

Reactors at Sea

Five nuclear submarines and over 20 nuclear missiles have been lost at sea; two nuclear weapons accidents and a number of near misses have occurred; the Royal Navy appear to have no idea what will be done with decommissioned submarines. COLIN HINES outlines the Greenpeace Nuclear Free Seas Campaign which aims to bring these environmental hazards to the public's attention.

Imagine the response of a community being asked to allow the regular movement of operating nuclear power stations in and out of their area. If it was added that nuclear weapons would also be involved, sometimes travelling in the same container as the nuclear power station, the result could make the mid 1980s opposition to nuclear waste dumps pale into insignificance.

Yet this is exactly what Rosyth, Faslane, Holy Loch, Plymouth and Portsmouth already have to endure. They are all naval bases or dockyards for nuclear powered and sometimes nuclear armed submarines. Plymouth, Portsmouth and Rosyth are also host to British aircraft carriers, destroyers and frigates armed with nuclear depth bombs and nuclear free fall bombs.

To highlight the environmental hazards of living so close to these naval nuclear facilities, Greenpeace this summer toured these bases as part of their Nuclear Free Seas Campaign, and published reports for each site (see SCRAM 67, reviews). We catalogued the potential for a power reactor or nuclear weapons accident, the likely effects on the surrounding population, the inadequate monitoring of routine radioactive discharges, and the above average leukaemia incidence in these areas. The hopelessly unsatisfactory 'Dad's Army' accident emergency plans drawn up by the Royal Navy were also exposed.

ACCIDENTS HAVE HAPPENED

Luckily, no serious accident has so far occurred at a naval nuclear base. But on 26 January this year, the nuclear powered Polaris missile submarine Resolution experienced a power cut at Faslane. The reactor coolant water pumps were lost; two back up pumps failed; a further motor didn't respond; alarms at the base went off and heat built up in the reactor core.

Local MP John McFall accused the Royal Navy of denying the accident until reports appeared in the national press. The Ministry of Defence then described the incident as a "minor electrical malfunction." Yet, according to Dr Richard Webb, a former US Navy nuclear engineer, the reactor could have been only minutes away from overheating leading to an unstoppable meltdown.

There are at present 544 floating nuclear reactors. There has already been one reactor meltdown at sea; five nuclear reactors have been abandoned on the ocean floor; and over 20 nuclear missiles have been lost. In October 1986 a Soviet submarine sank following an explosion on board: at least 15 nuclear weapons and two reactors went down with it. These had a radioactive inventory twenty times that re-



leased from Chernobyl.

Submarine reactors are small compared with commercial power reactors, but they regularly glide into the heart of communities of hundreds of thousands. However this is not the only threat posed by the naval nuclear bases.

An accident could occur involving a nuclear weapon on board a nuclear armed submarine or one of the aircraft carriers, destroyers or frigates which carry some of the 190 nuclear depth bombs and free fall bombs assigned for naval use. It is most likely to be caused by an electrical or fuel fire resulting in the ignition of the warhead's conventional explosive. This could lead to the widespread distribution of a radioactive cloud.

Such accidents have already occurred. Crashes involving nuclear armed US aircraft - at Thule, Greenland in 1966 and Palomares, Spain in 1968 - led to extensive radioactive contamination in both areas. The US Department of Defense have calculated that a 2.5 mile wide radioactive cloud could spread for 28 miles downwind of a nuclear warhead accident.

Western Scotland had a narrow escape in November 1981 when a Poseidon missile being unloaded by crane from a submarine fell over 5 metres and slammed into the side of the submarine tender before being stopped by a safety device. The missile reportedly contained the unstable conventional explosive LX09 which four years earlier had exploded at a nuclear weapons plant at Amarillo in Texas when being tapped into place with a rubber mallet. The resulting explosion killed three people and hurled debris more than 100 metres.

INADEQUATE EMERGENCY PLANS

The Royal Navy's accident emergency plans for the naval nuclear bases are a complete fantasy. No mention whatsoever is made of the possibility of a nuclear weapon accident; the radioactivity predicted to be released from a reactor accident is miraculously expected not to cause significant problems, nor require evacuation, beyond a distance of 550 metres. This conveniently coincides with the bases' perimeter fences.

Furthermore it is the Royal Navy which monitor the discharges and make the decisions concerning evacuation. They decide when to inform the local authority and emergency services and when to issue press releases. Their complacency concerning the seriousness of the consequences of any accident is typified by a pre-written press statement: "an accident has occurred ... which has resulted in the release of a small quantity of radioactive fission products."

The greatest absurdity is that the existence of these safety schemes is not widely known, and it is virtually impossible to obtain a copy. In Portsmouth the local South Coast Against Nuclear Navies group had to go through Kafkaesque hoops to find a copy of their local emergency document. Various local authority departments had never heard of it, and when it was eventually tracked down to a filing cabinet in the history section of the local library the group were told that it could not be photocopied because of copyright laws! This for a port where, over the past 4 years, there have been up to 200 US nuclear weapons brought in by US submarines and surface ships each year, as well as being host to UK nuclear depth and free fall bombs on the aircraft carriers based there.

