

Establishing national policies and strategies to enable and enhance decommissioning

Approaches to the decommissioning and contaminated water management for Fukushima Daiichi NPS

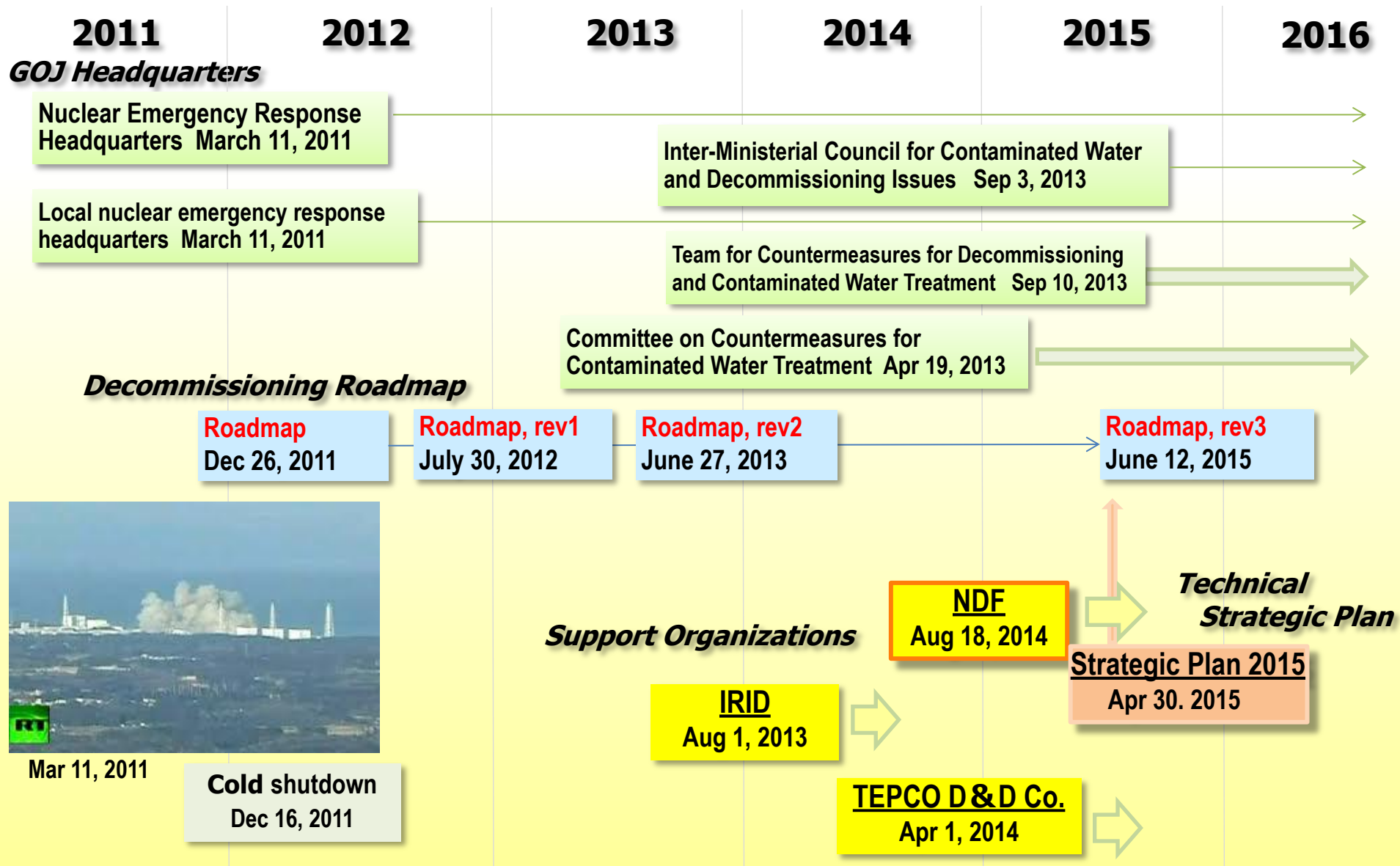
International Conference on Advancing the Global Implementation of
Decommissioning and Environmental Remediation Programmes

