

Committee on Medical Aspects of Radiation in the Environment

c/o National Radiological Protection Board, Chilton, Didcot, Oxon OX11 0RQ
Tel: 01235-832447 (Scientific) 01235-822629 (Scientific/Administration) Fax: 01235-832447/822630
Web Site: <http://www.open.gov.uk/doh/comare.htm>

Duncan Hogg
Senior Registrar
SEPA Edinburgh Office
Clearwater House
Heriot Watt Research Park
Avenue North
Riccarton
EDINBURGH EH14 4AP

31 August 2001

Your Ref: DH/LM/RSA/E/280

Our Ref: B1851/11

Dear Mr Hogg

RADIOACTIVE SUBSTANCES ACT 1993
BABCOCK ROSYTH DEFENCE LTD – ROSYTH ROYAL DOCKYARD
QUINQUENNIAL REVIEW OF NUCLEAR SITE AUTHORISATIONS

Thank you for seeking this committee's comments on these documents. We note that the health risks associated with the proposed authorised discharges are very low. We also welcome the proposed reductions in the authorised levels for cobalt-60 and alpha-emitting radionuclides. However, we note that all submarine refitting work is being located at Devonport, a fact that has had implications for the authorisation for Devonport Royal Dockyard. Specifically, in response to a request for comments on that authorisation, this committee noted:

" Part of the requirement for increased discharge limits arises from the transfer of work from Rosyth to Devonport. In such circumstances it is important to consider the implication for both sites in order to maintain an appropriate degree of control over discharges and the processes giving rise to them. This is particularly important, in the light of the Sintra Statement, in the case of discharges to the marine environment.

COMARE recommends that in situations where processes causing discharges of radioactive wastes are transferred from one site to another, the revisions to both sets of authorisations are co-ordinated and cross-referenced."

We consider, therefore, that the decision to allow the authorised level for tritium discharges from Rosyth to remain substantially unchanged should be reviewed. The basis for this decision appears to be a requirement to allow a sufficient margin for the possibility of submarines docking under contingency arrangements. In order to address this committee's concerns, we suggest that the authorised level for tritium discharges is directly linked to the requirement for contingency docking. Thus, the certificate should be set assuming contingency docking did not occur but with allowance for a higher level if it did, with the proviso that SEPA's agreement should be obtained in advance. Such an approach would also have the advantage of transparency and would be consistent with the principle of optimisation of protection.

It would also be appropriate to limit the time period of the authorisation, at least for liquid discharges, to that expected for the refit of the two remaining submarines, HMS Spartan and HMS Sceptre.

Duncan Hogg

31 August 2001

Turning to the authorisation for solid waste, COMARE notes that an accumulation of solid LLW has occurred since January 1999 and wishes action to be taken to ensure that this situation does not continue unnecessarily.

COMARE would also like to draw attention to a recommendation made previously in connection with authorisations within England, and before the formation of SEPA, concerning the question of justification. The principle of justification states that no practice involving exposures to radiation should be adopted unless it produces sufficient benefit to the exposed individuals or to society to offset the radiation detriment it causes. This requires that an estimate be made of the radiation detriment. The present application gives that estimate in terms of dose to a critical group member or collective dose to a population coupled with a descriptive phrase. In the case of dose to a critical group, it may be sufficient to say that it "is significantly less than ... the dose that has widespread international agreement for being sufficiently low to be of no regulatory concern". In the case of collective dose, however, to say that it is lower than the average radiation dose to an individual in the UK from natural background radiation may put it in context, but it is not a measure of detriment. COMARE has recommended that, in the interests of openness, the detriment from collective dose estimates should be calculated according to the ICRP formula and clearly stated. While COMARE is well aware of the limitations inherent in the calculation of detriment from collective dose, it remains the only measurement that we have and should not be hidden. It is COMARE's view that this information should be routinely requested in authorisations so that the basis of SEPA's judgement concerning justification can be transparent.

Having now considered the proposed authorisations for both Devonport Dockyard and Rosyth Dockyard, COMARE wishes to expand upon the recommendation made in the committee's comments on the Devonport authorisation. COMARE recommends that the regulatory bodies for England and Wales, and Scotland (EA and SEPA) review the authorisations for the two Dockyards, and any other relevant installation, in the light of the total expected arisings from the nuclear submarine programme. The objective would be to ensure that the transfer of work between sites did not result in any relaxation in the protection of members of the public. Therefore, I am copying this letter to Mr R Smith, the EA assessor to COMARE.

Yours sincerely

Professor BRYN BRIDGES
COMARE Chairman