

NRA presentation

NRA's updates since the previous March Mission

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2nd IAEA Regulatory Review Mission on ALPS Treated Water Handling
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1. Regulatory process

NRA

Review of IP

Draft review results reported and discussed by the NRA Commission

(18 May 2022)

Receiving public comments (19 May – 17 June 2022)

Results of public comment reported to the NRA Commission

Decision on approval by the NRA Commission

Approval of IP (22 July 2022)

Start of Operational Safety Inspection (incl. Quality check of TEPCO's analysis)

Review and approval of operational measures including selection scheme of source term and source monitoring program

NRA's Pre-service Inspection on SSCs (starting in Jan 2023)

Approval of IP

Pass of NRA's Pre-service Inspection

Operational Safety Inspection continues (incl. Quality check of TEPCO's source monitoring)

Periodic Facility Inspection

Independent source monitoring by the NRA's TSO

TEPCO

Application of Implementation Plan (IP) (21 Dec 2021)

Submission of revised IP (28 April, 15 May 2022)

Start of SSCs Installation

Submission of IP for operational measures including selection scheme of source term and source monitoring program (14 Nov 2022)

Tests on SSCs

Submission of revised IP

Completion of Installation

Start of operation

IP submission

NRA Review Meetings (13 meetings)

IP submission

NRA Review Meetings (4 meetings)

We are here



2. Review

For *the first Implementation Plan on ALPS treated water discharge facility installation submitted on 21 Dec 2021*, during Dec 2021 to July 2022,

- The NRA held its Review Meeting to have discussions with TEPCO and to see:
 - ✓ *Whether the TEPCO's Implementation Plan conforms to the Regulatory Requirements* (“Items required for Measures which should be taken at Tokyo Electric Power Co., Inc.’s Fukushima Daiichi Nuclear Power Station in line with the Designation as the Specified Nuclear Facility”); and
 - ✓ *Whether the TEPCO's Implementation Plan is in line with the government basic policy.*
- The NRA held **13 Review Meetings**, approximately once a week.
- Review Meeting is open to the public to attend for listening at the NRA meeting room as well as through web-streaming, and its materials are posted on the NRA website.



3rd “Review Meeting” (24th December 2021)

- Webpage (in Japanese): [東京電力福島第一原子力発電所 多核種除去設備等処理水の処分に係る実施計画に関する審査会合 | 原子力規制委員会 \(nsr.go.jp\)](https://www.nsr.go.jp/press/20211224_01.html)
- Webpage (in English): [NRA Library | The Nuclear Regulation Authority \(nsr.go.jp\)](https://www.nra.go.jp/en/)



NRA English Website



2. Review

- On 18 May 2022, the NRA Commission approved the Draft Review Results Document to move on to the solicitation of public comments.



NRA Commission meeting on May 18th 2022

- Public Comment Process:

(1)Period: from 19 May 2022 to 17 June 2022 (30 days)

(2)Subject: Draft Review Results Document on the application for approval to amend the Implementation Plan pertaining to Specified Nuclear Facility (Installation of ALPS treated water discharge facility)

(3)*Number of Submitted Comments: 670 comments**

*Among 1,233 comments received by the NRA, Submitted Comments are 670 and Relevant Comments are 323. These numbers are counted as designated by the Ministry of Internal Affairs and Communications.



2. Review

- The NRA looked into submitted comments, prepared its responses, and then concluded that *substantial changes to the review results are not needed considering points these comments raised.*

Example of the submitted comments

【Examination based on Reactor Regulation Act】

- Homogenization of nuclide concentrations in the ALPS treated water and dilution methods, as well as adequacy of design such as seismic resistance of facilities
- Identification of nuclides in the ALPS treated water and approach to effective dose assessment at the site boundary due to release

【Review in light of the Government Basic Policy】

- Appropriateness of evaluation conditions such as bio-accumulation of radionuclides, accumulation in sediment soil, and organically bound tritium in the radiological impact assessment
- Implementation of comprehensive Environmental Impact Assessment

