# Information (18:45), November 2, 2015

To All Missions (Embassies, Consular posts and International Organizations in Japan)

### Report on the discharge record and the sea water monitoring results at Fukushima Daiichi NPS during September and October

The Ministry of Foreign Affairs wishes to provide all Missions with a report on the discharge record and the sea water monitoring results with regard to the discharge of groundwater pumped up from the subdrain and groundwater drain systems during September and October as well as groundwater pumped up for bypassing in October at Fukushima Daiichi Nuclear Power Station (NPS).

#### 1. Subdrain and Groundwater Drain Systems

Purified groundwater pumped up from the subdrain and groundwater drain systems was discharged on September 14<sup>th</sup>, 15<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, 28<sup>th</sup> and on October 2<sup>nd</sup>, 3<sup>rd</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 11<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup>, 18<sup>th</sup>, 20<sup>th</sup>, 22<sup>nd</sup>, 23<sup>rd</sup>, 25<sup>th</sup>, 27<sup>th</sup>, 30<sup>th</sup>, and 31<sup>st</sup> (see Sheet 1,2 and 3). Each time in advance of the discharge, an analysis on the quality of the purified groundwater to be discharged is conducted by TEPCO and the result is announced.

All the results have confirmed that the radiation level of sampled water have been substantially below the operational targets set by TEPCO (these operational targets are set at very low level compared to the legal discharge limits).

The results of the analysis were also confirmed by Japan Atomic Energy Agency (JAEA) (see Sheet 4).

In addition, TEPCO and JAEA (on the request of the Government of Japan) regularly conduct a more detailed analysis on the purified groundwater. The results of JAEA's latest analysis confirmed that TEPCO's analysis was accurate and verified that the radiation level of sampled groundwater is substantially below the operational target (see Sheet 5).

Moreover, TEPCO publishes the result of analysis on seawater sampled during the operation around the port area (see Sheet 6). The result shows that the radiation level of seawater remains low enough compared to the density limit specified by the Reactor Regulation and no significant change in the radioactivity has been observed.

#### 2. Groundwater Bypassing

Groundwater pumped up for by-passing was discharged on October 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup> (see Sheet 8). Each time in advance of the discharge, an analysis on the quality of the groundwater to be discharged is conducted by TEPCO and the result is announced.

All the results have confirmed that the radiation level of sampled water have been substantially below the operational targets set by TEPCO (these operational targets are set at very low level compared to the legal discharge limits).

The results of the analysis were also confirmed by Japan Chemical Analysis Center.

In addition, TEPCO and JAEA (on the request of the Government of Japan) regularly conduct a more detailed analysis on the groundwater. The results of JAEA's latest analysis confirmed that TEPCO's analysis was accurate and verified that the radiation level of sampled groundwater is substantially below the operational target (see Sheet 9).

Moreover, TEPCO publishes its analysis on seawater sampled during the operation at the nearest seawater sampling post from the discharge point (see Sheet 10). The result shows that the radiation level in seawater remains low enough compared to the density limit specified by the Reactor Regulation and no significant change in the radioactivity has been observed.

This process is the same as the one announced in the Information last month. Results of the analysis are shown as follows:

(For further information, please contact TEPCO (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 analysis on the quality of the purified groundwater having been pumped up from the subdrain and groundwater drain systems at Fukushima Daiichi NPS (made available by TEPCO prior to discharge)

			(Unit. Bq/L)
Date of sampling	Detected	Analyt	ical body
*Date of discharge	nuclides	TEPCO	Mitsubishi Nuclear Fuel Co., Ltd.
O d d a sust sour	Cs-134	ND (0.67)	ND (0.50)
October 21 <sup>st</sup> , 2015	Cs-137	ND (0.53)	ND (0.52)
*Discharged on October 31 <sup>st</sup>	Gross β	ND (0.63)	ND (0.48)
October 31	H-3	200	270
46	Cs-134	ND (0.68)	ND (0.50)
October 19 <sup>th</sup> , 2015	Cs-137	ND (0.63)	ND (0.56)
*Discharged on October 30 <sup>th</sup>	Gross β	ND (0.74)	ND (0.48)
October 30	H-3	230	300
AL.	Cs-134	ND (0.81)	ND (0.55)
October 17 <sup>th</sup> , 2015	Cs-137	ND (0.60)	ND (0.49)
*Discharged on October 27 <sup>th</sup>	Gross β	ND (2.0)	ND (0.51)
Octobel 27	H-3	210	300
• th	Cs-134	ND (0.67)	ND (0.40)
October 15 <sup>th</sup> , 2015	Cs-137	ND (0.58)	ND (0.59)
*Discharged on October 25 <sup>th</sup>	Gross β	ND (2.2)	ND (0.52)
	H-3	220	300
• the same	Cs-134	ND (0.71)	ND (0.47)
October 13 <sup>th</sup> , 2015	Cs-137	ND (0.50)	ND (0.56)
*Discharged on October 23 <sup>rd</sup>	Gross β	ND (0.85)	ND (0.51)
Octobel 25	H-3	230	290
• th	Cs-134	ND (0.68)	ND (0.48)
October 12 <sup>th</sup> , 2015	Cs-137	ND (0.53)	ND (0.45)
*Discharged on October 22 <sup>nd</sup>	Gross β	ND (2.3)	ND (0.51)
OCIONEI ZZ	H-3	300	380
• • • • • • • • • • • • • • • • • • •	Cs-134	ND (0.81)	ND (0.39)
October 9 <sup>th</sup> , 2015	Cs-137	ND (0.58)	ND (0.54)
*Discharged on October 20 <sup>th</sup>	Gross β	ND (2.0)	ND (0.48)
Octobel 20	H-3	290	370

