Information (23:00), April 1, 2016

To All Missions (Embassies, Consular posts and International Organizations in Japan)

Report on the discharge record and the sea water monitoring results at Fukushima Daiichi NPS during March

The Ministry of Foreign Affairs wishes to provide all Missions with a report on the discharge record and the sea water monitoring results with regard to the discharge of groundwater pumped up from the subdrain and groundwater drain systems during March as well as groundwater pumped up for bypassing in March at Fukushima Daiichi Nuclear Power Station (NPS).

1. Subdrain and Groundwater Drain Systems

In March, purified groundwater pumped up from the subdrain and groundwater drain systems was discharged on the dates shown in Sheet 1. Each time in advance of the discharge, an analysis on the quality of the purified groundwater to be discharged is conducted by TEPCO and the result is announced.

All the results have confirmed that the radiation level of sampled water have been substantially below the operational targets set by TEPCO (these operational targets are set at very low level compared to the legal discharge limits).

In addition, TEPCO and JAEA (on the request of the Government of Japan) regularly conduct a more detailed analysis on the purified groundwater. The results of JAEA's latest analysis confirmed that TEPCO's analysis was accurate and verified that the radiation level of sampled groundwater is substantially below the operational target (see Sheet 2).

Moreover, TEPCO publishes the result of analysis on seawater sampled during the operation at the nearest seawater sampling post from the discharge point (see Sheet 3). The result shows that the radiation level of seawater remains low enough compared to the density limit specified by the Reactor Regulation and no significant change in the radioactivity has been observed.

2. Groundwater Bypassing

In March, groundwater pumped up for by-passing was discharged on the dates shown in Sheet 4. Each time in advance of the discharge, an analysis on the quality of the groundwater to be discharged is conducted by TEPCO and the result is announced.

All the results have confirmed that the radiation level of sampled water have been substantially below the operational targets set by TEPCO (these operational targets are set at very low level compared to the legal discharge limits).

The results of the analysis were also confirmed by Japan Chemical Analysis Center.

In addition, TEPCO and JAEA (on the request of the Government of Japan) regularly conduct a more detailed analysis on the groundwater. The results of JAEA's latest analysis confirmed that TEPCO's analysis was accurate and verified that the radiation level of sampled groundwater is substantially below the operational target (see Sheet 5).

Moreover, TEPCO publishes its analysis on seawater sampled during the operation at the nearest seawater sampling post from the discharge point (see Sheet 6). The result shows that the radiation level in seawater remains low enough compared to the density limit specified by the Reactor Regulation and no significant change in the radioactivity has been observed.

This process is the same as the one announced in the Information last month. Results of the analysis are shown as follows:

(For further information, please contact TEPCO (Tel: 03-6373-1111) or refer to the TEPCO's website:
http://www.tepco.co.jp/en/nu/fukushima-np/handouts/index-e.html)

Contact: International Nuclear Energy Cooperation Division,
Ministry of Foreign Affairs, Tel 03-5501-8227

Results of analysis on the quality of the purified groundwater having been pumped up from the subdrain and groundwater drain systems at Fukushima Daiichi NPS (made available by TEPCO prior to discharge)

(Unit: Bq/L)

Date of sampling *Date of discharge	Detected nuclides	Analytical body	
		TEPCO	Mitsubishi Nuclear Fuel Co., Ltd.
March 23rd, 2016 *Discharged on March 30th	Cs-134	ND (0.68)	ND (0.38)
	Cs-137	ND (0.60)	ND (0.47)
	Gross β	ND (2.0)	ND (0.65)
	H-3	960	860
March 22nd, 2016 *Discharged on March 29th	Cs-134	ND (0.80)	ND (0.57)
	Cs-137	ND (0.69)	ND (0.52)
	Gross β	ND (2.2)	ND (0.50)
	H-3	840	920
March 20th, 2016 *Discharged on March 28th	Cs-134	ND (0.79)	ND (0.43)
	Cs-137	ND (0.60)	ND (0.45)
	Gross β	ND (2.0)	ND (0.65)
	H-3	950	950
March 19th, 2016 *Discharged on March 27th	Cs-134	ND (0.82)	ND (0.59)
	Cs-137	ND (0.60)	ND (0.58)
	Gross β	ND (0.76)	ND (0.50)
	H-3	820	890
March 18th, 2016 *Discharged on March 26th	Cs-134	ND (0.44)	ND (0.47)
	Cs-137	ND (0.70)	ND (0.45)
	Gross β	ND (2.2)	ND (0.66)
	H-3	770	780
March 17th, 2016 *Discharged on March 24th	Cs-134	ND (0.67)	ND (0.48)
	Cs-137	ND (0.54)	ND (0.56)
	Gross β	ND (2.1)	ND (0.48)
	H-3	870	910
March 14th, 2016 *Discharged on March 20th	Cs-134	ND (0.68)	ND (0.42)
	Cs-137	ND (0.70)	ND (0.43)
	Gross β	ND (2.0)	ND (0.65)
	H-3	960	920
March 13th, 2016 *Discharged on March 19th	Cs-134	ND (0.74)	ND (0.51)
	Cs-137	ND (0.60)	ND (0.56)
	Gross β	ND (2.0)	ND(0.50)
	H-3	890	990

