# Information (17:00), August 14, 2020

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

1. Summary of decommissioning and contaminated water management

In June, the summary of monthly progress on decommissioning and contaminated water management of TEPCO's Fukushima Daiichi NPS was issued shown in Appendix 1. For more information, please see the following URL:
https://www.meti.go.jp/english/earthquake/nuclear/decommissioning/pdf/mp202006.pdf

2. Subdrain and Groundwater Drain Systems

In June, purified groundwater pumped from the subdrain and groundwater drain systems was discharged on the dates shown in Appendix 2. 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 3).

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 4). 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.

3. Groundwater Bypassing

In June, the pumped bypassing groundwater was discharged on the dates shown in Appendix 5. 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 6).

Moreover, TEPCO publishes analysis results on seawater sampled during the discharge operation at the nearest seawater sampling post from the discharge point (see Appendix 7). 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

# Outline of Decommissioning and Contaminated Water Management


Secretariat of the Team for Countermeasures for Decommissioning and Contaminated Water Treatment

## Main decommissioning work and steps

Fuel removal from the spent fuel pool was completed in December 2014 at Unit 4 and started from April 15, 2019 at Unit 3. Dust concentration in the surrounding environment is being monitored and work is being implemented with safety first. Work continues sequentially toward the start of fuel removal from Units 1 and 2 and debris (Note 1) retrieval from Units 1-3.

(Note 1) Fuel assemblies having melted through in the accident.

**Fuel Removal from SFP**

Units 1 & 2: Rubble removal & dose reduction → Installing fuel removal machine
Unit 3: Fuel removal
Unit 4: Storage and handling

| | | |
|---|---|---|
| Units 1-6 | Completion of fuel removal | Within 2031 |
| Unit 1 | Start of fuel removal | FY2027 - FY2028 |
| Unit 2 | Start of fuel removal | FY2024 - FY2026 |
| Unit 3 | Completion of fuel removal | Within FY2020 |
| Unit 4 | Completion of fuel removal | 2014 |

**Fuel Debris Retrieval**

Unit 1-3 / Unit 2: Ascertaining the status inside the PCV/ examining the fuel debris retrieval method, etc. (Note 2) → Fuel debris retrieval → Storage and handling

| | |
|---|---|
| First unit | Start of fuel debris retrieval |
| Unit 2 | Within 2021 |

**Dismantling Facilities**

Scenario development & technology consideration → Design and manufacturing of devices / equipment → Dismantling

### Fuel removal from the spent fuel pool

Fuel removal from the spent fuel pool started from April 15, 2019 at Unit 3. With the aim of completing fuel removal by the end of FY2020, rubble and fuel are being removed.

Fuel removal (April 15, 2019)

Removed fuel (assemblies)
**203/566**
(As of July 2, 2020)

Contaminated water management proceeds with the following three efforts:

### (1) Efforts to promote contaminated water management based on the three basic policies

**[Three basic policies]**

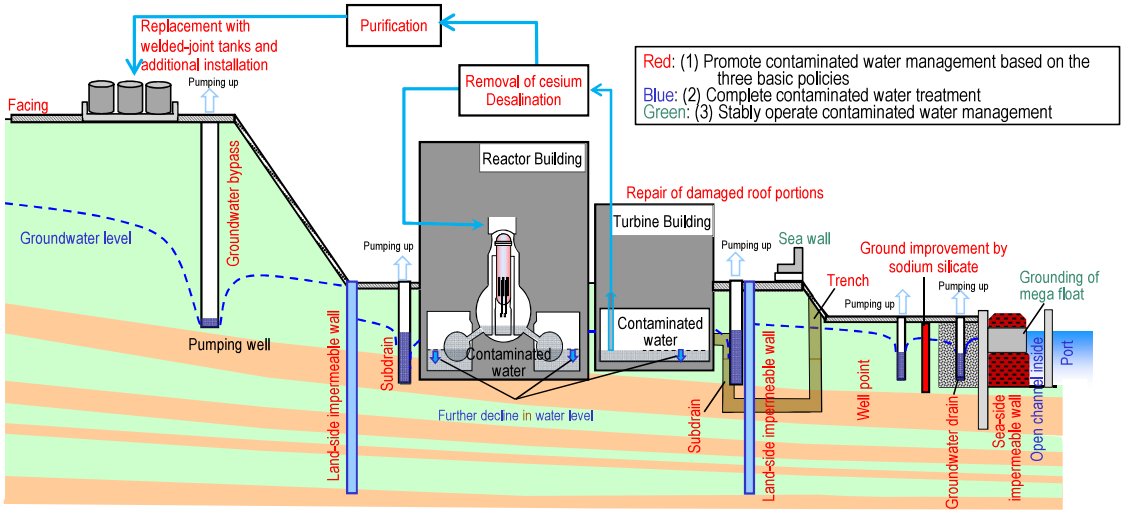
1. "Remove" the source of water contamination
2. "Redirect" fresh water from contaminated areas
3. "Retain" contaminated water from leakage

