# F1 Issues

## As of 25 February, 2014 Nuclear Regulation Authority (NRA), Japan

On 20 February 2014, TEPCO reported to the Nuclear Regulation Authority (NRA) on the incident of water leakage from Tank C-1 at Fukushima Daiichi Nuclear Power Station pursuant to the Act on Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors (Article 62-3, http://www.nsr.go.jp/english/library/data/related\_act\_1218.pdf)

The following URL of NRA website leads to News Release that was issued by the NRA on 20 February: http://www.nsr.go.jp/english/newsrelease/data/20140220.pdf

The following URL of TEPCO website leads to details of this incident: http://www.tepco.co.jp/en/press/corp-com/release/2014/1234394\_5892.html

TEPCO subsequently reported to the NRA including the following points:

- The amount of water, which leaked to the outside of dike, is 102 m<sup>3</sup>.
- The concentrations of radioactive materials in the leaked water taken in the Areas ①, ② and ③ where the leaked water spread are as follows:



Radionuclides	Area ① Bq/L	Area ② Bq/L	Area ③ Bq/L
Cs-134	$4.2 \times 10^{3}$	Under the limit of detection	Under the limit of detection
Cs-137	7.3 x 10 <sup>3</sup>	$3.2 \times 10^3$	$1.2 \times 10^{3}$
Co-60	$2.9 \times 10^{3}$	$1.5 \times 10^{3}$	$7.0 \times 10^2$
Mn-54	Under the limit of detection	Under the limit of detection	Under the limit of detection
Sb-125	$4.1 \times 10^4$	$3.4 \times 10^4$	$2.2 \times 10^4$
Total Beta	2.4 × 10 <sup>8</sup>	1.4 × 10 <sup>8</sup>	$6.5 \times 10^{7}$

TEPCO does not plan to measure the concentrations of radioactive materials in the leaked water of the Area 4.

### Current Information on Radioactivity in Seawater

The sampling points T-1 and T-2-1 near Fukushima Daiichi Nuclear Power Station are sentinels to assess effects on the environment by incidents including a leakage of contaminated water.

The concentrations of radionuclides (i.e., Cs-134, Cs-137 and total Beta) indicate no significant change at all before and after the occurrence of water leakage as shown in the following two tables.

The following URL of the NRA website leads to details of monitoring results: http://radioactivity.nsr.go.jp/en/contents/9000/8040/24/Sea\_Area\_Monitoring\_20140225.pdf



1.1km northern point (T-1) from the outlet for Reactor Units 1 to 4

Sampling Date in 2014	Cs-134 (Bq/L)	Cs-137 (Bq/L)	Total Beta (Bq/L)	H-3 (Bq/L)	
17 February	ND(0.81)	1.8	8.4	ND(1.4)	
18 February	ND(0.66)	1.1	-	-	
19 February	ND(0.79)	1.4	-	-	
20 February	ND(0.76)	1.2	-	-	
21 February	ND(0.68)	0.69	-	-	
22 February	ND(0.85)	1.6	_	_	

#### 1.3km southern point (T-2-1) from the outlet for Reactor Units 1 to 4

Sampling Date in 2014	Cs-134 (Bq/L)	Cs-137 (Bq/L)	Total Beta (Bq/L)	H-3 (Bq/L)
17 February	ND(0.71)	0.64	11	ND(1.4)
18 February	ND(0.71)	0.67	11	-
19 February	ND(0.58)	0.97	13	-
20 February	ND(0.69)	ND(0.57)	14	-
21 February	ND(0.76)	ND(0.63)	6.4	_
22 February	ND(0.67)	ND(0.69)	13	-

ND: Under the limit of detection

The concentrations of Cs-134 and Cs-137 monitored at the sampling points T-1 and T-2-1 in the period from 10 December 2013 to 22 February 2014 have remained below the limit values\* of concentrations as shown in the following two figures. The values under the limit of detection are not plotted on the figures. Seawater samples are taken every day except for the days of bad weather.







#### Sampling point: T-2-1

\*The scale is set taking into account the limit values of concentrations (e.g., 60 Bq/L for Cs-134, 90 Bq/L for Cs-137, 60,000 Bq/L for H-3) in water for release of radioactive materials from a nuclear facility to the environment, which have been based on Japan's Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors as well as the standpoints of International Commission on Radiological Protection (ICRP).