

Table 22.- Expected re-dispersal of fission products in fallout from Project Chariot, Case IV ^{1/}
 [Quantities are mean values for the respective areas, assuming 8 months decay.
 See Table 21 for expected dispersal at time of antecedent freezeup.]

Basin or area	Ogotoruk Creek	Nusoaruk Creek	Minor basins, Ogotoruk Creek to Cape Seppings	Kukpuk River above Ipewik River	Minor basins, Cape Seppings to Kivalina River	Ipewik River	Kivalina River	Pitmegea River	Wulik River	Kukpowruk River	Noatak River	Minor basins, Pitmegea River to Kukpowruk River	Outlying areas
Number on Plate 1	0	1	2	3	4	5	6	7	8	9	10	11	...
Fallout between azimuths 40° and 125° (Case IV.a.2)													
Products dissolved in runoff and in micro-ponds.													
Average concentration ^{2/} , μc/ml													
Sr ⁹⁰	1.2x10 ⁻⁵	8.1x10 ⁻⁷	2.9x10 ⁻⁶	1.3x10 ⁻⁷	1.6x10 ⁻⁸	3.4x10 ⁻⁸	5.9x10 ⁻⁹	8.8x10 ⁻⁹	5.7x10 ⁻⁹	8.2x10 ⁻⁹	(a)	4.7x10 ⁻⁹	< 4.3x10 ⁻⁹
I ¹³¹	2.2x10 ⁻¹¹	1.6x10 ⁻¹²	5.6x10 ⁻¹²	2.4x10 ⁻¹³	3.1x10 ⁻¹⁴	6.5x10 ⁻¹⁴	1.2x10 ⁻¹⁴	1.7x10 ⁻¹⁴	1.1x10 ⁻¹⁴	1.6x10 ⁻¹⁴	(a)	9.1x10 ⁻¹⁵	< 8.2x10 ⁻¹⁵
Cs ¹³⁷	6.6x10 ⁻⁶	5.2x10 ⁻⁷	1.7x10 ⁻⁶	7.5x10 ⁻⁸	1.0x10 ⁻⁸	2.0x10 ⁻⁸	3.8x10 ⁻⁹	5.2x10 ⁻⁹	3.2x10 ⁻⁹	4.6x10 ⁻⁹	(a)	2.9x10 ⁻⁹	< 2.5x10 ⁻⁹
Other nuclides	7.7x10 ⁻⁶	5.7x10 ⁻⁷	1.9x10 ⁻⁶	8.0x10 ⁻⁸	9.8x10 ⁻⁹	2.1x10 ⁻⁸	3.7x10 ⁻⁹	5.3x10 ⁻⁹	3.6x10 ⁻⁹	5.3x10 ⁻⁹	(a)	2.7x10 ⁻⁹	< 2.6x10 ⁻⁹
Sub-total	2.6x10 ⁻⁵	1.9x10 ⁻⁶	6.5x10 ⁻⁶	2.8x10 ⁻⁷	3.6x10 ⁻⁸	7.5x10 ⁻⁸	1.3x10 ⁻⁸	1.9x10 ⁻⁸	1.2x10 ⁻⁸	1.8x10 ⁻⁸	(a)	1.0x10 ⁻⁸	< 9.4x10 ⁻⁹
Insoluble, particulate products suspended in runoff.													
