5.4 Geologic Resources

Impacts on geologic resources would result principally from extraction of basalt, sand, gravel, and silt/loam from the Area C borrow pit for use in capping the disposal facilities upon closure. Geologic resources would also be used for construction of trenches and facilities as well as routine maintenance and operations. The amounts of these geologic resources committed in the alternative groups are quantified in Section 5.10. A comparison among the alternative groups of quantities that would be needed with and without needed ILAW resources is summarized in Table 5.18. (As a result of refined calculations of resource needs based on the Technical Information Document [FH 2004], the need for gravel and sand, silt/loam, and basalt for the action alternative groups increased by factors of approximately 1.8, 2.6, and 1.2, respectively, over those reported in the revised draft HSW EIS [DOE 2003].) Impacts on scenic aspects of topography are described in Section 5.12. No other impacts on geologic resources were identified.[(a)]

Table 5.18. Comparison of Commitments of Geologic Resources, Millions of m^3

Waste Volume	Gravel & Sand	Silt/Loam	Basalt	Total
Alternative Group A (without ILAW)				
Hanford Only	0.776	1.90	0.518	3.19
Lower Bound	0.782	1.91	0.521	3.22
Upper Bound	0.828	2.03	0.552	3.41
Alternative Group B (without ILAW)				
Hanford Only	0.881	2.16	0.587	3.62
Lower Bound	0.895	2.19	0.597	3.68
Upper Bound	1.01	2.47	0.673	4.15
Alternative Group C (without ILAW)				
Hanford Only	0.776	1.90	0.518	3.19
Lower Bound	0.782	1.91	0.521	3.22
Upper Bound	0.828	2.03	0.552	3.41
Alternative Group D (without ILAW)				
Hanford Only	0.777–0.821	1.90–2.01	0.518–0.548	3.20–3.38
Lower Bound	0.780–0.824	1.91–2.02	0.520–0.549	3.21–3.39
Upper Bound	0.807–0.850	1.97–2.08	0.538–0.567	3.32–3.50
Alternative Group E (without ILAW)				
Hanford Only	0.772	1.89	0.515	3.18
Lower Bound	0.775	1.90	0.516	3.19
Upper Bound	0.801	1.96	0.534	3.29
No Action Alternative (without ILAW)				
Hanford Only	0.013	0.031	0.008	0.052
Lower Bound	0.013	0.031	0.008	0.052
ILAW				
Vault	2.603[(b,c)]	NA	NA	NA
Multiple trench	0.770[(b,d)]	NA	NA	NA
Single trench	0.550[(b,e)]	NA	NA	NA

(a) Conversion factors: 1 m^3 = about 1.3 yd^3
(b) Total fill (sand, gravel, silt, and rip rap).
(c) Applicable to the No Action Alternative.
(d) Applicable to Alternative Groups A and B.
(e) Applicable to Alternative Groups C, D, and E.
NA = not applicable.

(a) The use of accelerated process lines would not be expected to require any geologic resources, except for, perhaps, minor amounts of gravel when placed temporarily outside of the CWC.