

## 5.17 Unavoidable Adverse Impacts

This section summarizes the potential unavoidable adverse impacts associated with implementing the HSW EIS alternative groups. Identified are those unavoidable adverse impacts that would remain after incorporating all mitigation measures that were included in the development of the EIS alternative groups. Potentially adverse impacts for each of the alternative groups are described in other portions of Section 5. In Section 5.18, additional practicable mitigation measures are identified that might further reduce the impacts described in this section.

In particular, unavoidable adverse impacts that would occur if Alternative Groups A, B, C, D, E, or the No Action Alternative were to be implemented are identified in the following sections.

### 5.17.1 Alternative Group A

Unavoidable adverse impacts associated with implementing Alternative Group A would include:

- commitment of about 168.5 ha (410 ac) of land for disposal of the Hanford Only waste volume to about 177.9 ha (440 ac) for the Upper Bound waste volume of LLW, MLLW, ILAW, and melters
- small additions of pollutants to the atmosphere as a result of operating heavy equipment during modification of the T Plant Complex and construction of additional burial trenches, operation of facilities, trench backfilling, obtaining materials for constructing Modified RCRA Subtitle C Barriers for disposal facilities and capping the sites, and from transportation of materials and wastes
- small increments in dose to workers and the public
- potential for a total of 23 to 75 transport accidents (Lower Bound to Upper Bound waste volumes for LLW, MLLW, TRU Waste, ILAW, and WTP melters) and 1 to 3 fatalities from those accidents
- potential for 5 to 9 inferred LCFs as a result of routine transport of waste to and from the Hanford Site
- potential for 17 transport accidents and 1 non-radiological fatality from transporting TRU waste to WIPP (none of these fatalities would be expected to occur in the states of Oregon or Washington)
- potential for one transport accident in Oregon and none in Washington involving receipt of waste from offsite generators and subsequent transport of the TRU waste to WIPP in the Lower Bound waste volume case and five transport accidents in Oregon and two in Washington in the Upper Bound waste volume case. One fatality might occur in Oregon in the Upper Bound waste volume case.
- eventual migration of mobile radionuclides such as technetium-99, iodine-129, and uranium isotopes to the groundwater and ultimately to the Columbia River, leading to very small additional radiation doses to downstream populations.

### **5.17.2 Alternative Group B**

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

- commitment of about 186.6 ha (460 ac) of land for disposal of the Hanford Only waste volume to 210.1 ha (519 ac) for the Upper Bound waste volume of LLW, MLLW, and ILAW
- small additions of pollutants to the atmosphere as a result of operating heavy equipment during construction of a new waste processing facility for treatment of some wastes
- potential for 1 less transport accident (total for either the Lower Bound or Upper Bound waste volumes for LLW, MLLW, TRU Waste, ILAW and WTP melters), with the potential for 1 to 2 fatalities from those accidents.

### **5.17.3 Alternative Group C**

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

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

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

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

- commitment of about 149.9 ha (370 ac) of land for disposal of the Hanford Only waste volume to 155 ha (383 ac) for the Upper Bound waste volume of LLW, MLLW, ILAW, and melters.

### **5.17.5 No Action Alternative**

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

- storage of certain MLLW and TRU wastes and melters requiring additional land disturbance of about 66 ha (163 ac)
- commitment of about 148 ha (365 ac) of land for below-grade disposal of LLW, MLLW, and ILAW for the Hanford Only waste volume to about 149 ha (368 ac) for the Lower Bound waste volume
- small additions of pollutants to the atmosphere from operating heavy equipment during construction and operation of burial trenches, construction of additional CWC storage buildings, operation of facilities, and from transportation of materials and wastes

- small increments in dose to the public and potential for one radiological LCF to the workers
- eventual migration of mobile radionuclides such as technetium-99, iodine-129, and uranium isotopes to the groundwater and ultimately to the Columbia River, leading to very small additional radiation doses to downstream populations
- potential for a total of 10 to 13 transport accidents (Hanford Only to Lower Bound waste volumes for LLW, MLLW, TRU Waste, ILAW and WTP melters) and no fatalities from those accidents
- potential for 2 inferred LCFs as a result of routine transport of waste to and from the Hanford Site
- potential for 8 transport accidents and zero fatalities from transport of TRU waste to WIPP
- potential for up to 1 transport accident in Oregon and none in Washington from the transport of TRU waste to WIPP. No fatalities are expected in either case.