

Nuclear ship visits to Australia

SINCE 1960, Australians have been exposed to the risk of nuclear emergencies and radioactive contamination in our harbour cities, during visits by foreign nuclear-armed and nuclear-powered warships. Governments of both persuasions have downplayed the risks attached to these visits, asserting that the potential for accidental discharge or detonation is negligible, and that emergency interventions would render any public health hazard tolerable.



From 1971 to 1976 such visits were however prohibited from all Australian ports, primarily because of safety concerns. Attempts by Victoria's Cain ALP government in 1982 to make the port of Melbourne nuclear-free were scuppered by the Hawke ALP Federal government. The NSW government imposed a ban on nuclear-powered vessels from Sydney Harbour in 1983, which persists to this day. The ports of New York and London, and all New Zealand ports, have similar prohibitions on safety grounds.

Australia's nuclear visitors

The Australian government permits vessels of foreign — usually US and UK — navies to berth in Australian ports, usually as part of the ANZUS Alliance. During the 2009 Talisman Sabre military exercises, a nuclear-powered aircraft carrier will operate in the Arafura Sea, with a nuclear powered submarine in the Coral Sea 'well away from the Great Barrier Reef' (Senator John Faulkner). According to Air Chief Marshal Houston 'some of them would visit our ports as well'.

Official US policy states that the only nuclear-armed vessels in their fleet, as of 1991, are the fourteen Ohio class submarines. Each submarine carries 24 Trident II ballistic missiles armed with nuclear warheads, providing the sea-based component of the U.S. strategic nuclear weapons arsenal. In the event of a port visit by such a submarine, the US will 'neither confirm nor deny' whether the vessel is actually bearing nuclear weapons. Unfortunately, Australian authorities do not have the power, capacity or intent to establish which vessels bear nuclear weapons, so it seems judicious to regard any visiting ballistic missile submarines designed to launch ballistic missiles as nuclear-armed.

History of nuclear incidents (1)

January 1966: a B-52G bomber of the USAF Strategic Air Command collides with a KC-135 tanker during mid-air refuelling at 9,450 m over the Mediterranean Sea, off the Spanish coast. The B-52G breaks apart: of its four Mk28 type hydrogen bombs, three are found on land near the small fishing village of Palomares. The non-nuclear explosives in two of these weapons detonate upon impacting the ground, resulting in plutonium contamination across a two square kilometre area. The fourth bomb falls into the Mediterranean Sea and is recovered intact after more than two months of searching.

March 1984: Aircraft carrier USS Kitty Hawk collides with a Victor class Soviet nuclear-powered attack submarine in the Sea of Japan. USS Kitty Hawk is carrying up to several dozen nuclear weapons; the Soviet submarine probably carries two nuclear torpedoes.

February 2009: a French submarine collides with a British submarine while they patrol the Atlantic Ocean. Both submarines are nuclear-powered and carry nuclear missiles.

Above left: the nuclear powered aircraft carrier HMS Ark Royal, which was unable to dock in the Port of Melbourne in 1988 due to community and union protests — it was believed to be nuclear armed. (Royal Navy picture)

Hazards of nuclear ship visits

1. Support of the nuclear 'umbrella': Permitting nuclear-armed vessels to berth in our harbours locks us into the machinery of nuclear war-fighting. Thus we rely upon the world's worst weapons of terror for our 'security'. We cannot honestly advocate nuclear disarmament whilst simultaneously sheltering under somebody else's nuclear 'umbrella'.

2. Nuclear weapon accident: Detonation of a nuclear weapon is believed to be extremely unlikely, as the weapons are said to require further assembly before they can be triggered. A fire on board however is not so unlikely and could lead to substantial damage to nuclear warheads, potentially causing dispersal of plutonium into the air and surrounding environment. Plutonium — the bomb fuel — is a highly radioactive isotope, an alpha-particle emitter and potent carcinogen with a half-life of 25,000 years. Its dispersal pattern would be unpredictable and dependent on the circumstances of the incident and prevailing environmental conditions, as the above examples show.

