

1 transporting these materials from their points of origin to the appropriate Hanford Site facility. Note that  
2 only the non-radiological impacts of transportation accidents are evaluated. No radiological impacts  
3 would occur (Rao et al. 1982).  
4

5 The non-radiological accident impacts of transporting construction materials were calculated by first  
6 determining the numbers of shipments of each material. This calculation was done by dividing the total  
7 material requirements by the capacity of a typical shipment. Typically, the shipment capacities are  
8 limited to about 40,000 lb (18,140 kg) of cargo to ensure that the shipments are below legal-weight truck  
9 limits (80,000 lb [36,290 kg] gross vehicle weight in most states). The next step was to determine the  
10 total distance traveled by these shipments or the product of the round-trip shipping distance and the  
11 number of shipments. Finally, the projected numbers of fatalities were determined by multiplying the  
12 travel distances times the accident and fatality rates for heavy-combination truck shipping. The accident  
13 rate used in this analysis was  $1.75E-7$  accidents per truck-km ( $2.8E-7$  accidents per truck-mile), and the  
14 fatality rate was  $7.5E-9$  fatalities per truck-km ( $1.2E-8$  fatalities per truck-mile). These rates are repre-  
15 sentative of accident and fatality rates on Washington State primary highways, similar to the highways  
16 and roadways to be used for most of the shipments. The rates used in this analysis were taken from  
17 Saricks and Tompkins (1999).  
18

19 Table H.11 presents the input data and results of the impact analysis for the transport of construction  
20 and capping materials. The table includes the estimated impacts associated with each Alternative Group  
21 and waste-volume case. Although accidents are expected to occur, in no case were any fatalities  
22 projected to occur associated with the transport of construction and capping materials.  
23

24 The results in Table H.11 indicate that there are not large differences in impacts among the Alter-  
25 native Groups. For the Hanford Only waste-volume cases, the projected fatalities ranged from about  
26 0.06 for Alternative Groups C, D, and E to 0.15 fatalities for the No Action Alternative. The impacts of  
27 all Alternative Groups except for the No Action Alternative are dominated by transport of asphalt,  
28 gravel/sand, silt/loam, and basalt, and bentonite to use as capping materials. The impacts for the No  
29 Action Alternative are dominated by the transport of steel and concrete.  
30

## 31 **H.4 Impacts on Traffic**

32

33 The potential for adverse impacts on traffic would be limited to those associated with the transport  
34 of construction materials from offsite, which would be predominantly 4- to 6-lane highways south of the  
35 Hanford Site; traffic congestion would not be expected. The transport of the majority of capping  
36 resources would be onsite as material from Area C would be delivered under State Route (SR) 240 by  
37 conveyors to a holding area in Area B on the Hanford Site east of SR 240. For a conservative view, the  
38 transportation-impact analysis assumed that all transport of capping material is by truck.  
39

## 40 **H.5 Offsite Transportation Impacts**

41

42 This section presents the transportation-impact analysis for shipping LLW and MLLW to Hanford  
43 from offsite generators and for shipping TRU Waste to WIPP.  
44