

HC 67 90/91

III DECOMMISSIONING OF NUCLEAR FLEET SUBMARINES

HMS CONQUEROR

33. Among the short-term savings measures announced on 31 July 1990 was the decision to retire HMS CONQUEROR early, at the end of December 1990.¹ CONQUEROR, second of the CHURCHILL class of nuclear-powered hunter-killer submarines, was commissioned in 1971. She was due for her third major refit "in the fairly near future".² It is estimated that her retirement will save, in stores and spares, £943,000 in 1990/91. This will rise to an annual saving of £2.2 to £2.8 million thereafter, at 1990/91 prices.³ More significantly, CONQUEROR's retirement will save the cost of her impending refit, a sum in the region of £100 million.⁴ The decision to retire her early was made in parallel with the decision to retire two diesel-electric submarines (SSKs) and a Leander-class frigate, all about to enter expensive refits.⁵

34. CONQUEROR has been lying at Devonport since shortly before the decision to decommission her was announced in July 1990.⁶ Although she was to be formally decommissioned at the end of 1990, the facilities to defuel her will not be available until about May 1991.⁷ When the facilities are available, she will then undergo the work necessary to prepare her for lay-up: docking, defuelling, de-equipping and protective treatment of the hull.⁸ This may take six months or more—

"longer in some circumstances if the most cost-effective use is to be made of Dockyard resources."⁹

Her crew will gradually be run down; some naval personnel will however remain on board, "to assure submarine and nuclear safety", until she is docked and defuelled.¹⁰ When the decommissioning work has been done, CONQUEROR is to be stored afloat: it has not yet been decided where.¹¹

HMS WARSPITE and HMS CHURCHILL

35. In September 1990 the Ministry decided to decommission two further nuclear submarines, HMS WARSPITE and HMS CHURCHILL. Both these submarines were in refit, WARSPITE at Devonport and CHURCHILL, which we visited in July 1990,¹² at Rosyth. WARSPITE had been in refit for two and a half years:

"the specified work was virtually complete, the testing and setting to work of systems was well in hand and the submarine had been undocked."¹³

CHURCHILL had been in refit for one year and four months and her specified work was two-thirds completed.¹⁴ Both submarines had been refuelled.¹⁵

36. The exact costs of these abandoned refits are still under negotiation with Devonport Management Ltd and Babcock Thorn Ltd, the dockyard management contractor at Rosyth.¹⁶ MoD will also have to pay a cancellation charge to the dockyard contractors; this is expected to be minimal.¹⁷ MoD has told us in

¹Evidence, p 21.

²Q159.

³Evidence, p 29, A5; p 32, A17.

⁴Q189.

⁵See para 5 above.

⁶Q157.

⁷Q158.

⁸Evidence, p 29, A2 and A3.

⁹Evidence, p 31, A7.

¹⁰Evidence, p 29, A1; Q156.

¹¹Evidence, p 29, A2.

¹²See Twelfth Report from the Defence Committee, 1989-90, Radiological Protection of Service and Civilian Personnel, HC 479.

¹³Evidence, p 30, A2. The contract completion date was April 1991: Evidence, p 30.

¹⁴Her contract completion date was September 1991: Evidence, p 30, A4.

¹⁵Q194.

¹⁶Evidence, p 31, A8.

¹⁷Evidence p 31, A8.

confidence its estimate of the likely outturn and has said in public that the cost of a refit is in the region of £100 million,¹ that WARSPITE's refit was virtually complete and two-thirds of the expenditure on CHURCHILL had been completed.² MoD has also said that most of the costs of refit are normally incurred in the early stages.³ This would suggest that the refit for WARSPITE will have cost almost £100 million and that of CHURCHILL something in the region of £65 to £70 million.

37. The Government proposes a substantial reduction in the submarine fleet as part of its Options for Change exercise. This anticipates a future SSN fleet of around 12, in place of the 17 operational at the time of the 25 July 1990 statement. The most recent TRAFALGAR and SWIFTSURE classes will number 13 in total, when TRIUMPH joins the fleet in 1991/92. It is therefore clear that the older VALIANT and CHURCHILL class submarines will gradually be decommissioned. It is possible that the oldest SWIFTSURE class submarines will also be decommissioned.⁴ The Assistant Under Secretary of State (Fleet Support) told us—

“it would only be worth running on a submarine if you believe, in the context of the number of submarines we will need in the future, it is worth running on and required”.⁵

38. There are two remaining boats of the VALIANT and CHURCHILL classes: VALIANT and COURAGEOUS. VALIANT came out of refit as recently as 1989, and COURAGEOUS in 1986/87.⁶ It is clear to us from the Ministry's evidence that the likelihood is that VALIANT and COURAGEOUS too will be decommissioned before very long. The Assistant Under Secretary (Fleet Support) told us—

“We are avoiding further refit expenditure on those two submarines . . . We are deferring and not incurring expenditure on those ships”⁷

39. There would have been little advantage in retiring recently refitted and potentially operational submarines, such as VALIANT and COURAGEOUS, rather than newly refitted but not yet operational submarines. WARSPITE was still some way from being operational: refit is followed by a work-up period before a ship resumes its operational duties.⁸ In the case of CHURCHILL there was also the benefit of saving the remaining third of the cost of refit, which we estimate to have been some £30 million. It is also cheaper to decommission a submarine in refit rather than an operational submarine. Some of the tasks which have to be carried out when decommissioning will already have been carried out as a matter of course during the refit, for example defuelling, removal of certain equipments and preservation of the hull.⁹ Although WARSPITE and CHURCHILL have been refuelled, they will not, apparently, have again to be put through the MODIX decontamination process.¹⁰

40. There are however costs to be incurred in decommissioning a nuclear submarine, even one in refit. MoD has given us a very broad indication of the cost of the works involved when a submarine is decommissioned, but insists that this be kept in confidence for commercial reasons.¹¹ We do not think this is a reasonable restriction. The House should know that the costs of decommissioning a submarine and preparing it for storage afloat are sizeable, and that they are significantly more in the short term than the savings to be made from retiring a submarine early.

¹Q189.

²Q193.

³HC Deb, 5 December 1990, col 157w.

⁴Q421 of 5 December 1990 (not published).

⁵Q169.

⁶Qq 258 and 267.

⁷Qq 177 and 179; also Q268. VALIANT and COURAGEOUS have been in port since early 1990; see paragraph 42 below and Qq 258, 261 and 263.

⁸Qq 185 and 227.

⁹Evidence, p 30, A7.

¹⁰Q195. MODIX stands for Multi-Stage Oxidative Decontamination with Ion Exchange clean-up: see para 29 of the Twelfth Report from the Defence Committee of Session 1989-90, Radiological Protection of Service and Civilian Personnel, HC 479.

¹¹Evidence, p 32, A18.

41. While the decision to abandon the refits of CHURCHILL and WARSPITE may well have been logical within the framework of Options for Change, and it may have been a more prudent step than decommissioning VALIANT or COURAGEOUS, we are not clear how far it was taken as part of a programme of financial savings. The possibility that expenditure on preparation for preservation afloat virtually cancels out the savings in the short-term reinforces our doubts, and lends some credence to speculation that the decision to decommission WARSPITE and CHURCHILL resulted not from short-term financial constraints or from the Options for Change proposals, but from the discovery of material defects in the submarines' reactor systems. A technical defect was discovered in HMS WARSPITE at the end of 1989 during a routine inspection in the course of her refit.¹ The nature of this defect has been described to us in private session.² MoD has admitted publicly that the defect had "potential safety implications".³ As "a prudent precaution" a programme of inspection was initiated, involving all of the Royal Navy's nuclear submarines, including the Polaris submarines (SSBNs).⁴

42. The inspection programme has been in two stages.⁵ As a first stage all nuclear submarines were inspected to ensure they were safe and fit to go to sea. Those boats that were in port were inspected before they went to sea; the others once they returned to port. This stage has now been completed. As a second stage a more detailed inspection technique has been developed, using WARSPITE for a series of tests.⁶ This technique is now being applied to all nuclear submarines.⁷ The process is a lengthy one because of the "general inaccessibility of the working area".⁸ Some submarines have already undergone the second stage inspection; others, VALIANT and COURAGEOUS for example, are still awaiting inspection.⁹ It is reasonable to assume that priority has been given to inspecting first those submarines that are newer and more capable.¹⁰ The cost of the inspection programme to date is of the order of £5 million; the final cost, according to the Assistant Under Secretary of State (Material/Naval) will—

"depend on the techniques being deployed for replacement and on the extent and timescale under which in the long term numbers of submarines are reduced."¹¹

We shall be returning to this subject in our forthcoming Report on the Royal Navy's submarines.

43. The defect may well have been a contributory factor to the decision to retire WARSPITE. MoD has confirmed that—

"the material condition of these vessels [WARSPITE, CHURCHILL and CONQUEROR] was an additional reason for their selection for decommissioning".¹²

Rectifying the defect in WARSPITE would undoubtedly have cost time and money. However, the Ministry has assured us that the problem was soluble: the defect alone did not necessitate WARSPITE's decommissioning.¹³

44. Given the decision to run the SSN fleet down to "about 12", the decision to abandon the two refits was unsurprising. In the words of the Deputy Under Secretary of State (Policy), the Ministry—

"obeyed the old economist's maxim "When it comes to taking a decision about what you will and will not do, you should let bygones be

¹Evidence, p 27.

²Qq 231 ff.

³Q136.

⁴*ibid*; Q116.

⁵Evidence, p 28.

⁶Q247.

⁷Qq 116, 131.

⁸Evidence, p 27. Some further details about the inspection process were provided on a classified basis.

⁹Qq 261 and 263.

¹⁰See Q241.

¹¹Q245.

¹²Evidence, p 30, A3; Q170.