### (2) Efforts to complete contaminated water treatment

4. Treatment of contaminated water in buildings
5. Measures to remove α–nuclide and reduce the concentration in contaminated water
6. Measures to alleviate the radiation dose of Zeolite sandbags in the Process Main Building and High-Temperature Incinerator Building and examine safe management methods

### (3) Efforts to stably operate contaminated water management

7. Planning and implementing necessary measures to prepare for large-scale disasters such as tsunami and heavy rain
8. Periodically inspecting and updating facilities to maintain the effect of contaminated water management going forward
9. Examining additional measures as required, with efforts to gradually expand the scale of fuel debris retrieval in mind




### (1) Efforts to promote contaminated water management based on the three basic policies

- Strontium-treated water from other equipment is being re-treated in the multi-nuclide removal equipment (ALPS) and stored in welded-joint tanks.
- Multi-layered contaminated water management measures, including land-side impermeable walls and subdrains, have stabilized the groundwater at a low level and the increased amount of contaminated water generated during rainfall is being suppressed by repairing damaged portions of building roofs, facing onsite, etc. Through these measures, the generation of contaminated water was reduced from approx. 540 $m^3$/day (in May FY2014) to approx. 180 $m^3$/day (in FY2019).
- Measures continue to further suppress the generation of contaminated water to approx. 150 $m^3$/day within FY2020 and 100 $m^3$/day or less within 2025.

### (2) Efforts to complete contaminated water treatment

- Contaminated water levels in buildings declined as planned and connected parts between Units 1 and 2 and 3 and 4 were respectively separated. For α-nuclide detected as water levels declined progressively, characteristics are being determined and treatment methods examined.
- Treatment of contaminated water in buildings will be completed within 2020, excluding Unit 1-3 Reactor Buildings, Process Main Building and High-Temperature Incinerator Building. For Reactor Buildings, the amount of contaminated water there will be reduced from the level at the end of 2020 during the period FY2022 - 2024.
- For Zeolite sandbags on the basement floors of the Process Main Building and High-Temperature Incinerator Building, measures to reduce the radiation dose are being examined with stabilization in mind.

### (3) Efforts to stably operate contaminated water management

- To prepare for tsunamis, measures including closing building openings, installing sea walls and transferring and grounding the mega float are being implemented. For heavy rain, sandbags are being installed to suppress direct inflow into buildings while work to enhance drainage channels and other measures are being implemented as planned.

# Progress Status and Future Challenges of the Mid-and-Long-Term Roadmap toward Decommissioning of TEPCO Holdings Fukushima Daiichi Nuclear Power Station (Outline)

## Progress status

◆ The temperatures of the Reactor Pressure Vessel (RPV) and Primary Containment Vessel (PCV) of Units 1-3 have been maintained within the range of approx. 20-30°C*1 over the past month. There was no significant change in the concentration of radioactive materials newly released from Reactor Buildings into the air*2. It was concluded that the comprehensive cold shutdown condition had been maintained.

* 1 The values varied somewhat, depending on the unit and location of the thermometer.

* 2 In May 2020, the radiation exposure dose due to the release of radioactive materials from the Unit 1-4 Reactor Buildings was evaluated at less than 0.00006 mSv/year at the site boundary. The annual radiation dose from natural radiation is approx. 2.1 mSv/year (average in Japan).

## Installation completed of the Unit 1 spent fuel pool cover

For Unit 1, rubble on the upper part of the Reactor Building is being removed toward removing the fuel assemblies stored in the spent fuel pool. During rubble removal work, roof steel frames, small rubble and other objects may fall. To reduce the potential risk of these fallen objects affecting the soundness of fuel assemblies stored there, a cover bag was installed over the surface of the spent fuel pool. During the period June 8 to 11, the cover bag was injected onto the pool surface, extended to cover the entire pool surface area, expanded by inflating it with air and filled with air Mortar*. Then the installation was completed.