23-27 May 2016, Madrid, Spain

Hajimu Yamana
President

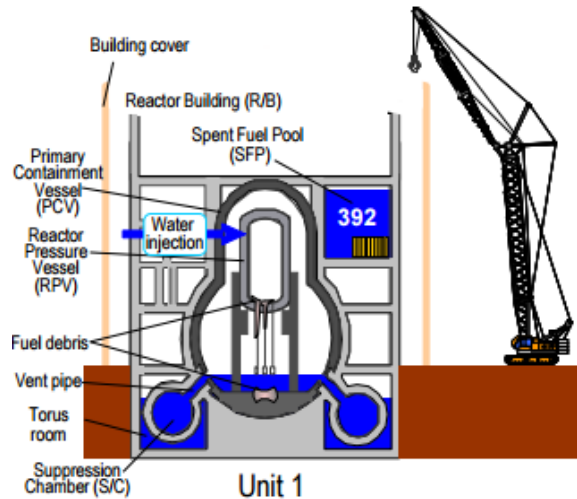
Nuclear Damage Compensation and
Decommissioning Facilitation Corporation (NDF), Japan

Strengthened organizational and institutional settings

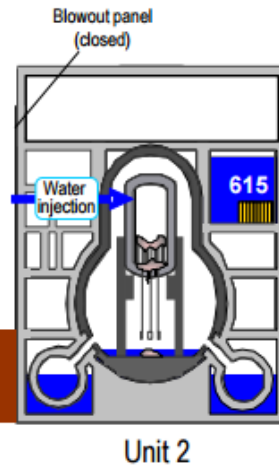


Update of Units 1-4

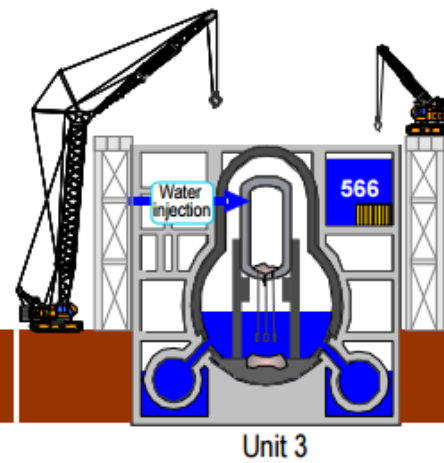
Unit1



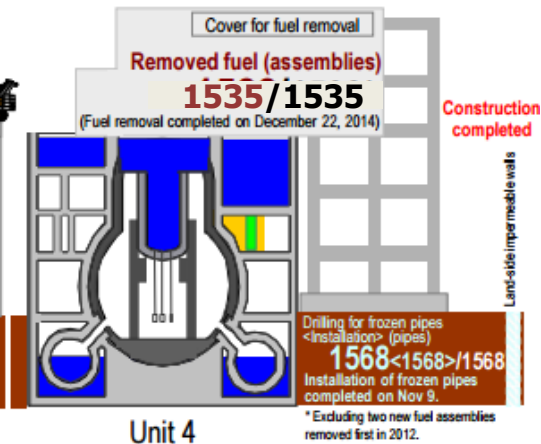
Unit2



Unit3



Unit4



Removal of last one roof panel



Policy decision for the overall disassembly of storage shed



During preparation of retrieval/decontamination



