June 23, 2026　Nuclear Reform Monitoring Committee

Fukushima Daiichi Nuclear Power Station Decommissioning Initiatives

TEPCO

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Fukushima Daiichi Decontamination &
Decommissioning Engineering Company (FDEC)

1. HISTORY AND CURRENT STATE OF FUKUSHIMA DAIICHI NUCLEAR POWER STATION

History of Fukushima Daiichi Nuclear Power Station (1/3)

TEPCO

Various initiatives are being implemented on the field and steady progress is being made in decommissioning.
The timeline below provides an overview of the major topics through FY2025.

Site environment

March 11, 2011

Great East Japan Earthquake occurred

A M9.0 mega-thrust earthquake occurred. Approximately 50 minutes after the earthquake, a 15m tsunami, much higher than the embankment, hit the station

June 2013

The access control facility began operation

The function for donning and taking off protective clothing, which had been at the J Village some 20km away, was moved to Fukushima Daiichi.

May 2015

The large resting area was completed

The resting area is equipped with a cafeteria and a convenience store (March 2016).

October 2015

The impermeable wall on ocean side was completed

Work status

March 2011

Hydrogen explosions occurred in Units 1, 3, and 4

Loss of cooling at Units 1 and 3 led to the hot fuel reacting with the steam, generating large amounts of hydrogen and causing the reactor buildings to explode.
The reactor building for Unit 4 also exploded when hydrogen flowed in from Unit 3.
(Unit 2 avoided an explosion)

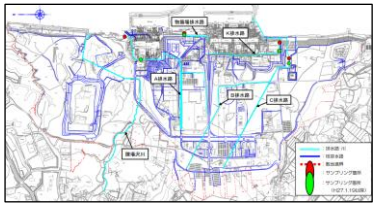
December 2014

Fuel removal from Unit 4 was completed

Removal of fuel from spent fuel pool and transfer to the common pool began in November 2013. In December 2014, transfer of all 1535 fuel assemblies was completed.

February 2015

Disclosure regarding the K drainage channel was delayed



In April 2012, construction on the impermeable wall was begun to block groundwater that is flowing into the port from the Units 1-4 site and to prevent contamination of the sea. In October 2015, the impermeable wall on ocean side was completed.

History of Fukushima Daiichi Nuclear Power Station (2/3)

TEPCO

Site environment

October 2016

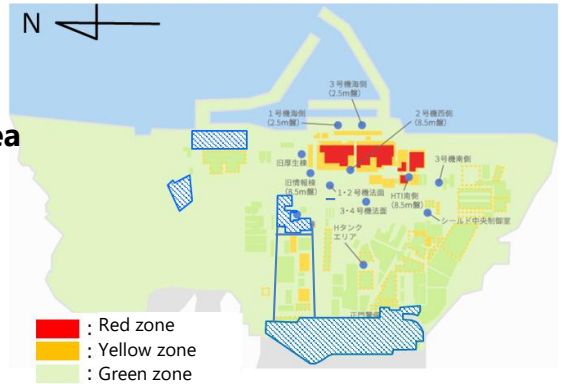
The new administrative building was completed

An emergency response center was set up in the new main building to further streamline emergency response and decommissioning.

May 2018

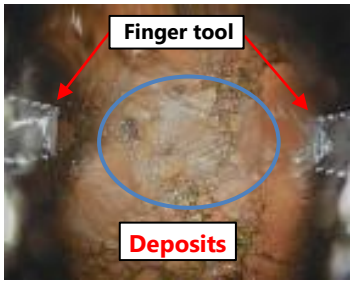
The general work clothes area was expanded

The general work clothes area was expanded to approx. 96% of premises

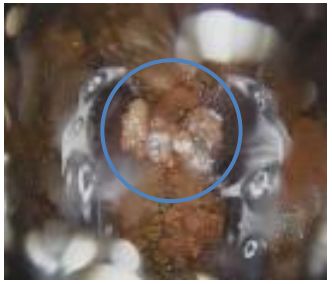


February 2019

Contact investigation was conducted on deposits within the Unit 2 reactor containment vessel.



Before contact



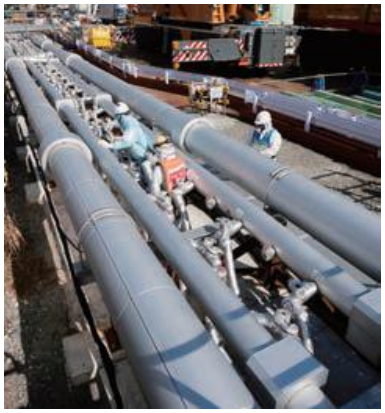
Coming into contact with deposits

Contact investigation

A contact investigation was conducted in February 2019 to gain an understanding of the condition of the deposits observed within the reactor containment vessel (e.g.,hardness, fragility).

March 2018

The land-side impermeable wall was frozen



Freezing of the land side impermeable wall, in which the soil is frozen to barricade off the groundwater, was started in March 2016. It was evaluated as effective, with underground temperatures across almost the entire target area falling below freezing in March 2018.

Work status

History of Fukushima Daiichi Nuclear Power Station (3/3)

TEPCO

Work status

March 2019

All of the water purified and treated in the purification facilities were stored in welded tanks.

Flange tank

Welded tank

February 2021

Fuel removal from Unit 3 was completed

Lifting up fuel in Unit 3 (568 fuel assemblies)

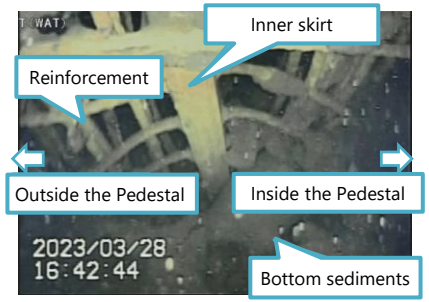
August 2023

ALPS treated water began to be discharged into the sea

March 2023

The accumulated water within the reactor building was reduced to half of the end of FY2020 levels.

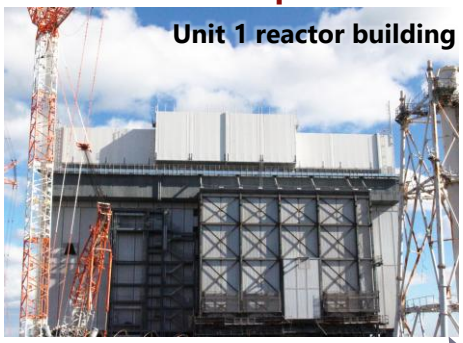
Conducting a internal investigation (underwater investigation) of the Unit 1 reactor containment vessel



Near the pedestal opening

January 2026

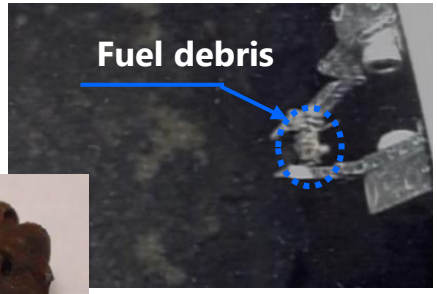
The Unit 1 large cover was completed



September 2024

Fuel debris was retrieved from Unit 2 on a trial basis.

Work on trial retrieval was started in September 2024, and the first piece of fuel debris was removed in November.

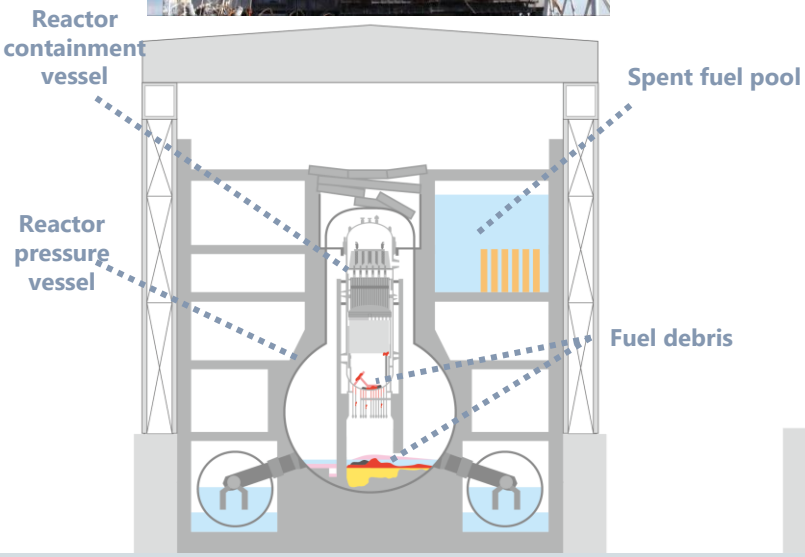


↑Fuel debris being grasped

←Appearance of the fuel debris sample

Current state of Fukushima Daiichi Nuclear Power Station (1/2)

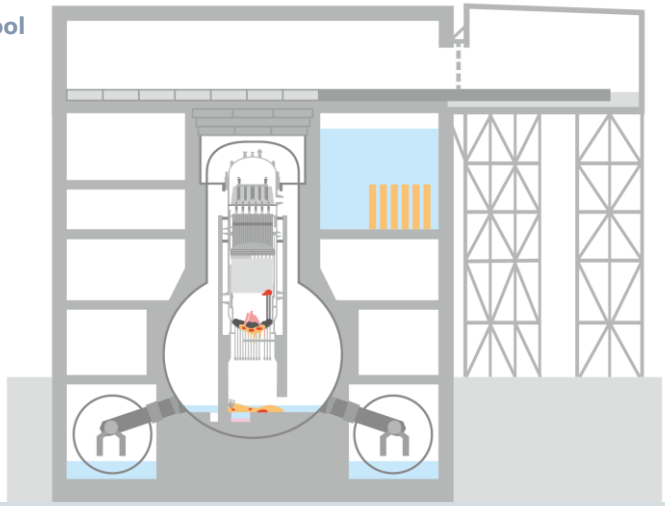
Unit 1



In preparation for fuel removal from the spent fuel pool, construction of the large cover was completed in January 2026, and the rubble removal crane was installed in March 2026.

