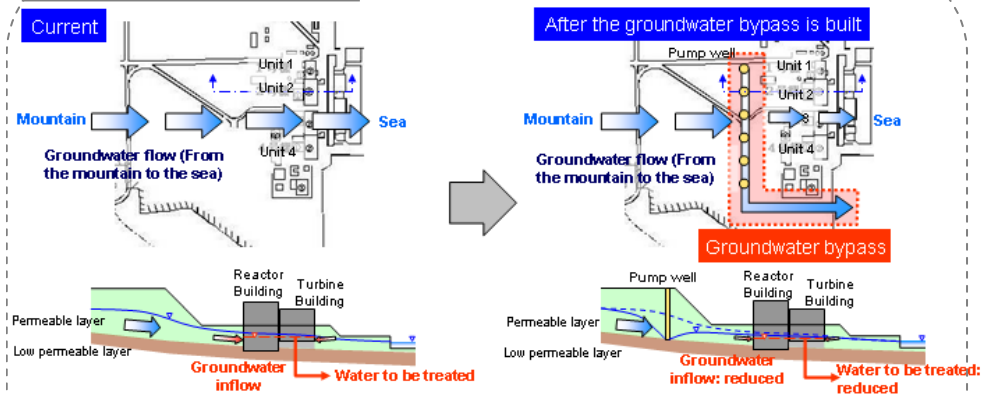


# Progress Status of the Groundwater Bypass Construction

May 13, 2013  
Tokyo Electric Power Company

The groundwater bypass is being built for the purpose of reducing groundwater inflow into buildings through pumping and bypassing the groundwater flowing from the mountain side in the upstream of buildings. As a result of water quality test on the groundwater pumped up from system A pump well and the water stored in the temporary storage tank, the results were below the detection limit or at sufficiently low levels.

## (1) Groundwater Bypass



Groundwater flows from the mountain side to the sea side through the permeable layer and part of it flows into buildings. In order to reduce the groundwater inflow into buildings, the groundwater is pumped up in the upstream of buildings and the flow channel is bypassed.

## (2) Construction Progress of the Groundwater Bypass

- Work ongoing (as of April 23)
- Installation of the pump wells completed (all 12 pump wells)
  - Water quality analysis completed (5 out of 12 pump wells)
  - Installation of transfer equipment such as piping



**Water quality test of system A pump well and the temporary storage tank A has been completed (See ③ Water Quality Test Results for details)**

## (3) Water Quality Test Results

As a result of water quality test performed by TEPCO and a third party organization, the cesium 137 density was sufficiently lower than the allowable limit (1Bq/L (equivalent to the cesium density in the surrounding rivers)) and the densities of other nuclides were below the detection limits (ND) or sufficiently lower than the density limits specified by laws and regulations.

System Sampling point (Sampling date)	A system (Analyzed by TEPCO)				A system (Analyzed by a Third Party Organization)				Temporary storage tank (Gr-A-1 tank) April 16, 2013	Density limit specified by regulation
	No.1 Jan. 24, 2013	No.2 Feb. 5, 2013	No.3 Dec. 11, 2012	No.4 Feb. 1, 2013	No.1	No.2	No.3	No.4		
Cesium-134	0.047	0.021	0.011	0.060	ND (<0.0074)	ND (<0.0087)	ND (<0.01)	0.0015	ND (<0.042)	60
Cesium-137	0.074	0.033	0.012	0.12	ND (<0.0075)	ND (<0.0077)	ND (<0.01)	0.037	ND (<0.059)	90
Strontium-89	ND (<0.079)	ND (<0.059)	ND (<0.236)	ND (<0.065)	ND (<0.013)	ND (<0.012)	-	ND (<0.012)		300
Strontium-90	ND (<0.024)	ND (<0.021)	ND (<0.068)	ND (<0.022)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)		30
Tritium	9	15	10	39	2	3	ND (<3.7)	6	21	60,000
All α	ND (<1.7)	ND (<1.7)	ND (<1.0)	ND (<1.7)	ND (<1.8)	ND (<1.8)	ND (<1.1)	ND (<1.8)	ND (<3.0)	-
All β	ND (<2.7)	ND (<6.6)	ND (<2.7)	ND (<6.5)	ND (<4)	ND (<4)	ND (<0.2)	ND (<4)	ND (<6.3)	-

ND: Below the detection limit

## (4) Water Quality Test After the Operational Commencement

Every time water is discharged, monitoring will be performed on the representative nuclides (cesium-137 and all β) and the results will be announced in our web page, etc. as necessary.

Water quality test after the operational commencement of the groundwater bypass		
Purpose	Determine the feasibility of water discharge	Monitor density fluctuations through detailed analysis performed on a regular basis
Frequency	Timing of water discharge (Monitoring to be done beforehand)	About once a month for the time being (may change to once every 3 months depending on the situation)
Location	Temporary storage tank	Temporary storage tank
Item to check	- Whether cesium-137 is 1Bq/L or less (maximum allowed density) - Whether all β is below the detection limit (20Bq/L)	- Whether the density is sufficiently lower than that of the samples collected in the surrounding marine area and rivers (representative nuclide: cesium-137) - Detailed analysis by TEPCO and a third party organization
Analysis items (Detection limit)	Cesium-137 All β	Cesium-137 Strontium-90 Tritium All α All β