# NRA's updates from the previous mission

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# 1. Inspection

Status of Operational Safety Inspection and Periodic Safety Inspection

> **No safety concerns were identified so far.**

***Operational Safety Inspection (continued during operation)***

- ✓ Resident inspectors verify, as necessary, whether the operation is adequately conducted according to the approved IP, including the check points below.
- ✓ So far, no safety issue has been confirmed through operational safety inspection.

1. *Operation management (approx. once/week)*
   - ✓ Operation status at each step (1. receiving, 2. measurement/confirmation, 3. discharge), decisions made by a responsible person at the holding points
   - ✓ Maintenance status based on the plan
   - ✓ Status of education and training
2. *Quality assurance (approx. once/month)*
   - ✓ Quality assurance activities on analysis of ALPS treated water, tritium analysis during discharging operation

# *1. Inspection (cont.)*

***Operational Safety Inspection (continued during operation)***

*3. Project management (approx. twice/week)*

- ✓ Hearing of the status of project management
- ✓ Observing the operator's relevant meetings (e.g., safety risk management meeting, ALPS treated water program team meeting)
- ✓ Status of establishing the annual discharge plan

*4. Trouble management (each time)*

- ✓ Status of discharge suspension by usual or emergency process in response to unusual events
- ✓ Status of countermeasures and corrective actions to troubles such as equipment failure or leakage

***Periodic Safety Inspection (28th Feb 2024, 25th Sep 2024)***

- ✓ The measurement/confirmation facility:
  - Circulation performance
  - Agitation performance
  - Operation Status
- ✓ The emergency shutdown valve:
  - Operation test with actuation signal

# *2. Regulatory perspective about TEPCO's adding Cd113m to its measured and analyzed nuclides*

- The 6 nuclides (Cl-36, Nb93m, Nb-94, Mo-93, Cd-113m and Ba-133) that had been confirmed to be less than 1/100 of the regulatory concentration limit in the analysis of contaminated water in the past are classified as "nuclides to be monitored".

- They are not to be measured at each regular discharge but to be measured once a year to verify their presence in contaminated water just in case for the character of the contaminated water is changed.

- This process is approved in the Implementation Plan.

- Cd-113m had not been detected with accuracy of less than 1/100 of the regulatory concentration limits in the ALPS inlet water at the result of the previous measurement before the discharge started, so Cd-113m was classified as "nuclides to be monitored".

# *2. Regulatory perspective about TEPCO's adding Cd113 to its measured and analyzed nuclides (cont.)*

- But in the measurement for "nuclides to be monitored" in FY2023, Cd-113m was detected more than 1/100 of the regulatory concentration limits, so Cd-113m was added to "nuclides to be measured and assessed".
- From 8th discharge (August 2024), 30 nuclides including Cd-113m was regularly measured whether it satisfied the release criteria.
- NRA got explanation about this from TEPCO, and regards this change is consistent with the approved process in the Implementation Plan.
- **<u>Cd 113 is captured in ALPS, so this change does not cause any safety concerns.</u>**

Analysis results for "nuclides to be monitored"
(sampled from ALPS inlet water in February, 2024)

| Analyzed Nuclides | Results | 1/100 of the regulatory concentration limits |
|---|---|---|
| Cl-36 | Below LoD (LoD: 1.7Bq/L) | 9Bq/L |
| Nb-93m | Below LoD (LoD: 14Bq/L) | 70Bq/L |
| Nb-94 | Below LoD (LoD: 0.88Bq/L) | 5Bq/L |
| Mo-93 | Below LoD (LoD: 1.9Bq/L) | 3Bq/L |
| Cd-113m | 2.9Bq/L > | 0.4Bq/L |
| Ba-133 | Below LoD (LoD: 4.9Bq/L) | 5Bq/L |

# *3. Independent monitoring*

- ✓ NRA's independent source monitoring to complement operational safety inspection on TEPCO's organizational framework for analyzing "nuclides to be measured and assessed" and their quality assurance activities

***Latest NRA's independent monitoring***

*Sampling date:* 4th Sep, 2024

*Analytical Institute:* JAEA Nuclear Safety Research Center / TSO of the NRA

*Radionuclides to be measured:*

C-14 and I-129 (the main contributors in REIA), Major γ-emitter nuclides (Co-60, Ru-106, Sb-125, Cs-134, Cs-137)

*Result* ***TEPCO's analysis was valid (En Score is less than 1)***

The next analysis in the same manner is being planned for 2025.