¹³Q167; see also Q452.

bygones".... We obviously regret that we spent this money but it does not follow that, because we spent it, we should carry on regardless spending more money if we believe there are better ways of spending the future sums available to us."¹

As the Minister for the Armed Forces told the House on 22 January 1991—

"We are decommissioning the oldest submarines that we have, which seems to be a very sensible thing to do in terms of taking out those that are least capable".²

45. The decision to abandon the refits could however have been taken earlier. Given the pace of change it is difficult to remember how the international scene looked in the Spring of 1989, when CHURCHILL went into refit. WARSPITE had entered refit over a year earlier. MoD cannot reasonably be faulted for going ahead with what must then have been routine refit schedules. It can reasonably be asked, however, why the refits were not abandoned earlier, perhaps at the beginning of 1990. In the case of CHURCHILL, which was at that time barely half way through its refit, this would have saved a considerable sum. While Ministers had made no formal decision on the outcome of their Options for Change considerations, it must have been clear within MoD which way the wind was blowing early in 1990. Parliament is owed an explanation as to why the CHURCHILL refit seems to have proceeded as normal through the first 7 months of 1990.

Presentation

46. While we have some sympathy for the difficult decision that the Ministry has made, we have none for the manner in which it has been presented. The decision to decommission CONQUEROR was announced by the Ministry in July 1990. The decisions to decommission WARSPITE and CHURCHILL, on the other hand, were not announced to Parliament until Ministers had to respond to Parliamentary Questions, prompted by reports in the Scottish press, at the end of October.³ The Assistant Under Secretary (Fleet Support) told us that it was not the Ministry's normal practice to announce every ship as it is decommissioned.⁴ This may be the case where it is simply a question of an elderly ship naturally reaching the end of its service life. However, where a decision to decommission represents a significant change in policy, and involves nugatory expenditure of the order of £170 million, it is clearly of considerable concern to the House and indeed the country. The Ministry was remiss in not announcing the decision to decommission WARSPITE and CHURCHILL, if not at once, at least as soon as the House returned in October 1990. We recommend that in future all decisions to decommission ships or disband units be reported to Parliament as soon as practicable.

Personnel

47. Decommissioning the three submarines will reduce the requirement for trained submariners by about 420;⁵ these personnel will be redeployed within the service, which suffers from a shortage of volunteers.⁶ The reduction will be a gradual process: reduced crews will stay aboard until the submarine is docked and defuelled.⁷ WARSPITE and CHURCHILL, being in refit, already had reduced complements.⁸

Disposal

48. The decision to decommission three nuclear submarines, and the prospect of more to come, raises again the issue of their disposal. In our Seventh Report of 1988-89 we looked at the various options for disposal of the reactor compartments of nuclear submarines and the problems involved in each.⁹ We concluded

¹Q437.

²HC Deb, 22 January 1991, col 154.

³HC Deb, 29 October 1990, col 414w and 1 November 1990, col 770w; see Evidence, p 30, A1.

⁴Qq 196 and 197.

⁵Evidence, p 31, A11.

⁶See Q459 of 5 December 1990 (not published).

⁷Evidence, p 29, A1.

⁸A nuclear submarine in refit retains a reduced crew to ensure safety: Evidence, p 30, A4.

⁹Seventh Report from the Defence Committee, 1988-89, Decommissioning of Nuclear Submarines, HC 316.

that in the short term there was much to be said for the Ministry's policy of "wait and see", of storing decommissioned submarines afloat while wider debate on how to dispose of radioactive waste continues, but that in the longer term, as more submarines reached the end of their service life, a solution to the problem would have to be found. At that time, MoD estimated that 8 nuclear submarines would be decommissioned by the year 2000.

49. If the Ministry's proposal of "about 12" SSNs takes effect, we can expect there to be 7 nuclear submarines awaiting disposal within the next few years (DREADNOUGHT included), with the 4 Polaris SSBNs joining them as the Trident submarines replace them. The Ministry seems to have discounted the option of dumping at sea. The Assistant Under Secretary (Fleet Support) told us that, while the Government does not regard the moratorium of London Dumping Convention as binding,—

"With public opinion as it currently exists we are not going to flout that public opinion and dump at sea."¹

In the long term the Ministry's preference is to use the NIREX deep repository for disposal of the reactor compartments of these submarines.² In 1989 NIREX told us their repository would be open by 2005 but difficulties in agreeing a location for this are now making this forecast seem optimistic. The Ministry has therefore been studying the options for interim disposal, and will be reporting the conclusions to Ministers "in the next few months".³

50. According to our witnesses, storage afloat would still be a tenable interim solution even if a dozen submarines were involved. According to the Assistant Under Secretary (Fleet Support)—

"With the number of submarines we anticipate being decommissioned over this coming decade we are confident we can provide facilities for them to be laid up without significant cost and without taking away berths which would otherwise be used by operational ships".⁴

Storage of this kind might be at Rosyth or Devonport or in "other MoD waters", which our witnesses chose not to identify.⁵

51. The running costs of storage afloat are relatively low. The treatment of the hull at the time of decommissioning is expected to last about ten years before retreatment in dock is required.⁶ In the interim period the costs of maintenance are said to be "negligible".⁷ DREADNOUGHT, which was decommissioned in 1982, is to be overhauled for the first time in the Spring of 1991.⁸ The likely cost of this work has been given to us in confidence since the contract is still under negotiation: MoD has undertaken to make public the rough cost of the work once negotiations are completed.⁹

52. In our 1989 Report we expressed the view that some advantage could be gained from greater exchange of information on decommissioning policy between the United Kingdom and our allies and neighbours.¹⁰ We are disappointed to learn that the recent moves to enhance defence cooperation with France has not, as previously understood, extended to the decommissioning of submarines.¹¹ We would again urge the Government to do what it can to ensure that we and the French benefit from each other's experience in this matter. For both countries the disposal of nuclear submarines is set to be a problem of increasing urgency.

¹Q203.

²Q200.

³Qq 200 and 201; also Evidence, p 32, A19.

⁴Q212.

⁵Qq 213 to 216.

⁶Evidence, p 32, A18.

⁷Q224.

⁸*ibid.*

⁹Evidence, p 32, A20.

¹⁰HC 316 of 1988-89, paragraph 19.

¹¹Evidence, p 32, A21; see Qq 46 to 50 of 1 May 1990, in HC 388 of 1989-90.

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[Continued]

Chairman

111. Is the CHALLENGER decision a short-term savings measure to give you £3.3 million this year to make up your shortfall and to give you a cash windfall, or is it a decision which has been pending for some time and whose hour finally came?

(Mr Hawtin) I think it is fair to say CHALLENGER has been at the margins of the programme for a little time now, certainly the financial pressures this year provided the clinching argument. It is also, as I said, in relation to the long-term size and shape of the programme we are likely to be able to construct under Options a ship we felt could be afforded a lower priority than other areas of capability.

112. Are you actually telling us it is something of a white elephant and selling it is the best way out?

(Mr Hawtin) I am saying that in the position in which we now find ourselves the judgment was taken disposal was the best solution for the finance budget programme as whole.

(Mr Williams) It is fair to say we did consider whether it might be better to take the option of using commercial resources about two or three years ago but at that time we decided the balance of advantage lay with retaining CHALLENGER which had been designed to meet our own special requirements. However as Mr Hawtin has said through that process it was at the margins of what was affordable. All the problems we have had in the current year tipped it over that margin.

Chairman: Let us turn to the decommissioning of nuclear submarines.

Mr George

113. What I wanted to ask was two questions, if I may. It appears from your responses one of the reasons CHALLENGER is no longer required was because there appeared to be commercial rivals so one could have recourse to the private sector. Was it not anticipated when CHALLENGER was being conceived and planned at an early stage there were going to be commercial rivals that one might have recourse to?

(Mr Hawtin) I think the answer to that, Mr George, is no, not at that time. CHALLENGER was first thought of back in the early 1970s and at that stage I do not think the kind of commercial capacity we now have was envisaged.

114. The second question: we have had two sections of our questioning on short-term savings and decommissioning of CHALLENGER but we have not asked what are the likely manpower implications? Could you give us some indication as to whether crews will be redeployed or no longer required for naval purposes? How many will be involved?

(Mr Hawtin) I think the short answer to that, again, subject to correction from Commodore Garnett, is the manpower involved in crewing those ships will be redeployed to other tasks elsewhere in the Navy.

115. There will be no reductions?

(Mr Hawtin) The overall size of the Navy will be reduced accordingly but the manpower will be required because we are facing shortfalls in a number of categories.

Chairman

116. We will now turn to the decommissioning of the nuclear submarines. You told us last February a technical problem had been identified in one of the Royal Navy's nuclear submarines and as a result a programme of inspection of all nuclear submarines had been initiated. This inspection, you say, is still continuing. Can you give us please in public an indication of the kind of problem involved? Can you assure us in public the problem poses no danger to the public or to Service personnel?

(Mr Hawtin) The Ministry announced on 30 January that a technical defect had been discovered in the course of the refit of one of the nuclear powered submarines, that as a prudent precaution a programme of technical inspection of other submarines had been set in hand and that those inspections were being carried out in close consultation with the Ministry's external independent technical and safety advisers. We have made no secret of this and the inspections are continuing. The fact that we are undertaking a very thorough programme of inspections reflects the fact that the Government attaches the highest priority to nuclear safety. Individual submarines are being returned to sea as and when they are cleared and required for operation. The Government would not allow any submarines to sail unless they were satisfied that the Royal Navy's safety advisers and the Ministry's external technical and safety advisers were satisfied it was safe for the submarines so to proceed. May I also clarify, since there has been some confusion, that Polaris boats have been included under that inspection programme under the same procedures as for other nuclear powered submarines. At no stage has there been any break in the deterrent patrol.

