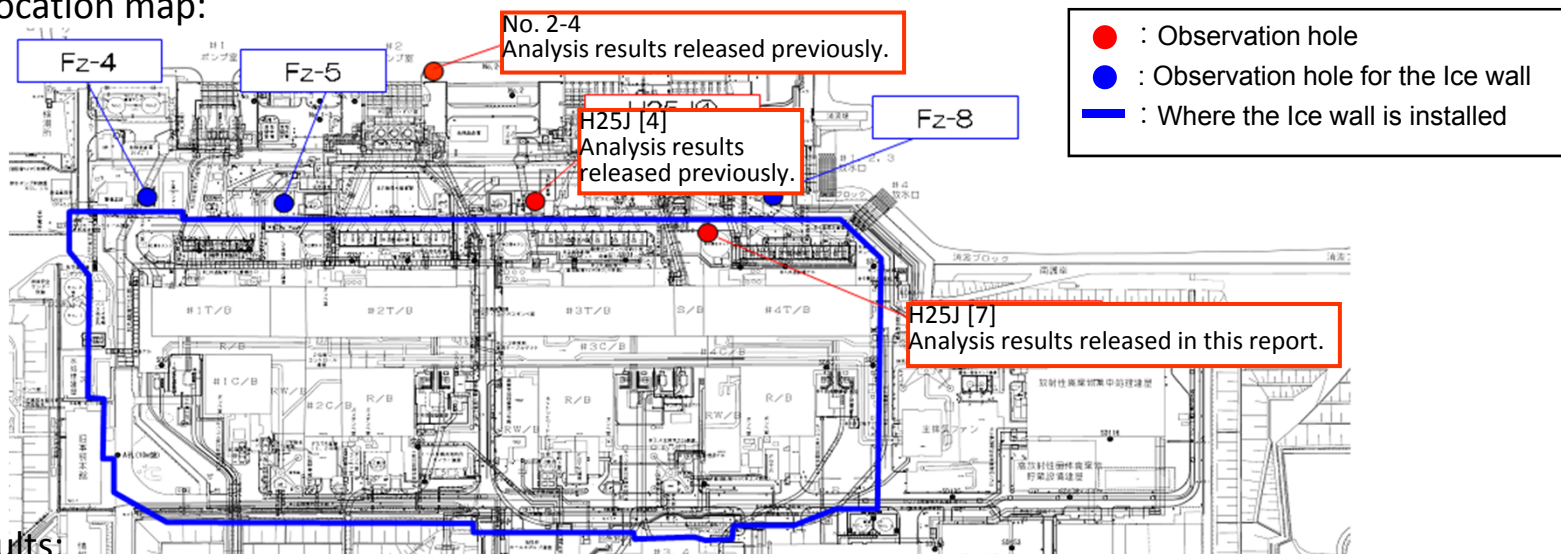


Water Quality Survey of the Lower Permeable Layer on the East Side (Seaside) of the Turbine Building at Fukushima Daiichi Nuclear Power Station

Revised Version

<Reference>
June 24, 2014
Tokyo Electric Power Company

- The survey of the groundwater quality in the lower permeable layer (alternate layer) on the East side of the turbine building has been ongoing, and new measurement results are obtained as blow.
- Tritium has been detected, for which the measurement of the water quality and water levels will be performed continuously.
- Sampling location map:



Survey results:

Unit: Bq/L

Location	Sampling date	Vol. of pumped up water for sampling	Cs134	Cs137	Gross β	H-3	Remarks
Seaside bet. Units 3 & 4 H25J [7]	Jun/10/2014	30L	ND (0.3)	ND (0.3)	ND (17)	120	The greater volume of pumped up water, the longer time taken for analyzing, which resulted in increasing radiation exposure. Therefore, to confirm whether the volume of water affects water quality, this time the survey was conducted with different volumes of water from last survey.
		120L	ND (0.3)	ND (0.3)	ND (17)	140	

* "ND" indicates a case where the analysis result is below the detection limit value that is shown in parenthesis under the "ND".

【Reference】 Water Quality Survey Results of the Lower Permeable Layer (Alternate layer) on the East Side of the Turbine Bldg.

