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**Mr P Burns**  
**ARPANSA**  
**MIRANDA**  
**NEW SOUTH WALES**

**06/11/09**

**Subject** AUS/2007-13B(U)-96 Endorsement U.S. NRC

Dear Sir

As most cobalt 60 sources come out of Russia or the United States we required their endorsements of our certificate no AUS/2007-13B(U)-96 to obtain this material.

In April of 2008 we submitted our documentation for the 1860A transport cask to ROSATOM and we obtained Russian certificate No RUS/5619B(U)-96T dated 22 August 2008. To date we have not obtained isotope from Russia due to their internal politics.

In March 2008 we submitted our documentation for the 1860A transport cask to the U.S. NRC for endorsement to enable us to move isotopes into and out of the United States. The U.S. NRC identified several concerns which has taken eighteen months (of a three year certificate) to resolve.

At the beginning of our discussions with the U.S. NRC we obtained from your officers procedures to be followed in the event of a change being required. The advice was "*a change could be made provided it did not impact on the safety of the Package*", once all variations were agreed too with the U.S. NRC, the safety analysis would be revised and submitted to ARPANSA for updating of the certificate.

After much discussion, explanation and minor interpretations of drawing and welding standards. (we had our welding technicians certified to both Australian and ANSI standards and drawings varied to include U.S. nomenclature) the remaining issues were identified and variations to satisfy them were finalised, we have prepared a Supplementary Safety Analysis and presented this to the U.S. NRC, however they will not progress further with endorsement until they have a revised AUS/2007-13B(U)-96 certificate incorporating these variations.

The U.S. NRC concerns were:

1. Possible damage to the end cap with entry of the test bar ( TS-R-1 Drop Test 727b ) through the test port access in the end crumple shield
2. Security of the drawer retention in the event of a force applied to the side of the end cap.( Drop Test 727b )
3. Measurement of the transport index from the end cap instead of the End Crumple Shield.
4. Design of the drawers to be used with the casks
5. Activity that can be authorised in the various configurations for use in the United States.
6. Pre and post transport inspection instructions for the cask.
7. Questions relating to the temperature rise at the outside of the cask in a 38°C environment when loaded with the maximum allowable activity

We have as a matter of prudence made the requested variations which are;  
We added a bolt on cover to the reinforcing tube at the centre of the bolt on end crumple shield, this bolt on cover plate addresses points 1 & 3 and does not impact on the integrity of the package, it does minimise the degree of damage sustained in the unlikely event of a TS-R-1 727(b) incident.

Point 2 was addressed by creating a shoulder on the end cap.

Point 4 was resolved by designing a suite of drawers to undertake various applications as discussed with various clients.

Point 5 is based on U.S. NRC not accepting our "first use" survey protocol. Initial activity authorisation will be lower and will be revised after validation.

Point 6 required clarification of information that was already in the SAR.

Point 7 was a query related to the assumptions and the formulae used by ANSTO in arguing the temperature test. We resolved this issue by doing an actual temperature rise test.

Your officers have a copy of the Supplementary Safety Analysis prepared for the U.S. NRC in both soft and hard form. Kieren Grogen of this office met with your officers in Sydney last week, they worked through the Supplementary Safety Analysis to ensure themselves that there was no change to the design and the minor variations do not impact adversely on the integrity of the cask in the event of an incident. As no negative comment was made relating to the variations, we have melded the Safety Analysis and the Supplementary SAR to enable amendment of our certificate No AUS/2007-13B(U)-96, this revised SAR will be presented to you within in the next two weeks.

With the revision of No AUS/2007-13B(U)-96, we request the revision expiry date be extended to the end of 2012 or to a 5 year term.

In an effort to speed things up we ask your assistance to process this variation as a matter of some urgency for submission to the U.S. NRC and DOT for their endorsement.

Yours Faithfully



E.T. Parrott  
Managing Director.