

6 Mar 08

SITE EVENT REPORT COMMITTEE (SERC) - ANNUAL REPORT FOR 2007

References:

- A. NB BP 19 - Reporting and Recording of Nuclear and Radiological Events.
- B. ACCS 7.
- C. SERC annual report for 2006, BNSO/073/136/38.
- D. BR 3018 - Nuclear Safety Management of Naval Reactor Plant.

PURPOSE

1. The purpose of this report is to update the Site Safety Committee on the changes to the nuclear and radiological event reporting process and to provide a summary of trends and issues emerging as a result of the nuclear and radiological event reporting at HM Naval Base Devonport during 2007.

SCOPE

2. This report covers all nuclear and radiological events that occurred on the MOD owned Naval Base Site during 2007 and were reported in accordance with Reference A. This is a requirement for NBC to satisfy iaw Reference B. The report also outlines the changes made to the event reporting process and provides assessment of its development over the last year. It does not cover the DRDL Site for which the company has separate arrangements.

EVOLUTION OF EVENT REPORTING AT HMNB DEVONPORT

3. Last year's report at Reference C introduced a revised event reporting system, NBQ 19 Issue 6 (August 2006). The aims of the revision were to reduce the paperwork associated with event reporting which was identified as slowing the event reporting process and identification of recommendations, and to implement a more definitive guide table for event immediate causes and underlying cause analysis.

4. The employment of a single event report form NBFQ 703, introduced with the August 2006 revision of NBQ 19, for use during the entire process from event initial notification to final closure has proved effective. The revised Event Cause Classification Code table introduced at the same time has proved to be of very limited value, with those responsible for reporting events and SERC members finding it difficult to allocate appropriate codes. Many of the tabulated codes were unlikely ever to be applicable to events considered by the SERC, leaving only a small number that were seen as appropriate. It is understood that the tabulated codes had been derived from a generic source. The SERC unanimously agreed that the tables were proving ineffective and following consultation a new arrangement of categorising events was developed. This

utilises a tree diagram to lead the user to Immediate Causes (IC) and if required by the investigation to an array of Underlying Causes (UC).

5. The current event trees, found at Annex A, are split into 3 main event types:
 - a. Equipment Related Event
 - b. Work Control Related Event
 - c. Personnel Failure Related Event

These are further broken down via the tree to provide 10 ICs for event analysis (given the number of events to be considered finer division is not considered appropriate), which in turn are broken down to provide an array of UCs and text prompts to be used during the Root Cause Analysis (RCA) investigation. Of note is that more than one IC and UC can be allocated per event.

6. The implementation of the new event trees was timed to roll out with the changes required in the move from a Quality Procedure (NBQ 19) to a Business Process (NB BP 19 - September 2007) as part of the implementation of the Business Management System in the Naval Base. The opportunity was also taken to incorporate two other changes to the process. These changes were:

- a. Reduction in the time between initial notification and receipt of the basic investigation including details of the immediate action from 10 working days to 1 working day. Attendance at Operating Experience Learning Group (OELG) meetings by the SERC Chairman had identified that nuclear industry best practice aims to achieve this timescale.
- b. Permitting the SERC Chairman, in consultation with the event Responsible Officer, to upgrade / downgrade the level in investigation as felt best suited the event. Although normal practice is to determine the level of investigation based on the Severity and Frequency codes grid (at Reference A), experience had shown that strict adherence did not always identify an appropriate level of investigation. This change offers more flexibility to the investigation process and focuses efforts where required.

7. The August 2006 major revision of NBQ 19 and streamlining of the process appears to have been broadly successful and the more recent changes in the move to BP 19 are seen as being largely evolutionary in nature. Whilst still in the early stages of its application, the process within NB BP 19 appears to be functioning satisfactorily. Users of the system appear to find the tree structure for identification of Immediate and Underlying Causes much easier to use. In the majority of cases, a basic investigation is being received within one working day although there is still significant scope for improvement here.

EVENT LIST

8. A list of nuclear and radiological events reported during 2007 is at Annex B. The list includes a basic description, event cause, event consequence code and remarks where appropriate. In some cases the assessment is provisional pending ongoing investigation, implementation of recommendations and / or agreement by the SERC.

EVENT HISTORY ANALYSIS

9. As per the practice adopted for the 2006 report, for the purpose of this report, it is intended to conduct a trend analysis of all nuclear and radiological events reported to the SERC over the last 5 year period from 2003 up to and including 2007. To enable a direct comparison, events prior to the introduction of Reference A have been re-assessed against the tree cause structure introduced by Reference A. A high proportion of the events have been allocated more than one IC and UC code which should be considered when comparing the total no. of events in any one year against the total no. of IC codes for the same period.

10. **History.** A total of 52 events were reported during 2007. The 5 year history is:

Year	Total No of Events
2007	52
2006	32
2005	35
2004	50
2003	38

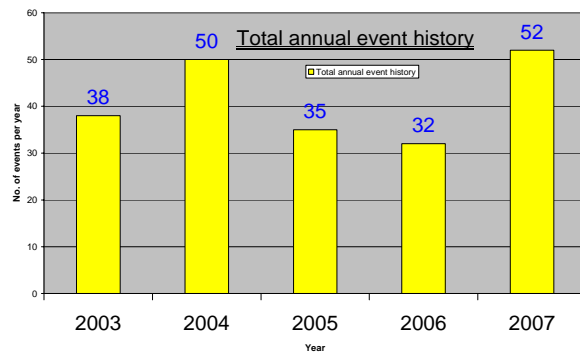


Table 1. No of events over past 5 Years.

11. It can be seen from the above event history that 2007 saw an increase in the number events reported. Whilst forecasting is never precise, this was predicted in the 2006 report (Reference C) believing that the then recent introduction of a less burdensome, less bureaucratic reporting system would encourage reporting. Potentially also contributing to this increase, with the aim of promoting nuclear and radiological event reporting across the Naval Base, BNSO sought to raise the profile of the Nuclear Site Event Report (NSER) process using the team briefing system. Additionally, a closer liaison has been developed with the Babcock Marine OEF team to ensure capture of events occurring on the MOD Site initially notified via the Babcock OEF System; some of these may have been missed in the past. Other organisations typically report increased reporting in similar circumstances and it is not the opinion of the SERC that the increased number of reported events is indicative of deterioration in overall safety. Early indications are that a similar number of event reports are being raised this year.

12. **Event Consequence (EC).** All events during 2007 were allocated an EC code iaw Reference A. This functions on a sliding scale from EC Code A, the most severe, to EC Code D. This is used in conjunction with a Task Frequency code in order to determine the Level of Investigation to be attached to the event; Trend, Root Cause Analysis (RCA) or Board of Inquiry. During 2007 all events fell within the lowest 2 EC codes categories with a worse case scenario of “some impact on safety or compliance” being reported. When considering events over the previous 5 years against the same scale, no events would have been allocated an EC code higher than a C.

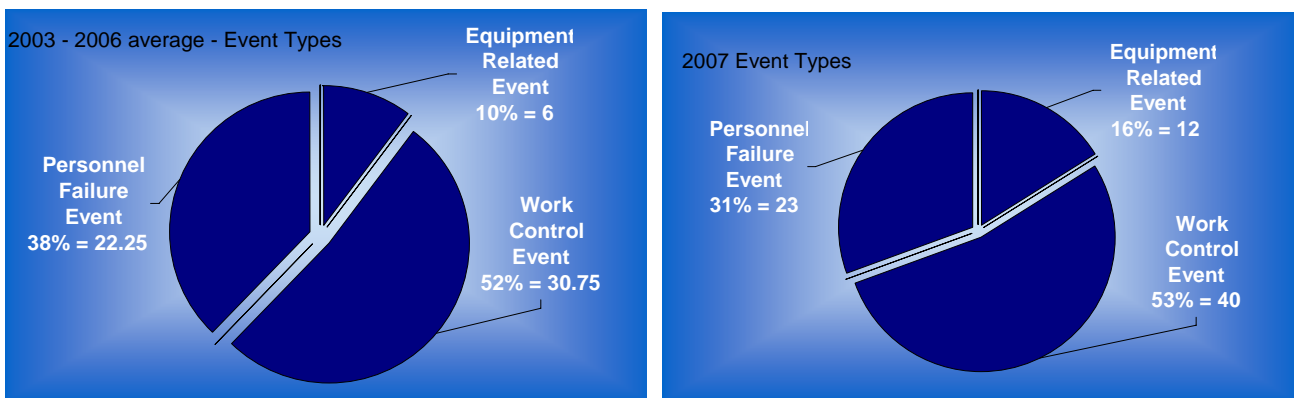
13. RCA was undertaken for 12 events (over 20%). This included events where, although only a basic trend investigation was indicated by the grid, the SERC Chairman

and the Responsible Officer considered that benefit would be gained from a deeper investigation.

