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Assessment of Environmental Radiation for Periodic Safety Review of  
Nuclear Power Plant

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Cs-137

, 가

**Abstract**

Assessment of environmental radiation near NPP site was carried out as a branch of the periodic safety review. The tritium concentration data collected from the published data were used to find out the cumulative trend of radionuclide, which resulted no evidence of cumulative performance. The tritium concentration in rain showed no direct relation with the gas effluent or rainfall. The concentrations of tritium and Cs-137 in samples taken near Kori site were in the range of the concentrations published elsewhere. The measured tritium concentrations were much lower than effluent limit or drinking water limit.

1.

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1980

, IAEA 1994 IAEA Safety Series[1]  
. IAEA 가 11

, / , , , , , , .  
1 가 가 20 가 .

가 IAEA .  
가 가 가 가 가

가 , 가 , 가 .  
가 , , , .

, , 가 , .

, 가 가 가 가 .

2. 가

[2]

가 [3]

[4] .

, , , , 가  
, , , I-131, Sr-90, Cs-137, K-40, Co-60 Cs-137

가 가 .

, , , , , , , ,  
, C-14, Cs-137, Sr-90, Pu-238, 239, 240, K-40 .

Cs-137 가 가

, 가

2.1

1 , 1 .  
 , ,  
 , ,  
 40 Bq/ml [5], 가 0.740 Bq/ml[6]  
 가  
 , 1997 1  
 2  
 2  
 [7,8]  
 [9].

2.2

3 10 1 가  
 20 가 .  
 3 3  
 78 , 86 , 88 . ,  
 10 가 가 10  
 가 . 3  
 , , 가 가

2.3

10, 11, 12 4 . 8 가  
 10, 1,2 . 6 11 .  
 dry deposition ,

2.4

Cs-137

1

[9]

Cs-

137 EG&G MCA System

[2, 3]

1 - 3 Bq/L

2

Cs-137 5 - 15 Bq/kg

2

3.

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Cs-137

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Cs-137

1. IAEA Safety Series No. 50-SG-012, Vienna, 1994

2.

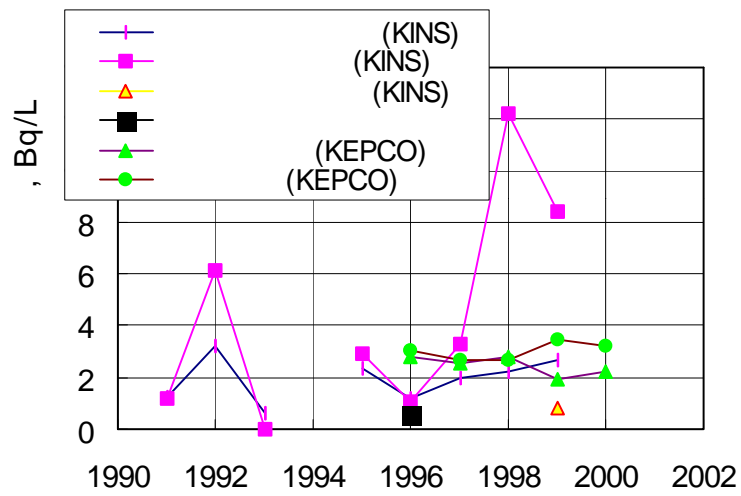
3. 가 ,
4. ,
5. 2001-2 , 2001
6. 40CFR141.16, National Primary Drinking Water Regulations, 2000
7. ” ,” 107, 21(2),  
(1996)
8. ” ,” 97, 22(2),  
(1996)
9. ASTM D 4107 – 98, Standard Test Method for Tritium in Drinking Water, 1998

1. , 가 ( )

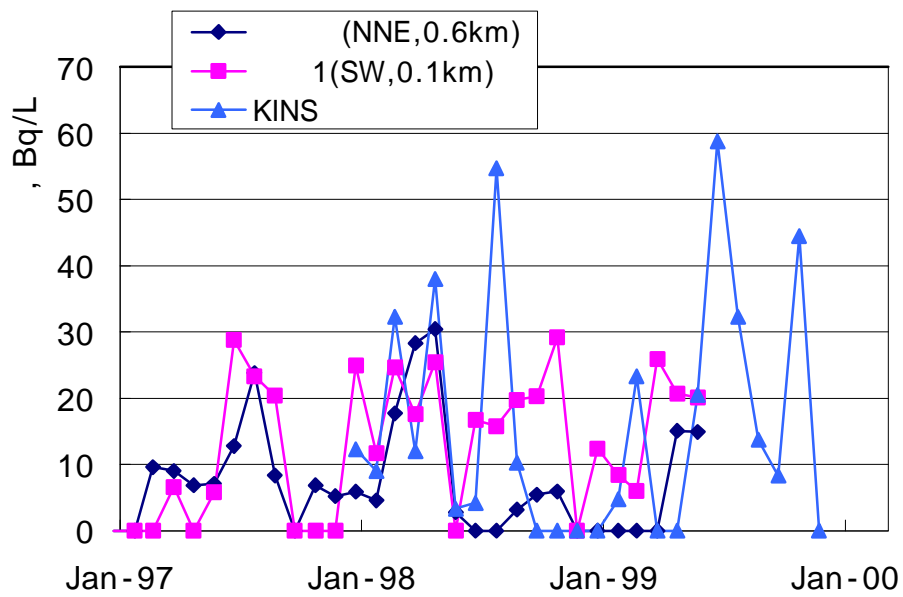
					(m)	(m)
			X (m)	Y (m)		
	129.290	35.3168	0.0	0.0		
	129.304	35.3282	796.696	762.058	1102.5	9.4
	129.300	35.3346	473.201	1471.86	1546.1	12.3
	129.295	35.3374	-53.416	1778.02	1778.8	20.7

