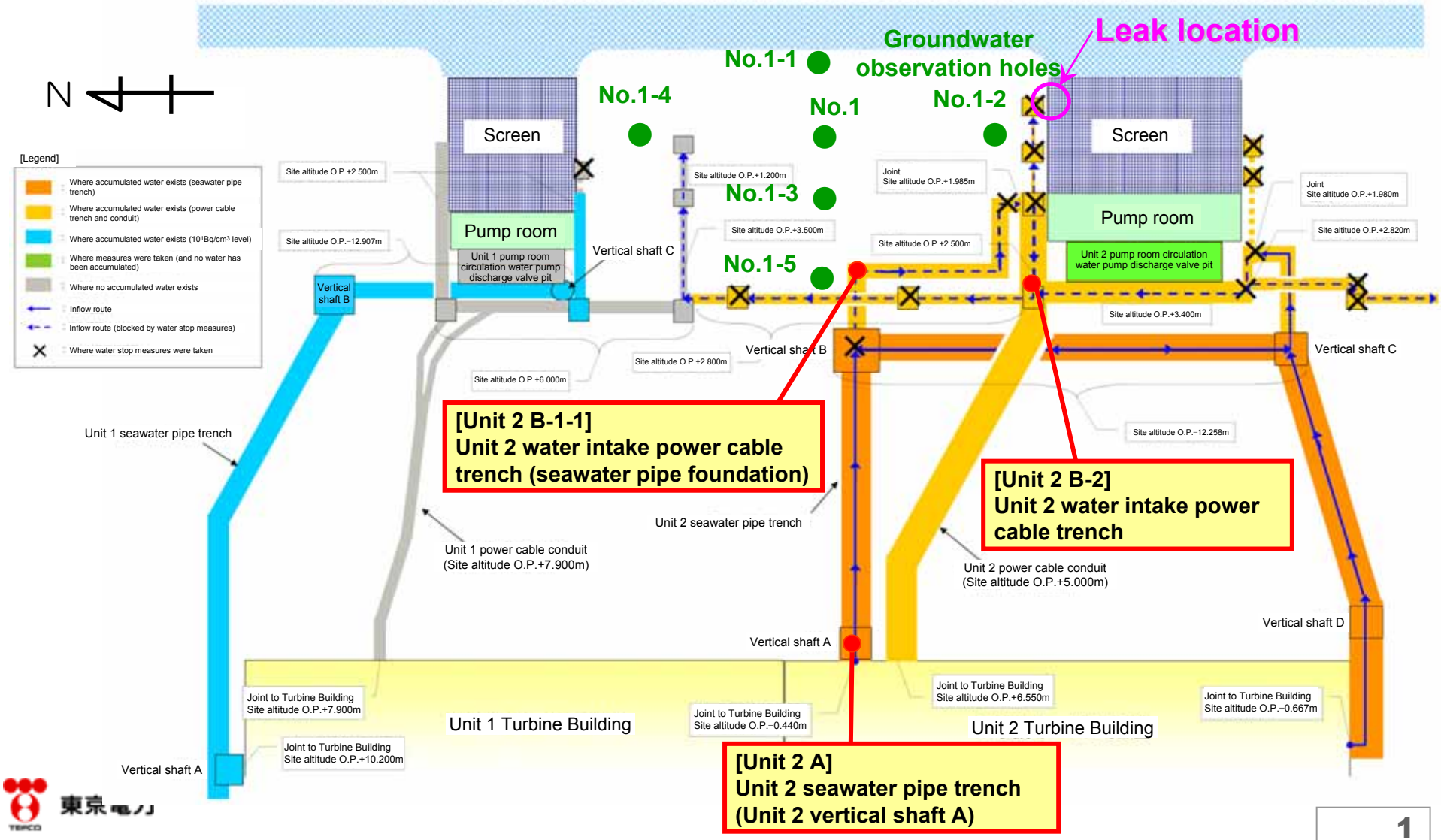
< Reference >

# Results and Current Evaluation from Inspection of Water Intake Power Cable Trench at Fukushima Daiichi Nuclear Power Station Unit 2

