Information (16:45), October 3, 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 September

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 September 2016 at Fukushima Daiichi Nuclear Power Station (NPS).

1. Subdrain and Groundwater Drain Systems

In September, 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 September 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 September, 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 September 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
September 24th, 2016 *Discharged on September 30th	Cs-134	ND (0.61)	ND (0.63)
	Cs-137	ND (0.73)	ND (0.86)
	Gross β	ND (2.1)	ND (0.52)
	H-3	520	530
September 23th, 2016 *Discharged on September 29th	Cs-134	ND (0.81)	ND (0.56)
	Cs-137	ND (0.59)	ND (0.59)
	Gross β	ND (2.1)	ND (0.50)
	H-3	450	470
September 22th, 2016 *Discharged on September 28th	Cs-134	ND (0.56)	ND (0.76)
	Cs-137	ND (0.71)	ND (0.70)
	Gross β	ND (1.9)	0.46
	H-3	430	450
September 21th, 2016 *Discharged on September 26th	Cs-134	ND (0.79)	ND (0.68)
	Cs-137	ND (0.72)	ND (0.59)
	Gross β	ND (2.0)	0.41
	H-3	450	450
September 20th, 2016 *Discharged on September 25th	Cs-134	ND (0.76)	ND (0.62)
	Cs-137	ND (0.58)	ND (0.56)
	Gross β	ND (2.3)	0.67
	H-3	420	450
September 18th, 2016 *Discharged on September 24th	Cs-134	ND (0.81)	ND (0.61)
	Cs-137	ND (0.68)	ND (0.59)
	Gross β	ND (0.72)	0.48
	H-3	530	550
September 16th, 2016 *Discharged on September 21st	Cs-134	ND (0.83)	ND (0.54)
	Cs-137	ND (0.71)	ND (0.64)
	Gross β	ND (2.1)	ND (0.49)
	H-3	530	560
September 15th, 2016 *Discharged on September 20th	Cs-134	ND (0.71)	ND (0.84)
	Cs-137	ND (0.65)	ND (0.74)
	Gross β	ND (2.3)	ND (0.39)
	H-3	450	470

September 14th, 2016 *Discharged on September 19th	Cs-134	ND (0.74)	ND (0.93)
	Cs-137	ND (0.50)	ND (0.53)
	Gross β	ND (2.2)	ND (0.32)
	H-3	480	530
September 13th, 2016 *Discharged on September 18th	Cs-134	ND (0.87)	ND (0.59)
	Cs-137	ND (0.69)	ND (0.59)
	Gross β	ND (2.1)	ND (0.35)
	H-3	490	520
September 12th, 2016 *Discharged on September 17th	Cs-134	ND (0.44)	ND (0.66)
	Cs-137	ND (0.69)	ND (0.68)
	Gross β	ND (2.1)	ND (0.39)
	H-3	480	510
September 10th, 2016 *Discharged on September 16th	Cs-134	ND (0.62)	ND (0.63)
	Cs-137	ND (0.53)	ND (0.61)
	Gross β	ND (0.70)	ND (0.32)
	H-3	470	480
September 9th, 2016 *Discharged on September 15th	Cs-134	ND (0.81)	ND (0.70)
	Cs-137	ND (0.63)	ND (0.68)
	Gross β	ND (2.2)	ND (0.36)
	H-3	500	520
September 6th, 2016 *Discharged on September 11th	Cs-134	ND (0.73)	ND (0.67)
	Cs-137	ND (0.53)	ND (0.59)
	Gross β	ND (2.0)	ND (0.37)
	H-3	510	540
September 5th, 2016 *Discharged on September 10th	Cs-134	ND (0.48)	ND (0.66)
	Cs-137	ND (0.73)	ND (0.74)
	Gross β	ND (1.8)	ND (0.35)
	H-3	540	580
September 4th, 2016 *Discharged on September 9th	Cs-134	ND (0.59)	ND (0.57)
	Cs-137	ND (0.68)	ND (0.61)
	Gross β	ND (2.0)	ND (0.39)
	H-3	640	680
September 2nd, 2016 *Discharged on September 8th	Cs-134	ND (0.68)	ND (0.73)
	Cs-137	ND (0.82)	ND (0.60)
	Gross β	ND (0.68)	0.59
	H-3	490	520
August 31st, 2016 *Discharged on September 7th	Cs-134	ND (0.68)	ND (0.74)
	Cs-137	ND (0.63)	ND (0.66)
	Gross β	ND (2.1)	ND (0.43)
	H-3	520	560
August 30st, 2016 *Discharged on September 6th	Cs-134	ND (0.60)	ND (0.55)
	Cs-137	ND (0.58)	ND (0.66)
	Gross β	ND (2.2)	ND (0.38)

	H-3	480	520
August 29th, 2016 *Discharged on September 4th	Cs-134	ND (0.76)	ND (0.64)
	Cs-137	ND (0.58)	ND (0.59)
	Gross β	ND (2.0)	0.46
	H-3	490	520
August 28th, 2016 *Discharged on September 3rd	Cs-134	ND (0.71)	ND (0.62)
	Cs-137	ND (0.73)	ND (0.73)
	Gross β	ND (0.72)	ND (0.49)
	H-3	540	570
August 27th, 2016 *Discharged on September 2nd	Cs-134	ND(0.60)	ND (0.68)
	Cs-137	ND (0.64)	ND (0.56)
	Gross β	ND (2.0)	ND (0.39)
	H-3	670	710

- * 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
August 2nd,2016	Cs-134	ND (0.0039)	ND* (0.0047)	ND (0.0062)
	Cs-137	0.017	0.017	0.020
	Gross α	ND (0.52)	ND (2.6)	ND (2.7)
	Gross β	ND (0.45)	ND (0.74)	ND (0.51)
	H-3	360	340	350
	Sr-90	0.0026	ND (0.0025)	ND (0.0054)

* 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)
September 6th, 2016 *During discharge	Cs-134	ND (0.71)
	Cs-137	ND (0.67)
	Gross β	13
	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
September 14th, 2016 *Discharged on September 27th	Cs-134	ND (0.58)	ND (0.68)
	Cs-137	ND (0.58)	ND (0.76)
	Gross β	ND (0.76)	ND (0.57)
	H-3	170	180
September 7th, 2016 *Discharged on September 20th	Cs-134	ND (0.66)	ND (0.63)
	Cs-137	ND (0.46)	ND (0.67)
	Gross β	ND (0.71)	ND (0.51)
	H-3	190	190
September 4th, 2016 *Discharged on September 13th	Cs-134	ND (0.66)	ND (0.73)
	Cs-137	ND (0.71)	ND (0.64)
	Gross β	ND (0.76)	ND (0.54)
	H-3	110	110
August 24th, 2016 *Discharged on September 6th	Cs-134	ND (0.63)	ND (0.57)
	Cs-137	ND (0.58)	ND (0.70)
	Gross β	ND (0.72)	ND (0.56)
	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
August 3rd, 2016	Cs-134	ND (0.0035)	ND (0.0044)	ND (0.0058)
	Cs-137	0.0028	ND (0.0041)	ND(0.0056)
	Gross α	ND (0.52)	ND (2.6)	ND (3.4)
	Gross β	ND (0.45)	ND (0.63)	ND (0.58)
	H-3	150	150	150
	Sr-90	0.0013	ND (0.0014)	ND (0.0053)

* 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)
September 6th, 2016 *During discharge	Cs-134	ND (0.73)
	Cs-137	ND (0.72)
	Gross β	10
	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.