## Information, April 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 March

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 March at Fukushima Daiichi Nuclear Power Station (NPS).

1. Sub-drain and Groundwater Drain Systems

In March 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 March 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 March, 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 March 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 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)

Data of compling	Detected	Analytic	al body
*Date of discharge	nuclides	TEPCO	Third-party organization
March 27 <sup>th</sup> , 2024	Cs-134	ND (0.97)	ND (0.58)
*Discharged on	Cs-137	ND (0.70)	ND (0.57)
April 1 <sup>st</sup>	Gross β	ND (1.7)	ND (0.32)
	H-3	610	660
March 25 <sup>th</sup> , 2024	Cs-134	ND (0.75)	ND (0.60)
*Discharged on	Cs-137	ND (0.68)	ND (0.48)
March 30 <sup>th</sup>	Gross β	ND (1.9)	ND (0.31)
	H-3	650	680
March 24 <sup>th</sup> , 2024	Cs-134	ND (0.62)	ND (0.63)
*Discharged on	Cs-137	ND (0.61)	ND (0.58)
March 29 <sup>th</sup>	Gross β	ND (1.8)	ND (0.32)
	H-3	600	630
	Cs-134	ND (0.91)	ND (0.73)
March 23 <sup>rd</sup> , 2024	Cs-137	ND (0.79)	ND (0.58)
*Discharged on	Gross β	ND (1.5)	ND (0.32)
March 28 <sup>th</sup>	H-3	610	640
	Cs-134	ND (0 75)	ND (0.63)
March 22 <sup>nd</sup> , 2024	Cs-137	ND (0.54)	ND (0.64)
*Discharged on	Gross β	ND (1.8)	ND (0.32)
March 27 <sup>th</sup>	H-3	510	550
	Cs-134	ND (0 71)	ND (0.60)
March 21 <sup>st</sup> , 2024	Cs-137	ND (0.72)	ND (0.48)
*Discharged on	Gross ß	ND (0.56)	ND (0.31)
March 26 <sup>th</sup>	H-3	540	560
March 20 <sup>th</sup> . 2024	Cs-134	ND (0.69)	ND (0.56)
*Discharged on	Cs-137	ND (0.59)	ND (0.54)
March 25 <sup>th</sup>	Gross β	ND (1.8)	ND (0.31)
	H-3	510	540
	Cs-134		ND (0.65)
Warch 19", 2024	Cs-137	ND (0.54)	ND (0.54)
*Discharged on March 24 <sup>th</sup>	Gross ß	ND (2 0)	ND (0.33)

(Unit: Ba/L)

	H-3	500	510
	Cs-134	ND (0.67)	ND (0.68)
March 18 <sup>th</sup> , 2024	Cs-137	ND (0.67)	ND (0.67)
*Discharged on	Gross β	ND (1.8)	ND (0.31)
	H-3	480	510
	Cs-134	ND (0.83)	ND (0.64)
March 16 <sup>th</sup> , 2024	Cs-137	ND (0.65)	ND (0.58)
*Discharged on	Gross β	ND (1.9)	ND (0.33)
	H-3	570	580
	Cs-134	ND (0.91)	ND (0.66)
March 12 <sup>th</sup> , 2024	Cs-137	ND (0.74)	ND (0.64)
*Discharged on	Gross β	ND (0.65)	ND (0.36)
	H-3	590	630
	Cs-134	ND (0.53)	ND (0.70)
March 10 <sup>th</sup> , 2024	Cs-137	ND (0.72)	ND (0.44)
*Discharged on March 15 <sup>th</sup>	Gross β	ND (1.8)	ND (0.35)
March 15	H-3	630	660
	Cs-134	ND (0.56)	ND (0.63)
March 9 <sup>th</sup> , 2024	Cs-137	ND (0.72)	ND (0.61)
*Discharged on March 14 <sup>th</sup>	Gross β	ND (1.8)	ND (0.35)
March 14	H-3	600	640
March 7 <sup>th</sup> 2024	Cs-134	ND (0.55)	ND (0.60)
*Discharged on	Cs-137	ND (0.70)	ND (0.54)
March 12 <sup>th</sup>	Gross β	ND (1.7)	ND (0.31)
	H-3	540	590
	Cs-134	ND (0.71)	ND (0.44)
March 5 <sup>th</sup> , 2024	Cs-137	ND (0.60)	ND (0.44)
*Discharged on March 10 <sup>th</sup>	Gross β	ND (2.0)	ND (0.33)
	H-3	570	600
Manak Ord 0004	Cs-134	ND (0.63)	ND (0.58)
March $3^{10}$ , 2024	Cs-137	ND (0.84)	ND (0.57)
*Discharged on March 8 <sup>th</sup>	Gross β	ND (1.9)	ND (0.36)
-	H-3	510	550
March 2 <sup>nd</sup> 2024	Cs-134	ND (0.82)	ND (0.58)
*Dis shares sh	Cs-137	ND (0.62)	ND (0.64)
*Discharged on March 7 <sup>th</sup>	Gross β	ND (0.65)	ND (0.37)
	H-3	510	550
February 29 <sup>th</sup> , 2024	Cs-134	ND (0.62)	ND (0.59)
*Discharged on	Cross P		
March 5 <sup>th</sup>	uuss р н₋з	640 (1.9)	ניט) שא 670
	11-5	040	010