March 12th, 2016 *Discharged on March 18th	Cs-134	ND (0.71)	ND (0.40)
	Cs-137	ND (0.49)	ND (0.43)
	Gross β	ND (2.0)	ND (0.64)
	H-3	800	790
March 10th, 2016 *Discharged on March 17th	Cs-134	ND (0.80)	ND (0.66)
	Cs-137	ND (0.69)	ND (0.50)
	Gross β	ND (0.76)	ND (0.50)
	H-3	750	850
March 8th, 2016 *Discharged on March 14th	Cs-134	ND (0.82)	ND (0.48)
	Cs-137	ND (0.65)	ND (0.47)
	Gross β	ND (2.2)	ND (0.64)
	H-3	760	760
March 7th, 2016 *Discharged on March 13st	Cs-134	ND (0.56)	ND (0.57)
	Cs-137	ND (0.46)	ND (0.45)
	Gross β	ND (2.1)	ND (0.50)
	H-3	770	810
March 5th, 2016 *Discharged on March 12th	Cs-134	ND (0.75)	ND (0.47)
	Cs-137	ND (0.78)	ND (0.43)
	Gross β	ND (2.3)	ND (0.65)
	H-3	850	760
March 4th, 2016 *Discharged on March 11th	Cs-134	ND (0.74)	ND (0.47)
	Cs-137	ND (0.64)	ND (0.58)
	Gross β	ND (2.2)	ND (0.49)
	H-3	690	750
March 3rd, 2016 *Discharged on March 10th	Cs-134	ND (0.54)	ND (0.48)
	Cs-137	ND (0.54)	ND (0.36)
	Gross β	ND (2.0)	ND (0.64)
	H-3	650	680
March 2nd, 2016 *Discharged on March 9th	Cs-134	ND (0.60)	ND (0.63)
	Cs-137	ND (0.66)	ND (0.61)
	Gross β	ND (0.78)	ND (0.48)
	H-3	620	690
February 29th, 2016 *Discharged on March 6th	Cs-134	ND (0.55)	ND (0.43)
	Cs-137	ND (0.73)	ND (0.43)
	Gross β	ND (2.2)	ND (0.65)
	H-3	680	660
February 28th, 2016 *Discharged on March 5th	Cs-134	ND (0.81)	ND (0.36)
	Cs-137	ND (0.62)	ND (0.54)
	Gross β	ND (2.3)	ND (0.51)
	H-3	660	760

February 26th, 2016 *Discharged on March 4th	Cs-134	ND (0.71)	ND (0.53)
	Cs-137	ND (0.68)	ND (0.49)
	Gross β	ND (2.0)	ND (0.65)
	H-3	550	570
February 24th, 2016 *Discharged on March 2nd	Cs-134	ND (0.71)	ND (0.47)
	Cs-137	ND (0.68)	ND (0.66)
	Gross β	ND (0.79)	ND (0.49)
	H-3	630	610

* ND represents a value below the detection limit; values in ( ) represent the detection limit.
* In order to ensure the results, Mitsubishi Nuclear Fuel, a third-party organization, has also conducted an analysis and verified the radiation level of the sampled water.

Result of detailed analysis conducted by TEPCO, JAEA and Japan Chemical Analysis Center (In order to confirm the validity of analysis, the Government of Japan also requests JAEA to conduct the analysis, while TEPCO requests Japan Chemical Analysis Center by itself.)

