

HOUSE OF COMMONS



**Nineteenth Report from the**

**COMMITTEE OF PUBLIC  
ACCOUNTS**

Session 1983-84

FOR CONSULTATION ONLY

**The United Kingdom Trident Programme**

**Ministry of Defence**

---

*Ordered by The House of Commons to be printed  
11 June 1984*

---

LONDON  
HER MAJESTY'S STATIONERY OFFICE  
£3.75 net

LIST OF WITNESSES	ix
MINUTES OF EVIDENCE	xii
APPENDIX	I
	19

MINISTRY OF DEFENCE: THE UNITED KINGDOM TRIDENT PROGRAMME

Introduction

1. The Government announced in July 1980 its decision to purchase the United States Trident I (C4) missile system to replace the Polaris force from the 1990s. Following the subsequent US decision to replace the Trident I (C4) by the Trident II (D5) system, the Government in March 1982 announced its revised choice of the Trident II (D5) system, to be fitted in larger, improved submarines. The capital cost of the total acquisition programme, including submarines, missiles and warheads, was estimated at some £7,500 million (at September 1981 prices and exchange rates).

2. We took evidence from the Ministry of Defence (MOD) on a report from the C&AG summarising the results of his staff's initial review of project management and financial control aspects of the Trident acquisition programme. Although the project is in its early stages, we thought it important to take an early opportunity to examine the arrangements being established to control what will for the foreseeable future be such a major item in the defence equipment budget. The main points arising from this examination are summarised below.

Accountability to Parliament

3. We welcome the fact that, as noted in the C&AG's report, so far Parliament's knowledge of, and ability to comment on, the Trident programme contrasts favourably with the position on the Chevaline improvements to the Polaris missile system, where lack of information and accountability to Parliament was criticised by our predecessors in their Ninth Report, Session 1981-82. We trust that Parliament will continue to be kept fully informed on Trident developments, progress and costs at regular intervals throughout the life of the programme.

Programme costs

4. In March 1984 the Secretary of State for Defence announced a revised Trident project estimate of £8,729 million. The revised figure represents an updating of the 1981 estimate of £7,520 million to take account of increased costs of some £1,900 million, partly offset by savings of just over £700 million arising from the decision to prepare and refurbish missiles in the USA rather than the UK. Two thirds of the increased costs of £1,900 million arise from inflation and one third from exchange rate variations. The savings from additional work being carried out in the US do not take account of any second-round economic effects arising from the impact on UK employment levels, etc.

HC287

HC269

Official Report  
13.3.84  
col 263-4  
Q 2459

Q 2515-6  
Q 2462-3

6. Contingencies within the new figure are of the order of 20 per cent (some £1,750 million). Though the contingency elements had now been more clearly identified MOD confirmed that at this early stage in the programme there was still a number of very considerable uncertainties, and the latest figures could not therefore be regarded as final.

6. Some 45 per cent, or nearly £4,000 million, of the latest estimate of £8,729 million will be spent in dollars. The sterling equivalent has been calculated at an exchange rate of £1 to \$1.53, and clearly the actual total costs may be significantly affected by movements upwards or downwards in the strength of the pound; MOD told us that a movement of 1 cent in the exchange rate would result in a £25 million change in the estimated programme costs. The current rate of £1 to \$1.39, if maintained, would thus increase the £8,729 million estimate by some £350 million.

Q 2573

7. The impact of further inflation over the life of the programme, the scale of expenditure in the US and the effect of movements in exchange rates, the size of the provision for contingencies and the very considerable uncertainties and risks which are present at this very early stage of the programme combine to suggest that the estimate of £8,729 million may in practice be vulnerable to significant variation, in our view probably upwards. Given the size of the Trident programme, and the Parliamentary and public interest in its costs and progress, we regard it as essential that these should continue to be closely monitored and any changes reported promptly to Parliament.

#### *Project management and financial control*

C&AG's  
Report,  
paras 13-16

8. The C&AG's report summarised the project management arrangements introduced for Trident, including the steps MOD had taken to establish clear lines of responsibility for technical and financial aspects of the programme, and necessary co-ordination and liaison between the various interests involved. The C&AG concluded that generally the arrangements being introduced should provide a framework for effective management of the programme, though they have yet to be tested thoroughly in practice. MOD told us that the arrangements, including those for liaison with the US, were based essentially on those which had operated successfully for many years for Polaris.

