Appendix B

Detailed Alternative Descriptions, Assumptions, Waste Volumes, and Waste Stream Flowsheets

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B.1 Introduction

This appendix contains five sets of information. The first set identifies waste streams by waste stream number. Basic information on the waste streams and facilities is contained in Section 2 of this environmental impact statement (EIS). The second set of information is a list by waste type of processing assumptions for each waste stream. The third set of information is the volume of each waste stream expected to be received annually for each waste type. The fourth set of information is the waste stream inventories. The fifth set of information is detailed flowsheets showing the disposition pathway for each waste stream for each alternative. For the presentation of waste volume numbers, the volumes have been rounded to the nearest whole cubic meter. It should be recognized that for some numbers, the number of significant figures exceeds the accuracy of the information. Occasional differences may be noted in the unit digit due to rounding.

B.2 Waste Stream Numbers

Figure B.1 is the same as Figure 2.1 (see Section 2 of Volume I) but includes the waste stream numbers that were used during the development of the *Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement* (HSW EIS) to track individual waste streams. For each waste stream, a number is shown in the figure, such as (#2), and was the identification number assigned to that stream. This is the alphanumeric designation by which each waste stream was initially identified in the development of this EIS. Streams #7, #16, and #19 were dropped from consideration as separate waste streams in the EIS during its development. Stream #7, composed of greater than Class C Wastes (an NRC category no longer applicable to Hanford waste), was combined with Stream #3. Stream 16, composed of contaminated equipment and materials for decontamination, was eliminated from the scope of the EIS, and Stream #19, greater than Category 3 (GTC3) and transuranic (TRU) waste in the Low Level Burial Grounds (LLBGs), was combined with stream #20 when subsequent analyses determined these wastes to be low-level waste (LLW). It can also be noted that two waste streams were subdivided to allow more detailed analysis (#10 and #13).

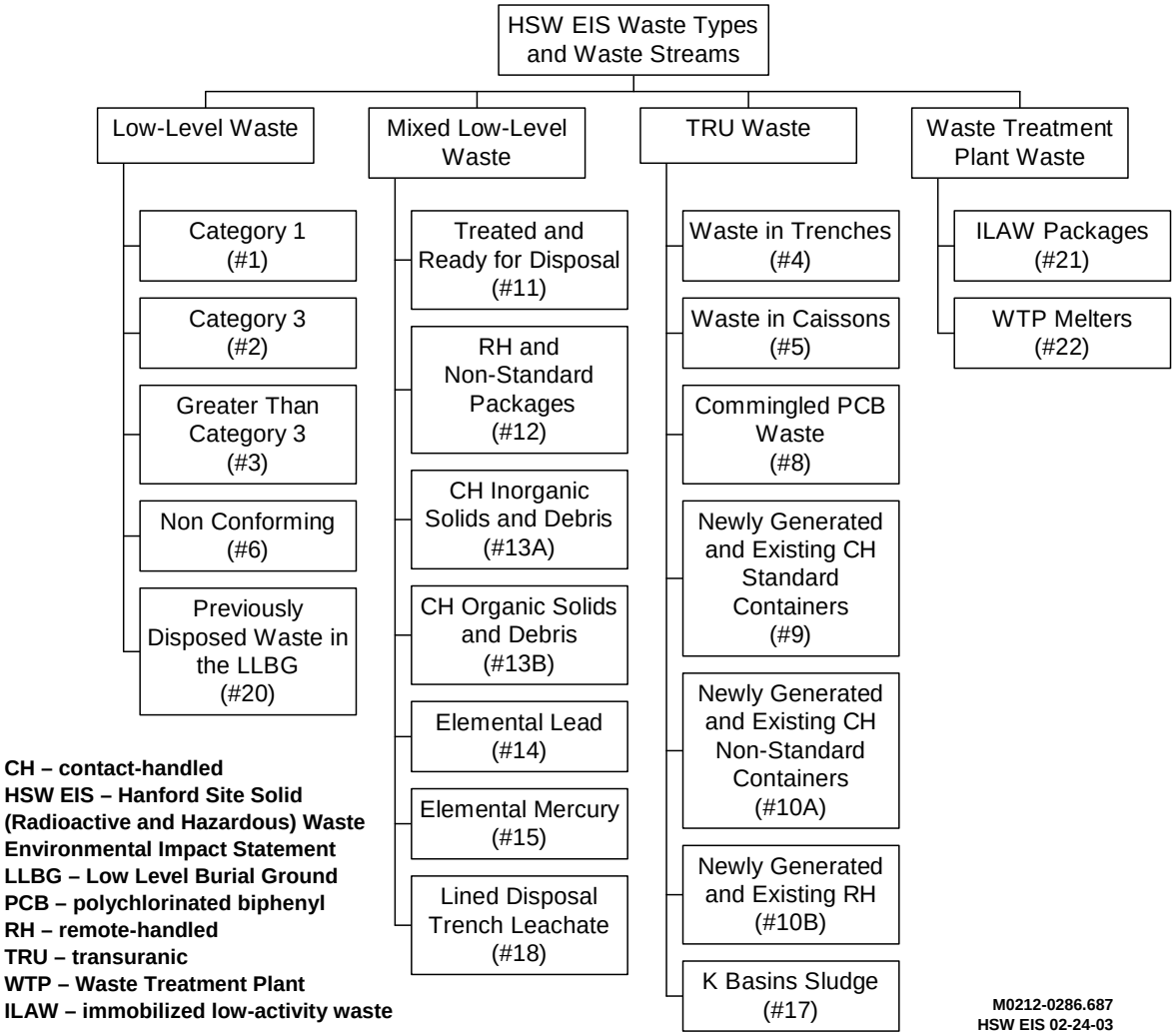


Figure B.1. Waste Types and Waste Streams Considered in the HSW EIS

(See text for discussion of waste streams #7, #16, and #19 that are not included in this diagram.)

B.3 HSW EIS Waste Processing Assumptions

Planning for the management of LLW, MLLW, TRU waste, and WTP waste at the Hanford Site has been ongoing for several years and has been documented in Anderson and Konynenbelt (1995), Sederburg (1997), and the Hanford Waste Management Strategic Plan (DOE-RL 2001). These documents formed the bases for the waste processing assumptions used to develop annual and life-cycle waste flows through facilities for each alternative. These assumptions specify the processing requirements for a particular waste stream, how much waste is sent, when the waste is sent, and what happens to the waste as it is processed. It should be noted that these assumptions cover the time period 2002 through 2046. Although the first year covered by these assumptions has passed, the environmental impacts would not change significantly by removing the information associated with 2002.

The assumptions for management of LLW, MLLW, TRU waste, and WTP wastes are contained in Tables B.1 through B.4. These assumptions describe how the waste is processed but do not necessarily specify the facilities at which the waste is managed. The facilities may change depending on the alternative. Information about facilities used in each alternative is contained in Section 3.3 of this EIS (Section 3, Volume I).

Table B.1. Assumptions for Management of Low-Level Waste

Stream Number	Description	Assumptions
NA	General Comments	All waste received after 2032 is assumed to be verified and packaged for disposal. Disposal activities such as Repackage into HICs and In-Trench Grouting will continue through 2046.
1	Category 1 LLW	The majority of Cat 1 LLW will be sent directly to disposal. Disposal of RH Cat 1 LLW results in a 3 to 1 volume increase due to handling criteria. A 5% fraction of the CH Cat 1 LLW in drums and boxes will be selected for verification at WRAP. Large boxes are assumed to be verified at the generating facility. Of the waste selected for verification, 10% is assumed to require glovebox processing. Drums will be processed in WRAP; boxes in the T Plant Complex. Drum processing results in a 60% volume decrease due mainly to compaction. Boxes would not be compacted and therefore processing results in a 50% volume increase. 175 m^3 of CH MLLW is assumed to be reclassified as CH Cat 1 LLW and disposed of in FY 2002 (80 m^3) and FY 2003 (95 m^3). These volumes have been included in the disposal estimates.
2	Category 3 LLW	Cat 3 LLW requires either Repackaging in HICs or In-Trench Grouting to provide additional stabilization prior to disposal. These options are considered equally viable for CH waste and rather than limit the amount of waste that can be sent to either option, the impacts will be analyzed assuming 100% of the CH Cat 3 LLW will undergo each operation. It is assumed that In-Trench Grouting would not be appropriate for RH Cat 3 LLW. Repackaging in HICs and Trench Grouting are assumed to result in a 3 to 1 increase for CH waste and a 5 to 1 increase for RH waste. A 5% fraction of the CH Cat 3 LLW in drums and boxes will be selected for verification at WRAP. Large boxes are assumed to be verified at the generating facility. Of the waste selected for verification, 10% is assumed to require glovebox processing. Drums will be processed in WRAP; boxes in the T-Plant Complex. Drum processing results in a 60% volume decrease due mainly to compaction. Boxes would not be compacted and therefore processing results in a 50% volume increase.
3	GTC3	This waste stream would be managed in a manner similar to the Cat 3 LLW.
6	Non-Conforming LLW	Non-Conforming LLW currently stored in CWC will be treated in 2008, which is assumed to double the waste volume. The treated waste will be sent directly to disposal.
20	Previously Disposed of Waste in the LLBGs	The current inventory of waste disposed of in the LLBGs is assumed to remain in the LLBGs.

Table B.2. Assumptions for Management of Mixed Low-Level Waste

Stream Number	Description	Assumptions
NA	General Comments	All waste received after 2032 is assumed to be treated, verified, and packaged for disposal.
11	Treated and Ready for Disposal	A 10% fraction of the CH MLLW currently stored or received in a form suitable for disposal will be sent to WRAP for verification. Of the current inventory selected for verification, 20% is assumed to be verified each year from FY 2002 to FY 2006. Newly generated waste will be verified in the year it is received. 20% of the current inventory will be disposed of each year from FY 2002 to FY 2006. Newly generated waste will be disposed of in the year it is received. 175 m^3 of currently stored MLLW is expected to be reclassified as LLW and disposed of in the LLBGs in FY 2002 (80 m^3) and FY 2003 (95 m^3). Existing MLLW Trench capacity is assumed to be 22,900 m^3 of CH waste per trench. One cubic meter of RH waste is assumed to displace 5.725 m^3 of CH waste.
12	RH & Non-Standard Packages	RH & Non-Standard Packages will be treated beginning in 2016. The processing rate will be a constant quantity (171 m^3/yr) sufficient to process all waste by 2032.
13A	CH Inorganic Solids and Debris	10% of the waste will be verified at WRAP. Inventory waste will be verified over a 5-year period at a constant rate starting in 2002; newly generated waste and waste returning from Commercial Treatment Facilities will be verified in the year received or treated. CH Inorganic Solids and Debris will undergo non-thermal treatment beginning in 2003. The treatment rates will be a constant quantity (813 m^3/yr) sufficient to reduce the storage inventory to zero by 2012. (Note: At the time these assumptions were developed, the target was to reduce the CH MLLW inventory to zero by 2014; however, a constant treatment rate through 2014 results in a negative inventory for this waste stream. Therefore, the rate has been set to reduce the inventory to zero in 2012.) After 2012, wastes will be treated as generated. Treatment is assumed to double the waste volume for disposal. For Alternative Group B, this waste stream will be treated in a new waste processing facility. This facility is assumed to begin operating in 2008 and will process waste at a constant rate (1,479 m^3/yr) sufficient to reduce the storage inventory to zero by 2014. After 2014, wastes will be treated as generated. Treatment is assumed to double the waste volume for disposal.

Table B.2. (contd)

Stream Number	Description	Assumptions
13B	CH Organic Solids and Debris	10% of the waste will be verified at WRAP. Inventory waste will be verified over a 5-year period at a constant rate starting in 2002; newly generated waste and waste returning from Commercial Treatment Facilities will be verified in the year received or treated. CH Organic Solids and Debris will undergo thermal treatment beginning in 2003. The treatment rates will be a constant quantity (417 m^3/yr) sufficient to reduce the storage inventory to zero by 2014. After 2014, wastes will be treated as generated. Treatment is not expected to change the waste volume for disposal. For Alternative Group B, this waste stream will be treated in a new waste processing facility. This facility is assumed to begin operating in 2008 and will process waste at a constant rate (660 m^3/yr) sufficient to reduce the storage inventory to zero by 2014. After 2014, wastes will be treated as generated. Treatment is not expected to change the waste volume for disposal. (Note: The Hanford Site has an existing contract for thermal treatment requiring 120 m^3 of waste to be treated each year from 2003 to 2005. In all alternatives, this contract is assumed to be fulfilled.)
14	Elemental Lead	Elemental Lead will undergo non-thermal treatment beginning in 2003. The treatment rates will be a constant quantity (46 m^3/yr) sufficient to reduce the storage inventory to zero by 2014. After 2014, wastes will be treated as generated. Treatment is assumed to double the waste volume for disposal. For Alternative Group B, this waste stream will be treated in a new waste processing facility. This facility is assumed to begin operating in 2008 and will process waste at a constant rate (78 m^3/yr) sufficient to reduce the storage inventory to zero by 2014. After 2014, wastes will be treated as generated. Treatment is assumed to double the waste volume for disposal.
15	Elemental Mercury	Elemental Mercury will undergo non-thermal treatment beginning in 2003. The treatment rates will be a constant quantity (2 m^3/yr) sufficient to reduce the storage inventory to zero by 2014. After 2014, wastes will be treated as generated. Treatment is assumed to result in a 15 to 1 increase in the waste volume for disposal. For Alternative Group B, this waste stream will be treated in a new waste processing facility. This facility is assumed to begin operating in 2008 and will process waste at a constant rate (3 m^3/yr) sufficient to reduce the storage inventory to zero by 2014. After 2014, wastes will be treated as generated. Treatment is assumed to result in a 15 to 1 increase in the waste volume for disposal.
18	MLLW Trench Leachate	Leachate from the MLLW trenches will be collected and sent to the Effluent Treatment Facility for treatment and disposal through 2025. After 2025, pulse driers will be used to treat the leachate.

Table B.3. Assumptions for Management of Transuranic Waste

Stream Number	Description	Assumptions
NA	General Comments	All waste received after 2032 is assumed to be verified, certified, and packaged for shipment.
4	Waste in Trenches	TRU waste retrievably stored in the LLBG trenches is assumed to be retrieved from the LLBGs. Waste in drums will be moved to CWC for storage while waste in boxes and RH waste will be sent directly to the treatment facility as capacity becomes available. All waste will be shipped to WIPP for disposal. **Retrieval** The following assumptions were made regarding retrieval to estimate subsequent storage, processing, and disposition impacts. From 2002 to 2006, the retrieval rate is assumed to be 732 m^3 per year. From 2007 to 2014, the rate will increase to 1,361 m^3 per year. Although some boxes and RH waste are likely to be encountered throughout the retrieval efforts, to simplify the analysis it has been assumed that all CH drums are retrieved followed by all CH boxes and finally RH waste. CH drums will be moved to CWC for storage prior to processing. CH boxes and RH waste is assumed to be overpacked and stored in the retrieval trench until processing capacity is available. During retrieval the contents of the CH drums will be determined to be either LLW or TRU waste. 50% of this waste is expected to be reclassified as LLW and remain in the trench as disposed of waste. **Processing** Retrievably stored CH drums will be processed at a rate (338 m^3/yr) sufficient to work off the inventory by the startup of processing of non-standard TRU wastes in 2013. Drum processing will result in a LLW Cat 1 volume equal to 10% of the TRU volume. RH and non-standard TRU waste processing is expected to reduce the volume of TRU by approximately 10% and generate volumes of LLW and MLLW roughly 30% and 2% of the original volume respectively. A portion (approximately 30%) of the LLW generated during RH waste processing is assumed to be LLW Cat 3. RH and non-standard TRU waste will be processed starting in 2015 and waste in 2013 respectively. The processing rate will be a constant quantity (366 m^3/yr CH and 10 m^3/yr RH) sufficient to process all waste by 2032. A ramp up in capacity of one-third the first year and two-thirds the second was assumed for CH processing. No ramp up is assumed for RH as the facility will have experience with RH waste from processing the K Basins Sludge. **Shipment to WIPP** Waste is assumed to be shipped to WIPP in the year it is processed.

Table B.3. (contd)

Stream Number	Description	Assumptions
5	Waste in Caissons	TRU waste retrievably stored in Caissons is assumed to be retrieved and shipped directly to the processing facility. **Retrieval** The following assumptions were made regarding retrieval to estimate subsequent storage, processing, and disposition impacts. Caisson retrieval is assumed to occur from 2015 to 2018 at a rate of 6 m^3 per year. **Processing** Caisson wastes will be processed immediately after retrieval at a constant rate from 2015 to 2018. Processing will result in a 2 to 1 volume increase. **Shipment to WIPP** Waste is assumed to be shipped to WIPP in the year it is processed.
8	Commingled PCB Waste	Commingled PCB waste will be processed beginning in 2013. The processing rate will be a constant quantity (5 m^3/yr) sufficient to process all waste by 2032 with a ramp up in capacity of 1/3 the first year and 2/3 the second. Waste is assumed to be shipped to WIPP in the year it is processed.
9	Newly Generated and Existing CH Standard Containers	CH TRU waste in drums and SWBs will be stored in CWC awaiting certification and shipment to WIPP. Newly generated and existing drums in above ground storage will be processed at a constant rate through 2032 (197 m^3 NDE/NDA and 25 m^3 glovebox). SWBs will be processed as generated through 2007 (average 250 m^3/yr). After 2007, the rate will be constant at 801 m^3/yr. This rate will result in all TRU waste in SWBs being shipped to WIPP by 2032. 5% of drums assayed are assumed to be reclassified as LLW. 10% of newly generated drums and 35% of existing drums will require glovebox processing. Glovebox processing will result in a 10% volume increase. Waste is assumed to be shipped to WIPP in the year it is processed.
10A	Newly Generated and Existing CH Non-Standard Containers	CH waste in non-standard containers will be processed beginning in 2013. The processing rate will be a constant quantity (57 m^3/yr) sufficient to process all waste by 2032 with a ramp up in capacity of one-third the first year and two-thirds the second. Processing will result in a 5% increase in the volume of TRU and generate a volume of LLW equal to 20% of the original waste volume. Waste is assumed to be shipped to WIPP in the year it is processed.
10B	Newly Generated and Existing RH Waste	RH waste will be processed beginning in 2015. The processing rate will be a constant quantity (121 m^3/yr) sufficient to process all waste by 2032. No ramp up is assumed as the facility will have experience with RH waste from processing the K Basins Sludge. Processing will result in a 5% increase in the volume of TRU and generate a volume of LLW equal to 20% of the original waste volume. Waste is assumed to be shipped to WIPP in the year it is processed.
17	K Basins Sludge	K Basins Sludge wastes will be treated in 2013 and 2014. One-third of the waste will be treated in 2013 and two-thirds in 2014. Processing by macroencapsulation will result in a 3 to 1 volume increase. Waste is assumed to be shipped to WIPP in the year it is processed.

Table B.4. Assumptions for Management of Waste Treatment Plant Wastes

Stream Number	Description	Assumptions
21	Immobilized Low-Activity Waste	ILAW will be disposed of in the year it is received.
22	WTP Melters	WTP Melters will be disposed of in the year they are received.

B.4 Waste Volumes

Tables B.5 through B.14 summarize the waste volumes to be managed by waste stream under each of the alternatives for LLW, MLLW, TRU waste, and WTP wastes, respectively. Section 2.1 in the body of the EIS can be consulted for text descriptions of each waste stream, and Appendix C contains additional information regarding the development of the waste volumes.

Table B.5. Low-Level Waste Hanford Only Volumes (m^3)[a, b]

Stream Number	Stream Name	Inventory/ Disposed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2046	Total
1	LLW Cat 1	18,944	2,410	2,486	3,241	3,107	3,120	3,117	3,872	4,611	3,827	3,902	36,156	88,792
2	LLW Cat 3	2,773	546	547	573	561	551	534	534	349	345	1,513	30,782	39,607
3	GTC3	<1												<1
6	Non-Conforming	299	0	0	0	0	0	0	0	0	0	0	0	299
20	Previously Disposed	283,067	Not Applicable											283,067

(a) To obtain cubic yards, multiply by 1.31.
(b) Rounded to the nearest cubic meter in this table for calculational convenience; significant figures are not meant to indicate the accuracy of the numbers.

Table B.6. Low-Level Waste Lower Bound Volumes (m^3)[a, b]

Stream Number	Stream Name	Inventory/ Disposed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2046	Total
1	LLW Cat 1	18,944	3,429	4,290	4,181	3,770	4,241	3,493	4,241	4,998	4,196	4,275	47,825	107,883
2	LLW Cat 3	2,773	1,048	769	727	676	568	559	552	366	362	1,530	31,403	41,334
3	GTC3	<1												<1
6	Non-Conforming	299	0	0	0	0	0	0	0	0	0	0	0	299
20	Previously Disposed	283,067	Not Applicable											283,067

(a) To obtain cubic yards, multiply by 1.31.
(b) Rounded to the nearest cubic meter in this table for calculational convenience; significant figures are not meant to indicate the accuracy of the numbers.

Table B.7. Low-Level Waste Upper Bound Volumes (m^3)[a, b]

Stream Number	Stream Name	Inventory/ Disposed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2046	Total
1	LLW Cat 1	18,944	3,429	4,290	24,103	23,692	24,163	23,415	24,163	7,409	6,591	7,882	119,048	287,130
2	LLW Cat 3	2,773	1,048	769	2,905	2,854	2,747	2,737	2,730	630	624	1,925	39,190	60,933
3	GTC3	<1												<1
6	Non-Conforming	299	0	0	0	0	0	0	0	0	0	0	0	299
20	Previously Disposed	283,067	Not Applicable											283,067

(a) To obtain cubic yards, multiply by 1.31.
(b) Rounded to the nearest cubic meter in this table for calculational convenience; significant figures are not meant to indicate the accuracy of the numbers.

Table B.8. Mixed Low-Level Waste Hanford Only Volumes (m^3)[a, b]

Stream Number	Stream Name	Inventory/ Disposed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2046	Total
11	Treated & Ready for Disposal	2,112	704	142	691	1,183	863	1,111	1,612	2,164	2,136	2,613	12,726	28,054
12	RH & Non-Standard	65	175	136	127	111	97	43	56	112	118	123	1,743	2,904
13A	CH Inorganic Solids & Debris	3,172	402	416	440	426	377	329	368	385	381	688	12,724	20,108
13B	CH Organic Solids & Debris	2,553	235	196	249	190	187	160	171	201	190	153	2,241	6,727
14	Elemental Lead	445	9	9	10	10	11	8	9	10	9	6	65	600
15	Elemental Mercury	13	0	0	0	0	1	1	1	1	1	1	1	21
18	MLLW Leachate	Dependent on alternative chosen												

(a) To obtain cubic yards, multiply by 1.31.
(b) Rounded to the nearest cubic meter in this table for calculational convenience; significant figures are not meant to indicate the accuracy of the numbers.

Table B.9. Mixed Low-Level Waste Lower Bound Volumes (m^3)[a, b]

Stream Number	Stream Name	Inventory/ Disposed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2046	Total
11	Treated & Ready for Disposal	2,112	704	142	691	1,183	863	1,111	1,612	2,164	2,136	2,613	12,754	28,082
12	RH & Non-Standard	65	175	136	127	111	97	43	56	112	118	123	1,743	2,904
13A	CH Inorganic Solids & Debris	3,172	403	417	441	426	377	329	368	385	381	688	12,724	20,111
13B	CH Organic Solids & Debris	2,553	237	198	251	192	189	162	173	203	192	155	2,284	6,790
14	Elemental Lead	445	14	10	11	10	11	8	9	10	9	6	65	608
15	Elemental Mercury	13	0	0	0	0	1	1	1	1	1	1	1	21
18	MLLW Leachate	Dependent on alternative chosen												

(a) To obtain cubic yards, multiply by 1.31.
(b) Rounded to the nearest cubic meter in this table for calculational convenience; significant figures are not meant to indicate the accuracy of the numbers.

Table B.10. Mixed Low-Level Waste Upper Bound Volumes (m^3)[a, b]

Stream Number	Stream Name	Inventory/ Disposed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2046	Total
11	Treated & Ready for Disposal	2,112	704	142	20,190	20,683	20,363	20,610	21,112	3,685	3,441	3,920	51,457	168,419
12	RH & Non-Standard	65	175	136	127	111	97	43	56	112	118	123	1,743	2,904
13A	CH Inorganic Solids & Debris	3,172	403	417	441	426	377	329	368	385	381	688	12,724	20,111
13B	CH Organic Solids & Debris	2,553	237	198	251	192	189	162	173	203	192	155	2,284	6,790
14	Elemental Lead	445	14	10	11	10	11	8	9	10	9	6	65	608
15	Elemental Mercury	13	0	0	0	0	1	1	1	1	1	1	1	21
18	MLLW Leachate	Dependent on alternative chosen												

(a) To obtain cubic yards, multiply by 1.31.
(b) Rounded to the nearest cubic meter in this table for calculational convenience; significant figures are not meant to indicate the accuracy of the numbers.

Table B.11. Transuranic Waste Hanford Only Volumes (m^3)[a, b]

Stream Number	Stream Name	Inventory/ Disposed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2046	Total
4	Waste from Trenches	14,552	0	0	0	0	0	0	0	0	0	0	0	14,552
5	Waste from Caissons	23	0	0	0	0	0	0	0	0	0	0	0	23
8	Commingled PCB Waste	80	15	0	0	0	0	0	0	0	0	0	0	95
9	CH Standard Containers	849	414	424	587	486	752	896	1,519	1,518	1,503	1,438	17,334	27,719
10A	CH Non-Standard Containers	585	0	0	0	0	0	0	0	0	0	0	492	1,077
10B	RH Waste	46	250	130	130	131	130	64	72	72	180	158	794	2,157
17	K Basins Sludge	0	0	64	70	6	0	0	0	0	0	0	0	139

(a) To obtain cubic yards, multiply by 1.31.
(b) Rounded to nearest cubic meter in this table for calculational convenience; significant figures are not meant to indicate the accuracy of the numbers.

Table B.12. Transuranic Waste Lower Bound Volumes (m^3)[a, b]

Stream Number	Stream Name	Inventory/ Disposed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2046	Total
4	Waste from Trenches	14,552	0	0	0	0	0	0	0	0	0	0	0	14,552
5	Waste from Caissons	23	0	0	0	0	0	0	0	0	0	0	0	23
8	Commingled PCB Waste	80	15	0	0	0	0	0	0	0	0	0	0	95
9	CH Standard Containers	849	418	428	587	486	752	896	1,519	1,518	1,503	1,438	17,334	27,727
10A	CH Non-Standard Containers	585	0	0	0	0	0	0	0	0	0	0	492	1,077
10B	RH Waste	46	270	144	130	131	130	64	72	72	180	158	794	2,191
17	K Basins Sludge	0	0	64	70	6	0	0	0	0	0	0	0	139

(a) To obtain cubic yards, multiply by 1.31.
(b) Rounded to nearest cubic meter in this table for calculational convenience; significant figures are not meant to indicate the accuracy of the numbers.

Table B.13. Transuranic Waste Upper Bound Volumes (m^3)[a, b]

Stream Number	Stream Name	Inventory/ Disposed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2046	Total
4	Waste from Trenches	14,552	0	0	0	0	0	0	0	0	0	0	0	14,552
5	Waste from Caissons	23	0	0	0	0	0	0	0	0	0	0	0	23
8	Commingled PCB Waste	80	15	0	0	0	0	0	0	0	0	0	0	95
9	CH Standard Containers	849	418	428	821	720	986	1,130	1,753	1,518	1,503	1,438	17,334	28,897
10A	CH Non-Standard Containers	585	0	0	56	56	56	56	56	0	0	0	492	1,357
10B	RH Waste	46	270	144	140	141	140	74	82	72	180	158	794	2,241
17	K Basins Sludge	0	0	64	70	6	0	0	0	0	0	0	0	139

(a) To obtain cubic yards, multiply by 1.31.
(b) Rounded to nearest cubic meter in this table for calculational convenience; significant figures are not meant to indicate the accuracy of the numbers.

Table B.14. Waste Treatment Plant Waste Volumes (m^3)[a, b]

Stream Number	Stream Name	Inventory/ Disposed	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2046	Total
21	ILAW Packages	0	0	0	0	0	0	0	1,673	3,345	3,345	3,345	199,292	211,000
22	WTP Melters	0	0	0	0	0	0	0	0	175	350	350	5,950	6,825

(a) To obtain cubic yards, multiply by 1.31.
(b) Rounded to nearest cubic meter in this table for calculational convenience; significant figures are not meant to indicate the accuracy of the numbers.

B.5 Radionuclide Inventories

Tables B.15 through B.24 contain the inventory of long-lived mobile radionuclides in each of the major waste types or waste streams by the expected final disposal location for the various alternative groups. These radionuclides are of major interest for migration calculations.

In the cases of technetium and iodine, separate values are presented for wastes that will be placed directly in the soil and for wastes that are expected to be disposed of in a grout matrix. The grout matrix substantially reduces the mobility of these radionuclides.

Since 1996, Hanford disposal criteria has required Category 3 LLW to be disposed of either in an HIC or using in-trench grouting. Therefore, all technetium and iodine disposed of after 1996 Category 3 LLW have been assumed to be in a grout matrix.

