

APPENDIX A

Data Tables

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3516 Data Tables

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3516 Design Safety Report



3516 Data Tables Issue 3

**Data Tables for use in Package Type 3516
Design Safety Report**

	Name	Signature	Date
Prepared by : SFL Package Design	P Giddins	<i>Paul Giddins</i>	19.09.12
Reviewed by : Nuclear Safety Manager	T G Wadeson	<i>T.G. Wadeson</i>	20/09/2012
Reviewed by : SFL Package Design	L Cornwell	<i>L Cornwell</i>	19.09.12

Amendment Record

Issue	Date	Amendment
1	April '06	First Issue
2	July '11	Data Table 2 – Package Contents: Details of allowable quantities amended in line with limits in current criticality assessment '3516A/CR01'. Maximum enrichment of material transported in package was 10 ^w /o U235, is now 5 ^w /o U235.
3	Sept '12	Data Table 2 – Package Contents: All permissible mass limits amended in line with criticality assessment '3516A/CR01 Issue 4'.

DATA TABLE 1

RADIOACTIVE CONTENTS

Ref	A	B
1	Radionuclides Present	<p>Subject to the allowable limits on Uranium₂₃₅, specified in Data Table 2, and the corresponding mass limits there shall be no limit on the nuclides that may be present in the uranium compounds provided that either :</p> <ul style="list-style-type: none"> - the resulting activity is distributed throughout and the estimated average specific activity does not exceed 10^{-4} A2/g. or - the A2 activity limits for mixtures are not exceeded.
2	Specific Activity ^[1]	The specific activity is dependent on enrichment and is limited as stated above

DATA TABLE 2

PACKAGE CONTENTS

The maximum permissible quantity within each pail is dependent on the enrichment of the contents and is as stated in the table below.

Ref	A	B	C	D	E	F	G
1	Enrichment (‰ U ₂₃₅)	≤ 4.6	≤ 4.7	≤ 4.8	≤ 4.9	≤ 4.95	≤ 5.0
2	Mass of U (kg) per pail	23.8	23.2	22.5	21.6	21.2	20.8
3	Equivalent mass of UO ₂ (kg) per pail	27.0	26.3	25.5	24.5	24.0	23.5
4	Mass of U (kg) per container (9 pails)	214.2	208.8	202.5	194.4	190.8	187.2
5	Equivalent mass of UO ₂ (kg) per container (9 pails)	243.0	236.7	229.5	220.5	216.0	211.5

In all cases the maximum mass of contents shall not exceed 27.00kg per pail.

DATA TABLE 3

PACKAGE MAKE-UP

Ref	A	B	C	D	E	F	G
1	COMPONENT	TITLE	Drg. LIST	DESIGN IDENTITY No	OVERALL DIM'N (mm)	WEIGHT (kg) ^[1]	No OFF PER PACKAGE
2	Outer	3516 Body	DRG 3516	3516/A(F)	962 Sq 690 high	100.989	1
3	Outer	3516 Lid	DRG 3516	—	1061 Sq 46 deep	31.624	1
4	Intermediate	Thermal Insulation	DRG 3516	—	various	83.932	1
5	Inner	Inner Liner	DRG 3516	—	760 Sq 500 high	73.874	1
6	Inner	Polystyrene Plugs	DRG 3516	—	various	0.582	12
7	Inner	Neutron Absorber ^[3]	N/A	—	755 Sq 450 high	123.161	1
8	Innermost	Pail	DRG 3516	3544	220 Dia 490 high	3.673	9
9	Assembly	3516 Container	DRG 3516	3516/A(F)	962 Sq 690 high	450 ^[2]	1

^[1] These are calculated nominal weights for the packaging items.

^[2] This is the calculated nominal weight for the assembled packaging & includes an allowance for fastenings & weld filler material. The maximum gross weight of the package, including contents, is 693kg.

^[3] The neutron absorber is to be NS-4-FR (2.0 wt % B₄C).