Q 2481 and  
2489

C&AG's  
Report,  
paras 17-20

9. Financial control of major defence projects is based on MOD instructions which take account of the principles of strong central project management, cost estimating, control and monitoring recommended in the Downey Report in 1966 and subsequently endorsed by the PAC. The special nature of the Trident project, however, had made it difficult for MOD to comply fully with the Downey recommendation that development should be carried out in distinct stages; and significant financial commitments on Trident had been entered into in advance of formal endorsement of the Naval Staff Requirement. On the other hand, we note that the Downey procedures were more concerned with an individual project than a programme such as Trident with its large number of different, though related, elements. We nevertheless welcome MOD's assurance that they have operated the Downey procedures on the main parts of the programme.

Q 2465

C&AG's  
Report,  
paras 21-4  
Q 2470

Q 2465

10. Costs and physical progress of the programme are being monitored against the Trident Cost Plan and approved programme milestones. MOD told us that the major difficulty with Trident was less its technical complexity than the scale of the project management task in bringing together the very large number of different elements of the programme; MOD have therefore introduced strong centralised project management to ensure overall co-ordination.

Q 2484-6

11. In general the programme elements for the submarine and ancillary shore based facilities are wholly under UK control. But progress on the submarine missile system compartment is dependent on the US, since they are supplying the missiles and associated strategic weapons systems equipment, in addition to certain warhead-related components and services. MOD told us that this did not create any problems since the US are very much further forward in their design work.

Q 2519  
Q 2468

12. The arrangements for project management and financial control described to us appear to be satisfactory in principle, but we note that they have not yet been fully tested in practice. We note MOD's assurance that the programme is on target and that there are adequate time contingencies to cater for slippages in particular areas. Though some aspects of the programme involve substantial dependence on the US we were assured that there were frequent and close contacts between the UK and the US to liaise on all aspects of the joint programme. Notwithstanding such assurances, and the strengths of the overall control framework, at this stage of the project there are inevitably some risks and uncertainties in all elements of the programme. MOD identified the main area of uncertainty as being the construction programme for shore facilities and infrastructure.

Q 2521

#### *Involvement of UK contractors in US*

13. With UK Trident expenditure in the USA now expected to amount to nearly £4,000 million, and with no offset provisions for US purchases of UK equipment, it is important that UK firms obtain as much of this work as possible. Under the arrangements agreed with the USA, UK manufacturers will be able to bid on Trident sub-component work on the same terms as US manufacturers, but MOD told us that it is not yet possible to judge how successful they will be. About 300 British firms have shown sufficient interest to make contact with the main US system contractors, and some 250 have been approved by the US companies to bid into the Trident programme. No significant work has, however, apparently yet been obtained.

Q 2523-4

Q 2525

Q 2545, 2556,  
2563 and  
2570  
Q 2524

14. MOD pointed out that UK contractors would have to prove that they could offer something better than the long-established US firms to get on to the programme; but they were hopeful that UK firms would obtain work in some of the specialist fields at lower levels. Special arrangements have been established within the Defence Sales Organisation to assist those wishing to bid for Trident business. We trust that MOD will continue in their efforts to publicise the opportunities for British industry and to give interested firms all possible assistance.

*US funding arrangements*

15. The costs to be incurred in the USA will come mainly under the provisions of the Polaris Sales Agreement, which generally provides for the UK to purchase missiles and equipment on the same terms as they are acquired by the US Government. The UK thereby obtains significant financial benefits from sharing in the contract prices negotiated for the very large US programme, and from its fixed contribution of \$116 million towards a US research and development programme costing some \$9,000 million.

16. Expenditure in the USA is funded under the Trust Fund arrangements prescribed in the Polaris Sales Agreement and used also for Chevaline. These provide for MOD to advance sums to the USA on the basis of quarterly estimates of expenditure. MOD confirmed that they had close working relationships with the project office running the US part of the programme, and that the UK was getting exactly the same control and supervision of US suppliers, and the same assurances on economic, efficient and effective working, as for the US programme.

