Fukushima Daiichi Nuclear Power Station
Installing an additional cover over the Unit 1 spent fuel pool gate

＜Reference document＞
June 26, 2025
Tokyo Electric Power Company Holdings, Inc.
Fukushima Daiichi Decontamination & Decommissioning Engineering Company

- In preparation to remove rubble from the operating floor of the Unit 1 reactor building, a large cover will be installed around the building in order to improve the reliability of dust dispersion countermeasures and prevent rain from entering the reactor building. Rubble will then be removed from underneath this cover.

- During the removal of rubble from the operating floor that will be conducted after construction of the large cover, there is the possibility that the auxiliary hoist※1 for the fuel handling machine (hereinafter referred to as, "FHM") may fall near the spent fuel pool (hereinafter referred to as, "SFP") in conjunction with rubble removal.

- As of March 2020, the SFP gate※2 cover to protect it from rubble falling near the SFP, and the SFP covering was installed in June 2020. However, there is the risk of damage to the SFP gate if the auxiliary hoist were to fall on top of the SFP gate cover.

- Therefore, an additional cover will be installed over the SFP gate as a countermeasure to protect the SFP gate from being damaged if the auxiliary hoist falls. This task will be commenced today, June 26, if the preparations was made.

- We will move forward safely with these tasks so as to not impact the surrounding environment or workers with suitably monitoring dust concentrations.

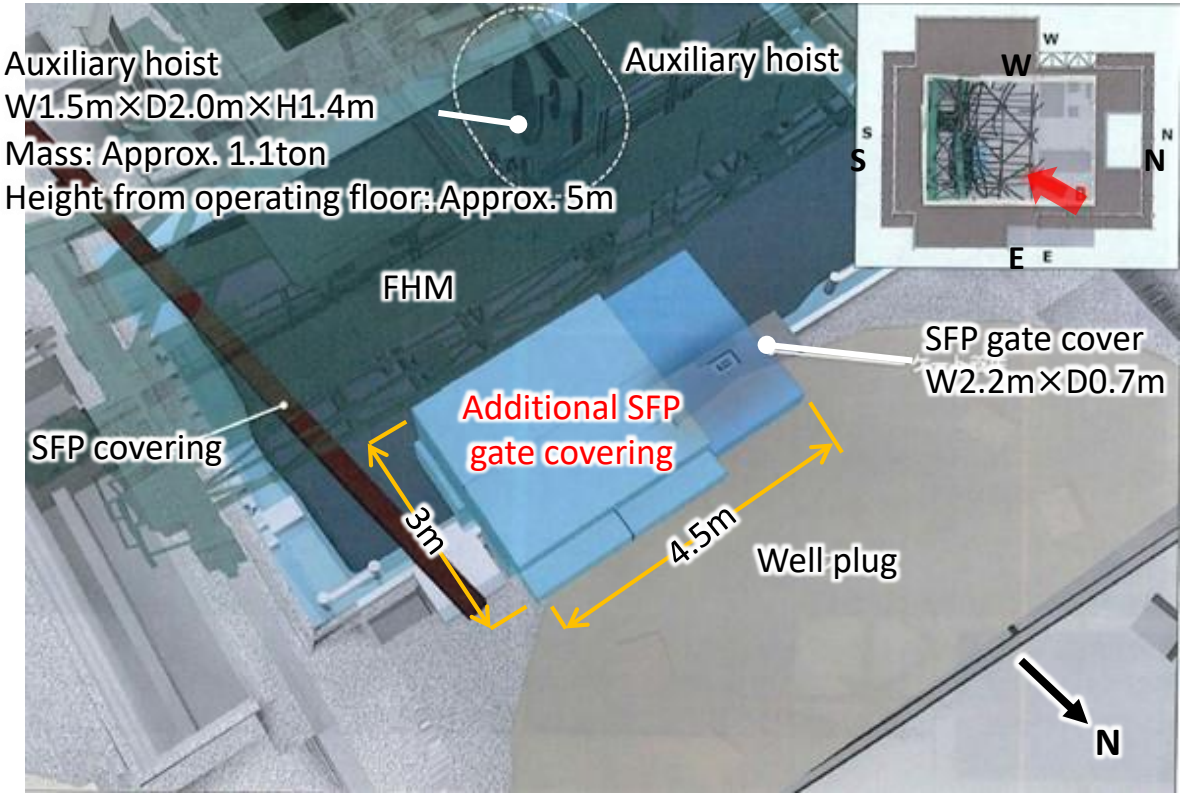
※1: Hoist used to raise and lower objects. The aforementioned auxiliary hoist is currently wedged in between a section of the fallen roof and the FHM. It is currently in a stable position.