Percentage assumed transported													
	2.5	2.5	5	12.5	17.5	17.5	17.5	25	25	25	...	25	25
Average concentration ^{2/} , μc/ml													
Sr ⁹⁰ and Cs ¹³⁷ , each	4.8x10 ⁻⁵	2.7x10 ⁻⁶	2.6x10 ⁻⁵	3.6x10 ⁻⁶	8.2x10 ⁻⁷	1.5x10 ⁻⁶	2.8x10 ⁻⁷	6.4x10 ⁻⁷	3.0x10 ⁻⁷	4.0x10 ⁻⁷	(a)	4.1x10 ⁻⁷	< 2.7x10 ⁻⁷
I ¹³¹	3.0x10 ⁻¹¹	1.7x10 ⁻¹²	1.6x10 ⁻¹¹	2.3x10 ⁻¹²	5.1x10 ⁻¹³	9.4x10 ⁻¹³	1.8x10 ⁻¹³	4.0x10 ⁻¹³	1.9x10 ⁻¹³	2.5x10 ⁻¹³	(a)	2.6x10 ⁻¹³	< 1.7x10 ⁻¹³
Other nuclides	8.0x10 ⁻⁴	4.6x10 ⁻⁵	4.4x10 ⁻⁴	6.2x10 ⁻⁵	1.4x10 ⁻⁵	2.5x10 ⁻⁵	5.6x10 ⁻⁶	1.1x10 ⁻⁵	5.1x10 ⁻⁶	8.0x10 ⁻⁶	(a)	6.9x10 ⁻⁶	< 4.6x10 ⁻⁶
Sub-total	9.0x10 ⁻⁴	5.1x10 ⁻⁵	4.9x10 ⁻⁴	6.9x10 ⁻⁵	1.6x10 ⁻⁵	2.8x10 ⁻⁵	6.2x10 ⁻⁶	1.2x10 ⁻⁵	5.7x10 ⁻⁶	8.8x10 ⁻⁶	(a)	7.7x10 ⁻⁶	< 5.1x10 ⁻⁶
Total stream burden, dissolved and suspended ^{2/} , average μc/ml.													
Sr ⁹⁰	6.0x10 ⁻⁵	3.5x10 ⁻⁶	2.9x10 ⁻⁵	3.7x10 ⁻⁶	8.4x10 ⁻⁷	1.5x10 ⁻⁶	2.9x10 ⁻⁷	6.5x10 ⁻⁷	3.1x10 ⁻⁷	4.1x10 ⁻⁷	(a)	4.1x10 ⁻⁷	< 2.7x10 ⁻⁷
I ¹³¹	5.2x10 ⁻¹¹	3.3x10 ⁻¹²	2.2x10 ⁻¹¹	2.5x10 ⁻¹²	5.4x10 ⁻¹³	1.0x10 ⁻¹²	1.9x10 ⁻¹³	4.2x10 ⁻¹³	2.0x10 ⁻¹³	2.7x10 ⁻¹³	(a)	2.7x10 ⁻¹³	< 1.8x10 ⁻¹³
Cs ¹³⁷	5.5x10 ⁻⁵	3.2x10 ⁻⁶	2.8x10 ⁻⁵	3.7x10 ⁻⁶	8.3x10 ⁻⁷	1.5x10 ⁻⁶	2.8x10 ⁻⁷	6.5x10 ⁻⁷	3.0x10 ⁻⁷	4.0x10 ⁻⁷	(a)	4.1x10 ⁻⁷	< 2.7x10 ⁻⁷
Other nuclides	8.1x10 ⁻⁴	4.7x10 ⁻⁵	4.4x10 ⁻⁴	6.2x10 ⁻⁵	1.4x10 ⁻⁵	2.5x10 ⁻⁵	5.6x10 ⁻⁶	1.1x10 ⁻⁵	5.1x10 ⁻⁶	8.0x10 ⁻⁶	(a)	6.9x10 ⁻⁶	< 4.6x10 ⁻⁶
Sub-total	9.2x10 ⁻⁴	5.4x10 ⁻⁵	5.0x10 ⁻⁴	6.9x10 ⁻⁵	1.6x10 ⁻⁵	2.8x10 ⁻⁵	6.2x10 ⁻⁶	1.2x10 ⁻⁵	5.7x10 ⁻⁶	8.8x10 ⁻⁶	(a)	7.7x10 ⁻⁶	< 5.1x10 ⁻⁶
Products adsorbed, c/mi ²													
On vegetation													
Sr ⁹⁰	3.2x10 ⁰	1.8x10 ⁻¹	8.8x10 ⁻¹	4.9x10 ⁻²	7.9x10 ⁻³	1.4x10 ⁻²	2.7x10 ⁻³	4.3x10 ⁻³	2.0x10 ⁻³	2.7x10 ⁻³	(a)	2.8x10 ⁻³	< 1.8x10 ⁻³