Completion of spent fuel

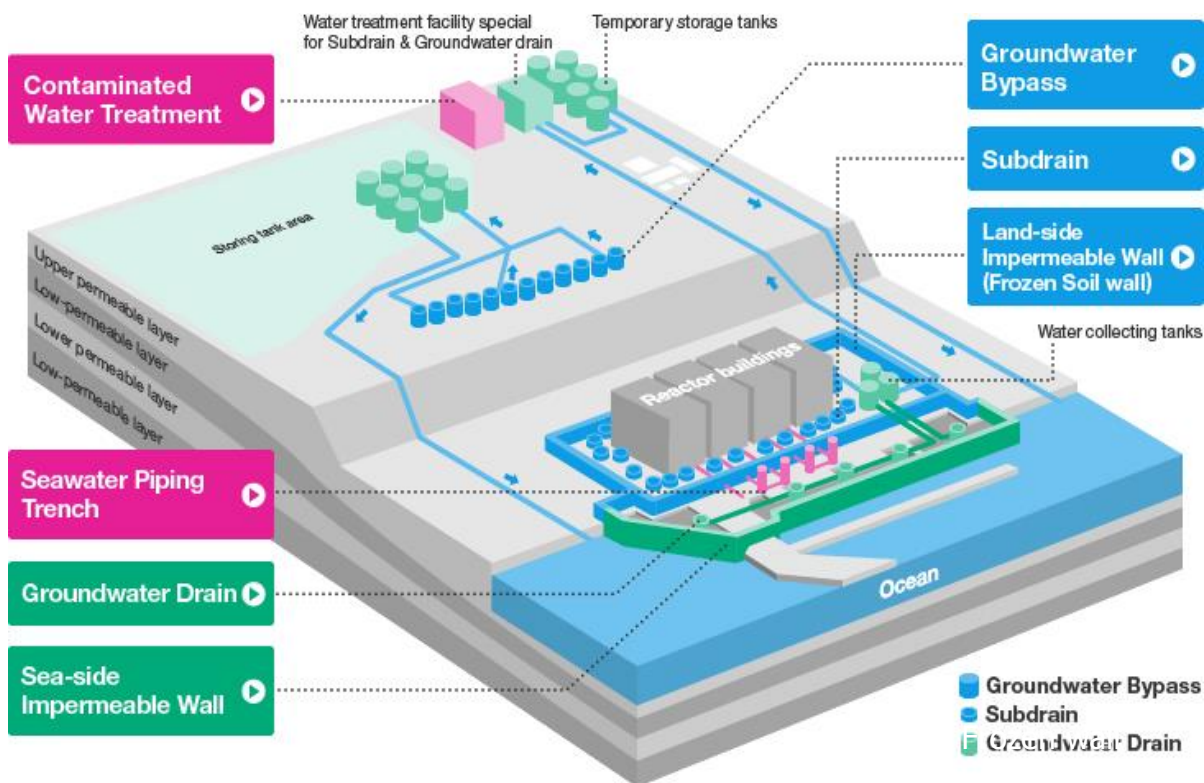
Source :Meeting material from Team for Countermeasures for Decommissioning and Contaminated Water Treatment

無断複製・転載禁止 原子力損害賠償・廃炉等支援機構

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Addressing the contaminated water challenges

- Basic principles and immediate countermeasures
 - ✓ Remove contamination source
 - ✓ Isolate water from contamination
 - ✓ Prevent leakage of contaminated water
- R&D and demonstration (advanced purification systems, frozen-soil wall etc.)
- Communication with stakeholders