Support materials will be installed for the fuel-handling machine and the overhead crane within 2020.

* Mixture of cement material, water and air

Condition of the spent fuel pool after the cover bag was injected and extended (June 8)

Cover bag after air mortar was filled (June 11)

## No obstacle detected that may hinder fuel removal from the Unit 2 spent fuel pool

On June 10 and 11, the inside of the Unit 2 spent fuel pool was investigated for the first time after the earthquake. The investigation did not confirm any conditions that could hinder the fuel removal, such as damage to the fuel racks or fuel handles.

For the underwater ROV used in this investigation, a mockup training was conducted for operators in the Fukushima Robot Test Field (Minamisōma City).

The upper part of fuel assemblies and fuel racks

Operation of the underwater ROV

## Steadily continuing of the Unit 3 fuel removal

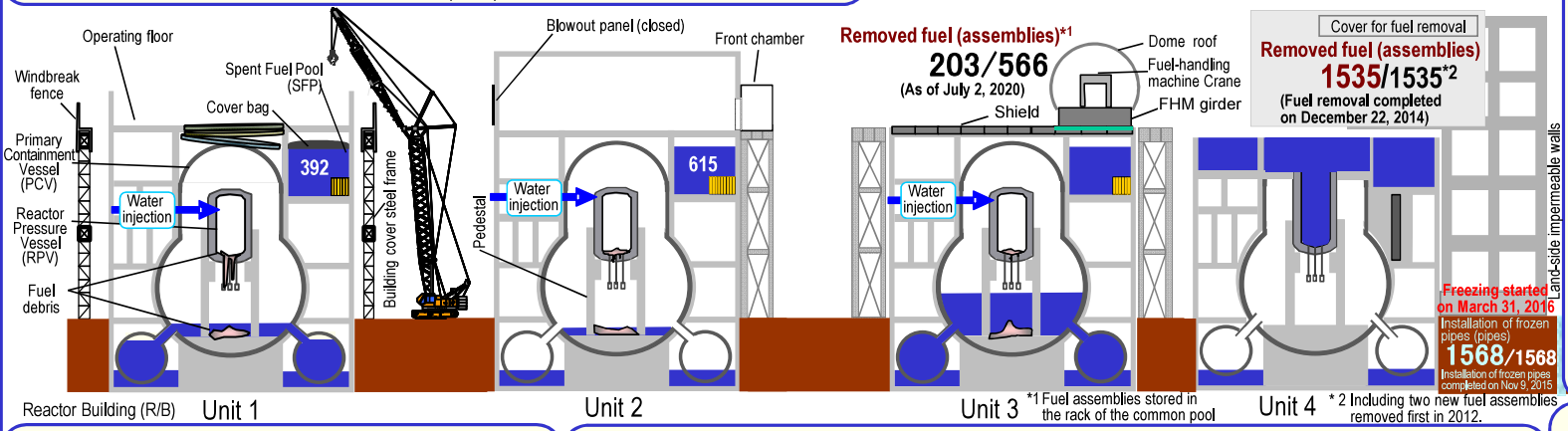
Since work resumed on May 26, fuel removal of Unit 3 has proceeded steadily with 203 of 566 fuel assemblies having been removed and 25 assemblies remaining, for which rubble needs to be removed from the fuel top.

For the method to remove the fuel assembly with a deformed handle, which could not be lifted during the lifting test last month, measures such as introducing new gripping equipment and transportation by a cask with larger inside dimensions are being examined.

## No problem caused by the leakage from the treatment facility special for Subdrain & Groundwater drain

On May 22, water drippage of about one drop/second was detected from the lower part of the pretreatment filter 2B insulator for the water treatment facility special for Subdrain & Groundwater drain. Generally, the water treatment facility operates with a single system. The drippage part was switched from System B to System A and the water treatment facility is currently operating without any trouble.

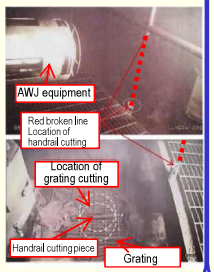
An inspection inside the container confirmed locally progressing corrosion, for which measures such as repairing or replacing filter containers will be implemented.