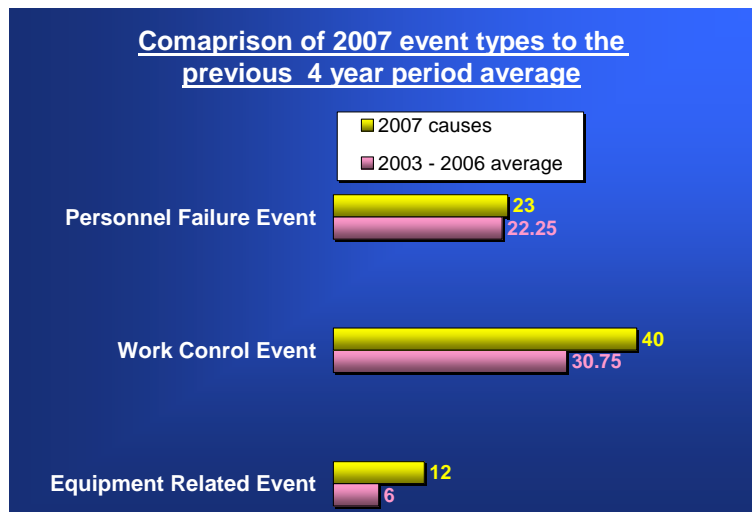
14. **Incident Reports.** Eight incidents on the MOD Site at Devonport were reported in accordance with Reference D during 2007, an increase of 2 over 2006 and the same number as 2005. The SERC have noted that when situations have arisen requiring EOP action, operators have assessed the situation and implemented the drill correctly, demonstrating the effectiveness of the training.

EVENT TYPE ANALYSIS

15. As explained at paragraphs 3 – 7 events are currently categorised using the system within Reference A. Three main event types have been identified. Noting that the system allows for more than one cause to be assigned, a comparison of event types for 2007 against the average witnessed between 2003 and 2006 is given below on the pie charts:



16. The charts above and opposite show that Control of Work continues to be the main cause of nuclear and radiological events across the MoD site at HMNB Devonport with a similar percentage of this type of event being reported in 2007 in comparison with previous years. Noting the increase in the total number of events reported, in percentage terms, 2007 saw an increase in equipment failure based events and reduction in personnel related events. Where applicable the design authority for the equipment has been informed with a view to modifying/improving the design. Personnel failures have consistently been responsible for approximately 1/3 of all nuclear and radiological events. Initiatives to improve the site safety culture are already in progress. The figures below re-iterate how, in general, the proportion of event types has remained consistent over the past 5 years.



Cause	Equipment		Control of Work		Personnel		Total ¹
	No.	%	No.	%	No.	%	
2007	12	16	40	53	23	31	75
2006	4	8	25	51	20	41	49
2005	4	7	28	51	23	42	55
2004	8	11	37	50	29	39	74
2003	8	14	37	57	17	29	62

Table 2. Table to demonstrate the main type of events reported over the last 5 years.

IMMEDIATE CAUSE ANALYSIS

16. As stated at paragraph 9 above, events over the past 5 years prior to the introduction of the current cause classification have been re-classified using the current system to enable comparison to be made. The table and graph give a breakdown of the Immediate Causes of these events.

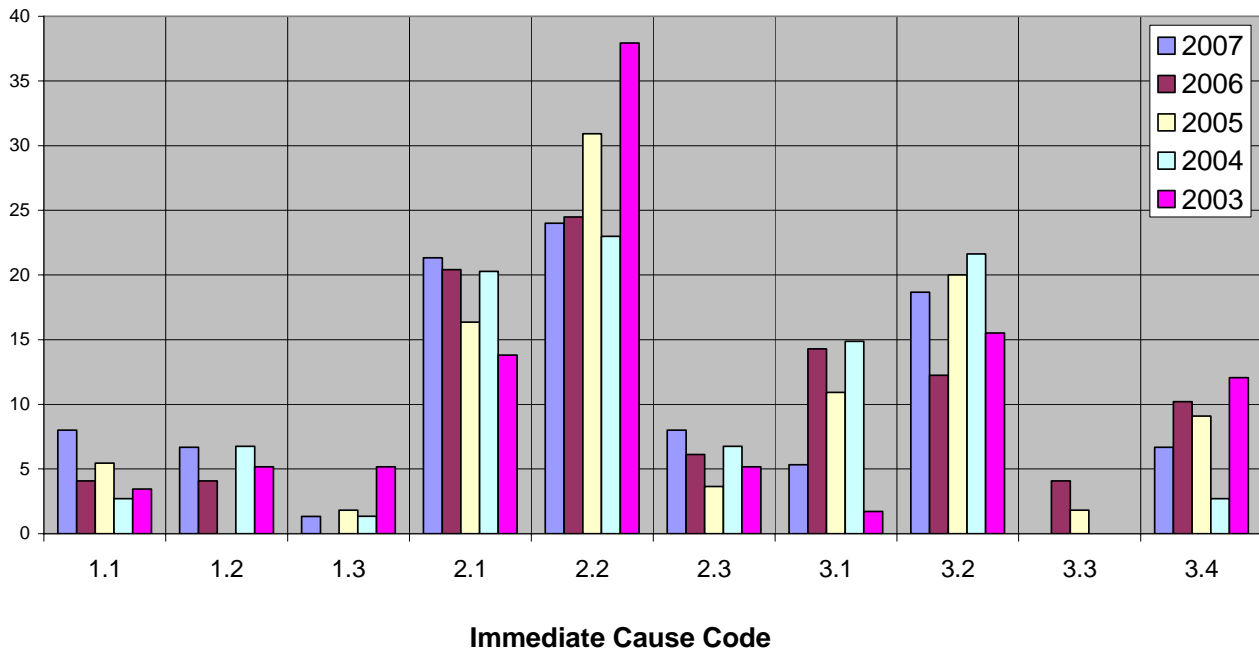
IC code / description		2007		2006		2005		2004		2003	
		No.	%	No.	%	No.	%	No.	%	No.	%
1.1	Equipment breakdown	6	8	2	4	3	5	2	3	2	3
1.2	Equipment not fit for purpose	5	7	2	4	0	0	5	7	3	5
1.3	Equipment correctly specified, incorrectly used	1	1	0	0	1	2	1	1	3	5
2.1	Preparation planning related event	16	21	10	20	9	16	15	20	8	14
2.2	Written control related event	18	24	12	24	17	31	17	23	22	38
2.3	Verbal control related event	6	8	3	6	2	4	5	7	3	5
3.1	Persons not adequately SQEP	4	5	7	14	6	11	11	15	1	2
3.2	Incorrect action taken despite suitable guidance	14	9	6	12	11	20	16	22	9	16
3.3	Persons not available	0	0	2	4	1	2	0	0	0	0
3.4	Poor safety culture/ awareness	5	7	5	10	5	9	2	3	7	12

Table 3. Table illustrating the number of events for each IC code over the last 5 years.

¹ Noting the system allows for more than one cause to be assigned.

% of
events

Immediate Cause as a percent over 5 year Period



Graph 1. Graph of IC codes reported over the last 5 years, shown as a percent of events.

17. **Trends.** When considering the data in Table 3 and its graphical representation above, it is clear to see that Control of Work and in particular, Written control related events (Code 2.2) and Preparation planning related events (Code 2.1) contribute consistently to the bulk of the events reported over the past 5 years; 2007 broadly continues this trend. Personnel related events have represented a significant percentage of the events reported each year over the 5 year period, with Incorrect Action Despite Suitable Guidance (Code 3.2) and Persons not adequately SQEP (Code 3.1) being the bulk causes in this instance. Noting that absolute numbers of events under each code are small it is not clear whether or not the fall in Code 3.1 events seen during 2007 represents a longer term change or a temporary blip.

