

Status of Visual Inspections of Containers Stored in the Temporary Storage Areas at the Fukushima Daiichi Nuclear Power Station

<Reference material>
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- In accordance with our implementation plan, waste, such as rubble and used protective clothing, from the Fukushima Daiichi Nuclear Power Station is kept in different storage areas demarcated based upon the surface dose level of the waste (※ 1) and the contents of the containers in consideration of the impact of radiation on the area surrounding the site and to decrease worker exposure and each storage area is managed.
- Although waste has been managed as mentioned above, water accumulated at the bottom of a container (one container) filled with waste stored in temporary storage area W2, and leaked from the container. In light of this incident we quickly performed the following inspections and checks.
 - ① Visual inspection of containers that require boundary functions (※ 2) (5,338 containers ※3)
 - ② The contents of containers for which the contents were unknown (4,011 containers ※3) were checked
(Already announced as of May 20)
- Visual inspections commenced on April 15, and as of June 30, 3,467 out of the 5,338 containers had been inspected. At current time, visual inspections and dose equivalent rate measurements taken from the outer surface of the containers have confirmed that there are no other water leaks, with the exception of the leak from the one container found in temporary storage area X on June 1 (announced on June 1 <Japanese only>). Furthermore, no significant fluctuations have been seen in fixed point dose equivalent rate measurements taken near ditches and cesspools in the vicinity of the temporary storage areas.
- In light of the discovery of the leak from a container in temporary storage area X on June 1, inspections in the aforementioned area have been suspended and the decision was made to implement the following safety measures in consideration of the risks associated with water leaks from containers that may be encountered as inspections move forward. Since these countermeasures have now been put in place, visual inspections in temporary storage area X recommenced yesterday (June 30).
 - ① Thermographic cameras are used to check for the presence of water inside the containers from the outside prior to moving the containers for the visual inspections.
 - ② Urethane foam is injected in between the lid and the container prior to movement for those containers from which water may leak when being moved.
- In other areas, visual inspections were planned to be completed at the end of June, but this date has been moved back to the end of July as a result of delays with progress caused by the need to perform inspections while repairing areas of remarkable corrosion, and changes made to heavy equipment used in conjunction with conditions in the field in the temporary storage areas.
- We will continue to engage in this task while prioritizing safety.

※1 : Depends on the surface dose rate of the container if the container has been filled with waste.

※2 : If surface dose rate is 0.1 mSv/h or higher (gamma), or 0.01 mSv/h or higher (beta), the rubble must be covered with tarps or put into containers.

※3 : 3,426 containers out of the 5,338 containers (※) that require boundary functions and the 4,011 containers for which the contents are unknown, are the same type of container, so the total number of containers subject to ① and ② is 5,923.

* : Corrected from 5,388 containers to 5,338 containers on July 2, 2021.

