Information (16:00), August 1, 2017

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 July 2017

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 July 2017 at Fukushima Daiichi Nuclear Power Station (NPS).

1. Subdrain and Groundwater Drain Systems

In July, 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 July 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 third-party organization (Mitsubishi Nuclear Fuel Co., Ltd, Kaken Co., Ltd and Tohoku Ryokka Kankyohozen Co.).

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 July, 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 July 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 analysis has been conducted once a month until March 2017. Since April 2017, it is conducted four times a year because there has been no significant fluctuation in the concentration of radioactive materials in the sea water, and no influence on the surrounding environment has been confirmed.

The sampling process for analyses conducted this month is the same as the one conducted in the information disseminated last month. Results of the analyses 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
July 23rd, 2017 *Discharged on July 28th	Cs-134	ND (0.71)	ND (0.65)
	Cs-137	ND (0.53)	ND (0.56)
	Gross β	ND (2.4)	ND(0.29)
	H-3	1,000	1,000
July 22nd, 2017 *Discharged on July 27th	Cs-134	ND (0.55)	ND (0.63)
	Cs-137	ND (0.63)	ND (0.71)
	Gross β	ND (2.3)	ND(0.32)
	H-3	980	980
July 20th, 2017 *Discharged on July 25th	Cs-134	ND (0.71)	ND (0.53)
	Cs-137	ND (0.58)	ND (0.62)
	Gross β	ND (2.4)	0.56
	H-3	900	920
July 19th, 2017 *Discharged on July 24th	Cs-134	ND (0.55)	ND (0.56)
	Cs-137	ND (0.58)	ND (0.59)
	Gross β	ND (2.4)	ND(0.36)
	H-3	890	900
July 18th, 2017 *Discharged on July 23rd	Cs-134	ND (0.49)	ND (0.75)
	Cs-137	ND (0.75)	ND (0.74)
	Gross β	ND (2.7)	ND(0.31)
	H-3	950	950
July 17th, 2017 *Discharged on July 22nd	Cs-134	ND (0.65)	ND (0.44)
	Cs-137	ND (0.58)	ND (0.59)
	Gross β	ND (0.72)	ND(0.31)
	H-3	900	930
July 15th, 2017 *Discharged on July 20th	Cs-134	ND (0.71)	ND (0.67)
	Cs-137	ND (0.58)	ND (0.83)
	Gross β	ND (2.4)	ND(0.35)
	H-3	810	820
July 14th, 2017 *Discharged on July 19th	Cs-134	ND (0.83)	ND (0.59)
	Cs-137	ND (0.53)	ND (0.73)
	Gross β	ND (2.3)	ND (0.35)
	H-3	800	810

July 13th, 2017 *Discharged on July 18th	Cs-134	ND (0.76)	ND (0.75)
	Cs-137	ND (0.63)	ND (0.68)
	Gross β	ND (2.7)	ND (0.30)
	H-3	810	810
July 12th, 2017 *Discharged on July 17th	Cs-134	ND (0.67)	ND (0.77)
	Cs-137	ND (0.63)	ND (0.77)
	Gross β	ND (2.4)	ND(0.34)
	H-3	780	790
July 10th, 2017 *Discharged on July 15th	Cs-134	ND (0.55)	ND (0.66)
	Cs-137	ND (0.58)	ND (0.71)
	Gross β	ND (0.72)	0.41
	H-3	740	740
July 9th, 2017 *Discharged on July 14th	Cs-134	ND (0.71)	ND (0.87)
	Cs-137	ND (0.68)	ND (0.71)
	Gross β	ND (2.4)	0.41
	H-3	730	730
July 8th, 2017 *Discharged on July 13th	Cs-134	ND (0.58)	ND (0.80)
	Cs-137	ND (0.63)	ND (0.74)
	Gross β	ND (2.5)	0.48
	H-3	740	750
July 7th, 2017 *Discharged on July 12th	Cs-134	ND (0.67)	ND (0.55)
	Cs-137	ND (0.63)	ND (0.64)
	Gross β	ND (2.4)	0.67
	H-3	800	810
July 5th, 2017 *Discharged on July 10th	Cs-134	ND (0.71)	ND (0.62)
	Cs-137	ND (0.68)	ND (0.53)
	Gross β	ND (2.1)	ND(0.34)
	H-3	960	960
July 4th, 2017 *Discharged on July 9th	Cs-134	ND (0.77)	ND (0.51)
	Cs-137	ND (0.58)	ND (0.68)
	Gross β	ND (2.1)	ND(0.38)
	H-3	890	930
July 3rd, 2017 *Discharged on July 8th	Cs-134	ND (0.70)	ND (0.68)
	Cs-137	ND (0.51)	ND (0.53)
	Gross β	ND (2.7)	ND(0.40)
	H-3	970	980
July 2nd, 2017 *Discharged on July 7th	Cs-134	ND (0.79)	ND (0.62)
	Cs-137	ND (0.63)	ND (0.71)
	Gross β	ND (0.72)	0.55
	H-3	1,000	1,000
June 30th, 2017 *Discharged on July 5th	Cs-134	ND (0.58)	ND (0.72)
	Cs-137	ND (0.46)	ND (0.50)
	Gross β	ND (2.3)	ND(0.30)

