



TOP SECRET ARTIFICER (G)

5. By way of illustration, taking the last hazard first - the REBs - small arms attack on REBs could result in an explosion equivalent to about 1 lbs of TNT and a consequent spread of Radio Active debris. The probability of a nuclear incident arising from small arms attack is unknown but because of the difficulties in the aiming and critical timing of the multiple high velocity shots which would be required - to within micro-seconds - it can be discounted.
6. Small arms attack on the Chevaline front end, if it penetrated both tanks, could lead to a hypergolic fire and possible consequential escalation of fire leading to second stage missile motor ignition.
7. The missile motors presented the largest target, and the response to shaped charge attack from a Carl Gustav type weapon, particularly on the second stage motor, could be immediate detonation with a yield up to 10,000 kg TNT equivalent and would be catastrophic, leading possibly to loss of the submarine.
8. So, as far as the Chevaline modification is concerned, the risk was increased only slightly because of the small target it offered in relation to that of the main motors.
9. The problem of security was being dealt with by the Admiralty Board. Certain recommendations had been made to the Board which included such things as improved physical protection at Culpport, the provision of armed RM patrols afloat during loading and unloading operations, extension of protected areas in the vicinity and screening to deny an effective point of aim. All these matters were under further study.
10. CPE concluded that he wished merely to ask the Committee to note the vulnerability of the missiles to attack and that the whole question was being dealt with by the Admiralty Board.
11. The Committee noted these statements.

THREAT ASSESSMENT (CSC/P(78)6)