Results of Analysis of Accumulated Water in the Turbine Building (JAEA)

Reference

May 22, 2011

Sample		1F-1 T/B BFL Accumulated Water		1F-2 T/B BFL Southeast Staircase Carry-in Gate for Large Stuff		1F-3 T/B BFL Influx Water		1F-4 T/B BFL Accumulated Water
Sampling Date & Time	Analysing Organization	2011/3/24 9:40		2011/3/27 20:40		2011/3/24 21:00		2011/3/24 21:00
Electric Conductivity (μS/cm)	2F	44,400		35,500		29,600		22,000
Chlorine (ppm)	2F	15,500		18,000		10,700		15,400
pH	2F	7.35		7.10		7.07		7.6 (Analysed by JFNL)
		Corresponding Value in Undiluted Solution	Analysis of Diluted Solution (10 times)	Corresponding Value in Undiluted Solution	Analysis of Diluted Solution (20 times)	Corresponding Value in Undiluted Solution	Analysis of Diluted Solution (10 times)	Undiluted Solution
SS (Suspended Solid) mg/l	JAEA	*<0.5*	<0.05	*<1*	<0.05	*<0.5*	<0.05	0.13
Oil ppm	JAEA	*<40*	<4.0	*100*	5.0	*<40*	<4.0	5.7
Total α Radioactivity Bq/ml	JAEA	*<3.7E-1*	<3.7E-2	*<7.4E-1*	<3.7E-2	*<3.7E-1*	<3.7E-2	<5.9E-2
	JNFL	*< 2.6E+01* ※1	< 2.6E+00※1	*< 5.2E+02* ※1	< 2.6E+01※1	*< 2.6E+10* ※1	< 2.6E+00※1	< 5.2E-01※2
Total β Radioactivity Bq/ml	JAEA	*2.8E+05*	2.8E+04	*6.8E+06*	3.4E+05	*5.2E+05*	5.2E+04	2.6E+02
	JNFL	*1.4E+05*	1.4E+04	*3.0E+06*	1.5E+05	*2.5E+05*	2.5E+04	1.1E+01
Metal Element		Appendix		Appendix		Appendix		Appendix
Uranium (mg/l)	JAEA	*<6*	<0.6	*<12*	<0.6	*<6*	<0.6	<0.6
	JNFL	*< 1.0E+02*	< 1.0E+01	*< 2.0E+02*	< 1.0E+01	< 1.0E+02	< 1.0E+01	< 1.0E+01
Plutonium (mg/l)	JAEA	*<12*	<1.2	*<24*	<1.2	*<12*	<1.2	<1.2

*1 Dilluted due to exceeding hood effluent limit (Unit 1;100 times, Unit 2; 1000 times, Unit 3; 1000 times), *2 Dilluted 20 times due to salt deposition

