EDUCATION, SCIENCE AND TRAINING

SENATE LEGISLATION COMMITTEE - QUESTIONS ON NOTICE
2003-2004 ADDITIONAL ESTIMATES HEARING

DEST Question No. E1017_04

Senator Carr provided in writing.

Question:

You have previously advised that the transport of radioactive waste material to a repository in South Australia poses no threat to communities on the transport routes, and that even in the event of an accident that there would be little or no radiological consequences.

Are these statements based on investigations conducted by ANSTO?

If they have, can you provide all the documents please?

Answer:

ANSTO has provided the following response:

Transport of radioactive waste material

The statements concerning the transport of low-level radioactive waste made by ANSTO were based upon international experience and upon analyses conducted by ANSTO. The transportation of radioactive materials has an excellent safety record. Over several decades, tens of millions of transports of radioactive materials have occurred world-wide, with no in-transit accidents causing serious human health, economic or environmental consequences. The recent NSW Government inquiry into low level waste also accepted advice from NSW emergency services that the transport of low level radioactive waste can be conducted safely.

Further, as Dr Cameron told the February ARPANSA Public Forum on the Safety of Proposed National Radioactive Waste Repository in Adelaide:

> "Low-level waste consists of inert solids. They're in multiple levels of containment. They're either compacted down or they're mixed with concrete in steel drums, and those are packed securely in six-metre long steel shipping containers. That has been assessed in many risk assessments as being an appropriate level of protection. There is no liquid waste to be transported and, therefore, there's no possibility of these falling off and leaking out, as has been said a few times. Even if an accident were to occur, the consequences would not be significant to people.
>
> Just as an example of this, although this is compacted material in steel drums and the flammable content is extremely low and the other material which is more active is mixed with concrete - and, again, concrete doesn't burn very well at all - we did a calculation which we thought would be the worst case, and that's to assume there is no overpack. Assume there is no mixture with concrete, assume we condense all of the activity from one truck down into a small mass and then that mass is involved in a fire - that was an issue raised during the New South

Wales inquiry - and that fire causes a plume to rise - in this case, we assumed the plume didn't rise very far before it fell down again – and people were nearby. Even with those worst-case assumptions, the dose was around four microsieverts. In flying from Sydney down to Adelaide, I got more than four microsieverts. As we mentioned before, you need to compare that with the natural background, which is about 2000 microsieverts per year."

The analysis discussed in that statement is attached.