

# Drop in Water Levels in the Fukushima Daiichi Nuclear Power Station Unit 1 and Unit 3 Primary Containment Vessels

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## Overview

- On February 18, as parameters, such as primary containment vessel water levels and temperature, were being monitored, the Unit 1 primary containment vessel experienced a drop in water level. As a result, other parameters were checked and it was found that some of the temperature gauges in the primary containment vessels for Unit 1 and Unit 3 have been showing decreasing trends since February 15 and February 17, respectively.
- Therefore, we have been assessing related parameters since February 18, and today February 19 we determined that water levels in the Unit 1 and Unit 3 primary containment vessels are decreasing.
- Furthermore, since no significant fluctuations have been seen with temperatures at the bottom of the primary containment vessels, containment vessel gas management system radiation (including noble gas monitors), monitoring post and dust monitors at site borders, or on-site dust monitors, we have determined that there is no off-site impact.
- During inspections on February 13 following the earthquake, no abnormalities were found with reactor cooling water injection equipment parameters or during visual inspections, and we confirmed that cooling water is being injected into reactors in a suitable manner. It is possible that the cause of the drops in primary containment vessel water levels may be the result of changes to damaged portions of the primary containment vessel caused by the earthquake, so we will continue to watch and monitor parameters.
- Furthermore, at current time no significant fluctuations have been seen in reactor building water levels, but we are conducting a detailed assessment of, and monitoring, parameters.

## Chronological order of events

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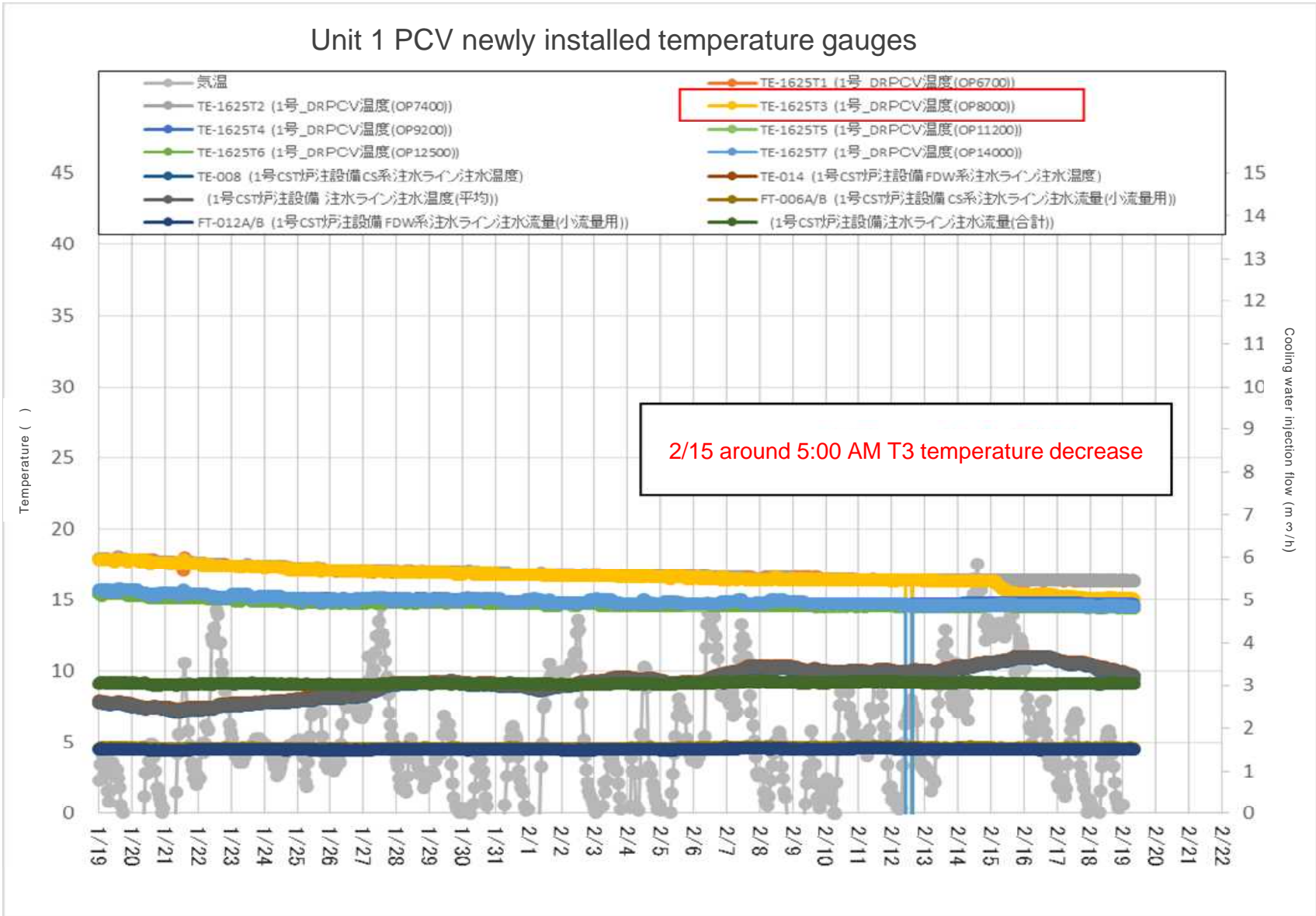
Around 11 PM, February 18

