Information (15:00), February 1, 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 January 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 January 2017 at Fukushima Daiichi Nuclear Power Station (NPS).

1. Subdrain and Groundwater Drain Systems

In January, 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 January 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 January, 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 January 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
January 25th, 2017 *Discharged on January 30th	Cs-134	ND (0.58)	ND (0.60)
	Cs-137	ND (0.75)	ND (0.65)
	Gross β	ND (2.7)	ND (0.33)
	H-3	770	820
January 24th, 2017 *Discharged on January 29th	Cs-134	ND (0.76)	ND (0.67)
	Cs-137	ND (0.58)	ND (0.59)
	Gross β	ND (2.5)	ND (0.34)
	H-3	680	710
January 22nd, 2017 *Discharged on January 27th	Cs-134	ND (0.60)	ND (0.63)
	Cs-137	ND (0.46)	ND (0.57)
	Gross β	ND (2.1)	ND (0.35)
	H-3	660	700
January 21st, 2017 *Discharged on January 26th	Cs-134	ND (0.79)	ND (0.60)
	Cs-137	ND (0.46)	ND (0.54)
	Gross β	ND (2.3)	ND (0.34)
	H-3	650	670
January 19th, 2017 *Discharged on January 25th	Cs-134	ND (0.56)	ND (0.84)
	Cs-137	ND (0.63)	ND (0.82)
	Gross β	ND (2.5)	ND (0.32)
	H-3	680	680
January 18th, 2017 *Discharged on January 23th	Cs-134	ND (0.60)	ND (0.72)
	Cs-137	ND (0.53)	ND (0.65)
	Gross β	ND (0.75)	ND (0.30)
	H-3	710	710
January 16th, 2017 *Discharged on January 21th	Cs-134	ND (0.77)	ND (0.51)
	Cs-137	ND (0.63)	ND (0.50)
	Gross β	ND (2.3)	ND (0.33)
	H-3	650	690
January 15th, 2017 *Discharged on January 20th	Cs-134	ND (0.52)	ND (0.56)
	Cs-137	ND (0.68)	ND (0.74)
	Gross β	ND (2.1)	ND (0.34)
	H-3	600	630

January 13th, 2017 *Discharged on January 19th	Cs-134	ND (0.64)	ND (0.79)
	Cs-137	ND (0.68)	ND (0.65)
	Gross β	ND (2.4)	ND (0.27)
	H-3	640	670
January 12th, 2017 *Discharged on January 18th	Cs-134	ND (0.76)	ND (0.64)
	Cs-137	ND (0.71)	ND (0.66)
	Gross β	ND (2.4)	ND (0.32)
	H-3	530	550
January 10th, 2017 *Discharged on January 15th	Cs-134	ND (0.78)	ND (0.97)
	Cs-137	ND (0.63)	ND (0.92)
	Gross β	ND (2.5)	ND (0.34)
	H-3	540	570
January 9th, 2017 *Discharged on January 14th	Cs-134	ND (0.62)	ND (0.71)
	Cs-137	ND (0.71)	ND (0.57)
	Gross β	ND (0.75)	ND (0.31)
	H-3	550	590
January 7th, 2017 *Discharged on January 12th	Cs-134	ND (0.64)	ND (0.67)
	Cs-137	ND (0.63)	ND (0.57)
	Gross β	ND (2.3)	ND (0.30)
	H-3	530	570
January 6th, 2017 *Discharged on January 11th	Cs-134	ND (0.71)	ND (0.62)
	Cs-137	ND (0.53)	ND (0.57)
	Gross β	ND (2.4)	ND (0.34)
	H-3	540	570
January 4th, 2017 *Discharged on January 9th	Cs-134	ND (0.81)	ND (0.82)
	Cs-137	ND (0.77)	ND (0.53)
	Gross β	ND (2.7)	ND(0.35)
	H-3	550	580
January 2nd, 2017 *Discharged on January 7th	Cs-134	ND (0.56)	ND (0.78)
	Cs-137	ND (0.68)	ND (0.78)
	Gross β	ND (2.5)	ND (0.35)
	H-3	550	590
January 1st, 2017 *Discharged on January 6th	Cs-134	ND (0.40)	ND (0.65)
	Cs-137	ND (0.53)	ND (0.70)
	Gross β	ND (0.72)	ND (0.31)
	H-3	530	560
December 30th, 2016 *Discharged on January 5th	Cs-134	ND (0.49)	ND (0.86)
	Cs-137	ND (0.53)	ND (0.78)
	Gross β	ND (2.4)	ND(0.32)
	H-3	510	540
December 29th, 2016 *Discharged on January 4th	Cs-134	ND (0.65)	ND (0.73)
	Cs-137	ND (0.58)	ND (0.89)
	Gross β	ND (2.0)	ND (0.30)

December 28th, 2016 *Discharged on January 2nd	H-3	590	610
	Cs-134	ND (0.49)	ND (0.76)
	Cs-137	ND (0.58)	ND (0.65)
	Gross β	ND (2.4)	ND (0.35)
	H-3	560	610

- * 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
December 1st,2016	Cs-134	ND (0.0033)	ND (0.0046)	ND (0.0059)
	Cs-137	0.0050	0.0080	0.0051
	Gross α	ND (0.51)	ND (3.1)	ND (3.4)
	Gross β	ND (0.45)	ND (0.75)	ND (0.67)
	H-3	710	650	660
	Sr-90	0.0017	ND (0.0014)	0.0091

* 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)
January 11th, 2017 *During discharge	Cs-134	ND (0.72)
	Cs-137	ND (0.59)
	Gross β	10
	H-3	ND(1.8)

(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
January 18th, 2017 *Discharged on January 31st	Cs-134	ND (0.43)	ND (0.80)
	Cs-137	ND (0.82)	ND (0.78)
	Gross β	ND (0.75)	ND (0.61)
	H-3	150	160
January 11th, 2017 *Discharged on January 24th	Cs-134	ND (0.62)	ND (0.50)
	Cs-137	ND (0.68)	ND (0.74)
	Gross β	ND (0.72)	ND (0.56)
	H-3	150	150
January 4th, 2017 *Discharged on January 17th	Cs-134	ND (0.76)	ND (0.75)
	Cs-137	ND (0.63)	ND (0.64)
	Gross β	ND (0.68)	ND (0.64)
	H-3	140	160
December 28th, 2016 *Discharged on January 9th	Cs-134	ND (0.63)	ND (0.65)
	Cs-137	ND (0.53)	ND (0.50)
	Gross β	ND (0.60)	ND (0.54)
	H-3	140	160
December 21th, 2016 *Discharged on January 2nd	Cs-134	ND (0.67)	ND (0.68)
	Cs-137	ND (0.63)	ND (0.64)
	Gross β	ND (0.64)	ND (0.51)
	H-3	140	160

* * 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
December 7th, 2016	Cs-134	ND (0.0032)	ND (0.0042)	ND (0.0059)
	Cs-137	0.0031	0.0038	0.0041
	Gross α	ND (0.52)	ND (3.1)	ND (3.4)
	Gross β	ND (0.46)	ND (0.72)	ND (0.59)
	H-3	140	130	130
	Sr-90	0.0018	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)
January 10th, 2017 *Discharged on February 2nd	Cs-134	ND (0.67)
	Cs-137	ND (0.58)
	Gross β	11
	H-3	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.