



Contribution ID: 156

Type: Roundtable Member

## Experiences and Challenges of Safeguards By Design for J-MOX

J-MOX construction had been started in October 2010 based on the permission of application for MOX fuel fabrication business license (J-MOX license) which was submitted in April 2005 under the system of conventional regulatory requirements. With the Great East Japan Earthquake in March 2011 as a turning point, the New Regulatory Requirements (New Regulation) was enforced in December 2013 and JNFL submitted the application for permission of modification of J-MOX license to the Nuclear Regulation Authority (NRA) in January 2014. Following the application for permission of modification of the J-MOX license, JNFL has submitted the eighth amendment in December 2017 to extend the schedule of construction completion from 2019 to 2022. Further amendments will be expected to cover all countermeasures in conformity with the New Regulation. As for the safeguards for J-MOX, JNFL had started to study the safeguards design independently in 1990's to clarify "Preparatory measures" which are essential and quantitative factors to be reflected on the plant designs (e.g. layout, ventilation, electric, process control, etc). Based on the submission of J-MOX license, the official meeting with IAEA was started in 2005 and most of inspectorates equipment has been specified through a lot of official meetings. However, it is getting clear that changes of the plant designs associated with New Regulation impacts on the design of part of safeguards equipment.

This paper introduces the experiences and the challenges of "Safeguards By Design" for J-MOX from the operator's viewpoint.

### Which "Key Question" does your Abstract address?

NEW3.1

### Which alternative "Key Question" does your Abstract address? (if any)

NEW3.2

### Topics

NEW3

**Primary author:** SHIMIZU, Junji (Japan Nuclear Fuel Limited (JNFL))

**Co-author:** IKEGAME, Ko (Japan Nuclear Fuel Limited)

**Presenter:** SHIMIZU, Junji (Japan Nuclear Fuel Limited (JNFL))

**Session Classification:** [NEW] Experience in Safeguards by Design for New Facility Types

**Track Classification:** Preparing for safeguards new facilities, processes and campaigns (NEW)