In addition, an internal investigation of the reactor containment vessel is being conducted in preparation for fuel debris retrieval.

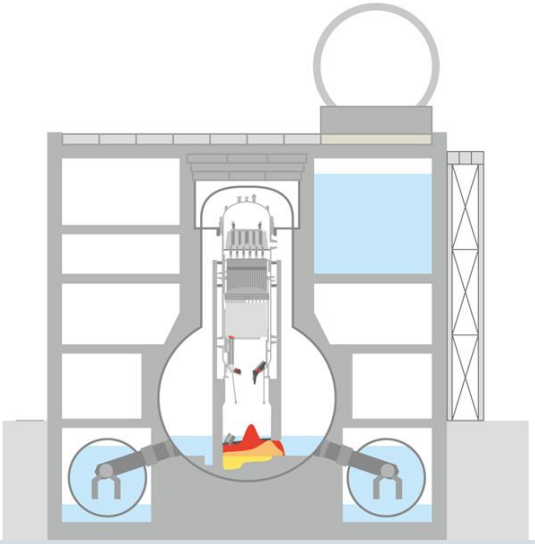
Unit 2



In March 2026, fuel handling equipment was installed in preparation for fuel removal from the spent fuel pool.

In November 2024, trial retrieval of fuel debris was completed for the first time.

Unit 3

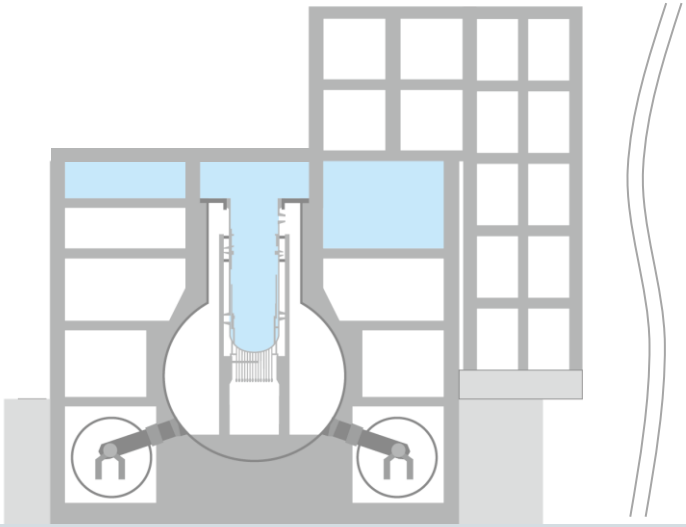


In February 28, 2021, the removal of all fuel (566 fuel assemblies) from the spent fuel pool was completed.

Removal of high dose equipment began in March 2023.

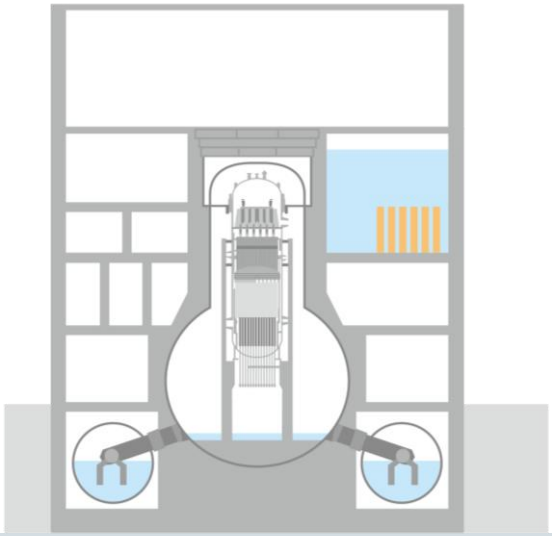
Current state of Fukushima Daiichi Nuclear Power Station (2/2)

Unit 4



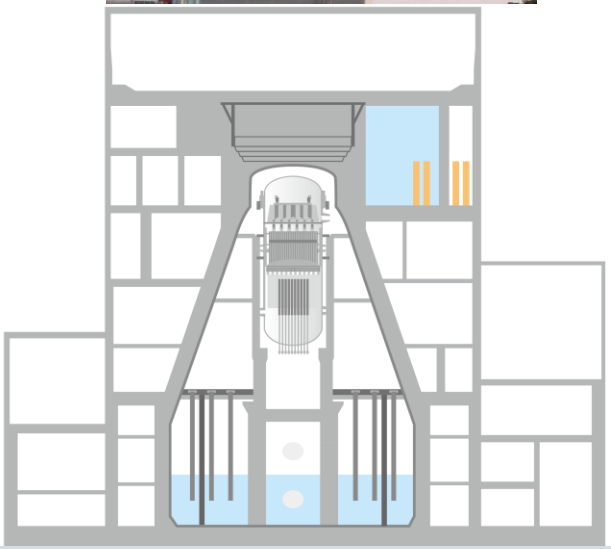
In December 22, 2014, removal of all fuel (1535 fuel assemblies) from the spent fuel pool was completed, eliminating risks associated with fuel.

Unit 5



Removal of fuel from the Unit 5 spent fuel pool was started in July 2025 in time with the removal of fuel from the Unit 6 spent fuel pool.

Unit 6



In August 2022, removal of fuel assemblies from the spent fuel pool began. In April 2025, all spent fuel (1456 fuel assemblies) were removed from the spent fuel pool.

Through implementation of long-term decommissioning (Basic Policy of the 5th Comprehensive Special Business Plan)

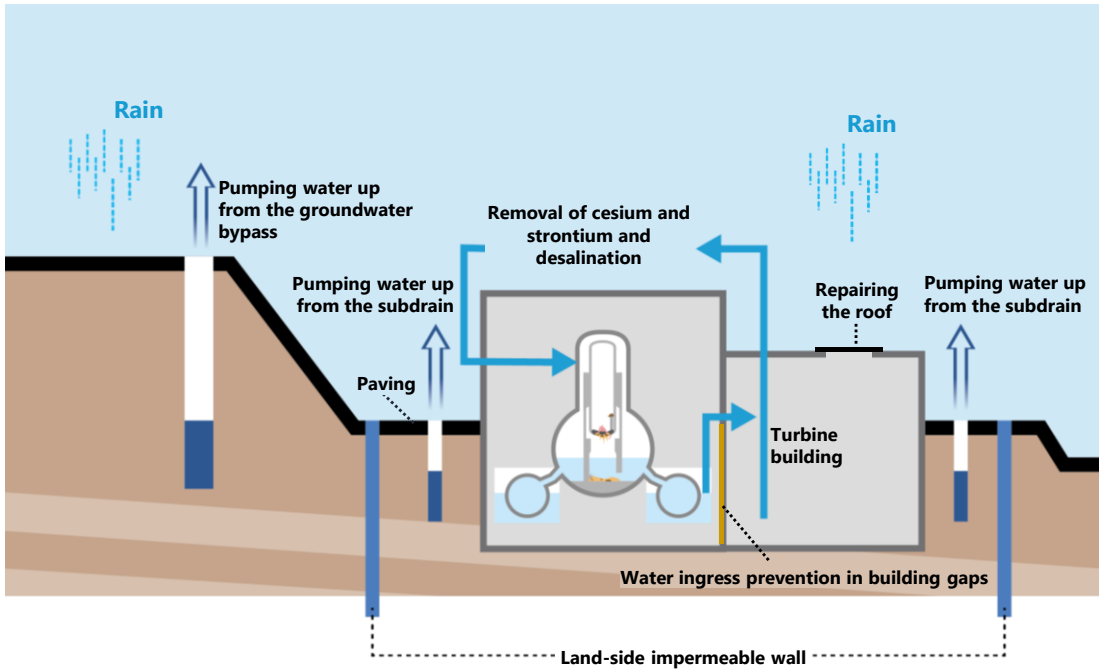
- It is necessary to safety and steadily advance difficult and complex work toward fuel debris retrieval which will be the biggest challenge going forward.
- **Fundamentally reform the decommissioning business with three pillars: management decision, capabilities and structure**, so that necessary management resources can be allocated upon making rational and independent decision by the decommissioning entity with field-first approach.

