

Lessons learned and challenges in the Decommissioning of former Iraqi nuclear facilities

Abstract:

Decommissioning refers to the administrative and technical measures taken to allow the removal of some or all of the regulatory controls from a nuclear facility (except for the depot, which is, by definition, subject to shutdown rather than decommissioning). These procedures include decontamination, disassembly, and removal of radioactive materials, waste, components, and structures. It is carried out to achieve a gradual and systematic reduction in radiation hazards and is taken on the basis of advance planning and evaluation to ensure safety during shutdown operations. The radiological characterization of the facility is the key stage in order to support the decommissioning strategy. The radiological characterization of nuclear facilities is the process of determining the quantities, types, and locations of radionuclides. In Iraq there are difficulties in the process of radiological characterization and inventory of the radioactive isotopes generated inside the facility due to the lack of information about the exact operating period and accidents during the operating period as well as the components of these facilities due to the destruction of these nuclear facilities during the Gulf War in 1991, and the looting of sites and facilities during the events of 2003, which exacerbated the problem. As a result of these events, many of these nuclear facilities have lost their containment of radioactive material and was an increased potential for dispersal into the environment. A master plan for decommissioning has been developed to shut down all nuclear facilities and sites in Iraq, which started from January 2008 until December 2025, and the plan consists of three phases, the first phase was between (2008-2010) to decommission three facilities with low radioactive risks to build staff capacity and experiment, Phase The second was between (2011-2015) is to decommission five high-risk facilities using the experience gained in the first and third phases between (2016-2025) to decommission the remaining nuclear facilities and sites based on a radiological risk prioritization plan. The technical cooperation with the International Atomic Energy Agency with regard to holding technical meetings and providing recommendations and necessary equipment had a significant impact on achieving programs to decommission most of the former nuclear sites and facilities in Iraq.

Speaker's email address

saadrgt@yahoo.com

Speaker's Affiliation

Iraqi Atomic Energy Commission-Decommissioning directorate of nuclear sites and facilities

Member State or IGO

Member State

Speaker's Title

Mr

Author: KADHUM, Saad

Presenter: KADHUM, Saad

Session Classification: SESSION 3: POLICY, LEGAL AND REGULATORY FRAMEWORK