17. A review of the US funding arrangements by MOD internal auditors, completed in 1983, noted that the quarterly funding arrangements had resulted in significant unused balances. On certain broad assumptions they calculated that—had interest been payable on unused Polaris and Trident funds held by the USA—the balances during the 2½ years to mid 1982-83 might have earned interest of some \$4.1 million. MOD pointed out, however, that the US Government were prevented by their own legislation from funding UK work and MOD had therefore to provide sufficient money in advance to meet contractors' bills expected during each quarter. Changing the funding arrangements formally would involve some re-negotiation of the Polaris Sales Agreement, but the Ministry are considering with the USA whether better arrangements could be devised so as to reduce the amounts of money resting in the bank.

18. We appreciate that these are strictly working balances (as compared, for example, with the UK termination liability deposits which attract interest under the US Foreign Military Sales Agreement); and we note that the average end-of-quarter balance in recent years had been contained at some 2 to 2.5 per cent of the sums advanced. Nevertheless, over the next 10 years or so the UK will advance to the USA nearly £4,000 million in respect of Trident expenditure alone, and the average balance in the trust fund account will thus be substantial. We therefore expect MOD urgently to pursue changes in the application of the current arrangements which will provide for the payment of interest under revised draw-down procedures, possibly by holding funds in the USA in the UK's name until transferred to the trust fund to meet bills as and when payment is made to contractors. If suitable changes cannot be negotiated then balances in the trust fund account must be closely monitored and kept at the lowest possible level. We wish to be kept informed as to

19. We also wish to reiterate, in line with the views expressed by a previous Committee (Session 1980-81, Third Report, paras 18-26), that in any future agreements covering overseas purchases, the need to avoid loss of interest on funding arrangements should be borne in mind at the outset. We have been assured by the Treasury that instructions to this effect were issued to departments following the earlier PAC Report.

*Audit arrangements in the USA*

20. US Navy auditors report annually to MOD whether expenditure from the Trust Fund has been reasonably and properly incurred. In view of the substantial UK expenditures involved in the Trident programme, we were glad to learn from MOD that they are planning to resume their own audit visits later this year as provided for in the Polaris Sales Agreement. We welcome also the C&AG's intention to review the arrangements for his staff's audit of US expenditure on UK Trident procurement, in the light of any changes in the extent of direct MOD audit and separate assurances he has received from the US General Accounting Office.

*Summary of main findings and conclusions*

21. (i) Parliament's knowledge of, and ability to comment on, the Trident programme contrasts favourably with the position criticised on the previous Chevaline programme. We trust that Parliament will continue to be kept fully informed on Trident developments, progress and costs at regular intervals throughout the life of the programme (para 3).
- (ii) The latest estimate of £8,729 million may in practice be vulnerable to significant variation given the likely impact of inflation, movements in exchange rates and the very considerable uncertainties and risks present at this early stage in the programme. We regard it as essential that progress and costs should be closely monitored and any changes reported promptly to Parliament (para 7).
- (iii) We note MOD's assurances that they operated the Downey project control and management procedures on the main parts of the Trident programme; that the programme is on target and there are adequate time contingencies to cater for slippages in particular areas; that the US elements of the programme are not expected to create any special problems; and that there are frequent and close contacts between the UK and the USA to liaise on all aspects of the joint programme (paras 9 to 12).
- (iv) Based on the evidence of this initial review, we regard the overall arrangements being introduced for project management and financial control as satisfactory in principle; but we note that these have not yet been fully tested in practice in the light of the acknowledged uncertainties and risks (para 12).
- (v) We trust that MOD will continue in their efforts to publicise the

C&AG's  
Report,  
paras 26-30

Q 2535,  
2551-2,  
2554

Q 2522

Q 2529

Q 2527

Q 2528

Q 2541

HC 125

C&AG's  
Report,  
paras 31-33

Q 2522

PROCEEDINGS OF THE COMMITTEE RELATING TO THE REPORT

WEDNESDAY, 26 MARCH, 1984

Members present:

Mr Robert Sheldon, in the Chair

Mr Dale Campbell-Savours  
Mr Eric Cockeram  
Mr Eric Deakins  
Mr Peter Horden  
Mr Michael Latham  
Mr John Maxton  
Mr Michael Morris  
Mr William O'Brien  
Mr George Park  
Sir Michael Shaw  
Mr Michael Shersby  
Mr Fred Silverster

Sir Gordon Downey, KCB, was further examined.

