Information (16:00), July 3, 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 June 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 June 2017 at Fukushima Daiichi Nuclear Power Station (NPS).

1. Subdrain and Groundwater Drain Systems

In June, 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 June 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 June, 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 June 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 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
June 25th, 2017 *Discharged on June 30th	Cs-134	ND (0.76)	ND (0.73)
	Cs-137	ND (0.58)	ND (0.68)
	Gross β	ND (2.1)	ND(0.33)
	H-3	920	950
June 24th, 2017 *Discharged on June 29th	Cs-134	ND (0.83)	ND (0.77)
	Cs-137	ND (0.71)	ND (0.68)
	Gross β	ND (2.7)	0.39
	H-3	920	940
June 23rd, 2017 *Discharged on June 28th	Cs-134	ND (0.71)	ND (0.59)
	Cs-137	ND (0.53)	ND (0.59)
	Gross β	ND (0.75)	ND(0.36)
	H-3	920	930
June 22nd, 2017 *Discharged on June 27th	Cs-134	ND (0.65)	ND (0.55)
	Cs-137	ND (0.53)	ND (0.41)
	Gross β	ND (2.4)	0.45
	H-3	950	960
June 20th, 2017 *Discharged on June 25th	Cs-134	ND (0.66)	ND (0.67)
	Cs-137	ND (0.71)	ND (0.68)
	Gross β	ND (2.4)	ND(0.40)
	H-3	910	920
June 19th, 2017 *Discharged on June 24th	Cs-134	ND (0.74)	ND (0.40)
	Cs-137	ND (0.53)	ND (0.59)
	Gross β	ND (2.5)	0.57
	H-3	1000	1000
June 18th, 2017 *Discharged on June 23rd	Cs-134	ND (0.68)	ND (0.82)
	Cs-137	ND (0.63)	ND (0.68)
	Gross β	ND (2.3)	ND(0.30)
	H-3	1000	1100
June 17th, 2017 *Discharged on June 22nd	Cs-134	ND (0.71)	ND (0.80)
	Cs-137	ND (0.68)	ND (0.60)
	Gross β	ND (2.4)	ND(0.34)
	H-3	990	1000

June 15th, 2017 *Discharged on June 20th	Cs-134	ND (0.74)	ND (0.65)
	Cs-137	ND (0.58)	ND (0.64)
	Gross β	ND (0.72)	ND(0.38)
	H-3	930	970
June 14th, 2017 *Discharged on June 19th	Cs-134	ND (0.74)	ND (0.77)
	Cs-137	ND (0.68)	ND (0.55)
	Gross β	ND (2.4)	ND (0.37)
	H-3	930	950
June 13th, 2017 *Discharged on June 18th	Cs-134	ND (0.66)	ND (0.69)
	Cs-137	ND (0.53)	ND (0.77)
	Gross β	ND (2.7)	ND (0.37)
	H-3	940	960
June 12th, 2017 *Discharged on June 17th	Cs-134	ND (0.69)	ND (0.67)
	Cs-137	ND (0.53)	ND (0.68)
	Gross β	ND (2.5)	ND(0.34)
	H-3	920	960
June 10th, 2017 *Discharged on June 15th	Cs-134	ND (0.68)	ND (0.67)
	Cs-137	ND (0.75)	ND (0.68)
	Gross β	ND (2.1)	0.40
	H-3	920	930
June 9th, 2017 *Discharged on June 14th	Cs-134	ND (0.49)	ND (0.57)
	Cs-137	ND (0.53)	ND (0.49)
	Gross β	ND (0.75)	ND(0.32)
	H-3	890	900
June 8th, 2017 *Discharged on June 13th	Cs-134	ND (0.74)	ND (0.66)
	Cs-137	ND (0.68)	ND (0.74)
	Gross β	ND (2.4)	ND (0.32)
	H-3	870	880
June 7th, 2017 *Discharged on June 12th	Cs-134	ND (0.66)	ND (0.71)
	Cs-137	ND (0.68)	ND (0.77)
	Gross β	ND (2.1)	ND(0.36)
	H-3	830	830
June 5th, 2017 *Discharged on June 10th	Cs-134	ND (0.70)	ND (0.42)
	Cs-137	ND (0.58)	ND (0.74)
	Gross β	ND (2.4)	ND(0.30)
	H-3	820	830
June 4th, 2017 *Discharged on June 9th	Cs-134	ND (0.67)	ND (0.56)
	Cs-137	ND (0.58)	ND (0.56)
	Gross β	ND (2.4)	ND(0.31)
	H-3	800	810
June 3rd, 2017 *Discharged on June 8th	Cs-134	ND (0.62)	ND (0.74)
	Cs-137	ND (0.58)	ND (0.77)
	Gross β	ND (2.1)	ND(0.32)