※2: Wall that separates the SFP from the reactor well. The SFP gate was installed during plant operation to prevent SFP water from flowing into the reactor well.

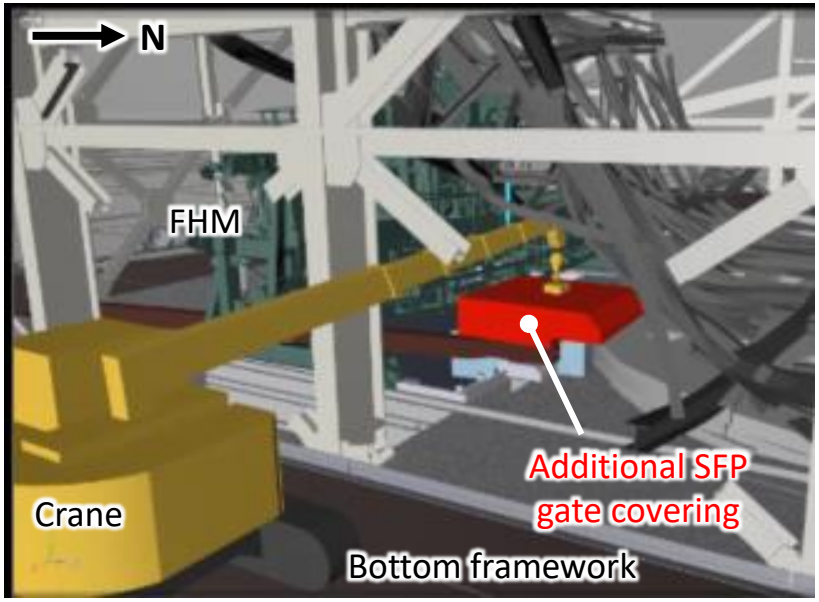
Method of installing the additional SFP gate cover

TEPCO

- Polystyrene foam has been chosen as the main material for the additional SFP gate covering because it is light, can be easily fitted to match the shape of objects/rubble in the field, and can absorb/distribute shock. A crane will be installed on east side of the bottom framework of the large cover and used to place polystyrene foam pieces on top of the existing SFP gate cover.
- Element tests (basic performance tests of the covering material using a drop impact test machine) and mockup tests that simulate the mass of various objects and positional relationships have been used to confirm that even if the auxiliary hoist were to fall on top of the covering material to be installed this time, no damage would be incurred for the SFP gate.