- During regular data sampling of operation logs, shift personnel discovers that water level in the Unit 1 primary containment vessel had dropped from L3 to L2.
- Parameters related to Unit 1 primary containment vessel water level fluctuations are checked.

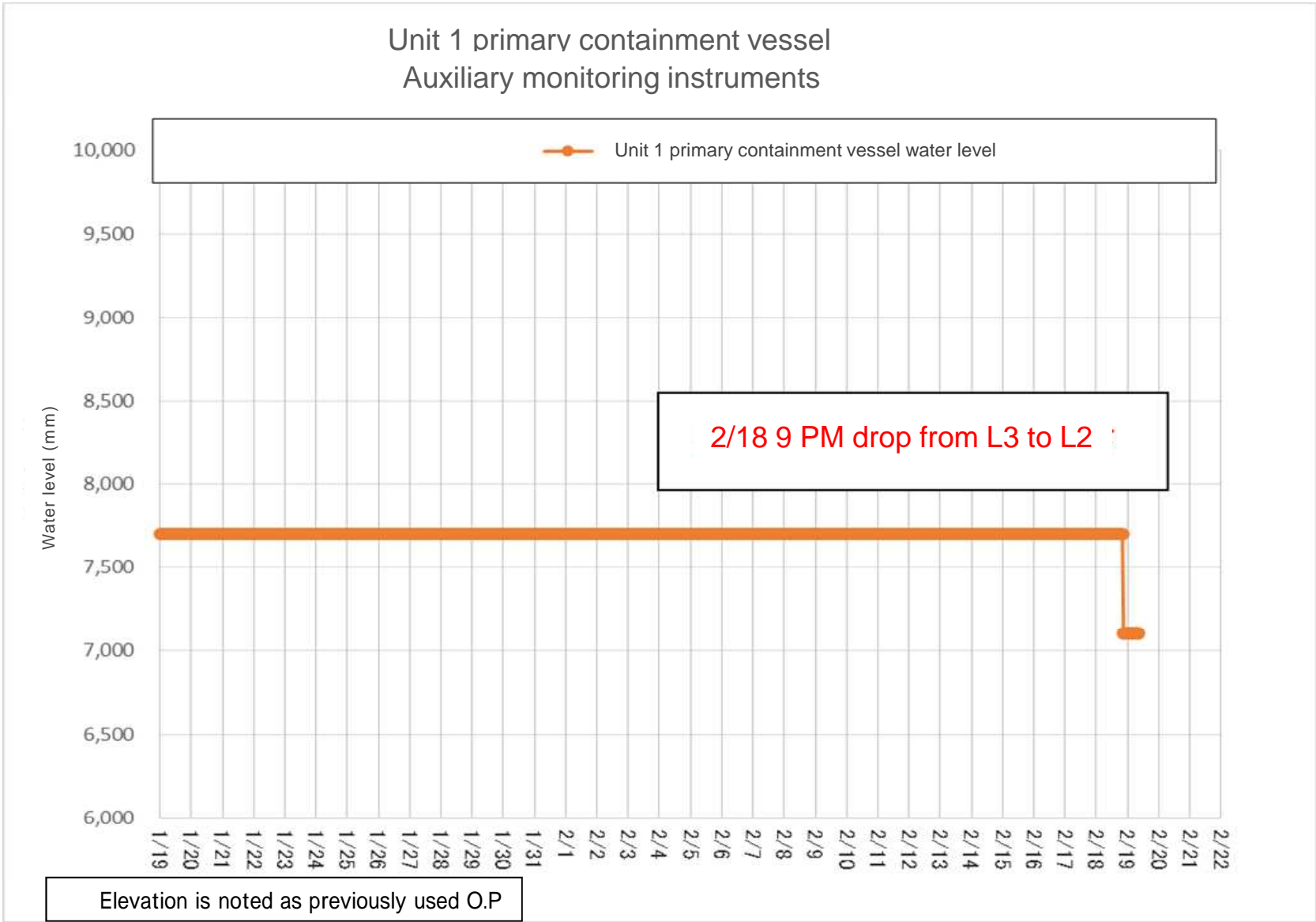
February 19

- News that the Unit 1 primary containment vessel water level has dropped from L3 to L2 is shared amongst departments on site.
- Relevant departments on site discuss and assess the possible causes of the drop in water level in the Unit 1 primary containment vessel.
- The following is discovered during this process:
  - ✓ It is found that at Unit 1, some temperature gauges in the primary containment vessel have shown decreasing trends since February 15.
  - ✓ At Unit 3, it is found that some temperatures in the primary containment vessel have shown decreasing trends since February 15, and that water level in the primary containment vessel is showing decreasing trends.
- As a result of a comprehensive assessment of all the aforementioned information the conclusion is drawn at around 5:00PM that water levels in the Unit 1 and Unit 3 primary containment vessels are decreasing.

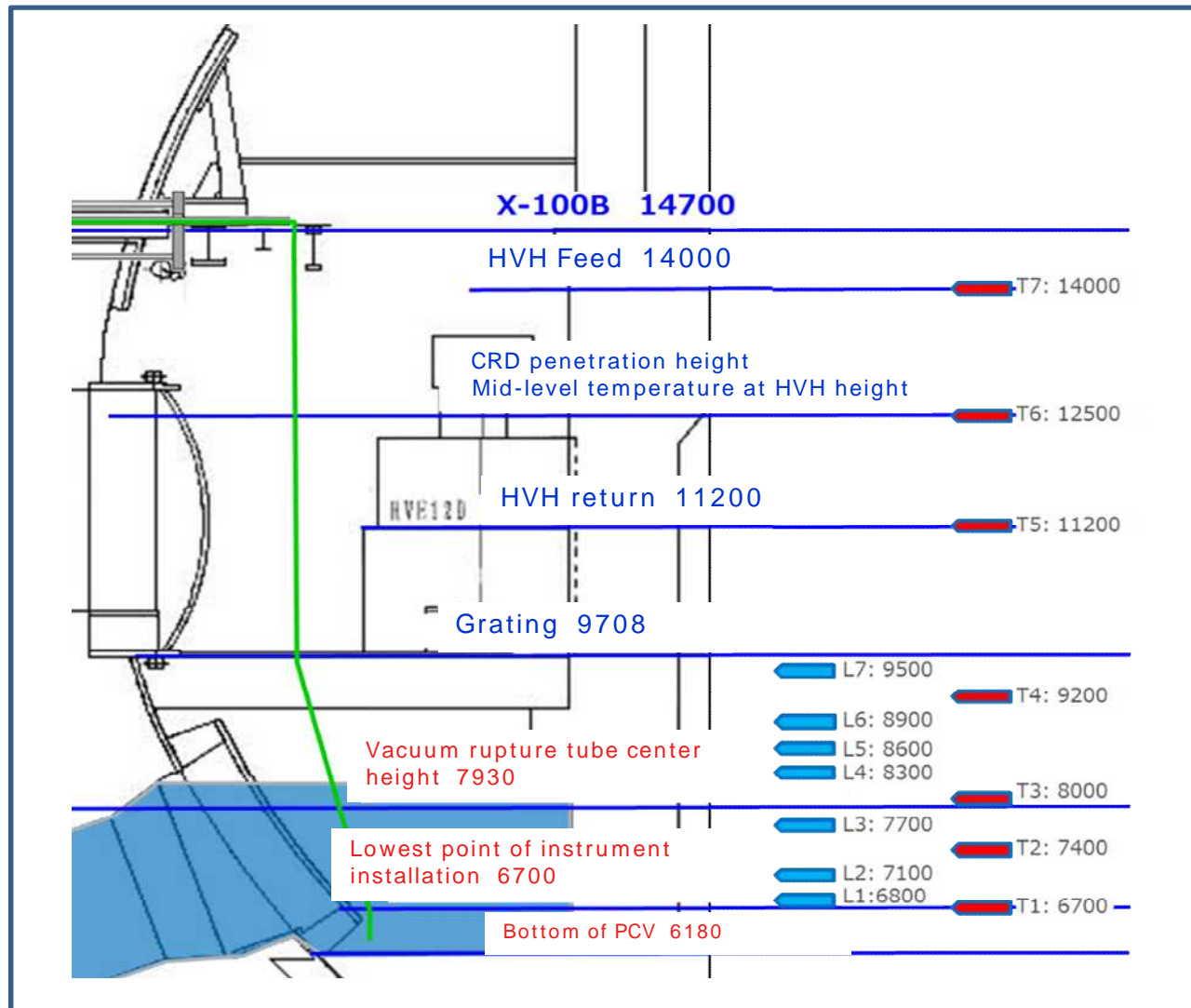
# Unit 1 primary containment vessel temperatures