The Committee deliberated.

\* \* \* \* \*

Mr C H A Judd was called in and further examined.

The Comptroller and Auditor General's report and memorandum on the UK Trident programme were considered.

Mr D H Perry, Chief of Defence Procurement, Rear Admiral J S Grove, CB, OBE, Chief of Strategic Systems Executive, and Mr N D Paren, Director of Resources and Programmes, Ministry of Defence, were called in and examined.

*Ordered*, That strangers be not now admitted.

The Comptroller and Auditor General's report and memorandum on the UK Trident programme were further considered.

Mr D H Perry was further examined.

[Adjourned till Wednesday at a quarter past Four o'clock

\* \* \* \* \*

MONDAY, 11 JUNE, 1984

Members present:

Mr Robert Sheldon, in the Chair

Mr Dale Campbell-Savours  
Mr Eric Cockeram  
Mr Michael Latham  
Mr John Maxton  
Mr Michael Morris  
Mr George Park  
Sir Michael Shaw  
Mr Michael Shersby  
Mr Fred Silverster

Sir Gordon Downey, KCB, was further examined.

The Committee deliberated.

Draft Report (Ministry of Defence: the UK Trident Programme), proposed by the Chairman, brought up and read.

*Ordered*, That the Draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 21 read and agreed to.

*Resolved*, That the Report be the Nineteenth Report of the Committee to the House.

*Ordered*, That the Appendix to the Minutes of Evidence taken before the Committee be reported to the House. ~~(The Chairman.)~~

*Ordered*, That the Chairman do make the Report to the House.

*Ordered*, That the provisions of Standing Order Number 92 (Select committees(reports)) be applied to the Report.

\* \* \* \* \*

(vi) We note MOD's assurance that the UK was getting exactly the same control and supervision of suppliers, and the same assurances on economic, efficient and effective working, as for the US Trident programme (para 16).

(vii) We expect MOD urgently to pursue changes in the application of the present funding arrangements for expenditure in the USA which will provide for the payment of interest on unused balances. Balances in the trust fund must be closely monitored and kept at the lowest possible level. We wish to be kept informed on the outcome of these negotiations (para 17).

(viii) We welcome the assurances given on the extent of audit of the expenditures in the USA (para 20).

# MINUTES OF EVIDENCE TAKEN BEFORE THE PUBLIC ACCOUNTS COMMITTEE

MONDAY 26 MARCH 1984

Members present:

Mr R Sheldon, in the Chair

Mr D Campbell-Savours  
Mr E Cockeram  
Mr E Deakins  
Mr P Hordern  
Mr M Latham  
Mr J Maxton

Mr M Morris  
Mr W O'Brien  
Mr G Park  
Sir Michael Shaw  
Mr M Shersby  
Mr F Silvester

SIR GORDON DOWNEY, KCB, was further examined.

## Report by the Comptroller and Auditor General Ministry of Defence: Trident Project.

### Examination of witnesses

MR D H PERRY, Chief of Defence Procurement, REAR ADMIRAL J S GROVE, CB, OBE, Chief of Strategic Systems Executive and MR N D PAREN, Director of Resources and Programmes (Strategic Systems), Ministry of Defence, were called in and examined.  
MR C H A JUDD, Treasury Officer of Accounts, was called in and examined.

Chairman

2459. Mr Perry, welcome to the Committee of Public Accounts on your first appearance as Accounting Officer. In their examination of Trident the Committee are of course not concerned with policy decisions on such matters as the choice of nuclear deterrent. We are dealing instead with the management of the programme and questions of financial control and monitoring. We have before us the report of the Comptroller and Auditor General and the Supplementary Memorandum which break the subject down into a number of useful headings. I suggest that I deal first with the question of programme costs, project management and financial control, which are paragraphs 4 to 25, and then we can consider the United States arrangements in paragraphs 26 onwards. So first dealing with programme costs and project management perhaps I could ask about the Secretary of State's announcement of a revised estimate of £8,729 million for Trident. Can you provide us with a breakdown of the changes from the 1981 estimate of £7,520 million showing separately the effects of inflation, exchange rate variations and changes in programme.

content such as missile refurbishment? I understand you have been asked to have this information available.

