Information (16:25), July 4, 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 June

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 2016 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).

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 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
June 24th, 2016 *Discharged on June 30th	Cs-134	ND* (0.77)	ND (0.76)
	Cs-137	ND (0.78)	ND (0.68)
	Gross β	ND (2.0)	ND (0.42)
	H-3	540	570
June 23rd, 2016 *Discharged on June 29th	Cs-134	ND (0.40)	ND (0.55)
	Cs-137	ND (0.46)	ND (0.65)
	Gross β	ND (2.1)	ND (0.49)
	H-3	580	600
June 21st, 2016 *Discharged on June 26th	Cs-134	ND (0.79)	ND (0.67)
	Cs-137	ND (0.75)	ND (0.70)
	Gross β	ND (2.4)	0.45
	H-3	540	570
June 20th, 2016 *Discharged on June 25th	Cs-134	ND (0.49)	ND (0.63)
	Cs-137	ND (0.58)	ND (0.74)
	Gross β	ND (2.1)	ND (0.39)
	H-3	560	580
June 18th, 2016 *Discharged on June 24th	Cs-134	ND (0.67)	ND (0.57)
	Cs-137	ND (0.68)	ND (0.61)
	Gross β	ND (0.76)	ND (0.36)
	H-3	580	610
June 17th, 2016 *Discharged on June 23rd	Cs-134	ND (0.72)	ND (0.55)
	Cs-137	ND (0.64)	ND (0.59)
	Gross β	ND (2.0)	ND (0.35)
	H-3	540	560
June 16th, 2016 *Discharged on June 22nd	Cs-134	ND (0.55)	ND (0.45)
	Cs-137	ND (0.71)	ND (0.60)
	Gross β	ND (2.2)	ND (0.35)
	H-3	530	560
June 15th, 2016 *Discharged on June 21st	Cs-134	ND (0.58)	ND (0.70)
	Cs-137	ND (0.64)	ND (0.70)
	Gross β	ND (2.2)	ND (0.41)
	H-3	470	490

June 13th, 2016 *Discharged on June 18th	Cs-134	ND (0.63)	ND (0.70)
	Cs-137	ND (0.70)	ND (0.70)
	Gross β	ND (2.0)	ND (0.37)
	H-3	530	560
June 12th, 2016 *Discharged on June 17th	Cs-134	ND (0.62)	ND (0.62)
	Cs-137	ND (0.58)	ND (0.61)
	Gross β	ND (2.1)	ND (0.40)
	H-3	520	540
June 10th, 2016 *Discharged on June 16th	Cs-134	ND (0.68)	ND (0.76)
	Cs-137	ND (0.58)	ND (0.74)
	Gross β	ND (0.74)	ND (0.40)
	H-3	550	550
June 9th, 2016 *Discharged on June 15th	Cs-134	ND (0.65)	ND (0.72)
	Cs-137	ND (0.53)	ND (0.49)
	Gross β	ND (2.2)	ND (0.38)
	H-3	590	620
June 8th, 2016 *Discharged on June 14th	Cs-134	ND (0.68)	ND (0.70)
	Cs-137	ND (0.58)	ND (0.82)
	Gross β	ND (2.1)	ND (0.37)
	H-3	560	590
June 7th, 2016 *Discharged on June 12th	Cs-134	ND (0.40)	ND (0.79)
	Cs-137	ND (0.71)	ND (0.74)
	Gross β	ND (2.1)	ND (0.37)
	H-3	580	600
June 5th, 2016 *Discharged on June 10th	Cs-134	ND (0.59)	ND (0.70)
	Cs-137	ND (0.62)	ND (0.59)
	Gross β	ND (2.2)	ND (0.34)
	H-3	590	610
June 4th, 2016 *Discharged on June 9th	Cs-134	ND (0.71)	ND (0.64)
	Cs-137	ND (0.78)	ND (0.59)
	Gross β	ND (2.3)	ND (0.36)
	H-3	620	650
June 3rd, 2016 *Discharged on June 8th	Cs-134	ND (0.91)	ND (0.60)
	Cs-137	ND (0.53)	ND (0.64)
	Gross β	ND (2.0)	ND (0.36)
	H-3	760	710
June 2nd, 2016 *Discharged on June 7th	Cs-134	ND (0.71)	ND (0.62)
	Cs-137	ND (0.71)	ND (0.61)
	Gross β	ND (0.75)	ND (0.36)
	H-3	640	660