	Cs-134	ND (0.86)	ND (0.66)
February27 <sup>m</sup> , 2024	Cs-137	ND (0.68)	ND (0.57)
*Discharged on	Gross β	ND (1.8)	ND (0.33)
	H-3	600	650

- \* \* 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)

Date of sampling	Detected	Analytical body		
	nuclides JAE/	JAEA	TEPCO	Japan Chemical Analysis Center
	Cs-134	ND (0.0028)	ND (0.0069)	ND (0.0061)
	Cs-137	0.0025	ND (0.0048)	ND (0.0049)
Echruchy 1st 2024	Gross α	ND (0.42)	ND (2.0)	ND (2.1)
February 1,2024	Gross β	ND (0.39)	ND (0.61)	ND (0.57)
	H-3	620	650	630
	Sr-90	0.0069	0.0050	ND (0.0060)

 $^{\ast}$  ND: represents a value below the detection limit; values in ( ) represent the detection limit.

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	_	_	_

(Unit: Bq/L)

Gross β	3 (1) *	_	_
H-3	1,500	60,000	10,000
Sr-90	_	30	10
	*		

(Reference)

(Unit: Bq/L)

% The operational target of Gross  $\beta$  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)

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(Unit.	DU/L)

Date of sampling	Detected nuclides	Sampling point (South discharge channel)
December 21 <sup>st</sup> , 2023	Cs-134	ND (0.75)
*0	Cs-137	ND (0.70)
discharge of purified	Gross β	12
groundwater.	H-3	ND (0.37)

## 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)

Data of compling		Analytical body	
*Date of discharge	Detected nuclides	TEPCO	Third-party organization
	Cs-134	ND (0.65)	ND (0.70)
March 8 <sup>th</sup> , 2024	Cs-137	ND (0.64)	ND (0.64)
*Discharged on	Gross β	ND (0.60)	ND (0.30)
	H-3	72	79
	Cs-134	ND (0.72)	ND (0.70)
March 16 <sup>m</sup> , 2024	Cs-137	ND (0.59)	ND (0.70)
*Discharged on	Gross β	ND (0.58)	ND (0.32)
	H-3	46	49

- \* \* 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 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)
		Analytical body		
Date of sampling	Detected nuclides	JAEA	TEPCO	Japan Chemical Analysis Center
	Cs-134	ND (0.0028)	ND (0.0043)	ND (0.0058)
	Cs-137	ND (0.0022)	ND (0.0037)	ND (0.0050)
February 11 <sup>th</sup> ,	Gross α	ND (0.47)	ND (2.0)	ND (2.1)
2024	Gross β	ND (0.48)	ND (0.63)	ND (0.66)
	H-3	63	63	64
	Sr-90	ND (0.0013)	ND (0.0013)	ND (0.0061)

 $^{\ast}$  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  $\beta$  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)
	Cs-134	ND (0.80)
December 10th 2002	Cs-137	ND (0.72)
December 12", 2023	Gross β	10
	H-3	ND (0.32)