	H-3	870	880
June 29th, 2017 *Discharged on July 4th	Cs-134	ND (0.59)	ND (0.70)
	Cs-137	ND (0.78)	ND (0.74)
	Gross β	ND (2.4)	ND(0.34)
	H-3	850	870
June 28th, 2017 *Discharged on July 3rd	Cs-134	ND (0.57)	ND (0.69)
	Cs-137	ND (0.71)	ND (0.64)
	Gross β	ND (2.5)	ND (0.37)
	H-3	1,000	1,000
June 27th, 2017 *Discharged on July 2nd	Cs-134	ND (0.71)	ND (0.53)
	Cs-137	ND (0.46)	ND (0.68)
	Gross β	ND (2.4)	ND(0.40)
	H-3	1,000	1,000

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

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
June 2nd,2017	Cs-134	ND(0.0027)	ND (0.0045)	ND (0.0048)
	Cs-137	0.0098	0.011	0.0084
	Gross α	ND (0.47)	ND (3.1)	ND (2.9)
	Gross β	ND (0.45)	ND (0.75)	ND (0.58)
	H-3	930	890	900
	Sr-90	0.0098	ND (0.0016)	ND(0.0063)

* 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)
July 5th, 2017 *Sampled before discharge of purified groundwater.	Cs-134	ND (0.76)
	Cs-137	ND (0.71)
	Gross β	12
	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
July 20th, 2017 *Discharged on July 27th	Cs-134	ND (0.76)	ND (0.81)
	Cs-137	ND (0.78)	ND (0.59)
	Gross β	ND (0.72)	ND (0.56)
	H-3	110	120
July 12th, 2017 *Discharged on July 21st	Cs-134	ND (0.60)	ND (0.81)
	Cs-137	ND (0.71)	ND (0.85)
	Gross β	ND (0.72)	ND (0.54)
	H-3	110	120
July 5th, 2017 *Discharged on July 17th	Cs-134	ND (0.81)	ND (0.63)
	Cs-137	ND (0.71)	ND (0.75)
	Gross β	ND (0.72)	ND (0.55)
	H-3	140	140
June 28th, 2017 *Discharged on July 11th	Cs-134	ND (0.73)	ND (0.65)
	Cs-137	ND (0.63)	ND (0.71)
	Gross β	ND (0.72)	ND (0.55)
	H-3	130	130
June 21st, 2017 *Discharged on July 4th	Cs-134	ND (0.65)	ND (0.68)
	Cs-137	ND (0.63)	ND (0.70)
	Gross β	ND (0.72)	ND (0.48)
	H-3	120	130

* * 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
June 7th, 2017	Cs-134	ND (0.0028)	ND (0.0044)	ND (0.0055)
	Cs-137	0.0034	ND(0.0035)	ND(0.0037)
	Gross α	ND (0.56)	ND (3.1)	ND (2.9)
	Gross β	ND (0.46)	ND (0.68)	ND (0.51)
	H-3	130	130	130
	Sr-90	ND(0.0014)	ND (0.0015)	ND (0.0056)

* 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 ※conducted four times a year	Detected nuclides	Sampling point (South discharge channel)
June 6th, 2017	Cs-134	ND (0.48)
	Cs-137	ND (0.78)
	Gross β	12
	H-3	1.7

(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.