



24 November 2014

## Caesium-137 - updated

Santos' use of Caesium-137 (CS-137) in the Pilliga has been previously reported earlier this year.

CS-137 is one of the most common radio isotopes used in industry, including in medical treatments and in the construction industry to gauge thickness and moisture of materials.

It is often used in drilling operations both globally and in Australia. Santos has used CS-137 in its NSW operations to measure and report on the underground geology as we drill test wells. When used for this purpose, a very small quantity of CS-137, encased by multiple layers of steel, is contained in the logging tool. Once the logging of the well is completed the tool and the Caesium are brought back to the surface and securely stored.

Radioactive elements are used widely in modern medicine and industry. There is no suggestion, for example, that the Caesium used in hospitals for internal radiotherapy, poses a major risk to people visiting or working in that hospitals. It is important to realise there are benefits to the use of these elements if they are carefully controlled and handled.

The quantity used in our drilling operations, when logging measurement is needed, is about the size of a paracetamol tablet, which is about five times as large as the amount which would be inserted into a patient undergoing internal radiotherapy using CS-137 for cancer treatment at a hospital.

Storage and handling of CS-137 is done in compliance with the Radiation Safety Act and Radiation Safety Regulations.

CS-137 is securely kept onsite inside a lead and concrete-lined container. The use of CS-137 is registered individually, as are the engineers who are responsible for handling it. The contractors who would run this type of logging equipment require multiple Government certification and approvals to carry out this work.

The use of CS-137 is not required to be mentioned in documentation when we seek to drill a well. The EPA and the Office of Coal Seam Gas are aware that its use is a standard and typical part of the drilling process.