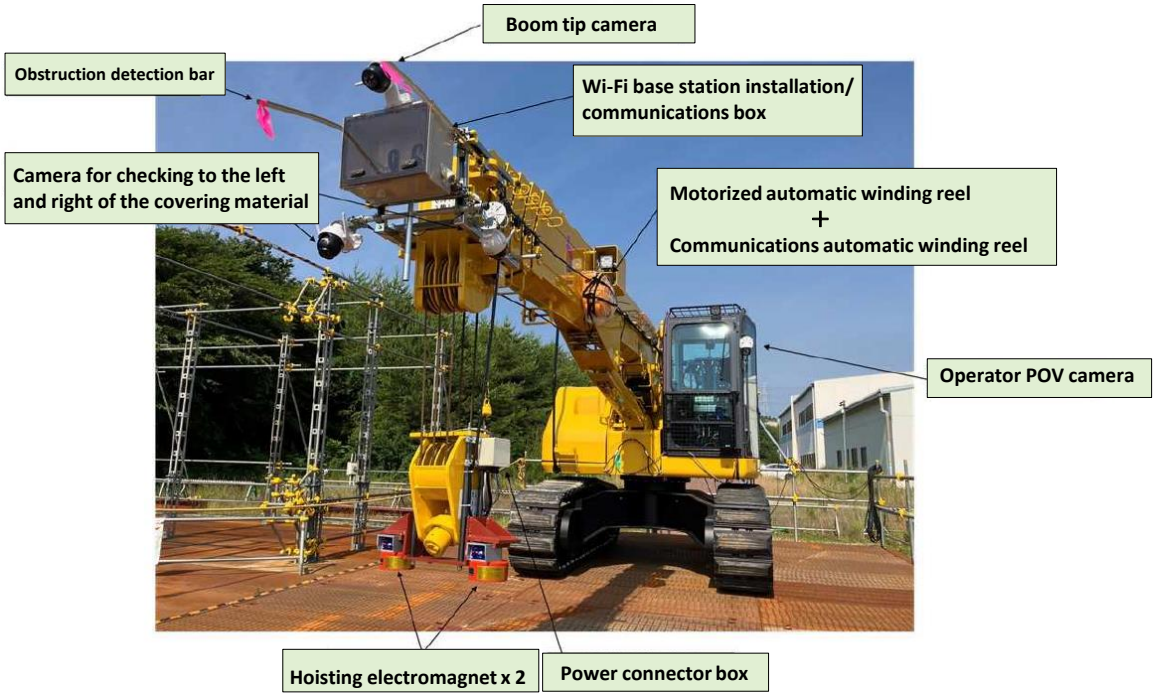
Birds eye view



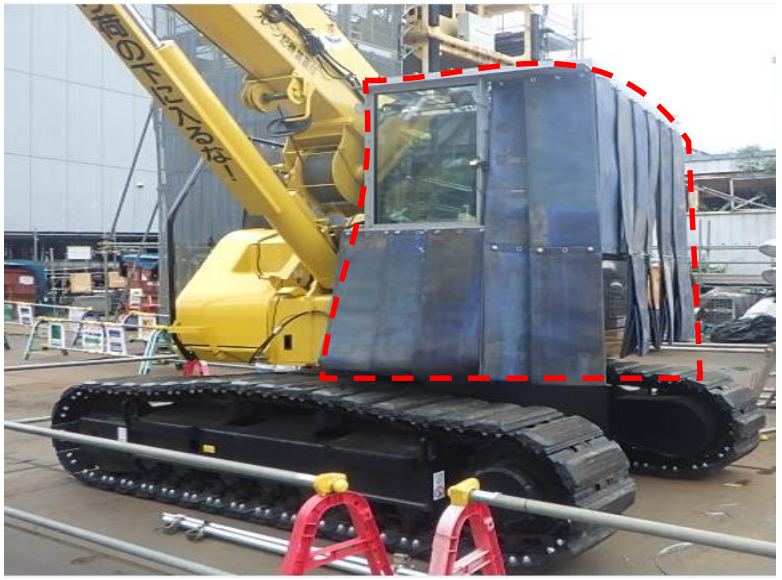
Concept drawing of installation

Exposure reduction countermeasures and countermeasures for foreseen risks during installation

- In order to reduce exposure, the operator's cabin of the crane that will be used to install the additional SFP gate cover has been shielded with lead and flint glass has been placed around the windshield, etc.
- A camera has been installed on the crane so that potential obstructions can be identified early since there is the risk of the crane jib or installation material coming in contact with obstructions (rubble, etc.) during installation of the additional cover.

