

The experience of the J-MOX Joint Technical Committee as a model for future joint development of safeguards equipment

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ABSTRACT

J-MOX is a large mixed Pu/U-oxide fuel fabrication plant for light water reactors (both PWR and BWR) that will be built at Rokkasho (Japan) on the same site as the Rokkasho Reprocessing Plant (RRP). The construction of the plant will start in November 2009 with a start of commercial operation expected in 2015. The plant will have a fully automated process with a maximum annual throughput of 130 tons heavy metal/year.

The safeguards approach developed for the plant includes extensive use of joint-use unattended non-destructive assay and containment and surveillance systems. This safeguards equipment will be owned and maintained by either the IAEA, the Japanese Authorities (JSGO/NMCC) or the operator (JNFL), and will be developed with a number of organizations and contractors around the world. The feedback experience from the development of safeguards equipment for the RRP has shown that strong technical coordination among the various actors involved in the development and testing of this equipment is needed to minimize the costs and the risks of needing rework and to optimize the standardization of equipment and its ability to be integrated.

Therefore, a Joint Technical Committee (JTC), composed of the IAEA, JSGO, NMCC and JNFL, has been established to ensure that these objectives and the requirements from the various users are met. The committee meets periodically to discuss technical considerations and review and approve the major deliverables related to the development of J-MOX hardware, software and procedures.

This paper will provide an overview of the structure and functioning of the J-MOX JTC as a model for future joint development of safeguards equipment.