

# Information, July, 2022

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 June**

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 June at Fukushima Daiichi Nuclear Power Station (NPS).

### 1. Sub-drain and Groundwater Drain Systems

In June 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 June 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 June, 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 June 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>)

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
June 26 <sup>th</sup> , 2022  *Discharged on July 1 <sup>st</sup>	Cs-134	ND (0.64)	ND (0.60)
	Cs-137	ND (0.47)	ND (0.61)
	Gross $\beta$	ND (1.9)	ND (0.37)
	H-3	910	990
June 25 <sup>th</sup> , 2022  *Discharged on June 30 <sup>th</sup>	Cs-134	ND (0.50)	ND (0.59)
	Cs-137	ND (0.60)	ND (0.61)
	Gross $\beta$	ND (0.63)	ND (0.36)
	H-3	810	850
June 24 <sup>th</sup> , 2022  *Discharged on June 29 <sup>th</sup>	Cs-134	ND (0.50)	ND (0.56)
	Cs-137	ND (0.65)	ND (0.63)
	Gross $\beta$	ND (1.8)	ND (0.33)
	H-3	870	900
June 24 <sup>th</sup> , 2022  *Discharged on June 29 <sup>th</sup>	Cs-134	ND (0.75)	ND (0.55)
	Cs-137	ND (0.65)	ND (0.63)
	Gross $\beta$	ND (2.2)	ND (0.39)
	H-3	780	840
June 23 <sup>rd</sup> , 2022  *Discharged on June 28 <sup>th</sup>	Cs-134	ND (0.63)	ND (0.65)
	Cs-137	ND (0.73)	ND (0.52)
	Gross $\beta$	ND (1.9)	ND (0.34)
	H-3	860	920
June 22 <sup>nd</sup> , 2022  *Discharged on June 27 <sup>th</sup>	Cs-134	ND (0.59)	ND (0.58)
	Cs-137	ND (0.65)	ND (0.63)
	Gross $\beta$	ND (1.9)	0.47
	H-3	800	860
June 22 <sup>nd</sup> , 2022  *Discharged on June 27 <sup>th</sup>	Cs-134	ND (0.65)	ND (0.66)
	Cs-137	ND (0.54)	ND (0.79)
	Gross $\beta$	ND (1.7)	ND (0.41)
	H-3	570	590
June 21 <sup>st</sup> , 2022	Cs-134	ND (0.62)	ND (0.56)

*Discharged on June 26 <sup>th</sup>	Cs-137	ND (0.79)	ND (0.61)
	Gross $\beta$	ND (1.7)	ND (0.36)
	H-3	770	840
June 20 <sup>th</sup> , 2022  *Discharged on June 25 <sup>th</sup>	Cs-134	ND (0.57)	ND (0.75)
	Cs-137	ND (0.67)	ND (0.57)
	Gross $\beta$	ND (2.1)	ND (0.37)
	H-3	740	800
June 19 <sup>th</sup> , 2022  *Discharged on June 24 <sup>th</sup>	Cs-134	ND (0.58)	ND (0.54)
	Cs-137	ND (0.60)	ND (0.61)
	Gross $\beta$	ND (2.2)	ND (0.33)
	H-3	670	710
June 18 <sup>th</sup> , 2022  *Discharged on June 23 <sup>th</sup>	Cs-134	ND (0.81)	ND (0.69)
	Cs-137	ND (0.54)	ND (0.69)
	Gross $\beta$	ND (1.8)	ND (0.34)
	H-3	810	890
June 18 <sup>th</sup> , 2022  *Discharged on June 23 <sup>rd</sup>	Cs-134	ND (0.76)	ND (0.45)
	Cs-137	ND (0.69)	ND (0.61)
	Gross $\beta$	ND (1.7)	ND (0.34)
	H-3	590	630
June 17 <sup>th</sup> , 2022  *Discharged on June 22 <sup>nd</sup>	Cs-134	ND (0.63)	ND (0.66)
	Cs-137	ND (0.73)	ND (0.69)
	Gross $\beta$	ND (0.62)	ND (0.35)
	H-3	580	610
June 16 <sup>th</sup> , 2022  *Discharged on June 21 <sup>st</sup>	Cs-134	ND (0.61)	ND (0.68)
	Cs-137	ND (0.54)	ND (0.66)
	Gross $\beta$	ND (2.0)	ND (0.36)
	H-3	780	850
June 16 <sup>th</sup> , 2022  *Discharged on June 21 <sup>st</sup>	Cs-134	ND (0.45)	ND (0.43)
	Cs-137	ND (0.73)	ND (0.61)
	Gross $\beta$	ND (1.9)	ND (0.37)
	H-3	690	730
June 14 <sup>th</sup> , 2022  *Discharged on June 19 <sup>th</sup>	Cs-134	ND (0.57)	ND (0.64)
	Cs-137	ND (0.77)	ND (0.52)
	Gross $\beta$	ND (1.7)	ND (0.35)
	H-3	580	620
June 13 <sup>th</sup> , 2022  *Discharged on June 18 <sup>th</sup>	Cs-134	ND (0.88)	ND (0.58)
	Cs-137	ND (0.47)	ND (0.58)
	Gross $\beta$	ND (1.9)	ND (0.34)
	H-3	580	610
June 12 <sup>th</sup> , 2022  *Discharged on	Cs-134	ND (0.68)	ND (0.69)
	Cs-137	ND (0.80)	ND (0.69)

