

Information (16:00), May 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 April 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 April 2017 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 (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 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 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

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 23 rd , 2017 *Discharged on April 28 th	Cs-134	ND (0.75)	ND (0.53)
	Cs-137	ND (0.71)	ND (0.62)
	Gross β	ND (2.3)	ND(0.33)
	H-3	850	920
April 22 nd , 2017 *Discharged on April 27 th	Cs-134	ND (0.68)	ND (0.94)
	Cs-137	ND (0.71)	ND (0.77)
	Gross β	ND (2.5)	ND(0.33)
	H-3	880	940
April 20 th , 2017 *Discharged on April 26 th	Cs-134	ND (0.67)	ND (0.50)
	Cs-137	ND (0.78)	ND (0.59)
	Gross β	ND (2.4)	ND(0.32)
	H-3	900	960
April 19 th , 2017 *Discharged on April 25 th	Cs-134	ND (0.89)	ND (0.53)
	Cs-137	ND (0.58)	ND (0.49)
	Gross β	ND (0.64)	ND(0.29)
	H-3	960	1000
April 17 th , 2017 *Discharged on April 24 th	Cs-134	ND (0.54)	ND (0.80)
	Cs-137	ND (0.58)	ND (0.71)
	Gross β	ND (2.4)	ND (0.30)
	H-3	870	930
April 18 th , 2017 *Discharged on April 23 rd	Cs-134	ND (0.52)	ND (0.68)
	Cs-137	ND (0.63)	ND (0.53)
	Gross β	ND (2.5)	ND (0.31)
	H-3	900	960
April 14 th , 2017 *Discharged on April 20 th	Cs-134	ND (0.71)	ND (0.57)
	Cs-137	ND (0.68)	ND (0.62)
	Gross β	ND (2.7)	ND(0.26)
	H-3	890	940
April 13 th , 2017 *Discharged on April 19 th	Cs-134	ND (0.62)	ND (0.45)
	Cs-137	ND (0.63)	ND (0.59)
	Gross β	ND (2.3)	ND(0.30)
	H-3	910	960

April 11 th , 2017 *Discharged on April 16 th	Cs-134	ND (0.66)	ND (0.47)
	Cs-137	ND (0.58)	ND (0.69)
	Gross β	ND (2.5)	ND (0.31)
	H-3	890	940
April 10 th , 2017 *Discharged on April 15 th	Cs-134	ND (0.56)	ND (0.71)
	Cs-137	ND (0.58)	ND (0.56)
	Gross β	ND (0.75)	ND (0.29)
	H-3	910	970
April 8 th , 2017 *Discharged on April 13 th	Cs-134	ND (0.62)	ND (0.42)
	Cs-137	ND (0.63)	ND (0.74)
	Gross β	ND (2.4)	ND (0.33)
	H-3	860	920
April 7 th , 2017 *Discharged on April 12 th	Cs-134	ND (0.74)	ND (0.67)
	Cs-137	ND (0.68)	ND (0.65)
	Gross β	ND (2.7)	ND(0.29)
	H-3	940	990
April 5 th , 2017 *Discharged on April 10 th	Cs-134	ND (0.52)	ND (0.70)
	Cs-137	ND (0.71)	ND (0.65)
	Gross β	ND (2.4)	ND(0.31)
	H-3	880	940
April 4 th , 2017 *Discharged on April 9 th	Cs-134	ND (0.68)	ND (0.46)
	Cs-137	ND (0.58)	ND (0.54)
	Gross β	ND (2.4)	ND (0.29)
	H-3	950	1000
April 3 rd , 2017 *Discharged on April 8 th	Cs-134	ND (0.71)	ND (0.54)
	Cs-137	ND (0.75)	ND (0.58)
	Gross β	ND (2.4)	ND (0.29)
	H-3	970	1000
April 2 nd , 2017 *Discharged on April 7 th	Cs-134	ND (0.74)	ND (0.72)
	Cs-137	ND (0.58)	ND (0.78)
	Gross β	ND (2.4)	ND (0.34)
	H-3	940	1000
April 1 st , 2017 *Discharged on April 6 th	Cs-134	ND (0.79)	ND (0.82)
	Cs-137	ND (0.46)	ND (0.82)
	Gross β	ND (0.79)	ND(0.33)
	H-3	790	850
March 30 th , 2017 *Discharged on April 4 th	Cs-134	ND (0.74)	ND (0.86)
	Cs-137	ND (0.71)	ND (0.74)
	Gross β	ND (2.1)	ND (0.34)
	H-3	850	890
March 28 th , 2017 *Discharged on April 2 nd	Cs-134	ND (0.44)	ND (0.73)
	Cs-137	ND (0.63)	ND (0.65)
	Gross β	ND (2.4)	ND(0.37)

	H-3	830	880
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- * * 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

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 1 st ,2017	Cs-134	ND (0.0033)	ND (0.0050)	ND (0.0060)
	Cs-137	0.0036	0.0050	ND(0.0047)
	Gross α	ND (0.43)	ND (3.8)	ND (3.4)
	Gross β	ND (0.45)	ND (0.68)	ND (0.51)
	H-3	880	820	860
	Sr-90	0.0018	ND (0.0012)	ND(0.0048)

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

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)
April 6 th , 2017 *Sampled before discharge of purified groundwater.	Cs-134	ND (0.61)
	Cs-137	ND (0.57)
	Gross β	9.4
	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.

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 12 th , 2017 *Discharged on April 25 th	Cs-134	ND (0.58)	ND (0.57)
	Cs-137	ND (0.53)	ND (0.72)
	Gross β	ND (0.72)	ND (0.46)
	H-3	110	130
April 5 th , 2017 *Discharged on April 18 th	Cs-134	ND (0.71)	ND (0.73)
	Cs-137	ND (0.63)	ND (0.60)
	Gross β	ND (0.72)	ND (0.50)
	H-3	120	130
March 29 th , 2017 *Discharged on April 11 th	Cs-134	ND (0.54)	ND (0.75)
	Cs-137	ND (0.58)	ND (0.75)
	Gross β	ND (0.64)	ND (0.58)
	H-3	130	130
March 22 nd , 2017 *Discharged on April 4 th	Cs-134	ND (0.79)	ND (0.58)
	Cs-137	ND (0.68)	ND (0.50)
	Gross β	ND (0.68)	ND (0.61)
	H-3	120	130

- * * 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.

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 1 st , 2017	Cs-134	ND (0.0033)	ND (0.0043)	ND (0.0057)
	Cs-137	0.0039	0.0065	ND(0.0052)
	Gross α	ND (0.43)	ND (3.1)	ND (3.4)
	Gross β	ND (0.45)	ND (0.72)	ND (0.53)
	H-3	140	130	140
	Sr-90	0.0027	ND (0.0022)	ND (0.0056)

* 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	Detected nuclides	Sampling point (South discharge channel)
April 4 th , 2017	Cs-134	ND (0.74)
	Cs-137	ND (0.46)
	Gross β	15
	H-3	2.5

(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.