Information (15:55), May 2, 2016

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

Report on the discharge record and the seawater monitoring results at Fukushima Daiichi Nuclear Power Station during April

The Ministry of Foreign Affairs wishes to provide all international Missions in Japan with a report on the discharge record and seawater monitoring results with regard to groundwater pumped from the subdrain and groundwater drain systems, as well as, bypassing groundwater pumped during the month of April 2016 at Fukushima Daiichi Nuclear Power Station (NPS).

1. Subdrain and Groundwater Drain Systems

In April, purified groundwater pumped from the subdrain and groundwater drain systems was discharged on the dates shown in Appendix 1. Prior to every discharge, an analysis on the quality of the purified groundwater to be discharged was conducted by Tokyo Electric Power Company (TEPCO) and the results were announced.

All the test results during the month of April have confirmed that the radiation levels of sampled water were substantially below the operational targets set by TEPCO (these operational targets are well below the density limit specified by the Reactor Regulation).

In addition, TEPCO and Japan Atomic Energy Agency (JAEA), at the request of the Government of Japan, regularly conduct more detailed analyses on the purified groundwater. The results of JAEA's latest analyses confirmed that TEPCO's analyses were accurate and verified that the radiation levels of sampled groundwater is substantially below the operational target (see Appendix 2).

Moreover, TEPCO publishes the results of analyses conducted on seawater sampled during the discharge operation at the nearest seawater sampling post from the discharge point (see Appendix 3). The results show that the radiation levels of seawater remain lower than the density limit specified by the Reactor Regulation and significant change in the radioactivity has not been observed.

2. Groundwater Bypassing

In April, the pumped bypassing groundwater was discharged on the dates shown in Appendix 4. Prior to every discharge, an analysis on the quality of the groundwater to be discharged was conducted by TEPCO and the results were announced.

All the test results during the month of April have confirmed that the radiation levels of sampled water were substantially below the operational targets set by TEPCO (these operational targets are well below the density limit specified by the Reactor Regulation). The results of these analyses were also confirmed by Japan Chemical Analysis Center.

In addition, TEPCO and JAEA, at the request of the Government of Japan, regularly conduct more detailed analyses on the groundwater. The results of JAEA's latest analyses confirmed that TEPCO's analyses were accurate and verified that the radiation levels of the sampled groundwater are substantially below the operational target (see Appendix 5).

Moreover, TEPCO publishes analysis results on seawater sampled during the discharge operation at the nearest seawater sampling post from the discharge point (see Appendix 6). The result shows that the radiation levels in seawater remain lower than the density limit specified by the Reactor Regulation and significant change in the radioactivity has not been observed.

The sampling process for analyses conducted this month is the same as the one announced in the information disseminated last month. Results of the analysis are shown in the attached appendices:

(For further information, please contact TEPCO at (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

Appendix 1

Results of analyses on the quality of the purified groundwater pumped 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	Third-party organization
April 23rd, 2016 *Discharged on April 30th	Cs-134	ND* (0.48)	ND (0.76)
	Cs-137	ND (0.80)	ND (0.70)
	Gross β	ND (2.2)	ND (0.35)
	H-3	700	740
April 22nd, 2016 *Discharged on April 29th	Cs-134	ND (0.77)	ND (0.46)
	Cs-137	ND (0.46)	ND (0.54)
	Gross β	ND (1.8)	ND (0.49)
	H-3	680	680
April 19th, 2016 *Discharged on April 25th	Cs-134	ND (0.67)	ND (0.53)
	Cs-137	ND (0.70)	ND (0.45)
	Gross β	ND (2.2)	ND (0.64)
	H-3	840	850
April 18th, 2016 *Discharged on April 24th	Cs-134	ND (0.52)	ND (0.48)
	Cs-137	ND (0.70)	ND (0.47)
	Gross β	ND (0.72)	ND (0.49)
	H-3	740	770
April 16th, 2016 *Discharged on April 23th	Cs-134	ND (0.67)	ND (0.41)
	Cs-137	ND (0.74)	ND (0.41)
	Gross β	ND (2.0)	ND (0.65)
	H-3	740	740
April 15th, 2016 *Discharged on April 22nd	Cs-134	ND (0.74)	ND (0.66)
	Cs-137	ND (0.54)	ND (0.58)
	Gross β	ND (2.0)	ND (0.50)
	H-3	770	790
April 13th, 2016 *Discharged on April 20th	Cs-134	ND (0.60)	ND (0.43)
	Cs-137	ND (0.60)	ND (0.45)
	Gross β	ND (2.0)	ND (0.65)
	H-3	710	720
April 12th, 2016 *Discharged on April 18th	Cs-134	ND (0.73)	ND (0.50)
	Cs-137	ND (0.69)	ND (0.64)
	Gross β	ND (2.2)	ND (0.49)
	H-3	710	740