October 7 <sup>th</sup> , 2015         Cs-134         ND (0.65)         ND (0.54)           "Discharged on October 18 <sup>th</sup> Gross β         ND (2.4)         ND (0.45)           October 6 <sup>th</sup> , 2015         Cs-134         ND (0.56)         ND (0.46)           "Discharged on October 16 <sup>th</sup> Gross β         ND (1.9)         ND (0.68)           October 5 <sup>th</sup> , 2015         Cs-137         ND (0.54)         ND (0.50)           "Discharged on October 18 <sup>th</sup> Cs-137         ND (0.63)         ND (0.50)           "October 18 <sup>th</sup> , 2015         Cs-137         ND (0.63)         ND (0.54)           "Discharged on October 18 <sup>th</sup> , 2015         Gross β         ND (0.80)         ND (0.50)           "Discharged on October 18 <sup>th</sup> , 2015         Gross β         ND (0.80)         ND (0.47)           October 18 <sup>th</sup> , 2015         Gross β         ND (0.80)         ND (0.47)           September 30 <sup>th</sup> , 2015         Gross β         ND (0.80)         ND (0.49)           "Discharged on October 9 <sup>th</sup> Gross β         ND (0.81)         ND (0.62)           September 27 <sup>th</sup> , 2015         Gross β         ND (0.81)         ND (0.51)           "Discharged on October 8 <sup>th</sup> Gross β         ND (0.83)         ND (0.51)           "Discharged on October 8 <sup>th</sup> Gros				(Unit: Bq/L)
"Discharged on October 18"         Gross β         ND (2.4)         ND (0.50)           October 6"n, 2015         Cs-134         ND (0.56)         ND (0.46)           October 6"n, 2015         Cs-134         ND (0.58)         ND (0.68)           "Discharged on October 16"         Gross β         ND (1.9)         ND (0.50)           October 5"n, 2015         Cs-134         ND (0.54)         ND (0.50)           "Discharged on October 15"         Gross β         ND (0.63)         ND (0.49)           October 1 <sup>at</sup> , 2015         Cs-134         ND (0.69)         ND (0.49)           "Discharged on October 11"         Gross β         ND (2.0)         ND (0.49)           September 30", 2015         Cs-134         ND (0.80)         ND (0.49)           "Discharged on October 9"         Gross β         ND (0.81)         ND (0.62)           September 27", 2015         Gross β         ND (0.83)         ND (0.52)           "Discharged on October 8"         Gross β         ND (0.83)         ND (0.54)           September 27", 2015         Cs-134         ND (0.85)         ND (0.54)           September 25", 2015         Cs-134         ND (0.85)         ND (0.54)           September 25", 2015         Cs-134         ND (0.85)         ND (0.64)     <	October 7th 0045	Cs-134	ND (0.65)	ND (0.54)
October 18"	October 7°, 2015	Cs-137	ND (0.58)	ND (0.45)
H-3	*Discharged on October 18 <sup>th</sup>	Gross β	ND (2.4)	ND (0.50)
October 6 <sup>th</sup> , 2015         Cs-137         ND (0.58)         ND (0.68)           *Discharged on October 16 <sup>th</sup> Gross β         ND (1.9)         ND (0.50)           H-3         320         360           October 5 <sup>th</sup> , 2015         Cs-134         ND (0.54)         ND (0.54)           *Discharged on October 15 <sup>th</sup> Gross β         ND (0.63)         ND (0.49)           October 1s <sup>st</sup> , 2015         Cs-134         ND (0.69)         ND (0.50)           *Discharged on October 1t <sup>th</sup> Gross β         ND (0.69)         ND (0.47)           October 1s <sup>th</sup> , 2015         Cs-134         ND (0.80)         ND (0.47)           *Discharged on October 9 <sup>th</sup> Gross β         ND (2.0)         ND (0.49)           *Discharged on October 8 <sup>th</sup> Gross β         ND (0.81)         ND (0.62)           *Discharged on October 8 <sup>th</sup> Gross β         ND (0.83)         ND (0.51)           *Discharged on October 8 <sup>th</sup> Gross β         ND (0.85)         ND (0.54)           *Discharged on October 8 <sup>th</sup> Gross β         ND (0.94)         ND (0.49)           *Discharged on October 6 <sup>th</sup> Gross β         ND (0.89)         ND (0.62)           *Discharged on October 5 <sup>th</sup> Gross β         ND (0.89)         ND (0.6	October 10	H-3	270	350
*Discharged on October 16 <sup>th</sup> P. 2015  *Cs-137 ND (0.59) ND (0.50)  *Cs-134 ND (0.54) ND (0.54)  *Cs-137 ND (0.63) ND (0.54)  *Discharged on October 15 <sup>th</sup> P. 2015  *Discharged on October 11 <sup>th</sup> P. 2015  *Discharged on October 9 <sup>th</sup> P. 2015  *Discharged on October 8 <sup>th</sup> P. 2015  *Discharged on October 9 <sup>th</sup> P. 2015  *Discharged on October 9 <sup>th</sup> P. 2015  *Discharged on October 8 <sup>th</sup> P. 2015  *Discharged on October 9 <sup>th</sup> P. 2015  *Discharged on	O t I oth coto	Cs-134	ND (0.56)	ND (0.46)
Coctober 16th   H-3   320   360	October 6", 2015	Cs-137	ND (0.58)	ND (0.68)
H-3   320   360	*Discharged on	Gross β	ND (1.9)	ND (0.50)