117. You have given us the assurance we sought about danger to the public and Service personnel but you have not given us an indication of the kind of problem involved about which there has been so much speculation.

(Mr Hawtin) I am afraid, Mr Chairman, I am not able, in open session, to give any more detail.

118. You cannot say you are not prepared to give any more detail when you are not prepared to give any detail. Are you not prepared to give any indication of the problem?

(Mr Hawtin) I am afraid I cannot go any further than we have already gone in the press release. These are sensitive military areas and as the Committee may be aware it is not the normal practice to comment on matters relating to nuclear submarine design.

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SRD

SRD

RPA

MR BRIAN HAWTIN, MR NIGEL PAREN, CDRE IAN GARNETT RN,
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[Continued]

Mr McFall

119. Can I ask Mr Hawtin if four Polaris boats are necessary for a credible and effective deterrence?

(Mr Hawtin) The Government has repeatedly made it clear, Mr McFall, that it regards four boats as the minimum to maintain a credible nuclear deterrent.

120. Can I take it these four boats are used in order: one is in patrol, one is in refit, one is ready for patrol and one is in reserve?

(Mr Hawtin) You may take it the Government policy is in order to maintain a permanent deterrent patrol that there should be at least one boat at sea at any one time. I cannot, I am afraid, go into more precise detail about the operational patterns of the Polaris force beyond one boat at sea—at least one boat at sea—at any one time.

121. Can I take it that if there is a fault in one boat then that reduces the effective deterrence?

(Mr Hawtin) No, I do not think that is a logical or necessary deduction, Mr McFall. As I have said we have four boats in order to enable us to maintain at least one on permanent deterrent patrol which is what the Government consider the minimum deterrent posture.

122. It has been suggested that there has been a fault in some of the Polaris boats and the other ones that are out at sea could be overworked and there could be a danger to safety. So, whilst you are maintaining the deterrent is it possible some boats are being overworked?

(Mr Hawtin) As I have said, Mr Chairman, Mr McFall, the Polaris boats are being subjected to the same inspection procedures as the rest of the submarine force. We are only sending boats to sea, be they Polaris or other SSN powered submarines, where we consider it safe to do so.

123. I can take it all Polaris boats have been inspected and there is no fault whatsoever with the SSBN fleet?

(Mr Hawtin) What I can say in answer to that question, Mr McFall, is all Polaris boats have been inspected, they have only returned to sea where, in the judgment of the Ministry's technical and safety advisers endorsed by the Ministry's external safety advisers, it is in our view safe for them to do so.

124. But there is a possibility that there could be faults with some of the Polaris submarines and the MoD is inspecting them, or the Royal Navy is inspecting them, and they will not be put to sea until you are satisfied the fault has been repaired?

(Mr Hawtin) We are not putting any boats to sea unless we are satisfied it is safe to do so.

125. Could I put it to you you are inspecting the boats, there could be some problem with the boats whilst they are being inspected? Your statement does not rule out the possibility of there being faults and you are inspecting them until you are of the firm

opinion that they are okay and can go back out to sea?

(Mr Hawtin) Let me emphasise two points. Firstly, the Government places paramount importance on the safety of nuclear submarine crews. Secondly, it attaches the highest priority to the maintenance of nuclear safety standards. The Royal Navy, I think it is fair to say, has an unimpeachable record stretching over 25 years in terms of nuclear safety. We intend keeping and maintaining that record. We are only sending boats to sea when they have been inspected and when the decision has been taken it is safe for them to sail. If we did not consider it safe for them to sail then they would still be alongside.

Chairman

126. I think we had a slightly different answer to the question, I think you told us you have inspected all four?

(Mr Hawtin) Yes.

127. The inspection is concluded?

(Mr Hawtin) All boats have been inspected.

128. All the Polaris boats have been inspected?

(Mr Hawtin) Yes.

129. Because of this problem?

(Mr Hawtin) Yes.

130. You have said there has been no interruption of the deterrent patrol?

(Mr Hawtin) Correct.

131. In that case it is a little mysterious when you say in your evidence that the situation is being kept under review in consultation with the Nuclear Powered Warship Safety Committee because if they have all been inspected and there has been no interruption to the patrol, why have they been kept under review?

(Mr Hawtin) Because the programme of inspection is continuing.

132. You said you had completed it.

(Mr Hawtin) We have completed inspections of all submarines. Further inspections, as necessary, and as appropriate, are being carried out.

Mr McFall

133. Can I take it HMS RESOLUTION has been inspected and it is okay?

(Mr Hawtin) HMS RESOLUTION has been inspected and was cleared to sail.

134. What date was she cleared?

(Mr Hawtin) I am afraid I cannot put a date on it.

135. Could I put it to you all nuclear submarines—the 22 we have—have the same Rolls Royce and associates pressured water reactor system?

(Mr Hawtin) I am afraid, Mr Chairman, I cannot comment in open session on matters relating to nuclear submarine design.

RRA

28 November 1990]

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[Continued

[Mr McFall contd]

Chairman: We shall be going into this in private session.

Mr McFall

136. The reason I put that was the technical defect found in HMS WARSPITE could be replicated in all the nuclear submarines because it has the same PWR system and it has the same technology. If you do not clear up the technical fault on HMS WARSPITE, that is an unsatisfactory answer to this Committee and to the public about the safety of our nuclear powered submarines, simply because they all have the same pressurised water reactor system.

(Mr Hawtin) Because a technical defect was discovered on HMS WARSPITE which had potential safety implications we have undertaken, as I have already explained and we have explained in writing to you, Mr Chairman, a programme of inspection. It is only with the results of those inspections and the endorsements of the appropriate safety advisers that we have cleared them for further operations.

Mr Churchill

137. You acknowledge the problem has been identified in WARSPITE as a result of which you have inspected all of the nuclear powered submarine fleet, both the SSNs and the Polaris. Have any specific faults been found in the Polaris boats?

(Mr Hawtin) I am afraid I am not able to comment on the material state of individual boats.

138. I was not asking you to comment on individual boats but merely whether any faults have been identified, and if so where they have been identified?

(Mr Hawtin) All I can say, I am afraid, in open session, Mr Churchill, is all of the Polaris boats have been inspected and they are only operating and allowed to proceed to sea in the way I have explained, and for the reasons I have explained it is judged safe for them to do so.

139. You cannot say whether any rectification work has taken place in relation to the SSN and SSBN submarines?

(Mr Hawtin) I would not wish to go into detail about what precise action has been taken beyond emphasising, I am afraid yet again, that the Government would not allow any boat, be it Polaris or SSN, to proceed to sea unless they felt it was safe for them to do so.

140. It has been reported in the press that VALIANT and COURAGEOUS have been kept in port since the beginning of the year. Is this true?

(Mr Hawtin) I would not wish to comment on the operational availability or deployment of individual boats.

Chairman

141. That was not the question. Have they been in port since the beginning of this year? It is a simple

question, it must be known to the public who can see them tied up alongside.

(Mr Hawtin) I am not sure that is fair comment. Can I ask Captain Thomas to answer.

(Captain Thomas) I cannot help any further than that. The deployment and operational availability of nuclear submarines is a matter of considerable sensitivity and we cannot answer in open session that question.

Mr Churchill: Can you give any indication that they might resume operations?

Mr McWilliam

142. Could I take you back briefly to your statement that all the boats have been checked and you are happy with the safety. Can you assure the Committee it is possible to check each boat to determine whether or not a fault has been discovered? I am trying to phrase this question so that you can answer in open session. Are you satisfied the tests you applied to each of the submarines would detect a major fault, or even a minor one, if it existed that we are concerned about?

(Mr Hawtin) We are satisfied the inspection procedures we are undertaking are adequate to enable us to make a judgement in the appropriate cases that it is safe for a boat to proceed to sea.

Mr McFall

143. Mr Hawtin, the Daily Telegraph of Monday 29 December, in an article by correspondent Julie Langden, said: "It was officially confirmed a fault had been found in at least one of the Polaris fleet of four submarines but sources refuse to confirm whether it was in the cooling systems of all the ships." Is that correct?

(Mr Hawtin) As I have said I am afraid, Mr Chairman, I am not prepared to go beyond what I have said in public. That is a press report, it is not an accurate statement of what the Ministry have said.

Chairman: I think in all of our interests it is probably best to pursue that in private.

Mr McFall: I would like to ask a few questions.

Chairman: You are not going to get answers.

Mr McFall

144. I want it on the public record, it is my privilege. I would say, Mr Hawtin, in terms of your explanation that one boat is out to sea all the time that could be explained by the fact that two boats could be in port and be in port for quite a considerable period of time, one of them being in refit and could be in refit for an extended period of time, yet the other two boats are out at sea and there is a possibility, given your explanation, of their being overworked. Whilst that is an answer to the Committee it is not a satisfactory answer because it does not fully explain the situation.

(Mr Hawtin) I understand in order to maintain the minimum deterrent patrol one needs at least one boat at sea at any one time. How many one has at sea at any one time I am afraid I am not able to comment on.

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(0001) [Continued]

[Mr McFall contd]

145. But you did not answer my point satisfactorily. It could be down to two boats working and two boats in port.

(Mr Hawtin) I am not prepared to comment on the availability and number of boats at any one time. As I have said we require at least one at sea and we have been able to maintain an uninterrupted deterrent patrol. I do not accept the deduction that represents overwork.

146. Could you give me a categorical assurance that safety is not in the least jeopardised on any of those boats whilst they are at sea?

(Mr Hawtin) I can only repeat, and I apologise for repeating it, the Government attaches the highest importance to safety. It has only allowed boats to proceed to sea because it is satisfied it is safe for them to do so, if there was any doubt in the Government's mind the boats would still be alongside.

147. The MoD have two key assumptions on nuclear submarines as far as I can see: in terms of life span do you go on the assumption there is a 30-year life span for nuclear submarines?