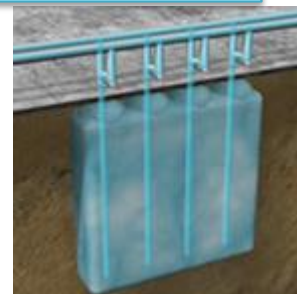
2014/5
Discharge started

2015/9
Pumping-up started

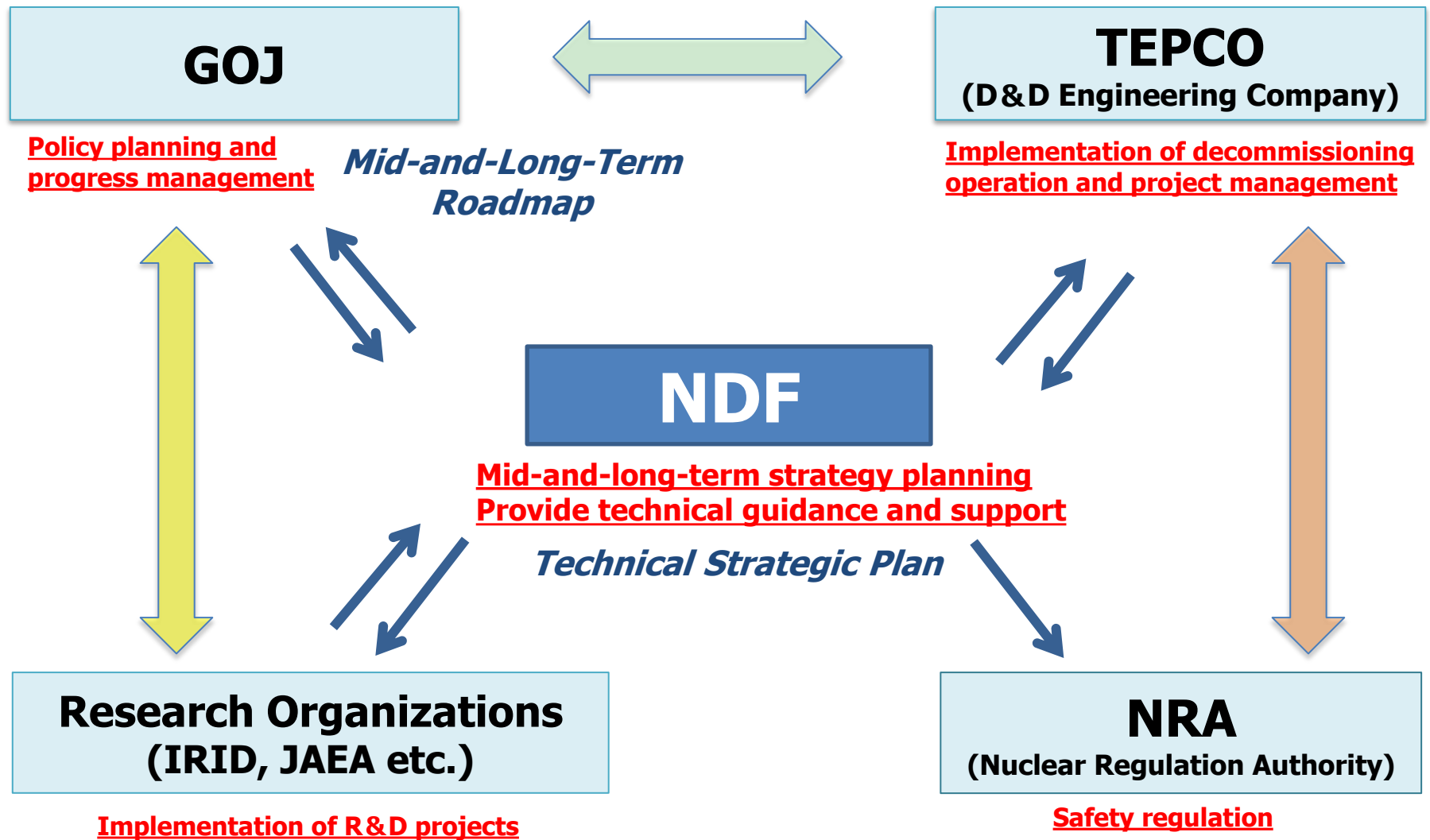
2015/3
Operation started

2015/7
Water
removal
completed