Cotober 5 <sup>th</sup> , 2015         Cs-137         ND (0.63)         ND (0.49)           *Discharged on October 15 <sup>th</sup> Gross β         ND (0.80)         ND (0.50)           October 1s <sup>th</sup> , 2015         Cs-134         ND (0.69)         ND (0.47)           *Discharged on October 9th         Gross β         ND (2.0)         ND (0.49)           *Discharged on October 9th         Cs-134         ND (0.81)         ND (0.62)           *Discharged on October 8th         Cs-134         ND (0.81)         ND (0.62)           *September 27th, 2015         Cs-134         ND (0.81)         ND (0.52)           *Discharged on October 8th         Cs-134         ND (0.83)         ND (0.51)           *Discharged on October 6th         Gross β         ND (0.85)         ND (0.64)           *Discharged on October 5th         Cs-134         ND (0.77)         ND (0.43)           *Discharged on October 5th         Gross β         ND (0.89)         ND (0.46)           *Discharged on October 5th         Gross β         ND (0.85)         ND (0.46)           *Discharged on October 2th         Cs-134         ND (0.63)         ND (0.51)           *Discharged on October 2th	October 16	H-3	320	360
"Discharged on October 15th Process (a) CS-137 (b) (0.80) (b) (0.50) (b) (b) (0.50) (b)	46	Cs-134	ND (0.54)	ND (0.54)
October 1st, 2015         H-3         210         270           October 1st, 2015         Cs-134         ND (0.69)         ND (0.47)           "Discharged on October 11th"         Gross β         ND (2.0)         ND (0.49)           September 30th, 2015         Cs-134         ND (0.81)         ND (0.62)           "Discharged on October 9th         Gross β         ND (0.76)         ND (0.52)           "Discharged on October 8th         Cs-137         ND (0.83)         ND (0.51)           "Discharged on October 8th         Gross β         ND (0.85)         ND (0.54)           September 25th, 2015         Gross β         ND (0.94)         ND (0.49)           "Discharged on October 6th         Gross β         ND (0.77)         ND (0.43)           September 23th, 2015         Gross β         ND (0.58)         ND (0.62)           "Discharged on October 6th         Gross β         ND (0.69)         ND (0.62)           "Discharged on October 5th         Gross β         ND (0.69)         ND (0.46)           "Discharged on October 5th         Gross β         ND (0.69)         ND (0.47)           "Discharged on October 3th         Gross β         ND (0.65)         ND (0.51)           "Discharged on October 2th         Gross β         ND (0.63)	October 5", 2015	Cs-137	ND (0.63)	ND (0.49)
Cs-134   ND (0.69)   ND (0.47)	*Discharged on	Gross β	ND (0.80)	ND (0.50)
October 1st, 2015         Cs-137         ND (0.80)         ND (0.56)           "Discharged on October 11th"         Gross β         ND (2.0)         ND (0.49)           September 30th, 2015         Cs-134         ND (0.81)         ND (0.62)           "Discharged on October 9th"         Gross β         ND (0.76)         ND (0.52)           "Discharged on October 8th"         Gross β         ND (0.83)         ND (0.51)           "Discharged on October 8th"         Gross β         ND (0.66)         ND (0.64)           "Discharged on October 6th         Gross β         ND (0.94)         ND (0.49)           September 25th, 2015         Cs-134         ND (0.77)         ND (0.49)           "Discharged on October 6th         Gross β         ND (0.89)         ND (0.62)           "Discharged on October 5th         Gross β         ND (0.69)         ND (0.46)           September 23rd, 2015         Cs-134         ND (0.69)         ND (0.47)           "Discharged on October 5th         Gross β         ND (0.85)         ND (0.47)           "Discharged on October 3rd         Gross β         ND (0.85)         ND (0.51)           "Discharged on October 3rd         Gross β         ND (0.85)         ND (0.50)           "Discharged on October 2rd         Gross β	October 15	H-3	210	270
*Discharged on October 11 <sup>th</sup> September 30 <sup>th</sup> , 2015  *Discharged on October 9 <sup>th</sup> September 27 <sup>th</sup> , 2015  *Discharged on October 8 <sup>th</sup> September 25 <sup>th</sup> , 2015  *Discharged on October 6 <sup>th</sup> September 25 <sup>th</sup> , 2015  *Discharged on October 6 <sup>th</sup> September 25 <sup>th</sup> , 2015  *Discharged on October 6 <sup>th</sup> September 25 <sup>th</sup> , 2015  *Discharged on October 6 <sup>th</sup> September 25 <sup>th</sup> , 2015  *Discharged on October 6 <sup>th</sup> September 25 <sup>th</sup> , 2015  *Discharged on October 6 <sup>th</sup> September 25 <sup>th</sup> , 2015  *Discharged on October 6 <sup>th</sup> September 23 <sup>rd</sup> , 2015  *Discharged on October 6 <sup>th</sup> September 23 <sup>rd</sup> , 2015  *Discharged on October 5 <sup>th</sup> September 21 <sup>st</sup> , 2015  *Discharged on October 5 <sup>th</sup> *Discharged on October 3 <sup>rd</sup> *Discharged on O	<b>-</b>	Cs-134	ND (0.69)	ND (0.47)