(Mr Hawtin) I would not wish to comment on the precise life span of a submarine. I am not sure if Captain Thomas wishes to add anything to this.

(Captain Thomas) I do not believe I can help.

148. There is no problem with submarines of 30 years old? What is the planning assumption for submarines, how long are they in operation?

(Captain Lucas) Yes. I can confirm that when we looked at the order of 30 years for the life of a submarine, which is frequently subject to survey and confirmation, it is valid to extend its life to that 30 years.

149. Can I also ask another assumption about refits. Is there a period of five years between refits?

(Captain Thomas) The period between refits has altered over the life of the submarines. The precise details of that I believe, again, would impinge upon the operational availability of the submarines so I cannot comment in detail on that. I wonder if I might, Chairman, make one point in answer to Mr McFall. Mr Hawtin has expressed on several occasions the Ministry's emphasis upon safety and I may say that is not only an emphasis on technical safety and the safety of the submarine and of its plant, but also of equal importance to the overall safety of the submarine is the safety of the operation of that boat. I understand Mr McFall might be concerned that the usage of submarines would place great pressure on operations but can I emphasise all aspects of safety are inspected in every way before the submarine is allowed to operate.

150. Can I ask have all Polaris boats had three refits each?

(Mr Hawtin) I personally cannot answer that question. I am not sure whether any other member of the team can?

(Captain Gozzard) No, I am not absolutely sure.

151. The reason I ask that is there is going to be a time gap between Polaris going off-stream and

Trident coming on-stream and in that case is it not the case that at least one of the Polaris boats will need a fourth refit between now and 1995 when Trident comes on?

(Mr Hawtin) I do not think we can answer that question.

Chairman: Mr McFall, we are really getting nowhere.

Mr McFall: Mr Chairman, I am getting somewhere.

Chairman: It is a matter for the whole of the Committee and I think the Committee are of a mood we will get more information in private session.

Mr McFall: I want as much on the public record as possible.

Chairman: The questions on the Polaris fleet you are not going to get.

Mr McFall: I am quite happy with the progress I am getting.

Chairman: Carry on then.

Mr McFall

152. One last question, Mr Chairman, on nuclear powered submarines: is it the case they have been put to sea under their own nuclear powered propulsion system at all times?

(Captain Thomas) I could not answer that question in open session.

Mr McFall: Thank you, Mr Chairman.

Mr Churchill

153. May I say, and I venture to think it will have the concurrence of my colleagues on this Committee, we regard the fact the Royal Navy has maintained unbroken the Polaris deterrent patrol for more than 20 years as reflecting very great credit on the Royal Navy and all those associated with the maintenance of those submarines.

(Mr Hawtin) Thank you.

Chairman

154. Let us go on to the three submarines to be decommissioned. We will start with HMS CONQUEROR. The decision to retire her early was announced in July as a means of achieving short-term savings. When was this decision made?

(Mr Paren) The decision was taken a few days before that announcement was made on 31 July.

155. Was that when the crew was told?

(Mr Paren) The crew were told in advance.

156. You say she remains in commission, is she still fully crewed?

(Mr Paren) Her crew will begin to run down. I have not got the details of precisely what the crew currently is.

157. How long has she been lying at Devonport?

(Mr Paren) She has been lying at Devonport since shortly before the announcement was made.

158. Why wait until the end of the year?

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(Mr Paren) To do the decommissioning she needs certain facilities to defuel and those facilities will not be available until about May of next year.

159. When was she due to have her next refit?

(Mr Paren) She was due to have a refit in the fairly near future and that was one of the reasons why, in looking for in year savings, we decided to take CONQUEROR out of service at this time.

160. Any costs incurred from cancelling it?

(Mr Paren) No costs in terms of refit cost because she had not got into refit.

161. There were no costs on the aborted refit?

(Mr Paren) None.

162. The decision to retire her was announced as a measure to ensure no overspend. You say it will save £943,000 in the current year. How do you reach this figure? Does it include manpower costs?

(Mr Paren) That figure does not include manpower costs, nor does it include the capital costs of a potential refit.

163. What do they mean?

(Mr Paren) The question you asked us was what were the savings we saw happening this year and next. The manpower costs, we will not be saving manpower costs this year because, as has been explained, there is a shortage of manpower in the Navy so, therefore, those people will be redeployed.

164. Let us turn to WARSPITE: the decision to retire her was taken in September. Did work on her refit continue until then?

(Mr Paren) Yes, it continued until the decision was made.

165. When was the contractor told of the decision?

(Mr Paren) The contractor was told of the decision in the middle of September.

166. The crew?

(Mr Paren) The crew was told about the same time, slightly before.

167. You discovered the problem in January and presumably between January and September you thought the problem was soluble, is that right?

(Mr Paren) We still think the problem is soluble, Mr Chairman.

168. What made you change your mind and decide not to solve it but to scrap it?

(Mr Paren) I think we have made clear these two measures were taken against the background of Options for Change and against the background that we were incurring money on the refits of these two submarines and against the background of our Secretary of State's statement that he saw the number of submarines reducing it was decided these two should be paid off early.

169. Given the relatively cheap running costs of a submarine, would it not have been worth operating WARSPITE until her next refit was due?

(Mr Paren) I think it would only be worth running on a submarine if you believe, in the context of the number of submarines we will need in the future, it is worth running on and required.

170. The requirement has reduced so suddenly there is no role for it?

(Mr Hawtin) If I may answer that, Mr Chairman, as we have said the Secretary of State made clear in his Options Statement that he envisaged in the longer term a maximum of about 16 submarines of which about 12 would be nuclear powered. As the Minister of State for the Armed Forces made clear in an answer to Mr O'Neill on 15 November: "A range of factors were taken into account before deciding which submarines to decommission to achieve the lower force level of about 16 boats including age, capability, material state and cost of maintenance and operation". There were, in other words, a range of factors one took into account in judging what was sensible in relation to the Options level.

Mr Cartwright

171. You have mentioned several times the manpower problems, how far did they influence the decision on WARSPITE?

(Mr Paren) They were not a major factor in the decision to pay her off.

172. They were a factor?

(Mr Paren) I think the main factors are the ones Mr Hawtin has described to you.

Mr McFall

173. With regard to WARSPITE, you are decommissioning WARSPITE and CHURCHILL, what sense is there in decommissioning the two boats which have most recently undergone their refit? Would it not have been sensible if you are looking at the VALIANT and the CHURCHILL Class as an entity with five boats to decommission those which have not undergone a refit?

(Mr Hawtin) As I have tried to explain, the decision was taken in relation to longer term size, shape and level of nuclear powered submarines. I cannot at this stage, because decisions have not been taken, comment on what might happen to other boats in the class. What we are talking about is paying off the older submarines which in terms of maintaining a longer term force level of about 12 is, we judge, a sensible course of action.

174. Can I ask how much it cost to refit both of those submarines?

(Mr Paren) We would be prepared to give you that answer in private session.

175. On logical grounds, can you not accept it would be better to decommission those which have not undergone an expensive refit which it is assumed in the press have cost upwards of £200 million which some people are saying is a scandalous waste of money?

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(Continued)

[Mr McFall contd]

(Mr Hawtin) All I can say is in terms of looking at what makes sense for a longer term force level and which boats one should maintain, the factors one has to take into account are those outlined and I have already quoted from the Minister of State for the Armed Forces.

Chairman

176. While you have given the standard Ministry answer you have not answered the reasonable question Mr McFall put and the public want to know. It does not seem sensible to take a boat which has been refitted at vast cost and scrap it when there are others which are about to go into refit which the laymen think ought to be scrapped rather than one which has just been maintained. That is a perfectly reasonable question to ask and if you could put down your brief and give a layman's answer...

(Mr Hawtin) All I can say is factors I have mentioned included the material state of the individual submarines.

177. That does not answer the blindingly logical question: when you have just spent maybe £100 or £200 million on refitting a ship why just scrap it? Presumably the next one was about to come in and will still have to come in and be refitted and still have to be scrapped? Maybe the layman has the wrong impression, I am trying to give you the opportunity to explain in simple language the logic of what you are doing and your answers are not addressing that particular question. I am sure there is a reasonable answer.

(Mr Paren) The Secretary of State made a statement in the House giving an indication of a number of submarines, including nuclear submarines, that he thought was required in the long-term. That number was considerably in excess of the number we have now. Looking at the future and looking for savings it makes sense with our older submarines to start reducing expenditure on them. You, I think, have spoken, Chairman, about future refits of older submarines. We have not got to the point yet where we need take decisions on the future refits of other submarines and, indeed, it would not be incompatible with the statement made by the Secretary of State for those not to require refit in order to bring the submarines down to the number the Secretary of State had in mind. I think I can say we are avoiding further refit expenditure on those two submarines.

178. Let me ask you another layman's question. A submarine fresh out of refit is of more value than one which has not been refitted for four or five years, is it not?

(Mr Paren) A submarine fresh out of refit is more valuable than one that has been away for four or five years. I think a more modern submarine, one of more recent vintage, has advantages over one of the older generation.

179. I accept that. Why are you announcing the scrapping of an older submarine that has just come

fresh out of refit when you could announce the scrapping of older submarines which have not gone into refit?

(Mr Paren) Because, as we have said, the announcements which are to be made and the final decisions which are to be made on which submarines to retain have not yet taken place. We are not incurring refit expenditure on those ships at the moment.

180. Why scrap one which is all shiny and new and ready to go to sea for four or five years when you have some that are not nice and shiny and have been at sea for four or five years and may be due to be scrapped? Why do you take the announcement in that order?

(Mr Paren) Because against the background of the statement made by the Secretary of State there does not appear to be in accordance with his future vision, a requirement for these submarines to be at sea for the next four or five years.

Mr Churchill: So the others are going to be scrapped?

