Unit 3 Primary Containment Vessel Internal Investigation

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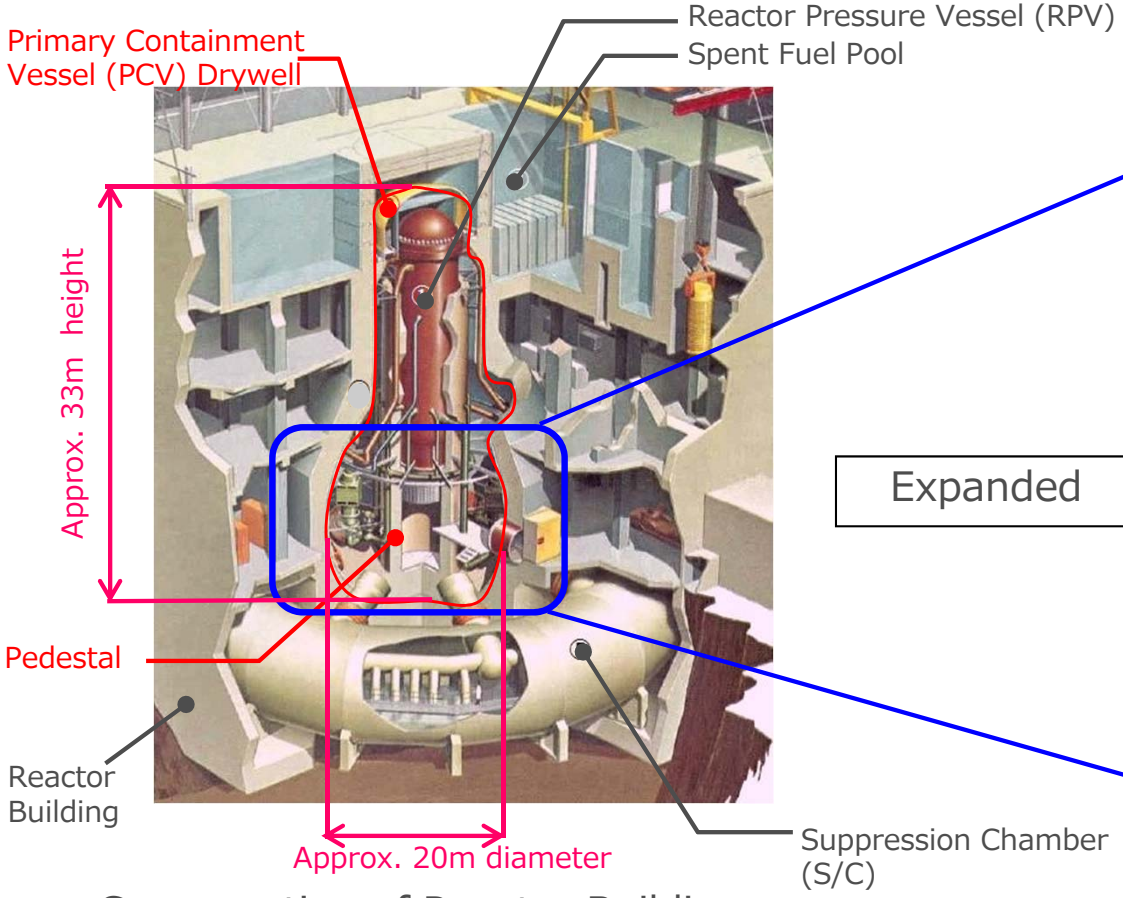
IRID TEPCO

Tokyo Electric Power Company Holdings, Inc.

1．Current conditions of Unit 3 Primary Containment Vessel (PCV)