# Unit 1 primary containment vessel water level

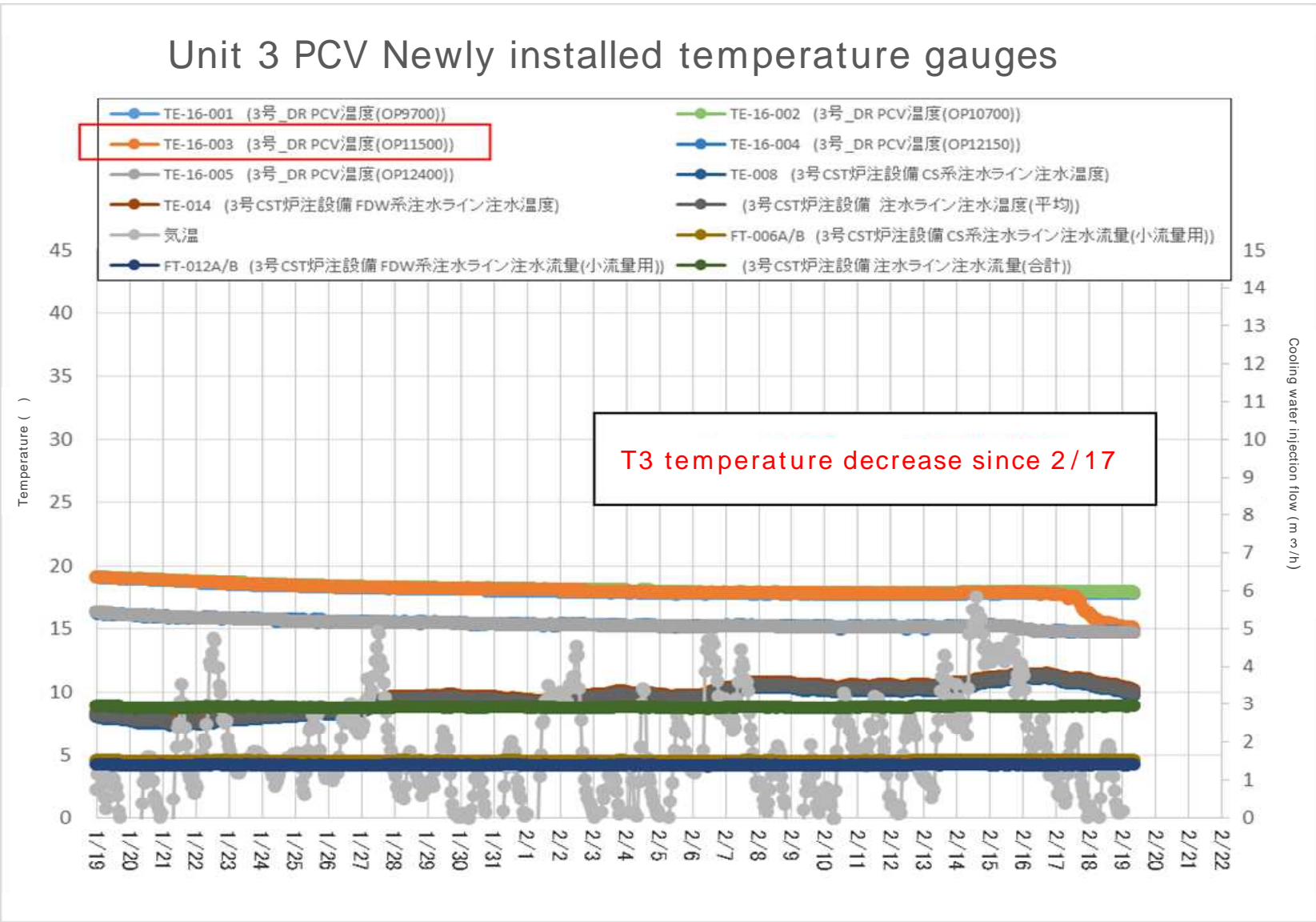


# Unit 1 primary containment vessel temperature gauge/water level gauge installation heights

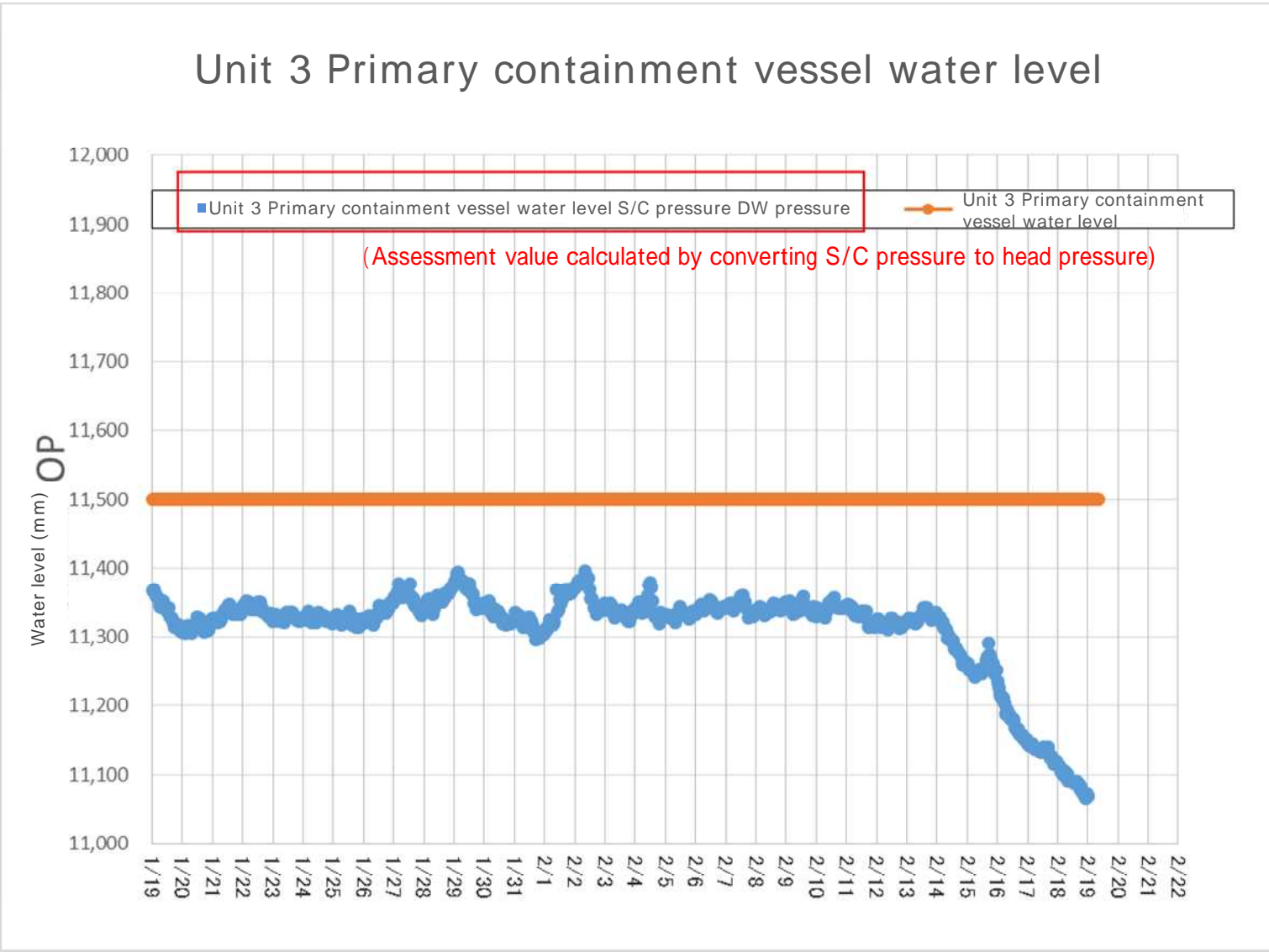