MLLW is composed of a variety of waste streams. Some of the MLLW is expected to be encased in grout during treatment to meet land disposal restrictions and some will be disposed of in HICs or grouted in the trench to meet Hanford disposal criteria. The simplifying assumption was made that each MLLW waste stream is either entirely ungrouted, entirely grouted, or half of the volume is assumed to be grouted. The grouted and ungrouted volumes of each waste stream were associated with their annual disposal rates and their respective radionuclide concentrations to determine the grouted and ungrouted activities in the forecast MLLW. Then the grouted and ungrouted activities of all waste streams disposed of in a location were tallied for each nuclide. The grouted fractions assumed for each MLLW stream are as follows:

Stream 11 – Treated and Ready for Disposal: RH portion and all offsite waste grouted
Stream 12 – RH and Non-Standard Packages: 100% grouted
Stream 13A&B – CH Inorganic and Organic Solids and Debris: 50% grouted
Stream 14 – Elemental Lead: 100% Ungrouted
Stream 15 – Elemental Mercury: 100% Ungrouted

Table B.15. Inventory of Long-Lived Mobile Radionuclides in HSW for the Various Alternative Groups, Ci

LLW Previously Buried in LLBGs - Included in All Alternative Groups												
Radionuclide	**Pre-1970 LLW**		**Total**	**1970-1988 LLW**		**Total**	**1989-1995 LLW**		**Total**	**Area Totals**		**Total**
	200 E	**200 W**		**200 E**	**200 W**		**200 E**	**200 W**		**200 E**	**200 W**	
C-14	0	0	0	2.2E+2	3.9E+2	6.1E+2	5.1E+0	9.3E+0	1.4E+1	2.2E+2	4.0E+2	6.2E+2
Tc-99	5.2E-1	1.3E-1	6.5E-1	0	0	0	1.4E-1	4.7E-1	6.1E-1	6.6E-1	6.0E-1	1.3E+0
Grouted Tc-99	0	0	0	0	0	0	0	0	0	0	0	0
I-129	1.2E-3	1.7E-4	1.4E-3	1.9E-2	1.8E-3	2.0E-2	9.5E-5	3.1E-2	3.1E-2	2.0E-2	3.3E-2	5.3E-2
Grouted I-129	0	0	0	0	0	0	0	0	0	0	0	0
U-233	1.0E+1	0	1.0E+1	0	0	0	2.1E-5	6.5E-2	6.5E-2	1.0E+1	6.5E-2	1.0E+1
U-234	3.7E-1	1.4E+0	1.8E+0	3.1E-2	3.9E+1	3.9E+1	1.9E-3	5.8E+0	5.8E+0	4.0E-1	4.7E+1	4.7E+1
U-235	1.1E-2	4.4E-2	5.5E-2	2.6E-3	3.3E+0	3.3E+0	4.3E-4	1.3E+0	1.3E+0	1.4E-2	4.7E+0	4.7E+0
U-236	7.5E-3	3.0E-2	3.7E-2	0	0	0	1.9E-6	5.8E-3	5.8E-3	7.5E-3	3.5E-2	4.3E-2
U-238	2.7E-1	1.1E+0	1.3E+0	6.3E-2	2.8E+1	2.8E+1	1.9E-2	6.0E+1	6.0E+1	3.5E-1	9.0E+1	9.0E+1
Sum U-23x[a]	1.1E+1	2.6E+0	1.4E+1	9.6E-2	7.1E+1	7.1E+1	2.2E-2	6.7E+1	6.8E+1	1.1E+1	1.4E+2	1.5E+2

(a) Doses per unit activity for the listed uranium isotopes are sufficiently similar that it is often convenient to employ only the total uranium in some calculations. For that reason, the sum of the activity of individual uranium isotopes is also given in this and following inventory tabulations.

Table B.16. Inventory of Long-Lived Mobile Radionuclides in HSW for Alternative Group A, Ci (Sheet 1 of 4)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group A - LLW and MLLW in Deeper/Wider Trenches in 200E and 200W; Melters and ILAW near PUREX												
	Category 1 LLW						Category 3 LLW					
	1996 to 2007			2008 to 2046			1996 to 2007			2008 to 2046		
Radionuclide	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**
Hanford Only Waste Volume[a]												
C-14	0	3.3E+0	3.3E+0	0	1.3E+1	1.3E+1	0	1.5E-1	1.5E-1	0	4.4E-1	4.4E-1
Tc-99	0	3.0E-1	3.0E-1	0	1.1E+0	1.1E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	2.6E-3	2.6E-3	0	3.0E-3	3.0E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.4E-7	3.4E-7	0	5.0E+0	5.0E+0
U-233	0	1.0E-1	1.0E-1	0	3.7E-1	3.7E-1	0	9.8E-2	9.8E-2	0	3.0E-1	3.0E-1
U-234	0	1.7E-1	1.7E-1	0	6.1E-1	6.1E-1	0	1.2E+2	1.2E+2	0	3.7E+2	3.7E+2
U-235	0	3.6E-2	3.6E-2	0	1.3E-1	1.3E-1	0	3.5E+0	3.5E+0	0	1.1E+1	1.1E+1
U-236	0	4.0E-3	4.0E-3	0	1.5E-2	1.5E-2	0	1.6E+1	1.6E+1	0	4.8E+1	4.8E+1
U-238	0	4.1E-1	4.1E-1	0	1.5E+0	1.5E+0	0	2.0E+2	2.0E+2	0	6.0E+2	6.0E+2
Sum of U-23x	0	7.2E-1	7.2E-1	0	2.6E+0	2.6E+0	0	3.4E+2	3.4E+2	0	1.0E+3	1.0E+3
Lower Bound Waste Volume												
C-14	0	4.1E+0	4.1E+0	0	1.6E+1	1.6E+1	0	1.5E-1	1.5E-1	0	4.6E-1	4.6E-1
Tc-99	0	3.7E-1	3.7E-1	0	1.3E+0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	3.2E-3	3.2E-3	0	3.7E-3	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	0	5.0E+0	5.0E+0
U-233	0	1.3E-1	1.3E-1	0	4.5E-1	4.5E-1	0	1.0E-1	1.0E-1	0	3.1E-1	3.1E-1
U-234	0	2.1E-1	2.1E-1	0	7.5E-1	7.5E-1	0	1.3E+2	1.3E+2	0	3.9E+2	3.9E+2
U-235	0	4.3E-2	4.3E-2	0	1.6E-1	1.6E-1	0	3.7E+0	3.7E+0	0	1.1E+1	1.1E+1
U-236	0	4.9E-3	4.9E-3	0	1.8E-2	1.8E-2	0	1.7E+1	1.7E+1	0	5.0E+1	5.0E+1
U-238	0	5.0E-1	5.0E-1	0	1.8E+0	1.8E+0	0	2.1E+2	2.1E+2	0	6.2E+2	6.2E+2
Sum of U-23x	0	8.8E-1	8.8E-1	0	3.2E+0	3.2E+0	0	3.6E+2	3.6E+2	0	1.1E+3	1.1E+3

Table B.16. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group A - LLW and MLLW in Deeper/Wider Trenches in 200E and 200W; Melters and ILAW near PUREX												
	Category 1 LLW						**Category 3 LLW**					
	1996 to 2007			**2008 to 2046**			**1996 to 2007**			**2008 to 2046**		
Radionuclide	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**
Upper Bound Waste Volume												
C-14	0	5.2E+0	5.2E+0	0	1.6E+1	1.6E+1	0	3.5E-1	3.5E-1	0	1.5E+2	1.5E+2
Tc-99	0	4.0E-1	4.0E-1	0	1.3E+0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	3.2E-3	3.2E-3	0	3.7E-3	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	0	5.0E+0	5.0E+0
U-233	0	1.3E-1	1.3E-1	0	4.5E-1	4.5E-1	0	2.3E-1	2.3E-1	0	1.8E-1	1.8E-1
U-234	0	9.0E-1	9.0E-1	0	9.2E-1	9.2E-1	0	2.9E+2	2.9E+2	0	3.1E+2	3.1E+2
U-235	0	8.9E-2	8.9E-2	0	1.7E-1	1.7E-1	0	8.4E+0	8.4E+0	0	1.2E+1	1.2E+1
U-236	0	4.9E-3	4.9E-3	0	1.8E-2	1.8E-2	0	3.8E+1	3.8E+1	0	2.9E+1	2.9E+1
U-238	0	1.7E+0	1.7E+0	0	2.1E+0	2.1E+0	0	4.7E+2	4.7E+2	0	5.0E+2	5.0E+2
Sum of U-23x	0	2.8E+0	2.8E+0	0	3.6E+0	3.6E+0	0	8.1E+2	8.1E+2	0	8.6E+2	8.6E+2

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.16. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group A - LLW and MLLW in Deeper/Wider Trenches in 200E and 200W; Melters and ILAW near PUREX												
	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals Segregated			
	1996 to 2007			2008 to 2046								
Radionuclide	200 E	200 W	Total	200 E	200 W	Total	Near PUREX	Near PUREX	200 E	200 W	Total Segregated	Total HSW
Hanford Only Waste Volume[a]												
C-14	0	1.5E+0	1.5E+0	4.3E+0	0	4.3E+0	0	0	4.3E+0	1.8E+1	2.2E+1	6.4E+2
Tc-99	0	3.4E+0	3.4E+0	8.3E+0	0	8.3E+0	0	2.6E+4	2.6E+4	4.8E+0	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	1.6E+2	0	1.6E+2	3.9E+1	0	2.0E+2	3.3E+3	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	1.0E-1	0	1.0E-1	0	2.2E+1	2.2E+1	4.1E-2	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	1.3E+2	8.7E-1	1.3E+2	1.4E+2
U-234	0	5.4E+0	5.4E+0	1.6E+1	0	1.6E+1	4.6E-1	4.4E+1	6.1E+1	5.0E+2	5.6E+2	6.1E+2
U-235	0	8.7E-2	8.7E-2	2.6E-1	0	2.6E-1	1.9E-2	1.8E+0	2.1E+0	1.4E+1	1.7E+1	2.1E+1
U-236	0	1.0E-1	1.0E-1	3.0E-1	0	3.0E-1	1.7E-2	1.4E+0	1.7E+0	6.4E+1	6.6E+1	6.6E+1
U-238	0	1.4E+0	1.4E+0	4.0E+0	0	4.0E+0	4.1E-1	4.8E+1	5.3E+1	8.0E+2	8.5E+2	9.4E+2
Sum of U-23x	0	7.0E+0	7.0E+0	2.1E+1	0	2.1E+1	1.8E+0	2.3E+2	2.5E+2	1.4E+3	1.6E+3	1.8E+3
Lower Bound Waste Volume												
C-14	0	1.5E+0	1.5E+0	4.3E+0	0	4.3E+0	0	0	4.3E+0	2.2E+1	2.6E+1	6.5E+2
Tc-99	0	3.4E+0	3.4E+0	8.4E+0	0	8.4E+0	0	2.6E+4	2.6E+4	5.1E+0	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	1.6E+2	0	1.6E+2	3.9E+1	0	2.0E+2	3.3E+3	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	1.0E-1	0	1.0E-1	0	2.2E+1	2.2E+1	4.2E-2	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	1.3E+2	9.9E-1	1.3E+2	1.4E+2
U-234	0	5.5E+0	5.5E+0	1.6E+1	0	1.6E+1	4.6E-1	4.4E+1	6.1E+1	5.2E+2	5.9E+2	6.3E+2
U-235	0	8.7E-2	8.7E-2	2.6E-1	0	2.6E-1	1.9E-2	1.8E+0	2.1E+0	1.5E+1	1.7E+1	2.2E+1
U-236	0	1.0E-1	1.0E-1	3.0E-1	0	3.0E-1	1.7E-2	1.4E+0	1.7E+0	6.7E+1	6.9E+1	6.9E+1
U-238	0	1.4E+0	1.4E+0	4.0E+0	0	4.0E+0	4.1E-1	4.8E+1	5.3E+1	8.3E+2	8.9E+2	9.8E+2
Sum of U-23x	0	7.0E+0	7.0E+0	2.1E+1	0	2.1E+1	1.8E+0	2.3E+2	2.5E+2	1.4E+3	1.7E+3	1.8E+3

Table B.16. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group A - LLW and MLLW in Deeper/Wider Trenches in 200E and 200W; Melters and ILAW near PUREX												
	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals Segregated			
	1996 to 2007			2008 to 2046								
Radionuclide	200 E	200 W	Total	200 E	200 W	Total	Near PUREX	Near PUREX	200 E	200 W	Total Segregated	Total HSW
Upper Bound Waste Volume												
C-14	1.6E+0	1.1E+0	2.7E+0	5.7E+0	0	5.7E+0	0	0	7.3E+0	1.7E+2	1.7E+2	8.0E+2
Tc-99	1.4E+0	2.1E+0	3.5E+0	8.3E+0	0	8.3E+0	0	2.6E+4	2.6E+4	3.8E+0	2.6E+4	2.6E+4
Grouted Tc-99	1.2E+2	6.0E+1	1.8E+2	3.3E+2	0	3.3E+2	3.9E+1	0	5.0E+2	3.4E+3	3.9E+3	3.9E+3
I-129	1.7E-2	1.7E-2	3.4E-2	1.1E-1	0	1.1E-1	0	2.2E+1	2.2E+1	2.4E-2	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	2.2E-3	2.2E-3	4.4E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	1.3E+2	9.9E-1	1.3E+2	1.4E+2
U-234	2.3E+2	1.1E+2	3.3E+2	3.4E+2	0	3.4E+2	4.6E-1	4.4E+1	6.1E+2	7.2E+2	1.3E+3	1.4E+3
U-235	1.0E+1	4.8E+0	1.5E+1	1.5E+1	0	1.5E+1	1.9E-2	1.8E+0	2.6E+1	2.5E+1	5.2E+1	5.7E+1
U-236	4.9E-2	4.9E-2	9.7E-2	3.1E-1	0	3.1E-1	1.7E-2	1.4E+0	1.8E+0	6.7E+1	6.9E+1	6.9E+1
U-238	2.3E+2	1.1E+2	3.5E+2	3.4E+2	0	3.4E+2	4.1E-1	4.8E+1	6.3E+2	1.1E+3	1.7E+3	1.8E+3
Sum of U-23x	4.7E+2	2.3E+2	6.9E+2	7.0E+2	0	7.0E+2	1.8E+0	2.3E+2	1.4E+3	1.9E+3	3.3E+3	3.4E+3

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.17. Inventory of Long-Lived Mobile Radionuclides in HSW for Alternative Group B, Ci (Sheet 1 of 4)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group B - LLW and MLLW in Conventional Trenches in 200E and 200W; Melters in 200E; and ILAW in 200W												
Radionuclide	Category 1 LLW						Category 3 LLW					
	1996 to 2007			2008 to 2046			1996 to 2007			2008 to 2046		
	200 E	200 W	Total	200 E	200 W	Total	200 E	200 W	Total	200 E	200 W	Total
Hanford Only Waste Volume[a]												
C-14	1.2E-1	3.2E+0	3.3E+0	4.8E-1	1.2E+1	1.3E+1	5.6E-3	1.4E-1	1.5E-1	1.7E-2	4.3E-1	4.4E-1
Tc-99	1.1E-2	2.9E-1	3.0E-1	4.1E-2	1.0E+0	1.1E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	2.7E+0	6.9E+1	7.2E+1	1.2E+2	3.1E+3	3.2E+3
I-129	9.8E-5	2.5E-3	2.6E-3	1.1E-4	2.9E-3	3.0E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	1.3E-8	3.3E-7	3.3E-7	7.4E-8	5.0E+0	5.0E+0
U-233	3.9E-3	9.8E-2	1.0E-1	1.4E-2	3.6E-1	3.7E-1	3.7E-3	9.4E-2	9.8E-2	1.1E-2	2.9E-1	3.0E-1
U-234	6.4E-3	1.6E-1	1.7E-1	2.3E-2	5.9E-1	6.1E-1	4.7E+0	1.2E+2	1.2E+2	1.4E+1	3.6E+2	3.7E+2
U-235	1.3E-3	3.4E-2	3.6E-2	4.8E-3	1.2E-1	1.3E-1	1.3E-1	3.4E+0	3.5E+0	4.0E-1	1.0E+1	1.1E+1
U-236	1.5E-4	3.9E-3	4.0E-3	5.5E-4	1.4E-2	1.5E-2	6.0E-1	1.5E+1	1.6E+1	1.8E+0	4.6E+1	4.8E+1
U-238	1.5E-2	3.9E-1	4.1E-1	5.5E-2	1.4E+0	1.5E+0	7.5E+0	1.9E+2	2.0E+2	2.2E+1	5.8E+2	6.0E+2
Sum of U-23x	2.7E-2	6.9E-1	7.2E-1	9.7E-2	2.5E+0	2.6E+0	1.3E+1	3.3E+2	3.4E+2	3.9E+1	9.9E+2	1.0E+3
Lower Bound Waste Volume												
C-14	1.5E-1	3.9E+0	4.1E+0	5.9E-1	1.5E+1	1.6E+1	5.8E-3	1.5E-1	1.5E-1	1.7E-2	4.5E-1	4.6E-1
Tc-99	1.4E-2	3.5E-1	3.7E-1	5.0E-2	1.3E+0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	2.7E+0	6.9E+1	7.2E+1	1.2E+2	3.1E+3	3.2E+3
I-129	1.2E-4	3.1E-3	3.2E-3	1.4E-4	3.5E-3	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	1.3E-8	3.4E-7	3.5E-7	7.7E-8	5.0E+0	5.0E+0
U-233	4.7E-3	1.2E-1	1.2E-1	1.7E-2	4.4E-1	4.5E-1	3.8E-3	9.8E-2	1.0E-1	1.2E-2	3.0E-1	3.1E-1
U-234	7.8E-3	2.0E-1	2.1E-1	2.8E-2	7.2E-1	7.5E-1	4.9E+0	1.2E+2	1.3E+2	1.5E+1	3.7E+2	3.9E+2
U-235	1.6E-3	4.2E-2	4.3E-2	5.9E-3	1.5E-1	1.6E-1	1.4E-1	3.6E+0	3.7E+0	4.2E-1	1.1E+1	1.1E+1
U-236	1.9E-4	4.7E-3	4.9E-3	6.7E-4	1.7E-2	1.8E-2	6.3E-1	1.6E+1	1.7E+1	1.9E+0	4.8E+1	5.0E+1
U-238	1.9E-2	4.8E-1	4.9E-1	6.7E-2	1.7E+0	1.8E+0	7.8E+0	2.0E+2	2.1E+2	2.3E+1	6.0E+2	6.2E+2
Sum of U-23x	3.3E-2	8.4E-1	8.7E-1	1.2E-1	3.0E+0	3.2E+0	1.3E+1	3.4E+2	3.6E+2	4.0E+1	1.0E+3	1.1E+3

Table B.17. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group B - LLW and MLLW in Conventional Trenches in 200E and 200W; Melters in 200E; and ILAW in 200W												
Radionuclide	**Category 1 LLW**						**Category 3 LLW**					
	1996 to 2007			**2008 to 2046**			**1996 to 2007**			**2008 to 2046**		
	200 E	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**
Upper Bound Waste Volume												
C-14	7.2E-1	4.5E+0	5.2E+0	2.2E+0	1.4E+1	1.6E+1	1.3E-2	3.4E-1	3.5E-1	5.5E+0	1.4E+2	1.4E+2
Tc-99	5.5E-2	3.4E-1	4.0E-1	1.8E-1	1.2E+0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	2.7E+0	6.9E+1	7.2E+1	1.2E+2	3.1E+3	3.2E+3
I-129	4.4E-4	2.8E-3	3.2E-3	5.1E-4	3.2E-3	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	1.3E-8	3.4E-7	3.5E-7	7.7E-8	5.0E+0	5.0E+0
U-233	1.7E-2	1.1E-1	1.3E-1	6.2E-2	3.9E-1	4.5E-1	8.7E-3	2.2E-1	2.3E-1	6.8E-3	1.7E-1	1.8E-1
U-234	1.3E-1	7.8E-1	9.0E-1	1.3E-1	7.9E-1	9.2E-1	1.1E+1	2.8E+2	2.9E+2	1.2E+1	3.0E+2	3.1E+2
U-235	1.2E-2	7.6E-2	8.9E-2	2.3E-2	1.5E-1	1.7E-1	3.2E-1	8.1E+0	8.4E+0	4.5E-1	1.2E+1	1.2E+1
U-236	6.8E-4	4.2E-3	4.9E-3	2.5E-3	1.5E-2	1.8E-2	1.4E+0	3.7E+1	3.8E+1	1.1E+0	2.8E+1	2.9E+1
U-238	2.3E-1	1.4E+0	1.7E+0	2.9E-1	1.8E+0	2.1E+0	1.8E+1	4.5E+2	4.7E+2	1.9E+1	4.9E+2	5.0E+2
Sum of U-23x	3.8E-1	2.4E+0	2.8E+0	5.0E-1	3.1E+0	3.6E+0	3.1E+1	7.8E+2	8.1E+2	3.2E+1	8.2E+2	8.6E+2

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.17. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group B - LLW and MLLW in Conventional Trenches in 200E and 200W; Melters in 200E; and ILAW in 200W												
	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals Segregated		Total Segregated	Total HSW
	1996 to 2007			2008 to 2046								
Radionuclide	200 E	200 W	Total	200 E	200 W	Total	200 E	200W	200 E	200 W		
Hanford Only Waste Volume[a]												
C-14	0	1.1E+0	1.1E+0	4.7E+0	0	4.7E+0	0	0	4.9E+0	1.8E+1	2.2E+1	6.4E+2
Tc-99	0	2.0E+0	2.0E+0	9.8E+0	0	9.8E+0	0	2.6E+4	8.4E+0	2.6E+4	2.6E+4	2.6E+4
Grouted Tc-99	0	4.0E+0	4.0E+0	1.6E+2	0	1.6E+2	3.9E+1	0	3.2E+2	3.2E+3	3.5E+3	3.5E+3
I-129	0	2.5E-2	2.5E-2	1.1E-1	0	1.1E-1	0	2.2E+1	1.0E-1	2.2E+1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	0	3.3E-3	3.3E-3	1.5E-2	0	1.5E-2	8.5E-1	1.3E+2	9.0E-1	1.3E+2	1.3E+2	1.4E+2
U-234	0	3.9E+0	3.9E+0	1.8E+1	0	1.8E+1	4.6E-1	4.4E+1	3.5E+1	5.3E+2	5.6E+2	6.1E+2
U-235	0	6.3E-2	6.3E-2	2.8E-1	0	2.8E-1	1.9E-2	1.8E+0	8.2E-1	1.6E+1	1.7E+1	2.1E+1
U-236	0	7.3E-2	7.3E-2	3.3E-1	0	3.3E-1	1.7E-2	1.4E+0	2.7E+0	6.3E+1	6.6E+1	6.6E+1
U-238	0	9.8E-1	9.8E-1	4.4E+0	0	4.4E+0	4.1E-1	4.8E+1	3.4E+1	8.2E+2	8.5E+2	9.4E+2
Sum of U-23x	0	5.0E+0	5.0E+0	2.3E+1	0	2.3E+1	1.8E+0	2.3E+2	7.4E+1	1.6E+3	1.6E+3	1.8E+3
Lower Bound Waste Volume												
C-14	0	1.1E+0	1.1E+0	4.7E+0	0	4.7E+0	0	0	5.1E+0	2.1E+1	2.6E+1	6.5E+2
Tc-99	0	2.0E+0	2.0E+0	9.8E+0	0	9.8E+0	0	2.6E+4	8.4E+0	2.6E+4	2.6E+4	2.6E+4
Grouted Tc-99	0	4.0E+0	4.0E+0	1.6E+2	0	1.6E+2	3.9E+1	0	3.2E+2	3.2E+3	3.5E+3	3.5E+3
I-129	0	2.5E-2	2.5E-2	1.1E-1	0	1.1E-1	0	2.2E+1	1.0E-1	2.2E+1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	0	3.3E-3	3.3E-3	1.5E-2	0	1.5E-2	8.5E-1	1.3E+2	9.0E-1	1.3E+2	1.3E+2	1.4E+2
U-234	0	3.9E+0	3.9E+0	1.8E+1	0	1.8E+1	4.6E-1	4.4E+1	3.6E+1	5.5E+2	5.8E+2	6.3E+2
U-235	0	6.3E-2	6.3E-2	2.8E-1	0	2.8E-1	1.9E-2	1.8E+0	8.4E-1	1.6E+1	1.7E+1	2.2E+1
U-236	0	7.4E-2	7.4E-2	3.3E-1	0	3.3E-1	1.7E-2	1.4E+0	2.8E+0	6.6E+1	6.9E+1	6.9E+1
U-238	0	9.8E-1	9.8E-1	4.4E+0	0	4.4E+0	4.1E-1	4.8E+1	3.6E+1	8.5E+2	8.9E+2	9.8E+2
Sum of U-23x	0	5.1E+0	5.1E+0	2.3E+1	0	2.3E+1	1.8E+0	2.3E+2	7.6E+1	1.6E+3	1.7E+3	1.8E+3

Table B.17. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group B - LLW and MLLW in Conventional Trenches in 200E and 200W; Melters in 200E; and ILAW in 200W												
	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals Segregated		Total Segregated	Total HSW
	1996 to 2007			2008 to 2046								
Radionuclide	200 E	200 W	Total	200 E	200 W	Total	200 E	200W	200 E	200 W		
Upper Bound Waste Volume												
C-14	1.1E+0	8.8E-1	2.0E+0	6.4E+0	0	6.4E+0	0	0	1.6E+1	1.6E+2	1.7E+2	8.0E+2
Tc-99	1.2E-1	8.7E-1	9.9E-1	1.1E+1	0	1.1E+1	0	2.6E+4	9.9E+0	2.6E+4	2.6E+4	2.6E+4
Grouted Tc-99	1.3E+2	7.4E+1	2.0E+2	3.2E+2	0	3.2E+2	3.9E+1	0	6.2E+2	3.2E+3	3.9E+3	3.9E+3
I-129	4.7E-3	8.1E-3	1.3E-2	1.3E-1	0	1.3E-1	0	2.2E+1	1.2E-1	2.2E+1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	6.1E-4	1.1E-3	1.7E-3	1.7E-2	0	1.7E-2	8.5E-1	1.3E+2	9.6E-1	1.3E+2	1.3E+2	1.4E+2
U-234	2.4E+2	1.4E+2	3.7E+2	3.1E+2	0	3.1E+2	4.6E-1	4.4E+1	5.9E+2	7.4E+2	1.3E+3	1.4E+3
U-235	1.1E+1	6.0E+0	1.7E+1	1.3E+1	0	1.3E+1	1.9E-2	1.8E+0	2.5E+1	2.6E+1	5.2E+1	5.7E+1
U-236	1.4E-2	2.4E-2	3.7E-2	3.7E-1	0	3.7E-1	1.7E-2	1.4E+0	2.9E+0	6.6E+1	6.9E+1	6.9E+1
U-238	2.5E+2	1.4E+2	3.9E+2	3.1E+2	0	3.1E+2	4.1E-1	4.8E+1	6.1E+2	1.1E+3	1.7E+3	1.8E+3
Sum of U-23x	4.9E+2	2.8E+2	7.7E+2	6.4E+2	0	6.4E+2	1.8E+0	2.3E+2	1.2E+3	2.1E+3	3.3E+3	3.4E+3

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.18. Inventory of Long-Lived Mobile Radionuclides in HSW for Alternative Group C, Ci (Sheet 1 of 4)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group C - Single Expandable Trenches: LLW in 200W, MLLW in 200E, and ILAW near PUREX; Melters also near PUREX												
Radionuclide	**Category 1 LLW**						**Category 3 LLW**					
	1996 to 2007			**2008 to 2046**			**1996 to 2007**			**2008 to 2046**		
	200 E	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**
Hanford Only Waste Volume[(a)]												
C-14	0	3.3E+0	3.3E+0	0	1.3E+1	1.3E+1	0	1.5E-1	1.5E-1	0	4.4E-1	4.4E-1
Tc-99	0	3.0E-1	3.0E-1	0	1.1E+0	1.1E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	2.6E-3	2.6E-3	0	3.0E-3	3.0E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.4E-7	3.4E-7	0	5.0E+0	5.0E+0
U-233	0	1.0E-1	1.0E-1	0	3.7E-1	3.7E-1	0	9.8E-2	9.8E-2	0	3.0E-1	3.0E-1
U-234	0	1.7E-1	1.7E-1	0	6.1E-1	6.1E-1	0	1.2E+2	1.2E+2	0	3.7E+2	3.7E+2
U-235	0	3.6E-2	3.6E-2	0	1.3E-1	1.3E-1	0	3.5E+0	3.5E+0	0	1.1E+1	1.1E+1
U-236	0	4.0E-3	4.0E-3	0	1.5E-2	1.5E-2	0	1.6E+1	1.6E+1	0	4.8E+1	4.8E+1
U-238	0	4.1E-1	4.1E-1	0	1.5E+0	1.5E+0	0	2.0E+2	2.0E+2	0	6.0E+2	6.0E+2
Sum of U-23x	0	7.2E-1	7.2E-1	0	2.6E+0	2.6E+0	0	3.4E+2	3.4E+2	0	1.0E+3	1.0E+3
Lower Bound Waste Volume												
C-14	0	4.1E+0	4.1E+0	0	1.6E+1	1.6E+1	0	1.5E-1	1.5E-1	0	4.6E-1	4.6E-1
Tc-99	0	3.7E-1	3.7E-1	0	1.3E+0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	3.2E-3	3.2E-3	0	3.7E-3	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	0	5.0E+0	5.0E+0
U-233	0	1.3E-1	1.3E-1	0	4.5E-1	4.5E-1	0	1.0E-1	1.0E-1	0	3.1E-1	3.1E-1
U-234	0	2.1E-1	2.1E-1	0	7.5E-1	7.5E-1	0	1.3E+2	1.3E+2	0	3.9E+2	3.9E+2
U-235	0	4.3E-2	4.3E-2	0	1.6E-1	1.6E-1	0	3.7E+0	3.7E+0	0	1.1E+1	1.1E+1
U-236	0	4.9E-3	4.9E-3	0	1.8E-2	1.8E-2	0	1.7E+1	1.7E+1	0	5.0E+1	5.0E+1
U-238	0	5.0E-1	5.0E-1	0	1.8E+0	1.8E+0	0	2.1E+2	2.1E+2	0	6.2E+2	6.2E+2
Sum of U-23x	0	8.8E-1	8.8E-1	0	3.2E+0	3.2E+0	0	3.6E+2	3.6E+2	0	1.1E+3	1.1E+3