18. When considered in greater detail the most frequent Underlying Causes for these particular IC codes are:

- Ineffective plan or preparation (2.1.2)
- Ineffective written control (2.2.2)
- Written instruction not followed (2.2.3)
- No or insufficient training received (3.1.2)
- Personal error (3.2.1)
- Person failed under pressure (3.2.2)

EVENT PROCESS PERFORMANCE

19. The report at Reference C identified a number of areas for improvement, one of which was to clear the backlog of events; at the time that it was written this backlog extended back to 2004. Complementary with this was reducing the time that the event

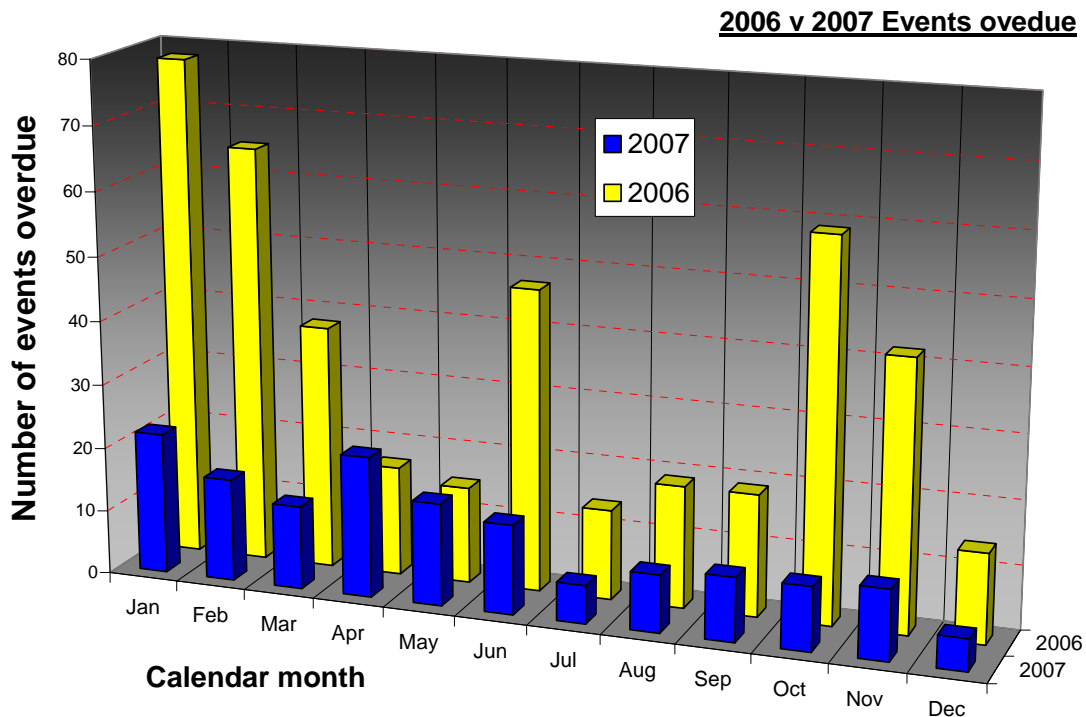
stayed open; in effect the time between event notification and the point at which the recommendations of the investigation are reported as complete. This is seen as a key element in improving safety and maximising the benefit to be gained from event reporting.

20. 2007 saw all events from 2004, through to 2006 closed. This was achieved at a time when the number of events reported in year rose by over 60% with a commensurate increase in workload for those involved. Similarly the duration that an event remains open and the number of open events at any one time have reduced by 2 months on average during the course of 2007.

21. This improvement in the processes performance can be attributed to a number of factors, namely:

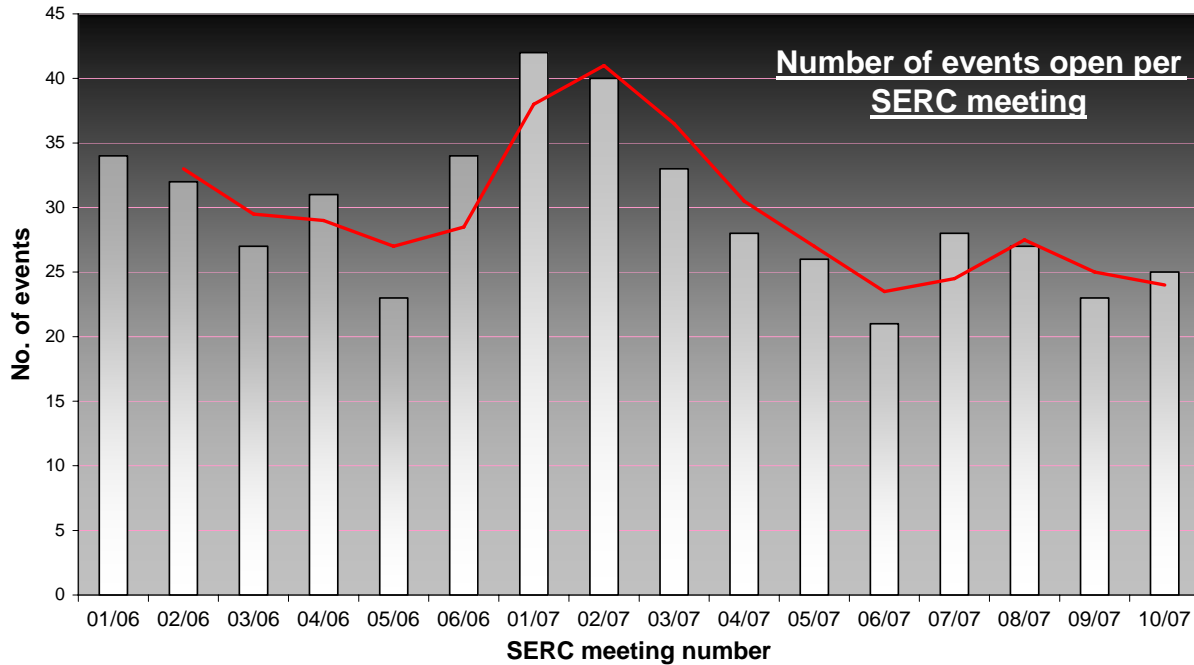
- a. More frequent SERC meetings which provide a focus for moving the work forward, currently approximately monthly – previously approximately two monthly.
- b. The application of the single “through life” event report form NBQ 703.
- c. Amendments to the process via NB BP 19.
- d. Increased priority given to event reporting by those involved.

22. The following two graphs demonstrate the change in performance that has been achieved by the application of the above 4 factors. The SERC aims to sustain this improvement. The current desire is to reduce event open times and thus reducing the period of time between event notification, investigation completion, agreement to recommendations and their implementation.



Graph 2. No of events overdue each month.

23. Graph 2 illustrates how the number of overdue events for a given calendar month has significantly reduced despite the increased volume of events when comparing the figures for 2006 and 2007. It should be noted that this graph includes the 12 month review of the effectiveness of the recommendations.



Graph 3. No of events remaining open – up to completion of implementation of recommendation following each SERC meeting².

24. Graph 3 illustrates that the number of events open following each SERC meeting during 2007 is broadly decreasing, noting that the graph does not include 12 month review of effectiveness of recommendations. It should be borne in mind that with no other change in performance in processing events, the increased number reported would have led naturally to an increase in the number of events open.

25. The SERC have identified that sustaining the improvements described above will be difficult during 2008; this is through no direct fault of the site event reporting process or the individuals in post. It is symptomatic of a system running at capacity which when compounded with a lack of staff continuity, staff absence due to sickness, gapping and subsequent overload means that the organisation finds it difficult to fully manage its business management system. At present turbulence within these departments has a direct consequence on its output pertaining to event reporting business, the performance of which will be monitored by the SERC Chairman throughout 2008.

EVENTS OF NOTE

26. **Cranes.** 2007 saw a re-emergence of crane related events on the TXB Facility. As with some of the events from earlier years piloting/banksman errors were a factor. Apart from immediate measures that were put into place by the Facility Operator and the Babcock Marine **XXXX (s.40 – Personal Information)** to reduce the likelihood of

² An event is deemed open until the SERC endorse the submitted Part 4 of the NBQ703 form. Endorsement is only granted once the implementation of the recommendations is complete.

repetition, a joint Babcock/MoD audit into the operation and control of cranes was undertaken, triggered in part by these events. The report observed that crane operation activities (essentially a service provided to the Facility Operator by Babcock Marine under the WSMI contract) would benefit from improved management suggesting the identification of a single focal point and establishment of dedicated lift teams familiar with the TXB. The report is still under consideration by Babcock Marine.