Elevation is noted as previously used O.P

# Unit 3 primary containment vessel temperatures, etc.

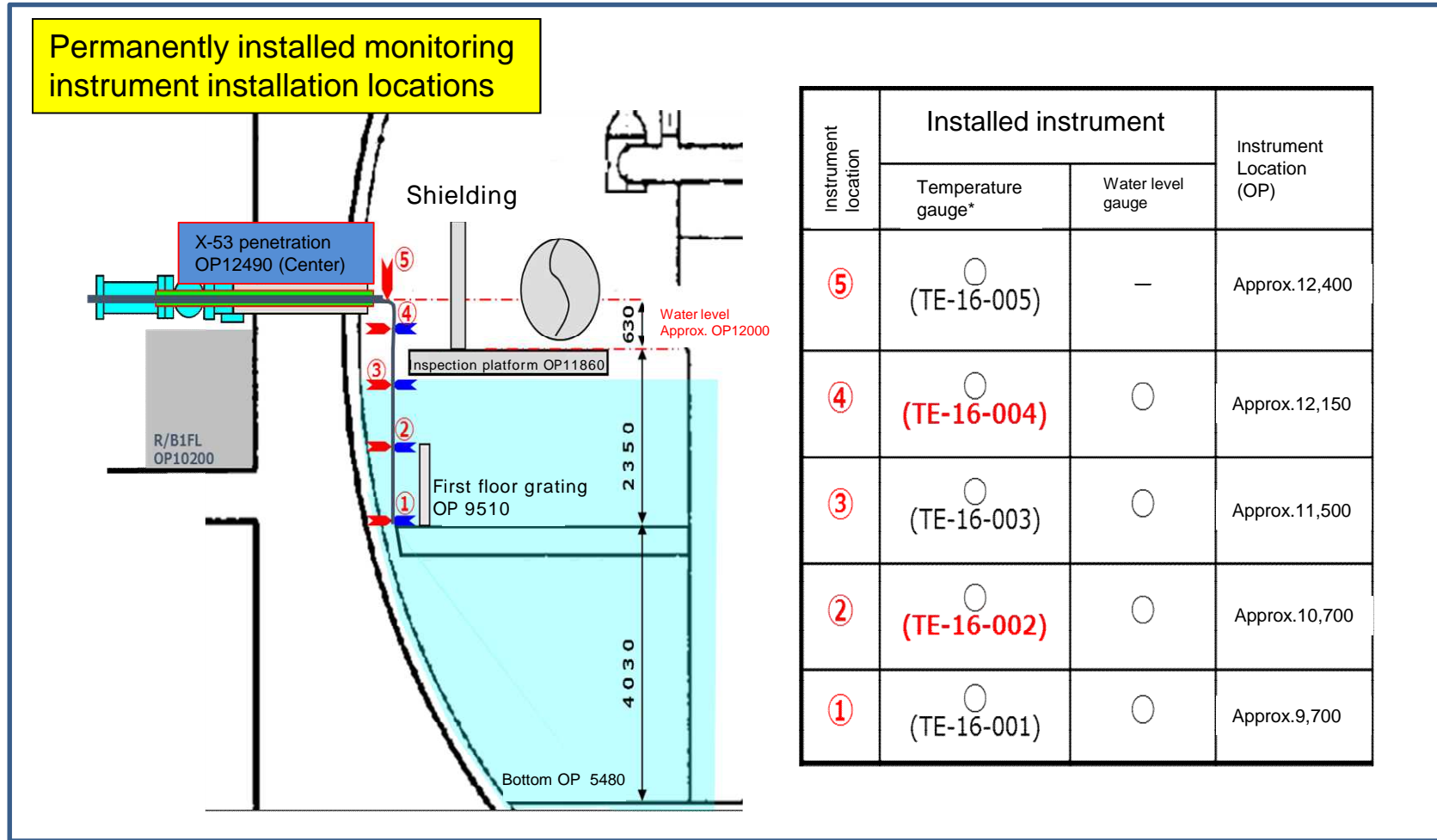


# Unit 3 primary containment vessel water level



Elevation is noted as previously used O.P

# Unit 3 primary containment vessel temperature gauge/water level gauge installation heights



Elevation is noted as previously used O.P