Information, September, 2024

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 August

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 sub-drain and groundwater drain systems, as well as bypassing groundwater pumped during the month of August at Fukushima Daiichi Nuclear Power Station (NPS).

1. Sub-drain and Groundwater Drain Systems

In August purified groundwater pumped from the sub-drain 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 August 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.).

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 August, 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 August 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 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 sub-drain 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
August 27th, 2024 *Discharged on September 1st	Cs-134	ND (0.93)	ND (0.80)
	Cs-137	ND (0.82)	ND (0.70)
	Gross β	ND (1.7)	ND (0.38)
	H-3	700	740
August 25th, 2024 *Discharged on August 30th	Cs-134	ND (0.98)	ND (0.67)
	Cs-137	ND (0.67)	ND (0.66)
	Gross β	ND (2.0)	ND (0.35)
	H-3	600	640
August 23rd 2024 *Discharged on August 28th	Cs-134	ND (0.72)	ND (0.79)
	Cs-137	ND (0.73)	ND (0.46)
	Gross β	ND (0.65)	ND (0.38)
	H-3	580	630
August 21st, 2024 *Discharged on August 26th	Cs-134	ND (0.72)	ND (0.75)
	Cs-137	ND (0.59)	ND (0.73)
	Gross β	ND (1.6)	ND (0.35)
	H-3	580	630
August 17th, 2024 *Discharged on August 22nd	Cs-134	ND (0.74)	ND (0.75)
	Cs-137	ND (0.84)	ND (0.63)
	Gross β	ND (1.9)	ND (0.35)
	H-3	580	660
August 15th, 2024 *Discharged on August 20th	Cs-134	ND (0.85)	ND (0.69)
	Cs-137	ND (0.71)	ND (0.63)
	Gross β	ND (0.72)	ND (0.35)
	H-3	770	830
August 13th, 2024 *Discharged on August 18th	Cs-134	ND (0.65)	ND (0.53)
	Cs-137	ND (0.64)	ND (0.58)
	Gross β	ND (2.0)	ND (0.31)
	H-3	790	840
August 11th, 2024 *Discharged on August 16th	Cs-134	ND (0.77)	ND (0.71)
	Cs-137	ND (0.74)	ND (0.66)
	Gross β	ND (1.9)	ND (0.38)

	H-3	770	840
August 9th, 2024 *Discharged on August 14th	Cs-134	ND (0.58)	ND (0.72)
	Cs-137	ND (0.71)	ND (0.60)
	Gross β	ND (0.63)	ND (0.34)
	H-3	780	860
August 8th, 2024 *Discharged on August 13th	Cs-134	ND (0.55)	ND (0.71)
	Cs-137	ND (0.74)	ND (0.63)
	Gross β	ND (1.8)	0.43
	H-3	760	820
August 7th, 2024 *Discharged on August 12th	Cs-134	ND (0.82)	ND (0.60)
	Cs-137	ND (0.71)	ND (0.80)
	Gross β	ND (1.8)	0.38
	H-3	710	820
August 5th, 2024 *Discharged on August 10th	Cs-134	ND (0.58)	ND (0.55)
	Cs-137	ND (0.75)	ND (0.51)
	Gross β	ND (1.7)	0.42
	H-3	820	900
August 4th, 2024 *Discharged on August 9th	Cs-134	ND (0.75)	ND (0.77)
	Cs-137	ND (0.62)	ND (0.63)
	Gross β	ND (2.0)	0.39
	H-3	860	940
August 3rd, 2024 *Discharged on August 8th	Cs-134	ND (0.75)	ND (0.60)
	Cs-137	ND (0.79)	ND (0.54)
	Gross β	ND (1.6)	0.41
	H-3	790	840
August 2nd, 2024 *Discharged on August 7th	Cs-134	ND (0.82)	ND (0.66)
	Cs-137	ND (0.79)	ND (0.51)
	Gross β	ND (1.9)	ND (0.37)
	H-3	750	780
August 1st, 2024 *Discharged on August 6th	Cs-134	ND (0.64)	ND (0.67)
	Cs-137	ND (0.65)	ND (0.66)
	Gross β	ND (0.65)	ND (0.33)
	H-3	730	760
July 31st, 2024 *Discharged on August 5th	Cs-134	ND (0.82)	ND (0.55)
	Cs-137	ND (0.67)	ND (0.75)
	Gross β	ND (1.5)	ND (0.35)
	H-3	700	730
July 30th, 2024 *Discharged on August 4th	Cs-134	ND (0.88)	ND (0.73)
	Cs-137	ND (0.79)	ND (0.63)
	Gross β	ND (1.6)	ND (0.35)
	H-3	680	720
July 29th, 2024	Cs-134	ND (0.75)	ND (0.65)