April 10th, 2016 *Discharged on April 16th	Cs-134	ND (0.59)	ND (0.47)
	Cs-137	ND (0.69)	ND (0.44)
	Gross β	ND (2.0)	ND (0.65)
	H-3	750	760
April 9th, 2016 *Discharged on April 15th	Cs-134	ND (0.87)	ND (0.59)
	Cs-137	ND (0.78)	ND (0.54)
	Gross β	ND (0.78)	ND (0.52)
	H-3	800	900
April 7th, 2016 *Discharged on April 14th	Cs-134	ND (0.67)	ND (0.49)
	Cs-137	ND (0.57)	ND (0.43)
	Gross β	ND (2.0)	ND (0.64)
	H-3	840	830
April 6th, 2016 *Discharged on April 13th	Cs-134	ND (0.68)	ND (0.54)
	Cs-137	ND (0.46)	ND (0.63)
	Gross β	ND (2.0)	ND (0.51)
	H-3	860	950
April 5th, 2016 *Discharged on April 10th	Cs-134	ND (0.73)	ND (0.41)
	Cs-137	ND (0.58)	ND (0.48)
	Gross β	ND (2.0)	ND (0.63)
	H-3	910	900
April 4th, 2016 *Discharged on April 9th	Cs-134	ND (0.48)	ND (0.44)
	Cs-137	ND (0.62)	ND (0.50)
	Gross β	ND (2.0)	ND (0.52)
	H-3	960	1,000
April 1st, 2016 *Discharged on April 8th	Cs-134	ND (0.79)	ND (0.45)
	Cs-137	ND (0.54)	ND (0.44)
	Gross β	ND (0.68)	ND (0.64)
	H-3	950	950
March 31st, 2016 *Discharged on April 7th	Cs-134	ND (0.77)	ND (0.36)
	Cs-137	ND (0.59)	ND (0.56)
	Gross β	ND (2.4)	ND (0.50)
	H-3	930	1,000
March 30th, 2016 *Discharged on April 6th	Cs-134	ND (0.74)	ND (0.44)
	Cs-137	ND (0.54)	ND (0.43)
	Gross β	ND (2.1)	ND (0.65)
	H-3	880	870
March 29th, 2016 *Discharged on April 3rd	Cs-134	ND (0.67)	ND (0.46)
	Cs-137	ND (0.57)	ND (0.54)
	Gross β	ND (1.9)	ND (0.50)
	H-3	850	920

March 27th, 2016 *Discharged on April 2nd	Cs-134	ND (0.75)	ND (0.39)
	Cs-137	ND (0.72)	ND (0.48)
	Gross β	ND (0.74)	ND (0.64)
	H-3	930	910
March 25th, 2015 *Discharged on April 1st	Cs-134	ND (0.50)	ND (0.59)
	Cs-137	ND (0.74)	ND (0.58)
	Gross β	ND (2.0)	ND (0.53)
	H-3	920	930

* * ND: represents a value below the detection limit; values in ( ) represent the detection limit.
* In order to ensure the results, the third-party organizations, Mitsubishi Nuclear Fuel Co., Ltd, Kaken Co., Ltd and Tohoku Ryokka Kankyohozen Co., Ltd have also conducted an analysis and verified the radiation level of the sampled water.

Appendix 2

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

(Unit: Bq/L)

Date of sampling	Detected nuclides	Analytical body		
		JAEA	TEPCO	Japan Chemical Analysis Center
March 2nd,2016	Cs-134	ND (0.0033)	ND* (0.0043)	ND (0.0058)
	Cs-137	0.0032	ND (0.0039)	ND (0.0060)
	Gross α	ND (0.47)	ND (2.5)	ND (3.1)
	Gross β	ND (0.46)	ND (0.78)	ND (0.58)
	H-3	650	630	620
	Sr-90	0.0081	ND (0.0030)	ND (0.0060)

* ND: represents a value below the detection limit; values in ( ) represent the detection limit.

Appendix 3

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)
April 6th, 2016 *During discharge	Cs-134	ND (0.66)
	Cs-137	ND (0.60)
	Gross β	15
	H-3	ND (1.6)

(Reference)

(Unit: Bq/L)

Radionuclides	Operational Targets	Density Limit specified by the Reactor Regulation	World Health Organization (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.

Appendix 4

Results of analyses on the water quality of the groundwater pumped up for bypassing 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
April 13th, 2016 *Discharged on April 26th	Cs-134	ND* (0.64)	ND (0.58)
	Cs-137	ND (0.62)	ND (0.57)
	Gross β	ND (0.63)	ND (0.48)
	H-3	150	140
April 6rd, 2016 *Discharged on April 19th	Cs-134	ND (0.63)	ND (0.58)
	Cs-137	ND (0.84)	ND (0.64)
	Gross β	ND (0.66)	ND (0.57)
	H-3	170	180
March 30th, 2016 *Discharged on April 12th	Cs-134	ND (0.75)	ND (0.71)
	Cs-137	ND (0.56)	ND (0.80)
	Gross β	ND (0.70)	ND (0.44)
	H-3	210	190
March 23rd, 2015 *Discharged on April 5th	Cs-134	ND (0.68)	ND (0.65)
	Cs-137	ND (0.78)	ND (0.78)
	Gross β	ND (0.70)	ND (0.52)
	H-3	180	190

- * 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.

Appendix 5

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

(Unit: Bq/L)

Date of sampling	Detected nuclides	Analytical body		
		JAEA	TEPCO	Japan Chemical Analysis Center
March 2nd, 2016	Cs-134	ND (0.0033)	ND (0.0043)	ND (0.0053)
	Cs-137	0.0031	ND (0.0036)	ND (0.0046)
	Gross α	ND (0.52)	ND (2.5)	ND (3.1)
	Gross β	ND (0.45)	ND (0.70)	ND (0.54)
	H-3	220	210	210
	Sr-90	0.0060	ND (0.0016)	ND (0.0063)

* ND: represents a value below the detection limit; values in ( ) represent the detection limit.

Appendix 6

Results of analyses 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)
April 5th, 2016 *During discharge	Cs-134	ND (0.71)
	Cs-137	ND (0.68)
	Gross β	11
	H-3	ND (1.8)

(Reference) (Unit: Bq/L)

Radionuclides	Operational Targets	Density Limit specified by the Reactor Regulation	World Health Organization (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.