Information (16:00), September 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 August 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 August 2017 at Fukushima Daiichi Nuclear Power Station (NPS).

1. Subdrain and Groundwater Drain Systems

In August, 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 August 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 August, 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 August 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
August 26th, 2017 *Discharged on August 31st	Cs-134	ND (0.71)	ND (0.58)
	Cs-137	ND (0.58)	ND (0.68)
	Gross β	ND (2.1)	0.41
	H-3	850	870
August 24th, 2017 *Discharged on August 29th	Cs-134	ND (0.54)	ND (0.56)
	Cs-137	ND (0.68)	ND (0.71)
	Gross β	ND (0.68)	ND(0.35)
	H-3	870	870
August 23rd, 2017 *Discharged on August 28th	Cs-134	ND (0.60)	ND (0.72)
	Cs-137	ND (0.53)	ND (0.67)
	Gross β	ND (2.3)	ND(0.39)
	H-3	870	870
August 22nd, 2017 *Discharged on August 27th	Cs-134	ND (0.59)	ND (0.64)
	Cs-137	ND (0.58)	ND (0.62)
	Gross β	ND (2.4)	0.39
	H-3	850	880
August 21st, 2017 *Discharged on August 26th	Cs-134	ND (0.64)	ND (0.53)
	Cs-137	ND (0.63)	ND (0.67)
	Gross β	ND (2.7)	0.43
	H-3	860	880
August 19th, 2017 *Discharged on August 24th	Cs-134	ND (0.51)	ND (0.56)
	Cs-137	ND (0.71)	ND (0.35)
	Gross β	ND (2.3)	ND(0.38)
	H-3	880	870
August 18th, 2017 *Discharged on August 23rd	Cs-134	ND (0.71)	ND (0.75)
	Cs-137	ND (0.58)	ND (0.60)
	Gross β	ND (2.4)	0.52
	H-3	910	920
August 17th, 2017 *Discharged on	Cs-134	ND (0.56)	ND (0.76)
	Cs-137	ND (0.63)	ND (0.68)

August 22nd	Gross β	ND (0.83)	0.42
	H-3	900	910
August 16th, 2017 *Discharged on August 21st	Cs-134	ND (0.67)	ND (0.70)
	Cs-137	ND (0.78)	ND (0.62)
	Gross β	ND (2.4)	ND(0.36)
	H-3	920	930
August 14th, 2017 *Discharged on August 19th	Cs-134	ND (0.74)	ND (0.60)
	Cs-137	ND (0.53)	ND (0.55)
	Gross β	ND (2.5)	ND (0.34)
	H-3	950	970
August 13th, 2017 *Discharged on August 18th	Cs-134	ND (0.74)	ND (0.75)
	Cs-137	ND (0.58)	ND (0.74)
	Gross β	ND (2.3)	ND (0.31)
	H-3	900	920
August 12th, 2017 *Discharged on August 17th	Cs-134	ND (0.62)	ND (0.77)
	Cs-137	ND (0.63)	ND (0.68)
	Gross β	ND (2.3)	0.46
	H-3	940	960
August 11th, 2017 *Discharged on August 16th	Cs-134	ND (0.76)	ND (0.65)
	Cs-137	ND (0.71)	ND (0.62)
	Gross β	ND (2.5)	0.49
	H-3	1,100	1,100
August 9th, 2017 *Discharged on August 14th	Cs-134	ND (0.74)	ND (0.75)
	Cs-137	ND (0.53)	ND (0.83)
	Gross β	ND (0.68)	0.52
	H-3	1,100	1,100
August 8th, 2017 *Discharged on August 13th	Cs-134	ND (0.67)	ND (0.88)
	Cs-137	ND (0.58)	ND (0.60)
	Gross β	ND (2.4)	ND(0.38)
	H-3	1,000	1,100
August 7th, 2017 *Discharged on August 12th	Cs-134	ND (0.79)	ND (0.57)
	Cs-137	ND (0.46)	ND (0.67)
	Gross β	ND (2.4)	ND(0.34)
	H-3	910	960
August 6th, 2017 *Discharged on August 11th	Cs-134	ND (0.76)	ND (0.50)
	Cs-137	ND (0.46)	ND (0.62)
	Gross β	ND (2.8)	ND(0.36)
	H-3	860	890
August 4th, 2017 *Discharged on August 9th	Cs-134	ND (0.77)	ND (0.63)
	Cs-137	ND (0.75)	ND (0.68)
	Gross β	ND (2.1)	ND(0.32)
	H-3	800	830
August 3rd, 2017	Cs-134	ND (0.44)	ND (0.75)