June 17 <sup>th</sup>	Gross $\beta$	ND (1.7)	ND (0.38)
	H-3	640	680
June 11 <sup>th</sup> , 2022  *Discharged on June 16 <sup>th</sup>	Cs-134	ND (0.72)	ND (0.63)
	Cs-137	ND (0.69)	ND (0.61)
	Gross $\beta$	ND (2.0)	ND (0.34)
	H-3	580	620
June 10 <sup>th</sup> , 2022  *Discharged on June 17 <sup>th</sup>	Cs-134	ND (0.76)	ND (0.70)
	Cs-137	ND (0.54)	ND (0.67)
	Gross $\beta$	ND (2.0)	ND (0.33)
	H-3	740	790
June 10 <sup>th</sup> , 2022  *Discharged on June 16 <sup>th</sup>	Cs-134	ND (0.53)	ND (0.67)
	Cs-137	ND (0.60)	ND (0.57)
	Gross $\beta$	ND (2.0)	ND (0.37)
	H-3	590	650
June 9 <sup>th</sup> , 2022  *Discharged on June 14 <sup>th</sup>	Cs-134	ND (0.63)	ND (0.71)
	Cs-137	ND (0.69)	ND (0.55)
	Gross $\beta$	ND (0.65)	ND (0.36)
	H-3	700	750
June 8 <sup>th</sup> , 2022  *Discharged on June 13 <sup>th</sup>	Cs-134	ND (0.60)	ND (0.61)
	Cs-137	ND (0.77)	ND (0.72)
	Gross $\beta$	ND (1.6)	ND (0.33)
	H-3	820	880
June 7 <sup>th</sup> , 2022  *Discharged on June 12 <sup>th</sup>	Cs-134	ND (0.79)	ND (0.60)
	Cs-137	ND (0.73)	ND (0.63)
	Gross $\beta$	ND (2.1)	ND (0.35)
	H-3	800	850
June 6 <sup>th</sup> , 2022  *Discharged on June 11 <sup>th</sup>	Cs-134	ND (0.65)	ND (0.67)
	Cs-137	ND (0.47)	ND (0.55)
	Gross $\beta$	ND (1.9)	ND (0.35)
	H-3	820	870
June 5 <sup>th</sup> , 2022  *Discharged on June 10 <sup>th</sup>	Cs-134	ND (0.57)	ND (0.58)
	Cs-137	ND (0.60)	ND (0.55)
	Gross $\beta$	ND (1.9)	ND (0.36)
	H-3	830	880
June 3 <sup>rd</sup> , 2022  *Discharged on June 8 <sup>th</sup>	Cs-134	ND (0.53)	ND (0.70)
	Cs-137	ND (0.73)	ND (0.68)
	Gross $\beta$	ND (1.6)	ND (0.36)
	H-3	790	820
June 2 <sup>nd</sup> , 2022  *Discharged on June 7 <sup>th</sup>	Cs-134	ND (0.45)	ND (0.68)
	Cs-137	ND (0.77)	ND (0.50)
	Gross $\beta$	ND (1.7)	0.42

