〈Reference〉

Installation of Water Level Indicators for Accumulated Water inside Unit 1 and 2 Buildings at Fukushima Daiichi Nuclear Power Station

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Tokyo Electric Power Company

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<Purpose in installing water level indicators in the buildings>

[Current Situation]

- While approx. 400 tons of underground water is estimated to flow into the buildings each day, it has been impossible to determine which units and which buildings dominantly receive the inflow.

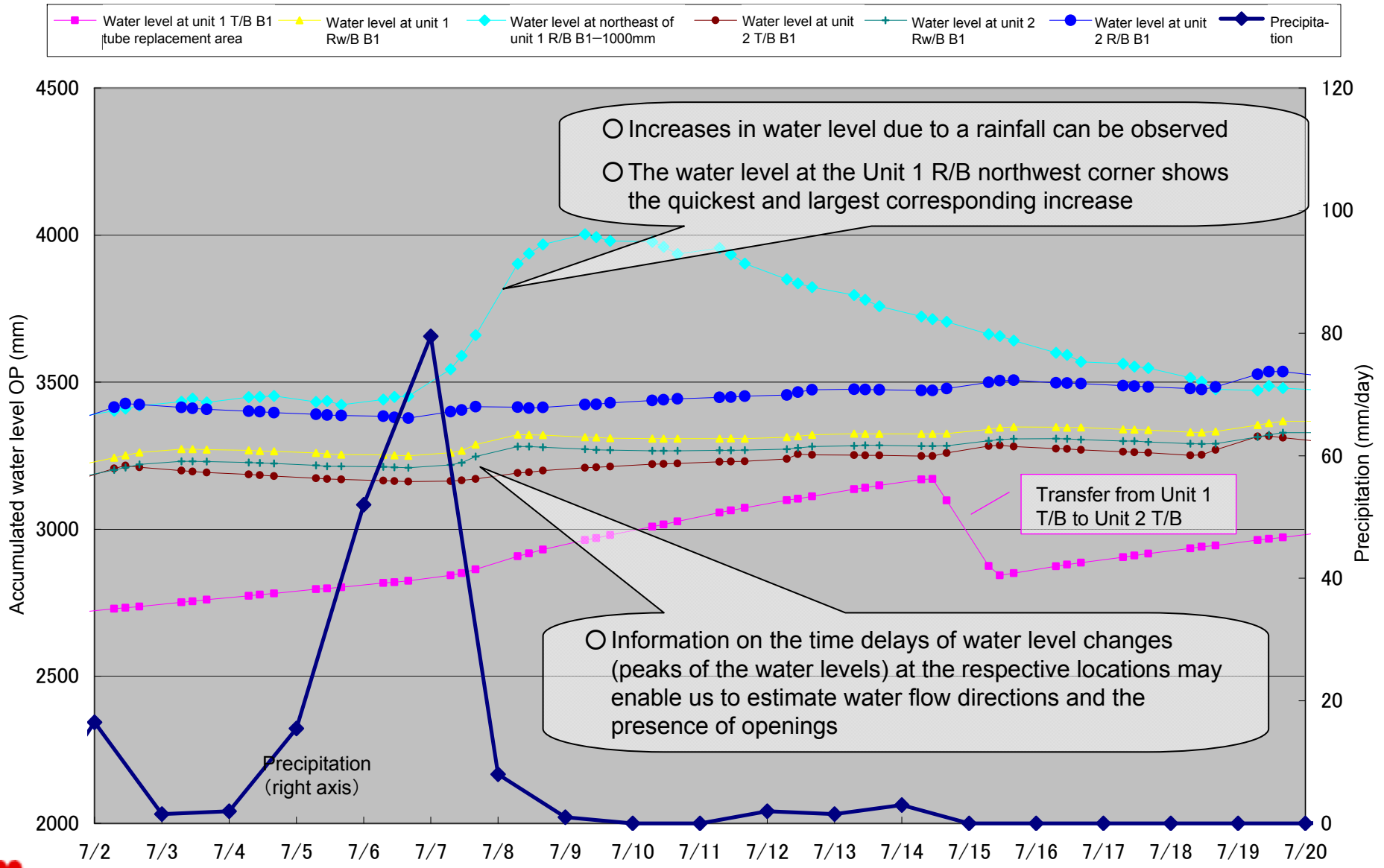
Installation of water level indicators and continuous obtainment of water level data …

enables us to have data that can be utilized in analysis and estimation for:

- Narrowing down units and buildings that dominantly receive underground water inflow
- Determining which locations out of the triangle corners and the torus rooms of the reactor buildings dominantly receive underground water inflow

- Grasping behavior of accumulated water within the buildings (locations through which water is allowed to flow from one building into another)

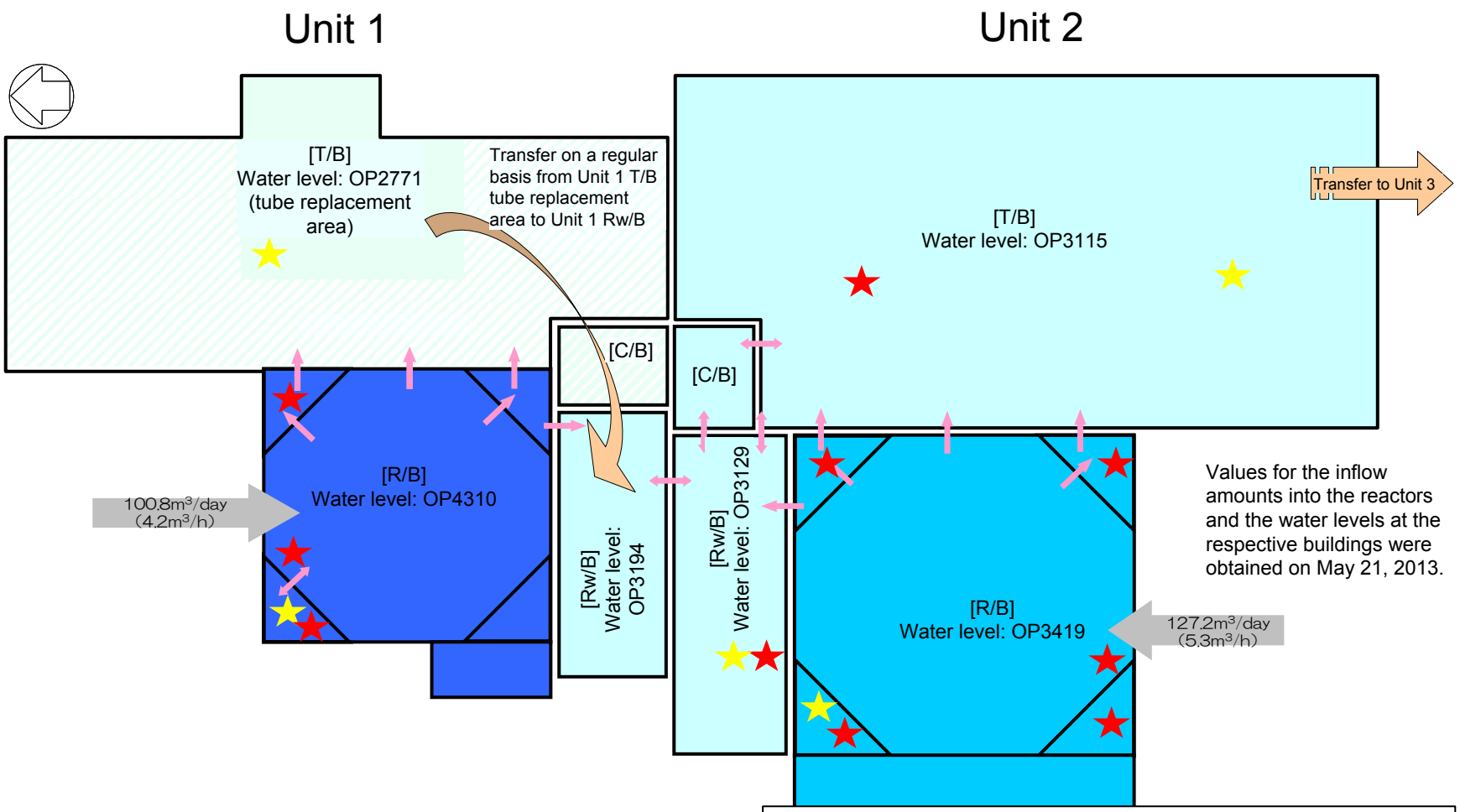
<Example of estimation using water level data (time delays of water levels)>