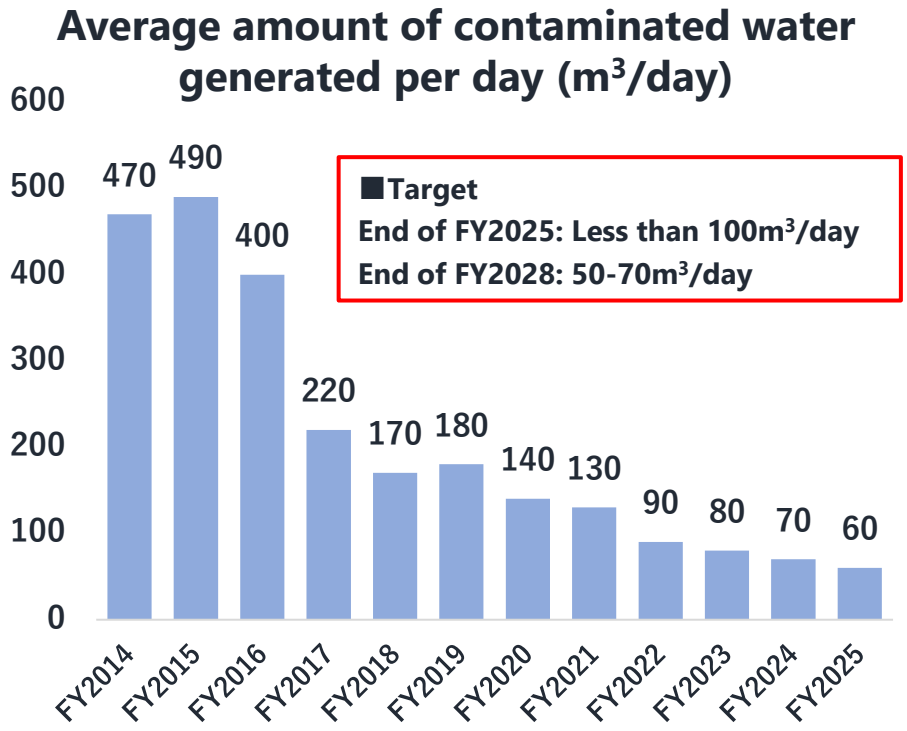
Reform of the decommissioning business	**Management decision of "Fukushima first"**	TEPCO	• Review the responsibilities and authority regarding planning and management resources between HD management and the decommissioning entity • Realize "proactive and bold management decisions to make the Fukushima business as secure as possible" through the review
		NDF	• Enhance governance regarding management and supervision (e.g., advices, guidance and supervision), as well as reserve funds, expenditure plans and human resources plans
	Improvement of capabilities to execute the decommissioning business		• Since thorough implementation of decommissioning requires owner capabilities and capability to build the regional relationship ("capabilities to execute the decommissioning business"), build a system to acquire and develop human resources to secure capabilities (including salary system, employee benefits, training environment, etc.) • Develop and operate a flexible hiring system that enables mid-career hiring of highly skilled professionals at Fukushima Daiichi D&D Engineering Company
	Development of structure	TEPCO	• Appropriately review the structure of nuclear-related organizations including Fukushima Daiichi, and shift to a structure where the decommissioning entity can play a leading role in management resources and management policies related to decommissioning • Develop and manage TEPCO's long-term strategies and processes, and develop an integrated collaborative framework of TEPCO and contractors
		NDF	• While appropriately mediating between the national government and TEPCO, reinforce the structure to appropriately manage and supervise decommissioning work
Basic stance toward the decommissioning business		TEPCO	• The decommissioning entity shall take the initiative in advancing efforts to safely and steadily complete decommissioning, while stably and continuously gaining the trust of the society and local community • In improving corporate values, the fundamental premise is for HD to provide maximum support for the efforts of the decommissioning entity
		NDF	• Appropriate governance in accordance with the NDF Act so that management and decommissioning operations are conducted in accordance with the basic stance
Balance between revitalization and decommissioning			• Deepening relationships with the local community through direct dialogue with local residents, collaboration with relevant institutions, and bi-directional communication • Contribute to creating a regional industrial and economic foundation through the decommissioning business • Promotion of distribution of agricultural, forestry and fishery products and expansion of its nonresident population, and continuation of various forms of human cooperation

2. RECENT INITIATIVES

Reduction in the amount of contaminated water generated

Multi-layered contaminated water measures such as repairing the damaged roofs and paving the roads on the site have led to reduced amounts of contaminated water generated.
Rainfall in FY2025 was 1,132 mm, less than the annual average of approximately 1,470 mm, and the actual amount of contaminated water generated was approximately 60m³/day. Even when assuming an average amount of rainfall, the amount of contaminated water generated per day is estimated to be around 70m³/day, achieving the target of "reducing (the contaminated water generated) to 50-70m³/day by the end of FY2028" three years ahead of schedule.





Fuel debris retrieval

The work schedule can be broken up into three phases. “Since the site radiation dose is relatively low and the primary containment vessel can be accessed earlier than others“, Unit 2 has been selected as the first unit from which fuel debris shall be retrieved.
Unit 2 entered into Phase 2, following the success of trial retrieval.

Phase ❶ Ascertaining primary containment vessel conditions /retrieval method deliberation, etc.

Phase ❷ Fuel debris retrieval

Phase ❸ Storage /transportation

Unit 1 **Unit 3**

Unit 2

Photo taken in October 2024
Unit 2: End jig grasping fuel debris

Internal investigation and trial retrieval using a robot arm

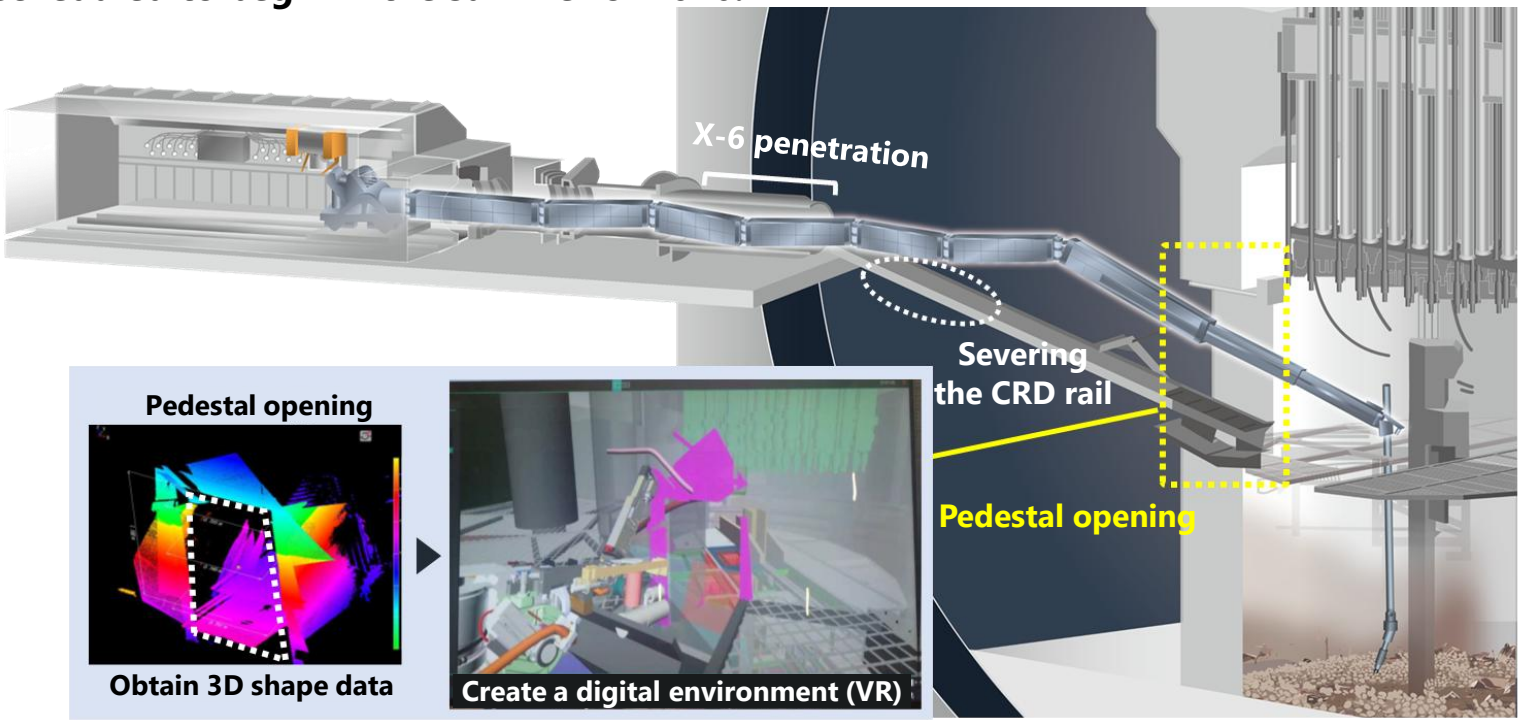
A robot arm will be inserted from the 'X-6 penetration hole*1' in the PCV to conduct internal investigations or trial retrievals.

There are three objectives here.

- 'Establish an access route*2', by removing obstacles that may interfere with the robot arm which is larger than the telescopic device
- Obtain 3D shape data and video of the interior of the PCV to design devices for when the scale of retrieval is expanded and to use in work plan appropriateness verification
- Demonstrate completely remote operations and the long-term use of devices under high dose conditions using a digital environment (VR)

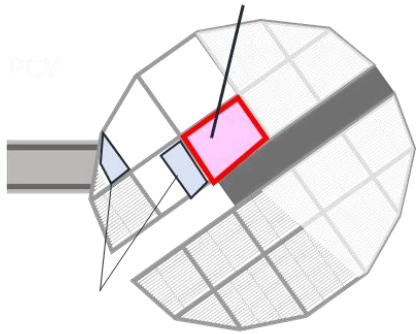
*1: X-6 penetration
*2: Route from the X-6 penetration to the pedestal

On April 21, 2026, the robot arm was carried into the Unit 2 reactor building. This arm will be installed over the next three to four months in preparation for PCV internal investigation and fuel debris retrieval scheduled to begin in the summer of 2026.