Table B.18. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group C - Single Expandable Trenches: LLW in 200W, MLLW in 200E, and ILAW near PUREX; Melters also near PUREX												
Radionuclide	**Category 1 LLW**						**Category 3 LLW**					
	1996 to 2007			**2008 to 2046**			**1996 to 2007**			**2008 to 2046**		
	200 E	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**
Upper Bound Waste Volume												
C-14	0	5.2E+0	5.2E+0	0	1.6E+1	1.6E+1	0	3.5E-1	3.5E-1	0	1.5E+2	1.5E+2
Tc-99	0	4.0E-1	4.0E-1	0	1.3E+0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	3.2E-3	3.2E-3	0	3.7E-3	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	0	5.0E+0	5.0E+0
U-233	0	1.3E-1	1.3E-1	0	4.5E-1	4.5E-1	0	2.3E-1	2.3E-1	0	1.8E-1	1.8E-1
U-234	0	9.0E-1	9.0E-1	0	9.2E-1	9.2E-1	0	2.9E+2	2.9E+2	0	3.1E+2	3.1E+2
U-235	0	8.9E-2	8.9E-2	0	1.7E-1	1.7E-1	0	8.4E+0	8.4E+0	0	1.2E+1	1.2E+1
U-236	0	4.9E-3	4.9E-3	0	1.8E-2	1.8E-2	0	3.8E+1	3.8E+1	0	2.9E+1	2.9E+1
U-238	0	1.7E+0	1.7E+0	0	2.1E+0	2.1E+0	0	4.7E+2	4.7E+2	0	5.0E+2	5.0E+2
Sum of U-23x	0	2.8E+0	2.8E+0	0	3.6E+0	3.6E+0	0	8.1E+2	8.1E+2	0	8.6E+2	8.6E+2

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.18. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group C - Single Expandable Trenches: LLW in 200W, MLLW in 200E, and ILAW near PUREX; Melters also near PUREX												
	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals Segregated			
	1996 to 2007			2008 to 2046								
Radionuclide	200 E	200 W	Total	200 E	200 W	Total	Near PUREX	Near PUREX	200 E	200 W	Total Segregated	Total HSW
Hanford Only Waste Volume[a]												
C-14	0	1.5E+0	1.5E+0	4.3E+0	0	4.3E+0	0	0	4.3E+0	1.8E+1	2.2E+1	6.4E+2
Tc-99	0	3.4E+0	3.4E+0	8.3E+0	0	8.3E+0	0	2.6E+4	2.6E+4	4.8E+0	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	1.6E+2	0	1.6E+2	3.9E+1	0	2.0E+2	3.3E+3	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	1.0E-1	0	1.0E-1	0	2.2E+1	2.2E+1	4.1E-2	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	1.3E+2	8.7E-1	1.3E+2	1.4E+2
U-234	0	5.4E+0	5.4E+0	1.6E+1	0	1.6E+1	4.6E-1	4.4E+1	6.1E+1	5.0E+2	5.6E+2	6.1E+2
U-235	0	8.7E-2	8.7E-2	2.6E-1	0	2.6E-1	1.9E-2	1.8E+0	2.1E+0	1.4E+1	1.7E+1	2.1E+1
U-236	0	1.0E-1	1.0E-1	3.0E-1	0	3.0E-1	1.7E-2	1.4E+0	1.7E+0	6.4E+1	6.6E+1	6.6E+1
U-238	0	1.4E+0	1.4E+0	4.0E+0	0	4.0E+0	4.1E-1	4.8E+1	5.3E+1	8.0E+2	8.5E+2	9.4E+2
Sum of U-23x	0	7.0E+0	7.0E+0	2.1E+1	0	2.1E+1	1.8E+0	2.3E+2	2.5E+2	1.4E+3	1.6E+3	1.8E+3
Lower Bound Waste Volume												
C-14	0	1.5E+0	1.5E+0	4.3E+0	0	4.3E+0	0	0	4.3E+0	2.2E+1	2.6E+1	6.5E+2
Tc-99	0	3.4E+0	3.4E+0	8.4E+0	0	8.4E+0	0	2.6E+4	2.6E+4	5.1E+0	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	1.6E+2	0	1.6E+2	3.9E+1	0	2.0E+2	3.3E+3	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	1.0E-1	0	1.0E-1	0	2.2E+1	2.2E+1	4.2E-2	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	1.3E+2	9.9E-1	1.3E+2	1.4E+2
U-234	0	5.5E+0	5.5E+0	1.6E+1	0	1.6E+1	4.6E-1	4.4E+1	6.1E+1	5.2E+2	5.9E+2	6.3E+2
U-235	0	8.7E-2	8.7E-2	2.6E-1	0	2.6E-1	1.9E-2	1.8E+0	2.1E+0	1.5E+1	1.7E+1	2.2E+1
U-236	0	1.0E-1	1.0E-1	3.0E-1	0	3.0E-1	1.7E-2	1.4E+0	1.7E+0	6.7E+1	6.9E+1	6.9E+1
U-238	0	1.4E+0	1.4E+0	4.0E+0	0	4.0E+0	4.1E-1	4.8E+1	5.3E+1	8.3E+2	8.9E+2	9.8E+2
Sum of U-23x	0	7.0E+0	7.0E+0	2.1E+1	0	2.1E+1	1.8E+0	2.3E+2	2.5E+2	1.4E+3	1.7E+3	1.8E+3

Table B.18. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group C - Single Expandable Trenches: LLW in 200W, MLLW in 200E, and ILAW near PUREX; Melters also near PUREX												
	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals Segregated			
	1996 to 2007			2008 to 2046								
Radionuclide	**200 E**	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**Near PUREX**	**Near PUREX**	**200 E**	**200 W**	**Total Segregated**	**Total HSW**
Upper Bound Waste Volume												
C-14	1.6E+0	1.1E+0	2.7E+0	5.7E+0	0	5.7E+0	0	0	7.3E+0	1.7E+2	1.7E+2	8.0E+2
Tc-99	1.4E+0	2.1E+0	3.5E+0	8.3E+0	0	8.3E+0	0	2.6E+4	2.6E+4	3.8E+0	2.6E+4	2.6E+4
Grouted Tc-99	1.2E+2	6.0E+1	1.8E+2	3.3E+2	0	3.3E+2	3.9E+1	0	5.0E+2	3.4E+3	3.9E+3	3.9E+3
I-129	1.7E-2	1.7E-2	3.4E-2	1.1E-1	0	1.1E-1	0	2.2E+1	2.2E+1	2.4E-2	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	2.2E-3	2.2E-3	4.4E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	1.3E+2	9.9E-1	1.3E+2	1.4E+2
U-234	2.3E+2	1.1E+2	3.3E+2	3.4E+2	0	3.4E+2	4.6E-1	4.4E+1	6.1E+2	7.2E+2	1.3E+3	1.4E+3
U-235	1.0E+1	4.8E+0	1.5E+1	1.5E+1	0	1.5E+1	1.9E-2	1.8E+0	2.6E+1	2.5E+1	5.2E+1	5.7E+1
U-236	4.9E-2	4.9E-2	9.7E-2	3.1E-1	0	3.1E-1	1.7E-2	1.4E+0	1.8E+0	6.7E+1	6.9E+1	6.9E+1
U-238	2.3E+2	1.1E+2	3.5E+2	3.4E+2	0	3.4E+2	4.1E-1	4.8E+1	6.3E+2	1.1E+3	1.7E+3	1.8E+3
Sum of U-23x	4.7E+2	2.3E+2	6.9E+2	7.0E+2	0	7.0E+2	1.8E+0	2.3E+2	1.4E+3	1.9E+3	3.3E+3	3.4E+3

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.19. Inventory of Long-Lived Mobile Radionuclides in HSW for Alternative Groups D_1 and D_2, Ci (Sheet 1 of 4)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group D_1. LLW, MLLW, ILAW, and Melters in a Lined Modular Facility near PUREX Alternative Group D_2. LLW, MLLW, ILAW, and Melters in a Lined Modular Facility in 200E LLBGs												
	Category 1 LLW						Category 3 LLW					
	1996 to 2007			2008 to 2046			1996 to 2007			2008 to 2046		
Radionuclide	200 E	200 W	Total	Near PUREX	200 W	Total	200 E	200 W	Total	Near PUREX	200 W	Total
Hanford Only Waste Volume[a]												
C-14	0	3.3E+0	3.3E+0	1.3E+1	0	1.3E+1	0	1.5E-1	1.5E-1	4.4E-1	0	4.4E-1
Tc-99	0	3.0E-1	3.0E-1	1.1E+0	0	1.1E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	3.2E+3	0	3.2E+3
I-129	0	2.6E-3	2.6E-3	3.0E-3	0	3.0E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.4E-7	3.4E-7	5.0E+0	0	5.0E+0
U-233	0	1.0E-1	1.0E-1	3.7E-1	0	3.7E-1	0	9.8E-2	9.8E-2	3.0E-1	0	3.0E-1
U-234	0	1.7E-1	1.7E-1	6.1E-1	0	6.1E-1	0	1.2E+2	1.2E+2	3.7E+2	0	3.7E+2
U-235	0	3.6E-2	3.6E-2	1.3E-1	0	1.3E-1	0	3.5E+0	3.5E+0	1.1E+1	0	1.1E+1
U-236	0	4.0E-3	4.0E-3	1.5E-2	0	1.5E-2	0	1.6E+1	1.6E+1	4.8E+1	0	4.8E+1
U-238	0	4.1E-1	4.1E-1	1.5E+0	0	1.5E+0	0	2.0E+2	2.0E+2	6.0E+2	0	6.0E+2
Sum of U-23x	0	7.2E-1	7.2E-1	2.6E+0	0	2.6E+0	0	3.4E+2	3.4E+2	1.0E+3	0	1.0E+3
Lower Bound Waste Volume												
C-14	0	4.1E+0	4.1E+0	1.6E+1	0	1.6E+1	0	1.5E-1	1.5E-1	4.6E-1	0	4.6E-1
Tc-99	0	3.7E-1	3.7E-1	1.3E+0	0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	3.2E+3	0	3.2E+3
I-129	0	3.2E-3	3.2E-3	3.7E-3	0	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	5.0E+0	0	5.0E+0
U-233	0	1.3E-1	1.3E-1	4.5E-1	0	4.5E-1	0	1.0E-1	1.0E-1	3.1E-1	0	3.1E-1
U-234	0	2.1E-1	2.1E-1	7.5E-1	0	7.5E-1	0	1.3E+2	1.3E+2	3.9E+2	0	3.9E+2
U-235	0	4.3E-2	4.3E-2	1.6E-1	0	1.6E-1	0	3.7E+0	3.7E+0	1.1E+1	0	1.1E+1
U-236	0	4.9E-3	4.9E-3	1.8E-2	0	1.8E-2	0	1.7E+1	1.7E+1	5.0E+1	0	5.0E+1
U-238	0	5.0E-1	5.0E-1	1.8E+0	0	1.8E+0	0	2.1E+2	2.1E+2	6.2E+2	0	6.2E+2
Sum of U-23x	0	8.8E-1	8.8E-1	3.2E+0	0	3.2E+0	0	3.6E+2	3.6E+2	1.1E+3	0	1.1E+3

Table B.19. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group D_1. LLW, MLLW, ILAW, and Melters in a Lined Modular Facility near PUREX Alternative Group D_2. LLW, MLLW, ILAW, and Melters in a Lined Modular Facility in 200E LLBGs												
	Category 1 LLW						**Category 3 LLW**					
	1996 to 2007			**2008 to 2046**			**1996 to 2007**			**2008 to 2046**		
Radionuclide	**200 E**	**200 W**	**Total**	**Near PUREX**	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**Near PUREX**	**200 W**	**Total**
Upper Bound Waste Volume												
C-14	0	5.2E+0	5.2E+0	1.6E+1	0	1.6E+1	0	3.5E-1	3.5E-1	1.5E+2	0	1.5E+2
Tc-99	0	4.0E-1	4.0E-1	1.3E+0	0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	3.2E+3	0	3.2E+3
I-129	0	3.2E-3	3.2E-3	3.7E-3	0	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	5.0E+0	0	5.0E+0
U-233	0	1.3E-1	1.3E-1	4.5E-1	0	4.5E-1	0	2.3E-1	2.3E-1	1.8E-1	0	1.8E-1
U-234	0	9.0E-1	9.0E-1	9.2E-1	0	9.2E-1	0	2.9E+2	2.9E+2	3.1E+2	0	3.1E+2
U-235	0	8.9E-2	8.9E-2	1.7E-1	0	1.7E-1	0	8.4E+0	8.4E+0	1.2E+1	0	1.2E+1
U-236	0	4.9E-3	4.9E-3	1.8E-2	0	1.8E-2	0	3.8E+1	3.8E+1	2.9E+1	0	2.9E+1
U-238	0	1.7E+0	1.7E+0	2.1E+0	0	2.1E+0	0	4.7E+2	4.7E+2	5.0E+2	0	5.0E+2
Sum of U-23x	0	2.8E+0	2.8E+0	3.6E+0	0	3.6E+0	0	8.1E+2	8.1E+2	8.6E+2	0	8.6E+2

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.19. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group D_1 - LLW, MLLW, ILAW, and Melters in a Lined Modular Facility near PUREX Alternative Group D_2 - LLW, MLLW, ILAW, and Melters in a Lined Modular Facility in 200E LLBGs												
	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals		Total Segregated	Total HSW
	1996 to 2007			2008 to 2046					Segregated			
Radionuclide	200 E	200 W	Total	200 E	200 W	Total	200 E	200 E	200 E	200 W		
Hanford Only Waste Volume[a]												
C-14	0	1.5E+0	1.5E+0	4.3E+0	0	4.3E+0	0	0	1.8E+1	4.9E+0	2.2E+1	6.4E+2
Tc-99	0	3.4E+0	3.4E+0	8.3E+0	0	8.3E+0	0	2.6E+4	2.6E+4	3.7E+0	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	1.6E+2	0	1.6E+2	3.9E+1	0	3.4E+3	7.7E+1	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	1.0E-1	0	1.0E-1	0	2.2E+1	2.2E+1	3.8E-2	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	5.0E+0	0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	1.3E+2	2.1E-1	1.3E+2	1.4E+2
U-234	0	5.4E+0	5.4E+0	1.6E+1	0	1.6E+1	4.6E-1	4.4E+1	4.3E+2	1.3E+2	5.6E+2	6.1E+2
U-235	0	8.7E-2	8.7E-2	2.6E-1	0	2.6E-1	1.9E-2	1.8E+0	1.3E+1	3.7E+0	1.7E+1	2.1E+1
U-236	0	1.0E-1	1.0E-1	3.0E-1	0	3.0E-1	1.7E-2	1.4E+0	5.0E+1	1.6E+1	6.6E+1	6.6E+1
U-238	0	1.4E+0	1.4E+0	4.0E+0	0	4.0E+0	4.1E-1	4.8E+1	6.5E+2	2.0E+2	8.5E+2	9.4E+2
Sum of U-23x	0	7.0E+0	7.0E+0	2.1E+1	0	2.1E+1	1.8E+0	2.3E+2	1.3E+3	3.5E+2	1.6E+3	1.8E+3
Lower Bound Waste Volume												
C-14	0	1.5E+0	1.5E+0	4.3E+0	0	4.3E+0	0	0	2.0E+1	5.7E+0	2.6E+1	6.5E+2
Tc-99	0	3.4E+0	3.4E+0	8.4E+0	0	8.4E+0	0	2.6E+4	2.6E+4	3.8E+0	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	1.6E+2	0	1.6E+2	3.9E+1	0	3.4E+3	7.7E+1	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	1.0E-1	0	1.0E-1	0	2.2E+1	2.2E+1	3.8E-2	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	5.0E+0	0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	1.3E+2	2.3E-1	1.3E+2	1.4E+2
U-234	0	5.5E+0	5.5E+0	1.6E+1	0	1.6E+1	4.6E-1	4.4E+1	4.5E+2	1.3E+2	5.9E+2	6.3E+2
U-235	0	8.7E-2	8.7E-2	2.6E-1	0	2.6E-1	1.9E-2	1.8E+0	1.3E+1	3.8E+0	1.7E+1	2.2E+1
U-236	0	1.0E-1	1.0E-1	3.0E-1	0	3.0E-1	1.7E-2	1.4E+0	5.2E+1	1.7E+1	6.9E+1	6.9E+1
U-238	0	1.4E+0	1.4E+0	4.0E+0	0	4.0E+0	4.1E-1	4.8E+1	6.8E+2	2.1E+2	8.9E+2	9.8E+2
Sum of U-23x	0	7.0E+0	7.0E+0	2.1E+1	0	2.1E+1	1.8E+0	2.3E+2	1.3E+3	3.6E+2	1.7E+3	1.8E+3

Table B.19. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046
Alternative Group D_1 - LLW, MLLW, ILAW, and Melters in a Lined Modular Facility near PUREX
Alternative Group D_2 - LLW, MLLW, ILAW, and Melters in a Lined Modular Facility in 200E LLBGs

Radionuclide	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals Segregated		Total Segregated	Total HSW
	1996 to 2007			2008 to 2046								
	200 E	200 W	Total	200 E	200 W	Total	200 E	200 E	200 E	200 W		
Upper Bound Waste Volume												
C-14	1.6E+0	1.1E+0	2.7E+0	5.7E+0	0	5.7E+0	0	0	1.7E+2	6.7E+0	1.7E+2	8.0E+2
Tc-99	1.4E+0	2.1E+0	3.5E+0	8.3E+0	0	8.3E+0	0	2.6E+4	2.6E+4	2.5E+0	2.6E+4	2.6E+4
Grouted Tc-99	1.2E+2	6.0E+1	1.8E+2	3.3E+2	0	3.3E+2	3.9E+1	0	3.7E+3	1.3E+2	3.9E+3	3.9E+3
I-129	1.7E-2	1.7E-2	3.4E-2	1.1E-1	0	1.1E-1	0	2.2E+1	2.2E+1	2.0E-2	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	5.0E+0	0	5.0E+0	5.0E+0
U-233	2.2E-3	2.2E-3	4.4E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	1.3E+2	3.6E-1	1.3E+2	1.4E+2
U-234	2.3E+2	1.1E+2	3.3E+2	3.4E+2	0	3.4E+2	4.6E-1	4.4E+1	9.2E+2	4.0E+2	1.3E+3	1.4E+3
U-235	1.0E+1	4.8E+0	1.5E+1	1.5E+1	0	1.5E+1	1.9E-2	1.8E+0	3.9E+1	1.3E+1	5.2E+1	5.7E+1
U-236	4.9E-2	4.9E-2	9.7E-2	3.1E-1	0	3.1E-1	1.7E-2	1.4E+0	3.1E+1	3.8E+1	6.9E+1	6.9E+1
U-238	2.3E+2	1.1E+2	3.5E+2	3.4E+2	0	3.4E+2	4.1E-1	4.8E+1	1.1E+3	5.9E+2	1.7E+3	1.8E+3
Sum of U-23x	4.7E+2	2.3E+2	6.9E+2	7.0E+2	0	7.0E+2	1.8E+0	2.3E+2	2.3E+3	1.0E+3	3.3E+3	3.4E+3

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.20. Inventory of Long-Lived Mobile Radionuclides in HSW for Alternative Group D_3, Ci (Sheet 1 of 4)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group D_3 - A Lined Modular Facility for LLW, MLLW, ILAW, and Melters at ERDF												
	Category 1 LLW						Category 3 LLW					
	1996 to 2007			2008 to 2046			1996 to 2007			2008 to 2046		
Radionuclide	200 E	200 W	Total	200 E	ERDF	Total	200 E	200 W	Total	200 E	ERDF	Total
Hanford Only Waste Volume[(a)]												
C-14	0	3.3E+0	3.3E+0	0	1.3E+1	1.3E+1	0	1.5E-1	1.5E-1	0	4.4E-1	4.4E-1
Tc-99	0	3.0E-1	3.0E-1	0	1.1E+0	1.1E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	2.6E-3	2.6E-3	0	3.0E-3	3.0E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.4E-7	3.4E-7	0	5.0E+0	5.0E+0
U-233	0	1.0E-1	1.0E-1	0	3.7E-1	3.7E-1	0	9.8E-2	9.8E-2	0	3.0E-1	3.0E-1
U-234	0	1.7E-1	1.7E-1	0	6.1E-1	6.1E-1	0	1.2E+2	1.2E+2	0	3.7E+2	3.7E+2
U-235	0	3.6E-2	3.6E-2	0	1.3E-1	1.3E-1	0	3.5E+0	3.5E+0	0	1.1E+1	1.1E+1
U-236	0	4.0E-3	4.0E-3	0	1.5E-2	1.5E-2	0	1.6E+1	1.6E+1	0	4.8E+1	4.8E+1
U-238	0	4.1E-1	4.1E-1	0	1.5E+0	1.5E+0	0	2.0E+2	2.0E+2	0	6.0E+2	6.0E+2
Sum of U-23x	0	7.2E-1	7.2E-1	0	2.6E+0	2.6E+0	0	3.4E+2	3.4E+2	0	1.0E+3	1.0E+3
Lower Bound Waste Volume												
C-14	0	4.1E+0	4.1E+0	0	1.6E+1	1.6E+1	0	1.5E-1	1.5E-1	0	4.6E-1	4.6E-1
Tc-99	0	3.7E-1	3.7E-1	0	1.3E+0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	3.2E-3	3.2E-3	0	3.7E-3	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	0	5.0E+0	5.0E+0
U-233	0	1.3E-1	1.3E-1	0	4.5E-1	4.5E-1	0	1.0E-1	1.0E-1	0	3.1E-1	3.1E-1
U-234	0	2.1E-1	2.1E-1	0	7.5E-1	7.5E-1	0	1.3E+2	1.3E+2	0	3.9E+2	3.9E+2
U-235	0	4.3E-2	4.3E-2	0	1.6E-1	1.6E-1	0	3.7E+0	3.7E+0	0	1.1E+1	1.1E+1
U-236	0	4.9E-3	4.9E-3	0	1.8E-2	1.8E-2	0	1.7E+1	1.7E+1	0	5.0E+1	5.0E+1
U-238	0	5.0E-1	5.0E-1	0	1.8E+0	1.8E+0	0	2.1E+2	2.1E+2	0	6.2E+2	6.2E+2
Sum of U-23x	0	8.8E-1	8.8E-1	0	3.2E+0	3.2E+0	0	3.6E+2	3.6E+2	0	1.1E+3	1.1E+3

Table B.20. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group D_3 - A Lined Modular Facility for LLW, MLLW, ILAW, and Melters at ERDF												
	Category 1 LLW						**Category 3 LLW**					
	1996 to 2007			**2008 to 2046**			**1996 to 2007**			**2008 to 2046**		
Radionuclide	**200 E**	**200 W**	**Total**	**200 E**	**ERDF**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**ERDF**	**Total**
Upper Bound Waste Volume												
C-14	0	5.2E+0	5.2E+0	0	1.6E+1	1.6E+1	0	3.5E-1	3.5E-1	0	1.5E+2	1.5E+2
Tc-99	0	4.0E-1	4.0E-1	0	1.3E+0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	3.2E-3	3.2E-3	0	3.7E-3	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	0	5.0E+0	5.0E+0
U-233	0	1.3E-1	1.3E-1	0	4.5E-1	4.5E-1	0	2.3E-1	2.3E-1	0	1.8E-1	1.8E-1
U-234	0	9.0E-1	9.0E-1	0	9.2E-1	9.2E-1	0	2.9E+2	2.9E+2	0	3.1E+2	3.1E+2
U-235	0	8.9E-2	8.9E-2	0	1.7E-1	1.7E-1	0	8.4E+0	8.4E+0	0	1.2E+1	1.2E+1
U-236	0	4.9E-3	4.9E-3	0	1.8E-2	1.8E-2	0	3.8E+1	3.8E+1	0	2.9E+1	2.9E+1
U-238	0	1.7E+0	1.7E+0	0	2.1E+0	2.1E+0	0	4.7E+2	4.7E+2	0	5.0E+2	5.0E+2
Sum of U-23x	0	2.8E+0	2.8E+0	0	3.6E+0	3.6E+0	0	8.1E+2	8.1E+2	0	8.6E+2	8.6E+2

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.20. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group D_3 - A Lined Modular Facility for LLW, MLLW, ILAW, and Melters at ERDF												
	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals		Total Segregated	Total HSW
	1996 to 2007			2008 to 2046					Segregated			
Radionuclide	200 E	200 W	Total	200 E	ERDF	Total	ERDF	ERDF	200 E	200 W		
Hanford Only Waste Volume[a]												
C-14	0	1.5E+0	1.5E+0	0	4.3E+0	4.3E+0	0	0	0	2.2E+1	2.2E+1	6.4E+2
Tc-99	0	3.4E+0	3.4E+0	0	8.3E+0	8.3E+0	0	2.6E+4	0	2.6E+4	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	0	1.6E+2	1.6E+2	3.9E+1	0	0	3.5E+3	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	0	1.0E-1	1.0E-1	0	2.2E+1	0	2.2E+1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	0	1.4E-2	1.4E-2	8.5E-1	1.3E+2	0	1.3E+2	1.3E+2	1.4E+2
U-234	0	5.4E+0	5.4E+0	0	1.6E+1	1.6E+1	4.6E-1	4.4E+1	0	5.6E+2	5.6E+2	6.1E+2
U-235	0	8.7E-2	8.7E-2	0	2.6E-1	2.6E-1	1.9E-2	1.8E+0	0	1.7E+1	1.7E+1	2.1E+1
U-236	0	1.0E-1	1.0E-1	0	3.0E-1	3.0E-1	1.7E-2	1.4E+0	0	6.6E+1	6.6E+1	6.6E+1
U-238	0	1.4E+0	1.4E+0	0	4.0E+0	4.0E+0	4.1E-1	4.8E+1	0	8.5E+2	8.5E+2	9.4E+2
Sum of U-23x	0	7.0E+0	7.0E+0	0	2.1E+1	2.1E+1	1.8E+0	2.3E+2	0	1.6E+3	1.6E+3	1.8E+3
Lower Bound Waste Volume												
C-14	0	1.5E+0	1.5E+0	0	4.3E+0	4.3E+0	0	0	0	2.6E+1	2.6E+1	6.5E+2
Tc-99	0	3.4E+0	3.4E+0	0	8.4E+0	8.4E+0	0	2.6E+4	0	2.6E+4	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	0	1.6E+2	1.6E+2	3.9E+1	0	0	3.5E+3	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	0	1.0E-1	1.0E-1	0	2.2E+1	0	2.2E+1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	0	1.4E-2	1.4E-2	8.5E-1	1.3E+2	0	1.3E+2	1.3E+2	1.4E+2
U-234	0	5.5E+0	5.5E+0	0	1.6E+1	1.6E+1	4.6E-1	4.4E+1	0	5.9E+2	5.9E+2	6.3E+2
U-235	0	8.7E-2	8.7E-2	0	2.6E-1	2.6E-1	1.9E-2	1.8E+0	0	1.7E+1	1.7E+1	2.2E+1
U-236	0	1.0E-1	1.0E-1	0	3.0E-1	3.0E-1	1.7E-2	1.4E+0	0	6.9E+1	6.9E+1	6.9E+1
U-238	0	1.4E+0	1.4E+0	0	4.0E+0	4.0E+0	4.1E-1	4.8E+1	0	8.9E+2	8.9E+2	9.8E+2
Sum of U-23x	0	7.0E+0	7.0E+0	0	2.1E+1	2.1E+1	1.8E+0	2.3E+2	0	1.7E+3	1.7E+3	1.8E+3

Table B.20. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group D_3 - A Lined Modular Facility for LLW, MLLW, ILAW, and Melters at ERDF												
	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals		Total Segregated	Total HSW
	1996 to 2007			2008 to 2046					Segregated			
Radionuclide	200 E	200 W	Total	200 E	ERDF	Total	ERDF	ERDF	200 E	200 W		
Upper Bound Waste Volume												
C-14	1.6E+0	1.1E+0	2.7E+0	0	5.7E+0	5.7E+0	0	0	1.6E+0	1.7E+2	1.7E+2	8.0E+2
Tc-99	1.4E+0	2.1E+0	3.5E+0	0	8.3E+0	8.3E+0	0	2.6E+4	1.4E+0	2.6E+4	2.6E+4	2.6E+4
Grouted Tc-99	1.2E+2	6.0E+1	1.8E+2	0	3.3E+2	3.3E+2	3.9E+1	0	1.2E+2	3.7E+3	3.9E+3	3.9E+3
I-129	1.7E-2	1.7E-2	3.4E-2	0	1.1E-1	1.1E-1	0	2.2E+1	1.7E-2	2.2E+1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	2.2E-3	2.2E-3	4.4E-3	0	1.4E-2	1.4E-2	8.5E-1	1.3E+2	2.2E-3	1.3E+2	1.3E+2	1.4E+2
U-234	2.3E+2	1.1E+2	3.3E+2	0	3.4E+2	3.4E+2	4.6E-1	4.4E+1	2.3E+2	1.1E+3	1.3E+3	1.4E+3
U-235	1.0E+1	4.8E+0	1.5E+1	0	1.5E+1	1.5E+1	1.9E-2	1.8E+0	1.0E+1	4.2E+1	5.2E+1	5.7E+1
U-236	4.9E-2	4.9E-2	9.7E-2	0	3.1E-1	3.1E-1	1.7E-2	1.4E+0	4.9E-2	6.9E+1	6.9E+1	6.9E+1
U-238	2.3E+2	1.1E+2	3.5E+2	0	3.4E+2	3.4E+2	4.1E-1	4.8E+1	2.3E+2	1.5E+3	1.7E+3	1.8E+3
Sum of U-23x	4.7E+2	2.3E+2	6.9E+2	0	7.0E+2	7.0E+2	1.8E+0	2.3E+2	4.7E+2	2.8E+3	3.3E+3	3.4E+3