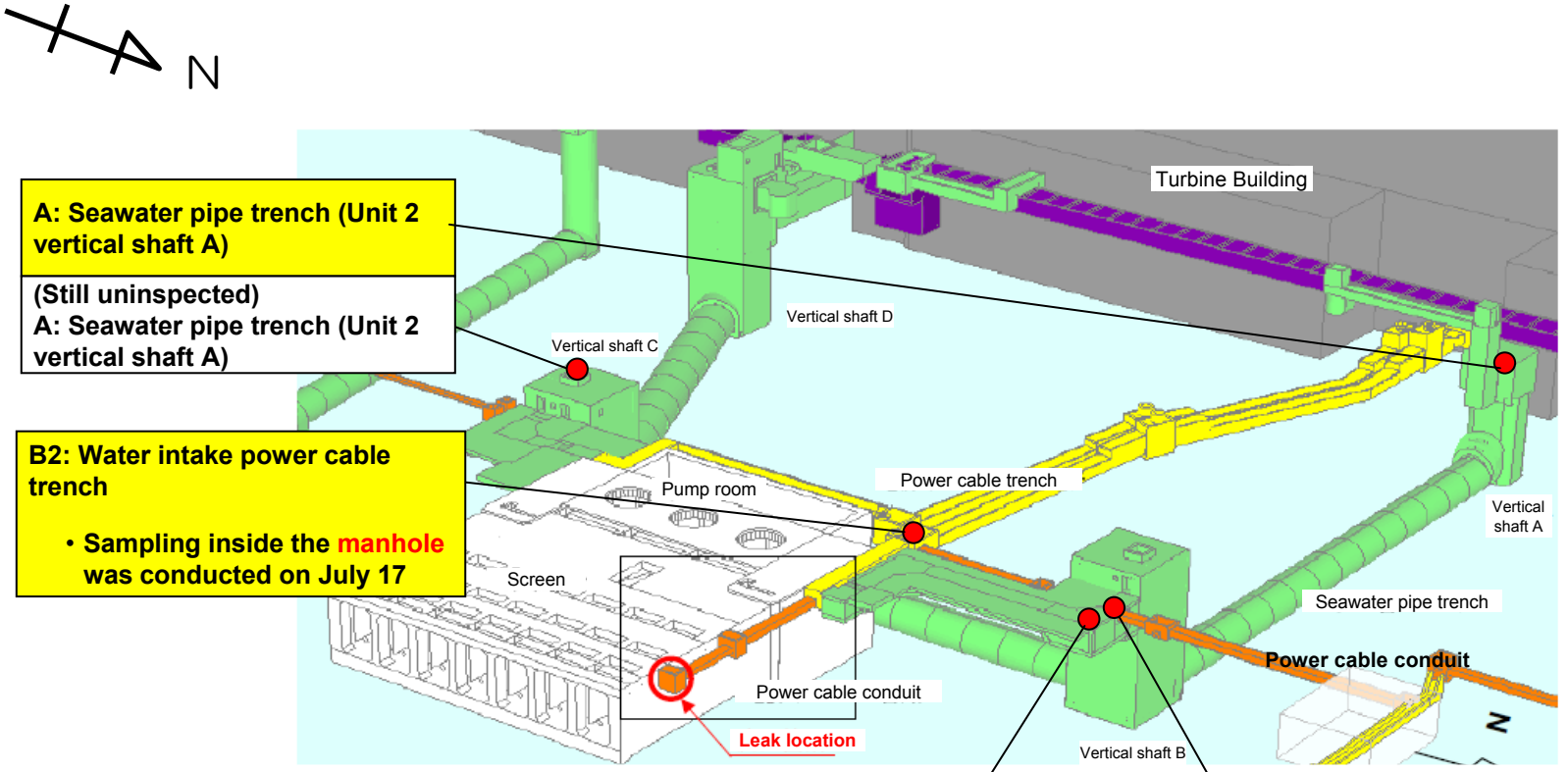
July 29, 2013
Tokyo Electric Power Company

TEPCO 東京電力

# Overview of Unit 2 Water Intake Power Cable Trench (1/2)



# Overview of Unit 2 Water Intake Power Cable Trench (2/2)



# Inspection Results

## [Unit 2 A] Unit 2 Seawater pipe trench (Unit 2 vertical shaft A)

| Sampling date | Chloride (ppm) | Cs134 (Bq/cm³) | Cs137 (Bq/cm³) | All β (Bq/cm³) | H-3 (Bq/cm³) |
|---|---|---|---|---|---|
| May 30, 2013 | 140 | $1.8 \times 10^4$ | $3.7 \times 10^4$ | – | – |

## [Unit 2 B-1-1] Unit 2 water intake power cable trench (seawater pipe foundation)

| Sampling date | Chloride (ppm) | Cs134 (Bq/cm³) | Cs137 (Bq/cm³) | All β (Bq/cm³) | H-3 (Bq/cm³) |
|---|---|---|---|---|---|
| July 26, 2013 | 8,000 | $7.5 \times 10^5$ | $1.6 \times 10^6$ | $7.5 \times 10^5$ | $8.7 \times 10^3$ |

| Water level measurement date | Water level*3 | Reference: Water level of Unit 2 vertical shaft A*4 |
|---|---|---|
| July 23, 2013 | OP.3150mm | OP.3083mm |
| July 26, 2013 | OP.3150mm | OP.3302mm |