September 30 <sup>th</sup> , 2015   Cs-134   ND (0.81)   ND (0.62)     *Discharged on October 9 <sup>th</sup>   Cs-137   ND (0.76)   ND (0.52)     *Discharged on October 8 <sup>th</sup>   Cs-134   ND (0.83)   ND (0.51)     *Discharged on October 8 <sup>th</sup>   Cs-134   ND (0.85)   ND (0.64)     *Discharged on October 8 <sup>th</sup>   Cs-137   ND (0.66)   ND (0.64)     *Discharged on October 6 <sup>th</sup>   Cs-137   ND (0.66)   ND (0.49)     *Discharged on October 6 <sup>th</sup>   Cs-137   ND (0.58)   ND (0.43)     *Discharged on October 6 <sup>th</sup>   Cs-137   ND (0.58)   ND (0.62)     *Discharged on October 6 <sup>th</sup>   Cs-134   ND (0.77)   ND (0.46)     *Discharged on October 5 <sup>th</sup>   Cs-134   ND (0.69)   ND (0.46)     *Discharged on October 5 <sup>th</sup>   Gross β   ND (0.85)   ND (0.51)     *Discharged on October 3 <sup>th</sup>   Cs-134   ND (0.79)   ND (0.46)     *Discharged on October 3 <sup>th</sup>   Gross β   ND (0.85)   ND (0.51)     *Discharged on October 3 <sup>th</sup>   Cs-134   ND (0.79)   ND (0.46)     *Discharged on October 3 <sup>th</sup>   Gross β   ND (0.85)   ND (0.50)     *Discharged on October 3 <sup>th</sup>   Cs-134   ND (0.63)   ND (0.49)     *Discharged on October 2 <sup>th</sup>   Gross β   ND (0.53)   ND (0.49)     *Discharged on October 2 <sup>th</sup>   Gross β   ND (0.80)   ND (0.49)	October 1 <sup>st</sup> , 2015	Cs-137	ND (0.80)	ND (0.56)
H-3   200   280	*Discharged on	Gross β	ND (2.0)	ND (0.49)
September 30 <sup>th</sup> , 2015	October 11	H-3	200	280
*Discharged on October 9 <sup>th</sup> Gross β ND (0.83) ND (0.51)  *Beptember 27 <sup>th</sup> , 2015  *Discharged on October 8 <sup>th</sup> Gross β ND (0.85) ND (0.64)  *Discharged on October 8 <sup>th</sup> Arabic ND (0.94) ND (0.49)  *Discharged on October 6 <sup>th</sup> Arabic ND (0.62)  *Discharged on October 6 <sup>th</sup> Arabic ND (0.62)  *Discharged on October 5 <sup>th</sup> Arabic ND (0.66) ND (0.47)  *Discharged on October 5 <sup>th</sup> Arabic ND (0.66) ND (0.47)  *Discharged on October 5 <sup>th</sup> Arabic ND (0.66) ND (0.47)  *Discharged on October 5 <sup>th</sup> Arabic ND (0.66) ND (0.47)  *Discharged on October 5 <sup>th</sup> Arabic ND (0.65) ND (0.51)  *Discharged on October 5 <sup>th</sup> Arabic ND (0.65) ND (0.51)  *Discharged on October 3 <sup>td</sup> Arabic ND (0.65) ND (0.51)  *Discharged on October 3 <sup>td</sup> Arabic ND (0.65) ND (0.51)  *Discharged on October 3 <sup>td</sup> Arabic ND (0.65) ND (0.50)  *Discharged on October 3 <sup>td</sup> Arabic ND (0.63) ND (0.49)  *Discharged on October 2 <sup>th</sup> Arabic ND (0.63) ND (0.49)  *Discharged on October 2 <sup>th</sup> Arabic ND (0.63) ND (0.49)  *Discharged on October 2 <sup>th</sup> Arabic ND (0.63) ND (0.49)  *Discharged on October 2 <sup>th</sup> Arabic ND (0.63) ND (0.49)  *Discharged on October 2 <sup>th</sup> Arabic ND (0.63) ND (0.49)  *Discharged on October 2 <sup>th</sup> Arabic ND (0.63) ND (0.49)		Cs-134	ND (0.81)	ND (0.62)
H-3   230   300	September 30 <sup>th</sup> , 2015	Cs-137	ND (0.76)	ND (0.52)
H-3   230   300	*Discharged on	Gross β	ND (0.83)	ND (0.51)
September 27 <sup>th</sup> , 2015           *Discharged on October 8 <sup>th</sup> Cs-137         ND (0.66)         ND (0.64)           *Discharged on October 6 <sup>th</sup> H-3         250         320           September 25 <sup>th</sup> , 2015         Cs-134         ND (0.77)         ND (0.43)           *Discharged on October 6 <sup>th</sup> Gross β         ND (0.58)         ND (0.62)           *Beptember 23 <sup>rd</sup> , 2015         Cs-137         ND (0.69)         ND (0.50)           *Discharged on October 5 <sup>th</sup> Gross β         ND (0.66)         ND (0.47)           *Discharged on October 3 <sup>rd</sup> Cs-134         ND (0.79)         ND (0.46)           September 21 <sup>st</sup> , 2015         Cs-134         ND (0.79)         ND (0.46)           *Discharged on October 3 <sup>rd</sup> Gross β         ND (0.85)         ND (0.51)           *Discharged on October 2 <sup>rd</sup> Cs-134         ND (0.63)         ND (0.50)           *Discharged on October 2 <sup>rd</sup> Gross β         ND (0.63)         ND (0.49)           *Discharged on October 2 <sup>rd</sup> Gross β         ND (0.63)         ND (0.49)	October 9**	H-3	230	300
$ \begin{tabular}{lllllllllllllllllllllllllllllllllll$		Cs-134	ND (0.85)	ND (0.54)
H-3   250   320	September 27 <sup>th</sup> , 2015	Cs-137	ND (0.66)	ND (0.64)
H-3   250   320	*Discharged on	Gross β	ND (0.94)	ND (0.49)
September 25 <sup>th</sup> , 2015           *Discharged on October 6 <sup>th</sup> Gross β         ND (0.58)         ND (0.62)           *Discharged on October 5 <sup>th</sup> Gross β         ND (0.89)         ND (0.50)           *Discharged on October 5 <sup>th</sup> Cs-134         ND (0.69)         ND (0.46)           *Discharged on October 5 <sup>th</sup> Gross β         ND (0.85)         ND (0.51)           *Discharged on October 3 <sup>rd</sup> Cs-134         ND (0.79)         ND (0.46)           *Discharged on October 3 <sup>rd</sup> Gross β         ND (0.85)         ND (0.50)           *Discharged on October 2 <sup>rd</sup> Cs-134         ND (0.63)         ND (0.49)           September 19 <sup>th</sup> , 2015         Cs-134         ND (0.63)         ND (0.49)           *Discharged on October 2 <sup>rd</sup> Gross β         ND (0.80)         ND (0.49)	October 8	H-3	250	320