○ Analysis results

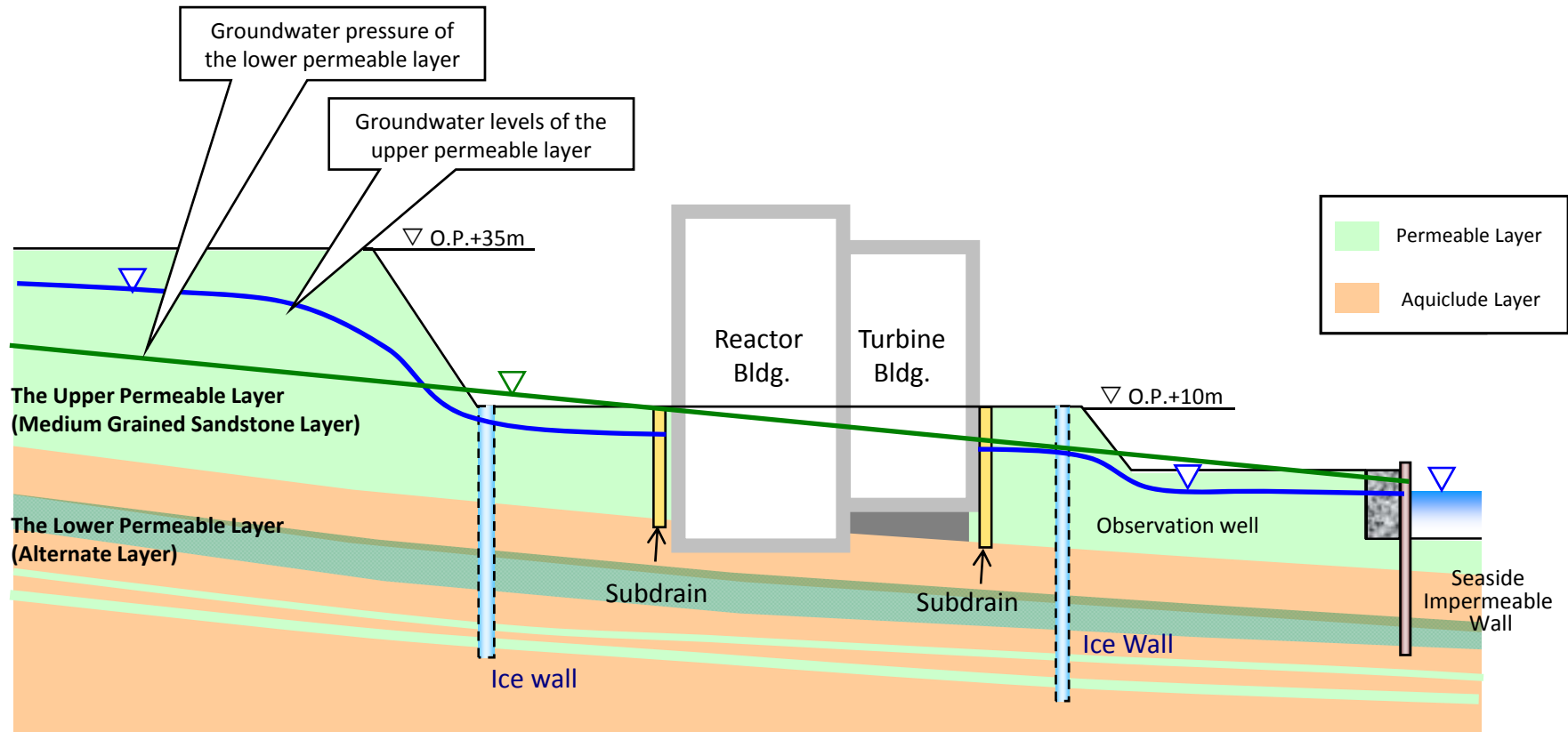
Unit for radioactive material density: Bq/L

“ND” indicates a case where the analysis result is below the detection limit value that is shown in parenthesis under the “ND”.