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.21. Inventory of Long-Lived Mobile Radionuclides in HSW for Alternative Groups E_1 and E_2, Ci (Sheet 1 of 4)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group E_1 - Lined Modular Facilities for LLW and MLLW in 200E LLBGs, and for Melters and ILAW at ERDF Alternative Group E_2 - Lined Modular Facilities for LLW and MLLW near PUREX, and for Melters and ILAW at ERDF												
	Category 1 LLW						Category 3 LLW					
	1996 to 2007			2008 to 2046			1996 to 2007			2008 to 2046		
Radionuclide	200 E	200 W	Total	Near PUREX	200 W	Total	200 E	200 W	Total	Near PUREX	200 W	Total
Hanford Only Waste Volume[a]												
C-14	0	3.3E+0	3.3E+0	1.3E+1	0	1.3E+1	0	1.5E-1	1.5E-1	4.4E-1	0	4.4E-1
Tc-99	0	3.0E-1	3.0E-1	1.1E+0	0	1.1E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	3.2E+3	0	3.2E+3
I-129	0	2.6E-3	2.6E-3	3.0E-3	0	3.0E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.4E-7	3.4E-7	5.0E+0	0	5.0E+0
U-233	0	1.0E-1	1.0E-1	3.7E-1	0	3.7E-1	0	9.8E-2	9.8E-2	3.0E-1	0	3.0E-1
U-234	0	1.7E-1	1.7E-1	6.1E-1	0	6.1E-1	0	1.2E+2	1.2E+2	3.7E+2	0	3.7E+2
U-235	0	3.6E-2	3.6E-2	1.3E-1	0	1.3E-1	0	3.5E+0	3.5E+0	1.1E+1	0	1.1E+1
U-236	0	4.0E-3	4.0E-3	1.5E-2	0	1.5E-2	0	1.6E+1	1.6E+1	4.8E+1	0	4.8E+1
U-238	0	4.1E-1	4.1E-1	1.5E+0	0	1.5E+0	0	2.0E+2	2.0E+2	6.0E+2	0	6.0E+2
Sum of U-23x	0	7.2E-1	7.2E-1	2.6E+0	0	2.6E+0	0	3.4E+2	3.4E+2	1.0E+3	0	1.0E+3
Lower Bound Waste Volume												
C-14	0	4.1E+0	4.1E+0	1.6E+1	0	1.6E+1	0	1.5E-1	1.5E-1	4.6E-1	0	4.6E-1
Tc-99	0	3.7E-1	3.7E-1	1.3E+0	0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	3.2E+3	0	3.2E+3
I-129	0	3.2E-3	3.2E-3	3.7E-3	0	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	5.0E+0	0	5.0E+0
U-233	0	1.3E-1	1.3E-1	4.5E-1	0	4.5E-1	0	1.0E-1	1.0E-1	3.1E-1	0	3.1E-1
U-234	0	2.1E-1	2.1E-1	7.5E-1	0	7.5E-1	0	1.3E+2	1.3E+2	3.9E+2	0	3.9E+2
U-235	0	4.3E-2	4.3E-2	1.6E-1	0	1.6E-1	0	3.7E+0	3.7E+0	1.1E+1	0	1.1E+1
U-236	0	4.9E-3	4.9E-3	1.8E-2	0	1.8E-2	0	1.7E+1	1.7E+1	5.0E+1	0	5.0E+1
U-238	0	5.0E-1	5.0E-1	1.8E+0	0	1.8E+0	0	2.1E+2	2.1E+2	6.2E+2	0	6.2E+2
Sum of U-23x	0	8.8E-1	8.8E-1	3.2E+0	0	3.2E+0	0	3.6E+2	3.6E+2	1.1E+3	0	1.1E+3

Table B.21. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group E_1 - Lined Modular Facilities for LLW and MLLW in 200E LLBGs, and for Melters and ILAW at ERDF Alternative Group E_2 - Lined Modular Facilities for LLW and MLLW near PUREX, and for Melters and ILAW at ERDF												
	Category 1 LLW						**Category 3 LLW**					
	1996 to 2007			**2008 to 2046**			**1996 to 2007**			**2008 to 2046**		
Radionuclide	**200 E**	**200 W**	**Total**	**Near PUREX**	**200 W**	**Total**	**200 E**	**200 W**	**Total**	**Near PUREX**	**200 W**	**Total**
Upper Bound Waste Volume												
C-14	0	5.2E+0	5.2E+0	1.6E+1	0	1.6E+1	0	3.5E-1	3.5E-1	1.5E+2	0	1.5E+2
Tc-99	0	4.0E-1	4.0E-1	1.3E+0	0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	3.2E+3	0	3.2E+3
I-129	0	3.2E-3	3.2E-3	3.7E-3	0	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	5.0E+0	0	5.0E+0
U-233	0	1.3E-1	1.3E-1	4.5E-1	0	4.5E-1	0	2.3E-1	2.3E-1	1.8E-1	0	1.8E-1
U-234	0	9.0E-1	9.0E-1	9.2E-1	0	9.2E-1	0	2.9E+2	2.9E+2	3.1E+2	0	3.1E+2
U-235	0	8.9E-2	8.9E-2	1.7E-1	0	1.7E-1	0	8.4E+0	8.4E+0	1.2E+1	0	1.2E+1
U-236	0	4.9E-3	4.9E-3	1.8E-2	0	1.8E-2	0	3.8E+1	3.8E+1	2.9E+1	0	2.9E+1
U-238	0	1.7E+0	1.7E+0	2.1E+0	0	2.1E+0	0	4.7E+2	4.7E+2	5.0E+2	0	5.0E+2
Sum of U-23x	0	2.8E+0	2.8E+0	3.6E+0	0	3.6E+0	0	8.1E+2	8.1E+2	8.6E+2	0	8.6E+2

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.21. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group E_1 - Lined Modular Facilities for LLW and MLLW in 200E LLBGs, and for Melters and ILAW at ERDF Alternative Group E_2 - Lined Modular Facilities for LLW and MLLW near PUREX, and for Melters and ILAW at ERDF												
Radionuclide	**MLLW**						**Melter MLLW**	**ILAW (vitrified)**	**Area Totals Segregated**		**Total Segregated**	**Total HSW**
	1996 to 2007			**2008 to 2046**								
	200 E	**200 W**	**Total**	**Near PUREX**	**200 W**	**Total**	**ERDF**	**ERDF**	**200 E**	**200 W**		
Hanford Only Waste Volume[a]												
C-14	0	1.5E+0	1.5E+0	4.3E+0	0	4.3E+0	0	0	1.8E+1	4.9E+0	2.2E+1	6.4E+2
Tc-99	0	3.4E+0	3.4E+0	8.3E+0	0	8.3E+0	0	2.6E+4	9.4E+0	2.6E+4	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	1.6E+2	0	1.6E+2	3.9E+1	0	3.4E+3	1.2E+2	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	1.0E-1	0	1.0E-1	0	2.2E+1	1.1E-1	2.2E+1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	5.0E+0	0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	6.8E-1	1.3E+2	1.3E+2	1.4E+2
U-234	0	5.4E+0	5.4E+0	1.6E+1	0	1.6E+1	4.6E-1	4.4E+1	3.9E+2	1.7E+2	5.6E+2	6.1E+2
U-235	0	8.7E-2	8.7E-2	2.6E-1	0	2.6E-1	1.9E-2	1.8E+0	1.1E+1	5.5E+0	1.7E+1	2.1E+1
U-236	0	1.0E-1	1.0E-1	3.0E-1	0	3.0E-1	1.7E-2	1.4E+0	4.9E+1	1.8E+1	6.6E+1	6.6E+1
U-238	0	1.4E+0	1.4E+0	4.0E+0	0	4.0E+0	4.1E-1	4.8E+1	6.0E+2	2.5E+2	8.5E+2	9.4E+2
Sum of U-23x	0	7.0E+0	7.0E+0	2.1E+1	0	2.1E+1	1.8E+0	2.3E+2	1.1E+3	5.8E+2	1.6E+3	1.8E+3
Lower Bound Waste Volume												
C-14	0	1.5E+0	1.5E+0	4.3E+0	0	4.3E+0	0	0	2.0E+1	5.7E+0	2.6E+1	6.5E+2
Tc-99	0	3.4E+0	3.4E+0	8.4E+0	0	8.4E+0	0	2.6E+4	9.7E+0	2.6E+4	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	1.6E+2	0	1.6E+2	3.9E+1	0	3.4E+3	1.2E+2	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	1.0E-1	0	1.0E-1	0	2.2E+1	1.1E-1	2.2E+1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	5.0E+0	0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	7.8E-1	1.3E+2	1.3E+2	1.4E+2
U-234	0	5.5E+0	5.5E+0	1.6E+1	0	1.6E+1	4.6E-1	4.4E+1	4.1E+2	1.8E+2	5.9E+2	6.3E+2
U-235	0	8.7E-2	8.7E-2	2.6E-1	0	2.6E-1	1.9E-2	1.8E+0	1.2E+1	5.6E+0	1.7E+1	2.2E+1
U-236	0	1.0E-1	1.0E-1	3.0E-1	0	3.0E-1	1.7E-2	1.4E+0	5.1E+1	1.8E+1	6.9E+1	6.9E+1
U-238	0	1.4E+0	1.4E+0	4.0E+0	0	4.0E+0	4.1E-1	4.8E+1	6.3E+2	2.6E+2	8.9E+2	9.8E+2
Sum of U-23x	0	7.0E+0	7.0E+0	2.1E+1	0	2.1E+1	1.8E+0	2.3E+2	1.1E+3	5.9E+2	1.7E+3	1.8E+3

Table B.21. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group E_1 - Lined Modular Facilities for LLW and MLLW in 200E LLBGs, and for Melters and ILAW at ERDF Alternative Group E_2 - Lined Modular Facilities for LLW and MLLW near PUREX, and for Melters and ILAW at ERDF												
	MLLW						Melter MLLW	ILAW (vitrified)	Area Totals Segregated			
	1996 to 2007			2008 to 2046								
Radionuclide	200 E	200 W	Total	Near PUREX	200 W	Total	ERDF	ERDF	200 E	200 W	Total Segregated	Total HSW
Upper Bound Waste Volume												
C-14	1.6E+0	1.1E+0	2.7E+0	5.7E+0	0	5.7E+0	0	0	1.7E+2	6.7E+0	1.7E+2	8.0E+2
Tc-99	1.4E+0	2.1E+0	3.5E+0	8.3E+0	0	8.3E+0	0	2.6E+4	1.1E+1	2.6E+4	2.6E+4	2.6E+4
Grouted Tc-99	1.2E+2	6.0E+1	1.8E+2	3.3E+2	0	3.3E+2	3.9E+1	0	3.7E+3	1.7E+2	3.9E+3	3.9E+3
I-129	1.7E-2	1.7E-2	3.4E-2	1.1E-1	0	1.1E-1	0	2.2E+1	1.3E-1	2.2E+1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	5.0E+0	0	5.0E+0	5.0E+0
U-233	2.2E-3	2.2E-3	4.4E-3	1.4E-2	0	1.4E-2	8.5E-1	1.3E+2	6.5E-1	1.3E+2	1.3E+2	1.4E+2
U-234	2.3E+2	1.1E+2	3.3E+2	3.4E+2	0	3.4E+2	4.6E-1	4.4E+1	8.8E+2	4.5E+2	1.3E+3	1.4E+3
U-235	1.0E+1	4.8E+0	1.5E+1	1.5E+1	0	1.5E+1	1.9E-2	1.8E+0	3.7E+1	1.5E+1	5.2E+1	5.7E+1
U-236	4.9E-2	4.9E-2	9.7E-2	3.1E-1	0	3.1E-1	1.7E-2	1.4E+0	2.9E+1	4.0E+1	6.9E+1	6.9E+1
U-238	2.3E+2	1.1E+2	3.5E+2	3.4E+2	0	3.4E+2	4.1E-1	4.8E+1	1.1E+3	6.3E+2	1.7E+3	1.8E+3
Sum of U-23x	4.7E+2	2.3E+2	6.9E+2	7.0E+2	0	7.0E+2	1.8E+0	2.3E+2	2.0E+3	1.3E+3	3.3E+3	3.4E+3

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.22. Inventory of Long-Lived Mobile Radionuclides in HSW for Alternative Group E_3, Ci (Sheet 1 of 4)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group E_3 - Lined Modular Facilities for LLW and MLLW at ERDF, and for Melters and ILAW near PUREX												
Radionuclide	**Category 1 LLW**						**Category 3 LLW**					
	1996 to 2007			**2008 to 2046**			**1996 to 2007**			**2008 to 2046**		
	200 E	**200 W**	**Total**	**200 E**	**ERDF**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**ERDF**	**Total**
Hanford Only Waste Volume[(a)]												
C-14	0	3.3E+0	3.3E+0	0	1.3E+1	1.3E+1	0	1.5E-1	1.5E-1	0	4.4E-1	4.4E-1
Tc-99	0	3.0E-1	3.0E-1	0	1.1E+0	1.1E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	2.6E-3	2.6E-3	0	3.0E-3	3.0E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.4E-7	3.4E-7	0	5.0E+0	5.0E+0
U-233	0	1.0E-1	1.0E-1	0	3.7E-1	3.7E-1	0	9.8E-2	9.8E-2	0	3.0E-1	3.0E-1
U-234	0	1.7E-1	1.7E-1	0	6.1E-1	6.1E-1	0	1.2E+2	1.2E+2	0	3.7E+2	3.7E+2
U-235	0	3.6E-2	3.6E-2	0	1.3E-1	1.3E-1	0	3.5E+0	3.5E+0	0	1.1E+1	1.1E+1
U-236	0	4.0E-3	4.0E-3	0	1.5E-2	1.5E-2	0	1.6E+1	1.6E+1	0	4.8E+1	4.8E+1
U-238	0	4.1E-1	4.1E-1	0	1.5E+0	1.5E+0	0	2.0E+2	2.0E+2	0	6.0E+2	6.0E+2
Sum of U-23x	0	7.2E-1	7.2E-1	0	2.6E+0	2.6E+0	0	3.4E+2	3.4E+2	0	1.0E+3	1.0E+3
Lower Bound Waste Volume												
C-14	0	4.1E+0	4.1E+0	0	1.6E+1	1.6E+1	0	1.5E-1	1.5E-1	0	4.6E-1	4.6E-1
Tc-99	0	3.7E-1	3.7E-1	0	1.3E+0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	3.2E-3	3.2E-3	0	3.7E-3	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	0	5.0E+0	5.0E+0
U-233	0	1.3E-1	1.3E-1	0	4.5E-1	4.5E-1	0	1.0E-1	1.0E-1	0	3.1E-1	3.1E-1
U-234	0	2.1E-1	2.1E-1	0	7.5E-1	7.5E-1	0	1.3E+2	1.3E+2	0	3.9E+2	3.9E+2
U-235	0	4.3E-2	4.3E-2	0	1.6E-1	1.6E-1	0	3.7E+0	3.7E+0	0	1.1E+1	1.1E+1
U-236	0	4.9E-3	4.9E-3	0	1.8E-2	1.8E-2	0	1.7E+1	1.7E+1	0	5.0E+1	5.0E+1
U-238	0	5.0E-1	5.0E-1	0	1.8E+0	1.8E+0	0	2.1E+2	2.1E+2	0	6.2E+2	6.2E+2
Sum of U-23x	0	8.8E-1	8.8E-1	0	3.2E+0	3.2E+0	0	3.6E+2	3.6E+2	0	1.1E+3	1.1E+3

Table B.22. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group E_3 - Lined Modular Facilities for LLW and MLLW at ERDF, and for Melters and ILAW near PUREX												
Radionuclide	**Category 1 LLW**						**Category 3 LLW**					
	1996 to 2007			**2008 to 2046**			**1996 to 2007**			**2008 to 2046**		
	200 E	**200 W**	**Total**	**200 E**	**ERDF**	**Total**	**200 E**	**200 W**	**Total**	**200 E**	**ERDF**	**Total**
Upper Bound Waste Volume												
C-14	0	5.2E+0	5.2E+0	0	1.6E+1	1.6E+1	0	3.5E-1	3.5E-1	0	1.5E+2	1.5E+2
Tc-99	0	4.0E-1	4.0E-1	0	1.3E+0	1.3E+0	0	0	0	0	0	0
Grouted Tc-99	0	0	0	0	0	0	0	7.2E+1	7.2E+1	0	3.2E+3	3.2E+3
I-129	0	3.2E-3	3.2E-3	0	3.7E-3	3.7E-3	0	0	0	0	0	0
Grouted I-129	0	0	0	0	0	0	0	3.5E-7	3.5E-7	0	5.0E+0	5.0E+0
U-233	0	1.3E-1	1.3E-1	0	4.5E-1	4.5E-1	0	2.3E-1	2.3E-1	0	1.8E-1	1.8E-1
U-234	0	9.0E-1	9.0E-1	0	9.2E-1	9.2E-1	0	2.9E+2	2.9E+2	0	3.1E+2	3.1E+2
U-235	0	8.9E-2	8.9E-2	0	1.7E-1	1.7E-1	0	8.4E+0	8.4E+0	0	1.2E+1	1.2E+1
U-236	0	4.9E-3	4.9E-3	0	1.8E-2	1.8E-2	0	3.8E+1	3.8E+1	0	2.9E+1	2.9E+1
U-238	0	1.7E+0	1.7E+0	0	2.1E+0	2.1E+0	0	4.7E+2	4.7E+2	0	5.0E+2	5.0E+2
Sum of U-23x	0	2.8E+0	2.8E+0	0	3.6E+0	3.6E+0	0	8.1E+2	8.1E+2	0	8.6E+2	8.6E+2

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.22. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group E_3 - Lined Modular Facilities for LLW and MLLW at ERDF, and for Melters and ILAW near PUREX												
	MLLW						Melter	ILAW (vitrified)	Area Totals Segregated			
	1996 to 2007			2008 to 2046								
Radionuclide	200 E	200 W	Total	200 E	ERDF	Total	Near PUREX	Near PUREX	200 E	200 W	Total Segregated	Total HSW
Hanford Only Waste Volume[a]												
C-14	0	1.5E+0	1.5E+0	0	4.3E+0	4.3E+0	0	0	0	2.2E+1	2.2E+1	6.4E+2
Tc-99	0	3.4E+0	3.4E+0	0	8.3E+0	8.3E+0	0	2.6E+4	2.6E+4	1.3E+1	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	0	1.6E+2	1.6E+2	3.9E+1	0	3.9E+1	3.5E+3	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	0	1.0E-1	1.0E-1	0	2.2E+1	2.2E+1	1.4E-1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	0	1.4E-2	1.4E-2	8.5E-1	1.3E+2	1.3E+2	8.9E-1	1.3E+2	1.4E+2
U-234	0	5.4E+0	5.4E+0	0	1.6E+1	1.6E+1	4.6E-1	4.4E+1	4.5E+1	5.2E+2	5.6E+2	6.1E+2
U-235	0	8.7E-2	8.7E-2	0	2.6E-1	2.6E-1	1.9E-2	1.8E+0	1.8E+0	1.5E+1	1.7E+1	2.1E+1
U-236	0	1.0E-1	1.0E-1	0	3.0E-1	3.0E-1	1.7E-2	1.4E+0	1.4E+0	6.5E+1	6.6E+1	6.6E+1
U-238	0	1.4E+0	1.4E+0	0	4.0E+0	4.0E+0	4.1E-1	4.8E+1	4.9E+1	8.0E+2	8.5E+2	9.4E+2
Sum of U-23x	0	7.0E+0	7.0E+0	0	2.1E+1	2.1E+1	1.8E+0	2.3E+2	2.3E+2	1.4E+3	1.6E+3	1.8E+3
Lower Bound Waste Volume												
C-14	0	1.5E+0	1.5E+0	0	4.3E+0	4.3E+0	0	0	0	2.6E+1	2.6E+1	6.5E+2
Tc-99	0	3.4E+0	3.4E+0	0	8.4E+0	8.4E+0	0	2.6E+4	2.6E+4	1.3E+1	2.6E+4	2.6E+4
Grouted Tc-99	0	4.9E+0	4.9E+0	0	1.6E+2	1.6E+2	3.9E+1	0	3.9E+1	3.5E+3	3.5E+3	3.5E+3
I-129	0	3.5E-2	3.5E-2	0	1.0E-1	1.0E-1	0	2.2E+1	2.2E+1	1.5E-1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	0	4.6E-3	4.6E-3	0	1.4E-2	1.4E-2	8.5E-1	1.3E+2	1.3E+2	1.0E+0	1.3E+2	1.4E+2
U-234	0	5.5E+0	5.5E+0	0	1.6E+1	1.6E+1	4.6E-1	4.4E+1	4.5E+1	5.4E+2	5.9E+2	6.3E+2
U-235	0	8.7E-2	8.7E-2	0	2.6E-1	2.6E-1	1.9E-2	1.8E+0	1.8E+0	1.5E+1	1.7E+1	2.2E+1
U-236	0	1.0E-1	1.0E-1	0	3.0E-1	3.0E-1	1.7E-2	1.4E+0	1.4E+0	6.7E+1	6.9E+1	6.9E+1
U-238	0	1.4E+0	1.4E+0	0	4.0E+0	4.0E+0	4.1E-1	4.8E+1	4.9E+1	8.4E+2	8.9E+2	9.8E+2
Sum of U-23x	0	7.0E+0	7.0E+0	0	2.1E+1	2.1E+1	1.8E+0	2.3E+2	2.3E+2	1.5E+3	1.7E+3	1.8E+3

Table B.22. (contd)

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 Alternative Group E_3 - Lined Modular Facilities for LLW and MLLW at ERDF, and for Melters and ILAW near PUREX												
	MLLW						Melter	ILAW (vitrified)	Area Totals Segregated			
	1996 to 2007			2008 to 2046								
Radionuclide	200 E	200 W	Total	200 E	ERDF	Total	Near PUREX	Near PUREX	200 E	200 W	Total Segregated	Total HSW
Upper Bound Waste Volume												
C-14	1.6E+0	1.1E+0	2.7E+0	0	5.7E+0	5.7E+0	0	0	1.6E+0	1.7E+2	1.7E+2	8.0E+2
Tc-99	1.4E+0	2.1E+0	3.5E+0	0	8.3E+0	8.3E+0	0	2.6E+4	2.6E+4	1.2E+1	2.6E+4	2.6E+4
Grouted Tc-99	1.2E+2	6.0E+1	1.8E+2	0	3.3E+2	3.3E+2	3.9E+1	0	1.6E+2	3.7E+3	3.9E+3	3.9E+3
I-129	1.7E-2	1.7E-2	3.4E-2	0	1.1E-1	1.1E-1	0	2.2E+1	2.2E+1	1.3E-1	2.2E+1	2.2E+1
Grouted I-129	0	0	0	0	0	0	0	0	0	5.0E+0	5.0E+0	5.0E+0
U-233	2.2E-3	2.2E-3	4.4E-3	0	1.4E-2	1.4E-2	8.5E-1	1.3E+2	1.3E+2	1.0E+0	1.3E+2	1.4E+2
U-234	2.3E+2	1.1E+2	3.3E+2	0	3.4E+2	3.4E+2	4.6E-1	4.4E+1	2.7E+2	1.1E+3	1.3E+3	1.4E+3
U-235	1.0E+1	4.8E+0	1.5E+1	0	1.5E+1	1.5E+1	1.9E-2	1.8E+0	1.2E+1	4.0E+1	5.2E+1	5.7E+1
U-236	4.9E-2	4.9E-2	9.7E-2	0	3.1E-1	3.1E-1	1.7E-2	1.4E+0	1.5E+0	6.7E+1	6.9E+1	6.9E+1
U-238	2.3E+2	1.1E+2	3.5E+2	0	3.4E+2	3.4E+2	4.1E-1	4.8E+1	2.8E+2	1.4E+3	1.7E+3	1.8E+3
Sum of U-23x	4.7E+2	2.3E+2	6.9E+2	0	7.0E+2	7.0E+2	1.8E+0	2.3E+2	7.0E+2	2.6E+3	3.3E+3	3.4E+3

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.23. Inventory of Long-Lived Mobile Radionuclides in HSW for the No Action Alternative, Ci

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 No Action Alternative - LLW in conventional design trenches (conforming LLW only) and MLLW in existing trenches only; remainder of LLW and MLLW stored at CWC; melters stored on concrete pads at CWC; ILAW disposed of in concrete vaults near PUREX													
	Category 1 LLW			Category 3 LLW			MLLW	ILAW (vitrified)	Area Totals				
	1996 to 2046			1996 to 2046			1996-2046		Segregated				
Radionuclide	200 E	200 W	Total	200 E	200 W	Total	200 W	Near PUREX	200 E	200 W	Total Segregated	In Storage	Total HSW
Hanford Only Volume[a]													
C-14	5.9E-1	1.5E+1	1.6E+1	2.2E-2	5.7E-1	5.9E-1	7.5E-1	0	6.1E-1	1.7E+1	1.7E+1	5.3E+0	6.4E+2
Tc-99	5.0E-2	1.3E+0	1.3E+0	0	0	0	9.6E-1	2.6E+4	2.6E+4	2.3E+0	2.6E+4	1.1E+1	2.6E+4
Grouted Tc-99	0	0	0	1.3E+2	3.2E+3	3.3E+3	3.3E+0	0	1.3E+2	3.2E+3	3.3E+3	2.0E+2	3.5E+3
I-129	2.0E-4	5.2E-3	5.4E-3	8.6E-8	2.2E-6	2.3E-6	1.8E-2	2.2E+1	2.2E+1	2.3E-2	2.2E+1	1.2E-1	2.2E+1
Grouted I-129	0	0	0	0	5.0E+0	5.0E+0	0	0	0	5.0E+0	5.0E+0	0	5.0E+0
U-233	1.8E-2	4.6E-1	4.7E-1	1.5E-2	3.8E-1	3.9E-1	2.5E-3	1.3E+2	1.3E+2	8.4E-1	1.3E+2	8.7E-1	1.4E+2
U-234	2.9E-2	7.5E-1	7.8E-1	1.9E+1	4.8E+2	5.0E+2	2.8E+0	4.4E+1	6.3E+1	4.8E+2	5.4E+2	2.0E+1	6.1E+2
U-235	6.2E-3	1.6E-1	1.6E-1	5.3E-1	1.4E+1	1.4E+1	4.5E-2	1.8E+0	2.3E+0	1.4E+1	1.6E+1	3.5E-1	2.1E+1
U-236	7.0E-4	1.8E-2	1.9E-2	2.4E+0	6.2E+1	6.4E+1	5.2E-2	1.4E+0	3.8E+0	6.2E+1	6.6E+1	4.5E-1	6.6E+1
U-238	7.0E-2	1.8E+0	1.9E+0	3.0E+1	7.7E+2	8.0E+2	7.0E-1	4.8E+1	7.8E+1	7.7E+2	8.5E+2	5.8E+0	9.4E+2
Sum of U-23x	1.2E-1	3.2E+0	3.3E+0	5.2E+1	1.3E+3	1.4E+3	3.6E+0	2.3E+2	2.8E+2	1.3E+3	1.6E+3	2.7E+1	1.8E+3
Lower Bound Waste Volume													
C-14	7.2E-1	1.9E+1	1.9E+1	2.3E-2	5.9E-1	6.1E-1	7.5E-1	0	7.4E-1	2.0E+1	2.1E+1	5.4E+0	6.5E+2
Tc-99	6.1E-2	1.6E+0	1.6E+0	0	0	0	9.7E-1	2.6E+4	2.6E+4	2.5E+0	2.6E+4	1.1E+1	2.6E+4
Grouted Tc-99	0	0	0	1.3E+2	3.2E+3	3.3E+3	3.4E+0	0	1.3E+2	3.2E+3	3.3E+3	2.0E+2	3.5E+3
I-129	2.5E-4	6.4E-3	6.6E-3	9.0E-8	2.3E-6	2.4E-6	1.8E-2	2.2E+1	2.2E+1	2.4E-2	2.2E+1	1.2E-1	2.2E+1
Grouted I-129	0	0	0	0	5.0E+0	5.0E+0	0	0	0	5.0E+0	5.0E+0	0	5.0E+0
U-233	2.2E-2	5.6E-1	5.8E-1	1.5E-2	4.0E-1	4.1E-1	2.5E-3	1.3E+2	1.3E+2	9.5E-1	1.3E+2	8.7E-1	1.4E+2
U-234	3.6E-2	9.2E-1	9.5E-1	1.9E+1	5.0E+2	5.2E+2	2.8E+0	4.4E+1	6.4E+1	5.0E+2	5.7E+2	2.0E+1	6.3E+2
U-235	7.5E-3	1.9E-1	2.0E-1	5.6E-1	1.4E+1	1.5E+1	4.5E-2	1.8E+0	2.4E+0	1.4E+1	1.7E+1	3.5E-1	2.2E+1
U-236	8.5E-4	2.2E-2	2.3E-2	2.5E+0	6.4E+1	6.7E+1	5.2E-2	1.4E+0	3.9E+0	6.4E+1	6.8E+1	4.6E-1	6.9E+1
U-238	8.6E-2	2.2E+0	2.3E+0	3.1E+1	8.0E+2	8.3E+2	7.0E-1	4.8E+1	8.0E+1	8.0E+2	8.8E+2	5.9E+0	9.8E+2
Sum of U-23x	1.5E-1	3.9E+0	4.0E+0	5.4E+1	1.4E+3	1.4E+3	3.6E+0	2.3E+2	2.8E+2	1.4E+3	1.7E+3	2.7E+1	1.8E+3

(a) For same locations: 0.82% of Lower Bound volume [LBV] Cat 1 LLW; 0.96% of LBV Cat 3 LLW [except Tc-99 & I-129 same as LBV]; 0.996% of MLLW LBV.

