

## ARPANSA SUBMISSION:

I am writing to provide comment on the draft Woomera Prohibited Area Rules released for public comment by the Minister for Defence and the Minister for Resources and Energy on 30 May 2013. My comments are primarily concerned with how the proposed Rules may impact the land contaminated by historical nuclear weapon testing located in the boundaries of the Woomera Prohibited Area.

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), as part of the Health and Ageing Portfolio, is a Federal Government agency charged with responsibility for protecting the health and safety of people, and the environment, from the harmful effects of ionising and non-ionising radiation. ARPANSA has had a long standing relationship with Government and Traditional Owners on radiation protection matters associated with land in Australia contaminated by historical nuclear weapons testing.

Nuclear weapon tests were carried out by the British Government within the Woomera Prohibited Area between 1953 and 1963. Section 400 was the main land area used and contaminated by testing. Section 400 covering approximately 3,000 square kilometres, includes the Maralinga Village, and is located in the south-west region of the Woomera Prohibited Area. The northern half of Section 400 sits inside the Woomera Prohibited Area and includes the most contaminated sites.

Section 400 has been subject to several clean-up activities over decades. In the mid 1990s, the Commonwealth Government commenced extensive clean-up and rehabilitation works on Section 400 which involved the removal of 350,000 cubic metres of contaminated soil and debris from the surface of just over two square kilometres of land. This contaminated soil was then buried in trenches 10 to 15 metres deep, under a capping of at least five metres of clean soil. These sites contain a range of hazards, both radiological and non-radiological. Full details of the clean-up can be found in the 2003 [Report](#) by the Maralinga Rehabilitation Technical Advisory Committee, *Rehabilitation of Former Nuclear Test Sites at Emu and Maralinga (Australia)*.

A significant area of land not subject to the final clean-up in the 1990s remains lightly contaminated with plutonium, uranium and other radionuclides. There are also many other burials of equipment at known and unknown locations, some of which may be contaminated with radioactive material or other non-radiological hazards.

Nuclear weapons testing also took place at Emu (Section 1486) and is located in the north-west region of the Woomera Prohibited Area. Although testing at Emu resulted in light contamination of the area, some access restrictions via signage are still required.

On 18 December 2009, Section 400 was formally handed back to its Traditional Owners during a ceremony held at Maralinga Village. In an accompanying [statement](#), the Commonwealth Government noted that while most of this parcel of land “is now suitable for unrestricted access,” around 400 square kilometres is “safe for casual access such as hunting” but not permanent occupation. The Government stated that it would “continue to monitor the site to assess the ongoing effectiveness of the rehabilitation work and, if necessary, take remedial action.”

The Handback was conditional upon compliance with the *Maralinga Land and Environment Management Plan* agreed by the Commonwealth, South Australia and the Maralinga Tjarutja. The negotiations strongly supported a restriction on mining in the areas of nuclear weapons testing and were supported by the South Australia Government banning exploration or production access in Section 400 and 1486 (see [map](#) and Figure 1). The agreement provides for access controls,

surveillance of the contaminated area by resident staff, provision for works to maintain engineered facilities and a general agreement that buried radioactive material and other buried debris from the testing should not be disturbed.

