

1.0 GENERAL INFORMATION

This chapter of the Safety Analysis Report (SAR) presents a general introduction and description of the RAJ-II package. The major components comprising the RAJ-II package are presented in Figure 1-1 through Figure 1-4. Detailed drawings presenting the RAJ-II packaging design are included in Appendix 1.4.1. Terminology and acronyms used throughout this document are presented in the Glossary of Terms and Acronyms on page 1-1. This package is intended to be used to transport Boiling Water Reactor (BWR) fuel assemblies containing both Type A and Type B fissile material.

1.1 INTRODUCTION

The model RAJ-II package has been developed to transport unirradiated fuel for Boiling Water Reactors. The cladding of the fuel provides the primary containment for the radioactive material. The inner and outer containers provide both thermal protection as well as mechanical protection from drops or accident conditions.

The integrity of the fuel is maintained by the protective outer package, the insulated inner package and the fuel rod cladding through both Normal Conditions of Transport (NCT) and Hypothetical Accident Conditions (HAC) deformations. A variety of full-scale engineering development tests were included as part of the certification process. Ultimately, two full-scale Certification Test Units (CTUs) were subjected to a series of free drops and puncture drops.

The payload within each RAJ-II package consists of a maximum of two unirradiated Boiling Water Reactor (BWR) fuel assemblies or individual rods contained in a cylinder, protective case or bundled together and positioned in one or both sides of the inner container. See Table 6-1 RAJ-II Fuel Assembly Loading Criteria. See Table 6-2 RAJ-II. The containment is provided by the leak tested cladding making up the fuel rods.

The shielding and criticality assessments provided in Chapter 5.0 and Chapter 6.0. The Criticality Safety Index (CSI) for the RAJ-II package is defined in Chapter 6.0.

The RAJ-II package is designed for shipment by truck, ship, or rail as either a Type B(U) fissile material or Type A fissile material package per the definition in 10 CFR 71.4 and 49 CFR 173.403.

Dimensions of the packaging identified in the text, tables, figures, etc. of this SAR, are intended to be nominal. The drawings provided in Appendix 1.4.1 contain the dimensions and the tolerances.