	H-3	870	900
June 2nd, 2017 *Discharged on June 7th	Cs-134	ND (0.68)	ND (0.66)
	Cs-137	ND (0.71)	ND (0.68)
	Gross β	ND (0.75)	ND (0.34)
	H-3	880	900
May 31st, 2017 *Discharged on June 5th	Cs-134	ND (0.54)	ND (0.80)
	Cs-137	ND (0.46)	ND (0.60)
	Gross β	ND (2.5)	ND(0.34)
	H-3	880	900
May 30th, 2017 *Discharged on June 4th	Cs-134	ND (0.60)	ND (0.75)
	Cs-137	ND (0.46)	ND (0.60)
	Gross β	ND (2.3)	ND(0.33)
	H-3	870	880
May 29th, 2017 *Discharged on June 3rd	Cs-134	ND (0.68)	ND (0.64)
	Cs-137	ND (0.58)	ND (0.59)
	Gross β	ND (2.5)	ND (0.29)
	H-3	840	870
May 28th, 2017 *Discharged on June 2nd	Cs-134	ND (0.79)	ND (0.82)
	Cs-137	ND (0.82)	ND (0.50)
	Gross β	ND (2.1)	ND(0.28)
	H-3	890	910

* * 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
May 1st,2017	Cs-134	ND(0.0033)	ND (0.0043)	ND (0.0069)
	Cs-137	0.013	0.014	0.019
	Gross α	ND (0.49)	ND (3.1)	ND (3.7)
	Gross β	ND (0.46)	ND (0.68)	ND (0.49)
	H-3	990	920	960
	Sr-90	ND(0.0011)	ND (0.0015)	ND(0.0066)

* 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)
June 7th, 2017 *Sampled before discharge of purified groundwater.	Cs-134	ND (0.61)
	Cs-137	ND (0.66)
	Gross β	11
	H-3	ND(1.5)

(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
June 14th, 2017 *Discharged on June 27th	Cs-134	ND (0.43)	ND (0.68)
	Cs-137	ND (0.58)	ND (0.55)
	Gross β	ND (0.72)	ND (0.55)
	H-3	140	140
June 7th, 2017 *Discharged on June 20th	Cs-134	ND (0.62)	ND (0.68)
	Cs-137	ND (0.58)	ND (0.59)
	Gross β	ND (0.68)	ND (0.47)
	H-3	130	120
May 31st, 2017 *Discharged on June 13th	Cs-134	ND (0.56)	ND (0.63)
	Cs-137	ND (0.75)	ND (0.74)
	Gross β	ND (0.75)	ND (0.60)
	H-3	130	140
May 24th, 2017 *Discharged on June 6th	Cs-134	ND (0.83)	ND (0.73)
	Cs-137	ND (0.78)	ND (0.62)
	Gross β	ND (0.75)	ND (0.61)
	H-3	130	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
May 3rd, 2017	Cs-134	ND (0.0027)	ND (0.0044)	ND (0.0061)
	Cs-137	ND(0.0031)	ND(0.0036)	ND(0.0046)
	Gross α	ND (0.53)	ND (3.1)	ND (3.7)
	Gross β	ND (0.46)	ND (0.68)	ND (0.54)
	H-3	130	120	130
	Sr-90	ND(0.0013)	ND (0.0014)	ND (0.0059)

* 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)
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.