## [Unit 2 B-2] Unit 2 water intake power cable trench

| Sampling date | Chloride (ppm) | Cs134 (Bq/cm³) | Cs137 (Bq/cm³) | All β (Bq/cm³) | H-3 (Bq/cm³) |
|---|---|---|---|---|---|
| July 17, 2013 | 70 | $1.2 \times 10^4$ | $2.4 \times 10^4$ | $2.3 \times 10^4$ | $1.2 \times 10^2$ |

| Water level measurement date | Water level*1 | Reference: Water level of Unit 2 vertical shaft A*2 |
|---|---|---|
| July 17, 2013 | OP.2760mm (water depth: approx. 70mm) | OP.3196mm |

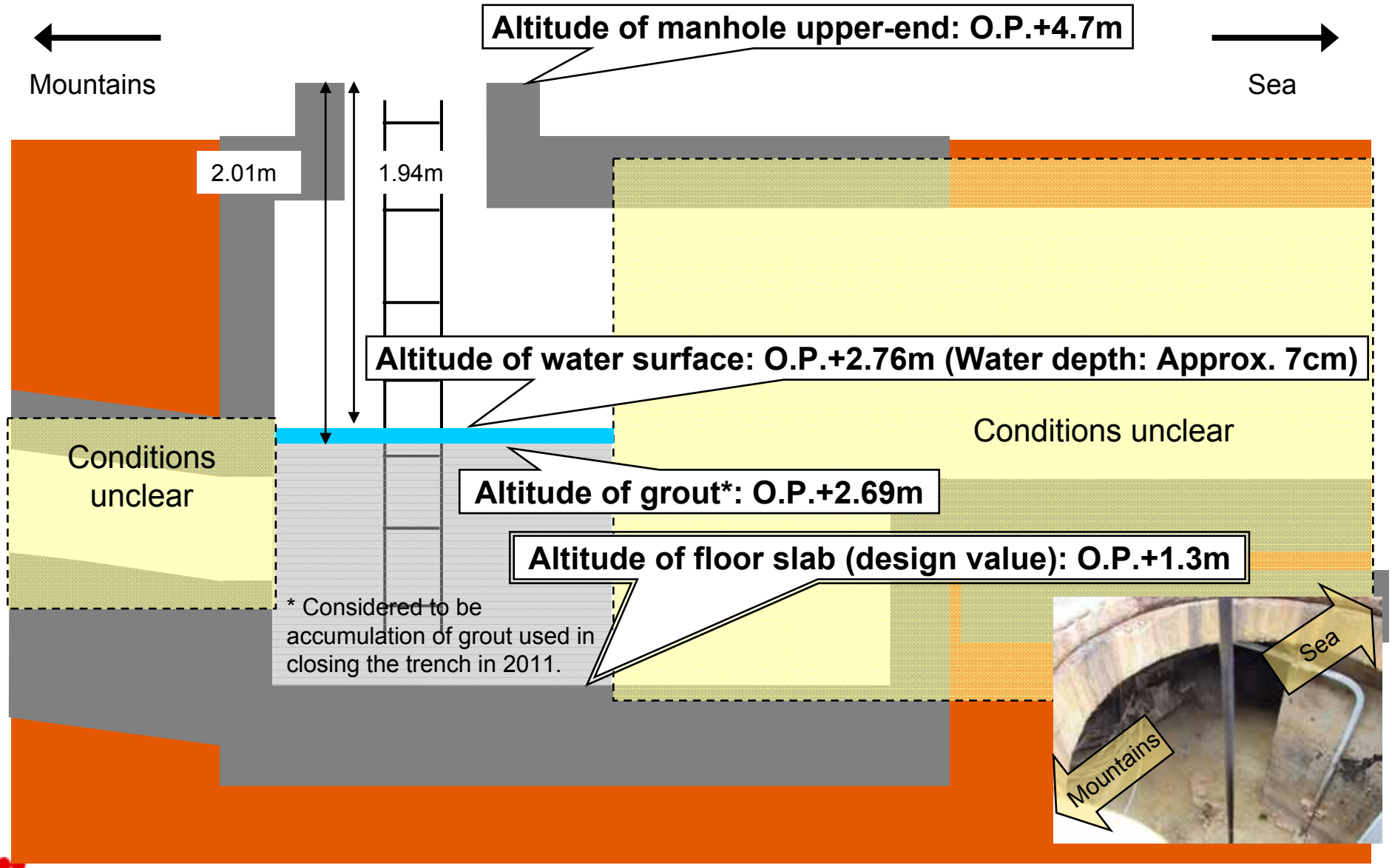
*1: Provisional measurement value obtained using a leveling rod.
*2: Measurement value regularly obtained (data as at 4:00 PM on July 17).
*3: Value measured using a water level gauge.
*2: Value measured at the same time as the water levels of the cable trench.

