LMSC PACKAGING STANDARD

PACKAGING/TRANSPORTATION – RADIOACTIVE MATERIALS

1.0 SCOPE

This standard outlines the proper packaging, labeling and marking of radioactive materials or devices in conformance with Department of Transportation (DOT) Regulations.

2.0 REFERENCES

2.1 Code of Federal Regulations, Title 49, Parts 100 – 177. Hazardous Materials. U. S. Department of Transportation (DOT) regulations.

2.2 Nuclear Regulatory Commission (NRC), (10CFR Part 71)

2.3 International Civil Aviation Organization (ICAO) Regulations, Hazardous Material. Transportation by air.

2.4 International Air Transport Association, (IATA) Regulations, Hazardous Material. Transportation by air.

2.5 U.S. Postal Service (39CFR Part 123)

2.6 International Maritime Regulations, (IMCO) Regulations, Hazardous Material. Transportation by water carrier.

2.7 California Radiation Control Regulations (California Administrative Code, Title 17).

3.0 DEFINITIONS/REQUIREMENTS

3.1 NRC and State of California License Requirements – a license is required for possession, use and transport of radioactive by–product source and special nuclear materials.

NOTE: Certain specific products and limited quantities are exempt from NRC regulations (consult lO CFR Part 71 and California Administrative Code, Title 17).

3.1.1 "A1" – means the maximum activity of special form radioactive material permitted in a TYPE A package.

3.1.2 "A2" – means the maximum activity of radioactive material other than special form or low specific activity radioactive material, permitted in a TYPE A package. These values are either listed in 49CFR 173.435 or may be derived in accordance with the procedure prescribed in 49CFR 173.433.

3.1.3 "Fissile Material" – means any material consisting of or containing one or more fissile radionuclides. Fissile radionuclides are plutonium–238, plutonium–239, plutonium–241, uranium–233 and uranium–235. Neither natural nor depleted uranium are fissile material. Fissile materials are classified according to the controls needed to provide nuclear criticality safety during transportation, as provided in 49CFR 173.455. Certain exclusions are provided in 49CFR 173.453.

3.1.4 "Limited Quantity of Radioactive Material" – means a quantity of radioactive material not exceeding the materials package limits specified in 49CFR 173.423 and which conform with requirements specified in 49CFR 173.421.

3.1.5 "Non–Fixed Radioactive Contamination" – means radioactive contamination that can be readily removed from a surface by wiping with an absorbent material. Non–fixed (removable) radioactive contamination is not significant if it does not exceed the limits specified in 49CFR l73.443.

3.1.6 "Normal Form Radioactive Material" – means radioactive material which has not been demonstrated to qualify as "special form radioactive material."

3.1.7 "Package" – means, for radioactive materials, the packaging together with its radioactive contents as presented for transport.

3.1.8 "Packaging" – means, for radioactive materials, the assembly of components necessary to ensure compliance with the packaging requirements of this subpart. It may consist of one or more receptables, absorbent materials, spacing structures, thermal insulation, radiation shielding, and devices for cooling or absorbing mechanical shocks. The conveyance, tie–down system, and auxiliary equipment may sometimes be designated as part of the packaging.

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