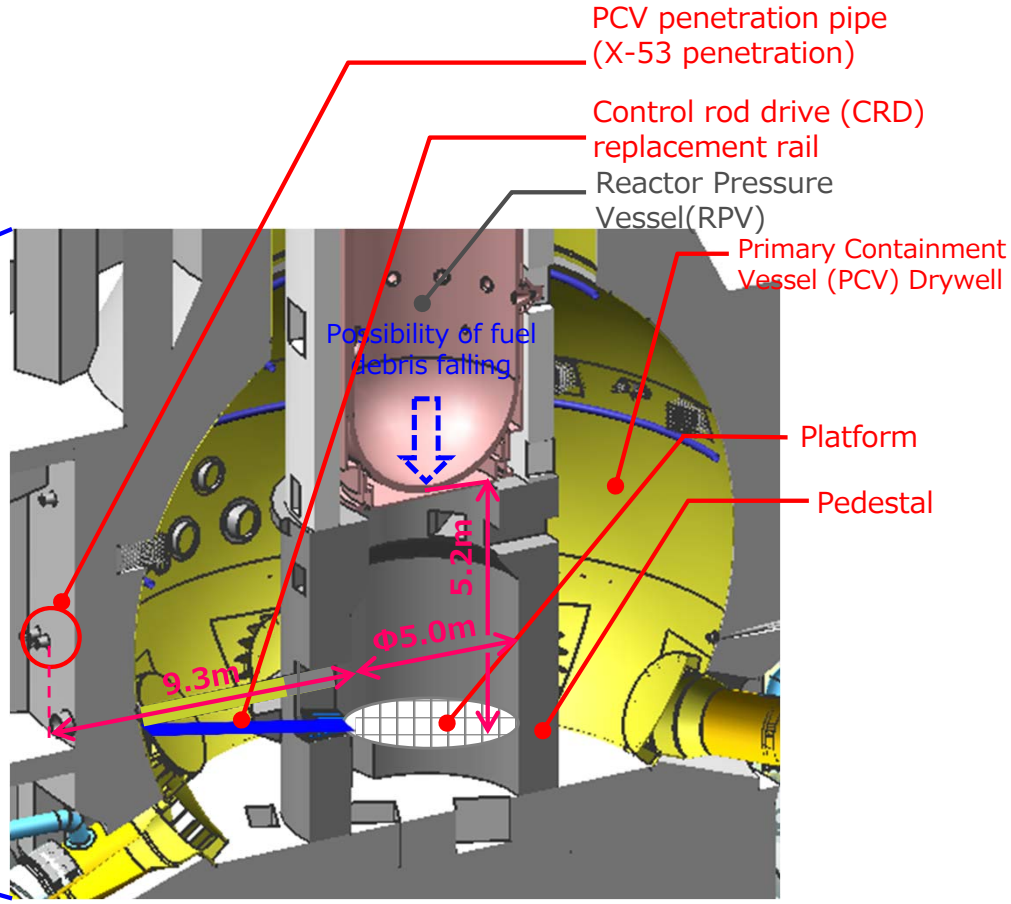
- Nuclear fuel in the Reactor Pressure Vessel (RPV) was exposed to the air and melted from the impact of March 11, 2011 Great Earthquake.
- As a result of the accident analysis, it was found that a portion of melted fuel might have been fallen inside the pedestal.

- To remove fuel debris, it is necessary to investigate inside of the PCV and clarify the conditions of debris and surrounding structure.