<Installation locations for water level indicators>

Location		Unit 1		Unit 2		Unit 3	
		Additional Installation	Remarks	Additional Installation	Remarks	Additional Installation	Remarks
R/B	Torus room	○	Leakage from PCV and water leakage into T/B are suspected. （To be placed through a hole drilled in the floor of the R/B 1st floor)	○	Leakage from PCV and water leakage into T/B are suspected. （To be placed through a hole drilled in the floor of the R/B 1st floor)	○	Leakage from PCV and water leakage into T/B are suspected.
	Northeast triangle corner	○	Installation is desired since the water level difference with the northwest triangle corner was found in investigation in September.	○	Water leakage into T/B and Rw/B through openings in the wall is suspected.	○	Water leakage to T/B and Rw/B through openings in the wall is suspected.
	Northwest triangle corner	○	Installation is desired since the water level difference with the northeast triangle corner was found in investigation in September.	○	Inflow from the adjacent HPCI and RCIC rooms is suspected.	○	Inflow from the adjacent HPCI and RCIC rooms is suspected.
	Southeast triangle corner	×	Installation is impossible due to current difficulty to access the location although inflow to Rw/B is suspected.	○	Water leakage to T/B through an opening in the wall is considered possible.	○	Water leakage to T/B through an opening in the wall is suspected.
	Southwest triangle corner	×	Installation is impossible due to current difficulty to access the location.	○	Inflow from the adjacent HPCI and RCIC rooms is suspected.	○	Inflow from the adjacent HPCI and RCIC rooms is suspected.
T/B		×	Accumulated water is considered to be only in the tube replacement area based on the current water level.（The wall surface toward T/B is in the air.）	○	Inflow of accumulated water from the R/B torus room, northeast and southeast triangle corners is suspected.	○	Inflow of accumulated water from the R/B torus room and the northeast and southeast triangle corners is suspected.
Rw/B		×	Since the connecting door with Unit 2 Rw/B is open, the water level at Unit 2 Rw/B, in which the radiation dose is lower, is to be measured.	○	Inflow of accumulated water from the R/B northeast triangle corner and outflow into T/B are suspected.	○	Inflow of accumulated water from the R/B northeast triangle corner and outflow into T/B are suspected.
Number of installation locations		3 locations in total		7 locations in total		7 locations in total (timing of installation, etc. are to be determined later)	

< Units 1 and 2: Where to install indicators>



★ Locations where to install indicators (new)*

★ Locations having indicators already installed (existing)

* For the purpose of suppressing radiation exposure in the installation work, water level indicators having sufficient resistance to radiation in the environments of the Units 1 and 2 are to be selected from the throw-in-type water level indicators, which are excellent in installation workability.

<Tentative schedule>

Unit	Work item	May	June
Unit 1	Preparation and bringing-in of water level indicators	Delivery of water level indicators ▼	
	Cabling and installation of digital recorder, etc.		
	Installation of water level indicators		Data acquisition and analysis
Unit 2	Preparation and bringing-in of water level indicators	Delivery of water level indicators ▼	
	Cabling and installation of digital recorder, etc.		
	Installation of water level indicators		Data acquisition and analysis