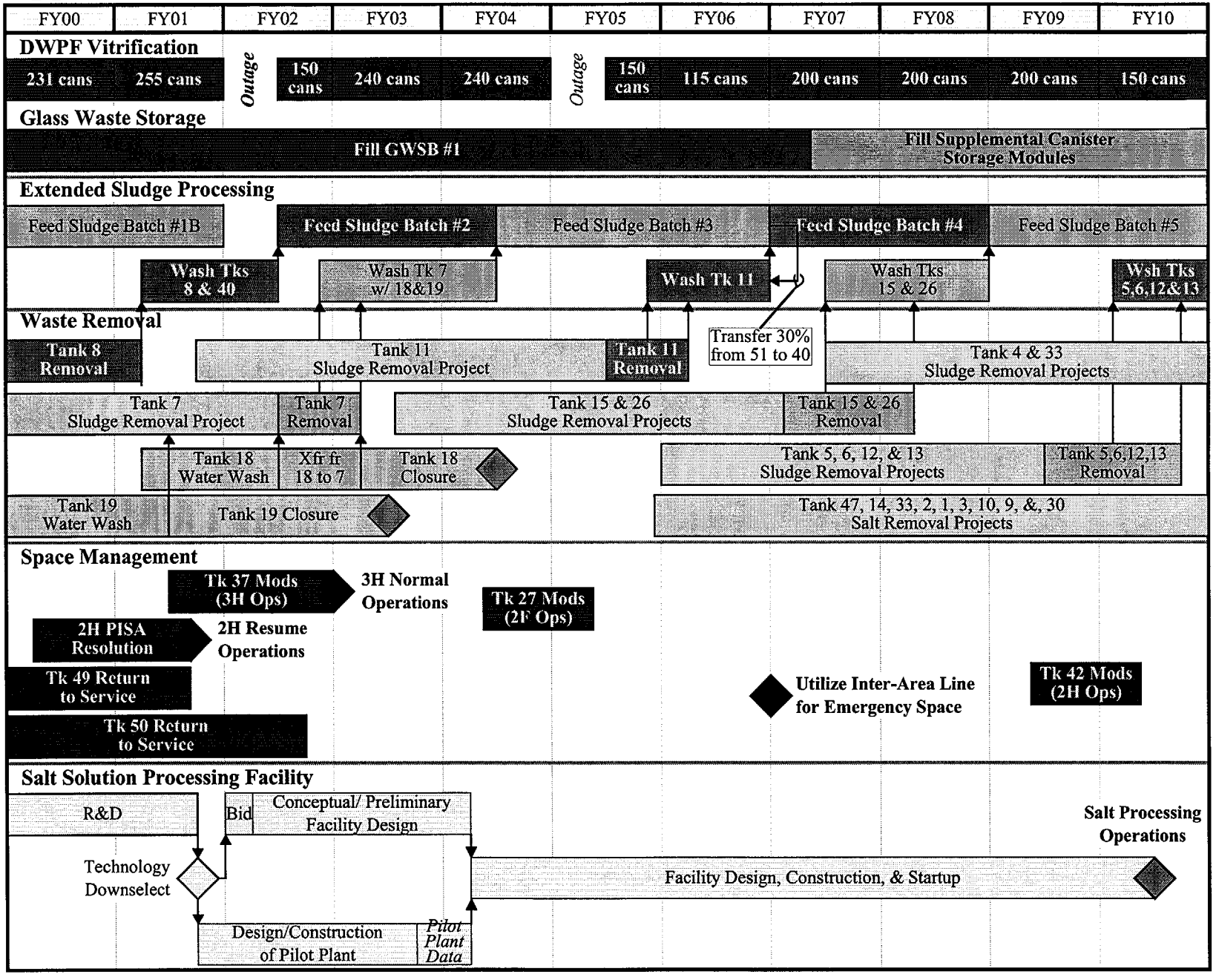
Appendix J.9 — Tank Inventory (Super Stretch Case)



Appendix J.10 - Tank Closures (Super Stretch Case)



Appendix J.11 - Level 1 Schedule (SuperStretch Case)



Appendix K – Execution Strategy

Appendix K provides the detailed production planning information for the Execution strategy. The Execution strategy is a short term strategy which includes information only for the contract period FY01 – FY06. This strategy is success oriented in the early years of the contract which will best position the program for future success if funding can be made available to move to the Super Stretch Case. The reader should not expect that the performance of the HLW System will be able to fully achieve this case, however, it describes the best short term execution strategy that can be envisioned at this time. This information should be used by the employees in the HLW System facilities as a benchmark for expected performance and a reference to the work scope that is authorized for implementation under the contract.

Key Scope Milestone	Execution Strategy
Total Number of Canisters Produced FY01 – FY06	1,150
DWPF Sludge Production (in average canisters per year)	
• FY01	255
• FY02	150
• FY03	240
• FY04	240
• FY05	150
• FY06	115
Canister Storage Locations	
• Make additional 450 GWSB #1 locations usable	FY04
• Begin work on additional Canister Storage locations – 1 Privatized Module	FY04
• Place Privatized Module into Radioactive Operations	FY07
Waste Removal	
• Tank 7 ready for sludge removal	7/02
Tank Closures	
• Complete closure of Tank 19	3/02
• Complete closure of Tank 18	3/04
Key Space Management Activities	
• Reuse Tank 49 for waste storage	9/01
• Reuse Tank 50 for waste storage	9/02
• Tank 37 modification completed for 3H Evaporator Drop Tank	9/02

This appendix provides the following data: Material Balances, Sludge Batch makeup, Canister Storage requirements, Near Term Saltstone Operations, Usable Tank Space estimates and a Level 1 Schedule.