Opening 3

To be used in robot arm retrieval



Telescopic device used in ①②

Unit 3 Internal investigation of the reactor containment vessel using a micro-drone

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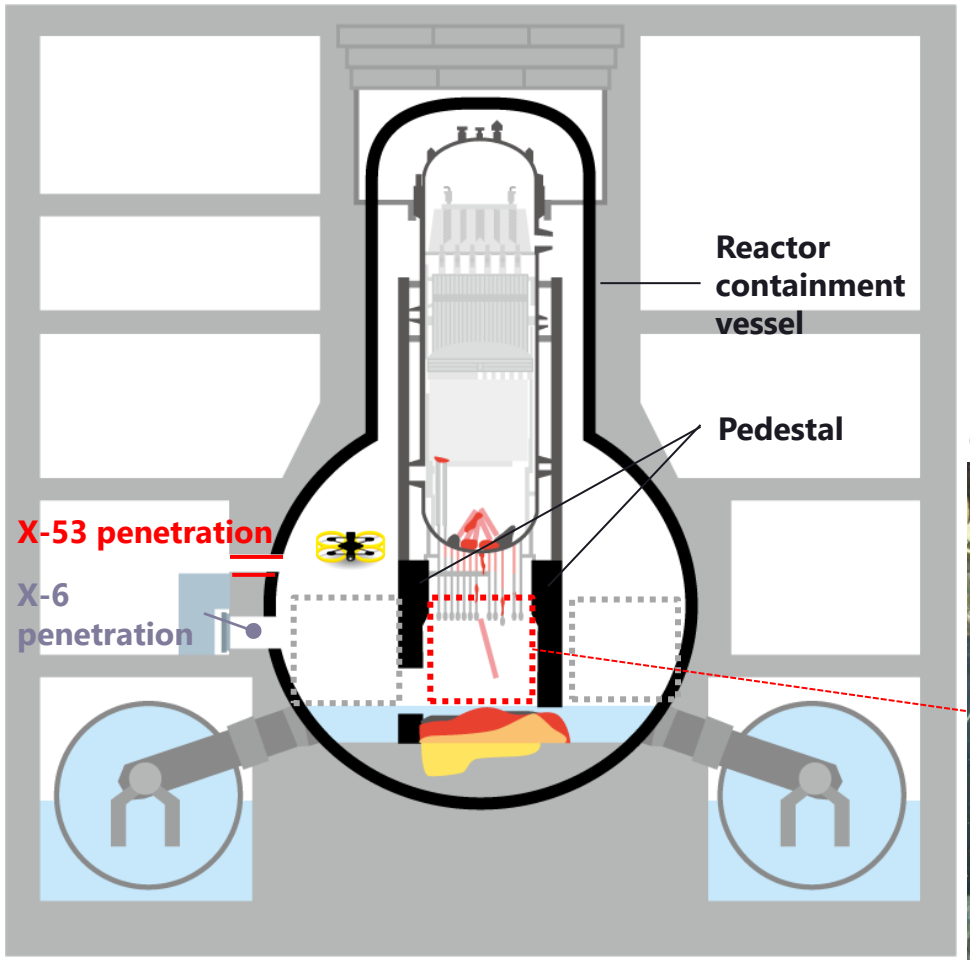
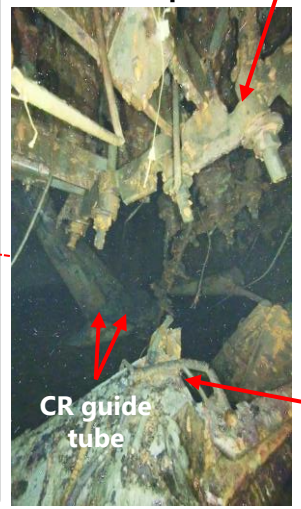
Additional information needs to be gathered regarding the reactor containment vessel (PCV) for Unit 3 in preparation for full-scale fuel debris retrieval. A micro-drone was inserted from the X-53 penetration to conduct a detailed investigation of the inside of the pedestal, which was investigated using a small underwater robot in 2017, as well as the first floor of the dry well, which had never been investigated before.

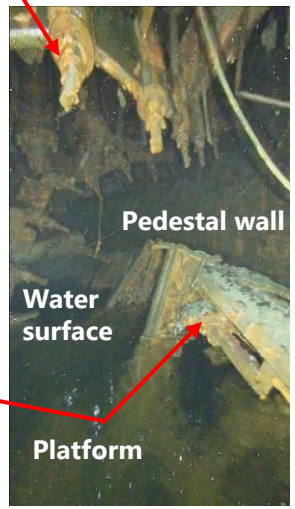


Micro-drone
(Small and light drone)

Objective: Taking video using a camera (2.7K)
Dimensions: 130 by 120 by 40 mm
Weight: 95 g (including the battery)
Flight time: approx. 13 minutes (investigation planned to take 10 minutes)

●Inside the pedestal





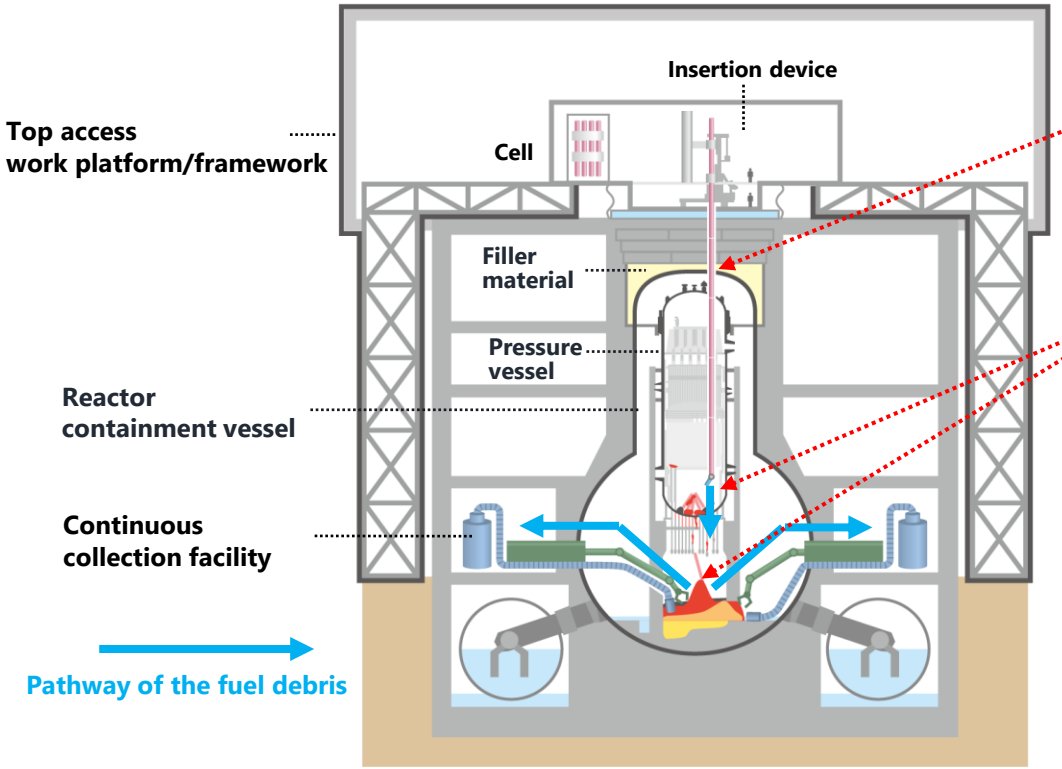
●Bottom of the RPV

Discussions regarding the full-scale retrieval of fuel debris

The main fuel debris retrieval process has been established for Unit 3 and discussions have been underway.

The schedule for preparing for the start of full-scale retrieval was developed taking into account such discussions as well as certain assumptions. It has been evaluated that both the North-South Work Platform and East-West Framework options require around 15 years to prepare for top access and 12 years for side access.

Items that require further confirmation (e.g., lack sufficient field information, require additional design development) will undergo field verification and design verification in one to two years from July 2025.



●Fuel debris retrieval method policy

Access from a small opening

Utilize the shielding function of existing shielding walls. (enables the reduction in scale of shielding of cells that will be added)

Standardize and simplify fuel debris handling*

*Processing and collection

- Process the fuel debris into small pieces
- Continuously collect the small pieces of fuel debris

Combining top and side access

- The fuel debris processed through top access will be lowered down from the opening at the bottom of the pressure vessel. It will then be continuously collected through side access.
- Continuous collection is possible just from side access alone

Construction of a large cover in preparation for Unit 1 fuel removal

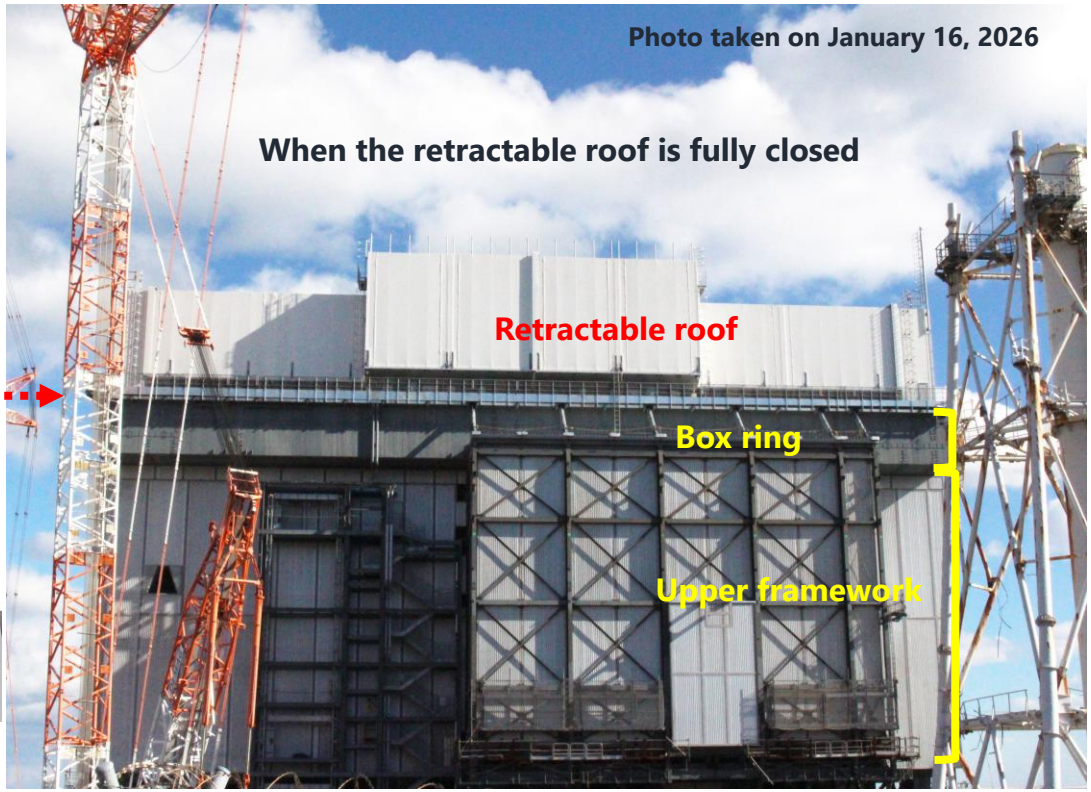
The large cover consists of the 'temporary work platform' at the bottom, the ‘bottom framework', 'upper framework' and 'box ring' above it, and the 'retractable roof' at the very top. Construction work on the 'large cover' was completed in January 19. In the future, rubble will be removed and the fuel handling system will be installed in preparation for fuel removal.