*Discharged on October 6 <sup>th</sup> *Discharged on October 6 <sup>th</sup> September 23 <sup>rd</sup> , 2015  *Discharged on October 5 <sup>th</sup> *Discharged on October 5 <sup>th</sup> September 21 <sup>st</sup> , 2015  *Discharged on October 3 <sup>rd</sup> *Discharged on October 3 <sup>rd</sup> September 21 <sup>st</sup> , 2015  *Discharged on October 3 <sup>rd</sup> September 21 <sup>st</sup> , 2015  *Discharged on October 3 <sup>rd</sup> September 19 <sup>th</sup> , 2015  *Discharged on October 2 <sup>rd</sup> September 19 <sup>th</sup> , 2015  *Discharged on October 2 <sup>rd</sup> September 19 <sup>th</sup> , 2015  *Discharged on October 2 <sup>rd</sup> September 19 <sup>th</sup> , 2015  *Discharged on October 2 <sup>rd</sup> Gross β ND (0.80)  September 19 <sup>th</sup> , 2015  *Discharged on October 2 <sup>rd</sup> Gross β ND (0.80)  ND (0.49)  ND (0.49)		Cs-134	ND (0.77)	ND (0.43)
October 6 <sup>th</sup> H-3         250         330           September 23 <sup>rd</sup> , 2015           *Discharged on October 5 <sup>th</sup> Cs-134         ND (0.69)         ND (0.46)           *Discharged on October 5 <sup>th</sup> Gross β         ND (0.85)         ND (0.51)           *Discharged on October 3 <sup>rd</sup> Cs-134         ND (0.79)         ND (0.46)           *Discharged on October 3 <sup>rd</sup> Gross β         ND (0.85)         ND (0.50)           *Discharged on October 2 <sup>rd</sup> Cs-134         ND (0.63)         ND (0.49)           *Discharged on October 2 <sup>rd</sup> Gross β         ND (0.80)         ND (0.49)	September 25 <sup>th</sup> , 2015	Cs-137	ND (0.58)	ND (0.62)
H-3   250   330     September 23 <sup>rd</sup> , 2015   Cs-134   ND (0.69)   ND (0.46)     *Discharged on October 5 <sup>th</sup>   Gross β   ND (0.85)   ND (0.51)     September 21 <sup>st</sup> , 2015   Cs-134   ND (0.79)   ND (0.46)     *Discharged on October 3 <sup>rd</sup>   Gross β   ND (0.79)   ND (0.46)     *Discharged on October 3 <sup>rd</sup>   Gross β   ND (0.85)   ND (0.51)     *Discharged on October 19 <sup>th</sup> , 2015   Cs-134   ND (0.63)   ND (0.49)     *Discharged on October 2 <sup>nd</sup>   Gross β   ND (0.53)   ND (0.49)     *Discharged on October 2 <sup>nd</sup>   Gross β   ND (0.80)   ND (0.49)     *Discharged on October 2 <sup>nd</sup>   Gross β   ND (0.80)   ND (0.49)     *Discharged on October 2 <sup>nd</sup>   Gross β   ND (0.80)   ND (0.49)	*Discharged on	Gross β	ND (0.89)	ND (0.50)
September 23 <sup>rd</sup> , 2015           *Discharged on October 5 <sup>th</sup> Cs-137         ND (0.66)         ND (0.47)           H-3         320         380           September 21 <sup>st</sup> , 2015         Cs-134         ND (0.79)         ND (0.46)           *Discharged on October 3 <sup>rd</sup> Gross β         ND (0.53)         ND (0.51)           *Discharged on October 2 <sup>nd</sup> Cs-134         ND (0.85)         ND (0.50)           *Discharged on October 2 <sup>nd</sup> Cs-134         ND (0.63)         ND (0.49)           *Discharged on October 2 <sup>nd</sup> Gross β         ND (0.80)         ND (0.49)	October 6"	H-3	250	330
$ \begin{tabular}{lllllllllllllllllllllllllllllllllll$		Cs-134	ND (0.69)	ND (0.46)
October 5 <sup>th</sup> H-3         320         380           September 21 <sup>st</sup> , 2015         Cs-134         ND (0.79)         ND (0.46)           *Discharged on October 3 <sup>rd</sup> Gross β         ND (0.53)         ND (0.51)           H-3         410         500           September 19 <sup>th</sup> , 2015         Cs-134         ND (0.63)         ND (0.49)           *Discharged on October 2 <sup>nd</sup> Gross β         ND (0.80)         ND (0.49)           *Discharged on October 2 <sup>nd</sup> Gross β         ND (0.80)         ND (0.49)	September 23 <sup>rd</sup> , 2015	Cs-137	ND (0.66)	ND (0.47)
H-3   320   380	*Discharged on	Gross β	ND (0.85)	ND (0.51)
September 21 <sup>st</sup> , 2015         *Discharged on October 3 <sup>rd</sup> Cs-137       ND (0.53)       ND (0.51)         H-3       H-3       H-3       ND (0.85)       ND (0.50)         September 19 <sup>th</sup> , 2015       Cs-134       ND (0.63)       ND (0.49)         *Discharged on October 2 <sup>nd</sup> Gross β       ND (0.80)       ND (0.49)         *Discharged on October 2 <sup>nd</sup> Gross β       ND (0.80)       ND (0.49)	October 5"	H-3	320	380
		Cs-134	ND (0.79)	ND (0.46)
October 3 <sup>rd</sup> H-3         410         500           September 19 <sup>th</sup> , 2015         Cs-134         ND (0.63)         ND (0.49)           *Discharged on October 2 <sup>nd</sup> Gross β         ND (0.80)         ND (0.49)	September 21st, 2015	Cs-137	ND (0.53)	ND (0.51)
H-3   410   500	*Discharged on	Gross β	ND (0.85)	ND (0.50)
September 19 <sup>th</sup> , 2015   Cs-137   ND (0.53)   ND (0.49)     *Discharged on October 2 <sup>nd</sup>   Gross β   ND (0.80)   ND (0.49)	October 3°°	H-3	410	500
*Discharged on October 2 <sup>nd</sup> Gross β ND (0.80) ND (0.49)		Cs-134	ND (0.63)	ND (0.49)
October 2 <sup>nd</sup>	September 19 <sup>th</sup> , 2015	Cs-137	ND (0.53)	ND (0.49)
H-3 470 570	*Discharged on	Gross β	ND (0.80)	ND (0.49)
	October 2 <sup>rd</sup>	H-3	470	570