27. **Berthing arrangements.** During the initial half of 2007, several events were reported as a result of inattention to the berthing arrangements by Ship Staff. Typical events included lost brows and minor damage to berthing facilities. At the request of the SERC, COMDEVFLOT wrote to submarine COs to highlight the issue and remind them of the need for vigilance. Highlighted by these events was the lack of representation by COMDEVFLOT at the SERC. Following invitation, COMDEVFLOT is now routinely represented at the SERC and this arrangement has proved highly beneficial in contributing to the deliberations of the Committee and addressing issues.

FUTURE DEVELOPMENT 2007 - REVIEW OF PROGRESS

28. Reference C identified 3 areas for future development:

- a. Reduction of the backlog of open events and improve the lifecycle of the event process.
- b. Introduction of a more formal process for tracking events from notification, through to recommendation implementation.
- c. Introduction of a feedback newsletter discussing site events.

29. All 3 areas have been addressed although refinement is likely to continue. The details are as follows:

- a. The backlog of events is now much reduced with December 2007 seeing only events raised during 2007 as open. Likewise, approximately half of the events raised during 2007 were closed in year. The lifecycle of events has also improved with the initial investigation being completed and recommendations forwarded within 1 working day of event notification in the majority of cases.
- b. The "Q Pulse" software package was initially trialled as a database to hold information on and track event progress for events raised during 2007 with the aim of generating reports from the software for use at the SERC meetings. Whilst a good tracking system, it had some limitations which were identified when trying to produce reports on the event system and required duplication of data input. The trial utilising "Q Pulse" has subsequently been abandoned and a simpler "Excel" spreadsheet is being used to track progress.
- c. A feedback newsletter titled "Lessons Learnt Feedback - Promoting Nuclear Safety" has been produced for COMDEVFLOT, DRDL and FOs for distribution to their work force. Via images and text, events have been outlined and the lessons learnt identified with the aim of promoting a safety across the site. The aim is now to continue to issue a short newsletter 3 times per year.

FUTURE DEVELOPMENT - 2008

30. The work started in 2007 will continue. There is still scope for reducing the time taken to report on events and implement emerging recommendations, a “shorter lifecycle” for events, but this is dependent on support and resources from key areas. Event reporting is not always viewed as an immediate priority when competing with all the other pressures of running an operational base and maintaining the output. As highlighted at paragraph 25 above a number of key staff involved in event reporting are heavily loaded with numerous other high priority tasks currently. This may have an adverse impact on event reporting; management attention to and support of event reporting will be key to future success. Likewise the issue of the news letter will continue and no doubt develop once feedback on the first issue is received.

31. As part of the effort to improve safety overall, **XXXX (s.40 – Personal Information)** has instigated an initiative to review Operating Experience and Feedback arrangements within the MOD organisation at the Naval Base. This review is considering the subject “in the round” including conventional health and safety, it is not just restricted to the narrower nuclear and radiological safety issues of event reporting currently addressed by the SERC. A key issue that has been identified is that with the closely interwoven MOD and Babcock Marine sites and the presence of staff managed by a number of organisations/contractors, there is significant potential for confusion as to who and what should be reported. In many cases an occurrence should be reported through a number of chains simultaneously. Whilst a single system for everything is not feasible with many reporting requirements imposed from outside the Naval Base, it may be possible to set up a single focal point for initial reporting/capture of the occurrence. This single initial focal point would simplify arrangements for employees, reducing the scope for confusion whilst being able to direct the occurrence notification to the appropriate specialist areas such as the appropriate part of Babcock Marine, the SERC Secretary or the Devonport Explosives Safety and Advisory Group. Currently this work is in its initial stages.

32. At present, many of those involved with event investigation in support of the SERC have little or no formal training, their knowledge is largely ad hoc learnt on the job. Training options are currently under consideration. The SERC Chairman and Secretary recently attended AWE Aldermaston’s “Abnormal Event Investigation Course” and two places have been secured on a forthcoming Babcock Marine Independent Technical Investigation Course. Once suitable training has been identified, it is anticipated that a small number of personnel involved with event reporting will require training each year on a rolling basis to allow for staff changes.

FREEDOM OF INFORMATION (FOI) ACT REQUEST

33. An FOI question was received from a local journalist seeking copies of the reports from the SERC to the SSC. Following assessment of the request against the guidelines provided for dealing with such requests, the information was provided. The release of this information subsequently led to articles being published in the local and national press. In turn these articles triggered correspondence published in the letters pages of the newspapers. Some of this correspondence highlighted the important positive aspects of event reporting as part of learning and improving safety. The effectiveness of any event reporting system relies upon open, frank reporting, frequently requiring someone who has made an error to identify their own failings. Time will tell whether or not the prospect of publicity leads to increased reticence amongst staff in this respect.

CONCLUSIONS

34. As anticipated, the number of events reported in 2007 was significantly higher than 2006. Other organisations typically experience increased reporting when effort has been directed towards improving reporting and it is not the opinion of the SERC that the increased number of reported events is indicative of deterioration in overall safety.

35. The significant changes introduced to the process in August 2006 appear largely to be working satisfactorily. Changes of a more evolutionary nature, primarily to improve cause classification and identification, have been introduced during 2007 to overcome problems identified.

36. The causes of events in 2007 were broadly in line with previous years. Written control related events (Code 2.2) and Preparation planning related events (Code 2.1) contribute consistently to the bulk of the events reported over the past 5 years. Personnel failure was also a significant contributor.

35. The backlog of overdue event reports has been greatly reduced. All events event from 2006 and earlier are now closed. Approximately half of the events raised during 2007 were closed in year.

36. Areas for further development/improvement in the reporting/learning/tracking and feedback of event have been identified.

Signed on Original

XXXX (s.40 – Personal Information)

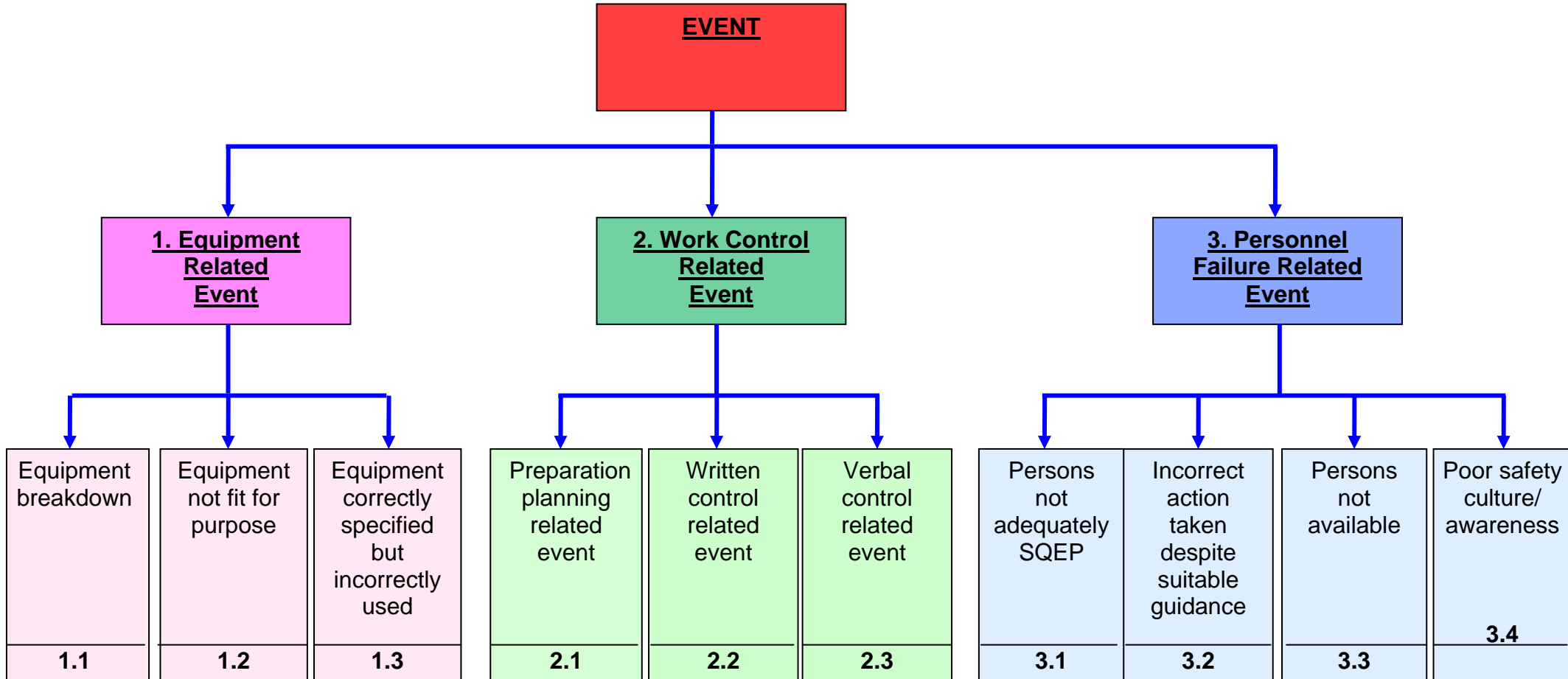
Lieutenant Commander, Royal Navy
SERC Chairman