Appendix K.1 - Material Balance (Execution Strategy)

End of Month/Year	Influents (gallons)											Effluents (gallons)							Net-Out
	F Canyon			H Canyon								Space Recovery from Evaporation							
	LHW	HHW	F-Can Total	LHW	HHW	H-Can Total	DWPF Recycle	Other	Inhibited Water	Jet Dilution	Total In	2F Evaps	2H Evaps	3H Evaps	Total	Salt Solution to Processing	Sludge to ESP/DWPF	Tot-Out	
Oct 2000	0	32,924	32,924	1,650	12,285	13,935	144,715	50,026	62,222	12,440		105,434	-	113,303	218,737	-	19,656	Actuals	(see Note 2)
Nov 2000	0	16,883	16,883	0	17,800	17,800	119,758	11,356	83,278	56,760		1,089	-	(16,111)	(15,022)	-	21,762	Actuals	(see Note 2)
Dec 2000	0	49,491	49,491	1,439	21,376	22,815	115,928	31,692	0	14,560		(20,849)	-	(9,442)	(30,291)	-	15,795	Actuals	(see Note 2)
Jan 2001	28,500	20,625	49,125	3,828	11,025	14,853	109,386	16,875	113,410	13,207	316,856	72,376	-	34,507	106,883	-	10,038	116,921	(199,935)
Feb 2001	30,000	28,500	58,500	5,104	14,700	19,804	145,848	22,500	260,091	36,630	543,373	101,602	-	39,677	141,280	-	13,384	154,664	(388,709)
Mar 2001	28,000	25,500	53,500	5,104	15,220	20,324	131,463	22,500	-	54,625	282,412	125,909	-	-	125,909	-	13,384	139,293	(143,119)
Apr 2001	30,000	27,500	57,500	15,104	15,220	30,324	85,410	22,500	30,000	42,580	268,314	170,338	-	180,890	351,228	-	13,384	364,612	96,298
May 2001	25,000	28,500	53,500	25,104	15,220	40,324	125,667	22,500	10,000	39,745	291,736	166,684	-	-	166,684	-	13,384	180,068	(111,668)
Jun 2001	18,000	25,500	43,500	5,104	15,220	20,324	110,281	22,500	460,000	47,113	703,719	167,098	-	164,206	331,304	-	13,384	344,688	(359,031)
Jul 2001	15,000	27,500	42,500	5,104	15,220	20,324	145,848	22,500	-	25,749	256,921	85,603	-	-	85,603	-	13,384	98,987	(157,934)
Aug 2001	15,000	28,500	43,500	5,104	15,220	20,324	145,848	22,500	360,000	59,060	651,232	60,594	60,313	101,769	222,676	-	13,384	236,060	(415,171)
Sep 2001	18,000	25,500	43,500	5,104	15,220	20,324	131,812	22,500	-	58,869	277,005	86,686	199,393	-	286,079	-	13,384	299,463	22,458
FY01	207,500	237,625	445,125	74,660	132,265	206,925	1,131,563	196,875	1,233,501	377,578	3,591,568	1,036,890	259,706	521,049	1,817,646	-	117,110	1,934,756	(1,656,811)
Oct 2001	15,000	27,500	42,500	25,104	15,220	40,324	-	22,500	250,000	42,451	397,775	33,008	154,177	83,770	270,955	-	-	270,955	(126,820)
Nov 2001	15,000	28,500	43,500	5,104	15,220	20,324	-	22,500	-	41,657	127,981	86,730	154,864	-	241,594	-	-	241,594	113,613
Dec 2001	18,000	25,500	43,500	5,104	15,220	20,324	-	22,500	-	43,768	130,092	70,308	87,734	94,712	252,754	-	-	252,754	122,662
Jan 2002	24,000	5,000	29,000	13,052	15,220	28,272	27,232	22,500	297,297	85,529	489,830	55,350	171,486	-	226,836	-	3,100	229,936	(259,895)
Feb 2002	24,000	6,000	30,000	13,052	15,220	28,272	108,928	22,500	-	86,267	275,967	12,506	342,971	66,350	421,828	-	12,400	434,228	158,261
Mar 2002	27,000	3,000	30,000	13,052	14,700	27,752	108,928	22,500	-	38,936	228,116	81,949	182,189	-	264,138	-	12,400	276,538	48,422
Apr 2002	24,000	3,000	27,000	13,052	14,700	27,752	108,928	22,500	-	113,493	299,673	148,184	264,830	26,067	439,081	-	12,400	451,481	151,808
May 2002	23,000	6,000	29,000	13,052	14,700	27,752	108,928	22,500	182,520	40,759	411,459	84,564	306,453	-	391,017	400,000	12,400	803,417	391,958
Jun 2002	26,000	3,000	29,000	13,052	14,700	27,752	108,928	22,500	656,670	35,279	880,129	70,651	231,146	29,754	331,551	400,000	12,400	743,951	(136,178)
Jul 2002	8,000	18,000	26,000	13,052	14,700	27,752	108,928	10,000	-	44,952	217,632	77,713	158,978	29,970	266,662	40,381	12,400	319,443	101,810
Aug 2002	8,000	18,000	26,000	13,052	14,700	27,752	108,928	10,000	-	68,740	241,420	66,004	267,733	37,099	370,835		12,400	383,235	141,815
Sep 2002	8,000	3,000	11,000	13,052	14,700	27,752	108,928	10,000	-	66,093	223,773	-	131,688	-	131,688	-	12,400	144,088	(79,685)