0 1 1 11th 001	Cs-134	ND (0.75)	ND (0.53)
September 11 <sup>th</sup> , 2015	Cs-137	ND (0.67)	ND (0.59)
*Discharged on September 28 <sup>th</sup>	Gross β	ND (0.94)	ND (0.50)
September 26	H-3	420	510
th th	Cs-134	ND (0.59)	ND (0.47)
August 20 <sup>th</sup> , 2015	Cs-137	ND (0.58)	ND (0.59)
*Discharged on September 17 <sup>th</sup>	Gross β	ND (0.85)	ND (0.49)
September 17	H-3	400	480
46	Cs-134	ND (0.61)	ND (0.53)
August 20 <sup>th</sup> , 2015	Cs-137	ND (0.76)	ND (0.57)
*Discharged on September 16 <sup>th</sup>	Gross β	ND (0.94)	ND (0.50)
September 16	H-3	550	600
th	Cs-134	ND (0.74)	ND (0.39)
August 19 <sup>th</sup> , 2015	Cs-137	ND (0.78)	ND (0.57)
*Discharged on September 15 <sup>th</sup>	Gross β	ND (0.83)	ND (0.49)
September 15	H-3	110	390
th	Cs-134	ND (0.55)	ND (0.43)
August 19 <sup>th</sup> , 2015	Cs-137	ND (0.58)	ND (0.62)
*Discharged on September 14 <sup>th</sup>	Gross β	ND (0.85)	ND (0.47)
Ocptember 14	H-3	460	430

