

The Health of Emergency response workers and the Port Adelaide community is at Risk in a potential AUKUS Nuclear Submarine Reactor Accident.

Briefing by David Noonan, Independent Environment Campaigner, 27 April 2024.

Federal Labor AUKUS [legislation](#) to declare Osborne a “Designated Nuclear Zone” for the maintenance of US Virginia Class Nuclear-Powered Attack Subs (N-Sub), and for the later proposed build of a future UK N-Sub design, is expected to go to a Parliamentary vote by mid-yr.

However, Federal and State authorities have so far failed to conduct health impact studies and ‘Emergency Response Plans’ that are required for an N-Sub visit to Port Adelaide / Osborne.

Port Adelaide has never had an N-Sub visit and the SA public have been denied their ‘Right to Know’ the extent of health and socio-economic impacts in a potential N-Sub reactor accident.

The Hon Mark Butler, Federal Minister for Health and MP for Port Adelaide, has over-sight of the civilian nuclear regulator ARPANSA who are responsible for the conduct of these health studies.

Minister Butler has a ‘duty of care’ to order the required health impact studies for an N-Sub visit to Port Adelaide and to inform community in SA of the radiological health risks they may face.

The “[Guide for Radiation Protection in Emergency Exposure Situations](#) (ARPANSA Part 1 & 2, 2019) and “[Nuclear powered vessel visit planning](#)” (APRANSA 2023) set out the studies, procedures, ‘safeguards’ and Emergency modelling required to be put in place for a N-Sub visit.

The SA State Labor Government has the responsibility to prepare, consult on and resource the required ‘Emergency Response Plan’ that follows on from these ARPANSA N-Sub visit studies.

These required nuclear accident studies and plans should be carried out and subject to public scrutiny in advance of decisions to impose nuclear reactor accident risks on community in SA.

Emergency services workers, our first responders, the police, fire, ambulance and hospital personnel have a ‘Right to Know’ what they are being signed up to by Federal and SA Gov’s.

The level of consequence of a N-Sub nuclear accident is high, even if the probability is ‘low’.

In a “nuclear or radiological Emergency”, [Federal provisions](#) allow dangerously high ionising radiation exposures to ‘designated’ Emergency response workers, at up to 50 mSv (milli-Sievert), far in excess of occupational exposure limits set for uranium mine workers, max 20 mSv/year.

Federal Emergency provisions authorise radiation exposures to workers and to the public from a military N-Sub accident at up to 50 times the max allowed annual dose of 1 mSv in civilian life.

Prime Minister Albanese rightly says Liberal Leader Dutton’s proposed nuclear power reactors are uneconomic and lack ‘social license’. Our PM asks Dutton: ‘Where will you put them?’

Worker and public health exposure risks in event of a nuclear accident at an AUKUS N-Sub are comparable to radiation exposures risks from an accident at a Dutton nuclear power reactor.

We know where Labor plans to impose AUKUS N-Sub reactors. The Port Adelaide community has not been informed of the radiological risks they face nor given ‘social license’ to N-Subs.

N-Sub reactor accident issues warrant full disclosure in advance. Safety is union business,

SA Emergency Workers may face “catastrophic conditions” at a N-Sub Accident:

The “[Guide for Radiation Protection in Emergency Exposure Situations – Planning Preparedness, Response and Transition. Radiation Protection Series G-3 Part 2](#)” (ARPANSA, 2019) sets out federal provisions for ionising radiation exposure doses to State Emergency workers and to other affected workers. These provisions apply in event of a N-Sub Accident at Port Adelaide.

“**4.2 Designation of organisations and personnel**” (p.18-19 & Table 3.1) provides for radiation exposures at up to 50 times, and in cases up to 500 times, a max civilian annual allowed dose:

“Emergency workers may include workers employed, both directly and indirectly, by an operating organisation, as well as personnel of response organisations, such as police officers, firefighters, medical personnel, and drivers and crews of vehicles used for evacuation. ...

The following four groups of workers may be exposed in a nuclear or radiological emergency, owing either to their involvement in the emergency response or to the nuclear or radiological emergency at a facility or an activity:

a. emergency workers who have specified duties

b. workers performing their duties in workplaces and not being involved in the response to a nuclear or radiological emergency ...

d. workers who are accidentally exposed as a result of an accident at a facility or during the conduct of an activity and whose exposure is not related to the emergency response

Groups b), c) and d) do not have a role in emergency response and are classified as members of the public during the emergency. The national reference level of 50 mSv is applied for protective actions, as defined in in Section 2.6.1 of RPS G-3 Part 1 (ARPANSA 2019).

The group of emergency workers specified in (a) can be further divided into three categories of emergency worker:

- *Category 1: Emergency workers undertaking mitigatory actions and **urgent protective actions on-site**, including lifesaving actions, actions to prevent serious injury, **actions to prevent the development of catastrophic conditions** that could significantly affect people and the environment, and actions to prevent severe tissue reactions. Emergency workers in Category 1 are required to be designated at the preparedness stage. They are likely to be operating personnel at the facility or undertaking the activity, but they may be personnel from the emergency services. They should receive training in occupational radiation protection. Category 1 designated workers may receive a dose of up to the national reference level of 50 mSv when implementing protective actions and other response actions. **They may also receive a dose of up to 500 mSv for life saving actions, to prevent the development of catastrophic conditions and to prevent severe tissue reactions.**” (my emphasis in bold)*

ARPANSA ([Part 1](#), Annex A, Table A.1, p.64) starkly says Emergency workers are to be called upon to ‘**volunteer**’ for actions “to prevent the development of **catastrophic conditions**”:

“... under circumstances in which the expected benefits to others clearly outweigh the emergency worker’s own health risks”.

ARPANSA (Part 1, Annex A, p.63) says: “...**female workers** who might be pregnant **need to be excluded** from taking actions that might result in an equivalent dose exceeding 50 mSv”.