Chairman: So the others are to be scrapped?

Mr Cartwright

181. The logic of what you are saying is you will scrap the VALIANT and COURAGEOUS before they get to the refit stage?

(Mr Hawtin) I do not think at this stage we can speculate what that decision will be.

Chairman

182. You are making your case about as badly as it can be made, we are trying to help you to explain something which to the general public outside appears to be a crazy decision, wasting good money. You are telling us that is not the case but you are not telling us why it is not the case. Do you want to have one more go?

(Mr Hawtin) I can only repeat

Chairman: Do not only repeat.

Mr McFall

183. This week there were reports in the press about all five nuclear submarines in the VALIANT and CHURCHILL class being decommissioned. It is crucially important we get a satisfactory answer from these officials today, or from the Ministry of Defence, because as well as it being a public scandal of £200 million for which there is no reasonable explanation forthwith, some people are suggesting the technical defect found in WARSPITE is of such a nature it is for that reason, and that reason alone, the submarine has been decommissioned. If the Ministry of Defence is going to give a satisfactory explanation they have got to counter this proposition it has been taken in for refit, it has been inspected and as a result of the fault it has been decommissioned. So, a satisfactory explanation is necessary both on public expenditure grounds and on the issue of faults.

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Chairman: We will leave the public to judge whether that is satisfactory or not, but it is not satisfactory to the Committee.

Mr Lee

184. Is there any difference in the operational capability or role of the particular submarines we are talking about that could affect the decision?

(Mr Hawtin) There is the basic point that all submarines entered service at different points in time, the VALIANT and CHURCHILL class are those which entered service the longest period of time away, they are the oldest boats and less capable than the more modern TRAFALGAR class.

185. The refit class are more modern than those others?

(Captain Gozzard) I think that is true. I would point out VALIANT recently completed a refit and it is still operational, in fact it will be some time before WARSPITE or CHURCHILL will be operational submarines. They have not only got to complete the refit but to complete on work up and I would say it is not so unreasonable, given the fact we are forced to reduce our boat strength as a result of changes in the Warsaw Pact, to dispose of submarines in which we are not only investing money but which only have a limited life due to the options decision.

Chairman

186. I have three quick questions about cost I should have asked you before. I asked you about CONQUEROR's refit when we were talking about her, is the cost of the aborted refit included in the figures of savings to be made by retiring her early?

(Mr Paren) No, I made clear in the answer I gave that the in year savings were not in relation to CONQUEROR's refit.

187. The figure you are giving as savings, does that include the aborted refit?

(Mr Paren) We did not include the aborted refit in those figures.

188. What would the cost of the aborted refit have been?

(Mr Paren) As we had not started the refit I cannot tell you what that figure would have been.

189. What figure did you budget for?

(Mr Paren) The cost of an SSN refit is about £100 million.

190. That was put in the budget somewhere for her refit had it happened?

(Mr Paren) That would have been the sort of sum, had it happened.

191. You have told us in confidence the likely cost of the refits of WARSPITE and CHURCHILL. Can you give us in public an order of magnitude?

(Mr Paren) It is not vastly different.

Chairman: Can we go to CHURCHILL. I think Mr Churchill has an interest to declare.

Mr Churchill

192. I do declare an interest, ever since I saw the launch at Barrow 20 years ago I have kept in close touch with her and her crew. When did you stop work on CHURCHILL's refit? When was the crew informed of the decision?

(Mr Paren) Again, when work stopped on WARSPITE's refit, that was the middle of September.

193. At that stage in money terms approximately what percentage of refit work had been completed?

(Mr Paren) Around the time work stopped we would assess two-thirds of the expenditure had been incurred.

194. When was the crew informed of the decision?

(Mr Paren) The crew was informed of the decision about two days before the contractors.

Your one word answer to our question B19, question 6, on whether WARSPITE and CHURCHILL have been refuelled is perhaps a little too brief! Has CHURCHILL been refuelled?

(Mr Paren) Yes, it has.

195. Will CHURCHILL or WARSPITE have to be put through MODIX again or a similar decontamination?

(Mr Paren) We would not expect, as part of the decommissioning process of either WARSPITE or CHURCHILL, to re-MODIX those two vessels.

196. Why was the decision to decommission CHURCHILL and WARSPITE not properly announced but left to a chance Parliamentary question?

(Mr Paren) Mr Churchill, it is not our normal practice to announce every ship as it is decommissioned.

197. When one is talking of such important capital assets so far as the Royal Navy is concerned, and one is talking of more than one of them, would it not be normal for Parliament to be informed of these?

(Mr Paren) All I can say, Mr Churchill, is it is not our normal practice. The announcement made on HMS CONQUEROR at the end of July was part of a package in response to a specific remit by the Secretary of State report back on further saving measures.

Chairman: In view of the unsatisfactory reception that answer had it should be part of the MoD's policy to announce in future. Let us now turn please to the policy on disposal and Mr George?

Mr George

198. When our Committee inquired a couple of years ago into decommissioning of nuclear submarines DREADNOUGHT was tied up in Rosyth and the Ministry officials had not decided its fate.

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[Mr George contd]

Can you tell me if it is decided yet what to do with DREADNOUGHT?

(Mr Paren) DREADNOUGHT remains tied up at Rosyth and we have not made a decision as to how she will finally be disposed of.

199. In that report of ours we were told there were up to ten nuclear powered submarines which were going to have to be disposed of by the year 2000, has that figure changed or not?

(Mr Paren) That figure is still of the right order.

200. Are you anywhere near to reaching a conclusion as to what to do with DREADNOUGHT and SON OF DREADNOUGHT? Will they all be tied up alongside each other?

(Mr Paren) Perhaps I can try and bring you up to date slightly. When we met last year we explained to you that we felt that disposal at sea at that stage was safe, cheap and indeed would not in any way damage the environment. I think, as you heard from a number of people on that occasion, there is a lot of expert advice which would support that view. That, of course, was a form of long-term and final disposal. One has to accept the case that there is a great deal of international feeling against disposal at sea. If we look at long-term disposal the alternative to disposal at sea is disposal in a deep repository and in that area NIREX have been commissioned by the Government to look at a long-term disposal repository for ILW and low level waste. That particular commission which has been put on NIREX is unlikely to provide a long-term and final disposal route until at the very earliest 2005. The other area we have looked at in the past is shallow land burial which, as you will know, was considered at one time by the Government and they decided not to pursue that particular course. As far as long-term disposal is concerned, we would certainly prefer to follow the national route, ie to use the NIREX facility. So in those circumstances the studies and work we have been doing in the last year have essentially been looking at interim disposal of it: to store afloat represents one option. We have been looking over the last year to alternative options to that—there are a fairly wide range—and we are about, in response to requests from our Ministers, to report back to them.

201. When do you anticipate a decision will be made by Ministers and are we reaching a critical point for a decision?

(Mr Paren) Well, we will be reporting back to Ministers in the next few months on that.

202. Has the London Dumping Convention had any effect on the sea disposal option?

(Mr Paren) The London Dumping Convention has made clear its opposition to that particular route. As you know Her Majesty's Government does not believe that the particular moratorium imposed by the London Dumping Convention is binding. On the other hand I have to make it clear we have no intention in the immediate future of dumping at sea.

203. In the immediate future, you mean in the next ten years?

(Mr Paren) With public opinion as it currently exists we are not going to flout that public opinion and dump at sea.

204. Have there been any discussions with the French about decommissioning?

(Mr Paren) There have been no significant discussions with the French. I do not think there is any great problem in how you decommission. Most of the problems involved with decommissioning are essentially public and political.

Chairman

205. The Secretary of State told us there was joint research going on with the French about this.

(Mr Paren) There has not been joint research on the disposal of nuclear submarines.

206. When he said that he was mistaken in his evidence to us on 1 May, question 47? Let me refresh your memory: "... following your meeting with the French Minister of Defence a statement was issued. One part of that statement referred to—and I quote—'... closer co-operation on decommissioning of military nuclear facilities.' Could you actually say what that means? (Mr King) Well, the Committee has, I think, issued a report, if I recall rightly, on our lack of progress in this field and so I am disappointed it was not given a warm welcome that we were talking to the French who share a similar problem about whether there are any ways in which we might co-operate in tackling some of these problems in the research field. 47. So it deals with both reactors and submarines? (Mr King) It is looking at the problem of decommissioning nuclear submarines."

(Mr Paren) In that case I will have to give you a note on that.

207. Withdraw the last answer. Does anybody know whether this is going on and what stage it has reached?

(Mr Paren) No, we do not.

Chairman: Nobody knows.

Mr McWilliam

208. Can I take you back, I think you were clear when you said the preferred route was to use the NIREX solution, is that correct?

(Mr Paren) What I said was on the particular route of sea disposal there is a great deal of international opposition to that particular route. The NIREX solution is one that is being pursued with Government support and it obviously offers a method of final disposal of nuclear reactors.

209. How about cutting them up into smaller pieces to actually cope with the NIREX solution, who is going to do that? I am not!

(Mr Paren) That, as we have always said, is one of the problems of disposing in a facility where you do

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have to cut it up. The longer you keep the reactor un-cut up, if I may put it that way, the lower the dosage, of course, that will result when you do have to cut up that reactor.

210. Are you aware of any research going on either within the MoD or within other authorities about how to cut up things like reactors safely and in a contained environment so the radiation does not escape?

(Mr Paren) I think Captain Thomas may wish to comment on that. Of course, in all areas nuclear safety techniques are improving all the time and there is scope, as time goes on, to be doing more work by remote methods.

(Captain Thomas) I do not think I can amplify much there, Chairman. It is true considerations, as we have discussed with the Committee before, of as low as reasonably practicable must predominate and one of the most effective ways of keeping nuclear dose as low as reasonably practicable is to leave the plant for as long as you can. There are very significant advances within the civil nuclear industry in the decommissioning of nuclear facilities and clearly we would seek to make use of those in carrying out any such work ourselves.