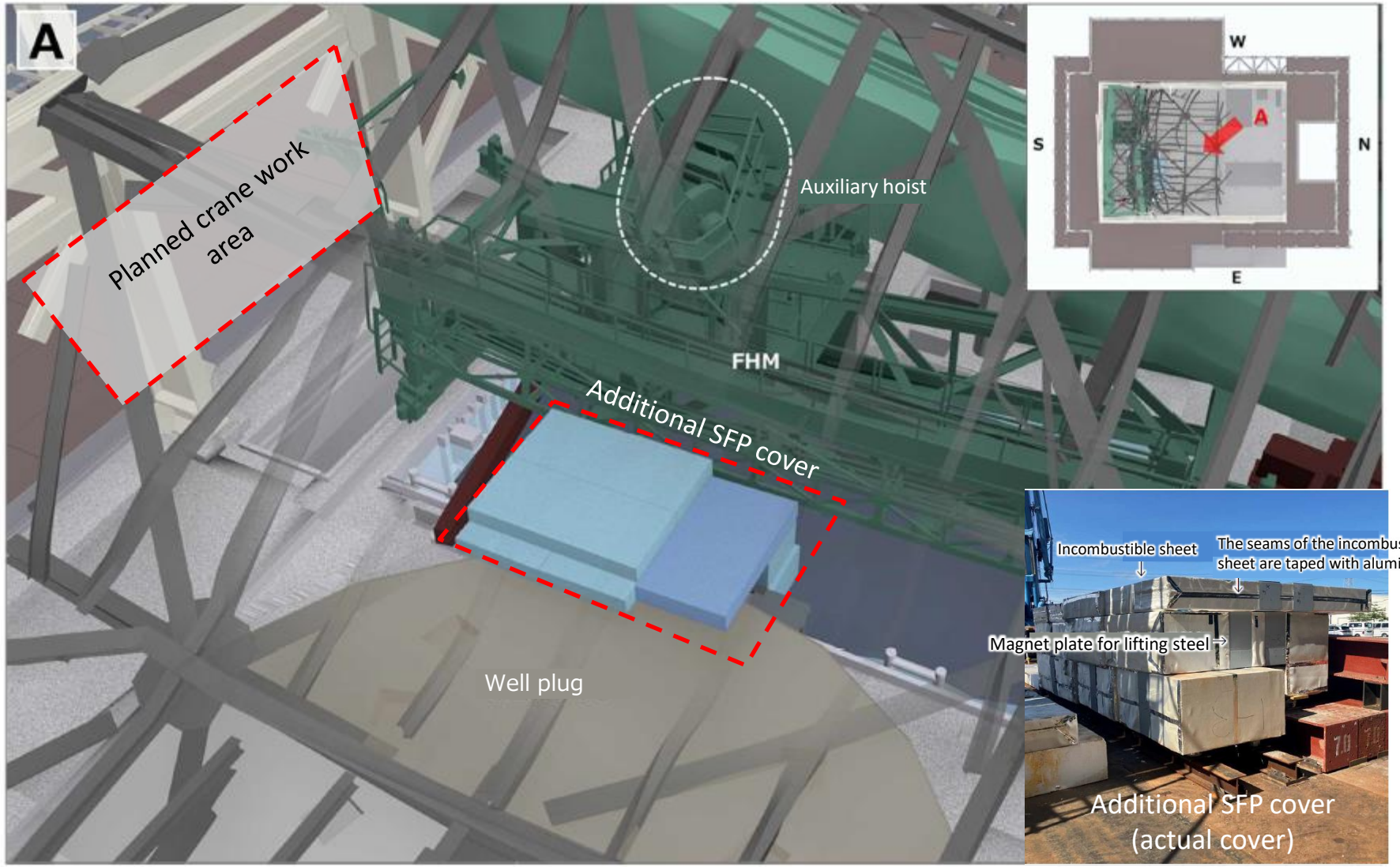


Crane (prior to shielding installation) (photographed on June 12, 2024)



Crane after installation of lead shielding and flint glass (photographed on May 22, 2025)

[Reference] Image of additional SFP gate cover installation



[Reference] Status of the SFP gate cover installation

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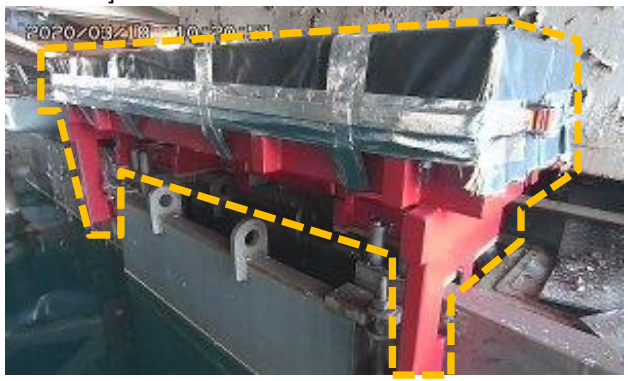
■ The SFP gate cover was installed above the pool gate on March 18

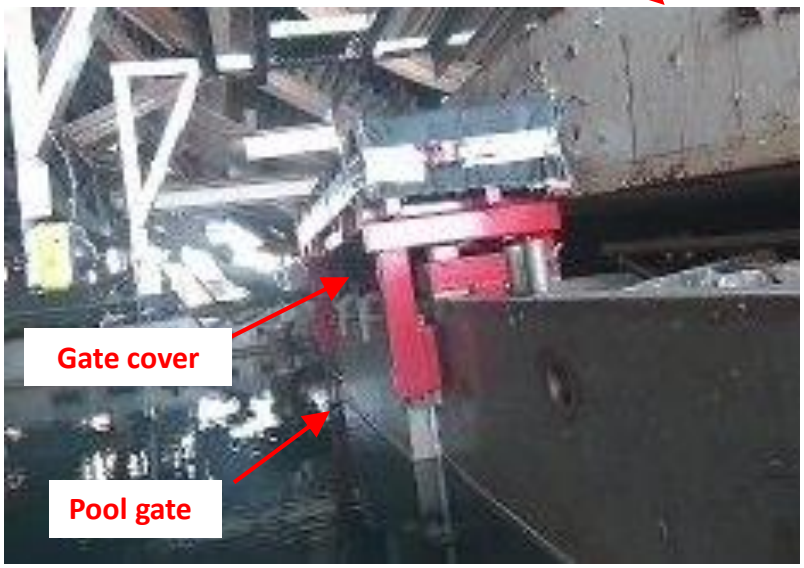
Photographed on March 18, 2020

Installation photo
(Direction of photograph: Southeast to Northwest)

[Reference]