Continued overleaf

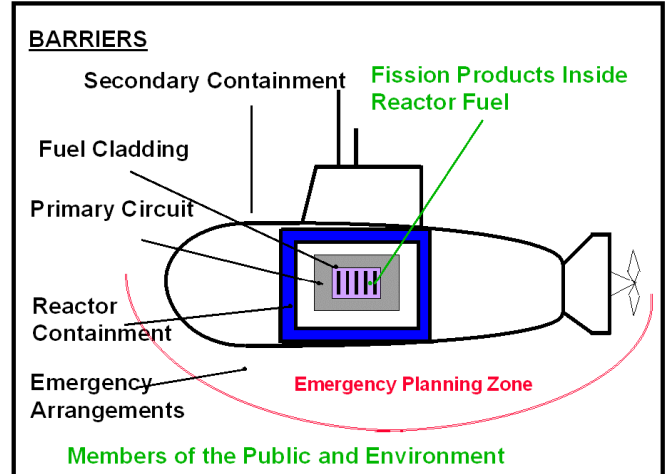


Hazards of nuclear ship visits

3. Nuclear reactor emergency: Australian authorities go to considerable lengths to assess and prepare for potential radiation emergencies associated with nuclear powered warships. Their approach is based on the '2000 Reference Accident', a single accident scenario chosen to represent 'an upper bound risk to the surrounding population' [ARPANSA Technical Report No. 145]. This scenario involves a full core meltdown: melting of all fuel in the reactor core due to a loss of coolant. In this model, the impact of the meltdown is almost entirely mitigated by preservation of the primary (the casing of the core) and secondary (the vessel hull) containment structures. The effective overall leak rate from the reactor's melted core into the environment is thus calculated to be 0.1% of its volume per day.

4. Terrorist attack: Despite terrorist attacks on the USS Cole [see box] and the World Trade Centre — and although port security measures recognise the risk of terrorism — the potential for radioactive contamination resulting from a deliberate reactor rupture and breach of the vessel's containment structures is not included in emergency planning. A terrorist attack could result in far greater radiation leakage and environmental contamination than a naval reactor accident. This represents a fundamental flaw in our preparation for a radiation emergency. Radiation emergencies need to be anticipated as both accidental and intentional in origin and planning and advice ought to take this into account.

5. Health and environmental risks: Major ports are almost always located in or near major population centres, imposing an unacceptable risk to citizens and potential for major economic and social dislocation in the event of a radiation emergency. Levels of environmental contamination will depend on the amount and types of radioactive isotopes released. As our historical examples show, these factors will be determined by unpredictable circumstances. Potential exists for immediate and long-term environmental and human health detriments, with contamination by isotopes such as iodine-131 and caesium-137, which move readily into the environment, affecting multiple levels of the food chain. A reactor leak occurring in Australian waters could lead to serious radioactive pollution of marine and coastal habitats.



ARPANSA diagram showing barriers to radiation release for their modelled '2000 Reference Accident'

History of nuclear incidents (2)

October 2000: In the Yemeni port of Aden a small craft approaches US Navy destroyer USS Cole and an explosion occurs, putting a 12 x 18 metre gash in the ship's port side.



The blast is caused by explosives which have been moulded into shape by terrorists against the hull of the boat.

History of nuclear incidents (3)

July 1997: While approaching Fremantle, nuclear-powered submarine HMS Trenchant remains at a depth of 200 metres and crashes into the continental shelf, coming to rest on a sloping patch of seafloor. The Australian public is informed in 2009. The sub 'is not believed to have been carrying nuclear weapons at the time ...'

July 2002: UK destroyer HMS Nottingham runs aground on the submerged but well-charted Wolf Rock near Lord Howe Island. A 50 metre hole is torn down the side of the vessel from bow to bridge, flooding five of her compartments and nearly causing her to sink.

Nuclear vessels do not provide security or safety

As with New Zealand, New York and Sydney, no Australian urban centre should be exposed to the small, but potentially devastating risk associated with proximity to nuclear-armed and nuclear-powered vessels.

In the interests of our security and safety, we should politely inform our allies that such vessels are no longer welcome in our ports. Our strategic alliances and defence imperatives will be enhanced by adopting a less obsequious and hazardous policy.

