

1 **5.17 Unavoidable Adverse Impacts**  
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3 This section summarizes the potential unavoidable adverse impacts associated with implementing the  
4 HSW EIS alternatives. Identified are those unavoidable adverse impacts that would remain after  
5 incorporating all mitigation measures that were included in the development of the EIS alternatives.  
6 Potentially adverse impacts for each of the alternatives are described in other portions of Section 5. In  
7 Section 5.18, additional practicable mitigation measures are identified that might further reduce the  
8 impacts described in this section.  
9

10 In particular, unavoidable adverse impacts that would occur if Alternative Groups A, B, C, D, E, or  
11 the No Action Alternative were to be implemented are identified in the following sections.  
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13 **5.17.1 Alternative Group A**  
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15 Unavoidable adverse impacts associated with implementing Alternative Group A would include:  
16

- 17 • commitment of from about 168.5 ha (410 ac) of land for disposal of the Hanford Only waste volume  
18 to about 177.9 ha (440 ac) for the Upper Bound waste volume of LLW, MLLW, ILAW, and melters  
19
- 20 • small additions of pollutants to the atmosphere as a result of operating heavy equipment during  
21 modification of the T Plant Complex and construction of additional burial trenches, operation of  
22 facilities, trench backfilling, obtaining materials for constructing modified RCRA Subtitle C covers for  
23 disposal facilities and capping the sites, and from transportation of materials and wastes  
24
- 25 • small increments in dose to workers and the public  
26
- 27 • potential for 20 transport accidents and 1 non-radiological fatality as a result of transporting MLLW  
28 offsite for treatment  
29
- 30 • potential for 1 radiological latent cancer fatality together with 18 transport accidents and 3 non-  
31 radiological fatalities from transport of TRU waste to WIPP (none of these fatalities was expected to  
32 occur in the states of Oregon or Washington)  
33
- 34 • potential for two transport accidents in Oregon and one in Washington involving receipt of waste  
35 from offsite generators in the Lower Bound waste volume case and four transport accidents in Oregon  
36 and one in Washington in the Upper Bound waste volume case (no fatalities were predicted in either  
37 case)  
38
- 39 • eventual migration of mobile radionuclides such as technetium-99, iodine-129, and uranium isotopes  
40 to groundwater and ultimately to the Columbia River, leading to contamination of groundwater and  
41 very small additional radiation doses to downstream populations.  
42

1 **5.17.2 Alternative Group B**

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3 Unavoidable adverse impacts associated with implementing Alternative Group B would be essentially  
4 the same as those for Alternative Group A, except for the following differences:

- 5  
6 • commitment of from about 186.6 ha (460 ac) of land for disposal of the Hanford Only waste volume  
7 to 184 ha (454 ac) for the Upper Bound waste volume of LLW, MLLW, and ILAW  
8  
9 • small additions of pollutants to the atmosphere as a result of operating heavy equipment during  
10 construction of a new waste processing facility for treatment of some wastes  
11  
12 • potential for 1 transport accident but with no associated fatalities  
13  
14 • potential for 1 radiological latent cancer fatality together with 18 transport accidents and 2 non-  
15 radiological fatalities from transport of TRU waste to WIPP (none of these fatalities was expected to  
16 occur in the states of Oregon or Washington)  
17  
18 • potential for two transport accidents in Oregon and one in Washington involving receipt of waste  
19 from offsite generators in the Lower Bound waste volume case and four transport accidents in Oregon  
20 and one in Washington in the Upper Bound waste volume case (no fatalities were predicted in either  
21 case).  
22

23 **5.17.3 Alternative Group C**

24  
25 Unavoidable adverse impacts associated with implementing Alternative Group C would be essentially  
26 the same as those for Alternative Group A, except for the following difference:

- 27  
28 • commitment of from about 150.5 ha (370 ac) of land for disposal of the Hanford Only waste volume  
29 to 159.9 ha (390 ac) for the Upper Bound waste volume of LLW, MLLW, and ILAW.  
30

31 **5.17.4 Alternative Groups D and E (All Subalternatives)**

32  
33 Unavoidable adverse impacts associated with implementing Alternative Groups D and E would be  
34 essentially the same as those for Alternative Group A, except for the following difference:

- 35  
36 • commitment of from about 149.9 ha (370 ac) of land for disposal of the Hanford Only waste volume  
37 to 155 ha (329 ac) for the Upper Bound waste volume of LLW, MLLW, ILAW, and melters.  
38

1 **5.17.5 No Action Alternative**

2  
3 Unavoidable adverse impacts associated with implementing the No Action Alternative would include

- 4  
5 • storage of certain MLLW and TRU wastes and melters requiring additional land disturbance of about  
6 66 ha (163 ac)  
7  
8 • consumption of resources and localized minor degradation of air quality associated with construction  
9 of 66 additional CWC storage buildings  
10  
11 • commitment of from about 148 ha (365 ac) of land for below-grade disposal of LLW, MLLW, and  
12 ILAW for the Hanford Only waste volume to about 149 ha (368 ac) for the Lower Bound waste  
13 volume  
14  
15 • small additions of pollutants to the atmosphere from operating heavy equipment during construction  
16 and operation of burial trenches, operation of facilities, and from transportation of materials and  
17 wastes  
18  
19 • small increments in dose to the public and potential for one radiological latent cancer fatality to the  
20 workers  
21  
22 • eventual migration of mobile radionuclides such as technetium-99, iodine-129, and uranium isotopes  
23 to groundwater and ultimately to the Columbia River, leading to contamination of groundwater and  
24 very small additional radiation doses to downstream populations  
25  
26 • potential for no radiological fatalities, but up to one non-radiological fatality as a result of waste  
27 transport  
28  
29 • potential for 1 radiological latent cancer fatality together with 9 transport accidents and 1 non-  
30 radiological fatality from transport of TRU waste to WIPP (none of these fatalities was expected to  
31 occur in the states of Oregon or Washington)  
32  
33 • potential for two transport accidents in Oregon and one in Washington involving receipt of waste  
34 from offsite generators in the Lower Bound waste volume case (no fatalities were predicted).  
35