Table B.24a. Inventory of MLLW as Soil and Grouted-Equivalent Fractions for Alternative Groups A, C, D, and E, Ci

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 - Details for MLLW										
	MLLW in SOIL					MLLW GROUTED – EQUIVALENT				
	1996 to 2007			2008 to 2046	TOTAL	1996 to 2007			2008 to 2046	TOTAL
Radionuclide	200 E	200 W	Sub-Total	Location[(a)]		200 E	200 W	Sub-Total	Location[(a)]	
Hanford Only Volume										
C-14	0	6.0E-1	6.0E-1	1.5E+0	2.1E+0	0	8.6E-1	8.6E-1	2.9E+0	3.7E+0
Tc-99	0	3.4E+0	3.4E+0	8.3E+0	1.2E+1	0	4.9E+0	4.9E+0	1.6E+2	1.6E+2
I-129	0	1.4E-2	1.4E-2	3.5E-2	5.0E-2	0	2.1E-2	2.1E-2	6.9E-2	8.9E-2
U-233	0	2.0E-3	2.0E-3	4.7E-3	6.6E-3	0	2.7E-3	2.7E-3	8.9E-3	1.2E-2
U-234	0	2.2E+0	2.2E+0	5.4E+0	7.7E+0	0	3.2E+0	3.2E+0	1.1E+1	1.4E+1
U-235	0	3.6E-2	3.6E-2	8.7E-2	1.2E-1	0	5.1E-2	5.1E-2	1.7E-1	2.2E-1
U-236	0	4.2E-2	4.2E-2	1.0E-1	1.4E-1	0	6.0E-2	6.0E-2	2.0E-1	2.6E-1
U-238	0	5.6E-1	5.6E-1	1.4E+0	1.9E+0	0	7.9E-1	7.9E-1	2.6E+0	3.4E+0
Sum U-23x	0	2.9E+0	2.9E+0	7.0E+0	9.9E+0	0	4.1E+0	4.1E+0	1.4E+1	1.8E+1
Lower Bound Waste Volume										
C-14	0	6.0E-1	6.0E-1	1.5E+0	2.1E+0	0	8.6E-1	8.6E-1	2.9E+0	3.7E+0
Tc-99	0	3.4E+0	3.4E+0	8.4E+0	1.2E+1	0	4.9E+0	4.9E+0	1.6E+2	1.6E+2
I-129	0	1.5E-2	1.5E-2	3.5E-2	5.0E-2	0	2.1E-2	2.1E-2	6.9E-2	8.9E-2
U-233	0	2.0E-3	2.0E-3	4.7E-3	6.6E-3	0	2.7E-3	2.7E-3	8.9E-3	1.2E-2
U-234	0	2.2E+0	2.2E+0	5.5E+0	7.7E+0	0	3.2E+0	3.2E+0	1.1E+1	1.4E+1
U-235	0	3.6E-2	3.6E-2	8.7E-2	1.2E-1	0	5.1E-2	5.1E-2	1.7E-1	2.2E-1
U-236	0	4.2E-2	4.2E-2	1.0E-1	1.4E-1	0	6.0E-2	6.0E-2	2.0E-1	2.6E-1
U-238	0	5.6E-1	5.6E-1	1.4E+0	1.9E+0	0	8.0E-1	8.0E-1	2.7E+0	3.4E+0
Sum U-23x	0	2.9E+0	2.9E+0	7.0E+0	9.9E+0	0	4.1E+0	4.1E+0	1.4E+1	1.8E+1
Upper Bound Waste Volume										
C-14	2.5E-1	3.7E-1	6.2E-1	1.5E+0	2.1E+0	1.4E+0	7.6E-1	2.1E+0	4.3E+0	6.4E+0
Tc-99	1.4E+0	2.1E+0	3.5E+0	8.3E+0	1.2E+1	1.2E+2	6.0E+1	1.8E+2	3.3E+2	5.2E+2
I-129	6.0E-3	8.8E-3	1.5E-2	3.5E-2	5.0E-2	1.1E-2	8.0E-3	1.9E-2	7.1E-2	8.9E-2
U-233	8.2E-4	1.2E-3	2.0E-3	4.6E-3	6.6E-3	1.4E-3	1.0E-3	2.4E-3	9.2E-3	1.2E-2
U-234	9.3E-1	1.4E+0	2.3E+0	5.4E+0	7.7E+0	2.2E+2	1.1E+2	3.3E+2	3.4E+2	6.7E+2
U-235	1.5E-2	2.2E-2	3.7E-2	8.6E-2	1.2E-1	1.0E+1	4.8E+0	1.5E+1	1.5E+1	2.9E+1
U-236	1.7E-2	2.6E-2	4.3E-2	1.0E-1	1.4E-1	3.1E-2	2.3E-2	5.5E-2	2.1E-1	2.6E-1
U-238	2.3E-1	3.4E-1	5.7E-1	1.4E+0	1.9E+0	2.3E+2	1.1E+2	3.4E+2	3.4E+2	6.9E+2
Sum U-23x	1.2E+0	1.8E+0	3.0E+0	6.9E+0	9.9E+0	4.7E+2	2.2E+2	6.9E+2	6.9E+2	1.4E+3

(a) Location for Alternative Groups A, C, D2, and E1 - 200E burial grounds; for Alternative Groups D1 and E2 - near PUREX; and for Alternative Groups D3 and E3 - at ERDF.

Table B.24b. Inventory of MLLW as Soil and Grouted-Equivalent Fractions for Alternative Group B, Ci

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 - Details for MLLW										
	MLLW in SOIL					MLLW GROUTED – EQUIVALENT				
	1996 to 2007			2008 to 2046	TOTAL	1996 to 2007			2008 to 2046	TOTAL
Radionuclide	200 E	200 W	Sub-Total	200E		200 E	200 W	Sub-Total	200E	
Hanford Only Volume										
C-14	0	3.5E-1	3.5E-1	1.7E+0	2.1E+0	0	7.0E-1	7.0E-1	3.0E+0	3.7E+0
Tc-99	0	2.0E+0	2.0E+0	9.8E+0	1.2E+1	0	4.0E+0	4.0E+0	1.6E+2	1.6E+2
I-129	0	8.4E-3	8.4E-3	4.1E-2	4.9E-2	0	1.7E-2	1.7E-2	7.2E-2	8.9E-2
U-233	0	1.1E-3	1.1E-3	5.5E-3	6.6E-3	0	2.2E-3	2.2E-3	9.4E-3	1.2E-2
U-234	0	1.3E+0	1.3E+0	6.4E+0	7.7E+0	0	2.6E+0	2.6E+0	1.1E+1	1.4E+1
U-235	0	2.1E-2	2.1E-2	1.0E-1	1.2E-1	0	4.2E-2	4.2E-2	1.8E-1	2.2E-1
U-236	0	2.4E-2	2.4E-2	1.2E-1	1.4E-1	0	4.9E-2	4.9E-2	2.1E-1	2.6E-1
U-238	0	3.3E-1	3.3E-1	1.6E+0	1.9E+0	0	6.5E-1	6.5E-1	2.8E+0	3.4E+0
Sum U-23x	0	1.7E+0	1.7E+0	8.2E+0	9.8E+0	0	3.4E+0	3.4E+0	1.4E+1	1.8E+1
Lower Bound Waste Volume										
C-14	0	3.5E-1	3.5E-1	1.7E+0	2.1E+0	0	7.1E-1	7.1E-1	3.0E+0	3.7E+0
Tc-99	0	2.0E+0	2.0E+0	9.8E+0	1.2E+1	0	4.0E+0	4.0E+0	1.6E+2	1.6E+2
I-129	0	8.5E-3	8.5E-3	4.1E-2	5.0E-2	0	1.7E-2	1.7E-2	7.3E-2	8.9E-2
U-233	0	1.1E-3	1.1E-3	5.5E-3	6.6E-3	0	2.2E-3	2.2E-3	9.4E-3	1.2E-2
U-234	0	1.3E+0	1.3E+0	6.4E+0	7.7E+0	0	2.6E+0	2.6E+0	1.1E+1	1.4E+1
U-235	0	2.1E-2	2.1E-2	1.0E-1	1.2E-1	0	4.2E-2	4.2E-2	1.8E-1	2.2E-1
U-236	0	2.5E-2	2.5E-2	1.2E-1	1.4E-1	0	4.9E-2	4.9E-2	2.1E-1	2.6E-1
U-238	0	3.3E-1	3.3E-1	1.6E+0	1.9E+0	0	6.5E-1	6.5E-1	2.8E+0	3.5E+0
Sum U-23x	0	1.7E+0	1.7E+0	8.2E+0	9.9E+0	0	3.4E+0	3.4E+0	1.4E+1	1.8E+1
Upper Bound Waste Volume										
C-14	2.2E-2	1.5E-1	1.7E-1	1.9E+0	2.1E+0	1.1E+0	7.3E-1	1.8E+0	4.6E+0	6.4E+0
Tc-99	1.2E-1	8.7E-1	9.9E-1	1.1E+1	1.2E+1	1.3E+2	7.4E+1	2.0E+2	3.2E+2	5.2E+2
I-129	5.2E-4	3.7E-3	4.2E-3	4.6E-2	5.0E-2	4.2E-3	4.5E-3	8.6E-3	8.1E-2	8.9E-2
U-233	6.7E-5	4.7E-4	5.4E-4	6.1E-3	6.6E-3	5.4E-4	5.8E-4	1.1E-3	1.1E-2	1.2E-2
U-234	8.0E-2	5.7E-1	6.5E-1	7.1E+0	7.7E+0	2.4E+2	1.4E+2	3.7E+2	3.1E+2	6.8E+2
U-235	1.3E-3	9.0E-3	1.0E-2	1.1E-1	1.2E-1	1.1E+1	6.0E+0	1.7E+1	1.3E+1	3.0E+1
U-236	1.5E-3	1.1E-2	1.2E-2	1.3E-1	1.4E-1	1.2E-2	1.3E-2	2.5E-2	2.3E-1	2.6E-1
U-238	2.0E-2	1.4E-1	1.6E-1	1.8E+0	1.9E+0	2.5E+2	1.4E+2	3.9E+2	3.1E+2	7.0E+2
Sum U-23x	1.0E-1	7.3E-1	8.3E-1	9.1E+0	9.9E+0	4.9E+2	2.8E+2	7.7E+2	6.3E+2	1.4E+3

Table B.24c. Inventory of MLLW as Soil and Grouted-Equivalent Fractions for the No Action Alternative, Ci

Disposition of Segregated Wastes in Various Forms and Locations as of 2046 - Details for MLLW						
	MLLW in SOIL			MLLW GROUTED – EQUIVALENT		
	1996 to 2046			1996 to 2046		
Radionuclide	200 E	200 W	Sub-Total	200 E	200 W	Sub-Total
Hanford Only Volume						
C-14	0	1.7E-1	1.7E-1	0	5.8E-1	5.8E-1
Tc-99	0	9.6E-1	9.6E-1	0	3.3E+0	3.3E+0
I-129	0	4.0E-3	4.0E-3	0	1.4E-2	1.4E-2
U-233	0	5.2E-4	5.2E-4	0	1.8E-3	1.8E-3
U-234	0	6.3E-1	6.3E-1	0	2.2E+0	2.2E+0
U-235	0	1.0E-2	1.0E-2	0	3.5E-2	3.5E-2
U-236	0	1.2E-2	1.2E-2	0	4.1E-2	4.1E-2
U-238	0	1.6E-1	1.6E-1	0	5.4E-1	5.4E-1
Sum U-23x	0	8.1E-1	8.1E-1	0	2.8E+0	2.8E+0
Lower Bound Waste Volume						
C-14	0	1.7E-1	1.7E-1	0	5.9E-1	5.9E-1
Tc-99	0	9.7E-1	9.7E-1	0	3.4E+0	3.4E+0
I-129	0	4.0E-3	4.0E-3	0	1.4E-2	1.4E-2
U-233	0	5.3E-4	5.3E-4	0	1.8E-3	1.8E-3
U-234	0	6.3E-1	6.3E-1	0	2.2E+0	2.2E+0
U-235	0	1.0E-2	1.0E-2	0	3.5E-2	3.5E-2
U-236	0	1.2E-2	1.2E-2	0	4.1E-2	4.1E-2
U-238	0	1.6E-1	1.6E-1	0	5.4E-1	5.4E-1
Sum U-23x	0	8.1E-1	8.1E-1	0	2.8E+0	2.8E+0

B.6 Waste Stream Flowsheets

Detailed information about how each waste steam will be managed is provided in the balance of this appendix, in flowsheets that identify the facilities to be used and the volumes of waste that would pass through that facility over the period of analysis (through 2046). The flowsheets are organized first by alternative group, then by waste type, and finally by waste stream. Each flowsheet lists the three sets of waste volumes analyzed: Hanford Only, Lower Bound, and Upper Bound. The Hanford Only waste volumes are presented in bold type, the Lower Bound waste volumes in normal font, and the Upper Bound waste volumes in italics. An index to the flowsheets is shown in Table B.25. This table provides the page numbers for the flowsheet diagrams by alternative group and waste type.

Table B.25. Identification of Flowsheets

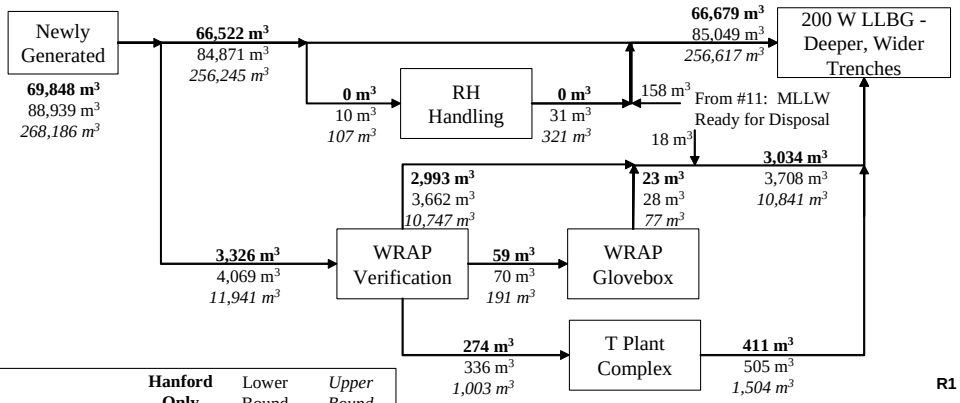
Alternative Group	Waste Type	Page Numbers
Group A	LLW	B.52 to B.54
	MLLW	B.54 to B.57
	TRU Waste	B.57 to B.60
	WTP Waste	B.61
Group B	LLW	B.62 to B.64
	MLLW	B.64 to B.67
	TRU Waste	B.67 to B.70
	WTP Waste	B.71
Group C	LLW	B.72 to B.74
	MLLW	B.74 to B.77
	TRU Waste	B.77 to B.80
	WTP Waste	B.81
Groups D & E	LLW	B.83 to B.85
	MLLW	B.85 to B.88
	TRU Waste	B.88 to B.91
	WTP Waste	B.92
No Action Group	LLW	B.93 to B.95
	MLLW	B.95 to B.98
	TRU Waste	B.98 to B.101
	WTP Waste	B.102

*Acronyms, Abbreviations, and Terms for the Waste Flow Diagrams

-----	Dashed lines represent waste managed as MLLW or TRU waste expected to be determined to be LLW
CH	contact-handled
CWC	Central Waste Complex
ERDF	Environmental Restoration Disposal Facility
FY	fiscal year
HIC	high-integrity container
ILAW	Immobilized Low-Activity Waste
LLBG	Low Level Burial Grounds
LLW	low-level waste
MLLW	mixed low-level waste
MW	mixed waste
PCB	polychlorinated biphenyl
PUREX	Plutonium Uranium Extraction Plant
RH	remote-handled
TRU	transuranic
WIPP	Waste Isolation Pilot Plant
WRAP	Waste Receiving and Processing Facility
WTP	Waste Treatment Plant
Disposed of FY99-01	Volume of waste disposed of from FY 1999 to FY 2001
Initial Inventory	Volume of waste managed by the Waste Management Program as of 9/30/2001
Receipts	Volume of waste expected to be received from FY 2002 to FY 2046
Waste Stream Total	Total volume of a waste stream to be managed, i.e., the sum of Disposed of FY99-01, Initial Inventory, and Receipts
Total Verification	Life-cycle volume of waste that will undergo verification in a Waste Management facility
Total Stabilized	Life-cycle volume of waste stabilized via in-trench grouting or placement in HICs
Total Treatment	Life-cycle volume of waste treated to meet disposal requirements
Total Processed	Life-cycle volume of waste processed to meet shipment and/or disposal requirements
Total Disposal	Life-cycle volume of waste disposed of at the Hanford Site or shipped offsite for final disposition
Ending Inventory	Total volume of waste remaining in storage at the Hanford Site at the end of FY 2046

Alternative Group A

Stream 1
LLW Category 1



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R1 HSW EIS 05-23-03

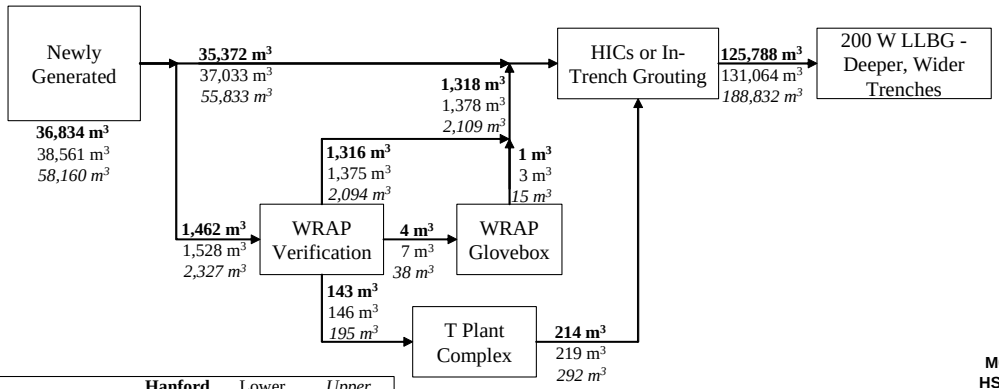
	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**18,944 m³**	18,944 m³	*18,944 m³*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**69,848 m³**	88,939 m³	*268,186 m³*
Waste Stream Total:	**88,792 m³**	107,883 m³	*287,130 m³*
Total Verification:	**3,326 m³**	4,069 m³	*11,941 m³*
Total Disposal:	**89,069 m³**	108,205 m³	*287,906 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Notes: Both lined and unlined trenches have been analyzed as part of this alternative.

Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

Alternative Group A

Stream 2
LLW Category 3



M0212-0286.54a2
HSW EIS 02-24-03

	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**2,773 m³**	2,773 m³	*2,773 m³*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**36,834 m³**	38,561 m³	*58,160 m³*
Waste Stream Total:	**39,607 m³**	41,334 m³	*60,933 m³*
Total Verification:	**1,462 m³**	1,528 m³	*2,327 m³*
Total Stabilized:	**36,903 m³**	38,630 m³	*58,234 m³*
Total Disposal:	**128,561 m³**	133,837 m³	*191,605 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

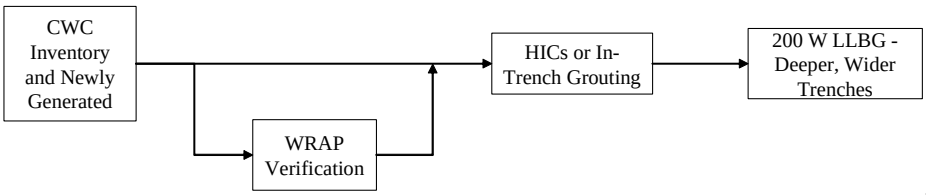
Notes: Both lined and unlined trenches have been analyzed as part of this alternative.

Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group A

Stream 3
Greater Than Category 3 Waste



M0212-0286.54a3
HSW EIS 02-24-03

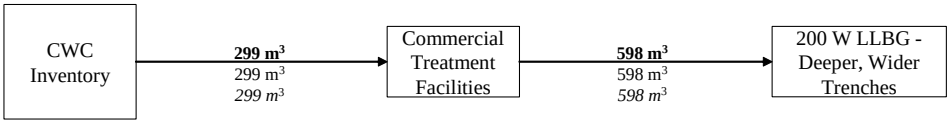
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**<1 m³**	<1 m³	*<1 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**<1 m³**	<1 m³	*<1 m³*
Total Stabilized:	**<1 m³**	<1 m³	*<1 m³*
Total Disposal:	**<1 m³**	<1 m³	*<1 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Notes: Both lined and unlined trenches have been analyzed as part of this alternative.

Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

Alternative Group A

Stream 6
LLW – Non-Conforming



M0212-0286.54a4
HSW EIS 02-24-03

	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**299 m³**	299 m³	*299 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**299 m³**	299 m³	*299 m³*
Total Treatment:	**299 m³**	299 m³	*299 m³*
Total Disposal:	**598 m³**	598 m³	*598 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Notes: Both lined and unlined trenches have been analyzed as part of this alternative.

Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group A

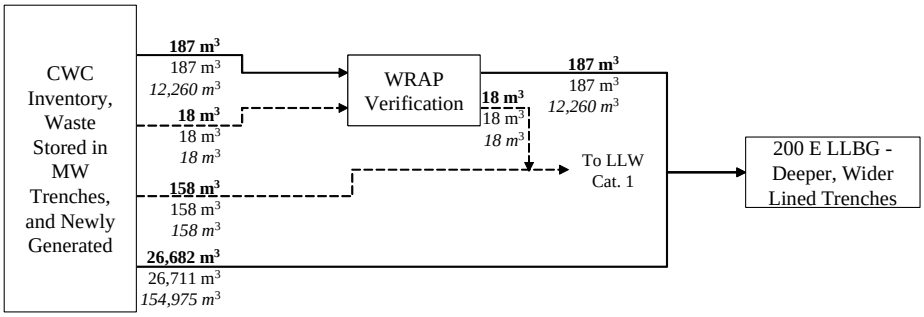
Stream 20
LLW – Previously Disposed of

	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**283,067 m³**	283,067 m³	*283,067 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**283,067 m³**	283,067 m³	*283,067 m³*
Total Treatment:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**283,067 m³**	283,067 m³	*283,067 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a5
HSW EIS 02-24-03

Alternative Group A

Stream 11
MLLW Treated and Ready for Disposal



M0212-0286.54a6
HSW EIS 02-24-03

	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**1,010 m³**	1,010 m³	*1,010 m³*
Initial Inventory:	**1,102 m³**	1,102 m³	*1,102 m³*
Receipts:	**25,942 m³**	25,970 m³	*166,307m³*
Waste Stream Total:	**28,054 m³**	28,082 m³	*168,419m³*
Total Treatment:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**27,879 m³**	27,907 m³	*168,244 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

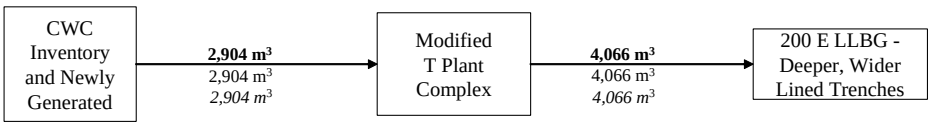
Notes: Dashed lines represent waste managed as MLLW expected to be reclassified as LLW.

Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group A

Stream 12
RH and Non-Standard Packages

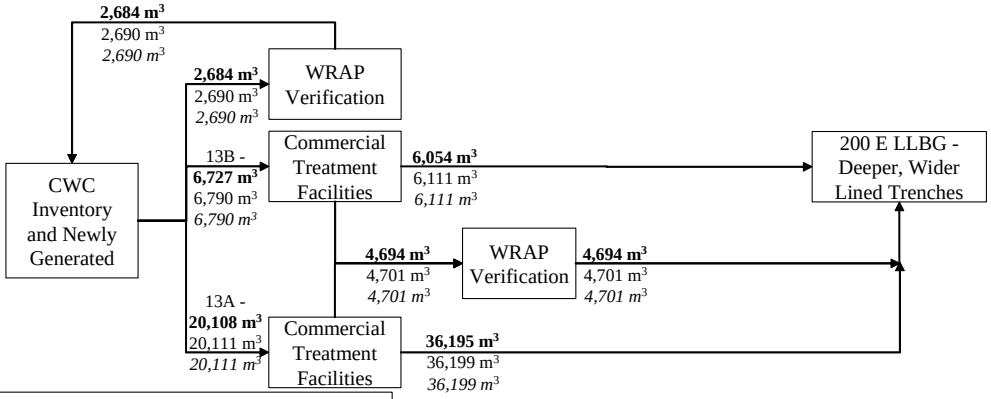


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**65 m³**	65 m³	*65 m³*
Receipts:	**2,839 m³**	2,839 m³	*2,839 m³*
Waste Stream Total:	**2,904 m³**	2,904 m³	*2,904 m³*
Total Treatment:	**2,904 m³**	2,904 m³	*2,904 m³*
Total Disposal:	**4,066 m³**	4,066 m³	*4,066 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a7
HSW EIS 02-24-03

Alternative Group A

Stream 13A – CH Inorganic Solids and Debris
Stream 13B – CH Organic Solids and Debris



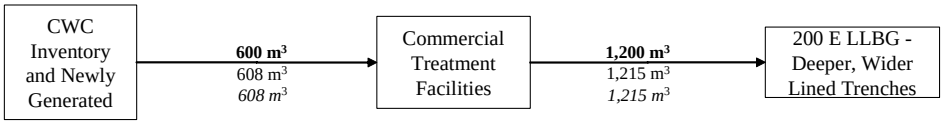
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**5,725 m³**	5,725 m³	*5,725 m³*
Receipts:	**21,110 m³**	21,175 m³	*21,175 m³*
Waste Stream Total:	**26,835 m³**	26,901 m³	*26,901 m³*
Total Treatment:	**26,835 m³**	26,901 m³	*26,901 m³*
Total Disposal:	**46,944 m³**	47,011 m³	*47,011 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a8
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group A

Stream 14
Elemental Lead



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**445 m³**	445 m³	*445 m³*
Receipts:	**155 m³**	163 m³	*163 m³*
Waste Stream Total:	**600 m³**	608 m³	*608 m³*
Total Treatment:	**600 m³**	608 m³	*608 m³*
Total Disposal:	**1,200 m³**	1,215 m³	*1,215 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a9
HSW EIS 02-24-03

Alternative Group A

Stream 15
Elemental Mercury

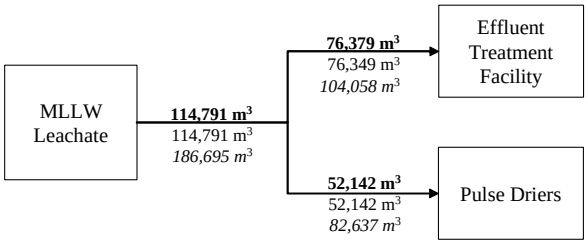
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**13 m³**	13 m³	*13 m³*
Receipts:	**8 m³**	8 m³	*8 m³*
Waste Stream Total:	**21 m³**	21 m³	*21 m³*
Total Treatment:	**21 m³**	21 m³	*21 m³*
Total Disposal:	**312 m³**	312 m³	*312 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a10
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group A

Stream 18
MLLW Trench Leachate

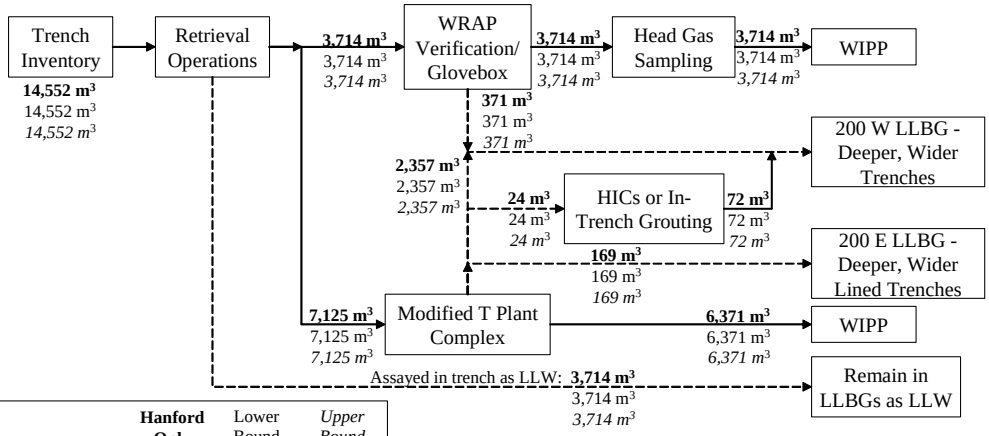


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Total Generation:	**114,791 m³**	114,791 m³	*186,695 m³*
Waste Stream Total:	**114,791 m³**	114,791 m³	*186,695 m³*
Total Treatment/ Disposal:	**114,791 m³**	114,791 m³	*186,695 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a11
HSW EIS 02-24-03

Alternative Group A

Stream 4
TRU - Waste from Trenches



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**14,552 m³**	14,552 m³	*14,552 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**14,552 m³**	14,552 m³	*14,552 m³*
Total Processed:	**10,938 m³**	10,938 m³	*10,938 m³*
Total Disposal:	**10,185 m³**	10,185 m³	*10,185 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

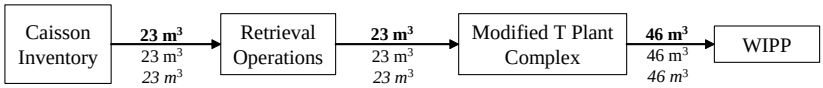
Note: Both lined and unlined trenches have been analyzed for LLW disposal as part of this alternative.

M0212-0286.54a12
R1 HSW EIS 05-23-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group A

Stream 5
TRU - Waste from Caissons



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**23 m^3**	23 m^3	*23 m^3*
Receipts:	**0 m^3**	0 m^3	*0 m^3*
Waste Stream Total:	**23 m^3**	23 m^3	*23 m^3*
Total Processed:	**23 m^3**	23 m^3	*23 m^3*
Total Disposal:	**46 m^3**	46 m^3	*46 m^3*
Ending Inventory:	**0 m^3**	0 m^3	*0 m^3*

M0212-0286.54a13
HSW EIS 02-24-03

Alternative Group A

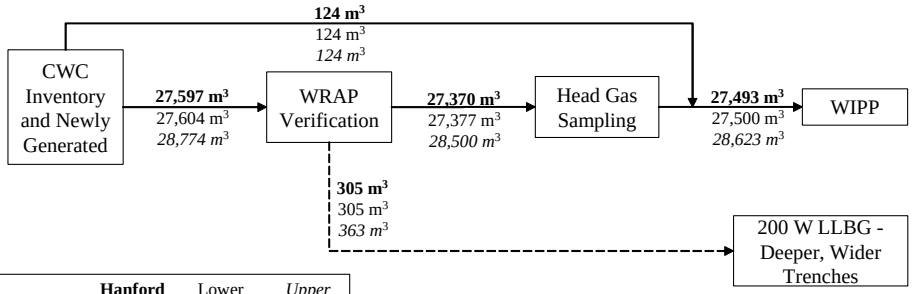
Stream 8
TRU - Commingled PCB Waste

	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**80 m^3**	80 m^3	*80 m^3*
Receipts:	**0 m^3**	15 m^3	*15 m^3*
Waste Stream Total:	**80 m^3**	95 m^3	*95 m^3*
Total Processed:	**80 m^3**	95 m^3	*95 m^3*
Total Disposal:	**80 m^3**	95 m^3	*95 m^3*
Ending Inventory:	**0 m^3**	0 m^3	*0 m^3*

M0212-0286.54a14
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group A
Stream 9
TRU – Newly Generated and Existing CH Standard Containers



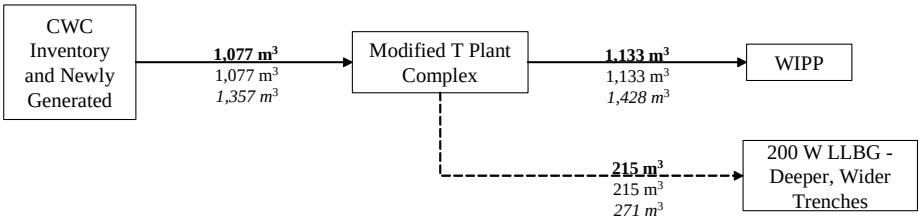
M0212-0286.54a15
HSW EIS 02-24-03

	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**849 m³**	849 m³	*849 m³*
Receipts:	**26,870 m³**	26,878 m³	*28,048 m³*
Waste Stream Total:	**27,719 m³**	27,727 m³	*28,897 m³*
Total Processed:	**27,597 m³**	27,604 m³	*28,774 m³*
Total Disposal:	**27,493 m³**	27,500 m³	*28,623 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Notes: Both lined and unlined trenches have been analyzed for LLW disposal as part of this alternative.