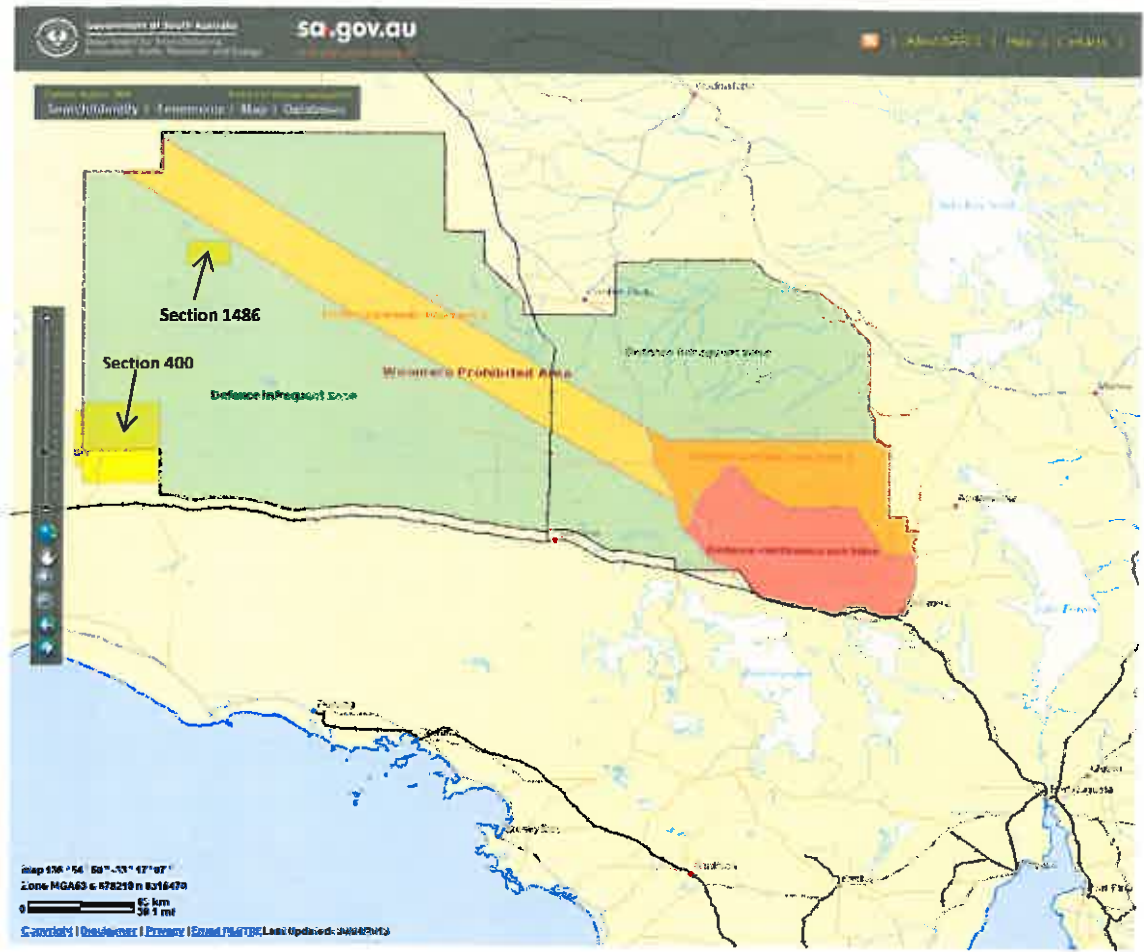


Figure 1: Map reproduced from the South Australian Resources Information Geoserver (SARIG) website on 9 July 2013 showing the boundaries of the Woomera Prohibited Area and the no exploration and production access areas labelled as Section 400 and Section 1486.

Section 400 is suitable for access if no major ground disturbance activities take place. It is foreseeable that testing of airborne systems by the Defence Forces or other military actions may result in significant re-distribution of radioactive material through-out the region. Exploration for mining purposes or product processing will also result in major ground disturbances.

It is not clear how the draft Woomera Prohibited Area Rules will deal with Sections 400 and 1486, in particular how these areas will be controlled and used into the future. Current restrictions reduce the likelihood of significant ground disturbance. ARPANSA recommends that these current restrictions applicable to Sections 400 and 1486 remain in place to ensure radiation protection of the Traditional Owners, visitors and the surrounding environment remain optimised.

If Section 400 was to be included in the Woomera Prohibited Area Rules, and activities were to take place that may result in major ground disturbances, then a comprehensive safety case would need to be undertaken to assess the health impact on the community and the environment.

Your sincerely

Carl-Magnus Larsson  
CEO of ARPANSA