TABLE OF CONTENTS

4.0 CONTAINMENT

4.1 DESCRIPTION OF THE CONTAINMENT SYSTEM

The Traveller package is limited to transporting Type A, low enriched commercial grade uranium, nuclear fuel assemblies and rods. The radioactive material, bound in sintered pellets having very limited solubility, has minimal propensity to suspend in air. These pellets are sealed in fuel tubes to form the fuel rod portion of each assembly. The welded seals of the fuel rods are verified for integrity. There is no pressure relief device that would allow release of radioactive contents.

Containment System is described in both SSR-6 (§213) [1] and 10CFR71.4 [2] as, “the assembly of components of the packaging intended to retain the radioactive material during transport.” The Containment System for the Traveller consists of the fuel rods.

4.2 CONTAINMENT UNDER NORMAL CONDITIONS OF TRANSPORT

For Type A fissile packages, no loss or dispersal of radioactive material is permitted under normal conditions of transport as specified in SSR-6 (§648) and 10CFR71.43(f). It has been demonstrated from repeated normal drop scenarios and subsequent evaluations that there is no loss of fissile material from the rods, and therefore no dispersal. Therefore, the containment system remains intact.

4.3 APPENDICES

4.3.1 References

[1] International Atomic Energy Agency, "Regulations for the Safe Transport of Radioactive Material," SSR-6, 2012.

[2] U.S. Nuclear Regulatory Commission Code of Federal Regulations, Title 10 Part 71, "Packaging and Transport of Radioactive Material", April 2016.