*Discharged on August 3rd	Cs-137	ND (0.74)	ND (0.71)
	Gross β	ND (1.7)	ND (0.36)
	H-3	650	670
July 28th, 2024 *Discharged on August 2nd	Cs-134	ND (0.79)	ND (0.60)
	Cs-137	ND (0.85)	ND (0.54)
	Gross β	ND (2.0)	ND (0.33)
	H-3	630	660

- * 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 : 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
July 1st,2024	Cs-134	ND (0.0029)	ND (0.0051)	ND (0.0066)
	Cs-137	0.0043±0.00081	0.0073	ND (0.0051)
	Gross α	ND (0.45)	ND (2.0)	ND (1.9)
	Gross β	ND (0.38)	ND (0.70)	ND (0.63)
	H-3	700 ±1.5	710	710
	Sr-90	ND (0.0012)	ND (0.0014)	ND (0.0061)

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

(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.

※ The reference table shows the values of operational targets before discharge. Since the values after discharge contain natural radioactive materials in seawater, there will be differences between the values and the operational targets values.

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 19th, 2024 *Sampled before discharge of purified groundwater.	Cs-134	ND (0.82)
	Cs-137	ND (0.69)
	Gross β	12
	H-3	ND (0.26)

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	Third-party organization
August 23rd, 2024 *Discharged on August 28th	Cs-134	ND (0.84)	ND (0.69)
	Cs-137	ND (0.80)	ND (0.46)
	Gross β	ND (0.58)	ND (0.36)
	H-3	45	49
August16th, 2024 *Discharged on August 21st	Cs-134	ND (0.85)	ND (0.75)
	Cs-137	ND (0.79)	ND (0.56)
	Gross β	ND (0.65)	ND (0.32)
	H-3	49	49
August 9th, 2024 *Discharged on August 14th	Cs-134	ND (0.91)	ND (0.60)
	Cs-137	ND (0.64)	ND (0.56)
	Gross β	ND (0.65)	ND (0.32)
	H-3	48	48
August 2nd, 2024 *Discharged on August 9th	Cs-134	ND (0.55)	ND (0.69)
	Cs-137	ND (0.69)	ND (0.69)
	Gross β	ND (0.59)	ND (0.31)
	H-3	45	47

- * 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: Tohoku Ryokka Kankyohozen Co., Ltd

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
July 5th, 2024	Cs-134	ND (0.0029)	ND (0.0050)	ND (0.0059)
	Cs-137	ND (0.0030)	ND (0.0040)	ND (0.0050)
	Gross α	ND (0.42)	ND (2.4)	ND (1.9)
	Gross β	ND (0.38)	ND (0.59)	ND (0.49)
	H-3	46 ±0.44	46	48
	Sr-90	0.0013 ±0.00038	ND (0.0014)	ND (0.0049)

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

(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.

※ The reference table shows the values of operational targets before discharge. Since the values after discharge contain natural radioactive materials in seawater, there will be differences between the values and the operational targets values.

Appendix 6

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)
June 19th, 2024	Cs-134	ND (0.71)
	Cs-137	ND (0.65)
	Gross β	9.7
	H-3	ND (0.26)