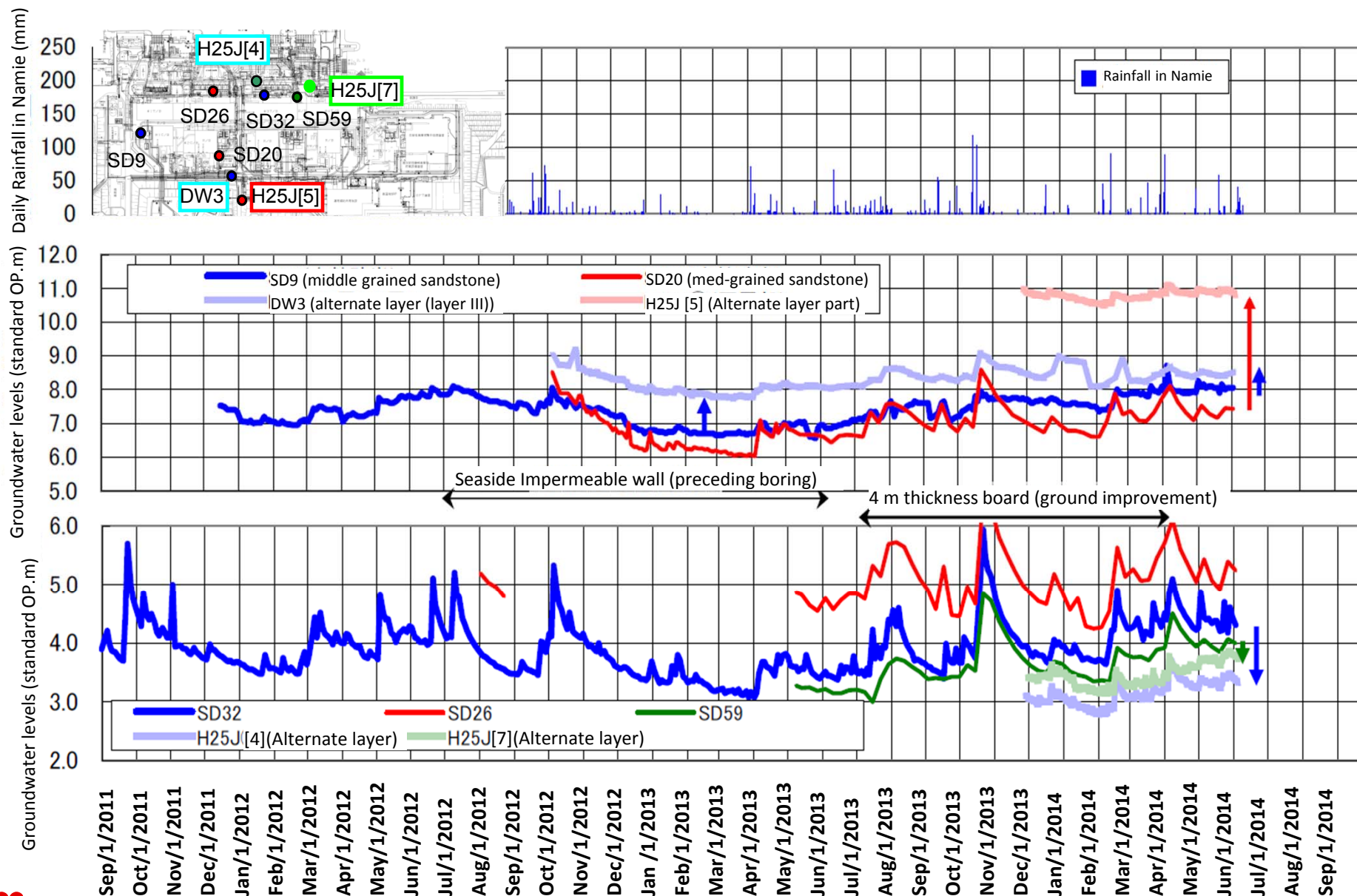
Location	Sampling spot	Sampling date	Cs134	Cs137	Gross β	H-3	Sampling methods
Seaside of Unit 3 H25J [4]	Lower permeable layer (alternate layer)	Apr/29/2014	ND (0.3)	ND (0.2)	ND (15)	ND (110)	Water obtained after replacing the whole water in the observation hole with a pump.
Seaside bet. Units 3&4 H25J [7]	Lower permeable layer (alternate layer)	Jan/10/2014	ND (0.4)	ND (0.5)	ND (12)	480	Water obtained after replacing the whole water in the observation hole with a pump.
		Jan/16/2014	ND (0.4)	1.0	ND (14)	ND (110)	Water obtained manually from the upper part of the observation hole with a water sampler.
			ND (0.4)	ND (0.4)	ND (14)	ND (110)	Water obtained after pumping up a small amount of water (approx. 10 L) from a deeper part of the observation hole.
		May/9/2014	ND (0.3)	ND (0.3)	ND (17)	ND (100)	Water obtained after pumping up a small amount of water (approx. 10 L) from a deeper part of the observation hole.
			ND (0.3)	ND (0.3)	ND (17)	170	Water obtained after pumping up a 30 L water from a deeper part of the observation hole.
			ND (0.4)	ND (0.3)	ND (17)	130	Water obtained after pumping up a 120 L water from a deeper part of the observation hole.
Units 2&3 Water intake bet. Units 2-3-4	Lower permeable layer (alternate layer)	May/21/2014	ND (0.4)	ND (0.5)	ND (16)	ND (110)	Water obtained after pumping up a 140 L water from a deeper part of the observation hole.

Location	Sampling point	Sampling date	Cs134	Cs137	Grossβ	H-3	Sampling methods
Fz-4	Lower permeable layer (alternate layer)	Apr/24/2014	ND (0.2)	ND (0.3)	ND (13)	ND (100)	Water obtained after pumping up a 140 L water from a deeper part of the observation hole.
Fz-5	Lower permeable layer (alternate layer)	May/28/2014	ND (0.3)	ND (0.3)	ND (15)	3,100	Water obtained after pumping up a 150 L water from a deeper part of the observation hole.
		Jun/4/2014	ND (0.3)	ND (0.3)	ND (15)	4,700	Water obtained after pumping up a 150 L water from a deeper part of the observation hole.
Fz-8	Lower permeable layer (alternate layer)	Apr/22/2014	ND (0.2)	ND (0.4)	ND (13)	ND (110)	Water obtained after pumping up a 110 L water from a deeper part of the observation hole.