- *After these processes above, the NRA Commission approved the amendment of the Implementation Plan on 22 July 2022, publishing the final Review Results Document.*

- Review Results Document (English): [000399110.pdf \(nsr.go.jp\)](#)
- NRA Commission Meeting Material on July 22 (English): [000399109.pdf \(nsr.go.jp\)](#)



2. Review

The second Implementation Plan on operational measures submitted on 14 Nov 2022

Content of the application:

- A: Organizational structure to manage operation and maintenance of ALPS treated water discharge facility after discharge starts
- B: Selection scheme of nuclides to be measured or evaluated before ALPS treated water is discharged
- C: Revision of Radiological Environmental Impact Assessment reflecting the selected nuclides as the source term (as reference materials)

- The NRA held its Review Meeting to have discussions with TEPCO and to see:
 - ✓ *Whether the TEPCO's Implementation Plan conforms to the Regulatory Requirements* (“Items required for Measures which should be taken at Tokyo Electric Power Co., Inc.’s Fukushima Daiichi Nuclear Power Station in line with the Designation as the Specified Nuclear Facility”); and
 - ✓ *Whether the TEPCO's Implementation Plan is in line with the government basic policy.*
- The NRA held **4 Review Meetings so far in Nov and Dec 2022.**



2. Review

Main points in examination based on the Reactor Regulation Act

A: Organizational structure to manage operation and maintenance of ALPS treated water discharge facility after discharge starts

- Whether appropriate organizational structure is to be in place, and the role and authority of each relevant organization is clearly defined.

➡ *Confirmed at the review meetings*

B: Selection scheme of nuclides to be measured or evaluated before ALPS treated water is discharged

- The reasoning and validity of the selection scheme

➡ *Technical discussions at the review meetings, TEPCO's reflection of some of the NRA's points confirmed (as a result, 2 nuclides out, 1 nuclide added)*

Main points on actions relevant to Government Basic Policy

C: Revision of REIA reflecting the selected nuclides as the source term (as reference materials) (as reference materials)

- Whether assessed doses with the selected nuclides are below the criteria

➡ *TEPCO's revision of the source term reflecting the change of the nuclides in B confirmed*



2. Review

The second Implementation Plan on operational measures submitted on 14 Nov 2022

- Technical discussions between the NRA and TEPCO have almost finished.

Future steps

- TEPCO to submit the revision of the application reflecting the technical discussions
- The NRA Secretariat to prepare the draft Review Results Document for the NRA Commission's discussion
- Public comment process (solicit comments for one month)



3. Inspection

Pre-service Inspection

- Starting from 16 January 2023

Operational Safety Inspection

Before start of discharge

- Started on construction of ALPS treated water discharge facility
- Started on quality assurance of nuclide analysis, planned to be finished before start of analysis for discharge

After start of discharge

- To be conducted to see whether ALPS treated water discharge operation meets the operating limits and conditions described in the Implementation Plan.



Construction progress: caisson installation on 18 Nov 2022
Source: TEPCO's material on 19 Dec 2022



4. *Independent Monitoring*

Independent Source Monitoring

Before start of discharge

- Analysis on-going at JAEA/the NRA's TSO to support the verification of TEPCO's quality management and the characterization of the source term, to be completed in spring 2023

After start of discharge

- To be conducted to support the verification of TEPCO's quality management

Independent Environmental Monitoring

Before start of discharge

- Started taking samples and analysis as baseline monitoring since April 2022 under the enhanced Comprehensive Radiation Monitoring Plan