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Metal Element

		1F-1 T/B BFL Accumulated Water		1F-2 T/B BFL Southeast Staircase Carry-in Gate for Large Stuff		1F-3 T/B BFL Influx Water		1F-4 T/B BFL Accumulated Water
		Corresponding Value in Undiluted Solution	Analysis of Diluted Solution (10 times)	Corresponding Value in Undiluted Solution	Analysis of Diluted Solution (20 times)	Corresponding Value in Undiluted Solution	Analysis of Diluted Solution (10 times)	Undiluted Solution
Na	mg/L	*8.6E+03*	8.6E+02	*7.3E+03*	3.6E+02	*5.7E+03*	5.7E+02	4.2E+03
Mg		*1.1E+03*	1.1E+02	*9.3E+02*	4.6E+01	*7.3E+02*	7.3E+01	5.3E+02
K		*3.8E+02*	3.8E+01	*3.0E+02*	1.5E+01	*2.5E+02*	2.5E+01	1.9E+02
Ca		*3.5E+02*	3.5E+01	*3.2E+02*	1.6E+01	*2.4E+02*	2.4E+01	1.7E+02
B		*<2.0E+01*	<2.0E+00	*<2.0E+01*	<1.0E+00	*<2.0E+01*	<2.0E+00	*<2.0E+01*
Zr		*<6.9E+00*	<6.9E−01	*<6.9E+00*	<3.4E−01	*<6.9E+00*	<6.9E−01	<6.9E+00
Mo		*<1.5E+01*	<1.5E+00	*<1.5E+01*	<7.6E−01	*<1.5E+01*	<1.5E+00	<1.5E+01
Al		*<8.7E+01*	<8.7E+00	*<8.7E+01*	<4.4E+00	*<8.7E+01*	<8.7E+00	<8.7E+01
Fe		*<4.0E+00*	<4.0E−01	*<4.0E+00*	<2.0E−01	*6.2E+00*	6.2E−01	<4.0E+00
Ni		*<1.8E+01*	<1.8E+00	*<1.8E+01*	<9.2E−01	*2.5E+01*	2.5E+00	<1.8E+01
Cr		*<1.6E+01*	<1.6E+00	*<1.6E+01*	<7.9E−01	*<1.6E+01*	<1.6E+00	<1.6E+01
Si		*<2.1E+01*	<2.1E+00	*<2.0E+01*	<1.0E+00	*<2.1E+01*	<2.1E+00	<2.1E+01
Ru		*<1.5E+01*	<1.5E+00	*<1.5E+01*	<7.5E−01	*<1.5E+01*	<1.5E+00	<1.5E+01
Pd		*<1.7E+02*	<1.7E+01	*<1.7E+02*	<8.7E+00	*<1.7E+02*	<1.7E+01	<1.7E+02
Rh		*<1.3E+01*	<1.3E+00	*<1.3E+01*	<6.7E−01	*<1.3E+01*	<1.3E+00	<1.3E+01
Sr		*5.9E+00*	5.9E−01	*5.0E+00*	2.5E−01	*3.7E+00*	3.7E−01	2.5E+00
U		*N.D.*	N.D.	*N.D.*	N.D.	*N.D.*	N.D.	N.D.

[Reference] Stable-strontium concentration in the ocean around 1F: 7.8mg/L(Average of 2008-2010), Stable-calcium concentration: 371ppm(Average of 2008-2010)

Cl^-	mg/L	*1.8E+04*	1.8E+03	*1.4E+04*	7.2E+02	*1.1E+04*	1.1E+03	8.1E+03
SO_4^{2-}		*2.5E+03*	2.5E+02	*2.0E+03*	9.9E+01	*1.5E+03*	1.5E+02	1.2E+03
NH_4^+		*< 1.0E+02*	< 1.0E+01	*< 2.0E+02*	< 1.0E+01	*< 1.0E+02*	< 1.0E+01	< 1.0E+01

Results of Nuclide Analysis by JAEA

(Bq/ml)

Name of Sample	Sampling Date and Time	γNuclide							Sr-89* (about 50 days)	Sr-90* (about 29 years)
		Starting Time of Measurement	Measurement Time (sec)	I-131 (about 8 days)	Cs-134 (about 2 years)	Cs-137 (about 30 years)	Ba-140 (about 13 days)	La-140 (about 2 days)		
1F-1 T/B BFL Accumulated Water	2011/3/24 9:40	2011/4/13 12:50	20,000	3.0E+04	1.2E+05	1.6E+05	<560	<300	5.7E+01	2.1E+01
1F-2 T/B BFL Southeast Staircase Carry-in Gate for Large Stuff	2011/3/27 20:40	2011/4/13 18:34	20,000	2.0E+06	2.6E+06	2.8E+06	2.4E+05	2.2E+05	7.0E+05	1.4E+05
1F-3 T/B BFL Influx Water	2011/3/24 21:00	2011/4/14 00:19	20,000	1.6E+05	1.4E+05	1.6E+05	1.5E+04	1.7E+04	8.6E+04	1.5E+04
1F-4 T/B BFL Accumulated Water	2011/3/24 21:00	2011/4/12 16:55	40,000	3.1E+02	2.0E+01	2.2E+01	<0.68	2.4E+00	<0.13	<0.13

*The densities of γNuclideare are converted to the values at the time of measurement(April 13th, 2011)