Annex:

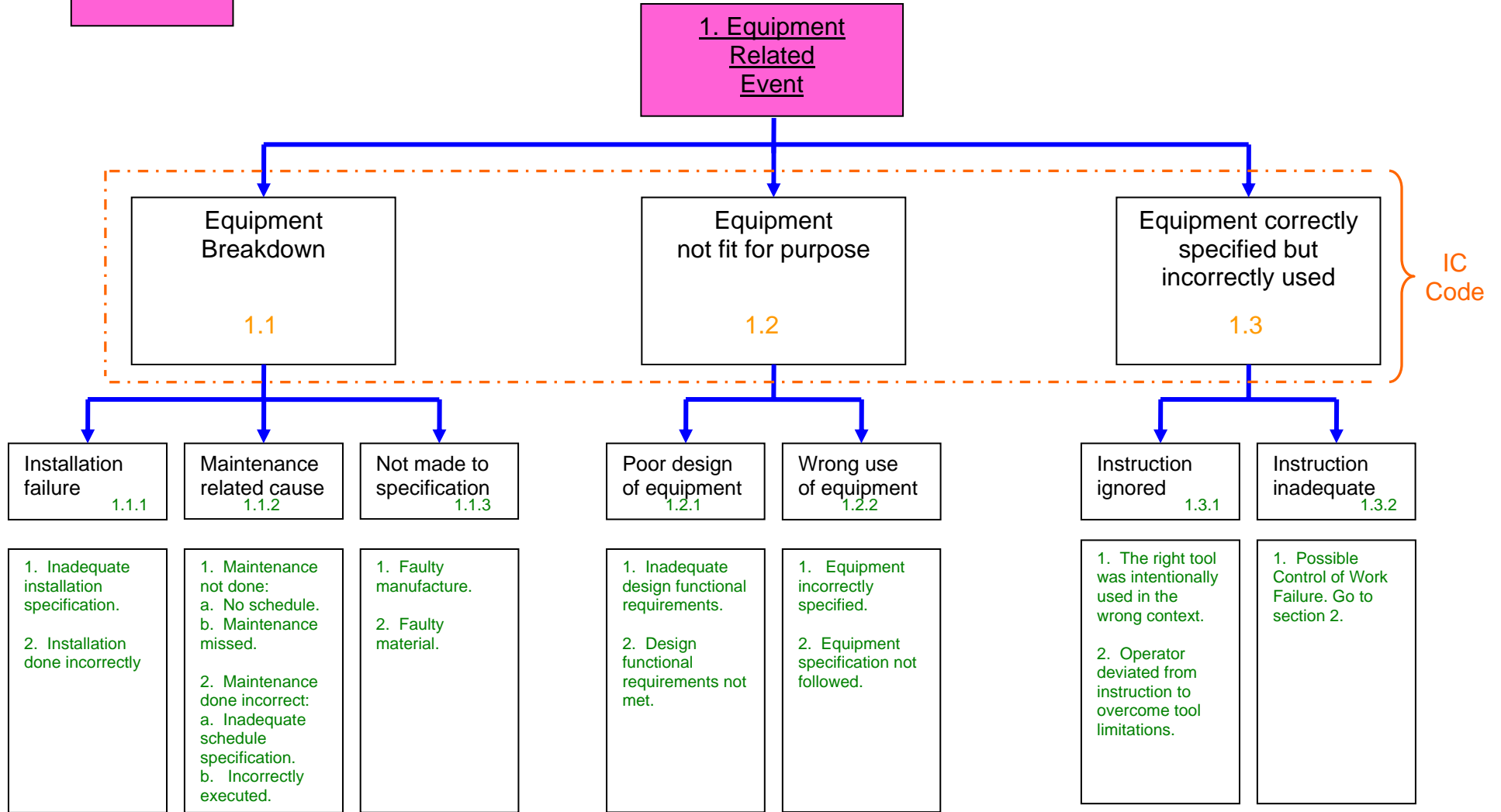
- A. Event Cause Classification Code Trees.
- B. Nuclear and Radiological Events Reported During 2007.

