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New Build, New Safeguards –Barakah

The Emirates Nuclear Energy Corporation (ENEC) began the construction of Unit1 of the Barakah Nuclear Energy Plant in 2012, with Units 2, 3 and 4 following in 2013, 2014 and 2015 respectively. The United Arab Emirates was already party to the NPT, had a comprehensive safeguards agreement in force and ratified an Additional Protocol.

A Department of Safeguards and Export Control was established by ENEC in 2012 and tasked with creating a Safeguards Plan which would oversee the implementation of Safeguards during construction and commissioning through to operations of this extremely large project.

The paper will describe how ENEC and Nawah Energy Company (ENEC subsidiary) tackled the challenges, gained new experiences and learned many lessons in building the Safeguards program for Barakah, including: The procurement of a bespoke Nuclear Material Accountancy and Control computer system. The production of Safeguards and Export Control Procedures within the Company management system. Technical and training visits to the reactor vendor in the Republic of Korea. Benchmarking visits to reactors in Finland and Korea. Use of IAEA Member State support programme for education and training. Early technical engagement during construction with the IAEA and the UAE Regulator on containment and surveillance (C&S) installation. Liaison with Barakah based management and the UAE nuclear regulatory authority (Federal Authority for Nuclear Regulation, FANR) to support the provision of Additional Protocol site declarations, Design Information, IAEA Containment & Surveillance equipment installation, facilitation of inspections including security and safety requirements. Liaison with other Government organisations on Export Control arrangements.

The Barakah project is the most significant nuclear new build in the Region. Consequently the UAE is fully committed to transparency and adherence to the requirements of the Nuclear Non-Proliferation Treaty. The paper will outline the measures that ENEC/ Nawah have taken in building the Safeguards program for Barakah Nuclear Energy Plant supporting the UAE to gain high confidence in its Non-Proliferation credentials.

Which "Key Question" does your Abstract address?

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

Topics

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