: Range of gate cover

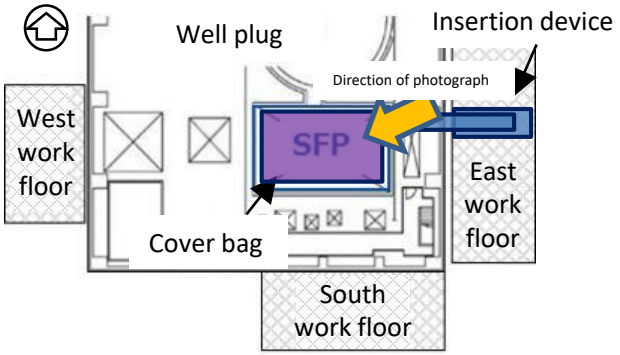


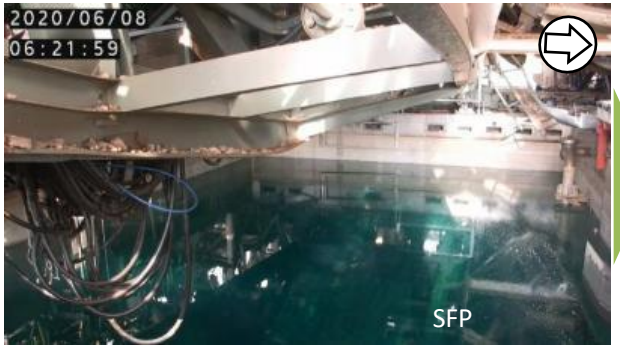
Installation photo
(Direction of photograph: East to West)

Photographed on March 18, 2020

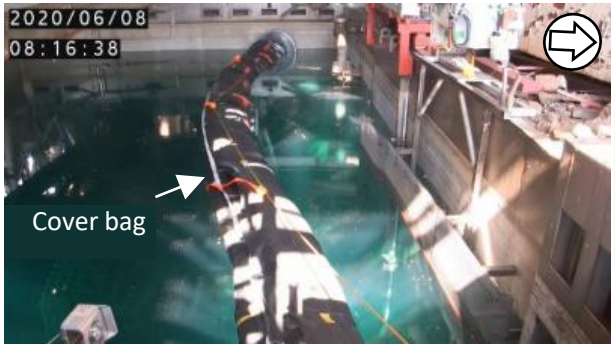
[Reference] Status of SFP cover installation

- A cover bag was positioned to protect to the fuel inside the SFP
  - June 8, 2020: Cover bag was inserted and spread
  - June 11, 2020: Air mortar was inflated into the cover back
  - June 17, 2020: Spacers installed to secure the cover back
  - June 18, 2020: SFP water level restored and circulated cooling restarted there by marking completion of SFP cover installation

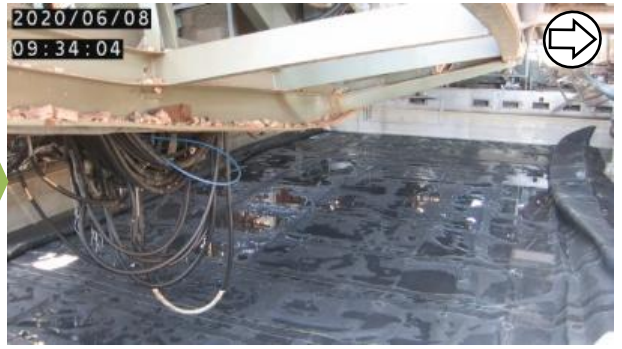




Prior to cover bag insertion
(Photographed on June 8, 2020)

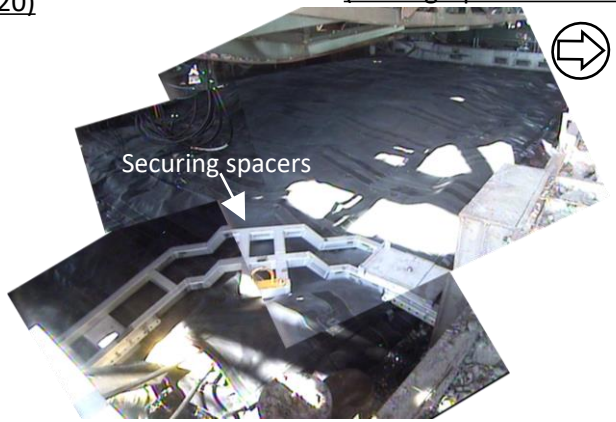


Cover bag insertion
(Photographed on June 8, 2020)



Cover bag was spread
(Photographed on June 8, 2020)

Air mortar was inflated
(Photographed on June 11, 2020)



Securing spacer installation
(Photographed on June 17, 2020)