【Reference】 Progress of status with the visual inspections of containers

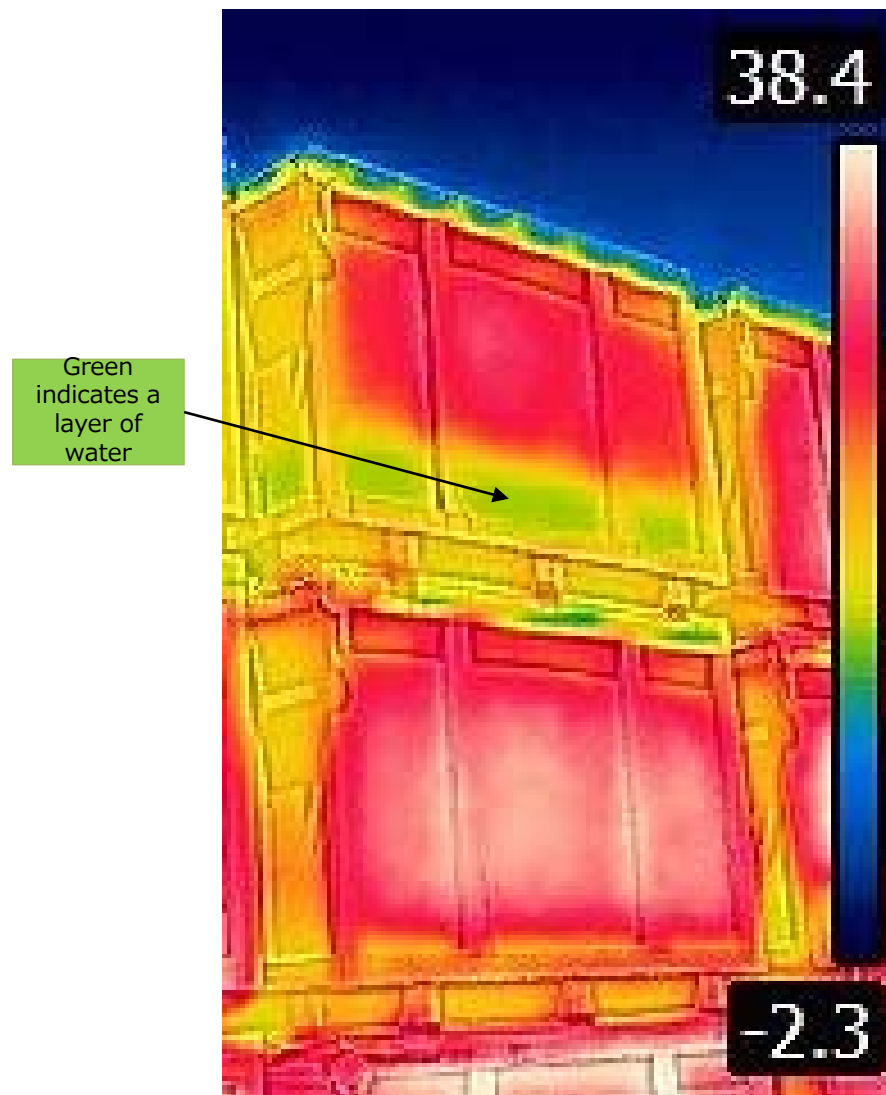
- ✓ Remarkable corrosion or dents have been found in 548 out of the 3,467 containers that have already been inspected (as of June 30). All of these containers were immediately repaired with protective tape.
- ✓ Furthermore, with the exception of the leak from the container that was announced on June 1, visual inspections and dose equivalent rate measurements taken from the outer surface of the containers have not revealed any other leaks. Furthermore, no significant fluctuations have been seen in fixed point dose equivalent rate measurements taken near ditches and cesspools in the vicinity of the temporary storage areas.

Inspected Area	Total number of containers subject to inspection	Number of containers for which inspections have been completed		Number of containers for which inspections have yet to be completed
			Number of containers on which corrosion was found *All have been repaired	
E 1	1,598	1,180	376	418
E 2	428	428	19	0
F 1	99	55	22	44
P 2	361	108	3	253
X	1,363	667	109	696
W 1	1,489	1,029	19	460
Total	5,338	3,467	548	1,871

【Reference】 Method of checking for the presence of water inside containers



Thermographic camera



Picture from thermographic camera

【Reference】 Monitoring status

- The monitoring of temporary storage areas in which containers that require boundary functions (containers/tarp covering) are stored has been strengthened as follows:
 - < Enhanced monitoring during the visual inspection of containers >
 - ✓ In order to confirm that radioactive substances are not leaking from containers, fixed point dose equivalent rate measurements (70 μ m, 1cm) are taken near the ditches and cesspools that serve as drainage channels for the temporary storage areas once a day (excluding Sundays) to check for significant fluctuations (put into practice on May 20).
 - < Temporary storage area monitoring >
 - ✓ Every time a container is moved, dose equivalent rate measurements (70 μ m, 1cm) are taken from the surface of the ground on which the container was sitting prior to the move to check for leaks from the container (put into practice on May 20).
 - ✓ Area patrols, air dose rate measurements (once a week), and measurement of the concentration of radioactive substances in the air (once every three months) continue to be implemented.
 - < Rain water drainage monitoring >
 - ✓ Continued monitoring of the Jimbasawa River, which serves as a drainage channel for rainwater from the temporary storage areas (once a month), and the drainage channel at the shallow draft quay (continuous).