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Lessons Learned from the Safety Assessments/Licensing Of NIRR-1 to LEU Fuel

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Objective

- To bring out the Fundamental Safety Requirements of Licensing Research Reactors and ensuring that the same Safety Objectives are met.

Introduction

- This paper contains details of safety analysis performed for the NIRR-1 core conversion from Highly Enriched Uranium (HEU) fuel to Low Enriched Uranium (LEU) fuel and the Lessons Learnt from the various licensing stages, the GHARR-1 Core Conversion. It also highlights the various licensing requirements the CERT were requested to provide/status before the core discharge and loading of NIRR-1. This includes requirements for Notification of the Conversion to LEU fuel to the requirements for Commissioning NIRR-1 for safe operation, during these licensing processes the NNRA needed to carry out safety assessments and Inspections at ensuring safety is given adequate priority.
- The Nuclear Safety and Radiation Protection Act 19 of 1995 established the Nigerian Nuclear Regulatory Authority (NNRA). The NNRA has responsibility for Nuclear Safety and Radiological Protection Regulation in Nigeria. Among the activities regulated by the NNRA is the Miniature Neutron Source Reactor (MNSR) @ CERT.