*** Framework: Architectural structure comprised of pillars and beams**

Commencement of fuel removal FY2027 to FY2028

Before the large cover was constructed

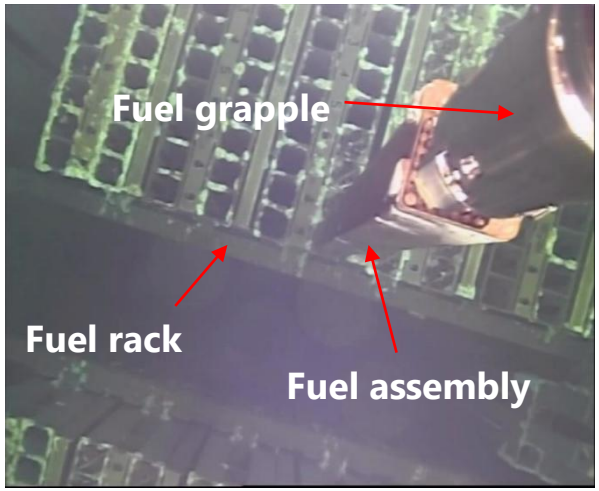
Photo taken on July 15, 2022



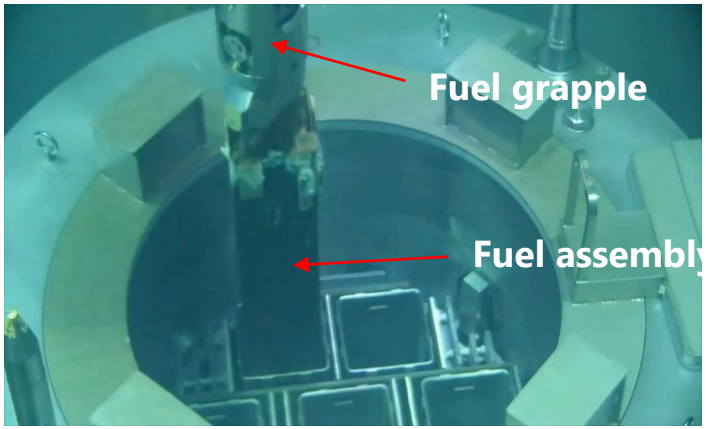
Unit 2 spent fuel removal

Removal work for the 615 fuel assemblies stored in the Unit 2 spent fuel pool (587 spent fuel assemblies and 28 new fuel assemblies) was started in June 2. All of the fuel is expected to be removed by FY2028.

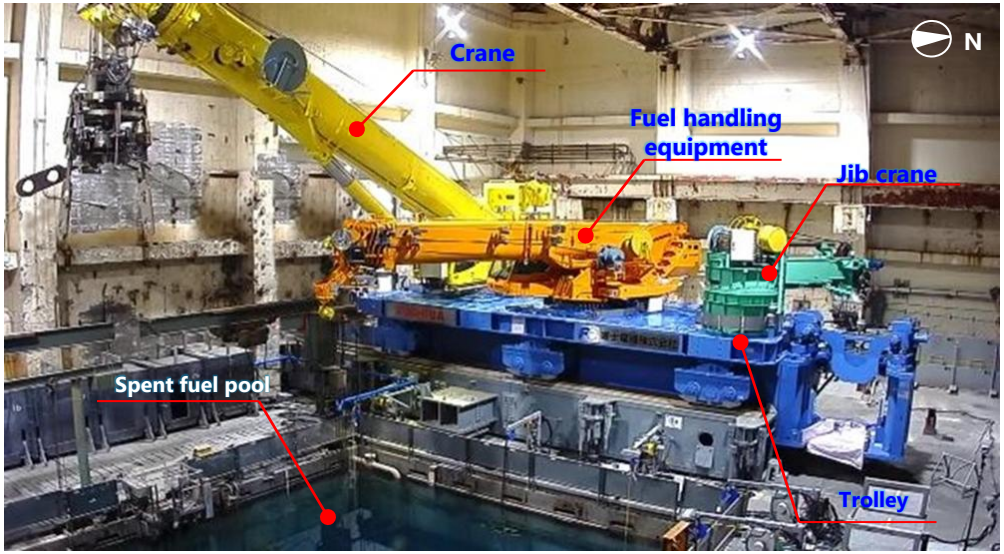
Commencement of fuel removal June 2026



Lifting the first fuel assembly from the rack (June 2, 2026)



Storing the first assembly in a cask (June 2, 2026)



Fuel handling system in the reactor building (taken using a remote monitoring camera) (Photo taken in December 6, 2025)

3. ALPS TREATED WATER

Discharging ALPS treated water into the sea

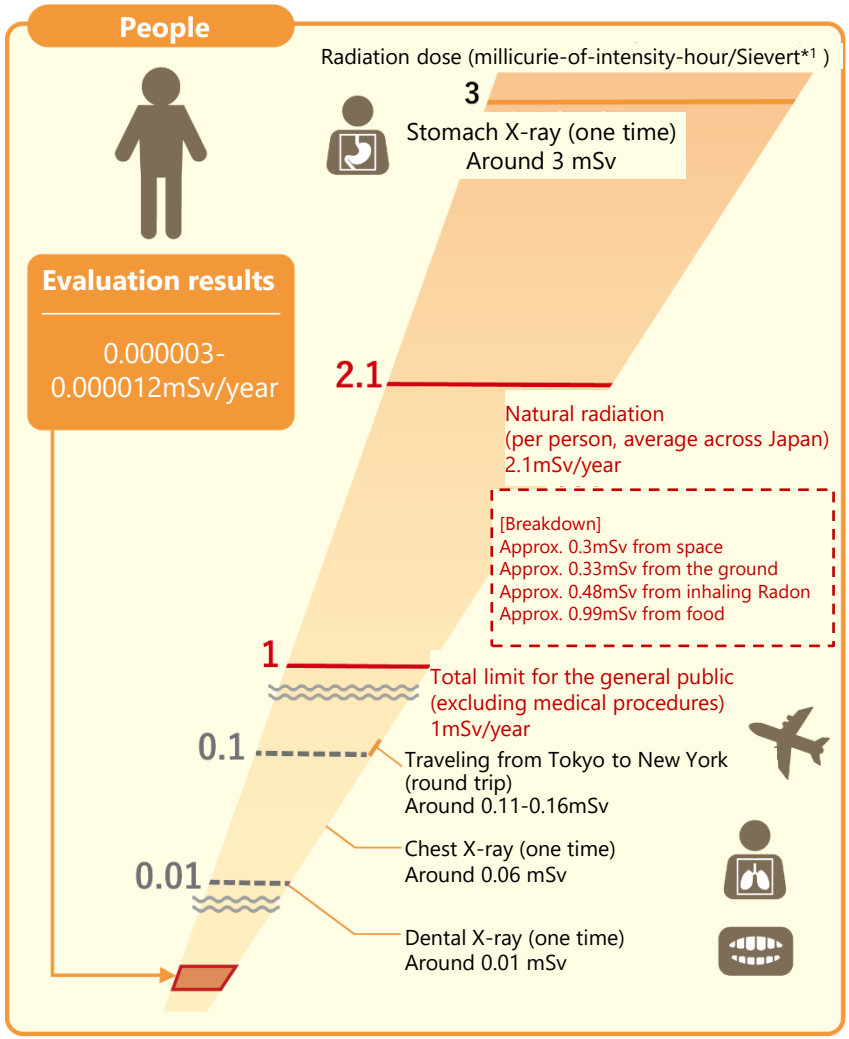
Since discharge of ALPS treated water was started in August 24, 2023, water has been discharged into the sea safely as planned.
Environmental impact assessments for the discharge into the sea have been conducted continuously and it has been evaluated that the impact of discharging ALPS treated water into the sea on humans, animals and plants is minimal.

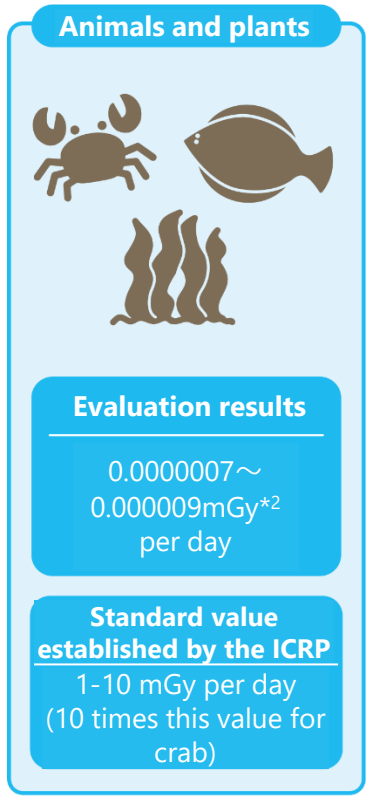
Impact on humans

Evaluated as being minimal, at 1/80,000th of the dose limit for the general public (1mSv per year).

Impact on animals and plants

Evaluated to be minimal, ranging from 1/1.1 millionth of the lower limit of the Derived Consideration Reference Level* for flatfish and brown seaweed to 1/14 millionth for crab.*Dose rate range within a one order of magnitude established by the ICRP for each species.
***The impact of radiation needs to be considered if the levels exceed this range.**





*1 Sievert (Sv) is a unit that represents the impact of radiation coming into contact with a human.
*2 Gray (Gy) is the unit that represents the amount of energy imparted when radiation comes into contact with something.

Source: National Institute of Radiological Sciences, etc.

