

15. Kanonerka	ND	ND	0.00	0.27	0.00	0.01	ND	0.04
16. Semipalatinsk	0.085	0.085	0.00	0.00	0.00	0.13	0.04	0.03

Note: ND - no data

Therefore, the main sources of exposure were the radioactive clouds coming over the populated areas. The influence of the "old radioactive tracks" was not so important in determining the total dose.

During the period of nuclear bomb explosions, the short-living radionuclides, i.e. Zr-95, Ru-103, Nb-95, Ru-106, Po-106, Ce-141, Ce-144 and others, were detected in the fallout (table 1.20) and vegetations (table 1.21).

Table 1. 20. Radioactive fallout in Semipalatinsk in 1981-1984 (Bq/m² per month)

Years	Monthes												Total
	1	2	3	4	5	6	7	8	9	10	11	12	
<u>Sr⁹⁰</u>													
1981	0.37	0.148	0.37	1.48	2.59	1.85	1.11	0.259	0.37	0.037	x	x	8.584
1982	x	x	x	0.074	0.74	0.74	0.592	0.333	0.74	0.296	x	0.111	3.626
1983	x	x	x	0.37	0.37	0.74	1.11	0.74	0.74	0.37	0.7	0.96	6.1
1984	x	x	1.48	x	x	x	0.36	0.37	1.11	ND	ND	x	3.32
<u>He⁹⁶</u>													
1981	27.75	9.25	33.85	49.8	66.41	21.46	48.0	x	x	x	x	x	256.53
1982	x	x	x	x	x	x	x	x	x	x	x	x	x
1983	x	x	x	x	x	x	x	x	x	x	x	x	x
1984	x	x	x	x	x	x	x	x	x	x	x	x	x
<u>Ru¹⁰³</u>													
1981	10.58	8.69	18.88	10.37	22.42	10.66	40.0	5.51	9.4	9.065	x	x	152.212
1982	4.847	1.332	1.739	6.845	16.243	6.919	10.471	7.585	3.7	11.322	3.441	2.331	76.775
1983	x	x	3.219	2.96	24.901	10.841	11.137	7.441	6.66	10.25	5.77	1.67	84.549
1984	2.48	x	0.85	5.0	7.62	19.57	31.67	7.29	2.81	3.55	3.16	x	84.00
<u>Ru¹⁰⁶</u>													
1981	x	x	x	20.57	23.12	x	13.06	x	14.25	3.00	6.29	12.77	93.06
1982	x	x	x	x	x	x	x	x	x	x	x	x	x
1983	x	x	x	x	x	x	x	x	x	x	x	x	x
1984	x	x	x	x	x	x	x	x	x	x	x	x	x

Notes: x - below detection;

ND - no data

Table 1. 21. Radioactive pollution of vegetation in 1981-1984 (Bq/kg)

Populated areas	Sample	Activity of radionuclides						
		Sr ⁹⁰	Cs ¹³⁷	Zr ⁹⁵ & Nb ⁹⁵	Ru ¹⁰³	Ru ¹⁰⁶	Ce ¹⁴¹	Pz ¹⁴⁴
Sarjal	hay	10-13	4.7	x				
grass	1.5-17	5-22	158	17-140	16	16		
Beryozka	hay	2-22	5-16	8.6				
grass	1-17	2-11	13	38	48	9.7		
Obali	grass	2-16	6-16	101	7-51	18-26	ND	59
Zaveti Ilich	grass	2-39	3-37	10-384	12-161	14-64	ND	31-77
Yubileinaya	grass	3-22	11-25	38-139	16-65	10-22	ND	79
Sarapan	grass	2-26	5-32	29-334	11-23	18-70	ND	27-73