*Discharged on August 8th	Cs-137	ND (0.71)	ND (0.74)
	Gross β	ND (2.5)	ND(0.32)
	H-3	880	900
August 2nd, 2017 *Discharged on August 7th	Cs-134	ND (0.74)	ND (0.66)
	Cs-137	ND (0.58)	ND (0.71)
	Gross β	ND (2.5)	ND(0.28)
	H-3	980	990
August 1st, 2017 *Discharged on August 6th	Cs-134	ND (0.68)	ND (0.60)
	Cs-137	ND (0.58)	ND (0.68)
	Gross β	ND (0.68)	ND(0.32)
	H-3	930	940
July 30th, 2017 *Discharged on August 4th	Cs-134	ND (0.54)	ND (0.89)
	Cs-137	ND (0.69)	ND (0.60)
	Gross β	ND (2.3)	ND(0.33)
	H-3	960	980
July 29th, 2017 *Discharged on August 3rd	Cs-134	ND (0.71)	ND (0.85)
	Cs-137	ND (0.65)	ND (0.71)
	Gross β	ND (2.5)	ND (0.31)
	H-3	970	980
July 28th, 2017 *Discharged on August 2nd	Cs-134	ND (0.71)	ND (0.60)
	Cs-137	ND (0.56)	ND (0.55)
	Gross β	ND (2.5)	ND(0.32)
	H-3	1,100	1,100

- * 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
July 2nd,2017	Cs-134	ND(0.0033)	ND (0.0044)	ND (0.0064)
	Cs-137	0.012	0.0096	0.0093
	Gross α	ND (0.60)	ND (3.0)	ND (3.9)
	Gross β	ND (0.45)	ND (0.72)	ND (0.60)
	H-3	1100	1,000	1,000
	Sr-90	0.0026	ND (0.0017)	ND(0.0049)

* 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)
August 7th, 2017 *Sampled before discharge of purified groundwater.	Cs-134	ND (0.71)
	Cs-137	ND (0.68)
	Gross β	11
	H-3	ND(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	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
August 24th, 2017 *Discharged on August 31st	Cs-134	ND (0.49)	ND (0.81)
	Cs-137	ND (0.68)	ND (0.53)
	Gross β	ND (0.72)	ND (0.58)
	H-3	130	140
August 17th, 2017 *Discharged on August 23rd	Cs-134	ND (0.79)	ND (0.68)
	Cs-137	ND (0.68)	ND (0.70)
	Gross β	ND (0.75)	ND (0.55)
	H-3	120	130
August 10th, 2017 *Discharged on August 18th	Cs-134	ND (0.48)	ND (0.42)
	Cs-137	ND (0.71)	ND (0.64)
	Gross β	ND (0.72)	ND (0.31)
	H-3	120	120
August 3rd, 2017 *Discharged on August 10th	Cs-134	ND (0.63)	ND (0.85)
	Cs-137	ND (0.58)	ND (0.55)
	Gross β	ND (0.64)	ND (0.52)
	H-3	120	120
July 27th, 2017 *Discharged on August 3rd	Cs-134	ND (0.68)	ND (0.63)
	Cs-137	ND (0.65)	ND (0.65)
	Gross β	ND (0.83)	ND (0.55)
	H-3	120	120

* * 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
July 5th, 2017	Cs-134	ND (0.0034)	ND (0.0047)	ND (0.0066)
	Cs-137	0.0037	ND(0.0041)	ND(0.0042)
	Gross α	ND (0.44)	ND (3.0)	ND (3.9)
	Gross β	ND (0.45)	ND (0.72)	ND (0.59)
	H-3	140	140	140
	Sr-90	0.0023	ND (0.0015)	ND (0.0058)

* 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.