## Cutting of obstacles inside the PCV toward injecting the Unit 1 inside investigation robot

As part of efforts to investigate inside the Unit 1 Primary Contamination Vessel (PCV), work to cut obstacles inside the PCV on the route for the investigation equipment started from May 26 and cutting of the handrail was completed by June 4. After washing the equipment and exchanging the nozzle, the grating will be cut from early July.

Work continues with safety first to start the inside investigation in late FY2020.

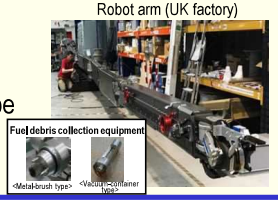



## Equipment being developed toward starting trial fuel debris retrieval of the Unit 2

Toward starting the trial retrieval of Unit 2 fuel debris scheduled in 2021, retrieval equipment is being developed in the UK. In the trial retrieval plan, a robot arm will be used to access the PCV, obstacles inside the PCV will be removed by the cutting equipment and powder fuel debris will be collected by metal-brush type adhering equipment or vacuum-container type suction equipment. For remotely operated work in a severe environment with high exposure to radiation and within a confined space, tests and training will be implemented using a realistic mock-up in advance and work will be implemented steadily with safety first.

Fuel debris retrieved from the trial will be placed in closed metal transportation casks to be transported to the existing analysis facility.

Robot arm (UK factory)




Mockup facility (UK RACE)

·Area: approx. 8m×30m
·Height: approx. 7m

Mockup facility (JAEA Naraha)

·Area: approx. 10m×30m
·Height: approx. 8m

## Thorough COVID-19 countermeasures implemented

At the Fukushima Daiichi Nuclear Power Station, countermeasures are being implemented to prevent the COVID-19 infection spreading, such as requiring employees to take their temperature prior to coming to the office, wear masks at all times and avoid the "Three Cs" by shift-use of the rest house, etc. At present, no TEPCO HD employees or cooperative firm laborers have contracted COVID-19.

Restriction on travel to and from the outside of the prefecture was eased on June 19 and reception of visitors was resumed from July 1. However, concern about the second wave remains and thorough countermeasures to prevent the infection of TEPCO HD employees and cooperative firm laborers will to be maintained, including continued restraint of travel to and from the outside of the prefecture to both sustain the ongoing decommissioning work and prevent the COVID-19 infection spreading.

Appendix 2

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<br>*Date of discharge | Detected nuclides | Analytical body | |
|---|---|---|---|
| | | TEPCO | Third-party organization |
| June 25th, 2020<br>*Discharged on June 30th | Cs-134 | ND (0.68) | ND (0.74) |
| | Cs-137 | ND (0.53) | ND (0.61) |
| | Gross β | ND (1.7) | ND (0.35) |
| | H-3 | 950 | 1,100 |
| June 24th, 2020<br>*Discharged on June 29th | Cs-134 | ND (0.56) | ND (0.39) |
| | Cs-137 | ND (0.68) | ND (0.71) |
| | Gross β | ND (1.8) | 0.40 |
| | H-3 | 1,000 | 1,100 |
| June 23rd, 2020<br>*Discharged on June 28th | Cs-134 | ND (0.74) | ND (0.63) |
| | Cs-137 | ND (0.63) | ND (0.54) |
| | Gross β | ND (1.6) | ND (0.37) |
| | H-3 | 1,000 | 1,100 |
| June 22nd, 2020<br>*Discharged on June 27th | Cs-134 | ND (0.68) | ND (0.67) |
| | Cs-137 | ND (0.46) | ND (0.71) |
| | Gross β | ND (1.8) | ND (0.35) |
| | H-3 | 990 | 1,100 |
| June 21st, 2020<br>*Discharged on June 26th | Cs-134 | ND (0.71) | ND (0.59) |
| | Cs-137 | ND (0.53) | ND (0.61) |
| | Gross β | ND (1.7) | 0.45 |
| | H-3 | 1,000 | 1,100 |
| June 20th, 2020<br>*Discharged on June 25th | Cs-134 | ND (0.71) | ND (0.81) |
| | Cs-137 | ND (0.58) | ND (0.55) |
| | Gross β | ND (2.1) | ND (0.32) |
| | H-3 | 970 | 1,100 |
| June 19th, 2020<br>*Discharged on June 24th | Cs-134 | ND (0.76) | ND (0.61) |
| | Cs-137 | ND (0.63) | ND (0.77) |
| | Gross β | ND (0.65) | ND (0.37) |
| | H-3 | 1,000 | 1,100 |
| June 18th, 2020<br>*Discharged on June 23rd | Cs-134 | ND (0.49) | ND (0.75) |
| | Cs-137 | ND (0.68) | ND (0.61) |
| | Gross β | ND (2.1) | ND (0.37) |
| | H-3 | 1,000 | 1,100 |

