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① DP Nuc SS
② NAR *[initials]*

I don't think we need to report to Minister on this

LOOSE MINUTE

D/Sec(FS)/48/16
(AYA/0632/88)

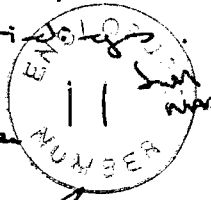
10 February 1988

Agree. Essentially an internal matter
now

L15/2

NAR *[initials]*

NAR DC



CFS

Copies to:
D Nuc Pol Sy
DST(AS) - without attachment

RNAD COULPORT - MISSILE LOADING
INCIDENT ON 3 DECEMBER 1987

1. I attach for your information a copy of a minute from DGST(N) which conveys a summary of the findings and recommendations of the Board of Inquiry convened to look into the above incident.
2. A copy goes to D Nuc Pol Sy in view of his interest in these matters. I would emphasise to him that this was a minor incident which had no implications for system security and that the Board of Inquiry was internal to the RNSTS.



Head of Sec(FS)
MB 8117 2628 MB

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LOOSE MINUTE

D/ST(AS)/233/6

3 February 1988

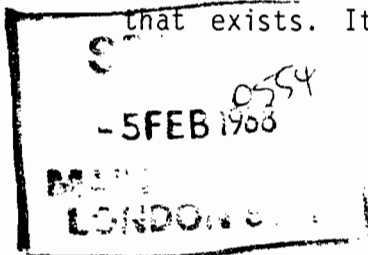
Head of Sec(FS)

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RNAD COULPORT - MISSILE LOADING INCIDENT ON 3 DECEMBER 1987

References: A. BR 4002
B. BR 1029(1) Article 0337
C. BR1029(1) Annex 3.3 para 23
D. RNAD Coulport's 031409Z December et seq

1. In accordance with Reference A Superintendent RNAD Coulport informed MOD UK Navy by signals (Reference D) of an incident during the handling of a Polaris missile at Coulport jetty on 3 December 1987.
2. The following day, in accordance with Reference B, a Board of Inquiry was convened and the report on its findings is attached (without enclosures apart from Enclosure 1 - terms of reference). The conclusions and recommendations are listed in paragraphs 32 to 33 and 34 respectively and are reproduced in Annexes A and B.
3. The report and its findings are accepted and implementation of recommendations is in hand. I have sought further information on certain aspects brought out in the report and these are commented upon below.
4. Selection Policy for Crane Drivers I am not convinced that the selection policy for crane drivers is adequate.
 - a. I do not feel that a task of such high importance and risk potential should be entrusted to young Leading Hands who do not have the background and experience in Polaris to understand the full ramifications of departure from authorised procedures.
 - b. A "profile" is therefore being drawn up for potential crane drivers which is to include at least 6 months experience of Polaris; it will also require a knowledgeable local opinion to be sought as to the reliability and suitability of each nominee for crane driving duties involving nuclear lifts.
 - c. A review of the suitability, applying the test at b., of all jetty crane drivers in post is being undertaken; appropriate action will be taken to place on other work anyone who does not "pass".
5. Mixed Manning at the Jetty (Recommendation 34.1 and para 18 of Report) The review on this front will include an in-depth survey of all mixed manning posts at Coulport to establish the extent of the problem and how it might best be addressed. As a minimum a course will be devised to explain the role of each Division, their interfaces and the controlling documentation that exists. It will emphasise the need for safety awareness at all levels



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of work and specifically treat on this for operations in the jetty area. The "check and balance" philosophy which is paramount within the Polaris business will also be explained, as will the Zero Defect Policy.

6. Managerial Acceptance of the Crane for Polaris Operations (Recommendation 34.3) Instructions have been included in Depot Orders that a senior officer (Grade 7 or above) is to approve jetty missile operations to be undertaken other than when both missile capable cranes are fully operable. When both are available the (new) 50 ton crane is to continue to be preferred for use. If only one crane is available this fact is to be taken into account in the decision process to on or off load missiles at any particular time. If only the (old) 40 ton crane is available Captain SM10 is to be advised that a degree of risk to timetables is involved.