	H-3	730	750
June 1 <sup>st</sup> , 2022  *Discharged on June 6 <sup>th</sup>	Cs-134	ND (0.72)	ND (0.69)
	Cs-137	ND (0.65)	ND (0.45)
	Gross $\beta$	ND (0.68)	ND (0.39)
	H-3	690	730
May 31 <sup>th</sup> , 2022  *Discharged on June 5 <sup>th</sup>	Cs-134	ND (0.63)	ND (0.73)
	Cs-137	ND (0.73)	ND (0.67)
	Gross $\beta$	ND (1.9)	ND (0.35)
	H-3	720	770
May 30 <sup>th</sup> , 2022  *Discharged on June 4 <sup>th</sup>	Cs-134	ND (0.59)	ND (0.47)
	Cs-137	ND (0.73)	ND (0.58)
	Gross $\beta$	ND (1,7)	ND (0.37)
	H-3	730	790
May 29 <sup>th</sup> , 2022  *Discharged on June 3 <sup>rd</sup>	Cs-134	ND (0.70)	ND (0.55)
	Cs-137	ND (0.65)	ND (0.55)
	Gross $\beta$	ND (1.6)	ND (0.32)
	H-3	850	920
May 28 <sup>th</sup> , 2022  *Discharged on June 2 <sup>nd</sup>	Cs-134	ND (0.50)	ND (0.60)
	Cs-137	ND (0.69)	ND (0.55)
	Gross $\beta$	ND (1.6)	ND (0.35)
	H-3	870	920
May 27 <sup>th</sup> , 2022  *Discharged on June 1 <sup>st</sup>	Cs-134	ND (0.66)	ND (0.50)
	Cs-137	ND (0.69)	ND (0.45)
	Gross $\beta$	ND (1,8)	ND (0.39)
	H-3	840	890

- \* \* 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
May 1 <sup>st</sup> , 2022	Cs-134	ND (0.0029)	ND (0.0047)	ND (0.0068)
	Cs-137	0.0032	0.0052	ND (0.0045)
	Gross $\alpha$	ND (0.53)	ND (3.4)	ND (2.2)
	Gross $\beta$	ND (0.38)	ND (0.62)	ND (0.58)
	H-3	830	830	860
	Sr-90	ND (0.0013)	ND (0.0012)	ND (0.0054)

\* 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 $\alpha$	—	—	—
Gross $\beta$	3 (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.

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 18 <sup>th</sup> , 2022  *Sampled before discharge of purified groundwater.	Cs-134	ND (0.68)
	Cs-137	ND (0.58)
	Gross $\beta$	11
	H-3	ND (1.0)



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
June 20 <sup>th</sup> , 2022  *Discharged on June 28 <sup>th</sup>	Cs-134	ND (0.53)	ND (0.56)
	Cs-137	ND (0.75)	ND (0.45)
	Gross $\beta$	ND (0.63)	ND (0.64)
	H-3	65	70
June 13 <sup>th</sup> , 2022  *Discharged on June 18 <sup>th</sup>	Cs-134	ND (0.70)	ND (0.48)
	Cs-137	ND (0.92)	ND (0.66)
	Gross $\beta$	ND (0.62)	ND (0.70)
	H-3	76	70
June 6 <sup>th</sup> , 2022  *Discharged on June 11 <sup>th</sup>	Cs-134	ND (0.65)	ND (0.55)
	Cs-137	ND (0.69)	ND (0.59)
	Gross $\beta$	ND (0.62)	ND (0.60)
	H-3	74	72
May 30 <sup>th</sup> , 2022  *Discharged on June 4 <sup>th</sup>	Cs-134	ND (0.53)	ND (0.66)
	Cs-137	ND (0.69)	ND (0.36)
	Gross $\beta$	ND (0.64)	ND (0.58)
	H-3	84	78

- \* \* 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 : Japan Chemical Analysis Center

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
May 3 <sup>rd</sup> , 2022	Cs-134	ND (0.0023)	ND (0.0043)	ND (0.0068)
	Cs-137	ND (0.0020)	ND (0.0041)	ND (0.0052)
	Gross $\alpha$	ND (0.53)	ND (3.4)	ND (2.2)
	Gross $\beta$	ND (0.38)	ND (0.61)	ND (0.54)
	H-3	83	84	86
	Sr-90	ND (0.0012)	ND (0.0016)	ND (0.0052)

\* 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 $\alpha$	—	—	—
Gross $\beta$	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.

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 18 <sup>th</sup> , 2022	Cs-134	ND (0.65)
	Cs-137	ND (0.46)
	Gross $\beta$	14
	H-3	ND (0.32)