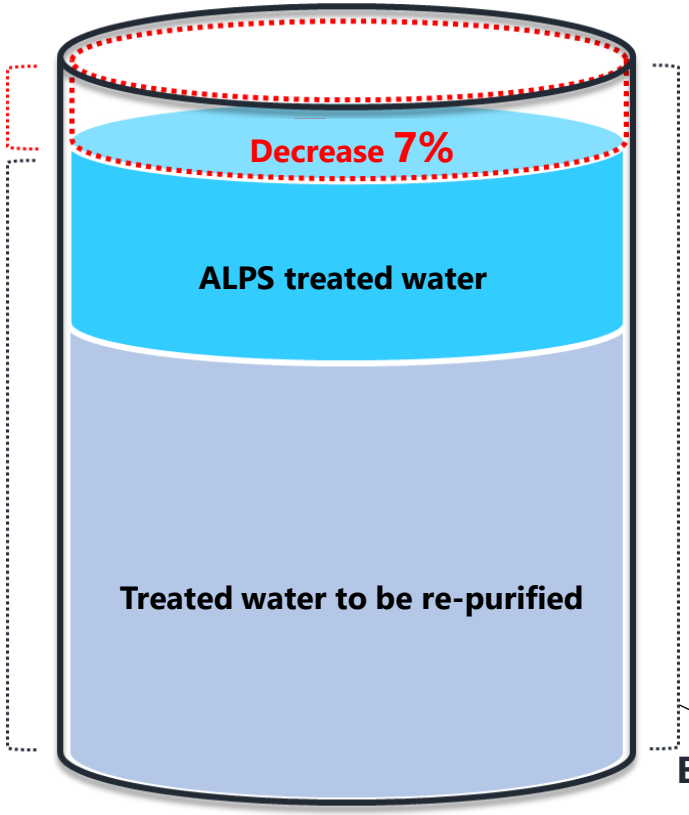
Reductions in the amount of ALPS treated water stored

Between August 24, 2023 when discharge commenced, and May 21, 2026, a total of 149,020m³ of ALPS treated water was discharged into the sea. In the same period, 61,252m³ of new ALPS treated water was generated. As a result, the amount of ALPS treated water etc.*1 stored has deceased by 7% compared with the amount stored before discharge began.
62,400 m³ of water is scheduled to be discharged over 8 batches in FY2026.

*1 ALPS treated water and treated water to be re-purified, which are contaminated water that has been treated by ALPS etc,

Reduction in treated water

Decrease in the amount stored
-87,768m³



As of May, 21, 2026
1,248,734m³

Before discharge commenced
1,336,502m³

Discharge performance and plan (by fiscal year)

Fiscal year	Amount of treated water discharged
FY2023	31,145m³ (4 discharges)
FY2024	54,999m³ (7 discharges)
FY2025	55,011m³ (7 discharges)
FY2026 (planned)	62,400m³ (8 discharges*2)

*2 As of June 23, 2026, there have been two discharges in FY2026, or 20 total across all years.

Disassembly of tanks

The tanks no longer used to store treated water as a result of the start of discharge of ALPS treated water into the sea will be systematically disassembled to secure enough area within the site to build facilities necessary for decommissioning. Disassembly of all 12 tanks in the J9 area was completed in September 2025. Disassembly of the 9 tanks in the J8 area was started in January 2026, and five tanks have been disassembled now.

In addition, dismantling of flange tanks was started in the E area on May 2019, and 48 out of 49 tanks have been dismantled as of July 2024. The last tank was disassembled in June 2026, marking the disassembly of all 334 flange tanks* that stored contaminated water from Units 1-4 immediately after the accident.

*Does not include other types of flange tanks on premises such as the existing ALPS sample tank.

E area D1 tank

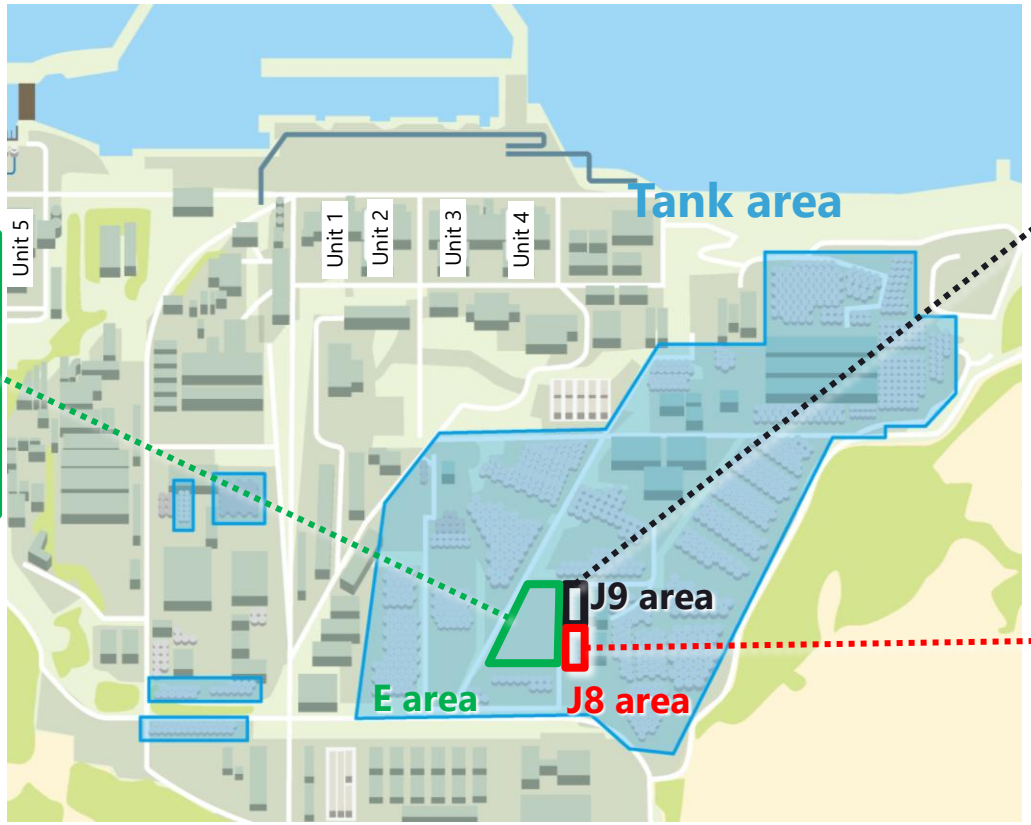
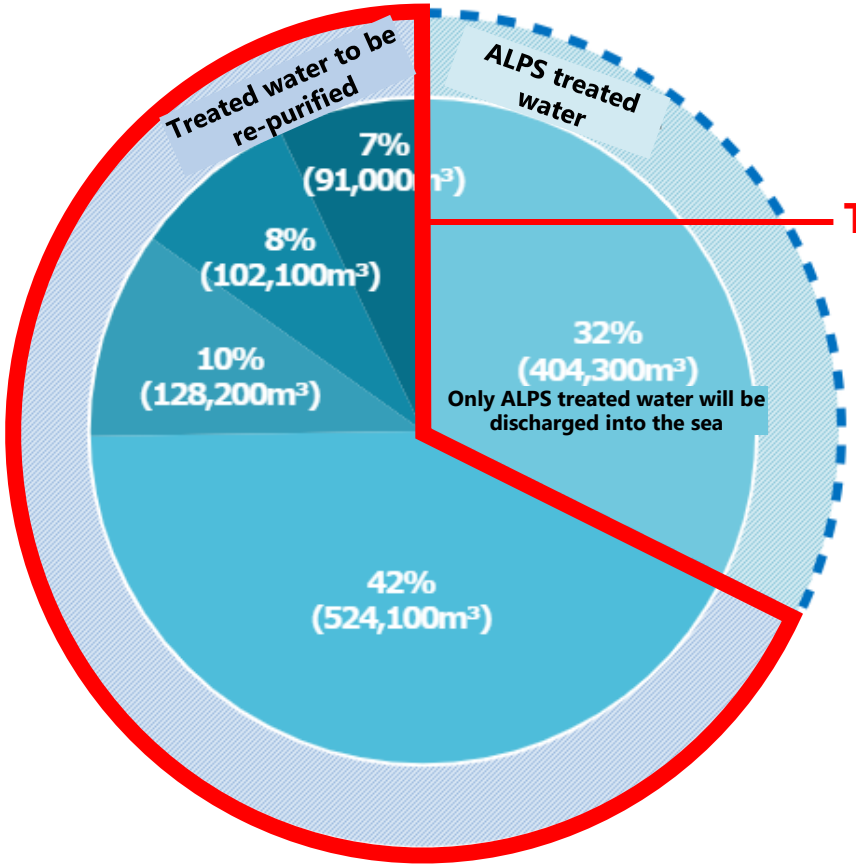


Photo after the tanks in the J9 area were dismantled

J8 area tanks

Secondary treatment of treated water to be re-purified

The station has submitted an application for approval to modify the implementation plan for the installation of the transfer piping for treated water to be re-purified in July 2025. The secondary treatment of treated water to be re-purified is slated to begin by the end of March 2027. In the meantime, water that has gone through secondary treatment will not be incorporated into the discharge plan for the fiscal year that it was treated, and will be stored as water to be discharged in the next fiscal year at the earliest.



Treated water to be re-purified

Approximately 70% of water stored in tanks contain radioactive materials exceeding the 'regulatory standard when discharging into the environment'.
This treated water to be re-purified will be re-purified (secondary treatment) with ALPS (Multi-nuclide Removal Facility) until it meets the government's regulatory standard before it is discharged into the sea.

Estimated amount of water stored by multiples of the sum of the radionuclide concentration ratio

- -1 time
- 1 time to 5 times
- 5 times to 10 times
- 10 times to 100 times
- More than 100 times

*Totals may not equal 100% due to rounding of percentages.

(As of December 31, 2025)

4. INITIATIVES TO IMPROVE THE RELIABILITY

State of initiatives to improve the reliability

FDEC has been resolving issues with 'co-creation' as the motto.