- \* ND represents a value below the detection limit; values in ( ) represent the detection limit.
- \* In order to ensure the results, Mitsubishi Nuclear Fuel, a third-party organization, has also conducted an analysis and verified the radiation level of the sampled water.

Prior to the first series of discharge of the groundwater pumped up from subdrain and groundwater drain systems, the Government of Japan requested JAEA to conduct an analysis on the purified groundwater to be discharged. The following result of analysis shows that analysis conducted by TEPCO is accurate.

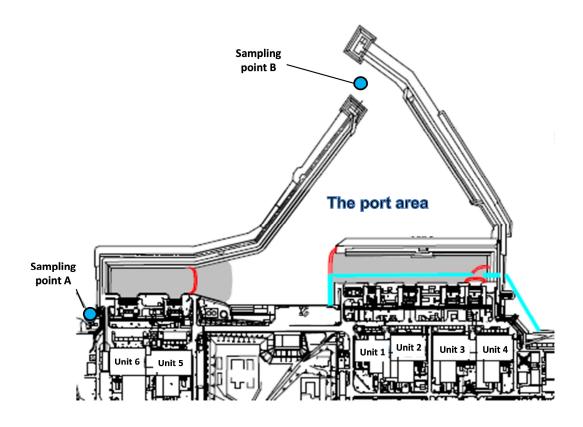
		(UIIIL BY/L)
Date of sampling	Detected	Analytical body
*Date of discharge	nuclides	JAEA
a de la companya de l	Cs-134	ND (0.85)
August 20 <sup>th</sup> , 2015	Cs-137	ND (0.71)
* Discharged on September 17 <sup>th</sup>	Gross β	ND (0.78)
September 17	H-3	420
th	Cs-134	ND (0.78)
August 20 <sup>th</sup> , 2015	Cs-137	ND (0.71)
* Discharged on September 16 <sup>th</sup>	Gross β	ND (0.77)
September 10	H-3	520
	Cs-134	ND (0.85)
August 19 <sup>th</sup> , 2015	Cs-137	ND (0.89)
* Discharged on September 15 <sup>th</sup>	Gross β	ND (0.78)
September 13	H-3	350
th	Cs-134	ND (0.91)
August 19 <sup>th</sup> , 2015	Cs-137	ND (0.93)
* Discharged on September 14 <sup>th</sup>	Gross β	ND (0.78)
ocptember 14	H-3	500