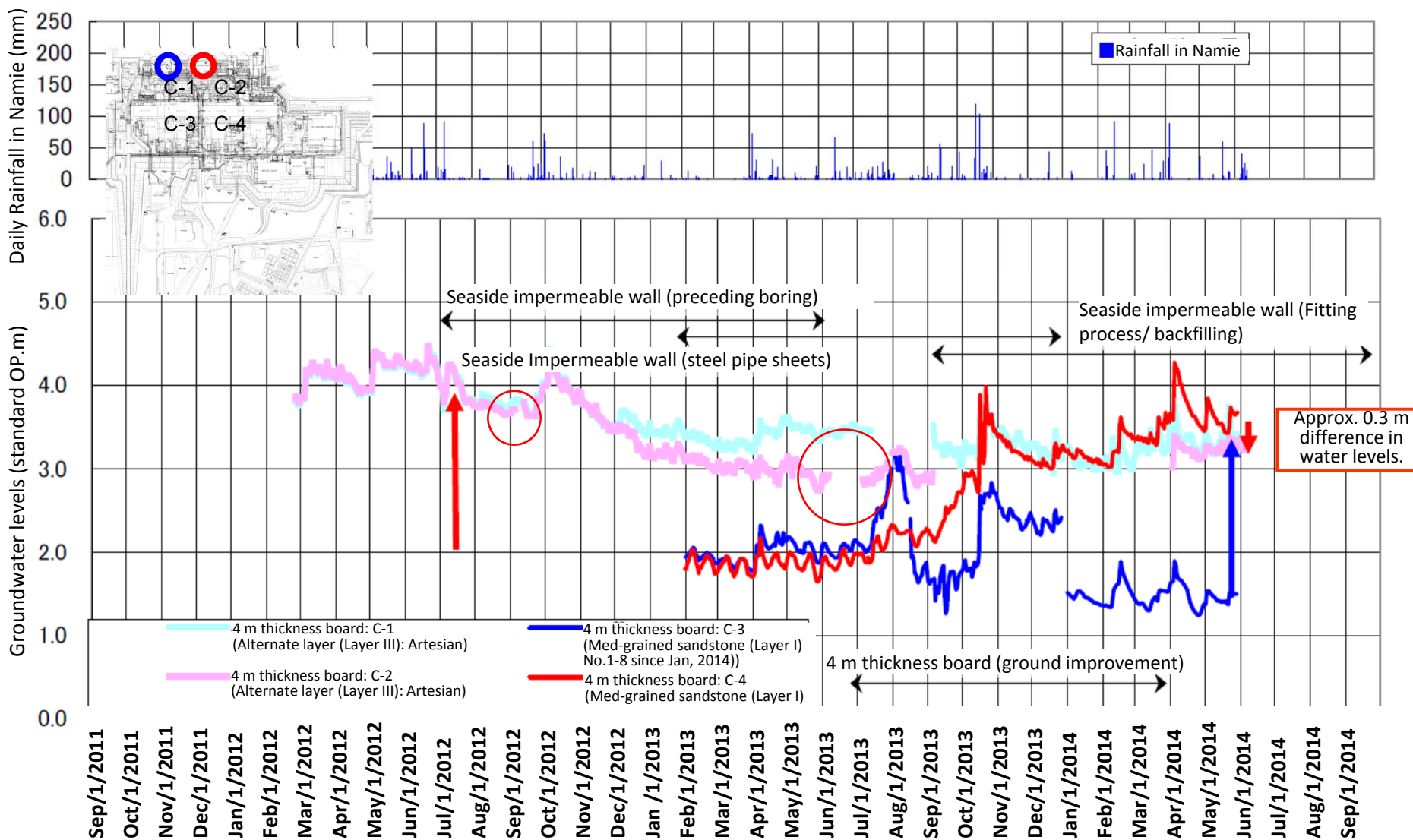
Distribution of Groundwater Levels



【Reference】 Groundwater Levels Transition Over Time of Medium-grained Sandstone and Alternate Layer Part (10 m thickness board)



【Reference】 Groundwater Levels Transition Over Time of Medium-grained Sandstone and Alternate Layer Part (4 m thickness board)



* Corrections have been made to the graph above due to some reading errors were found (the part enclosed with red circles) dated July 8, 2014.)