# Current Evaluation Reflecting Conditions Found in Inspections

| Evaluation item / Location | Communication with the Unit 2 seawater pipe trench | Water retained inside the trench |
|---|---|---|
| [Unit 2 B-1-1]<br>Unit 2 water intake power cable trench (seawater pipe foundation) | ■ There seems to be no communication with the seawater pipe trench<br>[Reason]<br>➢ No association has been found between water level changes in this trench and the Unit 2 vertical shaft A. | ■ It seems that contaminated water that flowed into the trench immediately after the accident has been retained as it was.<br>[Reasons]<br>➢ The Cs-137 density is in the order of the 6th power of ten (Bq/cm$^3$) as in the case of contaminated water that flowed into the trench immediately after the accident.<br>➢ The water level has been found unchanged. |
| [Unit 2 B-2]<br>Unit 2 water intake power cable trench | ■ There seems to be no communication with the seawater pipe trench<br>[Reason]<br>➢ The trench has a lower water level than the Unit 2 vertical shaft A. | ■ There is a possibility that water retained there (water depth as of July 19: approx. 7cm) may be residual water since the grout closure immediately after the accident, and the possibility of water having flowed out of the trench is unclear.<br>■ Rainwater, etc. seems to have flowed into the trench.<br>[Reason]<br>➢ Chloride concentration, cesium densities, etc are low (indicating the possibility of dilution with rainwater) |

In order to confirm whether water has flowed out of the trench, measurement of water levels (confirmation of increases and decreases of water levels) is needed.

# < Reference > [Unit 2 B-2] Conditions of Water Intake Power Cable Trench Interior (Illustration)




※ 画像は、７月19日に公表済み

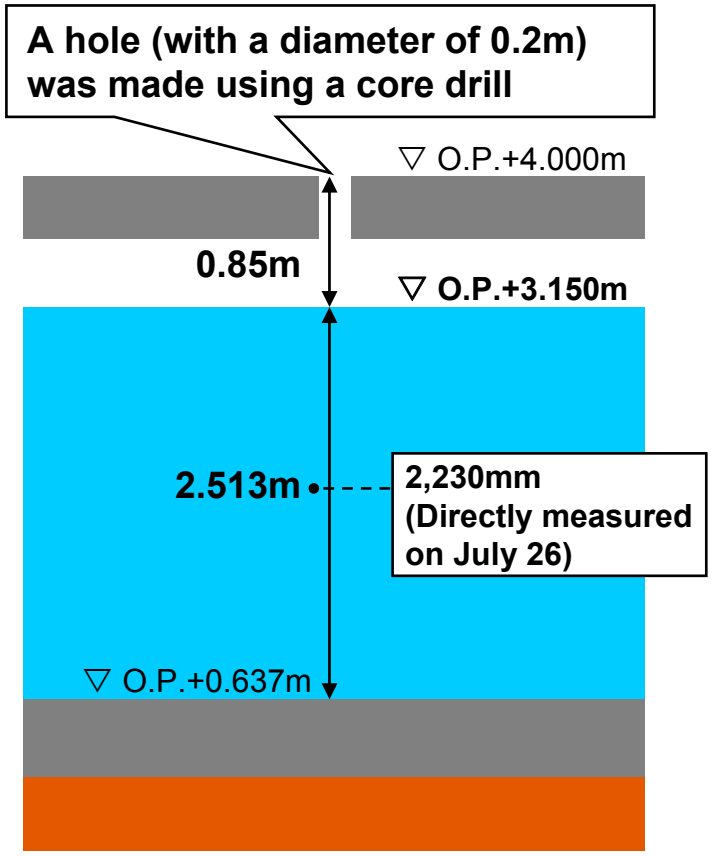
# < Reference > [Unit 2 B1-1] Conditions of Water Intake Power Cable Trench (Seawater Pipe Foundation)

Hole drilling

Installation of an iron cover

Implementation of entry prevention measures

Cross section of a part of the trench where a hole was made




* Values given as the altitudes of structures are design values.

* These photos have already been made public since July 19.