After October 2023, a series of issues occurred including physical contamination incidents at the additional ALPS and the suspension of the trial fuel debris retrieval. To address these issues, work inspections to assess risks associated with all work activities at the station, 'One Team' initiatives, and equipment-related improvements were conducted. As a result, the number of non-conformances at Fukushima Daiichi Nuclear Power Station has been on an decreasing trend.

● Changes in initiatives to address issues

"Co-creation"

"Co-creation of FDEC" represents initiatives to solve challenges together while building relationships of trust with partner companies, the local community, as well as among employees.

Series of issues after October 2023
- Physical contamination during Additional ALPS piping cleaning work
- Interruption of fuel debris trial retrieval due to a mistake in the telescopic device guide pipe order

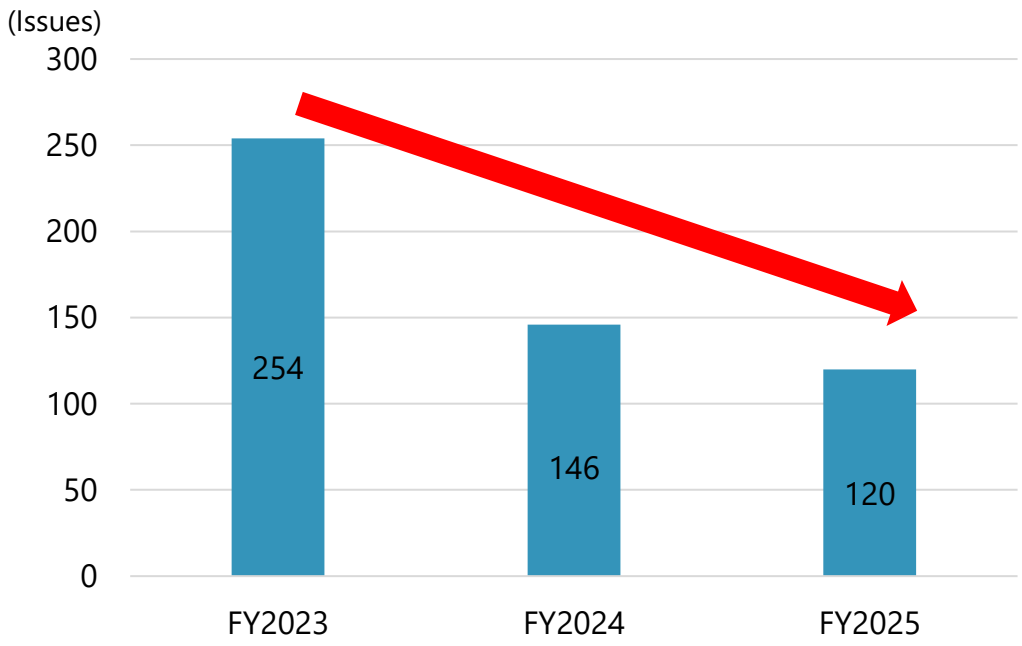
May 2024-
Started work inspections

April 2025-
Started "One Team" initiatives (trial phase)

August 2025-
Activities to promote understanding within FDEC
- Opinion exchange with the TEPCO Holdings President about One Team initiatives in the trial phase
- Opinion exchange between FDEC management and 1F executives

Now

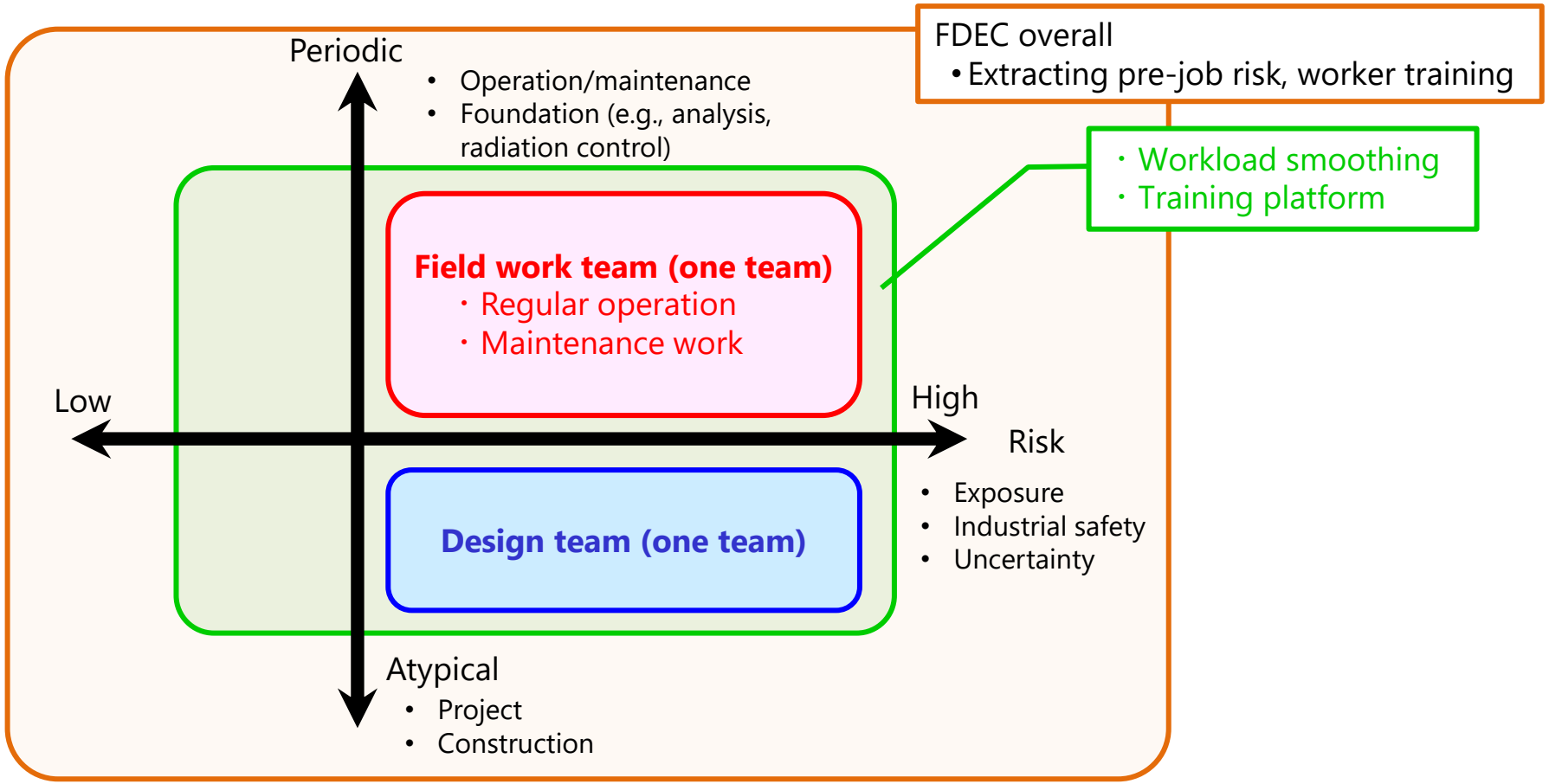
● Number of non-conformances by year



Overview of initiatives

To increase the safety of work being conducted at the station as a initiative of FDEC overall, work inspections in which the appropriateness of protective measures are determined from the perspectives of 'assessing hazardous factors' and 'risk analysis', were conducted.

We are also trialing 'One Team' initiatives in field work.



Conducting work inspections

Given incidents such as physical contamination and leakage outside of the building, which could cause negative effects on people and the environment, it was determined that safety in work conducted at the station needed to be increased as a station in addition to implementing recurrence prevention measures. With this in mind, work inspections were conducted to assess the appropriateness of protective measures from the perspectives of "assessing hazardous factors" and "risk analysis".

[Points to note in work inspections]

Ensured participation of all workers

- In conducting work inspections, sections were organized by work title, work schedule and protection instructions, according to work details. Inspections were conducted for all people involved in work, including prime contractors.

Open discussions (both directions)

- Opportunities were provided for all those involved in work inspections to discuss findings and other hazardous factors, and discussions were conducted.
- A welcoming atmosphere was created in these discussions where everyone involved in work can actively take initiative in participating in discussions and where workers from non-prime contractors can bring up findings.

Results of work inspections (incidents)

- Review rules regarding radiological protection gear replacement in work at G zone areas
  - ✓ Cover the ground to ensure workers can hold the correct posture when working and have all workers use different rubber gloves for each work step.
- Review energization operations for power receiving panels in electrical equipment installation work
  - ✓ Create diagrams that clarify the energized areas to use in procedures and notify all relevant personnel.
  - ✓ Ensured non-relevant personnel could not access the power receiving panels but putting them under permanent lock management.

Overview of 'One Team' initiatives (trial phase)

- **Trial operation of 'one team' initiatives were started for some of the ALPS maintenance work in Q1 of last year.**
  - Field work and mock equipment training were conducted together with partner companies to assess the state of the field and improve capabilities
  - Kaizen activities such as routinely asking for workers' opinions, were promoted to support coordination between TEPCO, prime contractors, and sub-contractors.
  - A 'One Team' manager was assigned within TEPCO to strengthen and clarify the communication channels between partner companies and to deepen coordination between upstream work and the field.