EVENT CAUSE CLASSIFICATION CODE TREES

Nuclear Site Event Reporting Immediate Cause (IC) Code Determination Diagram

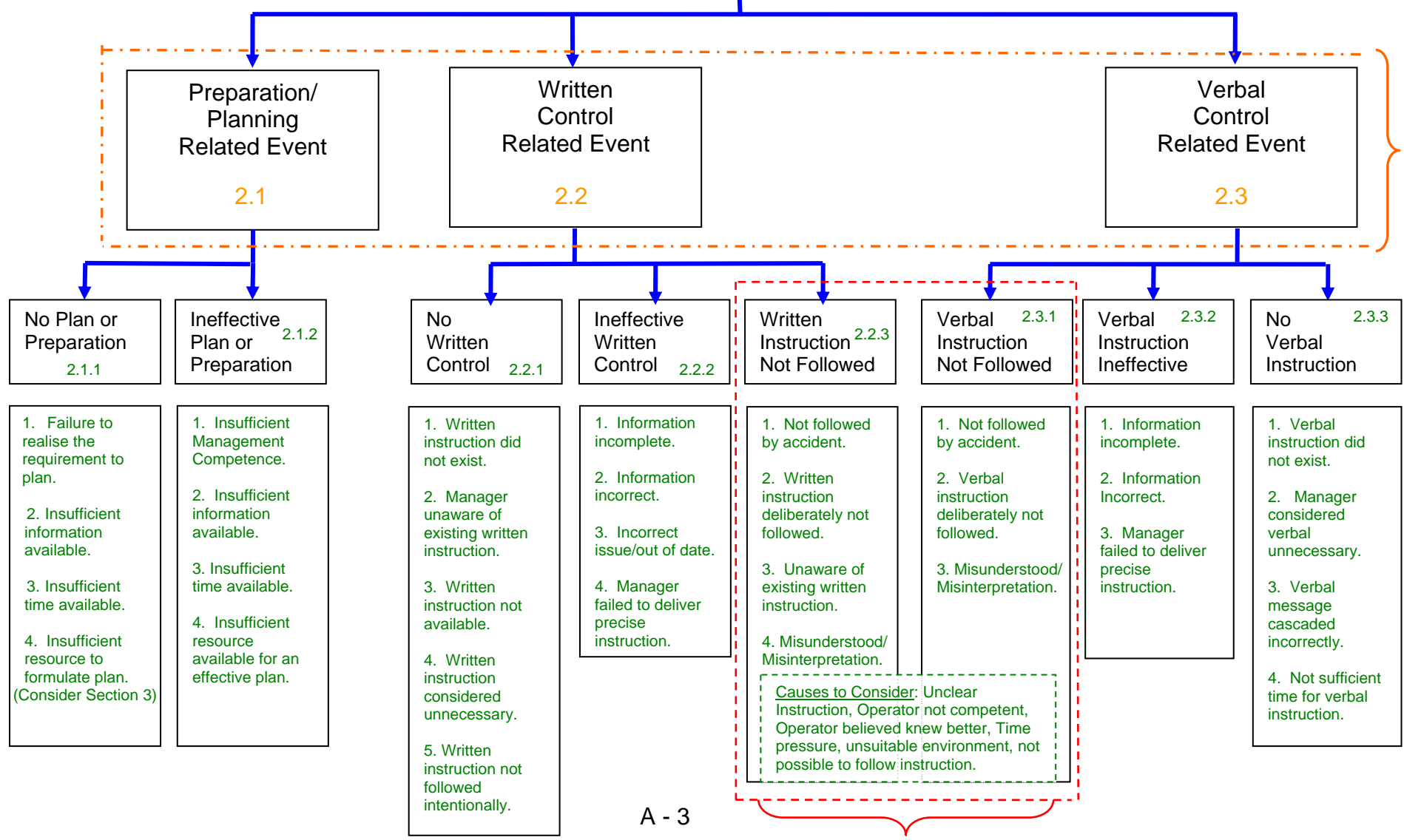


Section 1



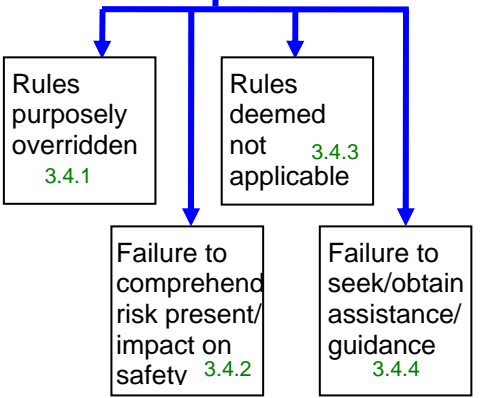
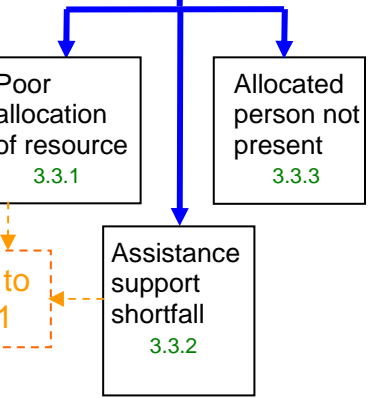
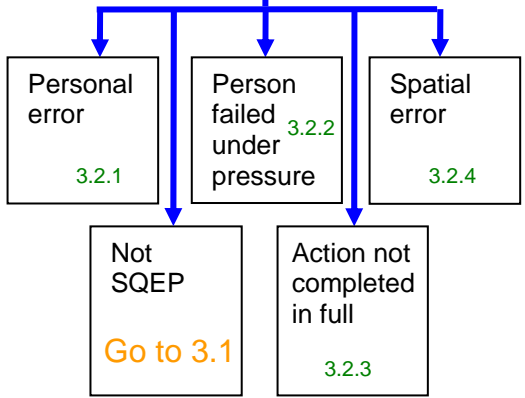
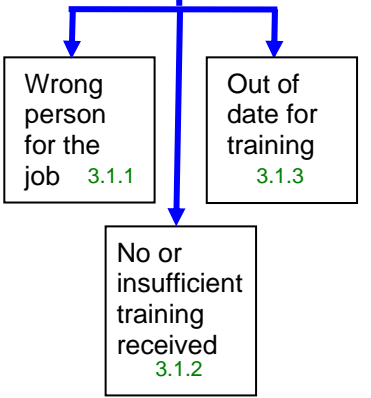
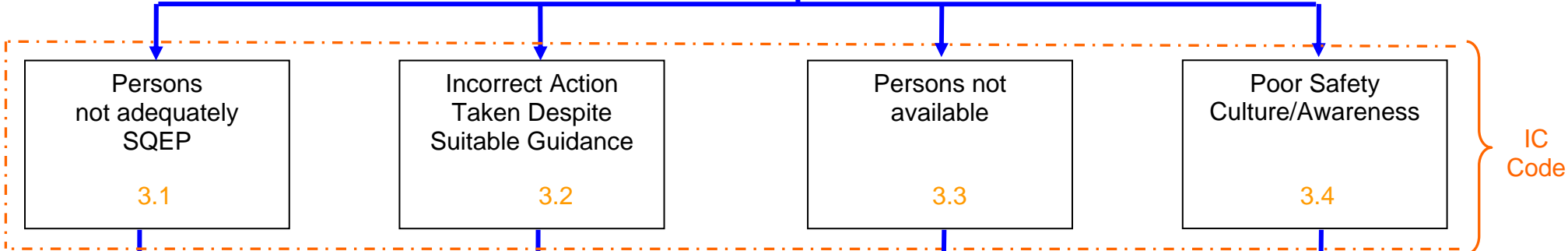
Section 2

2. Work Control Related Event



Section 3

3. Personnel Failure Related Event



- 4. Requirements fro SQEP not properly identified.
- 5. No other persons available.
- 6. Training insufficient.
- 7. Training not available.

- 1. Excessive pressure due to: personal, programme, complexity of work (specify).
- 2. Action not completed as person:
 - a. Moved from the job
 - b. Lack of understanding
 - c. Oversight
 - d. Distracted
- 3. Spatial awareness of individual at fault.
- 4. Design layout failing for spatial error. **Go to 1.2**
- 5. Suitable guidance incorrectly used.

- 1. Not present on purpose.
- 2. Not present due to external factors.
- 3. Project/programme pressures restricted personnel availability.
- 4. Persons available but not efficiently utilised.

- 1. Operator deemed the rules restrictive or not applicable
- 2. Supervisor deemed the rules restrictive or not applicable.
- 3. Risk assessment inadequate / not conducted / out of date.
- 4. Safety culture training / awareness inadequate / incomplete / not conducted / out of date. (Consider if man is SQEP 3.1)
- 5. Rules / safety guidance provided are ambiguous.
- 6. Individual failed to interpret the risk.

NUCLEAR AND RADIOLOGICAL EVENTS REPORTED DURING 2007

NSER number	Reported Date	Details	Cause	Event Consequence Code A-D	Remarks ³
01/07	02-Jan-07	At 1440 on 2 Jan 07 HMS XXXX (S.26 – Defence) lost her Alternative AC Shore Supply (DG supported 400A). Due to the Electrical Panel line up the Stbd Essential and Non Essential supplies were lost. The Shut Down Senior Rate carried out the correct drill.	Equipment Related Event & Personnel Related Event	C	Part 4 accepted at 04/07 meeting of the SERC. An oil leak on the DRDL supplied unit was attributed as the cause. Actions in hand to ensure the service history of DG units is correct and the units are suitable for support services.
02/07	08-Jan-07	At approx 1100 the TXB wharfmaster discovered that a stanchion on 8WS sea wall had been uprooted and was in danger of falling into the sea. On further investigation one of HMS XXXX (S.26 – Defence) hurricane hawsers had interfered with the stanchion.	Personnel Related Event	D	Part 2 & Part 4 accepted at the 03/07 meeting of the SERC. A letter was sent from the TXBFO to COMDEVFLOT requesting he remind CO's of their berthing responsibilities. Similarly the XXXX (s.40 – Personal Information) was reminded of his responsibilities and the need to conduct rounds.
03/07	08-Jan-07	During Health and Safety rounds at 7 Wharf it was noticed that an earth lead had been connected to the crane tracks.	Personnel Related Event	D	Part 4 accepted at the 04/07 meeting of the SERC. The crane tracks were checked by the DA as safe for use. FTMM was requested to exercise tighter control of contractors.

³

Part 4 accepted means that the Part 4 of the submitted NBQ703 form has been endorsed by the SERC on the understanding that the implementation of the agreed recommendations has been completed. At this point in time the event is deemed closed.

Part 2 / 3 accepted means that the investigation and proposed recommendations detailed on the Part 2 / 3 of the submitted NBQ703 form have been endorsed by the SERC. At this point the event is still deemed open.

NSER number	Reported Date	Details	Cause	Event Consequence Code A-D	Remarks ³
04/07	08-Jan-07	Failure of HMS XXXX (S.26 – Defence) brow hand rail. During necessary NDE work onboard HMS XXXX (S.26 – Defence) it was necessary to put a list on to stbd. Unfortunately this caused the fwd brow to move which was attached to HMS XXXX (S.26 – Defence) handrail.	Personnel Related Event	C	Part 2 & Part 4 accepted at the 03/07 meeting of the SERC. A letter was sent from the TXBFO to COMDEVFLOT requesting he remind CO's of their berthing responsibilities.
05/07	16-Jan-07	Maintenance work on 8 Wharf effluent tanks was programmed to commence without the correct radiological documentation or controls being in place.	Work Control Related Event	C	Part 4 accepted at the 07/07 meeting of the SERC. MAXIMO is now used to control the maintenance of these items.
06/07	12-Jan-07	Flying without correct procedure control. A helicopter was allowed to land on and fly from HMS XXXX (S.26 – Defence) without the correct administrative procedure being carried out.	Work Control Related Event	D	Part 4 accepted at the 03/07 meeting of the SERC. NBQ 58 has subsequently been issued to provide guidance on the correct procedural control of flying activities on the MoD site.
07/07	31-Jan-07	Poor personal dosimetry control. A subcontractor drew dosimetry (EPD) to enter the RC on HMS XXXX (S.26 – Defence) . The tunnel monitor correctly sighted the EPD prior to the RC entry, however the worker failed to take the dosimeter into the RC.	Personnel Related Event	C	Part 4 accepted at the 02/07 meeting of the SERC. All tunnel monitors and RC workers have received a brief on the correct control of dosimetry.
08/07	02-Feb-07	On carrying out rounds of 8W(S) a brow was found to be located on the red hatched area at the South end of 8W(S). This was as a result of work being undertaken on a DSRV seat without the TXB facility being aware.	Work Control Related Event	C	Part 4 accepted at the 05/07 meeting of the SERC. The submarine was reminded of the requirement to have two brows. TXB now attend the daily brief to ensure they receive information on submarine work packages.
09/07	06-Feb-07	HMS XXXX (S.26 – Defence) carried out a defect repair (re-pack gland on FW 402) without appropriate Nuclear Procedure control.	Work Control Related Event	C	Part 2 accepted at the 09/07 meeting of the SERC. Plant supervisors leaving LOP R and RAMP have been reminded of their responsibilities when coming under SFM PAG control.

