Information (17:00), May 20 , 2019

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 April

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 April at Fukushima Daiichi Nuclear Power Station (NPS).

1. Subdrain and Groundwater Drain Systems

In April, 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 April 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 (Tohoku Ryokka Kankyohozen Co. and Japan Chemical Analysis Center).

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 was 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 April, 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 April 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 were 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 analysis had been conducted once a month until March 2017. Since April 2017, it is conducted four times a year because there has been no significant fluctuation in the concentration of radioactive materials in the sea water, and no influence on the surrounding environment has been confirmed.

The sampling process for analyses conducted this month is the same as the one conducted 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 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
April 25th, 2019 *Discharged on April 30th	Cs-134	ND (0.71)	ND (0.64)
	Cs-137	ND (0.53)	ND (0.67)
	Gross β	ND (0.65)	ND (0.31)
	H-3	740	790
April 24th, 2019 *Discharged on April 29th	Cs-134	ND (0.66)	ND (0.85)
	Cs-137	ND (0.71)	ND (0.80)
	Gross β	ND (2.1)	ND (0.36)
	H-3	720	770
April 21st, 2019 *Discharged on April 26th	Cs-134	ND (0.56)	ND (0.55)
	Cs-137	ND (0.58)	ND (0.69)
	Gross β	ND (2.6)	ND (0.33)
	H-3	720	780
April 19th, 2019 *Discharged on April 24th	Cs-134	ND (0.52)	ND (0.65)
	Cs-137	ND (0.53)	ND (0.53)
	Gross β	ND (0.55)	ND (0.33)
	H-3	750	820
April 18th, 2019 *Discharged on April 23rd	Cs-134	ND (0.81)	ND (0.74)
	Cs-137	ND (0.58)	ND (0.80)
	Gross β	ND (2.4)	ND (0.33)
	H-3	710	780
April 17th, 2019 *Discharged on April 22nd	Cs-134	ND (0.48)	ND (0.62)
	Cs-137	ND (0.58)	ND (0.59)
	Gross β	ND (2.2)	ND (0.34)
	H-3	720	790
April 15th, 2019 *Discharged on April 20th	Cs-134	ND (0.83)	ND (0.60)
	Cs-137	ND (0.63)	ND (0.49)
	Gross β	ND (2.7)	ND (0.33)
	H-3	790	850
April 14th, 2019 *Discharged on	Cs-134	ND (0.57)	ND (0.62)
	Cs-137	ND (0.71)	ND (0.59)

April 19th	Gross β	ND (2.5)	ND (0.37)
	H-3	800	860
April 13th, 2019 *Discharged on April 18th	Cs-134	ND (0.68)	ND (0.60)
	Cs-137	ND (0.53)	ND (0.62)
	Gross β	ND (0.74)	ND (0.38)
	H-3	830	870
April 7th, 2019 *Discharged on April 12th	Cs-134	ND (0.67)	ND (0.49)
	Cs-137	ND (0.53)	ND (0.56)
	Gross β	ND (2.4)	ND (0.31)
	H-3	770	860
April 5th, 2019 *Discharged on April 10th	Cs-134	ND (0.50)	ND (0.62)
	Cs-137	ND (0.68)	ND (0.49)
	Gross β	ND (2.4)	ND (0.38)
	H-3	790	850
April 4th, 2019 *Discharged on April 9th	Cs-134	ND (0.71)	ND (0.49)
	Cs-137	ND (0.68)	ND (0.59)
	Gross β	ND (2.0)	ND (0.30)
	H-3	790	860
April 3rd, 2019 *Discharged on April 8th	Cs-134	ND (0.76)	ND (0.56)
	Cs-137	ND (0.58)	ND (0.53)
	Gross β	ND (0.68)	ND (0.34)
	H-3	790	860
March 30th, 2019 *Discharged on April 4th	Cs-134	ND (0.49)	ND (0.56)
	Cs-137	ND (0.71)	ND (0.64)
	Gross β	ND (2.2)	ND (0.33)
	H-3	790	870
March 28th, 2019 *Discharged on April 2nd	Cs-134	ND (0.63)	ND (0.46)
	Cs-137	ND (0.46)	ND (0.59)
	Gross β	ND (2.2)	ND (0.34)
	H-3	810	880
March 27th, 2019 *Discharged on April 1st	Cs-134	ND (0.83)	ND (0.62)
	Cs-137	ND (0.63)	ND (0.62)
	Gross β	ND (2.2)	ND (0.33)
	H-3	800	850

- * 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
March 2nd,2019	Cs-134	ND (0.0025)	ND (0.0042)	ND (0.0058)
	Cs-137	0.016	0.018	0.015
	Gross α	ND (0.56)	ND (3.4)	ND (2.4)
	Gross β	ND (0.47)	ND (0.75)	ND (0.51)
	H-3	980	820	880
	Sr-90	ND (0.0013)	ND (0.0013)	ND (0.0061)

* 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)
March 15th, 2019 *Sampled before discharge of purified groundwater.	Cs-134	ND (0.61)
	Cs-137	ND (0.72)
	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
April 23rd, 2019 *Discharged on April 28th	Cs-134	ND (0.71)	ND (0.64)
	Cs-137	ND (0.63)	ND (0.54)
	Gross β	ND (0.76)	ND (0.57)
	H-3	110	110
April 18th, 2019 *Discharged on April 25th	Cs-134	ND (0.40)	ND (0.59)
	Cs-137	ND (0.63)	ND (0.50)
	Gross β	ND (0.69)	ND (0.55)
	H-3	120	120
April 11th, 2019 *Discharged on April 18th	Cs-134	ND (0.46)	ND (0.45)
	Cs-137	ND (0.53)	ND (0.46)
	Gross β	ND (0.70)	ND (0.48)
	H-3	110	110
April 4th, 2019 *Discharged on April 11th	Cs-134	ND (0.69)	ND (0.59)
	Cs-137	ND (0.63)	ND (0.50)
	Gross β	ND (0.68)	ND (0.51)
	H-3	110	110
March 28th, 2019 *Discharged on April 4th	Cs-134	ND (0.59)	ND (0.66)
	Cs-137	ND (0.53)	ND (0.48)
	Gross β	ND (0.73)	ND (0.55)
	H-3	110	120

* * 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
March 2nd, 2019	Cs-134	ND (0.0029)	ND (0.0053)	ND (0.0059)
	Cs-137	ND (0.0022)	ND (0.0041)	ND (0.0051)
	Gross α	ND (0.57)	ND (3.4)	ND (2.4)
	Gross β	ND (0.46)	ND (0.69)	ND (0.51)
	H-3	150	130	140
	Sr-90	ND (0.0015)	ND (0.0014)	ND (0.0061)

* ND: represents a value below the detection limit; values in ( ) represent the detection limit.

Results of analyses on the seawater sampled near the discharge point (Around South Discharge Channel)

(Unit: Bq/L)

Date of sampling ※conducted four times a year	Detected nuclides	Sampling point (South discharge channel)
March 15th, 2019	Cs-134	ND (0.63)
	Cs-137	ND (0.46)
	Gross β	10
	H-3	7.7

(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.