7. Command and Control on the Jetty I am not satisfied that there was a clear hierarchy of command on the jetty on 3 December. In the absence on that day of the normal Jetty Supervisor (a Lieutenant [REDACTED] RN) it appears that there was some lack of appreciation of the precise responsibility of each among the officers present viz:

Mr [REDACTED]	SOGC (Lt [REDACTED] stand-in)
WO [REDACTED]	(the Reliability and Operational Safety rep assigned to jetty operations)
CPO [REDACTED]	(the Polaris Quality Control rep assigned to jetty operations)
CPO [REDACTED]	(Deputy to Jetty Supervisor)

The responsibilities of these posts are to be reviewed individually and collectively and a formal process of substitution defined for missile handling operations. This should recognise the naval/civilian interface, but should clearly specify lines of accountability regardless of 'colour of uniform'. Postholders will be required to confirm that they understand their duties.

8. Responsibility for Crane Routine Maintenance (Recommendations 34.6, 7 and 8) There have apparently been shortcomings both in ESD and in SADC Divisions, with the former sometimes not carrying out maintenance to time when this had been "called-up" and an uncertainty that the latter's computer output "calling-up" maintenance consistently was transmitted to the maintainer. However the system governing this whole area in relation to missile handling cranes was, as the report indicates, inadequate. Hence the decision not to pursue formal disciplinary action with any individual. In this respect consideration is being given, in conjunction with Chief Services Engineer, to transferring the crane maintenance task to the Missile Production Manager under the full technical control of the Weapon Systems Engineer as for Polaris Support Equipment; as a minimum the missile capable cranes will be designated as such controlled Equipment (Recommendation 34.10).

9. Exchange of Missiles - Consultation between Coulport and SM10 (Recommendation 34.11) It is clear that because the operation was not anticipated the first choice 50 ton crane was in maintenance, leaving only the 40 ton back-up crane available for use. The laid down procedures for reaching a considered decision on the action to be taken with a suspect missile on an SSBN were not followed. This led to the pressures surrounding the transfer and will be pursued with FOSM and DGSWS.

10. Referred to Head of Sec(FS) in accordance with Reference D and to notify CFS as deemed appropriate. I would be grateful if he will also consider to what extent D Nuc Pol Sy, who was a recipient of the initial signals - Reference D - should be further informed.

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CONCLUSIONS

32. It is the Board's conclusion based on the evidence from interviewing the people involved and reviewing the relevant documentation and controls that the cause of the accident was a combination of three principle factors and to a lesser extent a fourth.

Human Error

a. The crane driver LWEM [REDACTED] having declared that he could not operate his crane in the hoist mode caused his crane to operate in that mode when no longer receiving directions to do so.

Material Aspects

b. Over a 12 month period an average of 40% of mechanical and electrical weekly and monthly preventative maintenance routines were outstanding. Had these been completed and had the defects in control and instrumentation been reported and rectified it is highly probable that the incident would not have occurred.

Procedural

c. The absence of a comprehensive formal pre-use procedure to certify the 40 ton crane fit for a Polaris Missile lift is considered by the Board to be a significant omission. Had such a procedure been in force the crane would not have been cleared for use at the time of the incident.

Pressure to Complete the Missile Exchange

d. There was clear evidence of delay, frustration and an urgency to complete the operations quickly. This environment was not conducive to the safe exchange of missiles.

33. In view of all the various aspects associated with the incident the Board does not consider that any one person should be the subject of praise or censure.

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RECOMMENDATIONS

34. The following recommendations are made:-
1. Review the induction training of naval staff who join RNAD Coulport.
 2. Ensure the purpose and intent of Management Control Documents are fully understood by all naval staff.
 3. Increase to managerial level acceptance of the crane for Polaris Missile operations and record its accomplishment.
 4. Ensure all cognizant Divisions are associated, as appropriate, with the cranes acceptance.
 5. Provide a detailed acceptance procedure for the user to accept the crane for Polaris operations and formally record its completion.
 6. Improve the system of control for crane maintenance, defect reporting and defect rectification.
 7. Install a system of control, similar to that operating in process buildings, that identifies the exact nature of the maintenance task, the defects to be rectified and the timeframe to do the work.
 8. The improved acceptance, testing and control methods are to be applied to the 50 ton crane.
 9. Install a repeater panel on the drivers cabin for monitoring and adjusting the direct volt power supply for the crane.
 10. Make the 50 ton and 40 ton cranes pieces of defined support hardware in accordance with CPCP 16E. [CPCP is the very detailed documentation which controls all aspects of the handling and processing of Polaris missiles in RNAD Coulport].
 11. Provide a more structured and disciplined approach between SM10 and RNAD(C) for assessing and agreeing options for embarked missile problems to prevent unnecessary operation as that investigated.

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