It is assumed that WIPP or another offsite disposal facility will be available after 2032.

Alternative Group A
Stream 10A
TRU – Newly Generated and Existing CH Non-Standard Containers



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**585 m³**	585 m³	*585 m³*
Receipts:	**492 m³**	492 m³	*772 m³*
Waste Stream Total:	**1,077 m³**	1,077 m³	*1,357 m³*
Total Processed:	**1,077 m³**	1,077 m³	*1,357 m³*
Total Disposal:	**1,133 m³**	1,133 m³	*1,428 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

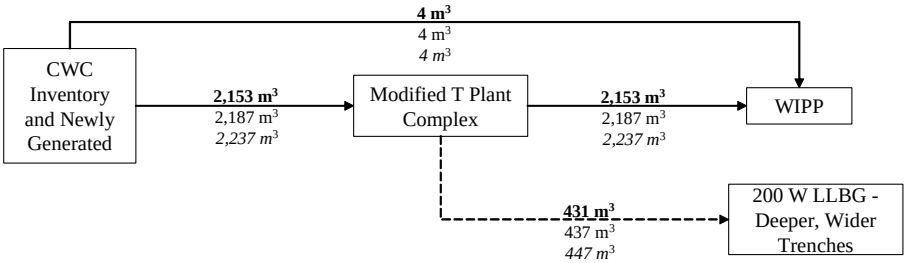
Note: Both lined and unlined trenches have been analyzed for LLW disposal as part of this alternative.

M0212-0286.54a16
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group A

Stream 10B
TRU – Newly Generated and Existing RH Waste



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**46 m³**	46 m³	*46 m³*
Receipts:	**2,112 m³**	2,145 m³	*2,196 m³*
Waste Stream Total:	**2,157 m³**	2,191 m³	*2,241 m³*
Total Processed:	**2,153 m³**	2,187 m³	*2,237 m³*
Total Disposal:	**2,157 m³**	2,191 m³	*2,241 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

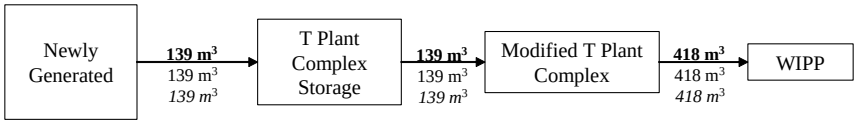
M0212-0286.54a17
HSW EIS 02-24-03

Notes: Both lined and unlined trenches have been analyzed for LLW disposal as part of this alternative.

It is assumed that WIPP or another offsite disposal facility will be available after 2032.

Alternative Group A

Stream 17
TRU – K Basins Sludge



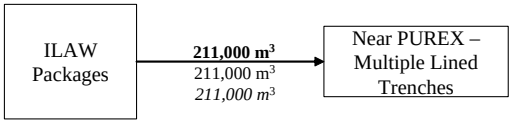
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**139 m³**	139 m³	*139 m³*
Waste Stream Total:	**139 m³**	139 m³	*139 m³*
Total Processed:	**139 m³**	139 m³	*139 m³*
Total Disposal:	**418 m³**	418 m³	*418 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a18
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group A

Stream 21
WTP Wastes – ILAW Packages

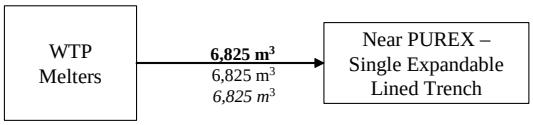


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**211,000 m³**	211,000 m³	*211,000 m³*
Waste Stream Total:	**211,000 m³**	211,000 m³	*211,000 m³*
Total Processed:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**211,000 m³**	211,000 m³	*211,000 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a19
R1 HSW EIS 02-24-03

Alternative Group A

Stream 22
WTP Wastes –WTP Melters



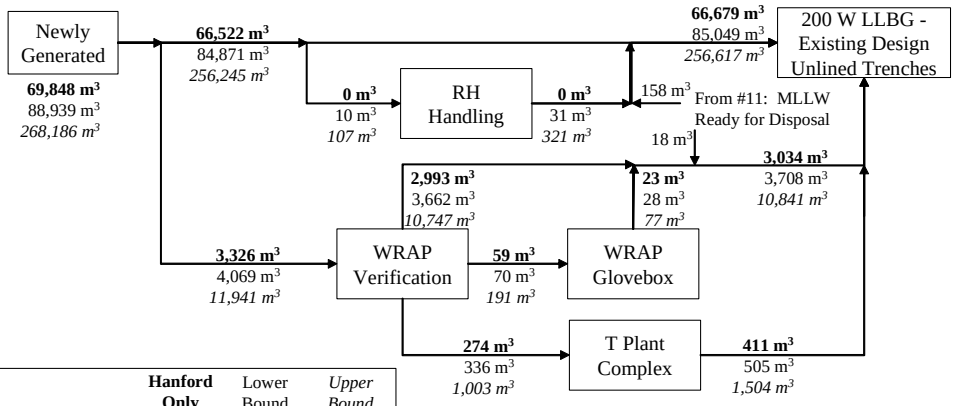
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**6,825 m³**	6,825 m³	*6,825 m³*
Waste Stream Total:	**6,825 m³**	6,825 m³	*6,825 m³*
Total Processed:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**6,825 m³**	6,825 m³	*6,825 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a20
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group B

Stream 1
LLW Category 1



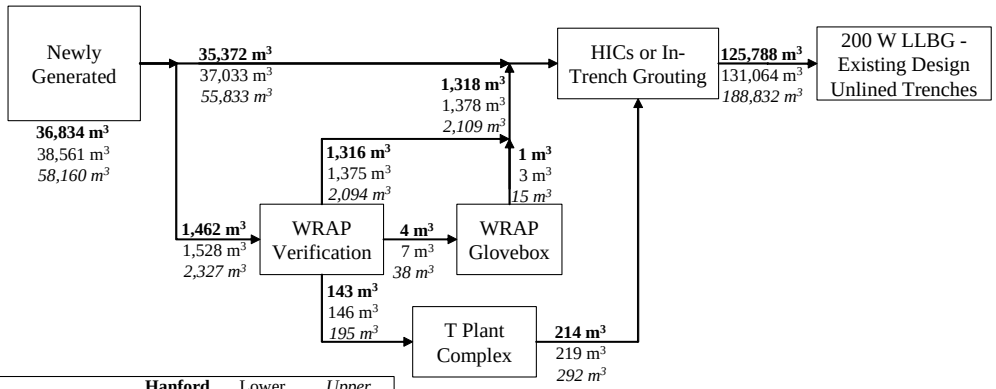
	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**18,944 m³**	18,944 m³	*18,944 m³*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**69,848 m³**	88,939 m³	*268,186 m³*
Waste Stream Total:	**88,792 m³**	107,883 m³	*287,130 m³*
Total Verification:	**3,326 m³**	4,069 m³	*11,941 m³*
Total Disposal:	**89,069 m³**	108,205 m³	*287,906 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Note: Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

M0212-0286.54a21
R1 HSW EIS 05-23-03

Alternative Group B

Stream 2
LLW Category 3



	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**2,773 m³**	2,773 m³	*2,773 m³*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**36,834 m³**	38,561 m³	*58,160 m³*
Waste Stream Total:	**39,607 m³**	41,334 m³	*60,933 m³*
Total Verification:	**1,462 m³**	1,528 m³	*2,327 m³*
Total Stabilized:	**36,903 m³**	38,630 m³	*58,234 m³*
Total Disposal:	**128,561 m³**	133,837 m³	*191,605 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

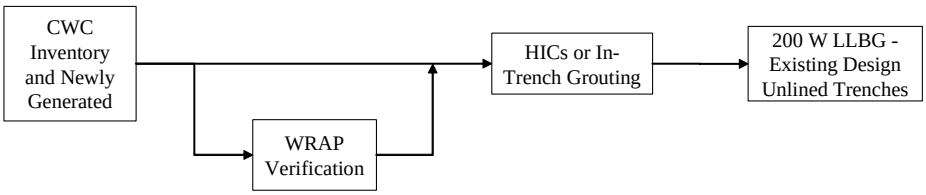
Note: Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

M0212-0286.54a22
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group B

Stream 3
Greater Than Category 3 Waste

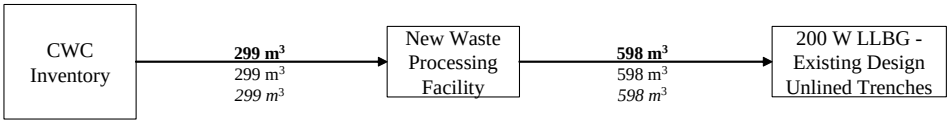


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**<1 m³**	<1 m³	*<1 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**<1 m³**	<1 m³	*<1 m³*
Total Stabilized:	**<1 m³**	<1 m³	*<1 m³*
Total Disposal:	**<1 m³**	<1 m³	*<1 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a23
HSW EIS 02-24-03

Alternative Group B

Stream 6
LLW – Non-Conforming



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**299 m³**	299 m³	*299 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**299 m³**	299 m³	*299 m³*
Total Treatment:	**299 m³**	299 m³	*299 m³*
Total Disposal:	**598 m³**	598 m³	*598 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a24
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group B

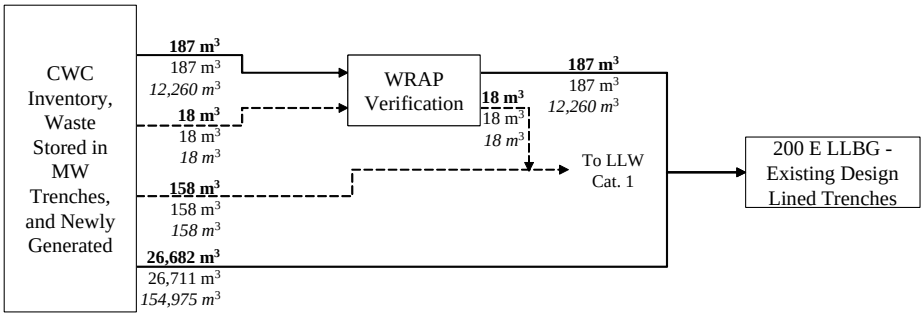
Stream 20
LLW – Previously Disposed of

	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**283,067 m³**	283,067 m³	*283,067 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**283,067 m³**	283,067 m³	*283,067 m³*
Total Treatment:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**283,067 m³**	283,067 m³	*283,067 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a25
HSW EIS 02-24-03

Alternative Group B

Stream 11
MLLW Treated and Ready for Disposal



M0212-0286.54a26
HSW EIS 02-24-03

	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**1,010 m³**	1,010 m³	*1,010 m³*
Initial Inventory:	**1,102 m³**	1,102 m³	*1,102 m³*
Receipts:	**25,942 m³**	25,970 m³	*166,307m³*
Waste Stream Total:	**28,054 m³**	28,082 m³	*168,419m³*
Total Treatment:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**27,879 m³**	27,907 m³	*168,244 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

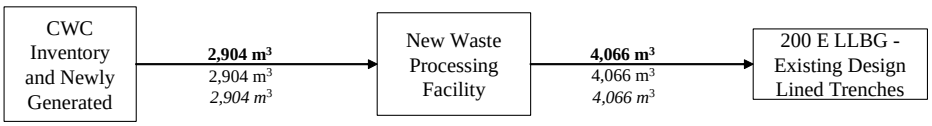
Notes: Dashed lines represent waste managed as MLLW expected to be reclassified as LLW.

Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group B

Stream 12
RH and Non-Standard Packages

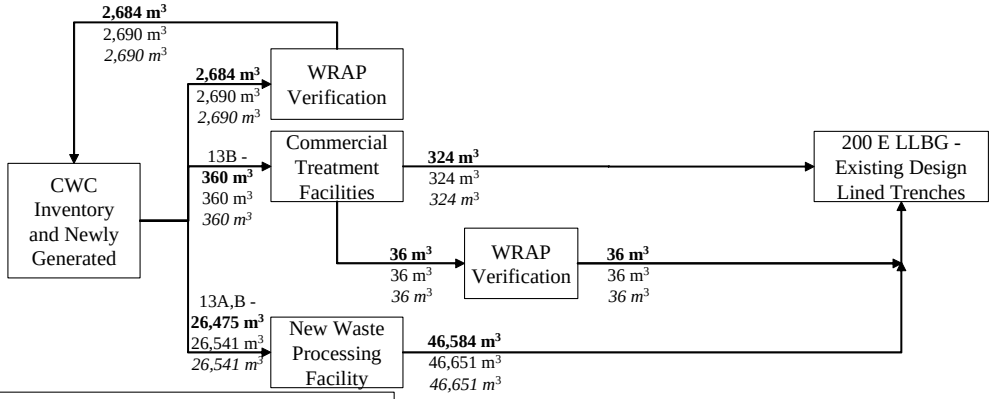


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**65 m³**	65 m³	*65 m³*
Receipts:	**2,839 m³**	2,839 m³	*2,839 m³*
Waste Stream Total:	**2,904 m³**	2,904 m³	*2,904 m³*
Total Treatment:	**2,904 m³**	2,904 m³	*2,904 m³*
Total Disposal:	**4,066 m³**	4,066 m³	*4,066 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a27
R1 HSW EIS 02-24-03

Alternative Group B

Stream 13A – CH Inorganic Solids and Debris
Stream 13B – CH Organic Solids and Debris



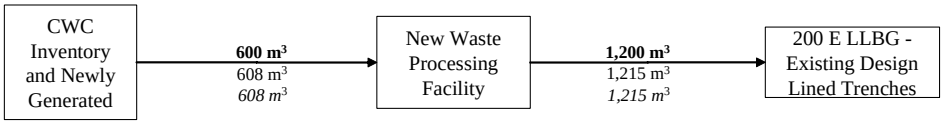
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**5,725 m³**	5,725 m³	*5,725 m³*
Receipts:	**21,110 m³**	21,175 m³	*21,175 m³*
Waste Stream Total:	**26,835 m³**	26,901 m³	*26,901 m³*
Total Treatment:	**26,835 m³**	26,901 m³	*26,901 m³*
Total Disposal:	**46,944 m³**	47,011 m³	*47,011 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a28
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group B

Stream 14
Elemental Lead



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**445 m³**	445 m³	*445 m³*
Receipts:	**155 m³**	163 m³	*163 m³*
Waste Stream Total:	**600 m³**	608 m³	*608 m³*
Total Treatment:	**600 m³**	608 m³	*608 m³*
Total Disposal:	**1,200 m³**	1,215 m³	*1,215 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a29
R1 HSW EIS 02-24-03

Alternative Group B

Stream 15
Elemental Mercury

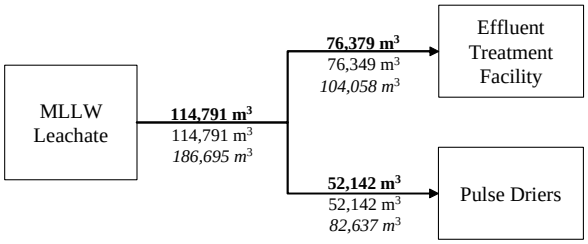
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**13 m³**	13 m³	*13 m³*
Receipts:	**8 m³**	8 m³	*8 m³*
Waste Stream Total:	**21 m³**	21 m³	*21 m³*
Total Treatment:	**21 m³**	21 m³	*21 m³*
Total Disposal:	**312 m³**	312 m³	*312 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a30
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group B

Stream 18
MLLW Trench Leachate

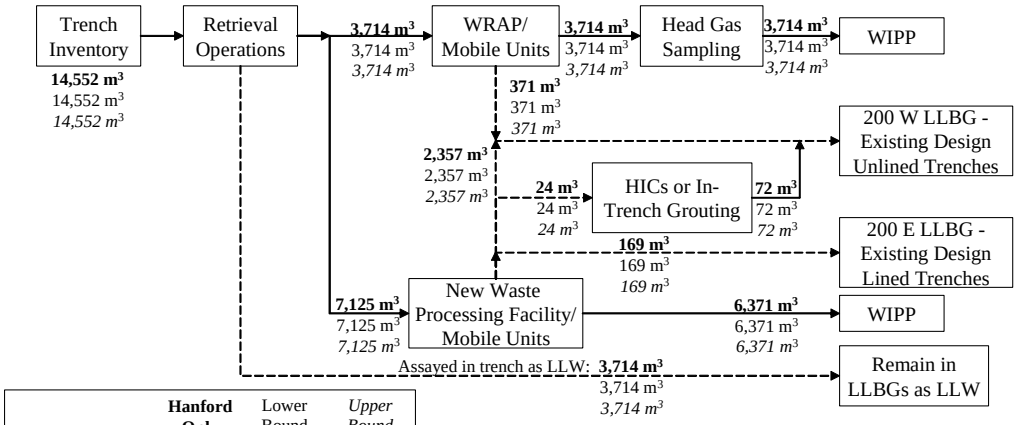


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Total Generation:	**114,791 m³**	114,791 m³	*186,695 m³*
Waste Stream Total:	**114,791 m³**	114,791 m³	*186,695 m³*
Total Treatment/ Disposal:	**114,791 m³**	114,791 m³	*186,695 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a65
HSW EIS 02-24-03

Alternative Group B

Stream 4
TRU - Waste from Trenches



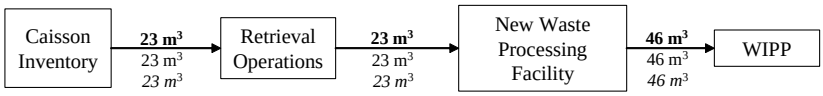
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**14,552 m³**	14,552 m³	*14,552 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**14,552 m³**	14,552 m³	*14,552 m³*
Total Processed:	**10,938 m³**	10,938 m³	*10,938 m³*
Total Disposal:	**10,185 m³**	10,185 m³	*10,185 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a31
R3 HSW EIS 05-23-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group B

Stream 5
TRU - Waste from Caissons



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**23 m^3**	23 m^3	*23 m^3*
Receipts:	**0 m^3**	0 m^3	*0 m^3*
Waste Stream Total:	**23 m^3**	23 m^3	*23 m^3*
Total Processed:	**23 m^3**	23 m^3	*23 m^3*
Total Disposal:	**46 m^3**	46 m^3	*46 m^3*
Ending Inventory:	**0 m^3**	0 m^3	*0 m^3*

M0212-0286.54a32
R1 HSW EIS 02-24-03

Alternative Group B

Stream 8
TRU - Commingled PCB Waste

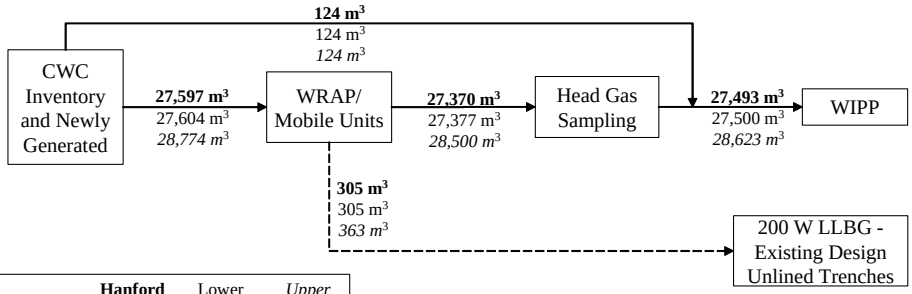
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**80 m^3**	80 m^3	*80 m^3*
Receipts:	**0 m^3**	15 m^3	*15 m^3*
Waste Stream Total:	**80 m^3**	95 m^3	*95 m^3*
Total Processed:	**80 m^3**	95 m^3	*95 m^3*
Total Disposal:	**80 m^3**	95 m^3	*95 m^3*
Ending Inventory:	**0 m^3**	0 m^3	*0 m^3*

M0212-0286.54a66
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group B

Stream 9
TRU – Newly Generated and Existing CH Standard Containers



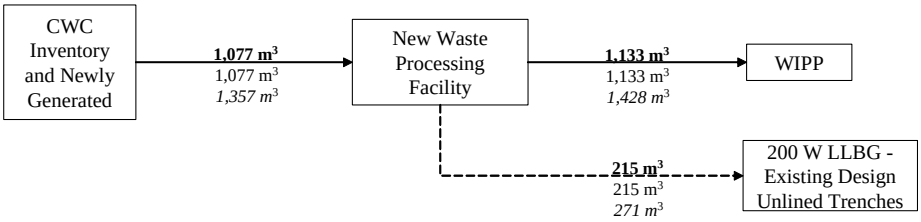
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**849 m³**	849 m³	*849 m³*
Receipts:	**26,870 m³**	26,878 m³	*28,048 m³*
Waste Stream Total:	**27,719 m³**	27,727 m³	*28,897 m³*
Total Processed:	**27,597 m³**	27,604 m³	*28,774 m³*
Total Disposal:	**27,493 m³**	27,500 m³	*28,623 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Note: It is assumed that WIPP or another offsite disposal facility will be available after 2032.

M0212-0286.54a33
HSW EIS 02-24-03

Alternative Group B

Stream 10A
TRU – Newly Generated and Existing CH Non-Standard Containers



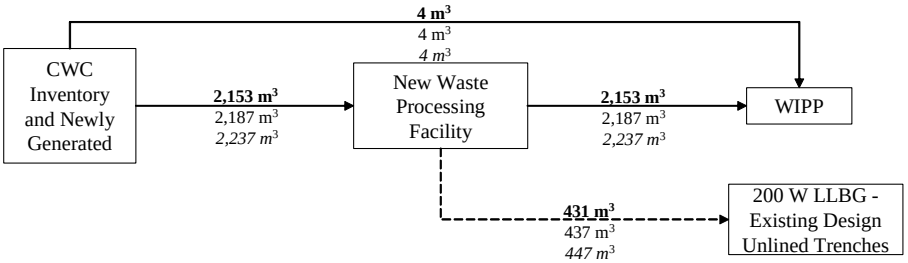
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**585 m³**	585 m³	*585 m³*
Receipts:	**492 m³**	492 m³	*772 m³*
Waste Stream Total:	**1,077 m³**	1,077 m³	*1,357 m³*
Total Processed:	**1,077 m³**	1,077 m³	*1,357 m³*
Total Disposal:	**1,133 m³**	1,133 m³	*1,428 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a34
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group B

Stream 10B
TRU – Newly Generated and Existing RH Waste



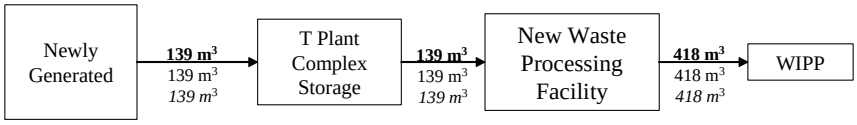
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**46 m³**	46 m³	*46 m³*
Receipts:	**2,112 m³**	2,145 m³	*2,196 m³*
Waste Stream Total:	**2,157 m³**	2,191 m³	*2,241 m³*
Total Processed:	**2,153 m³**	2,187 m³	*2,237 m³*
Total Disposal:	**2,157 m³**	2,191 m³	*2,241 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Note: It is assumed that WIPP or another offsite disposal facility will be available after 2032.

M0212-0286.54a35
R1 HSW EIS 02-24-03

Alternative Group B

Stream 17
TRU – K Basins Sludge



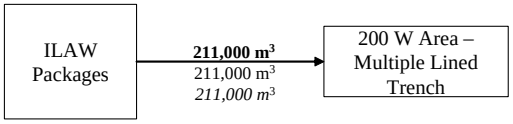
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**139 m³**	139 m³	*139 m³*
Waste Stream Total:	**139 m³**	139 m³	*139 m³*
Total Processed:	**139 m³**	139 m³	*139 m³*
Total Disposal:	**418 m³**	418 m³	*418 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a36
R1 HSW EI S 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group B

Stream 21
WTP Wastes – ILAW Packages

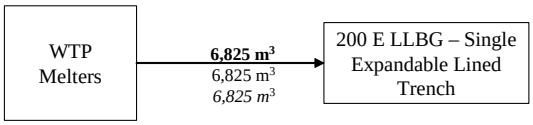


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**211,000 m³**	211,000 m³	*211,000 m³*
Waste Stream Total:	**211,000 m³**	211,000 m³	*211,000 m³*
Total Processed:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**211,000 m³**	211,000 m³	*211,000 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a37
R1 HSW EIS 02-24-03

Alternative Group B

Stream 22
WTP Wastes –WTP Melters



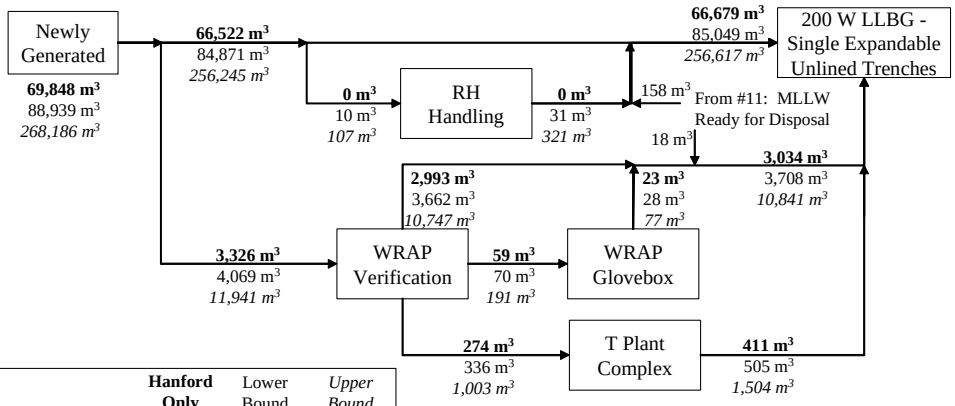
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**6,825 m³**	6,825 m³	*6,825 m³*
Waste Stream Total:	**6,825 m³**	6,825 m³	*6,825 m³*
Total Processed:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**6,825 m³**	6,825 m³	*6,825 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a38
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group C

Stream 1
LLW Category 1



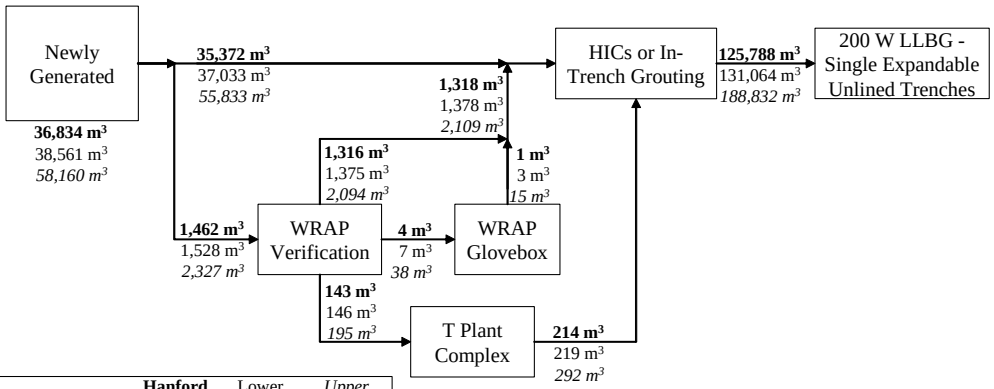
	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**18,944 m³**	18,944 m³	*18,944 m³*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**69,848 m³**	88,939 m³	*268,186 m³*
Waste Stream Total:	**88,792 m³**	107,883 m³	*287,130 m³*
Total Verification:	**3,326 m³**	4,069 m³	*11,941 m³*
Total Disposal:	**89,069 m³**	108,205 m³	*287,906 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Note: Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

M0212-0286.54a39
R1 HSW EIS 05-23-03

Alternative Group C

Stream 2
LLW Category 3



	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**2,773 m³**	2,773 m³	*2,773 m³*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**36,834 m³**	38,561 m³	*58,160 m³*
Waste Stream Total:	**39,607 m³**	41,334 m³	*60,933 m³*
Total Verification:	**1,462 m³**	1,528 m³	*2,327 m³*
Total Stabilized:	**36,903 m³**	38,630 m³	*58,234 m³*
Total Disposal:	**128,561 m³**	133,837 m³	*191,605 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

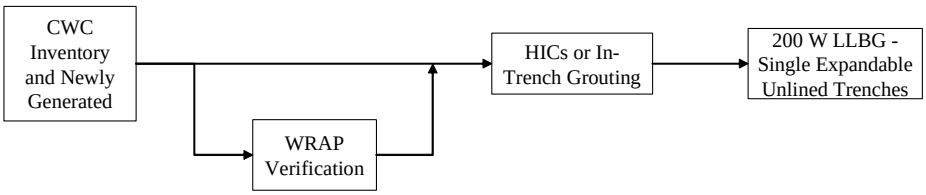
Note: Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

M0212-0286.54a40
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group C

Stream 3
Greater Than Category 3 Waste

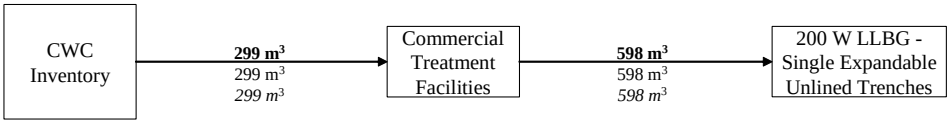


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**<1 m³**	<1 m³	*<1 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**<1 m³**	<1 m³	*<1 m³*
Total Stabilized:	**<1 m³**	<1 m³	*<1 m³*
Total Disposal:	**<1 m³**	<1 m³	*<1 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a41
HSW EIS 02-24-03

Alternative Group C

Stream 6
LLW – Non-Conforming



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**299 m³**	299 m³	*299 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**299 m³**	299 m³	*299 m³*
Total Treatment:	**299 m³**	299 m³	*299 m³*
Total Disposal:	**598 m³**	598 m³	*598 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a42
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group C

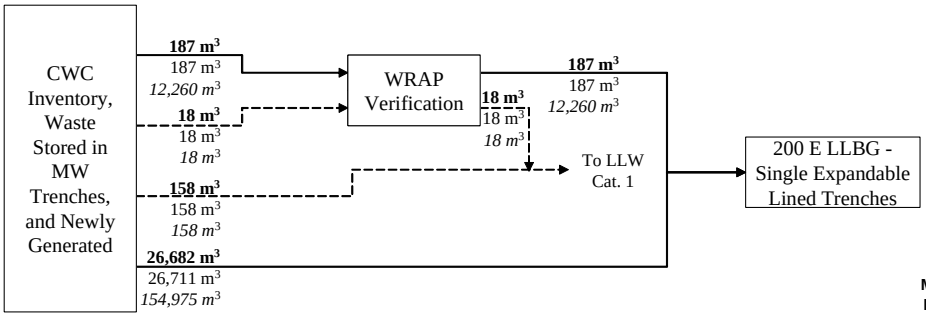
Stream 20
LLW – Previously Disposed of

	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**283,067 m³**	283,067 m³	*283,067 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**283,067 m³**	283,067 m³	*283,067 m³*
Total Treatment:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**283,067 m³**	283,067 m³	*283,067 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a43
HSW EIS 02-24-03

Alternative Group C

Stream 11
MLLW Treated and Ready for Disposal



M0212-0286.54a44
HSW EIS 02-24-03

	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**1,010 m³**	1,010 m³	*1,010 m³*
Initial Inventory:	**1,102 m³**	1,102 m³	*1,102 m³*
Receipts:	**25,942 m³**	25,970 m³	*166,307m³*
Waste Stream Total:	**28,054 m³**	28,082 m³	*168,419m³*
Total Treatment:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**27,879 m³**	27,907 m³	*168,244 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

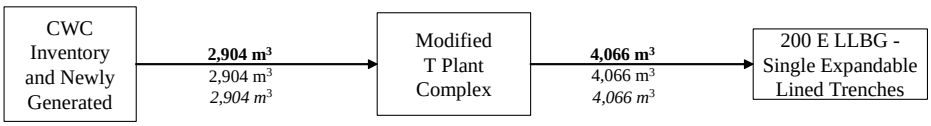
Notes: Dashed lines represent waste managed as MLLW expected to be reclassified as LLW.

Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group C

Stream 12
RH and Non-Standard Packages

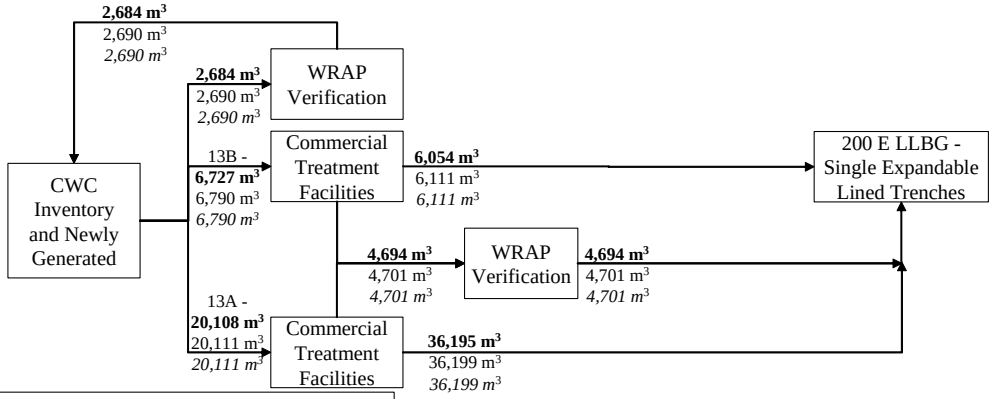


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**65 m³**	65 m³	*65 m³*
Receipts:	**2,839 m³**	2,839 m³	*2,839 m³*
Waste Stream Total:	**2,904 m³**	2,904 m³	*2,904 m³*
Total Treatment:	**2,904 m³**	2,904 m³	*2,904 m³*
Total Disposal:	**4,066 m³**	4,066 m³	*4,066 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a45
HSW EIS 02-24-03

Alternative Group C

Stream 13A – CH Inorganic Solids and Debris
Stream 13B – CH Organic Solids and Debris



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**5,725 m³**	5,725 m³	*5,725 m³*
Receipts:	**21,110 m³**	21,175 m³	*21,175 m³*
Waste Stream Total:	**26,835 m³**	26,901 m³	*26,901 m³*
Total Treatment:	**26,835 m³**	26,901 m³	*26,901 m³*
Total Disposal:	**46,944 m³**	47,011 m³	*47,011 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a46
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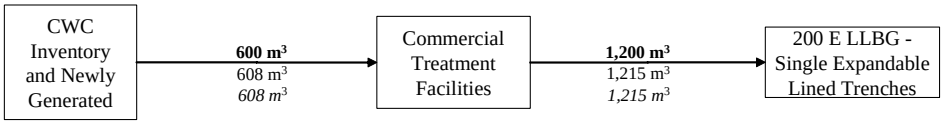
*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group C

Stream 14
Elemental Lead



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**445 m³**	445 m³	*445 m³*
Receipts:	**155 m³**	163 m³	*163 m³*
Waste Stream Total:	**600 m³**	608 m³	*608 m³*
Total Treatment:	**600 m³**	608 m³	*608 m³*
Total Disposal:	**1,200 m³**	1,215 m³	*1,215 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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Alternative Group C

Stream 15
Elemental Mercury

	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**13 m³**	13 m³	*13 m³*
Receipts:	**8 m³**	8 m³	*8 m³*
Waste Stream Total:	**21 m³**	21 m³	*21 m³*
Total Treatment:	**21 m³**	21 m³	*21 m³*
Total Disposal:	**312 m³**	312 m³	*312 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a48
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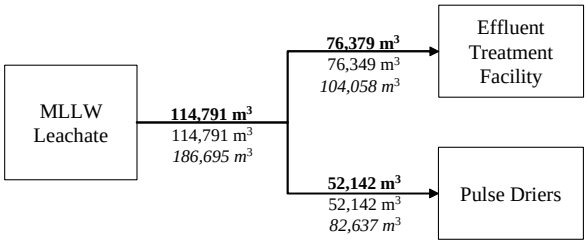
*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group C

Stream 18
MLLW Trench Leachate



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Total Generation:	**114,791 m³**	114,791 m³	*186,695 m³*
Waste Stream Total:	**114,791 m³**	114,791 m³	*186,695 m³*
Total Treatment/ Disposal:	**114,791 m³**	114,791 m³	*186,695 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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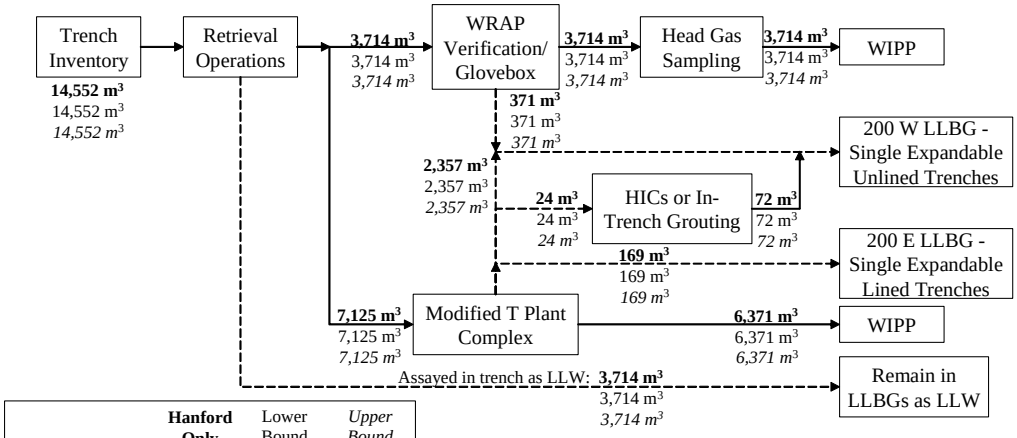
Alternative Group C

Stream 4
TRU - Waste from Trenches



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**14,552 m³**	14,552 m³	*14,552 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**14,552 m³**	14,552 m³	*14,552 m³*
Total Processed:	**10,938 m³**	10,938 m³	*10,938 m³*
Total Disposal:	**10,185 m³**	10,185 m³	*10,185 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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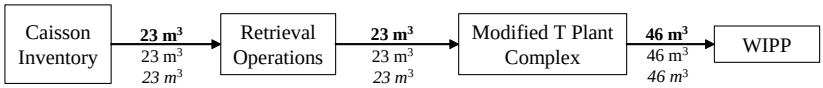
*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group C

Stream 5
TRU - Waste from Caissons



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**23 m^3**	23 m^3	*23 m^3*
Receipts:	**0 m^3**	0 m^3	*0 m^3*
Waste Stream Total:	**23 m^3**	23 m^3	*23 m^3*
Total Processed:	**23 m^3**	23 m^3	*23 m^3*
Total Disposal:	**46 m^3**	46 m^3	*46 m^3*
Ending Inventory:	**0 m^3**	0 m^3	*0 m^3*

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Alternative Group C

Stream 8
TRU - Commingled PCB Waste

	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**80 m^3**	80 m^3	*80 m^3*
Receipts:	**0 m^3**	15 m^3	*15 m^3*
Waste Stream Total:	**80 m^3**	95 m^3	*95 m^3*
Total Processed:	**80 m^3**	95 m^3	*95 m^3*
Total Disposal:	**80 m^3**	95 m^3	*95 m^3*
Ending Inventory:	**0 m^3**	0 m^3	*0 m^3*

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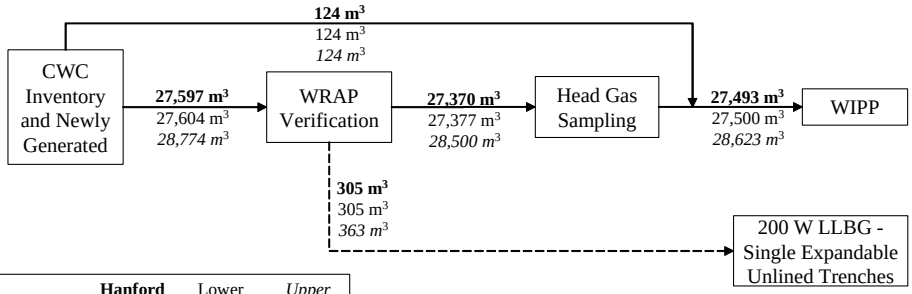
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group C
Stream 9
TRU – Newly Generated and Existing CH Standard Containers



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**849 m³**	849 m³	*849 m³*
Receipts:	**26,870 m³**	26,878 m³	*28,048 m³*
Waste Stream Total:	**27,719 m³**	27,727 m³	*28,897 m³*
Total Processed:	**27,597 m³**	27,604 m³	*28,774 m³*
Total Disposal:	**27,493 m³**	27,500 m³	*28,623 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Note: It is assumed that WIPP or another offsite disposal facility will be available after 2032.

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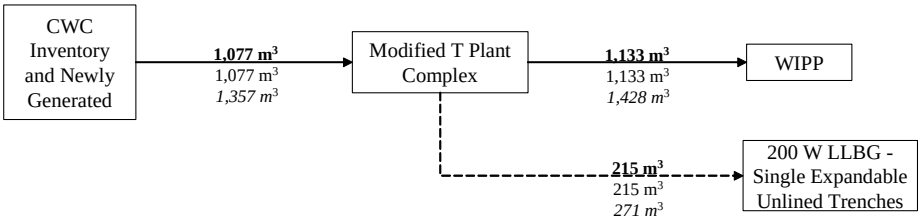
Alternative Group C
Stream 10A
TRU – Newly Generated and Existing CH Non-Standard Containers



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**585 m³**	585 m³	*585 m³*
Receipts:	**492 m³**	492 m³	*772 m³*
Waste Stream Total:	**1,077 m³**	1,077 m³	*1,357 m³*
Total Processed:	**1,077 m³**	1,077 m³	*1,357 m³*
Total Disposal:	**1,133 m³**	1,133 m³	*1,428 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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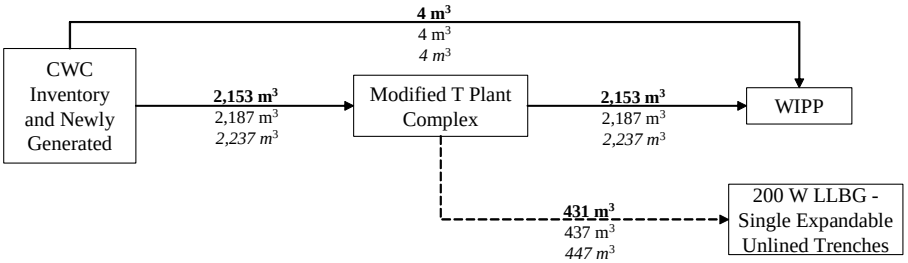
*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group C

Stream 10B
TRU – Newly Generated and Existing RH Waste



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**46 m³**	46 m³	*46 m³*
Receipts:	**2,112 m³**	2,145 m³	*2,196 m³*
Waste Stream Total:	**2,157 m³**	2,191 m³	*2,241 m³*
Total Processed:	**2,153 m³**	2,187 m³	*2,237 m³*
Total Disposal:	**2,157 m³**	2,191 m³	*2,241 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Note: It is assumed that WIPP or another offsite disposal facility will be available after 2032.

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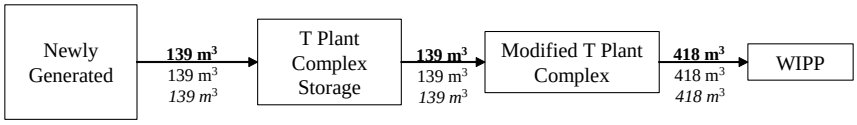
Alternative Group C

Stream 17
TRU – K Basins Sludge



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**139 m³**	139 m³	*139 m³*
Waste Stream Total:	**139 m³**	139 m³	*139 m³*
Total Processed:	**139 m³**	139 m³	*139 m³*
Total Disposal:	**418 m³**	418 m³	*418 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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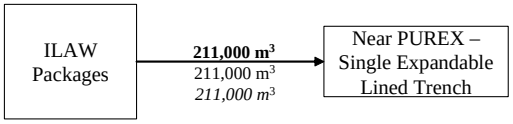
*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Group C

Stream 21
WTP Wastes – ILAW Packages



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**211,000 m³**	211,000 m³	*211,000 m³*
Waste Stream Total:	**211,000 m³**	211,000 m³	*211,000 m³*
Total Processed:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**211,000 m³**	211,000 m³	*211,000 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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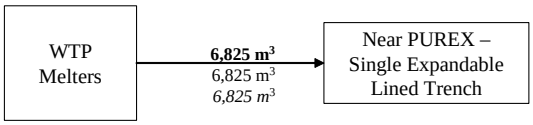
Alternative Group C

Stream 22
WTP Wastes –WTP Melters



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**6,825 m³**	6,825 m³	*6,825 m³*
Waste Stream Total:	**6,825 m³**	6,825 m³	*6,825 m³*
Total Processed:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**6,825 m³**	6,825 m³	*6,825 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.54a58
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

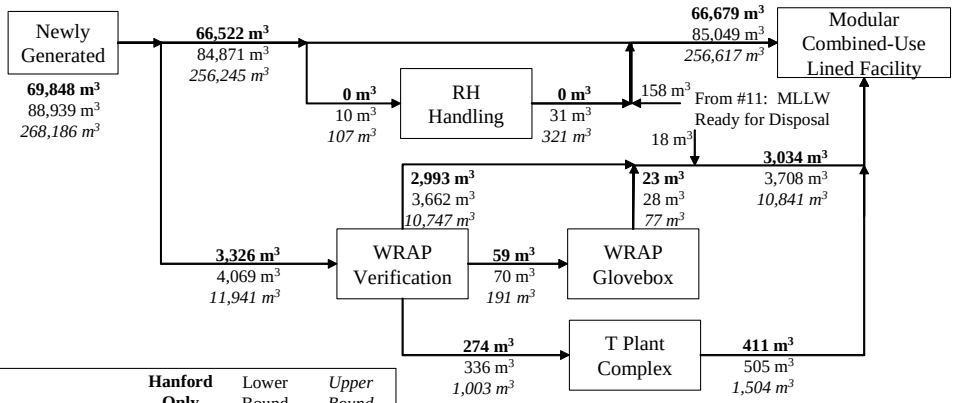
The waste flow diagrams for Alternative Groups D and E have been combined for simplification. The primary difference between these alternative groups is that Group D assumes a single modular combined-use facility for LLW, MLLW, and WTP wastes disposal whereas Group E assumes two modular combined-use facilities, one for LLW and MLLW disposal and one for disposal of WTP wastes. The subalternatives within each group are also represented by these diagrams. The primary differences among the subalternatives are the locations for the disposal facilities. Table B.26 has been provided as an aid for reviewing these flow diagrams. This table provides a matrix of the disposal options by waste type for each subalternative in Groups D and E.

Table B.26. Matrix of Disposal Options for Alternative Groups D and E

	Alternative Group D			**Alternative Group E**		
	1	**2**	**3**	**1**	**2**	**3**
LLW	Near PUREX	200 E LLBG	ERDF	200 E LLBG	Near PUREX	ERDF
MLLW	Near PUREX	200 E LLBG	ERDF	200 E LLBG	Near PUREX	ERDF
ILAW Packages	Near PUREX	200 E LLBG	ERDF	ERDF	ERDF	Near PUREX
WTP Melters	Near PUREX	200 E LLBG	ERDF	ERDF	ERDF	Near PUREX

Alternative Groups D & E

Stream 1
LLW Category 1



	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**18,944 m³**	18,944 m³	*18,944 m³*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**69,848 m³**	88,939 m³	*268,186 m³*
Waste Stream Total:	**88,792 m³**	107,883 m³	*287,130 m³*
Total Verification:	**3,326 m³**	4,069 m³	*11,941 m³*
Total Disposal:	**89,069 m³**	108,205 m³	*287,906 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Note: Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

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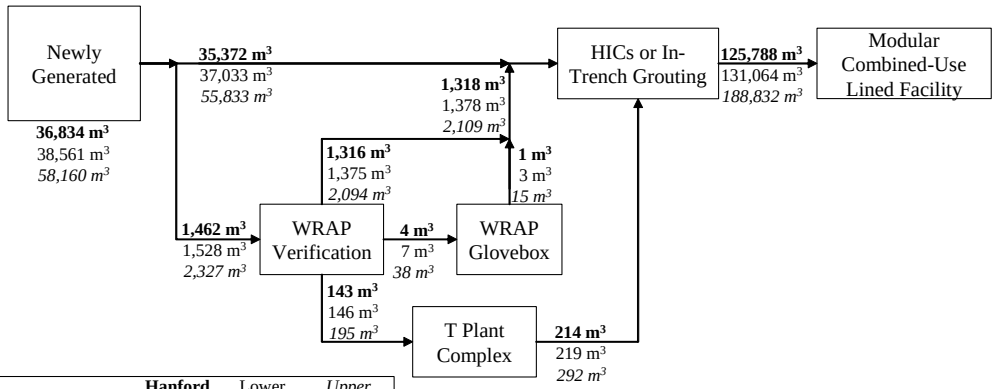
Alternative Groups D & E

Stream 2
LLW Category 3



	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**2,773 m³**	2,773 m³	*2,773 m³*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**36,834 m³**	38,561 m³	*58,160 m³*
Waste Stream Total:	**39,607 m³**	41,334 m³	*60,933 m³*
Total Verification:	**1,462 m³**	1,528 m³	*2,327 m³*
Total Stabilized:	**36,903 m³**	38,630 m³	*58,234 m³*
Total Disposal:	**128,561 m³**	133,837 m³	*191,605 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Note: Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

M0212-0286.55a2
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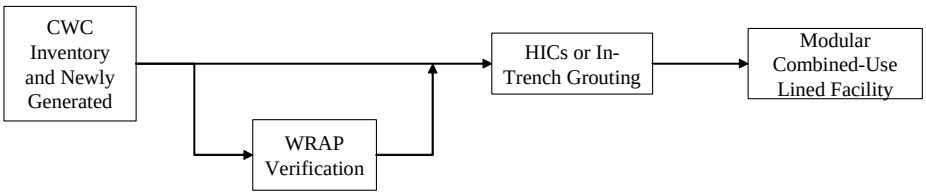
*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Groups D & E

Stream 3
Greater Than Category 3 Waste



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**<1 m³**	<1 m³	*<1 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**<1 m³**	<1 m³	*<1 m³*
Total Stabilized:	**<1 m³**	<1 m³	*<1 m³*
Total Disposal:	**<1 m³**	<1 m³	*<1 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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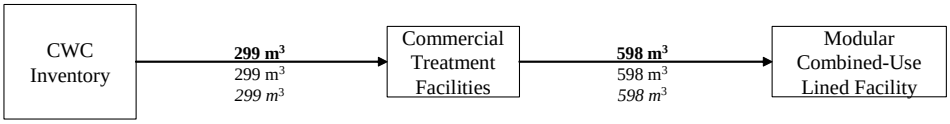
Alternative Groups D & E

Stream 6
LLW – Non-Conforming



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**299 m³**	299 m³	*299 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**299 m³**	299 m³	*299 m³*
Total Treatment:	**299 m³**	299 m³	*299 m³*
Total Disposal:	**598 m³**	598 m³	*598 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.55a4
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Groups D & E

Stream 20
LLW – Previously Disposed of

	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**283,067 m³**	283,067 m³	*283,067 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**283,067 m³**	283,067 m³	*283,067 m³*
Total Treatment:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**283,067 m³**	283,067 m³	*283,067 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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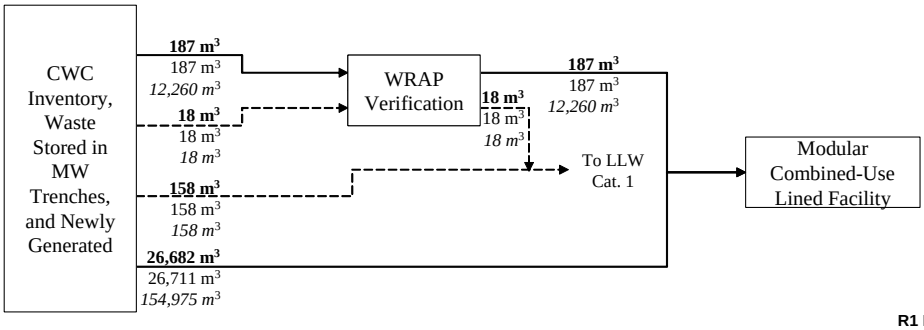
Alternative Groups D & E

Stream 11
MLLW Treated and Ready for Disposal



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R1 HSW EIS 02-24-03

	Hanford Only	Lower Bound	*Upper Bound*
Disposed FY99-01:	**1,010 m³**	1,010 m³	*1,010 m³*
Initial Inventory:	**1,102 m³**	1,102 m³	*1,102 m³*
Receipts:	**25,942 m³**	25,970 m³	*166,307m³*
Waste Stream Total:	**28,054 m³**	28,082 m³	*168,419m³*
Total Treatment:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**27,879 m³**	27,907 m³	*168,244 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

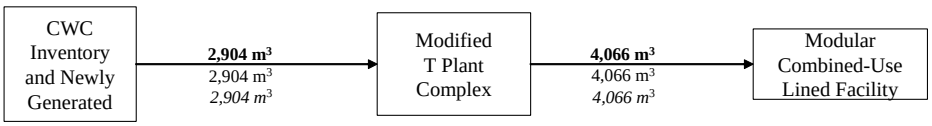
Notes: Dashed lines represent waste managed as MLLW expected to be reclassified as LLW.

Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Groups D & E

Stream 12
RH and Non-Standard Packages



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**65 m³**	65 m³	*65 m³*
Receipts:	**2,839 m³**	2,839 m³	*2,839 m³*
Waste Stream Total:	**2,904 m³**	2,904 m³	*2,904 m³*
Total Treatment:	**2,904 m³**	2,904 m³	*2,904 m³*
Total Disposal:	**4,066 m³**	4,066 m³	*4,066 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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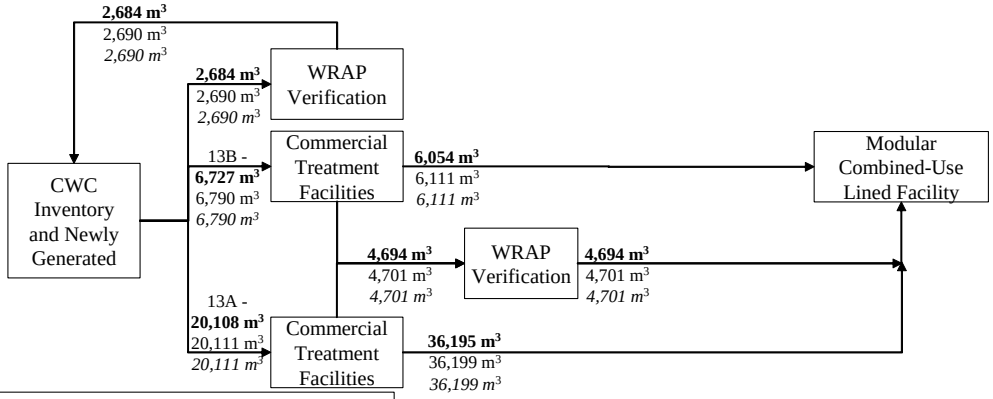
R1 HSW EIS 02-24-03

Alternative Groups D & E

Stream 13A – CH Inorganic Solids and Debris
Stream 13B – CH Organic Solids and Debris



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**5,725 m³**	5,725 m³	*5,725 m³*
Receipts:	**21,110 m³**	21,175 m³	*21,175 m³*
Waste Stream Total:	**26,835 m³**	26,901 m³	*26,901 m³*
Total Treatment:	**26,835 m³**	26,901 m³	*26,901 m³*
Total Disposal:	**46,944 m³**	47,011 m³	*47,011 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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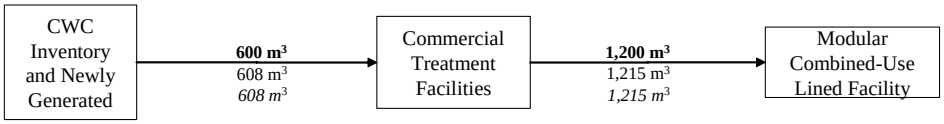
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Groups D & E

Stream 14
Elemental Lead



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**445 m³**	445 m³	*445 m³*
Receipts:	**155 m³**	163 m³	*163 m³*
Waste Stream Total:	**600 m³**	608 m³	*608 m³*
Total Treatment:	**600 m³**	608 m³	*608 m³*
Total Disposal:	**1,200 m³**	1,215 m³	*1,215 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

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R1 HSW EIS 02-24-03

Alternative Groups D & E

Stream 15
Elemental Mercury

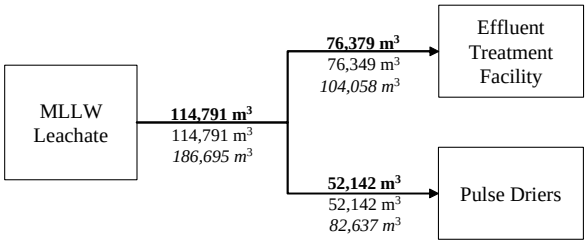
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**13 m³**	13 m³	*13 m³*
Receipts:	**8 m³**	8 m³	*8 m³*
Waste Stream Total:	**21 m³**	21 m³	*21 m³*
Total Treatment:	**21 m³**	21 m³	*21 m³*
Total Disposal:	**312 m³**	312 m³	*312 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.55a10
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Groups D & E

Stream 18
MLLW Trench Leachate

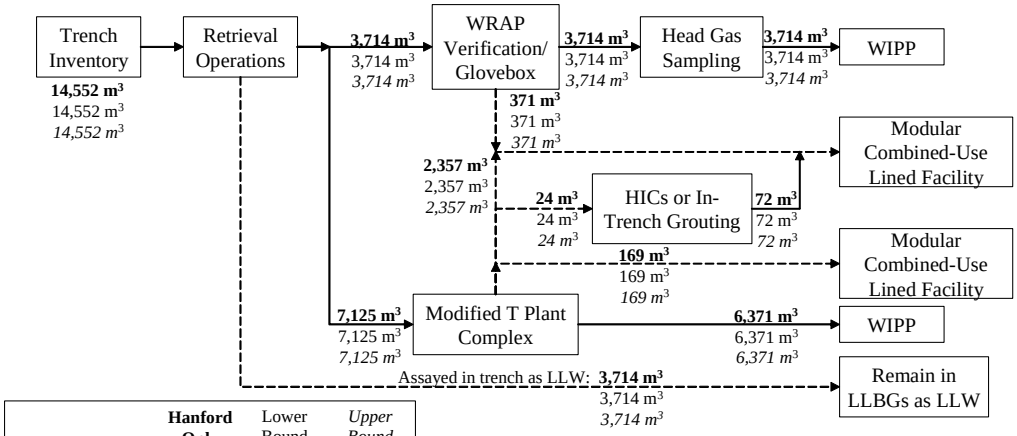


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Total Generation:	**114,791 m³**	114,791 m³	*186,695 m³*
Waste Stream Total:	**114,791 m³**	114,791 m³	*186,695 m³*
Total Treatment/ Disposal:	**114,791 m³**	114,791 m³	*186,695 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.55a11
HSW EIS 02-24-03

Alternative Groups D & E

Stream 4
TRU - Waste from Trenches



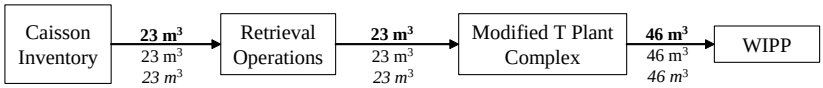
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**14,552 m³**	14,552 m³	*14,552 m³*
Receipts:	**0 m³**	0 m³	*0 m³*
Waste Stream Total:	**14,552 m³**	14,552 m³	*14,552 m³*
Total Processed:	**10,938 m³**	10,938 m³	*10,938 m³*
Total Disposal:	**10,185 m³**	10,185 m³	*10,185 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.55a12
R2 HSW EIS 05-23-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Groups D & E

Stream 5
TRU - Waste from Caissons



	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**23 m^3**	23 m^3	*23 m^3*
Receipts:	**0 m^3**	0 m^3	*0 m^3*
Waste Stream Total:	**23 m^3**	23 m^3	*23 m^3*
Total Processed:	**23 m^3**	23 m^3	*23 m^3*
Total Disposal:	**46 m^3**	46 m^3	*46 m^3*
Ending Inventory:	**0 m^3**	0 m^3	*0 m^3*

M0212-0286.55a13
HSW EIS 02-24-03

Alternative Groups D & E

Stream 8
TRU - Commingled PCB Waste

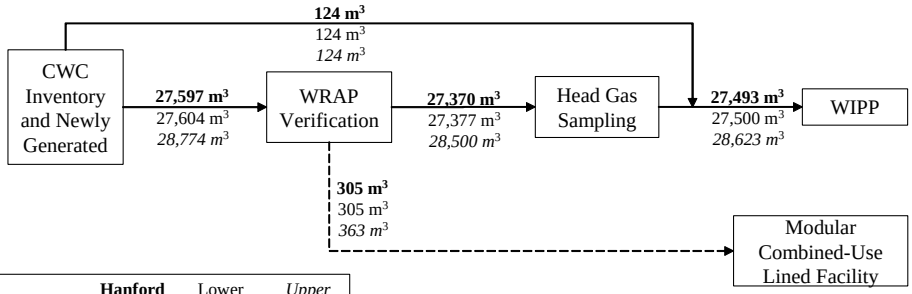
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**80 m^3**	80 m^3	*80 m^3*
Receipts:	**0 m^3**	15 m^3	*15 m^3*
Waste Stream Total:	**80 m^3**	95 m^3	*95 m^3*
Total Processed:	**80 m^3**	95 m^3	*95 m^3*
Total Disposal:	**80 m^3**	95 m^3	*95 m^3*
Ending Inventory:	**0 m^3**	0 m^3	*0 m^3*

M0212-0286.55a14
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Groups D & E

Stream 9
TRU – Newly Generated and Existing CH Standard Containers



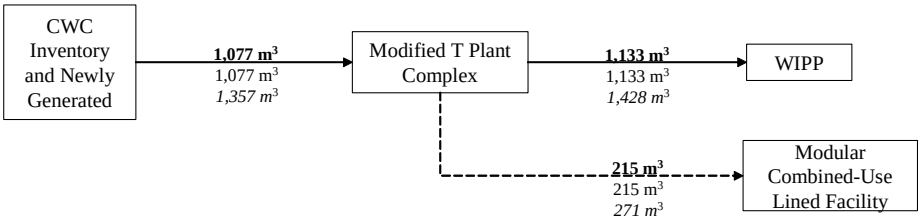
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**849 m³**	849 m³	*849 m³*
Receipts:	**26,870 m³**	26,878 m³	*28,048 m³*
Waste Stream Total:	**27,719 m³**	27,727 m³	*28,897 m³*
Total Processed:	**27,597 m³**	27,604 m³	*28,774 m³*
Total Disposal:	**27,493 m³**	27,500 m³	*28,623 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Note: It is assumed that WIPP or another offsite disposal facility will be available after 2032.