2016/2
Closing
completed

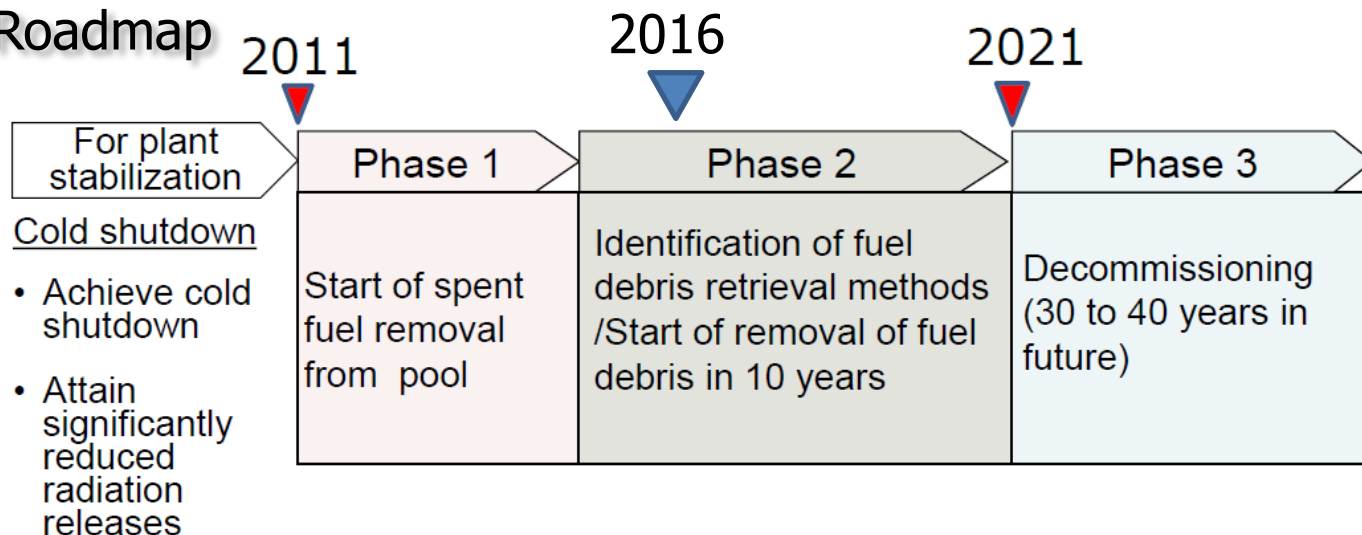


Organizational relationship



Mid-and-Long-Term Roadmap & Technical Strategic Plan

Mid-and-Long-term Roadmap (GOJ)