(Unit: Bq/L)

Date of sampling	Detected nuclides	Analytical body		
		JAEA	TEPCO	Japan Chemical Analysis Center
February 3rd,2016	Cs-134	ND (0.0040)	ND (0.0050)	ND (0.0055)
	Cs-137	0.0030	ND (0.0038)	0.0040
	Gross α	ND (0.73)	ND (2.6)	ND (2.8)
	Gross β	ND (0.46)	ND (0.71)	ND (0.56)
	H-3	190	560	560
	Sr-90	0.0068	ND (0.0014)	ND (0.0057)

Results of analysis on the seawater sampled near the discharge point (North side of Units 5 and 6 discharge channel)

(Unit: Bq/L)

Date of sampling	Detected nuclides	Sampling point (South discharge channel)
March 4th, 2016 *During discharge	Cs-134	ND (0.67)
	Cs-137	ND (0.46)
	Gross β	10
	H-3	ND (1.5)

(Reference)

(Unit: Bq/L)

Radionuclides	Operational targets	Legal discharge limit (Density limit by the Reactor Regulation)	WHO Guidelines for Drinking Water Quality
Cs-134	1	60	10
Cs-137	1	90	10
Gross α	—	—	—
Gross β	3 (1) ※	—	—
H-3	1,500	60,000	10,000
Sr-90	—	30	10

※ The operational target of Gross β is 1 Bq/L in the survey which is conducted once every ten days.

Results of analysis on the water quality of the groundwater having been pumped up for by-passing at Fukushima Daiichi NPS (made available by TEPCO prior to discharge)

(Unit: Bq/L)

Date of sampling *Date of discharge	Detected nuclides	Analytical body	
		TEPCO	Japan Chemical Analysis Center
March 16th, 2016 *Discharged on March 29th	Cs-134	ND (0.59)	ND (0.79)
	Cs-137	ND (0.49)	ND (0.53)
	Gross β	ND (0.72)	ND (0.54)
	H-3	210	230
March 9th, 2016 *Discharged on March 22th	Cs-134	ND (0.65)	ND (0.58)
	Cs-137	ND (0.60)	ND (0.62)
	Gross β	ND (0.70)	ND (0.56)
	H-3	240	260
March 2nd, 2016 *Discharged on March 15th	Cs-134	ND (0.69)	ND (0.80)
	Cs-137	ND (0.57)	ND (0.72)
	Gross β	ND (0.70)	ND (0.52)
	H-3	200	210
February 24th, 2016 *Discharged on March 8th	Cs-134	ND (0.80)	ND (0.65)
	Cs-137	ND (0.58)	ND (0.50)
	Gross β	ND (0.72)	ND (0.53)
	H-3	190	200
February 17th, 2016 *Discharged on March 1st	Cs-134	ND (0.80)	ND (0.58)
	Cs-137	ND (0.58)	ND (0.89)
	Gross β	ND (0.66)	ND (0.60)
	H-3	230	220

∗ ND represents a value below the detection limit; values in ( ) represent the detection limit

∗ In order to ensure the results, Japan Chemical Analysis Center, a third-party organization, has also conducted an analysis and verified the radiation level of the sampled water.

Result of detailed analysis conducted by TEPCO, JAEA and Japan Chemical Analysis Center (In order to confirm the validity of analysis, the Government of Japan also requests JAEA to conduct the analysis, while TEPCO requests Japan Chemical Analysis Center by itself.)

(Unit: Bq/L)

Date of sampling	Detected nuclides	Analytical body		
		JAEA	TEPCO	Japan Chemical Analysis Center
February 3rd, 2016	Cs-134	ND (0.0040)	ND (0.0044)	ND (0.0047)
	Cs-137	0.0030	ND (0.0039)	ND (0.0039)
	Gross α	ND (0.73)	ND (2.5)	ND (3.5)
	Gross β	ND (0.46)	ND (0.74)	ND (0.55)
	H-3	190	180	190
	Sr-90	0.0068	ND (0.0014)	ND (0.0048)

Results of analysis on the seawater sampled near the discharge point (Around South Discharge Channel)

(Unit: Bq/L)

Date of sampling	Detected nuclides	Sampling point (South discharge channel)
March 1st, 2016 *During discharge	Cs-134	ND (0.59)
	Cs-137	ND (0.64)
	Gross β	12
	H-3	ND (1.6)

(Reference) (Unit: Bq/L)

Radionuclides	Operational targets	Legal discharge limit (Density limit by the Reactor Regulation)	WHO Guidelines for Drinking Water Quality
Cs-134	1	60	10
Cs-137	1	90	10
Gross α	—	—	—
Gross β	5 (1) ※	—	—
H-3	1,500	60,000	10,000
Sr-90	—	30	10

※ The operational target of Gross β is 1 Bq/L in the survey which is conducted once every ten days.