Cross section of Reactor Building

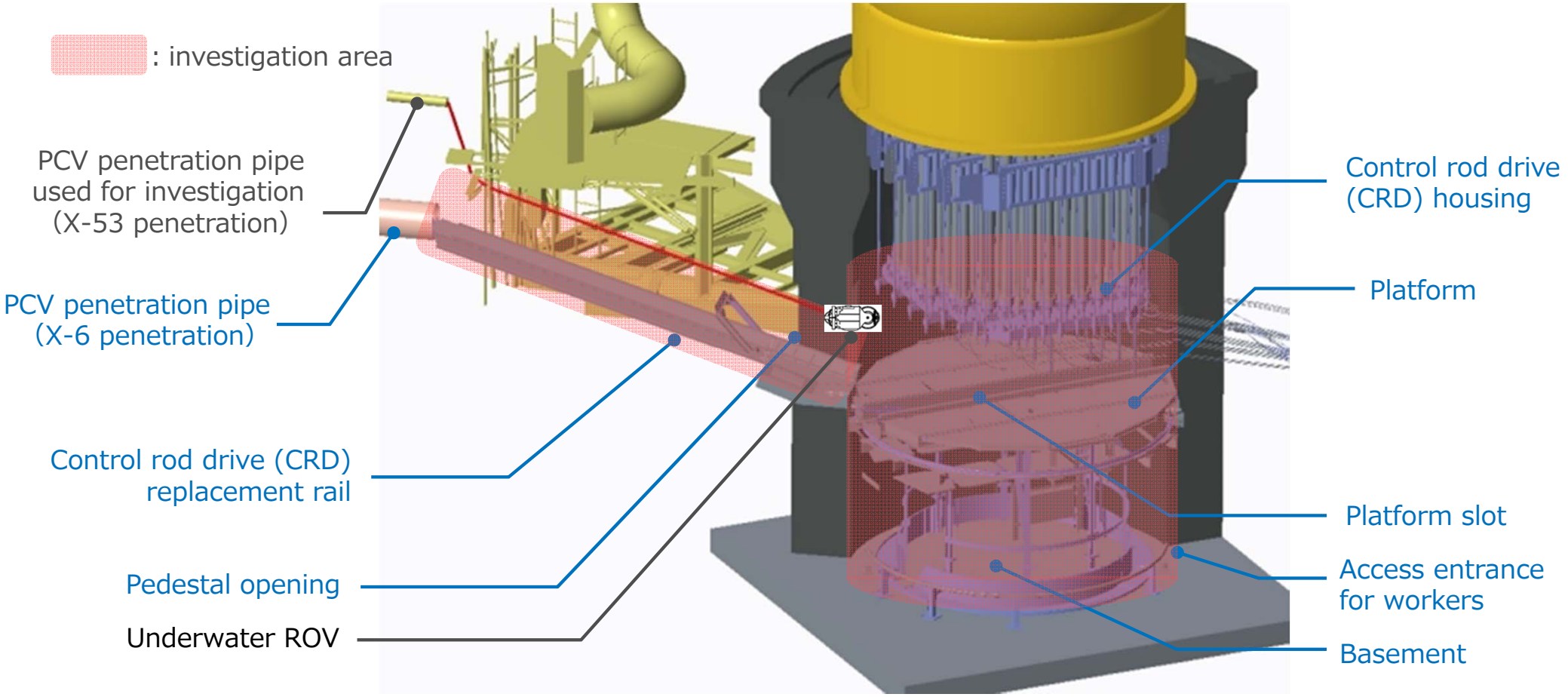
Expanded



Cross section of the bottom of Primary Containment Vessel

2．Outline of PCV internal investigation

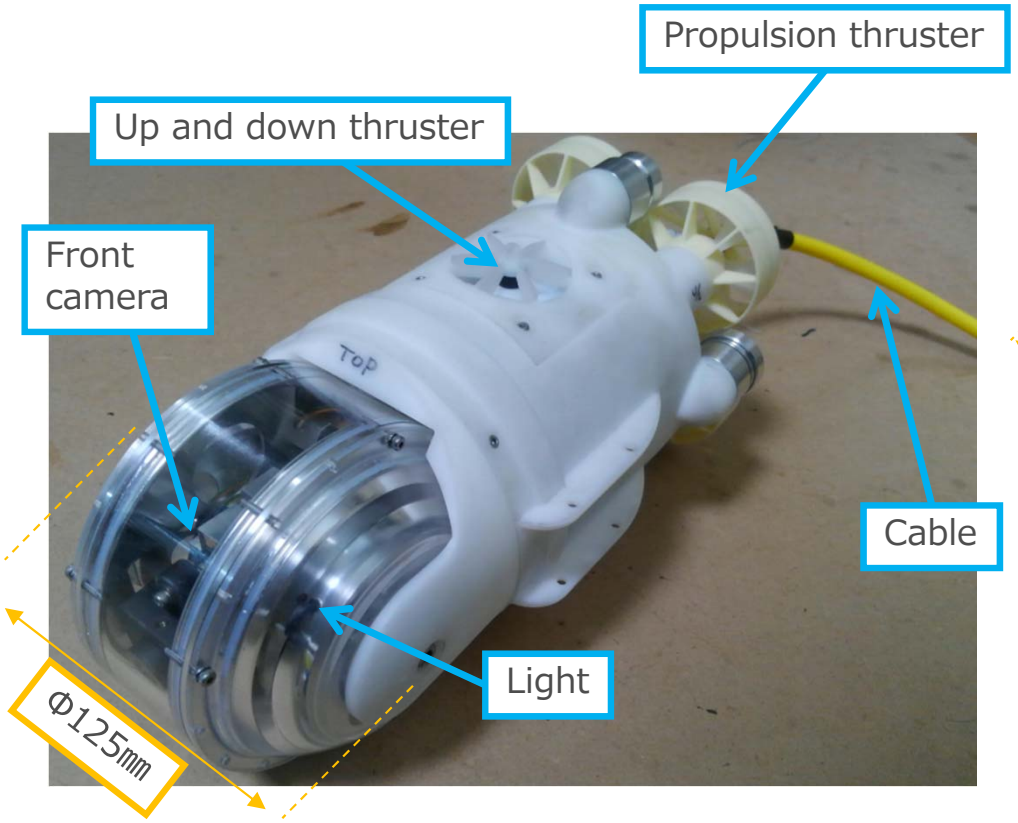
【Plan】①Pedestal basement where fuel debris may exist in is to be investigated.
②Information (conditions of X-6 and CRD rail) is to be gathered to feed back into design and development of next investigation.