FY02	220,000	146,500	366,500	152,780	179,000	331,780	898,656	232,500	1,386,487	707,924	3,923,847	786,967	2,454,249	367,722	3,608,939	840,381	102,300	4,551,620	627,771
Oct 2002	8,000	3,000	11,000	33,052	14,700	47,752	114,936	10,000	-	104,623	288,311	-	264,031	117,697	381,727	-	12,400	394,127	105,817
Nov 2002	8,000	3,000	11,000	33,052	14,700	47,752	114,936	10,000	-	62,596	246,284	-	191,692	173,405	365,097	-	12,400	377,497	131,213
Dec 2002	8,000	3,000	11,000	13,052	14,700	27,752	114,936	10,000	-	117,484	281,172	-	139,525	99,495	239,020	-	12,400	251,420	(29,752)
Jan 2003	8,000	3,000	11,000	5,104	14,700	19,804	114,936	10,000	-	77,223	232,963	78,005	180,726	151,205	409,936	-	12,400	422,336	189,372
Feb 2003	8,000	3,000	11,000	5,104	14,700	19,804	114,936	10,000	-	96,487	252,227	178,144	145,793	123,015	446,952	-	12,400	459,352	207,126
Mar 2003	8,000	3,000	11,000	5,104	14,700	19,804	114,936	10,000	-	33,602	189,342	103,811	191,929	68,140	363,881	-	12,400	376,281	186,938
Apr 2003	8,000	3,000	11,000	7,404	14,700	22,104	114,936	10,000	-	78,647	236,687	221,124	194,011	210,647	625,782	-	12,400	638,182	401,495
May 2003	8,000	3,000	11,000	7,404	14,700	22,104	114,936	10,000	-	96,054	254,094	92,929	140,473	114,929	348,331	-	12,400	360,731	106,637
Jun 2003	8,000	3,000	11,000	7,404	14,700	22,104	114,936	10,000	106,000	70,550	334,590	85,159	183,960	140,367	409,486	-	12,400	421,886	87,296
Jul 2003	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	450,000	39,061	644,861	189,371	145,819	91,283	426,474	-	12,400	438,874	(205,987)
Aug 2003	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	-	83,605	239,405	149,371	135,871	107,965	393,207	-	12,400	405,607	166,203
Sep 2003	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	450,000	54,261	660,061	285,824	228,270	89,372	603,466	-	12,400	615,866	(44,196)
FY03	96,000	36,000	132,000	136,876	171,696	308,572	1,379,232	120,000	1,006,000	914,193	3,859,997	1,383,738	2,142,100	1,487,520	5,013,359	-	148,800	5,162,159	1,302,162
Oct 2003	8,000	3,000	11,000	26,732	13,132	39,864	114,936	10,000	400,000	59,257	635,057	162,430	127,007	215,096	504,533	-	12,400	516,933	(118,125)
Nov 2003	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	-	71,924	227,724	107,982	110,937	222,984	441,904	-	12,400	454,304	226,580
Dec 2003	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	340,000	58,751	554,551	205,563	131,119	86,627	423,309	-	12,400	435,709	(118,842)
Jan 2004	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	-	57,777	213,577	194,640	222,176	79,894	496,710	-	12,400	509,110	295,533
Feb 2004	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	-	91,030	246,830	150,700	215,797	60,654	427,151	-	12,400	439,551	192,720
Mar 2004	8,000	3,000	11,000	6,732	13,132	19,864	114,936	10,000	298,816	43,666	498,282	119,936	168,844	-	288,780	-	12,400	301,180	(197,102)
Apr 2004	8,000	3,000	11,000	6,732	13,832	20,564	114,936	10,000	357,669	32,779	546,948	124,735	133,458	-	258,193	-	12,400	270,593	(276,355)
May 2004	8,000	3,000	11,000	26,732	13,832	40,564	114,936	10,000	200,000	92,331	468,831	65,164	133,485	-	198,648	-	12,400	211,048	(257,783)
Jun 2004	8,000	3,000	11,000	6,732	13,832	20,564	114,936	10,000	-	24,051	180,551	64,167	174,566	-	238,732	-	12,400	251,132	70,581
Jul 2004	8,000	3,000	11,000	6,732	13,832	20,564	114,936	10,000	-	26,226	182,726	43,212	141,143	-	184,355	-	12,400	196,755	14,029
Aug 2004	8,000	3,000	11,000	6,732	13,832	20,564	114,936	10,000	-	75,623	232,123	32,941	134,007	-	166,948	-	12,400	179,348	(52,775)
Sep 2004	8,000	3,000	11,000	6,732	13,832	20,564	114,936	10,000	-	35,944	192,444	95,634	123,654	-	219,289	-	12,400	231,689	39,245
FY04	96,000	36,000	132,000	120,784	161,784	282,568	1,379,232	120,000	1,596,485	669,359	4,179,644	1,367,104	1,816,193	665,255	3,848,552	-	148,800	3,997,352	(182,294)