Chairman

211. Is there any reason why CONQUEROR and WARSPITE should not remain at Devonport and CHURCHILL at Rosyth?

(Mr Paren) No, there is no reason why they should not.

212. Is there a limit to the number of submarines which can be laid up at Devonport or Rosyth?

(Mr Paren) All I can tell you at the moment is that with the number of submarines we anticipate being decommissioned over this coming decade we are confident we can provide facilities for them to be laid up without significant cost and without taking away berths which would otherwise be used by operational ships.

213. At Devonport or Rosyth?

(Mr Paren) Not necessarily Devonport or Rosyth but in berthing areas over which we exercise control.

214. What are the other options?

(Mr Paren) Besides?

215. Besides Devonport and Rosyth?

(Mr Paren) Those are the two obvious options but clearly there are other waters which we own. I do not want to go any further than that at this stage.

216. Why?

(Mr Paren) Because we have not yet, Mr Chairman, made any decisions. All we have assessed is what the potential berthing availability is and we are confident that potential berthing availability is consistent with decommissioning the number of submarines I have mentioned to you over the decade.

217. If VALIANT and CHURCHILL submarines were laid up would the wait and see policy be tenable?

(Mr Paren) We are confident if all of those were decommissioned, it does not bring us to the ten I have mentioned but there is extra berthing were we to decide we were going to keep those submarines stored afloat.

218. It still is a tenable option to do nothing?

(Mr Paren) That is a fact.

Mr McFall: Can I ask what is the longest half life of some of the nuclear components inside the reactors of some submarines?

Chairman: I think we have got that information.

Mr McFall: What is it, Mr Chairman, do you know.

Chairman

219. It is in our report, I can give it to you.

(Mr Paren) It was included in our report. I do not have that particular information.

220. Would the MoD pay any money to the dockyard management contractors for laying up decommissioned submarines at Devonport or Rosyth?

(Mr Paren) We would obviously pay the dockyard contractor for any work which is done on our behalf.

221. What sort of sum do you think you might have to pay?

(Mr Paren) The amount of work that has been done on nuclear submarines laid up is, as explained before, fairly small. We are about, at Rosyth, to do some work on DREADNOUGHT which I mentioned at the Committee's last hearing.

222. What in rough terms does the storage of DREADNOUGHT cost you?

(Mr Paren) It costs us very little.

223. Tens of thousands, hundreds of thousands?

(Mr Paren) That sort of figure.

224. Which sort, tens or hundreds?

(Mr Paren) In between the period when we are doing any major work on her the figure is negligible. The only major cost we incur is the cost of doing the occasional re-examination and some work to maintain that ship and for storage afloat for a further period of years. We are doing that on the DREADNOUGHT in the coming spring. It has been decommissioned for eight years and this is the first time we have had to incur any such expenditure.

225. Has thought been given to using one of the decommissioned submarines, for example, as a training platform?

(Mr Paren) I have no knowledge of that.

226. Or giving it to the submarine museum, with a dowry, as has apparently been done with USS NAUTILUS in the United States?

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(Mr Paren) I am not aware it has been, Mr Chairman.

227. Has it been thought about?

(Mr Paren) I am not aware it has.

(Mr Hawtin) Chairman, we might be able to help you on one of the previous questions.

(Captain Thomas) It is on the subject, Chairman, of the reasons for the order of paying off submarines. As Captain Gozzard has said one of the important factors obviously in the operation of a submarine is that the crew should be properly worked up. In the case of HMS VALIANT she was relatively recently out of refit and, therefore, she was in a capable situation, her material state was of significant importance, and her crew well worked up. In the case of HMS WARSPITE and HMS CHURCHILL that was not the case. Their crews are not worked up until after completion of their refit because they have to go through a trials period and an operational work up period. So they are some way off being available in an operational state.

228. Can you not transfer a worked up crew to a submarine refit?

(Captain Thomas) We do not like doing that, it is not something the operators favour doing. There are material differences between the submarines and there perhaps empathy would not be the correct word to use, but a feeling between the crew and its submarine, as there is with any vessel, and, therefore, it is not something we have a habit of doing.

Mr McFall

229. Can we take it then, Mr Chairman, that WARSPITE and CHURCHILL are being decommissioned because their crews are not worked up?

(Mr Paren) No, Chairman, I did not say that.

Chairman: That was one of the facts.

Mr McFall

230. So you are trying to be helpful but not providing a satisfactory answer to the Committee at the end of the day as to why WARSPITE and CHURCHILL were decommissioned?

(Mr Paren) I was trying to be helpful to the Committee and Mr McFall too.

Evidence heard in Private

Chairman

231. Let us get down to the nature of the problem now that we are in private. What would you like to tell us?

(Mr Hawtin) We are, I think, in a classified restricted session now and are able to go into a little bit more detail about the nature of the defect. May I invite Captain Thomas to do that?

(Captain Thomas) Chairman, the nature of the defect is such that it

232. This is what you have got?

(Captain Thomas) This is what we have got.

233. It applies to all the submarines?

(Captain Thomas) It was discovered in one submarine.

234. The WARSPITE?

(Captain Thomas) It was discovered in HMS WARSPITE. We have, as we have explained to the Committee, subsequently carried out a very intensive and extensive inspection programme of all our nuclear submarine flotilla.

235. And how many have you found have this defect?

237. All the others do not have this defect?

240. They are safe at the moment?

(Captain Thomas) All the submarines are safe, as we were able to say to you repeatedly in open session.

241. What you did not say was whether those you did not have to repair were safe. Obviously the ones you had to repair are safe.

(Captain Thomas) We have carried out an intensive programme of inspections which we are continuing. That process of inspection has allowed us to make safety cases for deploying in those submarines that are required for operations.

242. That applies to Polaris as well?

(Captain Thomas) That applies to all submarines.

* * *

Mr Lee

244. Are you in a position to apportion any blame, as it were? Are we talking about design fault or contractor fault?

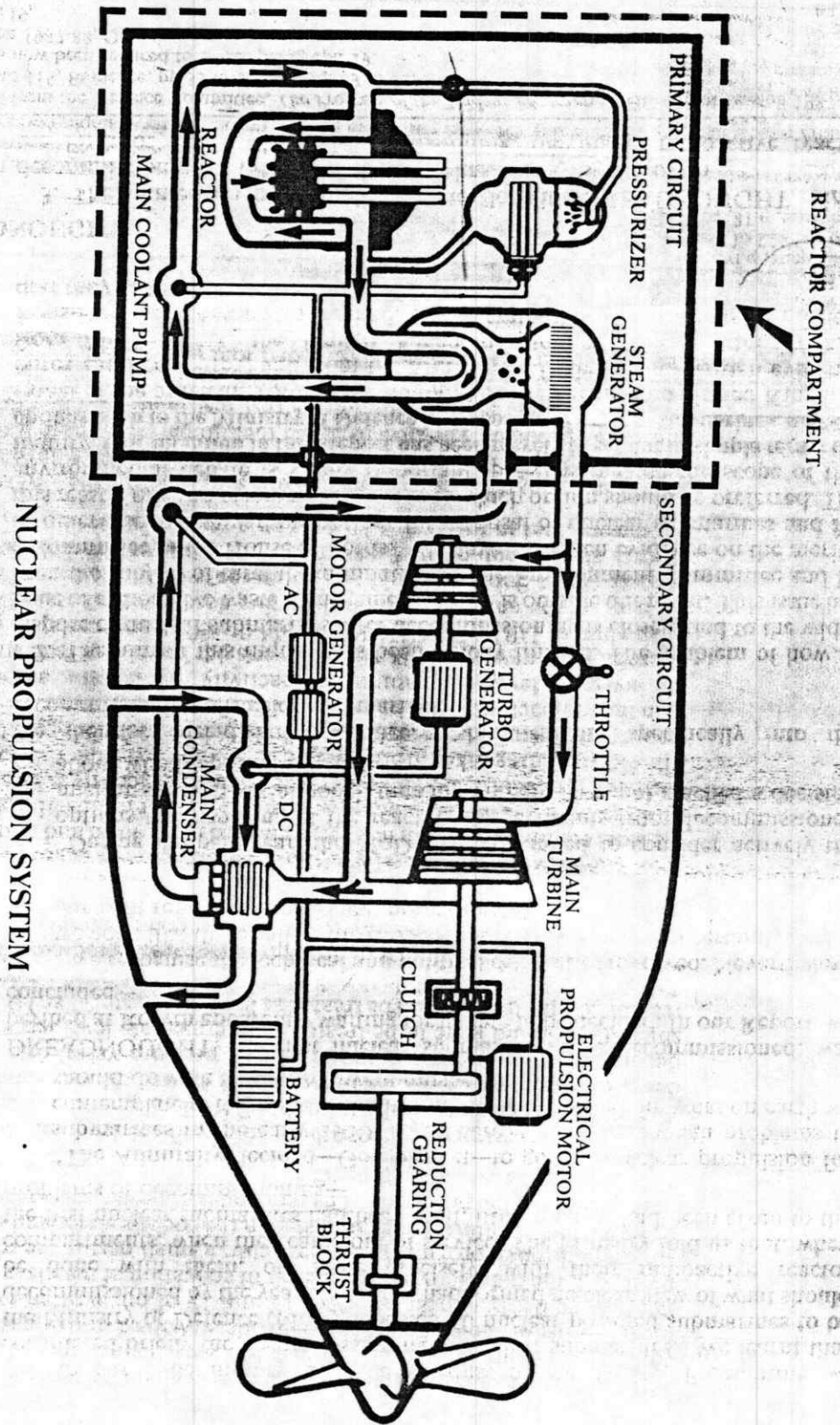
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245. Have you any idea at all what sort of extra costs might be incurred in doing the remedial work we are talking about? Can you give us any broad indication?

