

Western Australia outback proves no match for Aussie nuclear know-how

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The Coris360 imaging technology on the road in Western Australia to locate a radioactive source. Credit: ANSTO

A dedicated team of radiation specialists from the Australian Nuclear Science and Technology Organization (ANSTO) are behind the successful detection and rapid retrieval of a missing radioactive source in outback Western Australia.

Working alongside authorities from the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), Defense, and the Western Australia Department of Fire and Emergency Services (DFES) as part of a multi-agency response, the team of radiation experts located the minuscule-sized source during a vehicle search using a suite of radiation equipment including ANSTO's own custom-developed radiation detection and imaging technology.

The source was found two meters from the roadside on the Great Northern Highway near the town of Newman, when ANSTO's radiation detection equipment—which was mounted in the back of the vehicle—detected the presence of gamma rays while traveling at 70 kilometers per hour.



Coris360 technology mounted in a vehicle. Credit: ANSTO

The portable radiation detection technology was a modified version of ANSTO's own CORIS360, an Australian innovation by Chief Technology Officer and Principal Scientist of ANSTO's Detection and Imaging unit, Dr. David Boardman.

The CORIS360 technology produces fast, precise, and high-quality 360-degree images that pinpoint the identity and location of radiation in an area, while minimizing the need for workers to stay within a radiation environment.

Since its launch in 2020, the CORIS360 radiation detection technology has captured the global attention of agencies and organizations that support nuclear operations and national security activities.

ANSTO's Group Executive for Nuclear Safety, Security, and Stewardship Group, Dr. Miles Apperley commended the rapid recovery of the source by the team of experts from ANSTO's radiation protection services, [radiation](#) services, and detection and imaging units in Lucas Heights, who arrived in Perth on Monday evening and joined the search response on Tuesday morning.

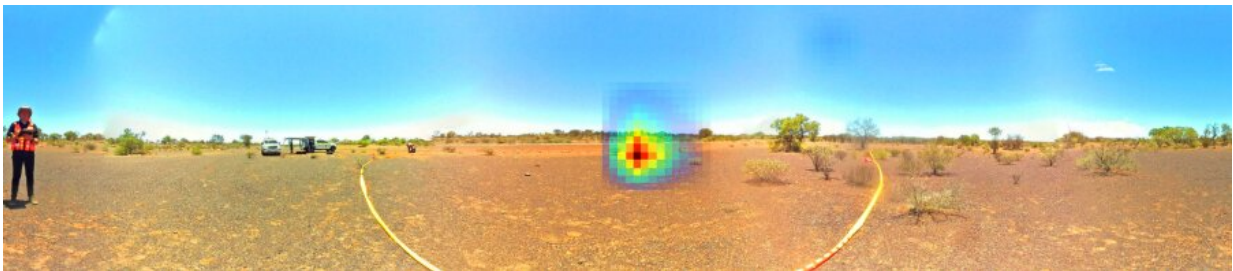
"For the team to find this missing source over a span of 1,400 kilometers and in the formidable conditions of the outback after only being on the ground for two days, is not only a phenomenal feat, but a testament to Australia's highly sophisticated nuclear capabilities and our people," Dr. Apperley said.

"Prior to deployment, ANSTO staff performed drive-by test runs of the detection equipment at Lucas Heights using an equivalent radioactive source activity, and evaluated different speeds and terrain conditions to ensure we could confidently detect the missing capsule.

"The sensitivity of the modified CORIS360 technology gave us the confidence it would be found, and this scenario is an incredible exemplar of Australian nuclear innovation which is aiding defense, the mining industry, and supporting nuclear safeguards and security.

"Australia may have a small nuclear program, but we're a sophisticated nuclear nation and in many ways, we're world leaders that punch above our weight when it comes to nuclear expertise and stewardship.

"As ANSTO celebrates 70 years of nuclear expertise in Australia this year, this outcome gives us another reason to honor the great talent we have in this country and the capabilities that ANSTO has so proudly held for decades."



CORIS360 on location scan. Credit: ANSTO

Australian Minister for Industry and Science, Hon Ed Husic MP praised the response efforts of ANSTO and the strong collaborative efforts

across the state and Commonwealth.

"It's fair to say finding a piece of equipment the size of a button in a vast desert was no easy task, and I would like to take this opportunity to thank ANSTO in collaboration with ARPANSA and DFES for their work in locating the capsule," Minister Husic said.

"ANSTO's expertise in nuclear technology played an absolute key role in detecting the equipment, having innovated the device which was ultimately used to find the coin-sized capsule on the roadside."

More information: For more information about ANSTO's CORIS360 technology, visit www.ansto.gov.au/products/dete...and-imaging-coris360

Provided by Australian Nuclear Science and Technology Organisation (ANSTO)

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