Tank 50 emptied to Saltstone

Appendix K.1 - Material Balance (Execution Strategy)

End of Month/Year	Influents (gallons)											Effluents (gallons)							Net-Out
	F Canyon			H Canyon								Space Recovery from Evaporation							
	LHW	HHW	F-Can Total	LHW	HHW	H-Can Total	DWPF Recycle	Other	Inhibited Water	Jet Dilution	Total In	2F Evaps	2H Evaps	3H Evaps	Total	Salt Solution to Processing	Sludge to ESP/DWPF	Tot-Out	
Oct 2004	8,000	3,000	11,000	26,732	13,832	40,564	-	10,000	-	55,502	117,066	47,356	205,100	-	252,456	-	-	252,456	135,390
Nov 2004	8,000	15,000	23,000	6,732	13,832	20,564	-	10,000	-	63,789	117,353	95,161	114,306	203,458	412,925	-	-	412,925	295,572
Dec 2004	8,000	7,000	15,000	6,732	13,832	20,564	-	10,000	-	42,188	87,752	74,035	120,703	199,821	394,559	-	-	394,559	306,807
Jan 2005	8,000	3,550	11,550	6,732	13,832	20,564	-	10,000	-	66,698	108,812	53,834	198,777	-	252,611	-	-	252,611	143,800
Feb 2005	8,000	3,550	11,550	6,732	13,832	20,564	-	10,000	-	70,396	112,510	96,791	140,180	58,836	295,807	-	-	295,807	183,297
Mar 2005	8,000	3,550	11,550	6,732	13,832	20,564	-	10,000	-	50,896	93,010	73,051	132,038	153,883	358,972	-	-	358,972	265,962
Apr 2005	8,000	3,550	11,550	6,732	13,832	20,564	140,692	10,000	-	23,994	206,800	56,889	163,253	119,492	339,634	-	12,400	352,034	145,234
May 2005	8,000	3,550	11,550	6,732	13,832	20,564	140,692	10,000	-	139,221	322,027	-	166,451	-	166,451	-	12,400	178,851	(143,175)
Jun 2005	8,000	3,550	11,550	6,732	13,832	20,564	140,692	10,000	-	76,676	259,482	108,493	90,618	176,124	375,234	-	12,400	387,634	128,153
Jul 2005	8,000	3,550	11,550	6,600	13,100	19,700	140,692	10,000	-	28,748	210,690	54,553	151,460	126,110	332,123	-	12,400	344,523	133,833
Aug 2005	8,000	3,550	11,550	6,600	13,100	19,700	140,692	10,000	-	133,164	315,106	14,463	118,868	59,539	192,870	-	12,400	205,270	(109,836)
Sep 2005	8,000	7,800	15,800	6,600	13,100	19,700	140,692	10,000	-	57,319	243,511	150,311	87,771	135,259	373,341	-	12,400	385,741	142,230
FY05	96,000	61,200	157,200	100,388	163,788	264,176	844,152	120,000	-	808,591	2,194,119	824,937	1,689,525	1,232,522	3,746,983	-	74,400	3,821,383	1,627,267
Oct 2005	8,000	7,800	15,800	26,600	13,100	39,700	50,548	10,000	-	44,126	160,174	172,184	142,902	99,478	414,563	-	4,129	418,692	258,518
Nov 2005	8,000	3,000	11,000	26,600	13,100	39,700	50,548	10,000	-	49,459	160,707	153,395	111,392	88,747	353,534	-	4,129	357,663	196,957
Dec 2005	8,000	3,000	11,000	6,600	13,100	19,700	50,548	10,000	-	79,789	171,037	66,951	83,022	58,353	208,326	-	4,129	212,455	41,418
Jan 2006	8,000	3,000	11,000	6,600	13,100	19,700	50,548	10,000	-	46,258	137,506	-	134,926	118,629	253,554	-	4,129	257,683	120,178
Feb 2006	8,000	3,000	11,000	6,600	13,100	19,700	50,548	10,000	-	31,282	122,530	-	133,290	64,650	197,940	-	4,129	202,069	79,538
Mar 2006	8,000	3,000	11,000	6,600	13,100	19,700	50,548	10,000	-	54,570	145,818	-	120,901	85,811	206,712	-	4,129	210,841	65,023
Apr 2006	8,000	3,000	11,000	7,600	31,100	38,700	50,548	10,000	-	36,423	146,671	-	127,042	72,388	199,430	-	4,129	203,559	56,888
May 2006	8,000	3,000	11,000	7,600	31,100	38,700	50,548	-	-	38,236	138,484	-	97,572	56,534	154,106	-	4,129	158,235	19,751
Jun 2006	8,000	3,000	11,000	7,600	31,100	38,700	50,548	-	-	35,811	136,059	-	73,445	43,442	116,887	-	4,129	121,016	(15,043)
Jul 2006	8,000	3,000	11,000	7,600	31,100	38,700	50,548	-	-	43,767	144,015	-	65,293	35,704	100,997	-	4,129	105,126	(38,889)
Aug 2006	8,000	3,000	11,000	7,600	31,100	38,700	50,548	-	-	40,172	140,420	-	73,795	31,892	105,688	-	4,129	109,817	(30,604)
Sep 2006	8,000	3,000	11,000	7,600	31,100	38,700	50,548	-	-	40,992	141,240	-	55,028	30,165	85,193	-	2,065	87,258	(53,982)
FY06	96,000	40,800	136,800	125,200	265,200	390,400	606,576	70,000	-	540,885	1,744,661	392,530	1,218,608	785,793	2,396,930	-	47,484	2,444,414	699,753