I ¹³¹	1.7x10 ⁻⁶	9.3x10 ⁻⁸	4.5x10 ⁻⁷	2.5x10 ⁻⁸	4.1x10 ⁻⁹	7.4x10 ⁻⁹	1.4x10 ⁻⁹	2.2x10 ⁻⁹	1.0x10 ⁻⁹	1.4x10 ⁻⁹	(a)	1.4x10 ⁻⁹	< 9.3x10 ⁻¹⁰
Cs ¹³⁷	3.3x10 ⁰	1.9x10 ⁻¹	8.9x10 ⁻¹	5.0x10 ⁻²	8.1x10 ⁻³	1.5x10 ⁻²	2.8x10 ⁻³	4.4x10 ⁻³	2.1x10 ⁻³	2.8x10 ⁻³	(a)	2.8x10 ⁻³	< 1.9x10 ⁻³
Other nuclides	5.2x10 ⁰	2.9x10 ⁻¹	1.4x10 ⁰	8.0x10 ⁻²	1.3x10 ⁻²	2.3x10 ⁻²	4.4x10 ⁻³	7.0x10 ⁻³	3.3x10 ⁻³	4.4x10 ⁻³	(a)	4.5x10 ⁻³	< 2.9x10 ⁻³
Sub-total	1.2x10 ¹	6.6x10 ⁻¹	3.2x10 ⁰	1.8x10 ⁻¹	2.9x10 ⁻²	5.2x10 ⁻²	9.9x10 ⁻³	1.6x10 ⁻²	7.4x10 ⁻³	9.9x10 ⁻³	(a)	1.0x10 ⁻²	< 6.6x10 ⁻³
On soil													
Sr ⁹⁰	3.1x10 ⁰	1.8x10 ⁻¹	8.5x10 ⁻¹	4.8x10 ⁻²	7.7x10 ⁻³	1.4x10 ⁻²	2.6x10 ⁻³	4.2x10 ⁻³	2.0x10 ⁻³	2.7x10 ⁻³	(a)	2.7x10 ⁻³	< 1.8x10 ⁻³
I ¹³¹	1.6x10 ⁻⁶	9.2x10 ⁻⁸	4.4x10 ⁻⁷	2.5x10 ⁻⁸	4.0x10 ⁻⁹	7.3x10 ⁻⁹	1.4x10 ⁻⁹	2.2x10 ⁻⁹	1.0x10 ⁻⁹	1.4x10 ⁻⁹	(a)	1.4x10 ⁻⁹	< 9.2x10 ⁻¹⁰
Cs ¹³⁷	3.5x10 ⁰	2.0x10 ⁻¹	9.5x10 ⁻¹	5.3x10 ⁻²	8.6x10 ⁻³	1.6x10 ⁻²	3.0x10 ⁻³	4.7x10 ⁻³	2.2x10 ⁻³	3.0x10 ⁻³	(a)	3.0x10 ⁻³	< 2.0x10 ⁻³
Other nuclides	5.2x10 ⁰	3.0x10 ⁻¹	1.4x10 ⁰	8.0x10 ⁻²	1.3x10 ⁻²	2.4x10 ⁻²	4.4x10 ⁻³	7.1x10 ⁻³	3.3x10 ⁻³	4.4x10 ⁻³	(a)	4.5x10 ⁻³	< 3.0x10 ⁻³
Sub-total	1.2x10 ¹	6.8x10 ⁻¹	3.2x10 ⁰	1.8x10 ⁻¹	2.9x10 ⁻²	5.4x10 ⁻²	1.0x10 ⁻²	1.6x10 ⁻²	7.5x10 ⁻³	1.0x10 ⁻²	(a)	1.0x10 ⁻²	< 6.8x10 ⁻³
On rock, talus, and colluvium													
Sr ⁹⁰	2.4x10 ⁰	1.4x10 ⁻¹	6.7x10 ⁻¹	3.7x10 ⁻²	6.0x10 ⁻³	1.1x10 ⁻²	2.1x10 ⁻³	3.3x10 ⁻³	1.5x10 ⁻³	2.1x10 ⁻³	(a)	2.1x10 ⁻³	< 1.4x10 ⁻³
I ¹³¹	1.0x10 ⁻⁷	5.9x10 ⁻⁹	2.8x10 ⁻⁸	1.6x10 ⁻⁹	2.6x10 ⁻¹⁰	4.7x10 ⁻¹⁰	8.8x10 ⁻¹¹	1.4x10 ⁻¹⁰	6.6x10 ⁻¹¹	8.8x10 ⁻¹¹	(a)	8.9x10 ⁻¹¹	< 5.9x10 ⁻¹¹
Cs ¹³⁷	2.8x10 ⁰	1.6x10 ⁻¹	7.6x10 ⁻¹	4.3x10 ⁻²	6.9x10 ⁻³	1.2x10 ⁻²	2.4x10 ⁻³	3.8x10 ⁻³	1.8x10 ⁻³	2.4x10 ⁻³	(a)	2.4x10 ⁻³	< 1.6x10 ⁻³
