



Department of Energy
Washington, D.C. 20545

PDR

71-9508

AUG 5 1980



Mr. C. E. MacDonald, Chief
Transportation Certification Branch
Division of Fuel Cycle and
Material Safety
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. MacDonald:

Enclosed are copies of our Certificate of Compliance USA/9508/BLF (DOE-AL),
an engineering evaluation, and a safety analysis for a modification to
the allowed contents of the 6M spec packaging.

There is no priority for your review as this packaging modification is
being used exclusively for Department of Energy shipments.

Sincerely,

Donald M. Ross

Donald M. Ross, Chief
Occupational Safety Branch
Operational and Environmental
Safety Division

Enclosures
As Stated (8 copies each)

cc:
R. R. Rawl, DOT, w/cy
c.c. & evaluation

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REVIEW OF LA-UR-1390, "USE OF THE DEPARTMENT OF TRANSPORTATION
SPECIFICATION 6M CONTAINER FOR SHIPPING POLYSTYRENE-PLUTONIUM COMPACTS"

LA-UR-79-1390 was reviewed to evaluate the safety of shipping, in the 6M container, fissile material (plutonium) with H/Pu ratios exceeding those presently allowed by the DOT regulations. The proposed material loadings would comply with all other 6M shipping requirements.

It was found that assumptions which disregarded the Pu-240 content, and the use of spherical geometry vs cylindrical, would provide a degree of conservatism in the proposed loadings. Additionally, use of any containers larger than 15 gallons would also provide some increased margin of safety. A comparison of the proposed loadings was also made with data from TID-7028 on critical masses of water moderated plutonium spheres. This also indicated a considerable margin of safety at the H/Pu ratios covered by the LASL report.

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