

The current challenges and good practices in Japan

“Measure to Reduce Radiation Exposure during the RV Core Internals Replacement at Ikata Nuclear Power Station Unit-1”

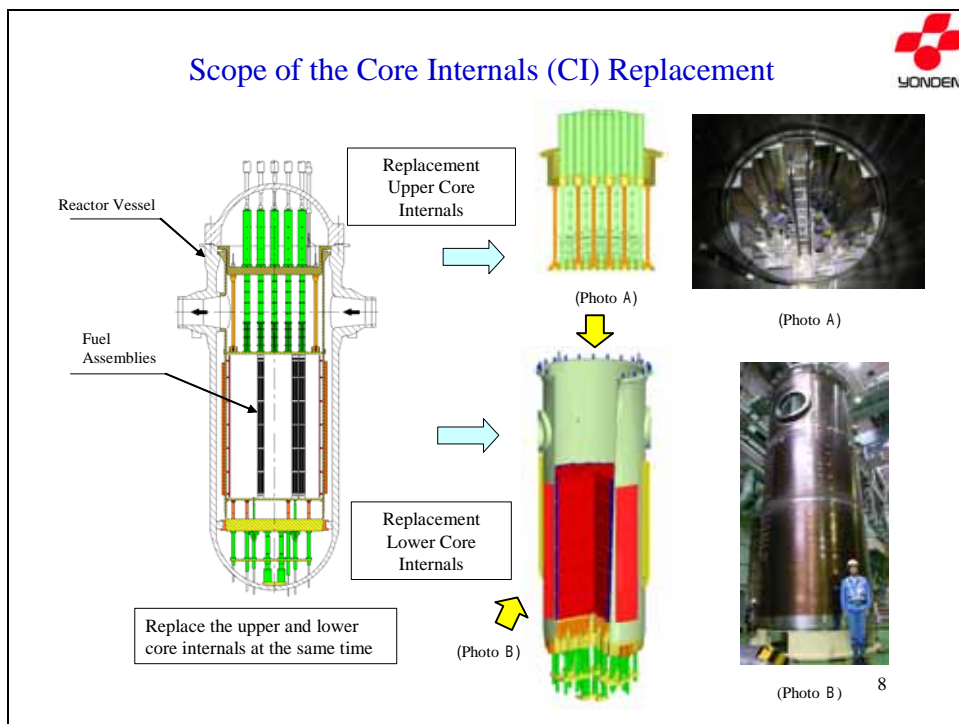
Yasuyuki Kashimoto, Shikoku Electric Power Co., Inc.



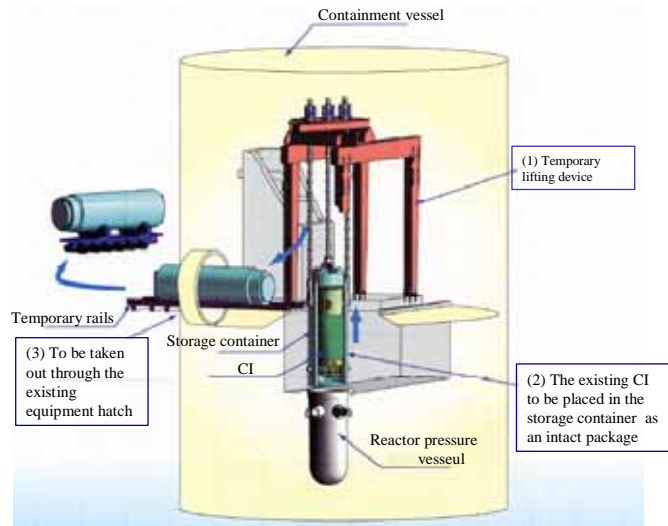
Mr. Kashimoto explained in detail about a variety of exposure reduction measures implemented in replacement of core internals of pressurized water reactor, Ikata Unit 1 as follows

- (1) Prior work plan
- (2) Mockup training
- (3) Installation of temporary shields
- (4) Remoteness and automation of low part plate insertion work to CI storage container
- (5) Warning to worker

Since it was the first-ever attempt in the world to replace all internal structure collectively, a prior work plan and the exposure reduction measures were examined carefully. Exposure dose decreased greatly below the planned dose due to these measures. The replacement work of CI of Unit 2 is being performed now using their experience at Unit 1.



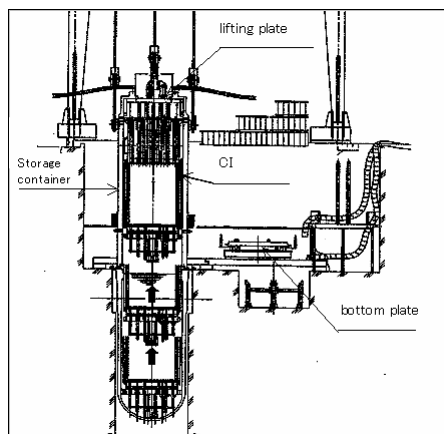
Conceptual Drawing for the Core Internals (CI) Replacement



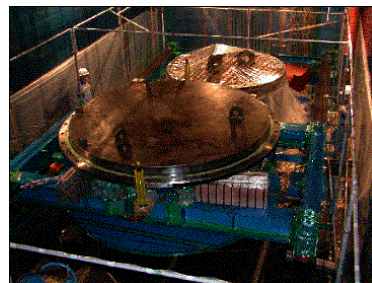
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(4) Automation of the work

Installed the bottom plate to the CI storage container automatically by remote-control to reduce exposure.



【How the bottom plate was installed】



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