

**From:** Kaltreider, Randall [REDACTED]  
**Sent:** Monday, November 22, 2010 9:31 AM  
**To:** Dimarzio, John A.  
**Cc:** h.gunter [REDACTED]; McAlhany, Sachiko W.  
**Subject:** FW: New Criticality Control Container for Pu  
John,

Per our discussion last week, see info below to use in the SEIS analysis.

Thanks!  
Randy

*Randall Kaltreider*  
EM-33, Office of Nuclear Materials Disposition  
[REDACTED]

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**From:** Nelson, Roger - [REDACTED]  
**Sent:** Monday, November 22, 2010 8:49 AM  
**To:** Kaltreider, Randall  
**Cc:** Hayes, Tim - LANL  
**Subject:** FW: New Criticality Control Container for Pu

Randy:

Our plan is to have 3 TRUPACT-II per shipment with the lighter Criticality Control Container (CCC), in contrast to 2 TRUPACT-II and a HalfPACT with the POC. We also plan on 380 FGE, but remember the limit is applied to the assay value plus 2-sigma. The assay for the material will likely be very good, so you probably should assume zero error and use the full 380 FGE as the upper bounding mass for shipments in the CCC.

...Roger

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**From:** Day, Brad - WTS  
**Sent:** Friday, November 19, 2010 11:12 AM  
**To:** Nelson, Roger - DOE; Sellmer, Todd - WTS  
**Subject:** RE: New Criticality Control Container for Pu

Roger,

The FGE limits for the CCO are estimated at 380 FGE at this point in time. Engineering testing will confirm the bounding array spacing of the pipes and provide a good indication as to whether the current criticality scoping analysis results will hold up. The FGE limit should be in the range of 350 to 400 FGE. The FGE limit will have to be met when 2x the error is added to the assayed FGE value.

The maximum gross weight of the CCO is 350 pounds, with an approximate tare weight of 230 pounds (i.e., ~120 pounds for contents). With an average empty TRUPACT-II weight of 12,633 pounds, 3-place shipments (limited by the 80,000 pound transport limit) have a 4,976 pound average payload capacity. So, on average, maximally loaded CCO shipments of  $14 \times 350 = 4,900$  pounds should be shippable as 3-position shipments. Note that the maximum TRUPACT-II tare weight is 13,140 pounds and the minimum 3-position capacity per TRUPACT-II is 4,237 pounds, so some shipments could be limited to less than 3 per trailer.

Regards,  
Brad

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Brad Day  
Advisory Engineer  
Packaging Integration  
**Washington TRU Solutions**

*Contractor for the U.S. Department of Energy*

[REDACTED]

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**From:** Kaltreider, Randall [REDACTED]  
**Sent:** Thursday, November 18, 2010 9:32 AM  
**To:** Nelson, Roger - DOE; Hayes, Tim - LANL  
**Subject:** New Criticality Control Container for Pu

Roger/Tim,

Our SEIS contractor needs to include in the analysis the difference between packaging and shipping the current POC vs the new CCC. Is there a brief summary of what you are analyzing that you could provide to me. For example if limit is 400 FGE, what amount would you actually limit in a POC – 350? Would truck still be limited to 2 ½ TRU packs or would it be 3 TRU packs due to lighter weight CCC?

Appreciate a quick response.

Thanks!  
Randy

*Randall Kaltreider*  
EM-33, Office of Nuclear Materials Disposition  
[REDACTED]