NO DECOMMISSIONING STRATEGY ADMITTED

Another environmental threat highlighted by the Greenpeace tour was that, like their civil counterparts, the Ministry of Defence have no detailed ideas of how to deal with nuclear reactors once they have been decommissioned. This was typified by a dismissively jaunty remark made earlier this year to the Defence Select Committee by Mr J Peters, Assistant Under Secretary of State for the

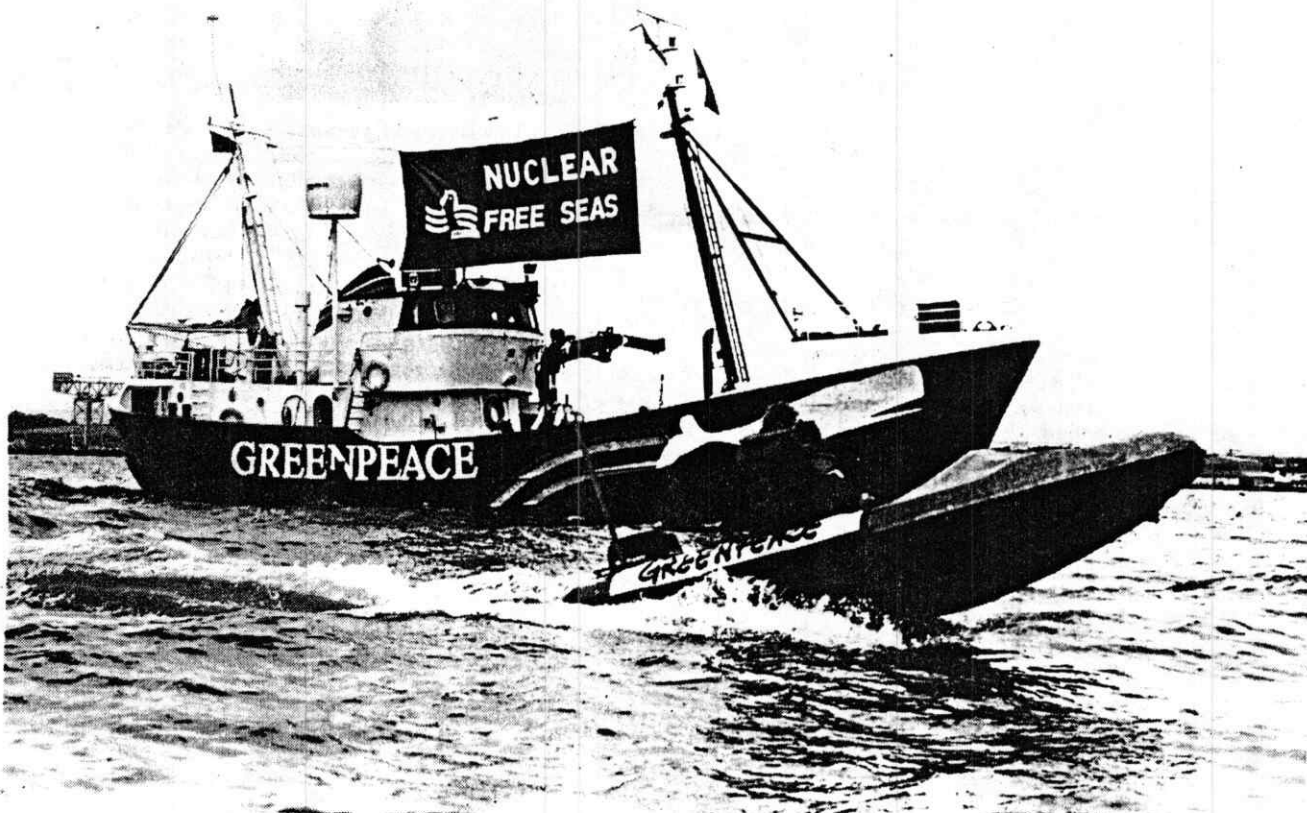
Navy. When asked about decommissioning of the first naval reactor he asserted: "there were quite enough problems to contemplate at the time without thinking too much about what on earth we should do with it when we were finished with it."

The highly radioactive fuel rods from the first UK submarine, Dreadnought, have already been removed but the reactor core and piping remains radioactive. The sealed hull presently languishes in the corner of Rosyth Dockyard. By the turn of the century nine more nuclear submarines will have been decommissioned. It appears from press reports that the Government's preferred option is to dump these submarines at sea. Even with the fuel removed, these submarines, if dumped shortly after decommissioning, would still contain about half the total radioactivity of all nuclear waste disposed of at sea by the British between 1949 and 1982.

The only way for populations living around the world's naval nuclear bases to be rid of these environmental threats is for the disarmament process, begun with the INF Treaty, to spread to naval nuclear weapons, and for nuclear powered vessels to be phased out as rapidly as possible.

In the interim, it is vital that those living near the bases are aware of the dangers of living cheek by jowl with floating nuclear power stations and nuclear weapons. The local authorities must play a more active part in monitoring the routine radioactive discharges from these bases, as well as the local cancer statistics. They must demand an active role in more realistic, and tested, evacuation plans.

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Moby Dick visit to Rosyth to confront the Royal on its nuclear ship policy (12.7.88)