| | | | |
|---|---|---|---|
| June 17th, 2020<br>*Discharged on June 22nd | Cs-134 | ND (0.60) | ND (0.64) |
| | Cs-137 | ND (0.71) | ND (0.57) |
| | Gross β | ND (1.8) | 0.46 |
| | H-3 | 960 | 1,100 |
| June 16th, 2020<br>*Discharged on June 21st | Cs-134 | ND (0.60) | ND (0.63) |
| | Cs-137 | ND (0.53) | ND (0.54) |
| | Gross β | ND (2.0) | ND (0.38) |
| | H-3 | 920 | 1,000 |
| June 15th, 2020<br>*Discharged on June 20th | Cs-134 | ND (0.40) | ND (0.60) |
| | Cs-137 | ND (0.68) | ND (0.78) |
| | Gross β | ND (1.8) | ND (0.33) |
| | H-3 | 950 | 1,000 |
| June 14th, 2020<br>*Discharged on June 19th | Cs-134 | ND (0.48) | ND (0.65) |
| | Cs-137 | ND (0.58) | ND (0.66) |
| | Gross β | ND (1.9) | 0.39 |
| | H-3 | 1,000 | 1,100 |
| June 13th, 2020<br>*Discharged on June 18th | Cs-134 | ND (0.77) | ND (0.61) |
| | Cs-137 | ND (0.46) | ND (0.54) |
| | Gross β | ND (1.8) | ND (0.33) |
| | H-3 | 970 | 1,100 |
| June 12th, 2020<br>*Discharged on June 17th | Cs-134 | ND (0.69) | ND (0.72) |
| | Cs-137 | ND (0.53) | ND (0.51) |
| | Gross β | ND (2.0) | ND (0.38) |
| | H-3 | 980 | 1,100 |
| June 11th, 2020<br>*Discharged on June 16th | Cs-134 | ND (0.74) | ND (0.67) |
| | Cs-137 | ND (0.53) | ND (0.42) |
| | Gross β | ND (0.65) | ND (0.40) |
| | H-3 | 910 | 990 |
| June 10th, 2020<br>*Discharged on June 15th | Cs-134 | ND (0.67) | ND (0.58) |
| | Cs-137 | ND (0.63) | ND (0.51) |
| | Gross β | ND (2.1) | 0.52 |
| | H-3 | 830 | 920 |
| June 9th, 2020<br>*Discharged on June 14th | Cs-134 | ND (0.48) | ND (0.58) |
| | Cs-137 | ND (0.68) | ND (0.63) |
| | Gross β | ND (1.8) | 0.39 |
| | H-3 | 1,100 | 1,200 |
| June 8th, 2020<br>*Discharged on June 13th | Cs-134 | ND (0.62) | ND (0.55) |
| | Cs-137 | ND (0.63) | ND (0.54) |
| | Gross β | ND (1.8) | ND (0.35) |
| | H-3 | 880 | 970 |

