Information (18:35), Sep 1, 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 August

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 2016 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).

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 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
Aug 26th, 2016 *Discharged on Aug 31st	Cs-134	ND (0.68)	ND (0.61)
	Cs-137	ND (0.63)	ND (0.89)
	Gross β	ND (2.2)	ND (0.38)
	H-3	530	560
Aug 25st, 2016 *Discharged on Aug 30th	Cs-134	ND (0.77)	ND (0.60)
	Cs-137	ND (0.68)	ND (0.59)
	Gross β	ND (2.2)	0.41
	H-3	550	550
Aug 23rd, 2016 *Discharged on Aug 28th	Cs-134	ND (0.62)	ND (0.68)
	Cs-137	ND (0.58)	ND (0.60)
	Gross β	ND (2.2)	0.55
	H-3	480	510
Aug 20th, 2016 *Discharged on Aug 25th	Cs-134	ND (0.63)	ND (0.70)
	Cs-137	ND (0.53)	ND (0.68)
	Gross β	ND (2.0)	0.45
	H-3	350	370
Aug 19th, 2016 *Discharged on Aug 24th	Cs-134	ND (0.60)	ND (0.81)
	Cs-137	ND (0.64)	ND (0.41)
	Gross β	ND (0.75)	ND (0.37)
	H-3	360	390
Aug 17th, 2016 *Discharged on Aug 23rd	Cs-134	ND (0.70)	ND (0.60)
	Cs-137	ND (0.64)	ND (0.68)
	Gross β	ND (2.4)	ND (0.35)
	H-3	380	410
Aug 16th, 2016 *Discharged on Aug 22nd	Cs-134	ND (0.79)	ND (0.57)
	Cs-137	ND (0.63)	ND (0.70)
	Gross β	ND (2.4)	ND (0.37)
	H-3	390	410
Aug 15th, 2016 *Discharged on Aug 21st	Cs-134	ND (0.77)	ND (0.56)
	Cs-137	ND (0.69)	ND (0.65)
	Gross β	ND (2.2)	ND (0.37)
	H-3	380	410

Aug 14th, 2016 *Discharged on Aug 20th	Cs-134	ND (0.55)	ND (0.60)
	Cs-137	ND (0.72)	ND (0.64)
	Gross β	ND (2.4)	ND (0.41)
	H-3	390	420
Aug 12th, 2016 *Discharged on Aug 18th	Cs-134	ND (0.68)	ND (0.57)
	Cs-137	ND (0.56)	ND (0.56)
	Gross β	ND (2.0)	ND (0.35)
	H-3	380	410
Aug 10th, 2016 *Discharged on Aug 17th	Cs-134	ND (0.74)	ND (0.76)
	Cs-137	ND (0.56)	ND (0.60)
	Gross β	ND (0.63)	ND (0.35)
	H-3	360	380
Aug 9th, 2016 *Discharged on Aug 16th	Cs-134	ND (0.69)	ND (0.60)
	Cs-137	ND (0.76)	ND (0.61)
	Gross β	ND (1.8)	ND (0.39)
	H-3	350	370
Aug 8th, 2016 *Discharged on Aug 13th	Cs-134	ND (0.57)	ND (0.76)
	Cs-137	ND (0.59)	ND (0.53)
	Gross β	ND (2.0)	ND (0.36)
	H-3	330	360
Aug 7th, 2016 *Discharged on Aug 12th	Cs-134	ND (0.64)	ND (0.64)
	Cs-137	ND (0.59)	ND (0.66)
	Gross β	ND (2.2)	ND (0.38)
	H-3	340	340
Aug 5th, 2016 *Discharged on Aug 10th	Cs-134	ND (0.71)	ND (0.66)
	Cs-137	ND (0.71)	ND (0.64)
	Gross β	ND (2.2)	ND (0.37)
	H-3	350	360
Aug 4th, 2016 *Discharged on Aug 9th	Cs-134	ND (0.74)	ND (0.64)
	Cs-137	ND (0.58)	ND (0.64)
	Gross β	ND (2.2)	0.40
	H-3	370	380
Aug 2nd, 2016 *Discharged on Aug 7th	Cs-134	ND (0.67)	ND (0.79)
	Cs-137	ND (0.68)	ND (0.96)
	Gross β	ND (0.74)	ND (0.33)
	H-3	350	360
July 31st, 2016 *Discharged on Aug 5th	Cs-134	ND (0.75)	ND (0.60)
	Cs-137	ND (0.78)	ND (0.49)
	Gross β	ND (1.9)	ND (0.40)
	H-3	340	350
July 30th, 2016 *Discharged on Aug 4th	Cs-134	ND (0.63)	ND (0.57)
	Cs-137	ND (0.94)	ND (0.61)
	Gross β	ND (2.2)	0.35