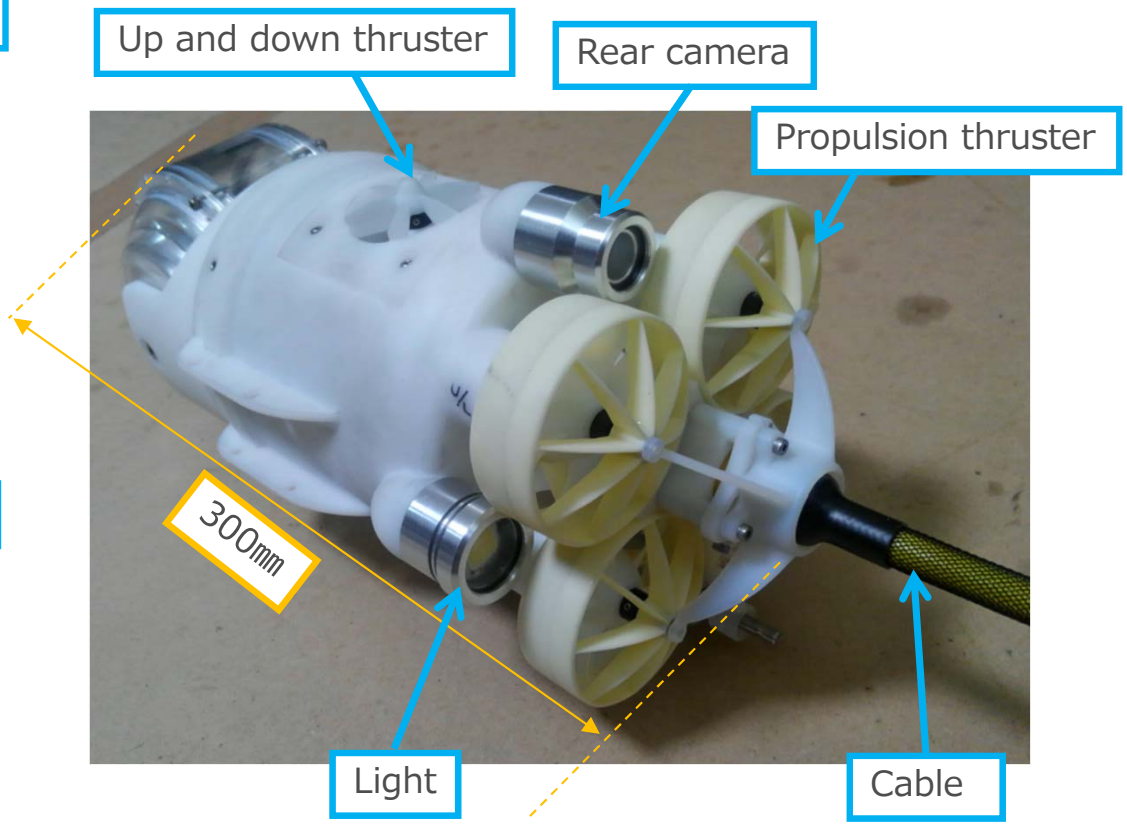
Outline view of investigation

3. PCV internal investigation using underwater ROV (1/2)

- There are the front camera (without pan, with tilt) and the rear camera (without pan-tilt) on the underwater ROV.



Appearance of underwater ROV (front)



Appearance of underwater ROV (rear)

Images provided by International Research Institute for Nuclear Decommissioning(IRID)

3. PCV internal investigation using underwater ROV (2/2)

- The below figure shows that the double O-rings shielding gas and pressured nitrogen forming the boundary will prevent the gas inside PCV from leaking and impacting ambient environment.
- The dust concentration will be monitored during the investigation to confirm that there is no leaked gas and no impact on ambient environment.