M0212-0286.55a15
R1 HSW EIS 02-24-03

Alternative Groups D & E

Stream 10A
TRU – Newly Generated and Existing CH Non-Standard Containers



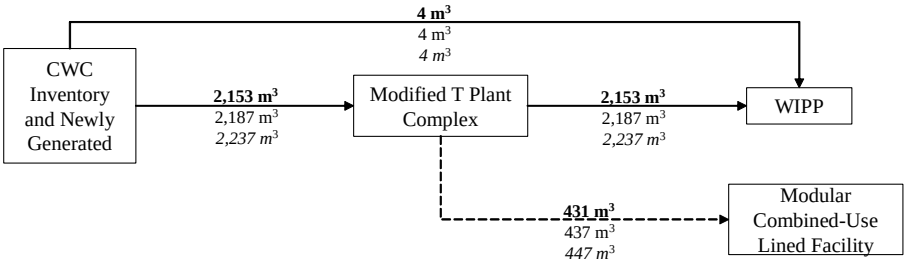
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**585 m³**	585 m³	*585 m³*
Receipts:	**492 m³**	492 m³	*772 m³*
Waste Stream Total:	**1,077 m³**	1,077 m³	*1,357 m³*
Total Processed:	**1,077 m³**	1,077 m³	*1,357 m³*
Total Disposal:	**1,133 m³**	1,133 m³	*1,428 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.55a16
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Groups D & E

Stream 10B
TRU – Newly Generated and Existing RH Waste



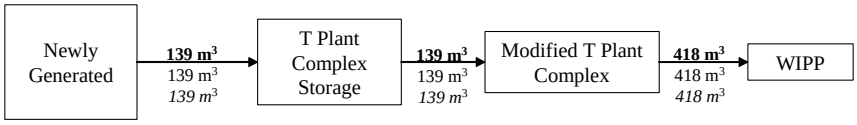
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**46 m³**	46 m³	*46 m³*
Receipts:	**2,112 m³**	2,145 m³	*2,196 m³*
Waste Stream Total:	**2,157 m³**	2,191 m³	*2,241 m³*
Total Processed:	**2,153 m³**	2,187 m³	*2,237 m³*
Total Disposal:	**2,157 m³**	2,191 m³	*2,241 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

Note: It is assumed that WIPP or another offsite disposal facility will be available after 2032.

M0212-0286.55a17
R1 HSW EIS 02-24-03

Alternative Groups D & E

Stream 17
TRU – K Basins Sludge



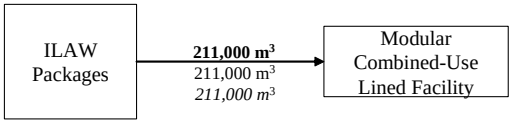
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**139 m³**	139 m³	*139 m³*
Waste Stream Total:	**139 m³**	139 m³	*139 m³*
Total Processed:	**139 m³**	139 m³	*139 m³*
Total Disposal:	**418 m³**	418 m³	*418 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.55a18
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

Alternative Groups D & E

Stream 21
WTP Wastes – ILAW Packages

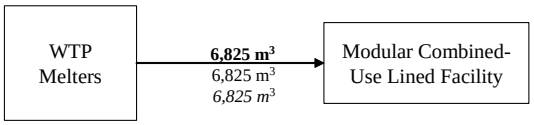


	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**211,000 m³**	211,000 m³	*211,000 m³*
Waste Stream Total:	**211,000 m³**	211,000 m³	*211,000 m³*
Total Processed:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**211,000 m³**	211,000 m³	*211,000 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.55a19
R1 HSW EIS 02-24-03

Alternative Groups D & E

Stream 22
WTP Wastes – WTP Melters



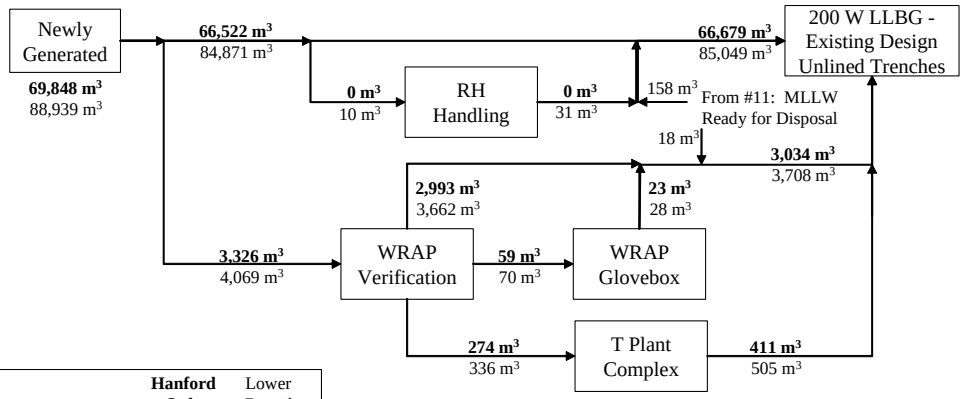
	Hanford Only	Lower Bound	*Upper Bound*
Initial Inventory:	**0 m³**	0 m³	*0 m³*
Receipts:	**6,825 m³**	6,825 m³	*6,825 m³*
Waste Stream Total:	**6,825 m³**	6,825 m³	*6,825 m³*
Total Processed:	**0 m³**	0 m³	*0 m³*
Total Disposal:	**6,825 m³**	6,825 m³	*6,825 m³*
Ending Inventory:	**0 m³**	0 m³	*0 m³*

M0212-0286.55a20
R1 HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

No Action Alternative Group

Stream 1
LLW Category 1



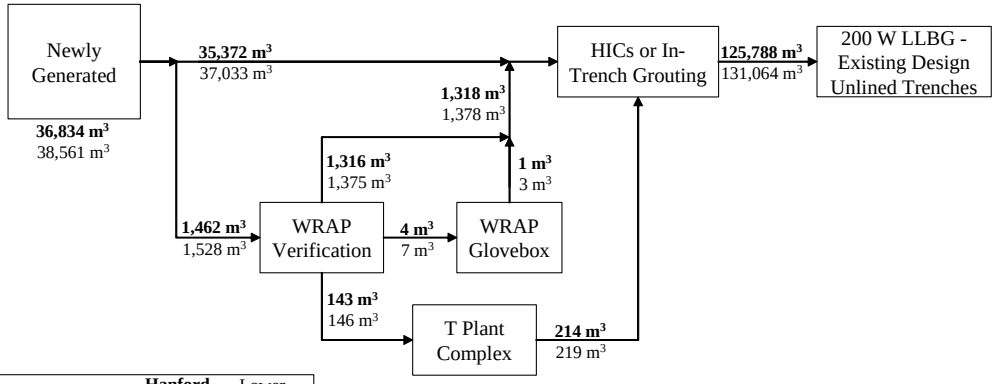
	Hanford Only	Lower Bound
Disposed FY99-01:	**18,944 m³**	18,944 m³
Initial Inventory:	**0 m³**	0 m³
Receipts:	**69,848 m³**	88,939 m³
Waste Stream Total:	**88,792 m³**	107,883 m³
Total Verification:	**3,326 m³**	4,069 m³
Total Disposal:	**89,069 m³**	108,205 m³
Ending Inventory:	**0 m³**	0 m³

Note: Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

M0212-0286.55a21
HSW EIS 02-24-03

No Action Alternative Group

Stream 2
LLW Category 3



	Hanford Only	Lower Bound
Disposed FY99-01:	**2,773 m³**	2,773 m³
Initial Inventory:	**0 m³**	0 m³
Receipts:	**36,834 m³**	38,561 m³
Waste Stream Total:	**39,607 m³**	41,334 m³
Total Verification:	**1,462 m³**	1,528 m³
Total Stabilized:	**36,903 m³**	38,630 m³
Total Disposal:	**128,561 m³**	133,837 m³
Ending Inventory:	**0 m³**	0 m³

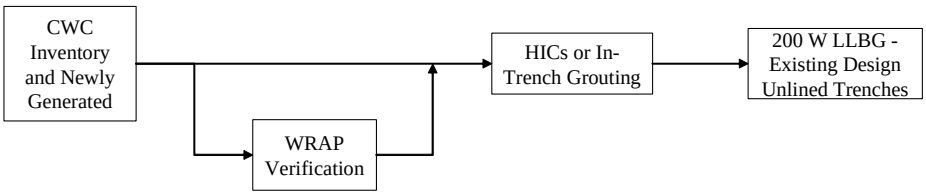
Note: Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

M0212-0286.55a22
HSW EIS 02-24-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

No Action Alternative Group

Stream 3
Greater Than Category 3 Waste

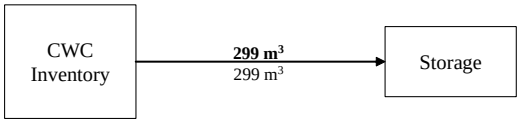


	Hanford Only	Lower Bound
Initial Inventory:	**<1 m³**	<1 m³
Receipts:	**0 m³**	0 m³
Waste Stream Total:	**<1 m³**	<1 m³
Total Stabilized:	**<1 m³**	<1 m³
Total Disposal:	**<1 m³**	<1 m³
Ending Inventory:	**0 m³**	0 m³

M0212-0286.55a23
HSW EIS 02-24-03

No Action Alternative Group

Stream 6
LLW – Non-Conforming



	Hanford Only	Lower Bound
Initial Inventory:	**299 m³**	299 m³
Receipts:	**0 m³**	0 m³
Waste Stream Total:	**299 m³**	299 m³
Total Treatment:	**299 m³**	299 m³
Total Disposal:	**0 m³**	0 m³
Ending Inventory:	**299 m³**	299 m³

M0212-0286.55a24
R1 HSW EIS 03-27-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

No Action Alternative Group

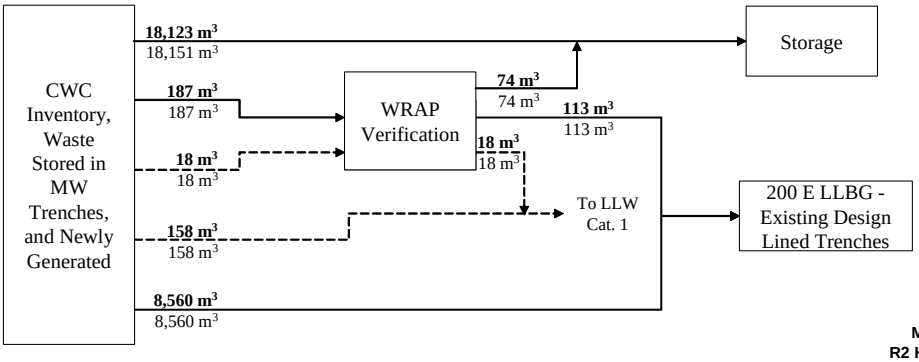
Stream 20
LLW – Previously Disposed of

	Hanford Only	Lower Bound
Initial Inventory:	**283,067 m³**	283,067 m³
Receipts:	**0 m³**	0 m³
Waste Stream Total:	**283,067 m³**	283,067 m³
Total Treatment:	**0 m³**	0 m³
Total Disposal:	**283,067 m³**	283,067 m³
Ending Inventory:	**0 m³**	0 m³

M0212-0286.55a25
HSW EIS 02-24-03

No Action Alternative Group

Stream 11
MLLW Treated and Ready for Disposal



M0212-0286.55a26
R2 HSW EIS 05-23-03

	Hanford Only	Lower Bound
Disposed FY99-01:	**1,010 m³**	1,010 m³
Initial Inventory:	**1,102 m³**	1,102 m³
Receipts:	**25,942 m³**	25,970 m³
Waste Stream Total:	**28,054 m³**	28,082 m³
Total Treatment:	**0 m³**	0 m³
Total Disposal:	**9,683 m³**	9,683 m³
Ending Inventory:	**18,196 m³**	18,225 m³

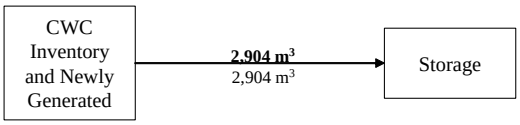
Notes: Dashed lines represent waste managed as MLLW expected to be reclassified as LLW.

Waste disposed from FY99 to FY01 is not shown in the diagram but is included in the summary of Total Disposal.

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

No Action Alternative Group

Stream 12
RH and Non-Standard Packages

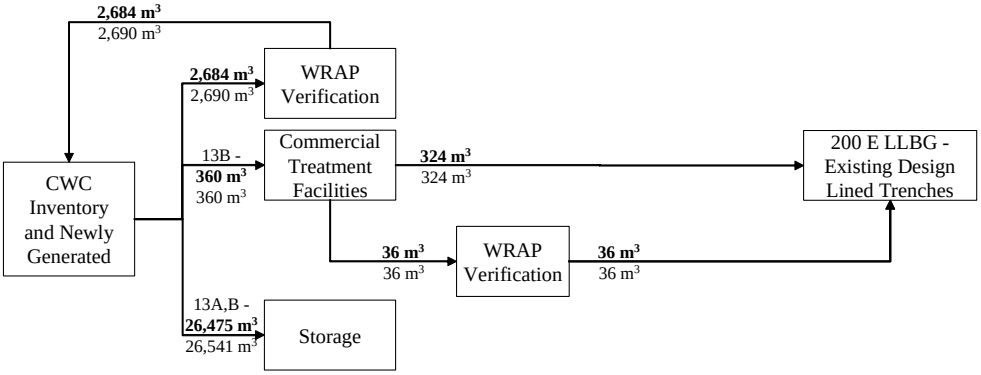


	Hanford Only	Lower Bound
Initial Inventory:	**65 m³**	65 m³
Receipts:	**2,839 m³**	2,839 m³
Waste Stream Total:	**2,904 m³**	2,904 m³
Total Treatment:	**0 m³**	0 m³
Total Disposal:	**0 m³**	0 m³
Ending Inventory:	**2,904 m³**	2,904 m³

M0212-0286.55a27
R1 HSW EIS 03-27-03

No Action Alternative Group

Stream 13A – CH Inorganic Solids and Debris
Stream 13B – CH Organic Solids and Debris



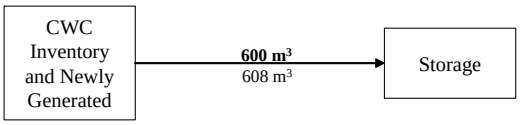
	Hanford Only	Lower Bound
Initial Inventory:	**5,725 m³**	5,725 m³
Receipts:	**21,110 m³**	21,175 m³
Waste Stream Total:	**26,835 m³**	26,901 m³
Total Treatment:	**360 m³**	360 m³
Total Disposal:	**360 m³**	360 m³
Ending Inventory:	**26,475 m³**	26,541 m³

M0212-0286.55a28
R1 HSW EIS 03-27-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

No Action Alternative Group

Stream 14
Elemental Lead

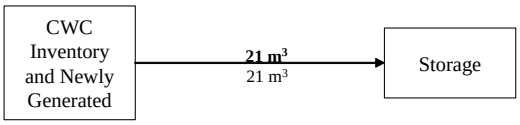


	Hanford Only	Lower Bound
Initial Inventory:	**445 m³**	445 m³
Receipts:	**155 m³**	163 m³
Waste Stream Total:	**600 m³**	608 m³
Total Treatment:	**0 m³**	0 m³
Total Disposal:	**0 m³**	0 m³
Ending Inventory:	**608 m³**	608 m³

M0212-0286.55a29
R1 HSW EIS 03-27-03

No Action Alternative Group

Stream 15
Elemental Mercury



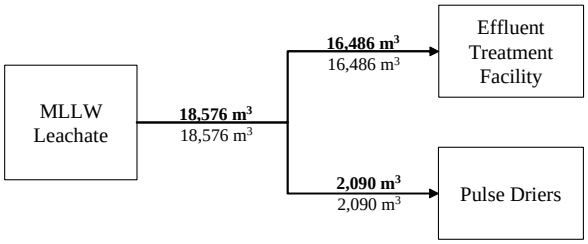
	Hanford Only	Lower Bound
Initial Inventory:	**13 m³**	13 m³
Receipts:	**8 m³**	8 m³
Waste Stream Total:	**21 m³**	21 m³
Total Treatment:	**0 m³**	0 m³
Total Disposal:	**0 m³**	0 m³
Ending Inventory:	**21 m³**	21 m³

M0212-0286.55a30
R1 HSW EIS 03-27-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

No Action Alternative Group

Stream 18
MLLW Trench Leachate

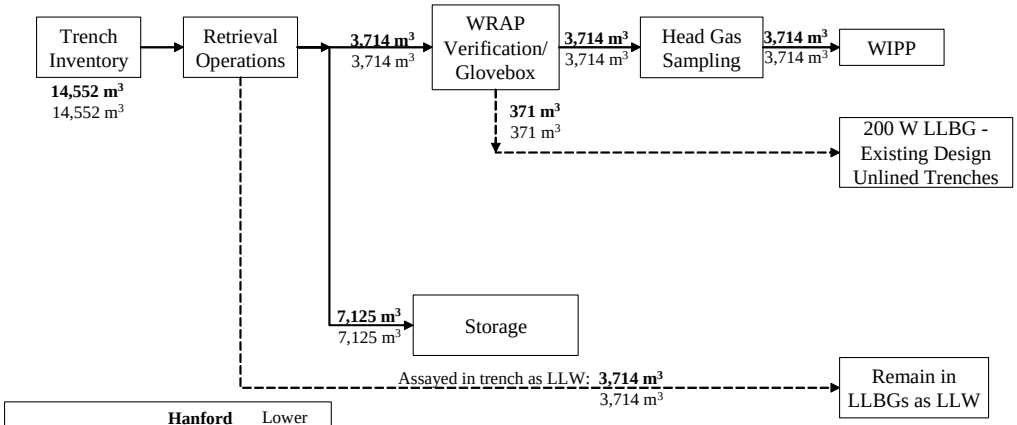


	Hanford Only	Lower Bound
Initial Inventory:	**0 m³**	0 m³
Total Generation:	**18,576 m³**	18,576 m³
Waste Stream Total:	**18,576 m³**	18,576 m³
Total Treatment/ Disposal:	**18,576 m³**	18,576 m³
Ending Inventory:	**0 m³**	0 m³

M0212-0286.55a31
HSW EIS 02-24-03

No Action Alternative Group

Stream 4
TRU - Waste from Trenches



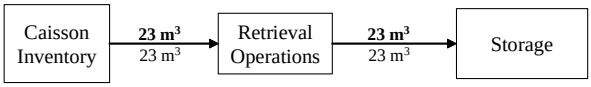
	Hanford Only	Lower Bound
Initial Inventory:	**14,552 m³**	14,552 m³
Receipts:	**0 m³**	0 m³
Waste Stream Total:	**14,552 m³**	14,552 m³
Total Processed:	**10,938 m³**	10,938 m³
Total Disposal:	**10,185 m³**	10,185 m³
Ending Inventory:	**0 m³**	0 m³

M0212-0286.55a32
R1 HSW EIS 03-27-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

No Action Alternative Group

Stream 5
TRU - Waste from Caissons

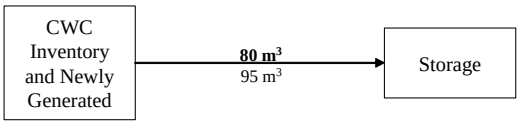


	Hanford Only	Lower Bound
Initial Inventory:	**23 m³**	23 m³
Receipts:	**0 m³**	0 m³
Waste Stream Total:	**23 m³**	23 m³
Total Processed:	**0 m³**	0 m³
Total Disposal:	**0 m³**	0 m³
Ending Inventory:	**23 m³**	23 m³

M0212-0286.55a33
R1 HSW EIS 03-27-03

No Action Alternative Group

Stream 8
TRU - Commingled PCB Waste



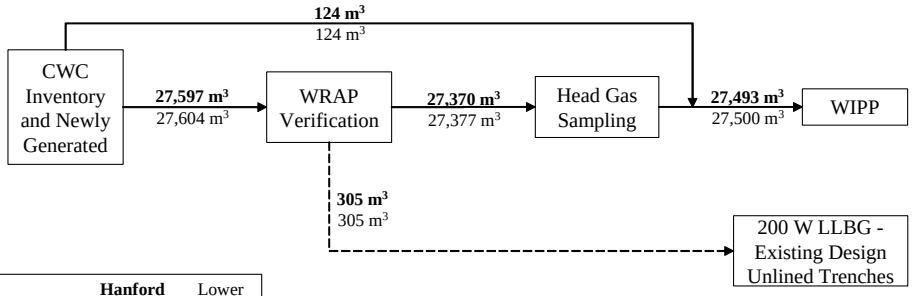
	Hanford Only	Lower Bound
Initial Inventory:	**80 m³**	80 m³
Receipts:	**0 m³**	15 m³
Waste Stream Total:	**80 m³**	95 m³
Total Processed:	**80 m³**	95 m³
Total Disposal:	**80 m³**	95 m³
Ending Inventory:	**0 m³**	0 m³

M0212-0286.55a34
R1 HSW EIS 03-27-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

No Action Alternative Group

Stream 9
TRU – Newly Generated and Existing CH Standard Containers



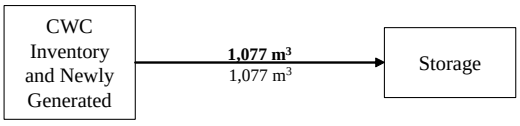
	Hanford Only	Lower Bound
Initial Inventory:	**849 m³**	849 m³
Receipts:	**26,870 m³**	26,878 m³
Waste Stream Total:	**27,719 m³**	27,727 m³
Total Processed:	**27,597 m³**	27,604 m³
Total Disposal:	**27,493 m³**	27,500 m³
Ending Inventory:	**0 m³**	0 m³

Note: It is assumed that WIPP or another offsite disposal facility will be available after 2032.

M0212-0286.55a35
HSW EIS 02-24-03

No Action Alternative Group

Stream 10A
TRU – Newly Generated and Existing CH Non-Standard Containers



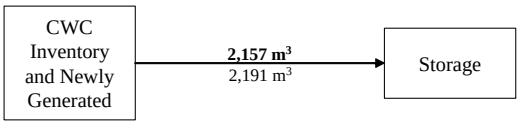
	Hanford Only	Lower Bound
Initial Inventory:	**585 m³**	585 m³
Receipts:	**492 m³**	492 m³
Waste Stream Total:	**1,077 m³**	1,077 m³
Total Processed:	**0 m³**	0 m³
Total Disposal:	**0 m³**	0 m³
Ending Inventory:	**1,077 m³**	1,077 m³

M0212-0286.55a36
R1 HSW EIS 03-27 -03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

No Action Alternative Group

Stream 10B
TRU – Newly Generated and Existing RH Waste

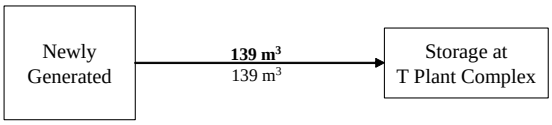


	Hanford Only	Lower Bound
Initial Inventory:	**46 m³**	46 m³
Receipts:	**2,112 m³**	2,145 m³
Waste Stream Total:	**2,157 m³**	2,191 m³
Total Processed:	**0 m³**	0 m³
Total Disposal:	**0 m³**	0 m³
Ending Inventory:	**2,157 m³**	2,191 m³

M0212-0286.55a37
R1 HSW EIS 03-27-03

No Action Alternative Group

Stream 17
TRU – K Basins Sludge



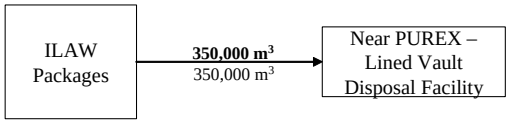
	Hanford Only	Lower Bound
Initial Inventory:	**0 m³**	0 m³
Receipts:	**139 m³**	139 m³
Waste Stream Total:	**139 m³**	139 m³
Total Processed:	**0 m³**	0 m³
Total Disposal:	**0 m³**	0 m³
Ending Inventory:	**139 m³**	139 m³

M0212-0286.55a38
R1 HSW EIS 03-27-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

No Action Alternative Group

Stream 21
WTP Wastes – ILAW Packages

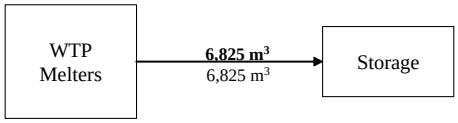


	Hanford Only	Lower Bound
Initial Inventory:	**0 m³**	0 m³
Receipts:	**350,000 m³**	350,000 m³
Waste Stream Total:	**350,000 m³**	350,000 m³
Total Processed:	**0 m³**	0 m³
Total Disposal:	**350,000 m³**	350,000 m³
Ending Inventory:	**0 m³**	0 m³

M0212-0286.55a39
R1 HSW EIS 02-24-03

No Action Alternative Group

Stream 22
WTP Wastes –WTP Melters



	Hanford Only	Lower Bound
Initial Inventory:	**0 m³**	0 m³
Receipts:	**6,825 m³**	6,825 m³
Waste Stream Total:	**6,825 m³**	6,825 m³
Total Processed:	**0 m³**	0 m³
Total Disposal:	**0 m³**	0 m³
Ending Inventory:	**6,825 m³**	6,825 m³

M0212-0286.55a40
R2 HSW EIS 03-27-03

*For definitions of acronyms, abbreviations, and terms, see list at the beginning of these flow diagrams.

B.7 References

Anderson, G. S., and H. S. Konynenbelt. 1995. *1995 Baseline Solid Waste Management System Description*. PNL-10743, Pacific Northwest Laboratory, Richland, Washington.

DOE-RL. 2001. *2001 Hanford Waste Management Strategic Plan*. DOE/RL-2001-15, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Sederburg, J. P. 1997. *Waste Management Project Technical Baseline Description*. HNF-SD-WM-RPT-288, U.S. Department of Energy, Richland Operations Office, Richland, Washington.