2. ( ) : LSC, : EG&G MCA System, 90,000 sec )

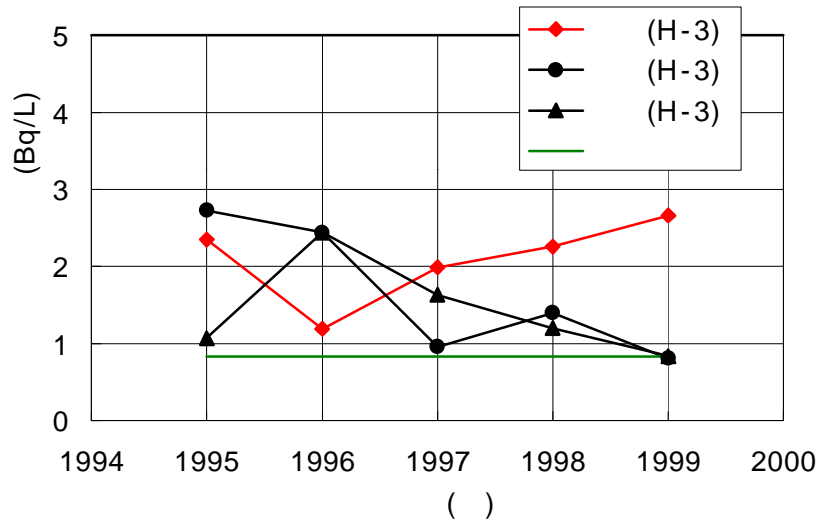
		( )	( )	(Cs-137)
		O	2.5Bq/L	<0.05Bq/L
		O	1.25Bq/L	<0.05Bq/L
				9.9 Bq/kg
		O	1.88Bq/L	<0.02Bq/L
		O	1.67Bq/L	<0.05Bq/L
				14.4Bq/kg
		O	1.67Bq/L	<0.05Bq/L
				4.9 Bq/kg



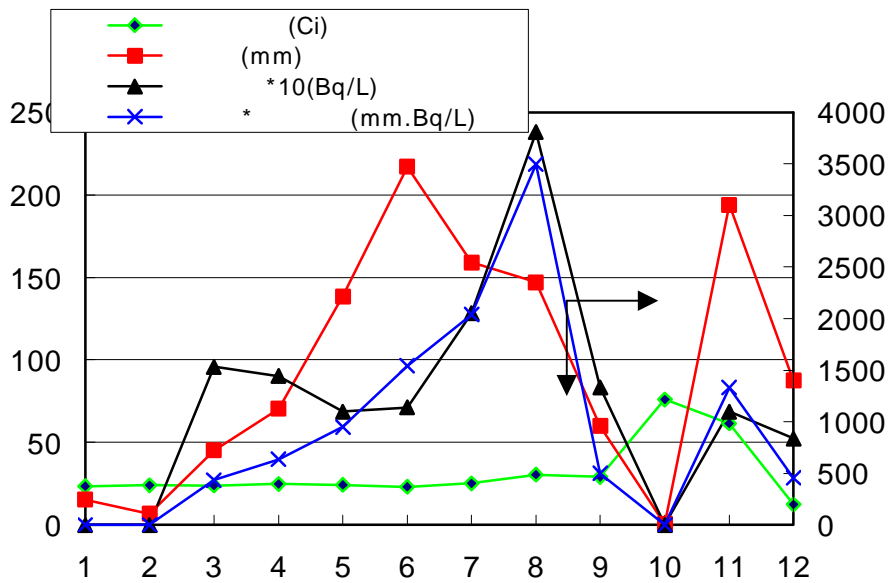
1. ( , , )



2. ( )

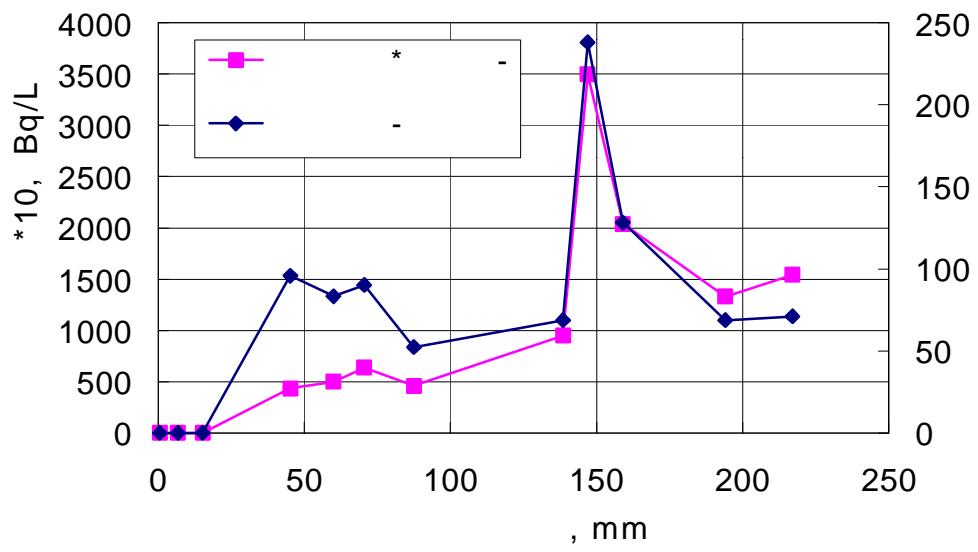


3. 5



4. 1997





5. 1997