Working using the same gear

Using names when talking to each other

Effects of 'One Team' initiatives (trial phase)

TEPCO

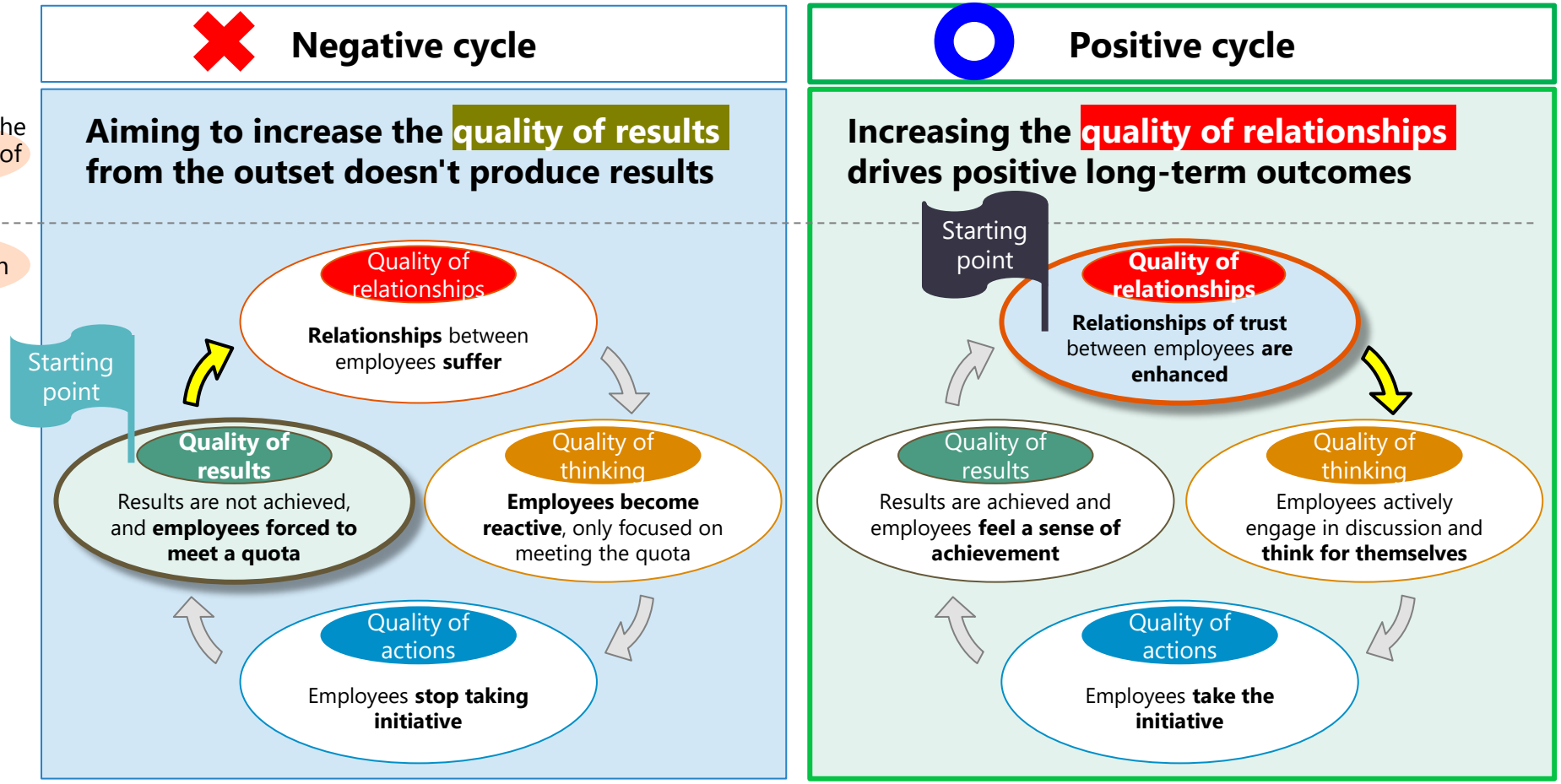
■ **Increasing the 'quality of relationships' led to a positive cycle in the core theory of success model***

- Aiming to increase the 'quality of results' from the outset leads to a negative cycle, and doesn't produce results
- The trial started by building relationships with partner companies and improving the 'quality of relationships'

*Core theory of success model: A theory proposed by Professor Daniel Kim at the Massachusetts Institute of Technology

Overview of the Core Theory of Success

Illustration



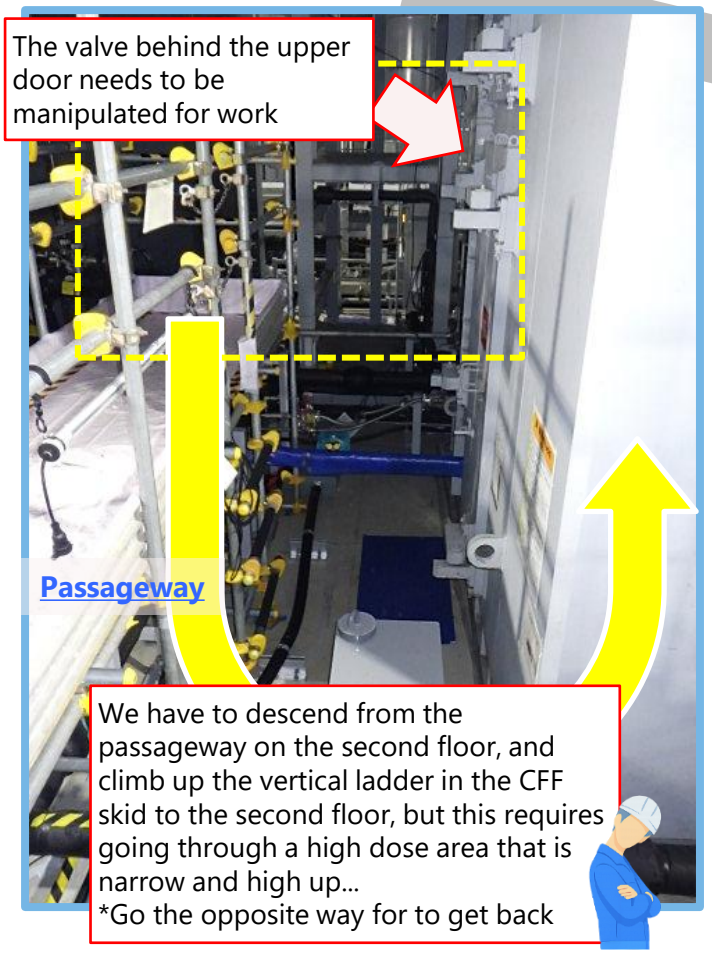
Examples of improved 'quality of relationships'
(suggestions from partner companies and TEPCO response)

TEPCO

■ **There were some changes, such as partner companies providing suggestions**

- Received a suggestion to install scaffolding that would shorten access routes and reduce exposure
- TEPCO acted on the suggestion promptly

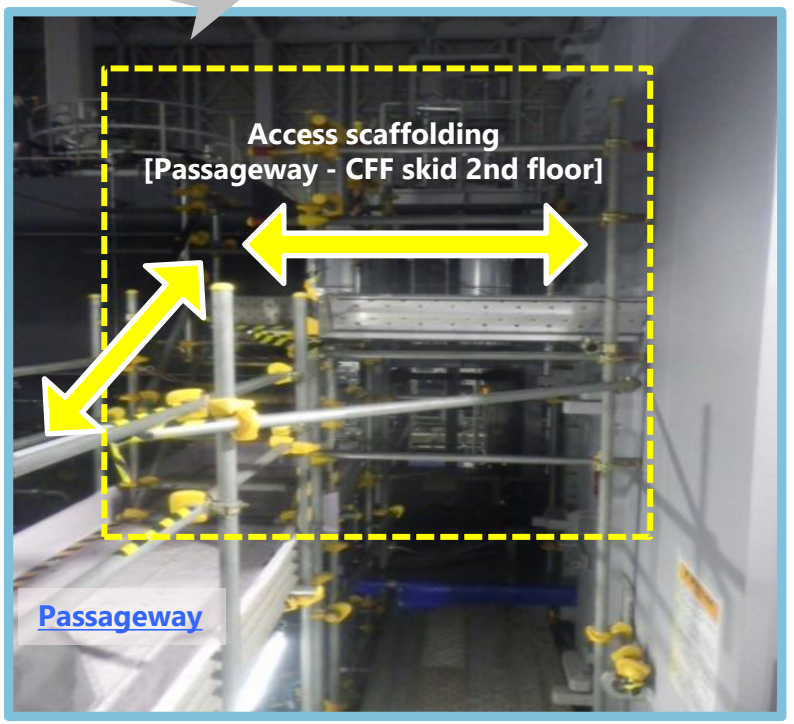
<Before>



Suggestion

- **If there were a way to access the upper door directly from the passageway, radiation exposure could be reduced while eliminating the need take a roundabout route and reducing the physical burden on workers.**
- **This ladder could be steps judging from the position of the passageway**

<After>



5. DISSEMINATING INFORMATION DOMESTICALLY AND INTERNATIONALLY

Dissemination information domestically and internationally through the dedicated website

Science-based information regarding decommissioning initiatives is shared in real-time through a dedicated website.

The site supports multiple languages to be able to provide accurate information internationally.

Treated Water Portal Site

- Website that provides detailed information about ALPS treated water such as real-time data about ALPS treated water being discharged into the sea
- Supports multiple languages (Japanese, English, Chinese, Korean)

Fuel Debris Portal Site

- Website that provides explanations about fuel debris in a digestible way using figures, photos, and video
- Updated regularly based on progress made in retrieval
- Supports Japanese and English

Overarching Radiation-monitoring data Browsing System in the costal ocean of Japan (ORBS)

- Website that consolidates and displays the results of seawater monitoring conducted by Fukushima Prefecture, NRA, Ministry of Environment, and TEPCO, to allow viewers to objectively look at the state of the sea around the station
- Supports multiple languages (Japanese, English, Chinese, Korean)

Two-way dialogue

We are explaining the current state of decommissioning during site tours when visitors are looking at the actual equipment, and by holding round tables and answering questions.

We also set up booths at events held throughout Fukushima Prefecture displaying models of ALPS treated water facilities and asking visitors to answer quizzes to disseminate information in an easy-to-understand manner while fostering two-way communication with visitors.

Fukushima Daiichi Nuclear Power Station Visit/Roundtable

Booth at LIVE AZUMA 2024 (October 2024)@Fukushima City

Booth at Recovery Namie Town Toukaichi Festival (November 2024) @Namie Town