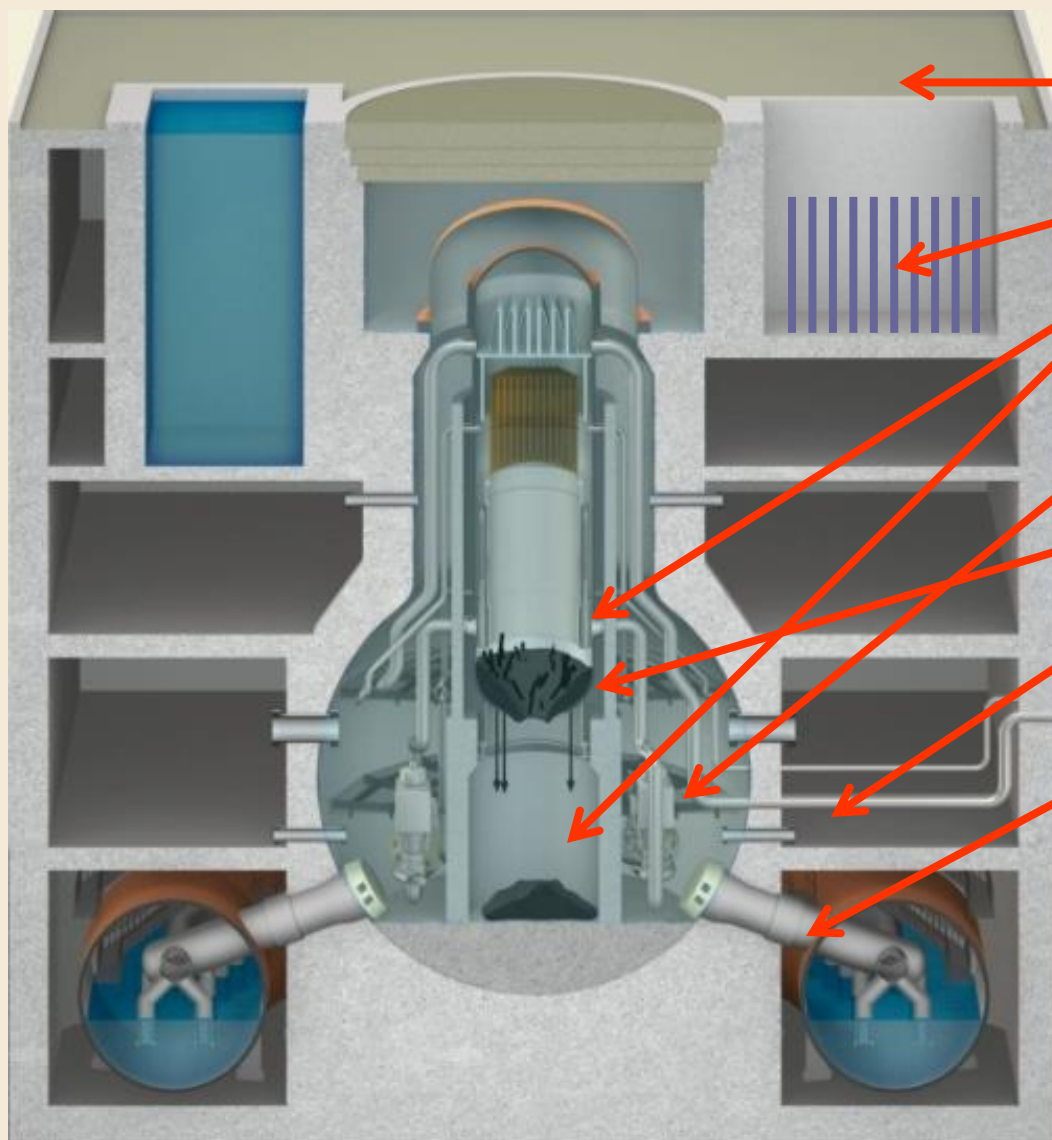
Technical Strategic Plan (NDF)

**Strategic Plan 2015:
Issued on Apr. 30, 2015**

**Strategic Plan 2016:
Scheduled for this summer**

- ◆ Discussion through the close dialogue and exchange of information between the Government and TEPCO.
- ◆ Study mid-term technical strategy through the discussion with the experts from various technical fields while receiving the advice from Decommissioning Strategy Board, Expert Committee from multiple fields, International Special Advisors.
- ◆ "Risk reduction strategy" regarding mid- and long-term decommissioning
- ◆ In vessel inspection and study of the technical strategy for the fuel debris retrieval method.
- ◆ Develop an optimum technical strategy based on the Five Guiding Principles. " Safe, Proven, Efficient, Timely and Field-oriented"