# *Other Updates*

NRA's review for TEPCO's organizational changes

- ✓ As the discharge of ALPS treated water started, TEPCO submitted an application for changes of the Implementation Plan for its organizational changes to NRA.
- ✓ TEPCO's aim of the application was to integrate TEPCO's all related groups of handling the contaminated water from the draining to the discharge in the viewpoint of improving its safety operation, long term operations and quality management.
- ✓ NRA confirmed that the previous related groups were appropriately transferred to the new organization and established the new group (Water Processing Center), so NRA approved the change of the Implementation Plan on 21st May, 2024.

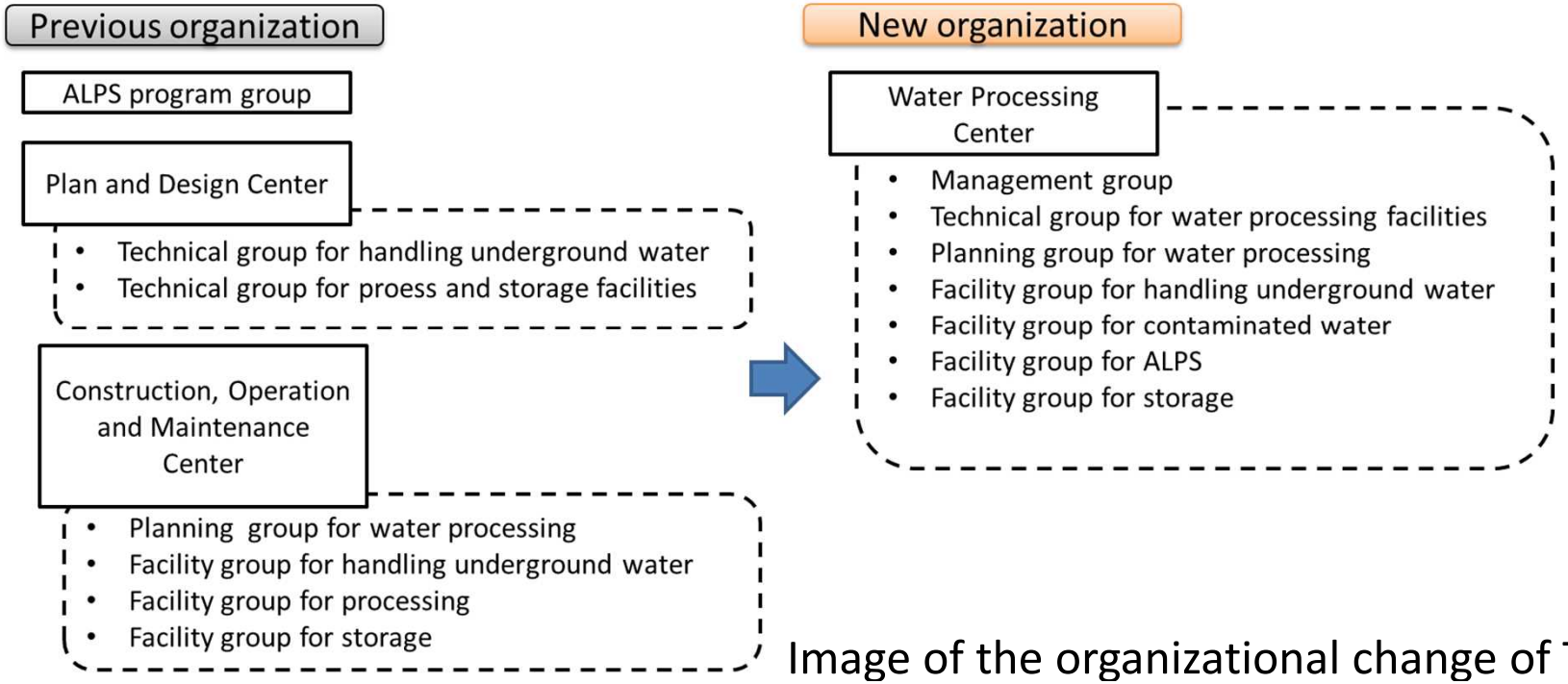


Image of the organizational change of TEPCO

Thank you for your attention.