(Mr Hawtin) I think at this stage it is, I am afraid, too early to give you broad figures of what might be involved. What I can say is that the direct cost of the inspection programme itself and of the techniques so far are of the order of £5 million on Vote 2, the equipment cost Vote, but what the final cost will be will depend on the techniques being deployed for replacement and on the extent and timescale under which in the long term numbers of submarines are reduced.

246. Where is it likely the work will be done?

(Mr Hawtin) I imagine the work will be done in the Royal Dockyards



NUCLEAR PROPULSION SYSTEM

28 November 1990)

MR BRIAN HAWTIN, MR NIGEL PAREN, CDRE IAN GARNETT RN,
CAPT PAUL THOMAS RN, CAPT JOHN GOZZARD RN,
MR PATRICK ROTHERAM, MR CHARLES BETTS,
MR RICHARD WILLIAMS, CAPT V H LUCAS RN and CAPT F B MUNGO RN

[Continued]

Chairman

247. Did you conclude that you could not fix the fault in WARSPITE, or that it was too expensive, or was it an obvious candidate for retirement anyway? How much of a factor is this defect in you having picked WARSPITE?

(Mr Hawtin) I think, Mr Chairman, there were a number of factors—I apologise for saying that again—the age of the submarine, the fact (Captain Thomas may wish to comment further) we used WARSPITE for a number of tests and the use of the inspection processes, so we did not at the end of the day judge it sensible given her material state, as Mr Hamilton said, to attempt to return her to service.

(Mr Hawtin) Captain Thomas wanted to add something.

(Captain Thomas) May I make it clear although the decision has been taken to decommission WARSPITE there is no reason why she could not be repaired. Can I just make that clear?

* * *

Mr McFall

251. But the Polaris is at least as old as this?

(Captain Thomas) I can only say we have carried out a very extensive.

* * *

253. I put it to you they are of the same type of reactor system, a PW1 Rolls Royce reactor system, that is the VALIANT class, the Polaris, SWIFT-SURE class. I am interested in looking at the technology of the PWR, that is the purpose of my question, it is the same technology used.

* * *

(Captain Thomas) I cannot comment on that technical detail.

257. On the way down in the British Midlands aeroplane I read The Technology of Nuclear Safety by Thompson and Beckerley and they classified service failures in piping systems under one or more of the following headings: "1. Design. 2. Materials selection. 3. Manufacturing and shaping of materials by the mill. 4. Final fabrication and welding of the pipe. 5. Excessively severe service conditions." Under what heading would that fault come under? This is not a trick question because you will trick me if you ask me a supplementary.

(Captain Thomas) Chairman, which are inclosed here. Without hearing them again . . .

* * *

Chairman

258. Why does not Mr McFall pass you the piece of paper and why do you not answer the question in a moment? In the meantime I will ask you factual questions that can be answered by somebody else. We asked you about the VALIANT and

COURAGEOUS being in ports from the beginning of the year.

(Captain Thomas) Yes, they have been.

(Captain Mungo) She came out of refit, VALIANT came out of refit, 15 months ago.

259. And has not been to sea since?

(Captain Mungo) Yes, she has.

260. Has she been in port since the beginning of the year?

(Captain Mungo) Yes, she has.

(Captain Gozzard) I cannot be precise on that either but they have been alongside the wharf for a substantial period of time.

261. Why is that?

(Captain Thomas) They are the subject of the inspection programme.

262. It takes that long?

(Captain Thomas) It does not take that long to carry out the

waiting for inspection she?

* * *

263. They have been sitting waiting for inspection because you did not have anything essential for them to do?

(Captain Thomas) Some inspections have been carried out.

Other need spectra equipment/manpower

* * *

264. Because they were a lower priority than others?

* * *

(Mr Hawtin) The manpower resources we can deploy are finite.

265. When do you expect them to go back and resume operations, VALIANT and COURAGEOUS?

(Mr Hawtin) I do not think we can answer that directly, Mr Chairman. As I have said earlier there is the Options Statement by the Secretary of State and what decisions he will take on which submarines to retain and which to pay off and in what timescale, we do not know because they have not yet been taken.

266. What are their crews doing at the moment?

(Captain Mungo) As I understand it the crews have been considerably reduced while they are in this condition as if they were in refit.

267. When are they next due for their next refit?

(Captain Gozzard) It is quite a long way away. VALIANT has just come out of refit and COURAGEOUS is some years away.

268. Why not decommission them now?

(Captain Lucas) VALIANT has completed her last refit, we are not expecting her to undertake another one at all. She is a fully refitted, fully worked up submarine. We are waiting for the decisions on Options for Change to see whether or not she should be decommissioned.

MR BRIAN HAWTIN, MR NIGEL PAREN, CDRE IAN GARNETT RN,
 28 November 1990) CAPT PAUL THOMAS RN, CAPT JOHN GOZZARD RN,
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[Continued]

[Chairman contd]

269. Are you ready to answer the question?

* * *

270. It has also been reported that there are doubts about the future of the first two SWIFTSURE submarines, SWIFTSURE and SOVEREIGN. Have the same two faults been found on them?

(Mr Hawtin) I do not think I can go into any great detail on individual boats.

* * *

271. Hang on, you told us all the inspections were complete.

(Mr Hawtin) No, we said, Mr Chairman, that the inspection process is continuing and further inspections are being carried out.

272. When SWIFTSURE and SOVEREIGN had their first inspection was anything found?

* * *

(Captain Mungo) I have not seen those reports, Mr Chairman.

274. Are their futures in doubt, those two submarines?

(Captain Gozzard) I think you are confusing two aspects there. One is the Options for Change and the other is the defect.

275. There is no defect problem which is putting a question mark over the future of those two submarines?

(Captain Gozzard)

* * *

Chairman: Options for Change we understand.

Mr McFall

* * *

not that your answer does not reassure me but the situation does not reassure me. On the safety aspect could I ask you in terms of safety you would not, or could not, send the ship out until the Nuclear Powered Warship Safety Committee deliberates and gives you the go ahead?

(Captain Thomas) That is not strictly true, but so far as the handling of this particular issue is concerned and generally speaking that is true. The Nuclear Powered Warship Safety Committee technically are advisers to the Secretary of State for Defence. I can confirm certainly in this case and in other cases for all those submarines we have taken

the safety cases in detail to the Nuclear Powered Warship Safety Committee where they have discussed and endorsed the Ministry's view it is safe on each of those occasions to operate those submarines.

(Mr Hawtin) We have only gone to them when we think there is a justifiable case for doing so, and in all cases, as Captain Thomas has said, they have endorsed that judgement.

(Captain Thomas) I hope you did not think I was prevaricating. Safety is the Ministry's responsibility, the Secretary of State calls upon the Nuclear Powered Warship Safety Committee as his expert advisory committee and they have endorsed each and every one of those safety submissions.

277. On the issue of Polaris perhaps we cannot go further even in secret session but I will ask it anyway. In terms of the public comment you made about one deterrent being at sea it is conceivable that can be done with two, as I mentioned in the public submission, and two are laid up. Is it the case that there are problems with two and the other two could be overworked as a result?

(Mr Hawtin) I do not think that is a fair deduction.

* * *

278. Has a crack been found in the Polaris submarine as mentioned in the *Daily Telegraph* on Monday 19 November?

(Mr Hawtin) I do not think we wish to comment further on the Polaris.

Chairman

279. Not even in private?

* * *

is the same situation present in the Trident boats?

(Mr Hawtin) We are considering the implications for the Trident boats,

* * *

we are confident there will be no effect on the in service date of Trident.

* * *

(Mr Hawtin) We will be taking whatever action we consider appropriate. We have not yet taken a view but we are confident we can take whatever action we need.

282. But it is potentially there?

(Mr Hawtin)

* * *

Chairman: Okay. Thank you very much indeed.

6. Letter from the Private Secretary to the Secretary of State for Defence to the Second Clerk of the Committee (12 February 1990)

I am responding to your letter dated 1 February in which you requested a note on the technical problems reported to have been experienced by one of the Royal Navy's nuclear submarines.

During a routine inspection carried out during the current refit of HMS WARSPITE

* * *

There had been no release of radioactive material.

* * *

and further work is in hand to identify the cause of the defect. As a prudent precaution an intense programme of inspection of all RN nuclear submarines has been initiated. Those submarines currently in port are being examined before returning to sea: the remaining boats will be checked as they come into port. The inspection process is likely to be protracted, given the general inaccessibility of the working area.

* * *

The situation is being closely monitored by the Nuclear Powered Warship Safety Committee, which includes independent experts. The Committee has endorsed the Department's approach to the problem.

The operation of the strategic deterrent has continued uninterrupted with at least one SSBN remaining on patrol.

The Government will continue to give very high priority to safety in the operation of the nuclear submarine fleet.

7. Letter from the Private Secretary to the Secretary of State for Defence to the Second Clerk of the Committee (27 February 1990)

In your letter of 14 February you raise a number of further points in relation to the recent technical defect found in a RN nuclear submarine. The answers are as follows.

The current inspection programme is being carried out in two stages. The first stage has been completed for all submarines now at sea and is in hand for the remainder. Submarines are being individually cleared for further activity as appropriate. As an additional prudent precaution a further detailed inspection technique is being developed and will be applied to all submarines. This part of the programme is planned to begin in May and is expected to take some months to complete.

As requested we will send you further information on completion of the work in hand to identify the cause of the defect in WARSPITE. This work is also expected to take some considerable time to complete.