| | | | |
|---|---|---|---|
| June 7th, 2020<br>*Discharged on June 12th | Cs-134 | ND (0.58) | ND (0.61) |
| | Cs-137 | ND (0.63) | ND (0.61) |
| | Gross β | ND (1.6) | ND (0.35) |
| | H-3 | 970 | 1,100 |
| June 6th, 2020<br>*Discharged on June 11th | Cs-134 | ND (0.67) | ND (0.76) |
| | Cs-137 | ND (0.82) | ND (0.62) |
| | Gross β | ND (1.9) | 0.39 |
| | H-3 | 800 | 890 |
| June 5th, 2020<br>*Discharged on June 10th | Cs-134 | ND (0.64) | ND (0.59) |
| | Cs-137 | ND (0.58) | ND (0.69) |
| | Gross β | ND (1.7) | ND (0.39) |
| | H-3 | 810 | 900 |
| June 4th, 2020<br>*Discharged on June 9th | Cs-134 | ND (0.76) | ND (0.63) |
| | Cs-137 | ND (0.75) | ND (0.66) |
| | Gross β | ND (1.9) | ND (0.39) |
| | H-3 | 900 | 990 |
| June 2nd, 2020<br>*Discharged on June 7th | Cs-134 | ND (0.68) | ND (0.67) |
| | Cs-137 | ND (0.68) | ND (0.63) |
| | Gross β | ND (1.6) | ND (0.38) |
| | H-3 | 1,100 | 1,200 |
| June 1st, 2020<br>*Discharged on June 6th | Cs-134 | ND (0.66) | ND (0.72) |
| | Cs-137 | ND (0.58) | ND (0.81) |
| | Gross β | ND (0.70) | ND (0.41) |
| | H-3 | 1,000 | 1,100 |
| May 30th, 2020<br>*Discharged on June 4th | Cs-134 | ND (0.71) | ND (0.57) |
| | Cs-137 | ND (0.58) | ND (0.66) |
| | Gross β | ND (2.0) | ND (0.36) |
| | H-3 | 1,000 | 1,100 |
| May 29th, 2020<br>*Discharged on June 3rd | Cs-134 | ND (0.44) | ND (0.70) |
| | Cs-137 | ND (0.78) | ND (0.63) |
| | Gross β | ND (0.68) | ND (0.36) |
| | H-3 | 960 | 1,000 |
| May 27th, 2020<br>*Discharged on June 1st | Cs-134 | ND (0.79) | ND (0.67) |
| | Cs-137 | ND (0.53) | ND (0.73) |
| | Gross β | ND (2.0) | 0.39 |
| | H-3 | 900 | 970 |

- * 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 3

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 2nd,2020 | Cs-134 | ND (0.0033) | ND (0.0050) | ND (0.0068) |
| | Cs-137 | 0.0074 | 0.0050 | 0.0063 |
| | Gross α | ND (0.54) | ND (3.4) | ND (1.8) |
| | Gross β | ND (0.48) | ND (0.59) | ND (0.60) |
| | H-3 | 850 | 720 | 780 |
| | Sr-90 | 0.0026 | ND (0.0032) | ND (0.0052) |

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

Appendix 4

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 11th, 2020 *Sampled before discharge of purified groundwater. | Cs-134 | ND (0.69) |
| | Cs-137 | ND (0.56) |
| | Gross β | 13 |
| | H-3 | 1.7 |

(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 | 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 5

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<br>*Date of discharge | Detected nuclides | Analytical body | |
|---|---|---|---|
| | | TEPCO | Japan Chemical Analysis Center |
| June 17th, 2020<br>*Discharged on June 25th | Cs-134 | ND (0.73) | ND (0.58) |
| | Cs-137 | ND (0.46) | ND (0.47) |
| | Gross β | ND (0.64) | ND (0.54) |
| | H-3 | 110 | 120 |
| June 10th, 2020<br>*Discharged on June 18th | Cs-134 | ND (0.58) | ND (0.37) |
| | Cs-137 | ND (0.58) | ND (0.43) |
| | Gross β | ND (0.62) | ND (0.57) |
| | H-3 | 110 | 130 |
| June 3rd, 2020<br>*Discharged on June 11th | Cs-134 | ND (0.65) | ND (0.48) |
| | Cs-137 | ND (0.68) | ND (0.40) |
| | Gross β | ND (0.64) | ND (0.49) |
| | H-3 | 110 | 120 |
| May 27th, 2020<br>*Discharged on June 4th | Cs-134 | ND (0.40) | ND (0.58) |
| | Cs-137 | ND (0.68) | ND (0.52) |
| | Gross β | ND (0.66) | 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 6

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 6th, 2020 | Cs-134 | ND (0.0031) | ND (0.0047) | ND (0.0055) |
| | Cs-137 | ND (0.0020) | ND (0.0040) | ND (0.0050) |
| | Gross α | ND (0.59) | ND (3.4) | ND (1.8) |
| | Gross β | ND (0.48) | ND (0.64) | ND (0.59) |
| | H-3 | 130 | 110 | 120 |
| | Sr-90 | 0.00091 | ND (0.0016) | ND (0.0056) |

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

Appendix 7

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 11th, 2020 | Cs-134 | ND (0.67) |
| | Cs-137 | ND (0.64) |
| | Gross β | 10 |
| | 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 | 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.