Notes:

1) Discussion of the components of the Influents and Effluents is contained in Section 8.1.3 "HLW System Material Balance"
2) Actual values for October through December 2000 are obtained from the "HLW Morning Reports"

Appendix K.2 – Sludge Processing (Execution Strategy)

	Waste Removal		ESP Pretreatment							DWPF Vitrification						
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Sludge Batch	Source Tanks	Sludge Content (kg)	Feed Prep Start Date	Feed Prep Total Dur. (months)	Total ESP Water Vol. (kgal)	Na (wt% dry)	Hg (wt% dry)	Total Solids (wt%)	Pretreated Volume (kgal)	Feed Volume (kgal)	Start Feed	Canister Yield	Feed Duration (years)	Finish Feed	Feed Tank	Sludge Loading (wt %)
1A	51	298,000			na	8.80		16.4	491	491 -140 351	3/1/96 (Tk 51 heel @ 40 ")	492	2.75	8/30/98	51	25.0
1B	42 total	420,861 420,861			na	7.77	0.30	16.5	460	460	10/1/98	738 (Includes use of 80 cans of Tank 51 heel)	3.00	9/30/01	51	25.0
2	8 40 total	182,451 179,098 361,549			1,977	8.75	0.30	16.0	456	456 -140 316	1/1/02 (Assumes DWPF outage in 1stQ FY02)	471	2.19	3/10/04	40	28.0
3	7(70%) 18(70%) 19(70%) total	288,957 14,777 1,956 305,690	11/16/02	16	3,156	8.70	0.10	16.0	540	540	3/10/04	395	2.54	9/24/06	51	29.0
Totals		1,088,100			5,133	Total Estimated Washwater						2,096	Total Estimated Cans			

Notes:

General) Above based on the following yearly canister production values: FY01 255 cans/yr, FY02 150 cans/yr, FY03 240 cans/yr, FY04 240 cans/yr, FY05 150 cans/yr, FY06 115 cans/yr.

A) Each Sludge Batch must be individually tested and confirmed to meet waste qualification spedicfications

B) Sludge in these tanks will comprise the batch. Note: 100% of the sludge from Tanks 7, 18&19 will be moved to ESP to support Sludge Batch 3. However, 30% of this sludge will be combined with Tank 11 sludge to make Sludge Batch 4.

C) Amount of sludge from each source tank in the batch obtained from WCS data base

D) Feed Prep start date is the date that sludge is first moved into the the ESP feed tank (40 or 51) to begin preparation of the sludge batch (i.e. obtain proper alkali composition of the sludge slurry for feed to DWPF)

E) Total planned duration of transfers, washing, sampling, test glass production, and associated decants for the preparation of a sludge batch for feed to DWPF

F) Total estimated volume of sludge transfer water and wash water decants to obtain target soluble Na concentration for feed to DWPF

G) Amount of total Na in washed sludge (dry basis)

H) Amount of total Hg in washed sludge (dry basis)

I) Total solids (soluble and insoluble) in washed sludge

J) Volume of sludge at given wt% total solids before heel effects (Batch 1B is actual. Batch 2 is projected from detailed analysis. Batch 3 and beyond are based on ratio of batch sludge kg values converted to gallons and adjusted from an estimated 25 wt% solids to 16 wt% solids)

K) Volume of sludge available for feed after adding or subtracting pump heel

L) Start feed date based on depletion of previous batch down to pump heel

M) Estimated number of canisters produced given the pretreatment as shown. Numbers are actual for Batch 1A and estimated for remaining batches. Coupled Salt and Sludge Feed assumed to start with Batch 5.

N) Column O divided by the planned canister production during the period in which the batch is vitrified. See production note under General Section above.

O) Column N plus column P. Finish Feed means when the last transfer of feed is sent from the Feed Tank. The last canister for the batch will be poured later. The DWPF has approximately 25 canisters of feed in process. Therefore 25 more canisters will be produced from the batch after the last feed is sent to DWPF.

P) Batch feed tank

Q) Weight % of glass comprised of sludge oxides.