NSER number	Reported Date	Details	Cause	Event Consequence Code A-D	Remarks ³
10/07	17-Feb-07	Defect on the RCFW system on HMS XXXX (S.26 – Defence) necessitated a mandatory full scram iaw EOPs.	Equipment Related Event & Personnel Related Event	C	Part 4 accepted at the 09/07 meeting of the SERC. Ship's Staff have been reminded of the need to ensure probes are correctly seated and they must only be removed on identification of a true defect.
11/07	20-Feb-07	Following the testing of the Nuclear Evacuation Warning Sirens at 11:30 on the 12th February routine observations indicated that the siren at Keyham did not sound. This was reported to NBRSD and NSSM and a Work Order was raised to investigate and rectify.	Equipment Related Event & Work Control Related Event	D	Part 4 accepted at the 08/07 meeting of the SERC. A more robust system is now in place to report and monitor siren defects and planned maintenance.
12/07	06-Mar-07	HMS XXXX (S.26 – Defence) experienced a tidal surge whilst berthed at 7 Wharf (N) causing it to move away from the jetty. The forward gangway subsequently fell into the water.	Personnel Related Event	C	Part 2 & 4 accepted at the 04/07 meeting of the SERC. A letter was sent from the TXBFO to COMDEVFLOT requesting he remind CO's of their berthing responsibilities.
13/07	05-Mar-07	Uncontrolled movement of a bag containing potentially contaminated items. A bag containing a gauge and fittings labelled with a RMTL and containing a HP Form 31M had been left in an uncontrolled place.	Personnel Related Event	D	Part 4 accepted at the 08/07 meeting of the SERC. All related staff have received a "tool box" brief on the correct control potentially contaminated items.
14/07	14-Mar-07	Notification of an event and subsequent submission of NSER 13/07 was conducted outside the timescales required by NBQ 19.	Personnel Related Event	D	Part 4 accepted at the 08/07 meeting of the SERC. The person at fault has been appraised of the event reporting process.
15/07	16-Mar-07	Primary sampling on HMS XXXX (S.26 – Defence) should be carried out at set intervals. Following the move to 3 Basin, the sampling of HMS XXXX (S.26 – Defence) was initially not achieved within the required time intervals.	Equipment Related Event & Work Control Related Event	C	Part 4 accepted at the 09/07 meeting of the SERC. Samples are now being conducted at the correct time interval. The PAG have approved the future sampling regime.

NSER number	Reported Date	Details	Cause	Event Consequence Code A-D	Remarks ³
16/07	16-Mar-07	Whilst withdrawing Group 2 rods during reactor start-up, rod bottom indicated and rod drop confirmed. The reactor was Full Scramed iaw EOPs.	Equipment Related Event	C	Part 4 accepted at the 09/07 meeting of the SERC. The TA are investigating a potential design shortfall.
17/07	29-Mar-07	EMHQ took receipt of a package from a company called XXXX (S.43 – Commercial Interest) Ltd. On opening the package the EMHQ manager discovered that it contained a small source that was not identified on the packaging.	Work Control Related Event	C	Part 4 accepted at the 10/07 meeting of the SERC. Suppliers of such items have been reminded of the MoD packaging requirements. EMHQ have a desktop guide to receiving packages that may contain sources.
18/07	30-Mar-07	Radiography on PADSTOW without permission. This event arose due to confusion on site boundaries.	Work Control Related Event & Personnel Related Event	C	Part 3 accepted at the 07/07 meeting of the SERC. A review of the procedures is being undertaken and a site map is to be included to support site Radiography.
19/07	26-Apr-07	There have been a number of occasions when DML & MoD employees have failed to follow correctly Maintenance Procedure FP14-29-000	Work Control Related Event	C	Part 4 accepted at the 10/07 meeting of the SERC. All outstanding items have been maintained. Refresher training has been completed.
20/07	27-Apr-07	During rounds of the TXB it was identified that the gooseneck used for HMS XXXX (S.26 – Defence) PCD connection had been correctly 'double bagged' but stowed in the PCD connection pit at the coping edge. This is in contravention of the NP.	Work Control Related Event	C	Part 2 & 4 accepted at the 10/07 meeting of the SERC. Recommendations from the associated audit are undergoing due process.
21/07	10-May-07	On the 9 May at 2000 one of the waterfront monitors stated that he had conducted the daily source muster and that the IPM test source HP46-51 was missing.	Personnel Related Event	C	Part 3 & 4 accepted at the 05/07 meeting of the SERC. The monitors have received a "tool box" brief on the correct stowage of sources. In this instance, rounds have been proved to be effective.

NSER number	Reported Date	Details	Cause	Event Consequence Code A-D	Remarks ³
22/07	16-May-07	The dis-establishment of DIS did not complete the appropriate due process	Work Control Related Event	C	Part 2 accepted at the 05/07 meeting of the SERC. All recommendations are complete with the exception of the ACCS 36 submission which is undergoing due process.
23/07	06-Jun-07	Whilst travelling crane 1080 along 8 Wharf (S) the power cable became trapped by the power access cover plate. This in turn became trapped in the roller guard causing the supply to trip. The crane was rendered inoperative for a period of time.	Personnel Related Event	C	Part 2 accepted at the 09/07 meeting of the SERC. The Audit report associated with this event has identified a need to change crane management. The management proposal is undergoing due process.
24/07	15-Jun-07	Ship's staff carried out a calibration of VOWF transducer iaw NP 22-112(T) but utilised an inappropriate test rig test rig from NP 22-181(T).	Work Control Related Event	C	Part 4 accepted at the 09/07 meeting of the SERC. The process used to issue Rigs is undergoing a review. In the interim, SFM PAG are monitoring the provision of all rigs for use under SFM PAG NPs.
25/07	19-Jun-07	The Occupational Health Centre was found to be holding radioactive sources that were not identified on the Naval Base register.	Work Control Related Event & Personnel Related Event	C	Part 3 accepted at the 06/07 meeting of the SERC. The items have been accounted for and disposed of correctly. The profile of holding such stores has been raised across the Naval Base.
26/07	27-Jun-07	Humidity readings within the RPV tent of HMS XXXX (S.26 – Defence) have been identified as out of spec.	Equipment Related Event	C	Part 2 accepted at the 06/07 meeting of the SERC. Action in hand to introduce a process to keep the humidity in spec.
27/07	29-Jun-07	During reversion to SGCD from NEC, the minimum in-core temperature was momentarily breached.	Personnel Related Event	C	Part 2 accepted at the 06/07 meeting of the SERC. The incident report reply has now been received and the recommendations are in place.