	H-3	360	380
July 29th, 2016 *Discharged on Aug 3nd	Cs-134	ND (0.78)	ND (0.58)
	Cs-137	ND (0.67)	ND (0.66)
	Gross β	ND (2.2)	ND (0.37)
	H-3	360	380
July 28th, 2016 *Discharged on Aug 2nd	Cs-134	ND(0.50)	ND (0.70)
	Cs-137	ND (0.68)	ND (0.59)
	Gross β	ND (0.79)	ND (0.39)
	H-3	350	380

- * 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.
- 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
Aug 2nd,2016	Cs-134	ND (0.0033)	ND* (0.0044)	ND (0.0060)
	Cs-137	0.0055	0.0091	0.0058
	Gross α	ND (0.41)	ND (2.5)	ND (3.5)
	Gross β	ND (0.45)	ND (0.66)	ND (0.66)
	H-3	610	560	580
	Sr-90	0.0050	ND (0.0018)	ND (0.0062)

* 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)
Aug 3rd, 2016 *During discharge	Cs-134	ND (0.71)
	Cs-137	ND (0.88)
	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
Aug 17th, 2016 *Discharged on Aug 29th	Cs-134	ND* (0.80)	ND (0.50)
	Cs-137	ND (0.78)	ND (0.55)
	Gross β	ND (0.63)	ND (0.48)
	H-3	140	140
Aug 10th, 2016 *Discharged on Aug 22nd	Cs-134	ND (0.55)	ND (0.85)
	Cs-137	ND (0.72)	ND (0.62)
	Gross β	ND (0.74)	ND (0.52)
	H-3	150	150
Aug 3rd, 2016 *Discharged on Aug 16th	Cs-134	ND (0.57)	ND (0.68)
	Cs-137	ND (0.65)	ND (0.73)
	Gross β	ND (0.63)	ND (0.56)
	H-3	150	140
July 27st, 2016 *Discharged on Aug 9th	Cs-134	ND (0.73)	ND (0.80)
	Cs-137	ND (0.68)	ND (0.67)
	Gross β	ND (0.63)	ND (0.53)
	H-3	180	190
July 21st, 2016 *Discharged on Aug 2nd	Cs-134	ND (0.93)	ND (0.50)
	Cs-137	ND (0.50)	ND (0.57)
	Gross β	ND (0.66)	ND (0.61)
	H-3	180	200

* * 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 6th, 2016	Cs-134	ND (0.0026)	ND (0.0046)	ND (0.0043)
	Cs-137	0.0028	ND (0.0052)	ND(0.0042)
	Gross α	ND (0.53)	ND (2.6)	ND (3.2)
	Gross β	ND (0.45)	ND (0.72)	ND (0.56)
	H-3	200	180	190
	Sr-90	0.0019	ND (0.0017)	ND (0.0065)

* 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)
Aug 2nd, 2016 *During discharge	Cs-134	ND (0.58)
	Cs-137	ND (0.69)
	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	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.