Appendix K.3 - Canister Storage (Execution Strategy)

End of FY	SRS Cans Produced		SRS Cans in GWSB #1 (2,159 max)			SRS Cans in Modular Storage (1 building @ 585)			SRS Cans Shipped to Repository		Net Cans Stored At SRS
	Yearly	Cum.	Added	Shipped	Cum.	Added	Shipped	Cum.	Each Year	Cumulative	
1996	64	64	64		64						64
1997	169	233	169		233						233
1998	250	483	250		483						483
1999	236	719	236		719						719
2000	231	950	231		950						950
2001	255	1,205	255		1,205						1,205
2002	150	1,355	150		1,355						1,355
2003	240	1,595	240		1,595						1,595
2004	240	1,835	240		1,835						1,835
2005	150	1,985	150		1,985	0		0			1,985
2006	115	2,100	115		2,100	0		0			2,100

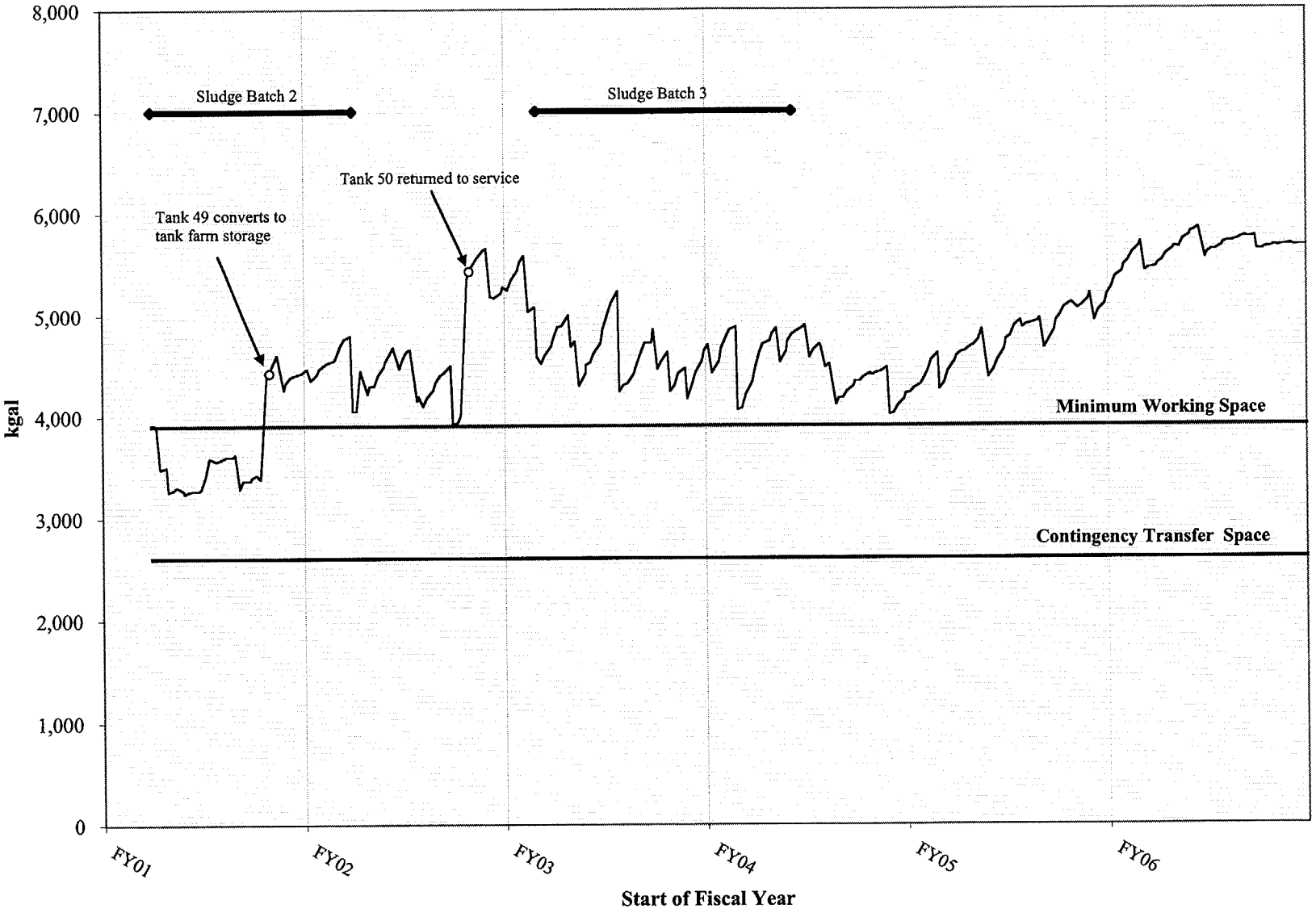
Notes:

1) GWSB #1 filling began in May 1996. Of its 2,286 canister storage locations, 5 positions store non-radioactive test canisters and 122 are unuseable with no viable repair technique. This yields a capacity of 2,159 usable storage locations, including 450 presently unusable location that require modification per an existing plan before they will be useable.

