

**Main Menu**

Main

**DIGANOS QUE  
PIENSA****GIVE US YOUR  
OPINION****ABOUT US  
THE ARCHIVES /  
LOS ARCHIVOS  
click here to enter****Contact: News  
Department at  
news editor's  
desk.**

Wednesday, February 28, 2001

**MEMORANDUM FROM THE  
NUCLEAR SAFETY ADVISORY  
PANEL****8th PROGRESS EXPORT ON THE  
DEFECT REPAIRS TO HMS TIRELESS**

Dear Chief Minister

During 113 visit to Gibraltar on 19 February 2001 the Panel met with the CNNRP Site Inspector for Gibraltar (S12), the Commander and engineering personnel of Tireless (CO and MEO), technical support staff from Gibraltar and the Radiation Physics Agency (RPA)

The Panel reviewed and discussed the following:

a) Radiological Management anti Radioactive Waste Issues

**Quality Assurance (QA):** The Panel expressed concern that the two QA reports that had been raised to date, relating to the management of radioactive waste, both identified inadequacies of the health physicist resource and non-compliant implementation of management routines (paperwork) prior to approval CNNRP stated that additional qualified personnel had solved under-resourcing and that the routines had been reviewed and were now approved.

CNNRP S12 provided the Panel with assurance that the resource and compliance problems had not resulted in any radiation release and/or exceptional (unplanned for) radiation dose exposure.

**Sealed Radioactive Source**

**Terms:** The current arrangement is that the two sealed source terms (used for the NDE radiography process) will remain stored in the reactor compartment of Tireless and will not be removed whilst Tireless is at Gibraltar.

The Panel will be notified and consulted over any changes to this arrangement that would involve the source terms being transported over the public roads of Gibraltar.

**Radioactive Waste Store**

**Decommissioning:** At completion of the repair and when Tireless has sailed from Gibraltar, RFA Rosalie will be moved along the South Mole to facilitate transfer of the drummed solid and liquid radioactive waste from the waste store. The complete operation of transferring the wastes and fully decommissioning (and decontamination if appropriate) will occupy about three weeks past the Tireless sailing date.

The Panel is to review these arrangements prior to any waste transfer operations commencing.

**Environmental Monitoring:** CNNRP tabled the environmental monitoring results for the immediate atmospheric, mole surfaces and marine (sediment) environments around the Tireless berth. The report, prepared by DERA Radiation Protection Services, shows that for the period May to December 2000 no radioactivity above background was detected.

**b) Progress of the Repair**

Torbay continues as the lead boar with the final internal dressing operations now nearing completion.

The weld on Tireless has been completed to full-fill and internal dressing has commenced. Irrespective of the outcome of the final non destructive examination (NDE) of Torbay. Tireless will assume the lead and progress through its final NDE to preparations for the hydro test, which is now scheduled for the 4th week of March, or thereabouts Once that the final NDE of Tireless has been completed (25/26 February) CNNRP plans to meet with the Panel at Devonport to review the NDE data and findings of the Primary Weld Acceptance Group (PWAG). The Panel's welding consultant, Mr Murgatroyd, will be involved in this specialist assessment.

### **c) Overall programme**

CNNRIP'S projected programme to Tireless sail away and removal of all of its radioactive waste is as follows:

26 Feb - NDE

#### **Early March**

Surge Line Reinstate

#### **Mid-Late March**

Preps for Hydra Test

#### **End March**

Primary Hydra Test

#### **Early April**

Re-Instate Primary Plant

#### **Mid April**

Pre-Sailing Activities & Tow  
Readiness Removal

#### **Mid Late April**

Primary Plant Warm Up to  
non-critical State B

**Late April**

Primary Plant to Critical State A and Turbo Proving

**Late April**

Sail Away

**Late May**

RFA Rosalie departs with waste

**d) Tow Readiness**

The seamanship consultant to the Panel, Mr Hattersely, inspected the physical preparations made for towing, reporting that the major tow modifications were in place, although a further three to four working days would be required to fully ready Tireless for towing should the need arise.

The Panel reiterated the Government of Gibraltar's understanding that towing readiness would be maintained until there was sufficient confidence and assurance that the weld repair had been satisfactorily implemented. The Panel stated to CNNRP that it believed that the earliest date for this would be post hydro test of late March, by which date it would have expected to have reviewed the NDE data and PWAG findings, and received further information on the substantiation of the maximum credible defect size, residual stresses and implementation of the ultrasonic NDE of the swept branch connector weld (see items 2a) and 2e) of the 7th Progress report).

**e) Crew Training and System Interfacing**

After the long stand down period crew refresher training (by watches)

is presently underway at the submarine simulator facilities at Devonport - the entire ship's complement will have received refresher training before Tireless's primary plant start up of mid to late April.

The crew will also undertake certain refresher training tasks on board Tireless and certain of these will require interfacing with ship's systems. The Panel raised its concern that interactive training could, in itself, jeopardise safety if the human response was incorrect. The CO and MEO explained that all safety sensitive training tasks would be prior identified and the interaction would be 'touch' only (i.e. a valve would be touched to signify that the action had been undertaken but it would not be turned).

During the week before departure the crew of Tireless would be expected to undertake a Harbour Training Programme under Flag Officer Sea Training, this training is likely to involve a work-up

staff and/or riding crew boarding in Gibraltar. The Panel is seeking further information on the extent of this harbour training programme from CNNRP. -

### **1) Other Topics Raised**

The Panel raised a number of other topics mostly relating to its requirement for further information for the preparation of the Panel's substantive report, which is to consider the hydro test and primary plant commissioning and start-up before Tireless sails from Gibraltar, and the waste storage and removal,

Amongst these topics, CNNRP has

undertaken to provide further information, including

Projected final radioactive waste inventories held in store on the South Mole  
Final certification of radioactive waste removal and decontamination clearance to 0.4 Bq/cm<sup>2</sup>  $\beta$ -y fixed from the radioactive waste store and quayside areas or to the nine condition prior to the arrival of Tireless  
Criteria and results of the gaseous and effluent monitoring and discharge levels within and from the reactor compartment during all stages of the repairs at Gibraltar  
Updated SBC residual stress, crack size and ultrasound NDE criteria  
WAG acceptance report for the final SBC weld and statement of PWAG's independence  
Confirmation from CO Tireless that he was satisfied he had sufficient depth of experience and cohesion in the officers and crew following such a prolonged period of stand-down.  
Advanced notice would be provided of the quayside movements of RFA Rosalie and her final sail away date from Gibraltar  
The Panel would be provided with a copy of the text overheads of the AV presentation given by MEO Cmd P Jessop.

**The Panel recommends that the Government of Gibraltar notes:**

i) The Panel's satisfaction that the practical measures, resources and checks now in plate at Gibraltar are compatible with the requirements of the Safety Justification (reviewed in the 7th Progress Report);

ii) that the Panel will continue to monitor and report upon the repair, testing and recommissioning activities as these relate to nuclear safety; and

iii) that the Panel will now proceed to finalise it's report which will enable the Government of Gibraltar to consider it position with regard to the repair programme proceeding through the primary hydro test scheduled for the end of March - this report will be submitted by the end of the 2nd full week of March.

P H Davidson  
J H Large  
C J Milloy

Produced and edited by Iberia News Ltd. © Iberia News Ltd 2001.  
No part of the contents may be reproduced, copied, disseminated or republished without permission from Iberia News Ltd.

Suite 465 Imossi House, 1/5 Irish Town,  
P.O. Box 561, Gibraltar.  
Contact: News Department at news editor's desk.