8. Memorandum by the Ministry of Defence on the decommissioning of HMS CONQUEROR (16 November 1990)

Q1. *Where is CONQUEROR at present? Has she been decommissioned? Has her reactor core been removed? If so, where has it been taken and how?*

A1. HMS CONQUEROR is currently lying in Devonport Naval Base. She remains in commission until 31 December 1990 when she will be paid off. Sufficient naval personnel will remain to assure submarine and nuclear safety until she is docked and defuelled. The reactor core has not been removed.

Q2. *What is planned for her future? Will she lie at Rosyth with DREADNOUGHT? If so, how will she get there?*

A2. The future for HMS CONQUEROR is yet to be decided. On completion of defuelling, de-equipping and preparation for a prolonged lay-up, CONQUEROR will be stored afloat although no decision has yet been taken as to the location.

Q3. *Is her radioactivity being monitored; and with what frequency? Has she been treated with protective paint and a cathodic protection system?*

A3. Detailed and regular radioactivity surveys are carried out in accordance with the regulations covering operational nuclear submarines. A comprehensive paint scheme and a cathodic protection system will be put in place as part of the preparation for lay-up.

Q4. *What different considerations arise as regards the process and problems of decommissioning from the differences between DREADNOUGHT and CONQUEROR?*

A4. The considerations regarding the process and problems of decommissioning the two submarines are essentially the same.

Q5. *What are the sums saved (a) in 1990-91, (b) thereafter by the decision to retire CONQUEROR early; and what estimate has MoD made of the costs of decommissioning Conqueror?*

A5. The decision to retire CONQUEROR early will save £943 thousand in the current year and between £2.2 and £2.8 million per annum at 1990/91 prices thereafter. At this stage it is too early to give a reliable estimate of the costs of decommissioning HMS CONQUEROR.

Q6. *Has the Ministry made any progress in its consideration of how to dispose of the nuclear reactor compartments of decommissioned nuclear submarines?*

A6. Disposal of nuclear submarines is highly complex involving political, technical, scientific and legal considerations. The subject is under active consideration but no final decision has yet been made.

9. Memorandum by the Ministry of Defence on the decommissioning of HMS CHURCHILL and WARSPITE (27 November 1990)

Q1. When did the Government make the decision to decommission CHURCHILL and WARSPITE; and when and how was this announced to Parliament?

A1. The intention to reduce submarine force levels was announced to the House on 25 July 1990 (Official Report, col 471). The consequential decision to decommission HMS CHURCHILL and WARSPITE was taken in early September during the Parliamentary Recess. Written answers were given to Parliamentary Questions from the hon Member for East Lothian on 29 October (col. 414) and 1 November (col. 770) confirming that CHURCHILL and WARSPITE, respectively, were to be decommissioned.

Q2. How long have CHURCHILL and WARSPITE been in refit? What work has been done to date?

A2. HMS WARSPITE had been in refit for two and a half years at the time of the decision to pay her off. The specified work was virtually complete, the testing and setting to work of systems was well in hand and the submarine had been undocked. HMS CHURCHILL had been in refit for one year and four months. Her specified work was about two thirds completed and some systems had been tested. She was still docked down.

Q3. The Committee was informed by letters of 12 and 27 February this year (D/SofS/PS/20/225S: HCDC refs A75, A96) about technical problems experienced by an RN nuclear-powered submarine, and was offered further information on completion of the work in hand to identify the cause of the defect. What connection is there between these faults and the programme of inspection instituted earlier this year, and the decommissioning of WARSPITE, CHURCHILL and CONQUEROR? What are the implications for the Polaris submarines?

A3. The inspection programme of Royal Navy nuclear-powered submarines is continuing. The evidence available to date

* * *

These are, however, provisional conclusions and work continues towards identifying conclusively the causes of the phenomenon.

HM submarines WARSPITE, CHURCHILL and CONQUEROR are among the oldest of the RN's nuclear-powered submarines and the

* * *

The decision taken during the summer, in the context of Options for Change, to limit the non-deterrent submarine force to 16 boats, itself suggested the disposal of older vessels in the interests of reducing the average age of the nuclear submarines flotilla. The material condition of these vessels was an additional reason for their selection for decommissioning.

The RESOLUTION Class submarines, which carry the Polaris nuclear deterrent, are of similar age and have been inspected in common with other nuclear-powered submarines. There has been no interruption to deterrent patrols. The situation is being kept under review in consultation with the Nuclear Powered Warship Safety Committee.

Q4. When were CHURCHILL and WARSPITE expected to come out of refit? Had crews been identified and formed?

A4. At the time the decision was taken to cancel the refits the contract completion dates were:

WARSPITE—April 1991. CHURCHILL—September 1991.

Nuclear-powered submarines in refit retain a crew since the Commanding Officer remains responsible for reactor, ship and personnel safety. However, the complement is reduced from that in commission by releasing the majority of the Operational and Supply and Secretarial staff. Both submarines were at the reduced complement. Personnel were being identified to build up the operational complement as the end of refit approached, but had not joined. Appointing and drafting is now aimed at reducing the Naval manpower as far as possible and as soon as possible. (See also A.11)

Q5. Where are CHURCHILL and WARSPITE at present? Will they be decommissioned where they are? Where will they then be taken?

A5. HMS CHURCHILL is in Rosyth Royal Dockyard and HMS WARSPITE is in Devonport Royal Dockyard, where they will be de-equipped and defuelled and prepared for lay-up. They will then be stored afloat at a location to be decided.

Q6. During refit, were both CHURCHILL and WARSPITE defuelled and decontaminated by the MODIX clean-up process? Had either been refuelled since they had been decontaminated?

A6. Yes. Yes.

Q7. What specific tasks are involved when a nuclear-powered submarine is decommissioned? How long does it take? Which of those tasks are also carried out on a submarine in refit? What savings in time and cost therefore result from decommissioning a submarine in refit rather than an operational one?

A7. Certain equipments are removed, either for further use or to declassify the vessel, the reactor is defuelled, and the hull is prepared for an extended period afloat. The time taken depends on the priority as well as the volume of the task, and will be programmed according to the availability of facilities and labour

in the Dockyard. The time in hand could range upwards from half a year—longer in some circumstances if the most cost-effective use is to be made of Dockyard resources. The refit of an SSN also includes the defuel, equipment removal and hull preservation. The extent of savings from decommissioning a submarine in refit rather than an operational one depends on the stage of the refit.

Q8. What stage has discussion with contractors about the cost of the refits reached? What does MoD envisage as the likely cost, for the refits and for cancellation, that will result from these discussions?

A8. The Ministry is discussing the WARSPITE and CHURCHILL contracts with DML and BTL respectively in order to agree a price based on the work performed up to the time the contract was cancelled. The refit of WARSPITE was substantially complete, there were few outstanding forward commitments by DML, and therefore cancellation charges should be minimal. Although the precise total refit costs will not be known for some time it is likely that the outturn will be of The CHURCHILL contract was less advanced, but unavoidable forward commitments by BTL, and hence cancellation charges, are also expected to be minimal. Detailed information is not yet available from the contractor but the Ministry expects that a final settlement for completed work will be in the order of * (Vote 5).

Q9. Will the same contractors be responsible for the decommissioning? What will be the cost of decommissioning?

A9. The contract to prepare each submarine for disposal will be offered to the refitting contractor on a single tender basis as part of the MoD core programme. The specification for the work is in course of preparation. Until this work is complete it is too early to provide an estimate of cost.

Q10. What are the annual running costs of CHURCHILL and WARSPITE in service?

A10. The average annual running costs of a Fleet submarine are £4.4 million, including manpower costs.

Q11. What are the manpower implications of the decommissioning of CONQUEROR, CHURCHILL and WARSPITE? Will there be a reduced requirement for trained submariners? If so, what savings might be expected?

A11. The decommissioning of three nuclear submarines will reduce the requirement for trained submariners by about 420 once the submarines are fully de-manned. Manning levels will be reduced at the earliest opportunity. The personnel involved will be redeployed to other tasks.

NC 69 90/91

10. Part of a further Memorandum submitted by the Ministry of Defence on Submarines (4 January 1991)

Q17. How were the savings from retiring CONQUEROR early calculated? (Answer 5 of CONQUEROR Answers refers.)

A17. The savings of around £1 million from decommissioning CONQUEROR early come entirely from savings in stores and spares.

Q18. What would be the order of magnitude of the costs of decommissioning an operational nuclear submarine?

A18. Subject to detailed specification of the work and contract negotiation, we would expect to pay somewhere in the region of * for a programme of work to dock the submarine, defuel the reactor, de-equip other compartments, and prepare the hull for a period of storage afloat. Further dockings, costing between * and * at today's prices, would be planned at 10-yearly intervals pending final disposal. The costs of final disposal would depend on the method and route, which have still to be chosen.

Q19. What are the range of options for the interim disposal of decommissioned submarine reactors, referred to in Q200? What are the advances in the civil nuclear industry in the decommissioning of nuclear facilities, referred to in Q210?

A19. Interim storage options have concentrated on storage afloat and storage on land. The advances in the UK nuclear industry centre on Windscale/Sellafield where AEA Technology are gaining experience in applying conventional engineering techniques to decommissioning of the Windscale/Sellafield Advanced Gas Reactor as well as developing new techniques involving remote operations.

Q20. What is the estimated cost of the forthcoming work on DREADNOUGHT, referred to in Q224? (If the cost is COMMERCIAL-IN-CONFIDENCE, an order of magnitude for public use would also be helpful.)

A20. Contract negotiations are not yet complete, but the total cost could be around *. At this stage of the negotiations, it is not yet possible to give a global figure for public use. We will be able to do this once the negotiations are complete.

Q21. What progress has been made in co-operation with France on decommissioning nuclear submarines (see Qq 204-7)?

A21. The UK and France have not been co-operating on the problems of decommissioning nuclear submarines. Limited technical discussions have been held on techniques for decommissioning nuclear facilities used for the weapons programme.