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DATE
November 10, 1967

TITLE

LITHIUM-ALUMINUM SEPARATIONS REQUEST

AUTHOR

T. W. Ambrose

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November 10, 1967

U. S. Atomic Energy Commission
Richland Operations Office
Richland, Washington

Attention: Mr. R. L. Plum, Chief
Production Reactor Operations Branch

Gentlemen:

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By Authority of EG-10MP-1
By DSG/WD 5/10/94
Verified By SG/PLM 5/10/94
PM Eck 5-10-94

LITHIUM-ALUMINUM SEPARATIONS REQUEST

A test irradiation of lithium was recently completed in one of the Hanford K Reactors. It is requested that these lithium-aluminum alloy targets be separated and analyzed for tritium content. This request confirms a recent conversation which members of our staff had with _____, who indicated that the analysis could be performed within an accuracy of ± 1 percent.

This request is for the analysis to be performed on two groups or batches of samples. The first group would be 38 elements with a total gas content estimated to be approximately 97 liters. The second batch would consist of 76 elements with a total gas content estimated to be approximately 193 liters. This then would be followed by an analysis of the combined gas content of both batches.

The following information describes the elements:

Number of elements, batch 1	38
Number of elements, batch 2	76
Total number of elements	114

OFFSITE DESTRUCTION
Approved By:
F. H. Ambrose

GROUP 1

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U. S. Atomic Energy Commission

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November 10, 1967

Length of core	8.387-8.407 inches
Diameter of core	1.501-1.505 inches
Length of clad element	8.752-8.892 inches
Diameter of clad element	1.585-1.601 inches (excluding supports)
Estimated average gas content ($T_2 + He$)	2540 cc/element at STP
Estimated maximum gas content ($T_2 + He$)	3590 cc/element at STP

Shipping arrangements would probably be made to coincide with a shipment scheduled from N Reactor. receipt of the analysis results in January or February would be acceptable. If further information is needed, please contact J. R. Langton (phone extension 2-5768) or G. F. Owsley (phone extension 2-5535).

Very truly yours,

DOUGLAS UNITED NUCLEAR, INC.

T. W. Ambrose, Manager
Research and Engineering

JRL:vb

cc: 1-3 AEC-RL, RL Plum
4 TW Ambrose
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