May 31st, 2016 *Discharged on June 6th	Cs-134	ND (0.56)	ND (0.66)
	Cs-137	ND (0.71)	ND (0.60)
	Gross β	ND (2.0)	ND (0.34)
	H-3	580	620
May 30th, 2016 *Discharged on June 5th	Cs-134	ND (0.62)	ND (0.62)
	Cs-137	ND (0.58)	ND (0.64)
	Gross β	ND (2.2)	ND (0.37)
	H-3	570	600
May 28th, 2016 *Discharged on June 3rd	Cs-134	ND (0.87)	ND (0.76)
	Cs-137	ND (0.86)	ND (0.65)
	Gross β	ND (2.1)	ND (0.36)
	H-3	610	640
May 27th, 2016 *Discharged on June 2nd	Cs-134	ND (0.61)	ND (0.60)
	Cs-137	ND (0.67)	ND (0.74)
	Gross β	ND (0.71)	ND (0.35)
	H-3	660	660
May 25th, 2016 *Discharged on June 1st	Cs-134	ND (0.56)	ND (0.70)
	Cs-137	ND (0.61)	ND (0.61)
	Gross β	ND (2.0)	ND (0.35)
	H-3	640	660

* * 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
May 2nd,2016	Cs-134	ND (0.0032)	ND* (0.0045)	ND (0.0062)
	Cs-137	ND (0.0027)	ND (0.0039)	ND (0.0048)
	Gross α	ND (0.52)	ND (2.5)	ND (3.1)
	Gross β	ND (0.45)	ND (0.78)	ND (0.48)
	H-3	690	650	670
	Sr-90	0.0013	ND (0.0013)	ND (0.0051)

* 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 6th, 2016 *During discharge	Cs-134	ND (0.75)
	Cs-137	ND (0.60)
	Gross β	13
	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 15th, 2016 *Discharged on June 28th	Cs-134	ND* (0.76)	ND (0.70)
	Cs-137	ND (0.67)	ND (0.67)
	Gross β	ND (0.67)	ND (0.57)
	H-3	160	180
June 8th, 2016 *Discharged on June 21st	Cs-134	ND (0.79)	ND (0.58)
	Cs-137	ND (0.60)	ND (0.60)
	Gross β	ND (0.68)	ND (0.64)
	H-3	170	180
June 1st, 2016 *Discharged on June 14th	Cs-134	ND (0.62)	ND (0.58)
	Cs-137	ND (0.58)	ND (0.59)
	Gross β	ND (0.71)	ND (0.58)
	H-3	180	190
May 27th, 2015 *Discharged on June 7th	Cs-134	ND (0.63)	ND (0.68)
	Cs-137	ND (0.76)	ND (0.62)
	Gross β	ND (0.68)	ND (0.57)
	H-3	170	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
May 4th, 2016	Cs-134	ND (0.0034)	ND (0.0052)	ND (0.0065)
	Cs-137	0.0029	ND (0.0038)	0.0051
	Gross α	ND (0.63)	ND (2.6)	ND (3.1)
	Gross β	ND (0.45)	ND (0.72)	ND (0.52)
	H-3	180	180	170
	Sr-90	ND (0.0014)	ND (0.0015)	ND (0.0054)

* 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 7th, 2016 *During discharge	Cs-134	ND (0.61)
	Cs-137	ND (0.66)
	Gross β	9.7
	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	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.