Result of detailed analysis conducted by TEPCO, JAEA and Japan Chemical Analysis Center (In order to confirm the validity of analysis, the Government of Japan also requests JAEA to conduct the analysis, while TEPCO requests Japan Chemical Analysis Center by itself.)

	Detected	Analytical body			
Date of sampling	nuclides	JAEA	TEPCO	Japan Chemical Analysis Center	
	Cs-134	0.041	0.012	0.041	
	Cs-137	0.18	0.16	0.20	
September 11 <sup>th</sup> ,2015	Gross α	ND (0.77)	ND (2.7)	ND (2.8)	
September 11 ,2015	Gross β	ND (0.45)	ND (0.94)	ND (0.54)	
	H-3	450	420	440	
	Sr-90	0.0026	ND (0.0012)	ND (0.0052)	

# Results of analysis on the seawater sampled around the port area

				1	(Onit. bq/L)	
Date of Detected		Sampling point A (North side of Unit 5,6 discharge channel)		Sampling point B (Port entrance)		
sampling	nuclides	Before	During	Before	During	
		discharge	discharge	discharge	discharge	
	Cs-134	_	ND (0.82)	_	_	
October 2 <sup>nd</sup> ,	Cs-137	_	ND (0.56)	_	_	
2015	Gross β	_	12	_	_	
	H-3	_	2.0	_	_	
	Cs-134	_	ND (0.75)	_	_	
September	Cs-137	_	ND (0.53)	_	_	
28 <sup>th</sup> , 2015	Gross β	_	15	_	_	
	H-3	_	ND (1.6)	_	_	
	Cs-134					
September	Cs-137	The seawater sampling canceled due to tsunami advisory.				
18 <sup>th</sup> , 2015	Gross β					
	H-3					
	Cs-134	ND (0.78)	1.8	ND (0.59)	ND (0.60)	
September	Cs-137	ND (0.59)	7.8	ND (0.50)	ND (0.43)	
17 <sup>th</sup> , 2015	Gross β	13	15	ND (16)	ND (16)	
	H-3	ND (1.6)	ND (1.6)	ND (1.6)	2.5	
	Cs-134	ND (0.72)	ND (0.67)	ND (1.3)	ND (0.62)	
September	Cs-137	ND (0.82)	ND (0.68)	ND (0.92)	ND (0.71)	
15 <sup>th</sup> , 2015	Gross β	11	11	ND (18)	ND (15)	
	H-3	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	
	Cs-134	ND (0.70)	ND (0.46)	ND (0.66)	ND (0.60)	
September	Cs-137	ND (0.72)	0.75	ND (0.78)	ND (0.58)	
14 <sup>th</sup> , 2015	Gross β	14	7.6	18	ND (17)	
	H-3	ND (1.8)	ND (1.8)	ND (1.8)	ND (1.8)	



## (Reference)

Radionuclides	Operational targets	Legal discharge limit (Density limit by the Reactor Regulation)	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

 $<sup>\</sup>divideontimes$  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 water quality of the groundwater having been pumped up for by-passing at Fukushima Daiichi NPS (made available by TEPCO prior to discharge)

Date of sampling		Analytical body	
*Date of discharge	Detected nuclides	TEPCO	Japan Chemical Analysis Center
46	Cs-134	ND (0.77)	ND (0.65)
October 15 <sup>th</sup> , 2015	Cs-137	ND (0.53)	ND (0.50)
*Discharged on October 28 <sup>th</sup>	Gross β	ND (0.80)	ND (0.54)
October 28	H-3	170	170
	Cs-134	ND (0.69)	ND (0.80)
October 8 <sup>th</sup> , 2015	Cs-137	ND (0.56)	ND (0.62)
*Discharged on October 21 <sup>st</sup>	Gross β	ND (0.80)	ND (0.58)
October 21	H-3	170	180
	Cs-134	ND (0.69)	ND (0.73)
October 1 <sup>st</sup> , 2015	Cs-137	ND (0.72)	ND (0.77)
*Discharged on October 14 <sup>th</sup>	Gross β	ND (0.89)	ND (0.61)
October 14	H-3	190	180
September 24 <sup>th</sup> ,	Cs-134	ND (0.67)	ND (0.73)
2015	Cs-137	ND (0.58)	ND (0.55)
*Discharged on	Gross β	ND (0.90)	ND (0.59)
October 7 <sup>th</sup>	H-3	170	190

<sup>\*</sup> ND represents a value below the detection limit; values in ( ) represent the detection limit

<sup>\*</sup> 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 analysis conducted by TEPCO, JAEA and Japan Chemical Analysis Center (In order to confirm the validity of analysis, the Government of Japan also requests JAEA to conduct the analysis, while TEPCO requests Japan Chemical Analysis Center by itself.)

		Analytical body			
Date of sampling	Detected nuclides	JAEA	TEPCO	Japan Chemical Analysis Center	
	Cs-134	ND (0.0047)	ND (0.0046)	ND (0.0064)	
	Cs-137	0.0046	ND (0.0042)	0.0044	
September 2 <sup>nd</sup> ,	Gross α	ND (0.59)	ND (2.7)	ND (3.6)	
2015	Gross β	ND (0.45)	ND (0.78)	ND (0.57)	
	H-3	140	130	140	
	Sr-90	0.0042	ND (0.0012)	ND (0.0049)	

Results of analysis 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)
	Cs-134	ND (0.68)
October 7 <sup>th</sup> , 2015	Cs-137	ND (0.40)
*During discharge	Gross β	12
	H-3	ND (1.7)

(Reference) (Unit: Bq/L)

Radionuclides	Operational targets	Legal discharge limit (Density limit by the Reactor Regulation)	WHO Guidelines for Drinking Water Quality
Cs-134	1	60	10
Cs-137	1	90	10
Gross α	_	I	_
Gross β	5 (1) *	I	_
H-3	1,500	60,000	10,000
Sr-90	_	30	10

 $<sup>\</sup>divideontimes$  The operational target of Gross  $\beta$  is 1 Bq/L in the survey which is conducted once every ten days.