Information (19:15), Aug 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 July

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 2016 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).

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 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
July 27th, 2016 *Discharged on August 1st	Cs-134	ND* (0.58)	ND (0.42)
	Cs-137	ND (0.76)	ND (0.60)
	Gross β	ND (2.0)	ND (0.36)
	H-3	350	360
July 26th, 2016 *Discharged on July 31st	Cs-134	ND (0.58)	ND (0.76)
	Cs-137	ND (0.67)	ND (0.78)
	Gross β	ND (2.0)	ND (0.34)
	H-3	340	360
July 25st, 2016 *Discharged on July 30th	Cs-134	ND (0.67)	ND (0.72)
	Cs-137	ND (0.61)	ND (0.82)
	Gross β	ND (2.2)	ND(0.33)
	H-3	280	300
July 23rd, 2016 *Discharged on July 28th	Cs-134	ND (0.59)	ND (0.73)
	Cs-137	ND (0.58)	ND (0.89)
	Gross β	ND (2.1)	ND (0.33)
	H-3	300	320
July 21st, 2016 *Discharged on July 27th	Cs-134	ND (0.59)	ND (0.63)
	Cs-137	ND (0.63)	ND (0.60)
	Gross β	ND (2.2)	ND (0.54)
	H-3	370	390
July 20th, 2016 *Discharged on July 26th	Cs-134	ND (0.58)	ND (0.58)
	Cs-137	ND (0.68)	ND (0.63)
	Gross β	ND (2.0)	ND (0.35)
	H-3	370	390
July 19th, 2016 *Discharged on July 25th	Cs-134	ND (0.67)	ND (0.54)
	Cs-137	ND (0.68)	ND (0.60)
	Gross β	ND (0.68)	ND (0.34)
	H-3	400	410
July 18th, 2016 *Discharged on July 23rd	Cs-134	ND (0.60)	ND (0.70)
	Cs-137	ND (0.75)	ND (0.74)
	Gross β	ND (2.2)	ND (0.36)
	H-3	440	410

July 17th, 2016 *Discharged on June 22nd	Cs-134	ND (0.59)	ND (0.68)
	Cs-137	ND (0.53)	ND (059)
	Gross β	ND (2.1)	ND (0.35)
	H-3	450	420
July 16th, 2016 *Discharged on July 21st	Cs-134	ND (0.76)	ND (0.86)
	Cs-137	ND (0.68)	ND (0.59)
	Gross β	ND (2.1)	ND (0.32)
	H-3	470	430
July 13th, 2016 *Discharged on July 18th	Cs-134	ND (0.49)	ND (0.70)
	Cs-137	ND (0.71)	ND (0.56)
	Gross β	ND (2.0)	ND (0.34)
	H-3	480	500
July 11th, 2016 *Discharged on July 16th	Cs-134	ND (0.75)	ND (0.74)
	Cs-137	ND (0.73)	ND (0.72)
	Gross β	ND (2.2)	ND (0.41)
	H-3	480	480
July 10th, 2016 *Discharged on July 15th	Cs-134	ND (0.55)	ND (0.62)
	Cs-137	ND (0.76)	ND (0.68)
	Gross β	0.78	0.44
	H-3	500	530
June 9th, 2016 *Discharged on July 14th	Cs-134	ND (0.49)	ND (0.50)
	Cs-137	ND (0.71)	ND (0.64)
	Gross β	ND (2.2)	ND (0.38)
	H-3	500	510
July 7th, 2016 *Discharged on July 13th	Cs-134	ND (0.59)	ND (0.82)
	Cs-137	ND (0.75)	ND (0.86)
	Gross β	ND (2.3)	ND (0.39)
	H-3	520	550
July 6th, 2016 *Discharged on July 12th	Cs-134	ND (0.75)	ND (0.64)
	Cs-137	ND (0.78)	ND (0.60)
	Gross β	ND (2.2)	ND (0.36)
	H-3	540	570
July 5th, 2016 *Discharged on July 10th	Cs-134	ND (0.80)	ND (0.66)
	Cs-137	ND (0.73)	ND (0.61)
	Gross β	ND (2.0)	ND (0.42)
	H-3	540	570
July 4th, 2016 *Discharged on July 10th	Cs-134	ND (0.54)	ND (0.57)
	Cs-137	ND (0.53)	ND (0.53)
	Gross β	ND (2.0)	0.6
	H-3	530	550

July 2nd, 2016 *Discharged on July 8th	Cs-134	ND (0.76)	ND (0.70)
	Cs-137	ND (0.58)	ND (0.78)
	Gross β	ND (0.66)	ND (0.39)
	H-3	560	590
June 29th, 2016 *Discharged on July 6th	Cs-134	ND (0.68)	ND (0.76)
	Cs-137	ND (0.58)	ND (0.70)
	Gross β	ND (2.4)	ND (0.35)
	H-3	510	540
June 28th, 2016 *Discharged on July 4th	Cs-134	ND (0.52)	ND (0.73)
	Cs-137	ND (0.71)	ND (0.74)
	Gross β	ND (2.0)	0.43
	H-3	510	540
June 26th, 2016 *Discharged on July 2nd	Cs-134	ND (0.67)	ND (0.62)
	Cs-137	ND (0.68)	ND (0.66)
	Gross β	ND (0.79)	ND (0.40)
	H-3	510	550
June 25th, 2016 *Discharged on July 1st	Cs-134	ND (0.56)	ND (0.60)
	Cs-137	ND (0.69)	ND (0.49)
	Gross β	ND (2.3)	ND (0.39)
	H-3	540	570

* * 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
June 2nd,2016	Cs-134	ND (0.0031)	ND* (0.0042)	ND (0.0059)
	Cs-137	ND (0.0023)	ND (0.0042)	ND (0.0039)
	Gross α	ND (0.51)	ND (2.6)	ND (3.5)
	Gross β	ND (0.45)	ND (0.75)	ND (0.52)
	H-3	680	640	660
	Sr-90	0.0030	ND (0.0013)	ND (0.0057)

* 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 6th, 2016 *During discharge	Cs-134	ND (0.68)
	Cs-137	ND (0.58)
	Gross β	11
	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 13th, 2016 *Discharged on July 26th	Cs-134	ND* (0.83)	ND (0.77)
	Cs-137	ND (0.64)	ND (0.60)
	Gross β	ND (0.85)	ND (0.53)
	H-3	200	200
July 6th, 2016 *Discharged on July 19st	Cs-134	ND (0.62)	ND (0.68)
	Cs-137	ND (0.58)	ND (0.60)
	Gross β	ND (0.72)	ND (0.59)
	H-3	180	200
June 29st, 2016 *Discharged on July 12th	Cs-134	ND (0.74)	ND (0.85)
	Cs-137	ND (0.58)	ND (0.66)
	Gross β	ND (0.68)	ND (0.46)
	H-3	190	190
June 22nd, 2016 *Discharged on July 5th	Cs-134	ND (0.85)	ND (0.63)
	Cs-137	ND (0.62)	ND (0.69)
	Gross β	ND (0.83)	ND (0.53)
	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
June 1st, 2016	Cs-134	ND (0.0031)	ND (0.0044)	ND (0.0059)
	Cs-137	0.0024	ND (0.0038)	ND(0.0044)
	Gross α	ND (0.36)	ND (2.6)	ND (3.5)
	Gross β	ND (0.45)	ND (0.71)	ND (0.55)
	H-3	190	190	180
	Sr-90	ND (0.0021)	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)
July 5th, 2016 *During discharge	Cs-134	ND (0.75)
	Cs-137	ND (0.61)
	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	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.