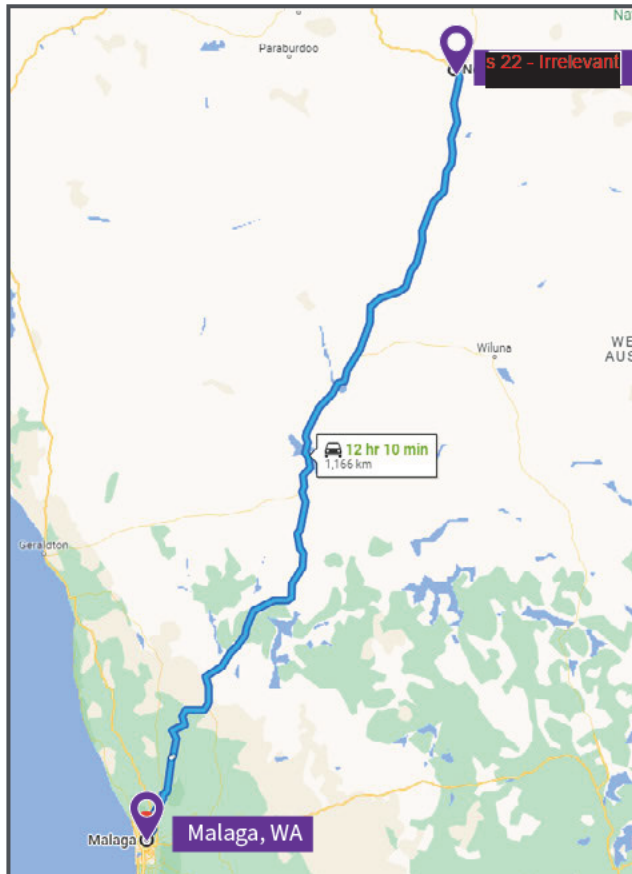




ARPANSA Situation Report: Missing radiation source in Western Australia

Time/date of event: 12–16 January 2023 | **Location:** Western Australia | **Source:** 19.9 GBq industrial radiation source



BACKGROUND

- A 19.9 Giga-becquerel (GBq) industrial radiation Cs-137 source in a level gauge was transported by road on a trailer from [REDACTED] in the Pilbara to the Perth metropolitan area [REDACTED]. The ceramic radioactive material was inside a metal capsule which is 6 mm diameter and 8 mm long.
- The source was packed on 10 January 2023 - secured in the gauge housing, then inside a transport box (to which it was bolted), this was mounted on a pallet and initially stored [REDACTED]. The pallet was collected and loaded onto a trailer by the freight company on 12 January 2023 for transport by road (Great Northern Highway) to Perth. It travelled through some intermediate depots before arriving at the premises [REDACTED] in Malaga on 16 January 2023. The pallet was stored at those premises until being opened on 25 January 2023, when the source was found to be missing. The source is thought to have fallen through a hole in the damaged box and then from the trailer to the road.
- Investigations by [REDACTED], including physical and instrumental searches of various sites and a section of the Great Northern Highway near Bindoon, have been conducted and are continuing. These efforts to find the source have not been successful to date, and all avenues of investigation are being carried out by authorities.
- The Department of Fire and Emergency Services (DFES) is the Hazard Management Agency for the incident [REDACTED] of the missing material.
- Fixed and portable radiation gauges are used to measure product characteristics in mining, oil and gas, manufacturing and other industries. They contain either a sealed radiation source or an X-ray source and are regulated by State and Territory Competent Authorities in accordance with national codes set by ARPANSA including the Code for the Safe Transport of Radioactive Material. These codes apply a graded approach in such that safety and security precautions are taken depending on the danger presented by the radioactive material.

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SITUATION UPDATE

- ARPANSA's Duty Officer was contacted s 22 - Irrelevant on Friday 27 January advising that a Category 4 radiation source (20GBq Cs-137) became detached from the gauge during transit between north of Newman and Malaga, WA (approximately 1,400km distance).
- The Australian Government has activated COMDISPLAN and under two separate Requests for Assistance, will provide support to the Western Australian Government in recovering the capsule:
 - s 22 - Irrelevant
- ARPANSA's deployed staff consist of a liaison officer, two teams of two radiation measurement experts, and specialised car-borne detection equipment. Staff arrived in Perth this morning and have been briefed along with other Commonwealth Agencies. Measurements will commence this afternoon, with further technical reach-back provided from our Melbourne office.
- s 22 - Irrelevant
- ARPANSA has published a statement on our website: [ARPANSA joins search for missing radioactive source](#). Frequent media enquiries are being fielded, with the vast majority referred to the WA Government (the incident response leader).

SAFETY AND SECURITY RISK

- ARPANSA s 22 - Irrelevant that the material presents a low chance of harm however is of enough concern to warrant its recovery if possible. The radiation exposure is approximately 2mSv/h at 1m with the possibility of radiation burns if held closely for extended periods. The exposure risk will remain for several years due to the approximately 30 year half-life of Caesium-137.
- If found, a general cordon of 30m is sufficient in line with ARPANSA emergency guidance.
- As a Category 4 source, the material is of a lower level of radiological security concern and is not ordinarily subject to enhanced security measures.

MEDIA

See whole-of-government Talking Points s 22 - Irrelevant

CONTACT

ARPANSA's central point of contact s 22 - Irrelevant

DISTRIBUTION

A horizontal bar chart consisting of 12 black bars of varying lengths. The bars are arranged vertically, with the longest bar in the middle and the shortest bars at the top and bottom. The lengths of the bars vary significantly, with some being very short and others extending almost across the entire width of the chart area.