Other nuclides	4.6x10 ⁰	2.6x10 ⁻¹	1.3x10 ⁰	7.1x10 ⁻²	1.1x10 ⁻²	2.1x10 ⁻²	3.9x10 ⁻³	6.2x10 ⁻³	2.9x10 ⁻³	3.9x10 ⁻³	(a)	4.0x10 ⁻³	< 2.6x10 ⁻³
Sub-total	9.8x10 ⁰	5.6x10 ⁻¹	2.7x10 ⁰	1.5x10 ⁻¹	2.4x10 ⁻²	4.4x10 ⁻²	8.4x10 ⁻³	1.3x10 ⁻²	6.2x10 ⁻³	8.4x10 ⁻³	(a)	8.5x10 ⁻³	< 5.6x10 ⁻³
Dissolved products infiltrated to soil water, c/mi ² .													
	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Insoluble, particulate products remaining near place of fall, c/mi ² .													
Sr ⁹⁰ and Cs ¹³⁷ , each	3.1x10 ¹	1.7x10 ⁰	8.1x10 ⁰	4.2x10 ⁻¹	6.4x10 ⁻²	1.2x10 ⁻¹	2.2x10 ⁻²	3.2x10 ⁻²	1.5x10 ⁻²	2.0x10 ⁻²	(a)	2.0x10 ⁻²	< 1.3x10 ⁻²
I ¹³¹	1.9x10 ⁻⁵	1.1x10 ⁻⁶	5.1x10 ⁻⁶	2.6x10 ⁻⁷	4.0x10 ⁻⁸	7.2x10 ⁻⁸	1.4x10 ⁻⁸	2.0x10 ⁻⁸	9.3x10 ⁻⁹	1.2x10 ⁻⁸	(a)	1.3x10 ⁻⁸	< 8.3x10 ⁻⁹
Other nuclides	5.2x10 ²	2.9x10 ¹	1.4x10 ²	7.1x10 ⁰	1.1x10 ⁰	2.0x10 ⁰	4.4x10 ⁻¹	5.3x10 ⁻¹	2.5x10 ⁻¹	4.0x10 ⁻¹	(a)	3.4x10 ⁻¹	< 2.2x10 ⁻¹
Sub-total	5.8x10 ²	3.2x10 ¹	1.6x10 ²	7.9x10 ⁰	1.2x10 ⁰	2.2x10 ⁰	4.8x10 ⁻¹	5.9x10 ⁻¹	2.8x10 ⁻¹	4.4x10 ⁻¹	(a)	3.8x10 ⁻¹	< 2.5x10 ⁻¹

^{1/} Assumptions: (1) Detonation as assumed in Table 21; this table covers the partial re-dispersal of products during the next ensuing snowmelt season, also the interim decay of products not re-dispersed. (2) Snowmelt runoff 1 inch over the area, in 30 days following breakup. (3) Mobile products reach the streams during the later half of the snowmelt season, in one-fourth of the snowmelt runoff.

^{2/} Average over 15 days, in trunk streams at outer margin of the area of measurable fallout. Although it is expected that throwout will dam Ogotoruk Creek at the time of detonation, this dam well may be breached by the snowmelt runoff.

^{3/} Zero or nominal.