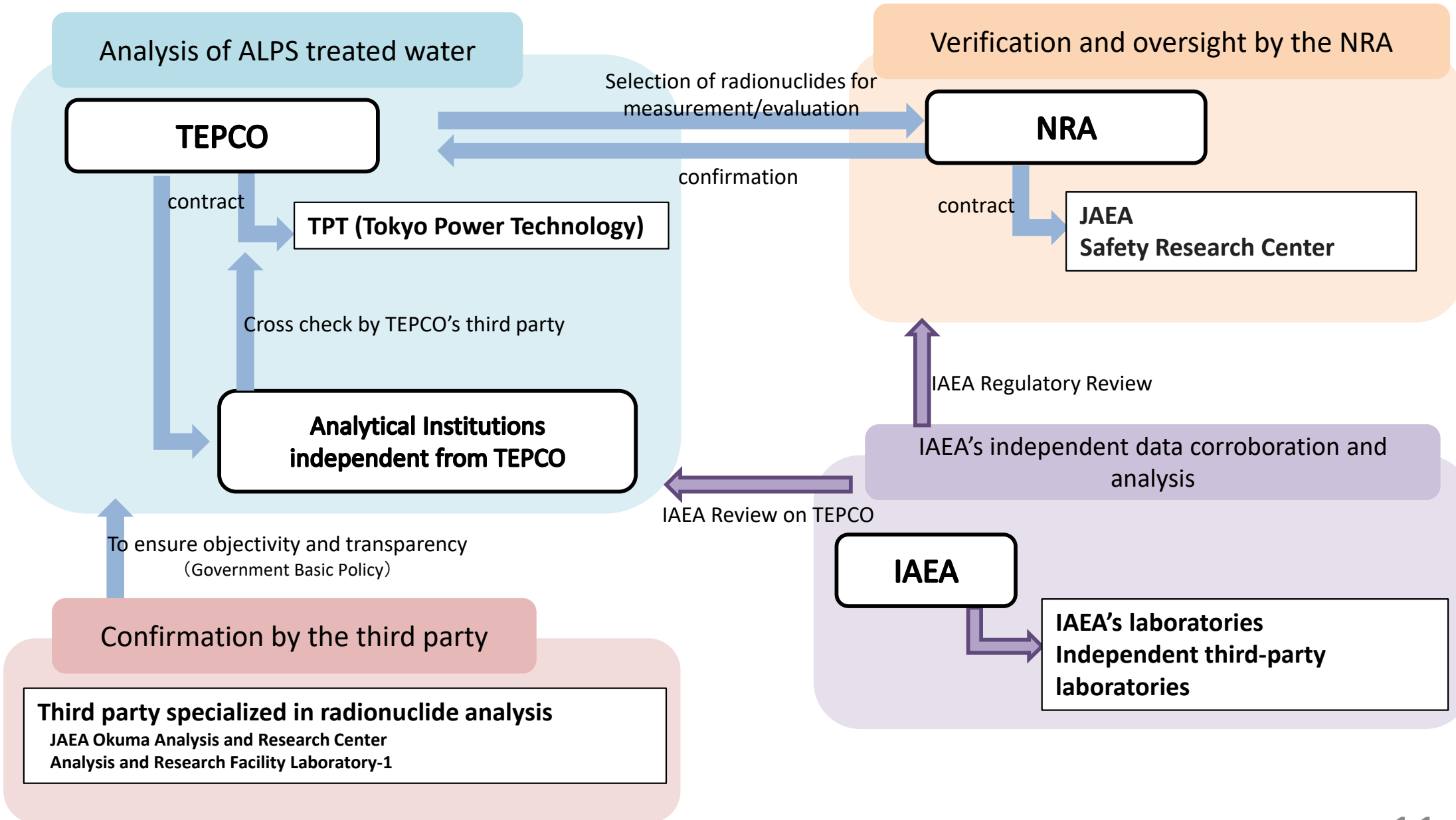
After start of discharge

- To be continued



4. Independent Monitoring

Organizations involved in analysis of ALPS treated water (before start of discharge)



*This scheme is under consideration, and may change depending on further consideration.



Thank you for your attention.