

Regulatory Framework for Decommissioning of Nuclear Facilities in Japan

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1. Introduction

Decommissioning has recently become an issue highlighted in Korea due to the permanent shutdown of Kori-1 Unit 1 which is the first PWR (Pressurized Water Reactor) NPP commissioned in 1978 and was put on permanent shutdown for decommissioning on June 2017, after 40 years of operation. Operation license of Kori Unit 1 was expired in 2007 after 30 years of design life and Kori Unit 1 received a 10 years of 1st continued operation from the government until June 2017. In June 2015, Kori Unit 1 was decided to be permanently shutdown without applying its 2nd continued operation and becomes the first NPP be decommissioned in Korea.

KHNP, the operating licensee of Kori unit 1, is now preparing final decommissioning plan (FDP) for decommissioning approval by June 2022, within 5 years from its permanent shutdown, according to the recently revised Nuclear Safety Legislations. KINS is on processing the development of review guideline of FDP by conducting R&D project.

This study shows the introduction on regulatory framework for decommissioning of nuclear facilities in Japan, in order to refer to the development of review guideline of FDP.

2. Regulatory framework

2.1 NPPs under decommissioning

There are 11 nuclear power reactors under decommissioning in Japan as of Aug. 2018 as shown in Table 1.

Table 1. NPPs under decommissioning in Japan [1]

Reactor	Start of operation	Appl. For decom. plan	NRA's approval of decom. plan
Tokai	Jul. 1966	Mar. 2006	Jun. 2006
Fugen (ATR)	Mar. 1979	Nov. 2006	Feb. 2008
Hamaoka Unit 1&2	Mar. 1976 Nov. 1978	Jun. 2009	Nov. 2009
Genkai Unit 1	Oct. 1975	Dec. 2015	Apr. 2017
Tsuruga Unit 1	Mar. 1970	Feb. 2016	Apr. 2017
Mihama Unit 1&2	Nov. 1970 Jul. 1972	Feb. 2016	Apr. 2017
Shimane Unit 1	Mar. 1974	Jul. 2016	Apr. 2017
Ikata Unit 1	Sep. 1977	Dec. 2016	Jun. 2017
Monju	Sep. 1991	Mar. 2018	Mar. 2018

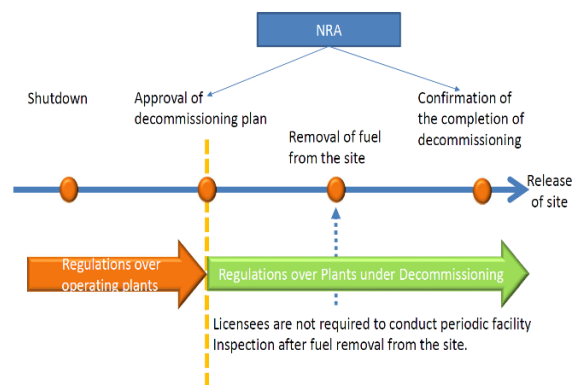


Fig. 1. Regulatory framework for decommissioning [1].

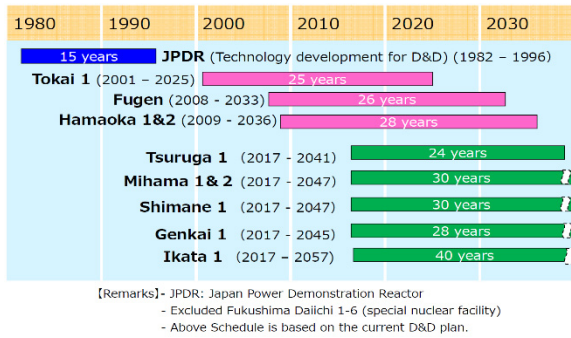


Fig. 2. Decommissioning Project Schedule of NPPs in Japan [2].

2.2 Regulatory framework for decommissioning

NRA (Nuclear Regulation Authority in Japan) review decommissioning plan whether it is proper to meet the review standard for decommissioning of nuclear power reactor [3], when licensee submit decommissioning plan with related documents according to “Reactor Regulation Act” and other relevant acts.

3. Conclusion

Regulatory framework for decommissioning of nuclear facilities in Japan was introduced in this study. Analysis of Japanese regulatory system and review standard for decommissioning of nuclear power reactor could be a good reference during the development of review guideline for FDP of nuclear facilities in our country.

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