Fuel debris retrieval

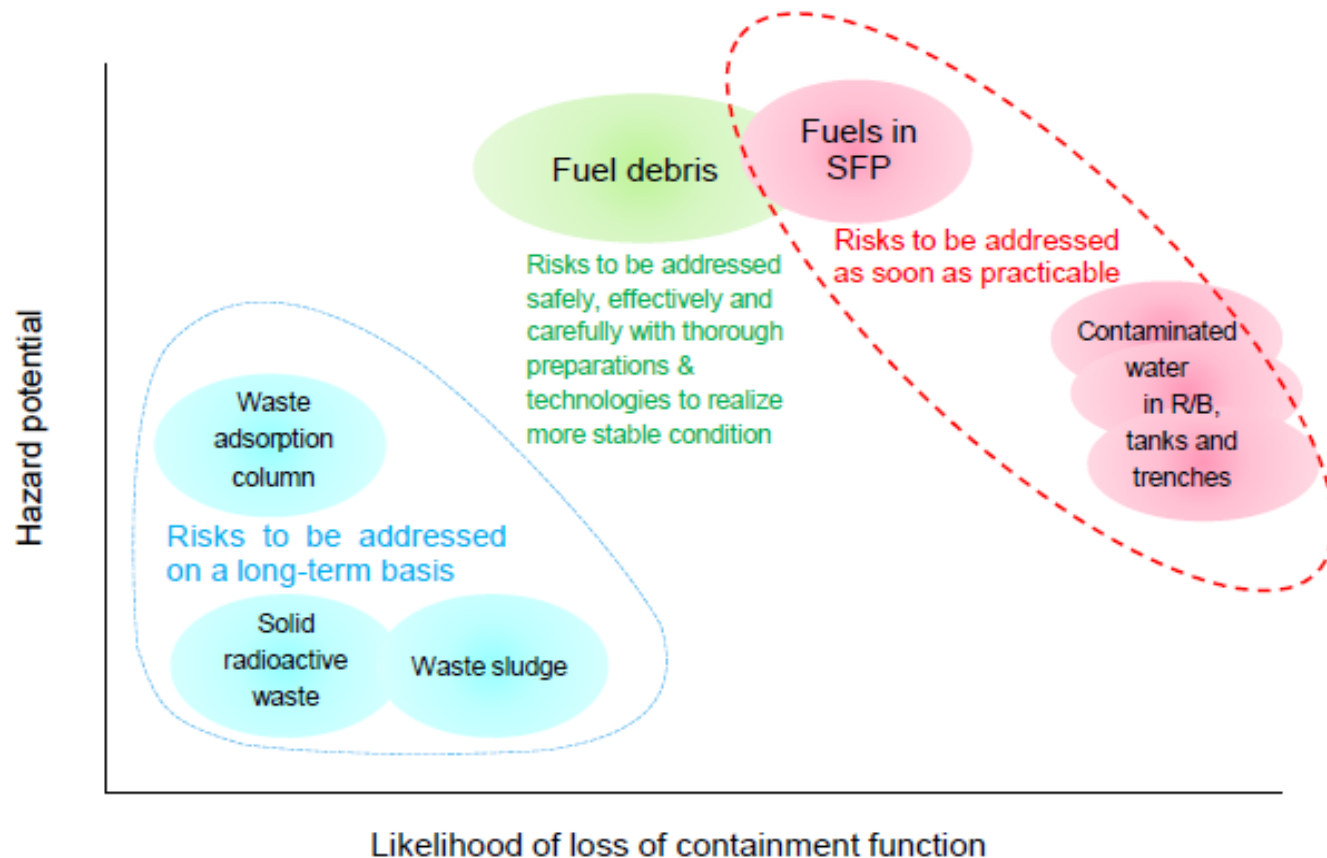


- Operation floor largely damaged. High dose rate
- Spent fuels stored in Unit1, 2 and 3
- Fuel debris dispersed in both RPV and PCV
Properties unknown
- High radiation inside PCV
Inside PCV gradually known.
- Cooldown by water injection required.
- Building highly contaminated with high radiation (battle with decontamination)
- Leakage from PCV.
Generation of contaminated water.
- Leakage from the building.
Penetration of groundwater.
Needs of contaminated water leakage prevention

Decommissioning as risk reduction

Risk defined in the Technical Strategic Plan 2015 by NDF, Japan

Figure 3-5 shows the levels of risks for major risk sources in the Fukushima Daiichi NPS based on the “hazard potential” and “likelihood of loss of containment function.”



Source: Technical Strategic Plan 2015, NDF

International cooperation

International Community

IAEA

- Peer review missions
- Safety report series
- “DAROD” project
 - ✓ Safety issues for accident damaged nuclear facilities

OECD/NEA

- Joint research program
- BSAF-2
- SAREF
- EGWMF

Bilateral framework

- Dialogue
- Cooperation
- Partnership
etc.

International Forum on the Decommissioning of the Fukushima Daiichi NPS



*For the people and reconstruction of Fukushima area,
and for the decommissioning and safety enhancement of
nuclear facilities all over the world*

Thank you for your attention!