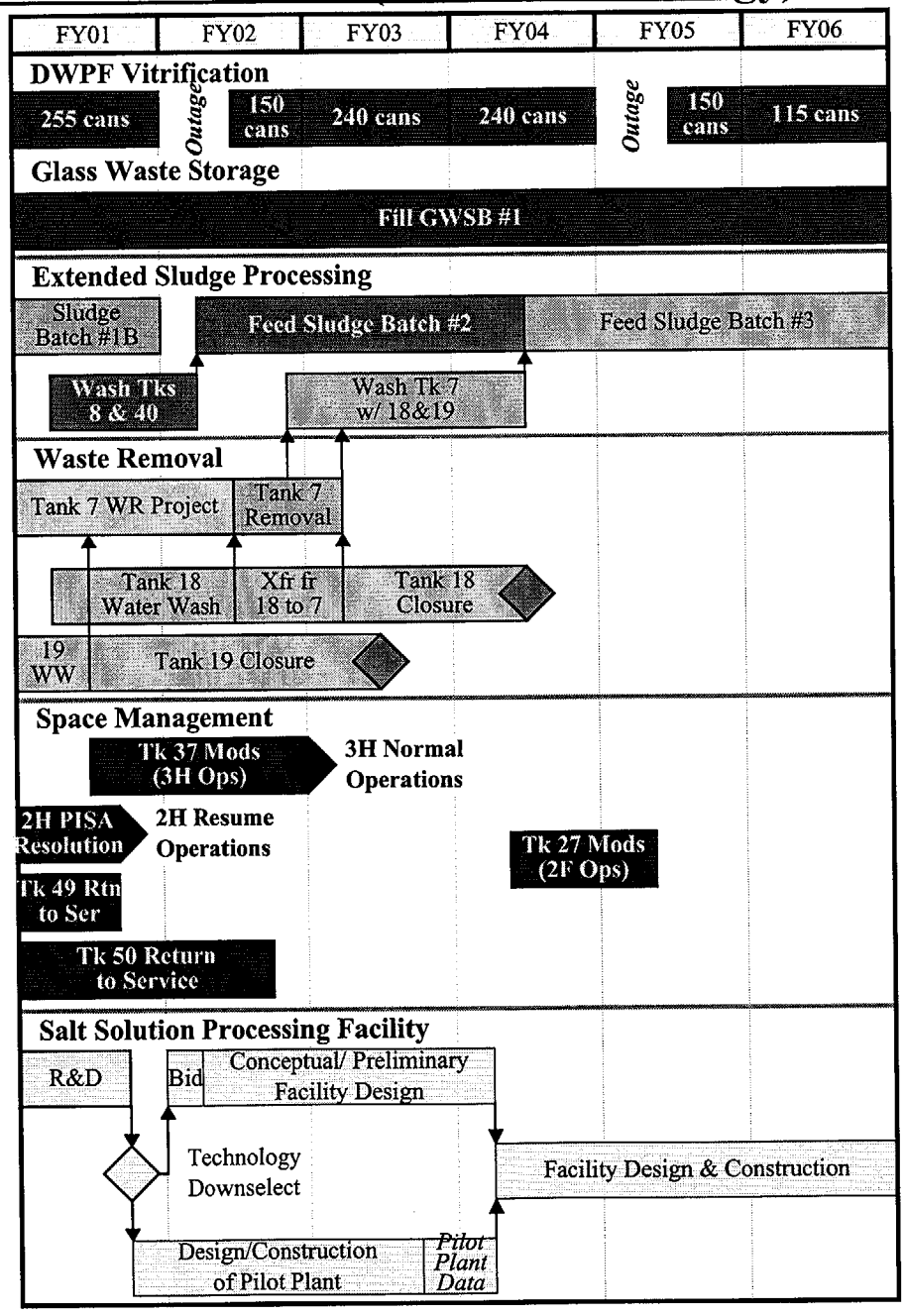
2) GWSB #1 is expected to reach maximum capacity in FY07.

3) Additional glass waste storage locations will be built as privatized modularized buildings, which will be $^1/_4$ of the size of GWSB #1. The first building, GWSB #2A, will be needed in FY07.

Appendix K.4 Useable Tank Space (Execution Strategy)



Appendix K.5 — Level 1 Schedule (Execution Strategy)



Distribution List

DOE–HQ
Fisher, K.W. (Kurt), EM-42
Picha, K.G. (Kenneth), EM-35

DOE–SR
Aleman, S.M. (Suzanne), 703-H
Anderson, C.E. (Charlie), 704-S
Baez, A.N. (Alejendro), 703-A
Barber`, D.A. (Don), 703-H
Blanco, S.M. (Soni)(15), 704-S
Everatt, C.A. (Carl), 704-S
Glenn, Jr, M.S. (Sam), 703-F
Gnann, H.B. (Howard), 704-S
Gonyaw, D.J. (Debbie), 704-S
Gutmann, T.S. (Tom), 704-S
Hansen, C.A. (Charles), 703-F
Ling, L.T. (Larry), 703-H
McCullough, Jr, J.W. (Jim), 704-3N
Pearson, W.D. (Bill)(21), 704-S
Spader, W.F. (Bill), 704-3N
Stubbs, W.L. (Bill), 704-S
Yarborough, R.M. (Rob), 704-S

DNFSB
Davis, R.T. (Todd), 719-14A
Ogg, D.G. (Dan)(3), 719-14A

WSRC–Sr.Staff
Becker, D.L. (Dan), 703-A
Buggy, J.J. (Joe), 703-A
Grefenstette, P.D. (Paul), 703-A
Jones, C.B. (Clay), 703-A
Pedde, R.A. (Bob), 703-A

HLWD–Staff
Campbell, P.D. (Dean), 705-A
Conner, Jr, H.T. (Harold), 703-H
Cwalina, A.M. (Andy), 703-H
Hay, J.B. (Joanne), 703-H
Padezanin, III, T. (Ted), 703-H
Piccolo, S.F. (Steve), 703-H