NSER number	Reported Date	Details	Cause	Event Consequence Code A-D	Remarks ³
28/07	03-Jul-07	The Officer of the day on HMS XXXX (S.26 – Defence) failed to report the loss of the fwd gangway between the Naval Armament Lighter barge and the submarine iaw the Tidal Administration Control Document.	Work Control Related Event & Personnel Related Event	C	Part 2 accepted at the 05/07 meeting of the SERC. The recommendations have been completed. The profile of event reporting has been raised. COMDEVFLOT have reminded CO's of their responsibilities.
29/07	03-Jul-07	During a weapons embarkation evolution on HMS XXXX (S.26 – Defence), the Fwd gangway placed between HMS XXXX (S.26 – Defence) and the Naval Armament Lighter (NAL) became detached from the NAL and fell between the NAL and submarine.	Work Control Related Event	C	Part 3 accepted at the 10/07 meeting of the SERC. The RCA has recommended that the ODD assumed responsibility for the brow during such evolutions. This responsibility is reminded to Ship's Staff at the relevant planning meetings.
30/07	19-Jul-07	HMS XXXX (S.26 – Defence) was due alongside 9W at 0900 on Wed 18 Jul 07. The orientation of the S/M was the subject of confusion due to the endorsed berthing plan not showing her arrival.	Work Control Related Event & Personnel Related Event	D	Part 3 accepted at the 06/07 meeting of the SERC. All the recommendations have been completed with no further re-occurrence.
31/07	02-Aug-07	Poor briefing to TXB on the availability of shore services requiring release for maintenance.	Work Control Related Event	C	Part 4 accepted at the 09/07 meeting of the SERC. A better briefing regime has been adopted with regular meetings held regarding shore services availability.
32/07	02-Aug-07	A coping box (7TF3-1) on 7 wharf has been damaged. Initial investigations indicate that a brow damaged the box due to tidal movement and poor Surface Ship OOD rounds.	Work Control Related Event & Personnel Related Event	C	Part 2 yet to be endorsed. Awaiting a supporting report from DRDL.
33/07	06-Aug-07	Whilst transiting 8 Wharf (N) in a southerly direction, TXB portal crane 6488 impacted with an incorrectly placed CO2 bottle bank located near the rail track.	Personnel Related Event	C	Part 3 accepted at the 10/07 meeting of the SERC. The Audit report associated with this event has identified a need to change crane management. The management proposal is undergoing due process.

NSER number	Reported Date	Details	Cause	Event Consequence Code A-D	Remarks ³
34/07	13-Aug-07	Failure to complete crane pre operation checks resulting in the brakes being left on when in motion.	Work Control Related Event & Personnel Related Event	C	Part 3 accepted at the 10/07 meeting of the SERC. The Audit report associated with this event has identified a need to change crane management. The management proposal is undergoing due process.
35/07	14-Aug-07	HMS XXXX (S.26 – Defence) suffered a loss of AC Shore Supply whilst berthed at 8 Wharf (N), warming up to NOPT. The SDSR carried out his EOP actions as required with plant safety maintained.	Equipment Related Event	D	Part 2 accepted at the 08/07 meeting of the SERC. Ship's Staff have been reminded of the need to conduct thorough visual inspection on equipment before it is returned to service.
36/07	16-Aug-07	Whilst conducting a weapon load evolution on HMS XXXX (S.26 – Defence) berthed at 8 Wharf (N), a failure of an outboard stanchion that forms an integral part of the weapon embarkation rails was experienced. The weapon was safely moved and secured.	Equipment Related Event	D	Part 2 accepted at the 08/07 meeting of the SERC. The DA are now involved and are reviewing the stanchion design.
37/07	16-Aug-07	A review of radioactive liquid waste transfer documentation has identified that the paperwork associated with two transfers did not contain sufficient information.	Work Control Related Event	C	Part 3 & 4 accepted at the 07/07 meeting of the SERC. The required changes to documentation have been made and staff advised of the new requirements.
38/07	23-Aug-07	Damage to the TXB facility during civil engineering works.	Work Control Related Event	C	The Part 3 is undergoing revision by XXXX (s.40 – Personal Information) to provide achievable recommendations.
39/07	24-Aug-07	Whilst HMS XXXX (S.26 – Defence) was slipping 8 Wharf (N) to proceed to sea, the Admiralty pilot stationed on the bridge observed that a cable was still attached to the submarine.	Personnel Related Event	D	Part 2 & 4 accepted at the 08/07 meeting of the SERC. Facilities and Ship's Staff have been reminded of the need to conduct thorough rounds before sailing for sea.
40/07	13-Sep-07	All 4 loop pressure readings were between 6 and 12 bar away from expected readings with the plant at nominal pressure.	Personnel Related Event	C	Part 2 accepted at the 08/07 meeting of the SERC. Awaiting IR reply. In the interim the TA gave permission for continued operation using previous transfer standards.

NSER number	Reported Date	Details	Cause	Event Consequence Code A-D	Remarks ³
41/07	16-Sep-07	Tug XXXX (S.26 – Defence) was used in the movement of HMS XXXX (S.26 – Defence) from 9W to sea with a towing winch that had failed its bollard pull test, which in practice meant the winch was 50% less efficient than normal.	Work Control Related Event	C	Part 4 accepted at the 09/07 meeting of the SERC. Communications have been improved between the parties involved. A check off list is also used to verify the defect state of Tugs.
42/07	21-Sep-07	Failure to extend date of concession whilst equipment was still in service due to an oversight by XXXX (s.40 – Personal Information) . Concession has since been extended and equipment continued to be in service.	Work Control Related Event	D	Part 4 accepted at the 10/07 meeting of the SERC. A flag up system has been introduced to identify concessions that are about to expire.
43/07	26-Sep-07	No. 4 MCP was run Fast speed whilst there was a high winding temperature as indicated on the ISIS monitoring system. There was no supporting documentation to allow this operation and it was carried out without the knowledge of the SFM PAG.	Work Control Related Event	C	Part 2 & 4 accepted at the 08/07 meeting of the SERC. The plant manager has been reminded of the need to identify all defects to SFM PAG. The TA has given approval for continued operation.
44/07	07-Nov-07	XXXX (s.40 – Personal Information) was informed by XXXX (s.40 – Personal Information) that the Devonport NARIMS server had failed sometime during the preceding weekend. This meant that the normal NARIMS service was not available	Equipment Related Event	D	Part 2 accepted at the 09/07 meeting of the SERC. The recommendations are currently being implemented. These include the methods of defect reporting and back up system implementation.
45/07	12-Nov-07	It has been reported on the DRDL OEF system that after the sirens sounded for Short Sermon 07 Demonstration exercise there were still vehicle movements taking place on the site.	Work Control Related Event	D	Part 2 accepted at the 09/07 meeting of the SERC. This event has been captured under the Short Sermon Forward Action Plan and is being progressed.
46/07	12-Nov-07	It has been reported on the DRDL OEF system that there were significant queues outside some Shelter Stations when non-essential personnel were responding to the evacuation sirens for Short Sermon 07 Demonstration exercise.	Work Control Related Event	D	Part 2 accepted at the 09/07 meeting of the SERC. This event has been captured under the Short Sermon Forward Action Plan and is being progressed.

NSER number	Reported Date	Details	Cause	Event Consequence Code A-D	Remarks ³
47/07	12-Nov-07	At the initiation of the Short Sermon 07 exercise the nuclear evacuation warning sirens were not audible by all positions.	Equipment Related Event	D	Part 2 accepted at the 09/07 meeting of the SERC. This event has been captured under the Short Sermon Forward Action Plan and is being progressed.
48/07	21-Nov-07	Failure to complete Pre Requisites on an SFM NP prior to conducting RC NDE.	Work Control Related Event	C	Part 2 accepted at the 10/07 meeting of the SERC. The IR reply has now been received and recommendations are being actioned.
49/07	28-Nov-07	Humidity on HMS XXXX (S.26 – Defence) found to be out of spec despite having equipment installed to prevent this.	Equipment Related Event	D	Part 2 accepted at the 10/07 meeting of the SERC. A technical review of the arrangements is currently in hand. TA advice has been sought.
50/07	03-Dec-07	Tug XXXX (S.26 – Defence) was used in the movement of HMS XXXX (S.26 – Defence) from sea to 9W with a cracked valve housing that had a temporary repair and was deemed restricted and not to be used for Nuclear Submarines by the ADO.	Work Control Related Event	C	Part 2 accepted at the 10/07 meeting of the SERC. Communications have been improved with all parties involved. The new XXXX (S.43 – Commercial Interest) contract due to roll out late 07 is to be monitored.
51/07	11-Dec-07	Facility Safety Case (FSC) 130 completed Naval Base due process but was 'called in' by XXXX (s.40 – Personal Information) to gain regulatory agreement after Naval Base due process. This was not compliant with JSP 518.	Work Control Related Event	D	Part 2 accepted at the 10/07 meeting of the SERC. The relevant documentation to support Naval Base due process is to be amended to ensure compliance with JSP 518.
52/07	12-Dec-07	Whilst alongside a submarine adopted Single MG Operation whilst preparing to shut down due to an MG defect.	Equipment Related Event	D	Part 2 accepted at the 10/07 meeting of the SERC. The Ship's staff were commended for the correct handling of this defect and the safe shut down and management of the plant. Nil recommendations made.