HLW–Pgm Mgmt
Caldwell, T.B. (Tommy), 703-H
Cathey, S.S. (Susan), 703-H
Chew, D.P. (David), 703-H
Dean, K.B. (Kelly), 703-H
Mahoney, M.J. (Mark)(120), 703-H
Wilson, W.A. (Walter), 703-H
Wise, F.E. (Frank), 703-H

HLW–Controller
Harris, T.A. (Tony), 704-67S
Herrmann, Jr, H.O. (Harry), 703-H
Kennedy, P.S. (Pam), 703-H
Ross, T.D. (Tim), 742-9G

HLW–WD
Barnes, J.L. (Jeff), 704-S
Reynolds, T.R. (Tammy), 210-S
Westergreen, J.D. (Jeff), 704-S

HLW–CST
Borders, M.N. (Mike), 704-56H
Buxton, M.D. (Marybeth), 742-14G
Clark, Jr, W.C. (Wyatt), 241-100F
Coleman, D.H. (David), 241-100F
Davis, Jr, W.T. (Will), 707-H
Davis, N.R. (Neil), 703-H
Dickert, V.G. (Ginger), 703-H
Gilles, M.L. (Michael), 704-56H
Green, M.J. (Michael), 742-14G
Herbert, J.E. (Jim), 241-108F
Johnson, M.D. (Mike), 703-H
Lampley, C.G. (Charles), 241-100F
Long, B.E. (Bruce), 241-197H
Runnels, R.A. (Rick), 707-H
Sherburne, D.C. (David), 241-100F
Stevens, P.H. (Pete), 703-H
Whittenburg, A.L. (Anatia), 704-56H

HLW–SWP
Adams, R.A. (Bob), 704-3N
Hinds, Jr, R.N. (Bob), 704-3N
Morin, J.P. (Jerry), 703-H

HLW–Maint
Handfinger, H.M. (Harvey), 704-71S
Hauer, K.A. (Kim), 704-71S
Hill, P.J. (Peter), 704-56H
Lawson, Jr, L.G. (Gordon), 704-71S
Lucas, T.J. (Ted), 210-S
Mohammadi, M.N. (Rod), 704-71S
Wilkerson, S.W. (Steve), 704-71S
Wilson, R.W. (Robert), 704-71S

HLW–Train & Proc
Chandler, T.E. (Tim), 766-H
Thompson, D.G. (Dennis), 766-H

HLW–QA
Kuhn, R.J. (Ron), 703-H

HLWE
Allen, V.P. (Trish), 703-H
Bates, W.F. (Bill), 707-H
Blocker, R.H. (Roz), 703-H
Broaden, D.A. (Dave), 703-H
Campbell, R.M. (Ron), 703-H
Carter, J.T. (Joe), 704-3N
Cauthen, G.L. (Gary), 707-H
Chapman, N.F. (Noel), 704-3N
Cloninger, J.M. (Mack), 704-S
d'Entremont, P.D. (Paul), 703-H
Dewes, J.N. (John), 703-H
Edwards, Jr, R.E. (Richard), 704-25S
Elder, H.H. (Hank), 704-196N
Fowler, R.C. (Rick), 704-196N
Freed, E.J. (Eric), 707-2H
Gillam, J.M. (Jeff), 703-H
Hayes, Jr, C.R. (Chuck), 703-H
Hester, Jr, J.R. (Bob), 703-H
Jacobs, R.A (Roy), 704-3N
Jones, D.W. (Dan), 703-H
Jones, J.F. (Janet), 742-13G
Kerley, W.D. (Bill), 704-S
Kidd, M.S. (Mike), 742-13G
Lewis, B.L. (Brenda), 703-H
Lewis, III, W.I. (Ivan), 703-H
Lex, T.J. (Tom), 703-H
Liner, K.R. (Keith), 704-15S
Little, D.B. (David), 704-25S
Martin, B.A. (Bruce), 742-4G
Martin, D.J. (Dave), 703-H
Miller, M.S. (Marshall), 742-3G
Monahon, T.M. (Tom), 703-H
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Occhipinti, J.E. (John), 704-27S
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Ortner, T.L. (Terry), 703-H
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Strohmeier, S.J. (Steve), 742-8G
Subosits, S.B. (Steve), 704-196N
Taylor, G.A. (Glenn), 704-196N
Thaxton, IV, G.D. (Donnie), 704-56H
Thomas, A.B. (Allen), 703-H
, Vacant (),
Wagner, W.A. (Wayne), 704-35S

HLW–Cost & Sched
Ballard, D.C. (Dan), 704-26F
Byrd, D.W. (Dirk), 703-H
Doughty, D.E. (Don), 704-56H
Druce, J.K. (Jerry), 703-H
Gilbreath, K.D. (Kent), 703-H
Haynes, R.S. (Ray), 704-71S
Howell, W.M. (Mark), 704-196N
Pate, T.E. (Tim), 704-56H
Phillips, J.M. (John), 703-H
Ware, Jr, W.W. (Woody), 703-H

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Boasso, C.J. (Cliff), 742-2G
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Crouse, T.N. (Tom), 241-109F
Donahue, Jr, C.L. (Troy), 241-109F
Matos, D.M. (Dave), 742-3G

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Newman, J.L. (Jeff), 742-A

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Evans, J.S. (Stu), 703-F
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Maxted, A. (Tony), 704-43H
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