(Mr Perry.) Yes. I understand that this is an open session and I should like to give the answer in rather general terms. If you wish to go into more detail perhaps we could do it later in a closed session. The estimate of £8,729 million which was recently announced by the Secretary of State is the estimate that we are using in our present review of the defence costing. It consists of an up-pricing of the £7,520 million which was given in defence open government document 82/1 and makes allowance for up-pricing for inflation and variation in exchange rates and the decision to reprocess at King's Bay, Georgia, rather than in the United Kingdom. The allowance in that up-pricing for exchange rates amounts to about one third of the up-pricing and that due to inflation amounts to about two thirds. The saving from the decision to go to King's Bay at average 1983-84 prices and an exchange rate of US\$1.53 to the pound, is just over £700 million.

2460. When exchange rates move against us do you have to find offsetting savings in

NOTE 1 . . in the text indicates that further information is awaited; it may be found by reference to a list in the published Report Volume.

NOTE 2 \* \* \* in the text indicates evidence which has been received but is not printed.

*The cost of printing and publishing these Minutes of Evidence is estimated by Her Majesty's Stationery Office at £1500.*

[Chairman Contd.]

other parts of the Defence Budget? (Mr Perry.) In so far as the Defence Budget is recosted every year with our latest estimates and in that all the programmes have to fit into that Defence Budget, certainly some measure of adjustment has to occur whenever any change takes place either up or down. We should all of course remember that in dealing with exchange rate variations it is possible for it to go either way, then the programme has to be adjusted to accommodate those changes.

2461. Given the changes in exchange rates that we have seen over the past year or so, is this not a major problem for you? (Mr Perry.) I can only say that we can accommodate the programme as recently announced and as presently costed in the Defence Budget with the funds that we expect to have available.

2462. At this early stage of the project there are still a number of very considerable uncertainties even in these latest figures. (Mr Perry.) Yes.

2463. How firm are the project estimates and what provisions have been made for contingencies? (Mr Perry.) As is stated in the National Audit Office report, we have been in the process of reviewing the Trident programme and of taking it through our central committees. That process has got quite a long way down the road now but at the moment it lacks final endorsement by Ministers. So the costings that we give today cannot be regarded as the outcome of that final review because there are certain options that still need to be considered. With regard to the contingency, the contingency in the estimate of £8,729 million is of the order of 20 per cent.

2464. Paragraphs 13-16 of the C&AG's report deal with the arrangements for project management which are designed to avoid the rather fragmented responsibility that was part of the criticisms made of the Chevaline project. Have these recommendations and improvements been fully implemented and put to serious test? (Mr Perry.) Right from the start of the Trident project we set up firm centralised project management arrangements. Rear Admiral Grove is in charge of the

office which is coordinating the whole of the Trident acquisition programme. That is a somewhat different situation from the beginning of the Chevaline programme. We have recently made some changes in the arrangements in so far as, in addition to undertaking a coordinating function across the whole of the Trident programme, Rear Admiral Grove also has direct technical and financial accountability for the elements of the submarine, the missile and the strategic weapon system.

2465. In paragraphs 17, 18 and 19 on financial control, how serious do you consider the risks in entering into significant financial commitments in advance of the final Naval Staff requirement and how have you sought to minimise them? (Mr Perry.) In the report this has been connected with the Downey procedures which underpin the instructions under which we operate in MOD(PE). However, Downey was really concerned with an individual project rather than a programme such as Trident with a large number of facets. What we have to look carefully for in a programme such as Trident is the coordination between the various elements. Of course the individual elements themselves are important but it is also the coordination between the elements that we have to watch for. Because Trident consists of a number of different elements which cover different spans in the time which they are going to take to bring into action, it is not possible to phase the programme in such a way that each reaches one of the conventional Downey points, or that they all reach the same point in the Downey procedures before we move onto the next. That would mean that the whole programme would go at the pace of the slowest and we would not be able to anticipate any of the longer lead elements of the programme. What we have done is to operate the Downey procedures on the main elements of the programme but depend on strong centralised project management to make sure that they are all well coordinated.

2466. But the Downey principles of course gave you the go-ahead after the satisfactory completion of the earlier stages. This is presumably going to throw a considerable strain on this coordination because of the different levels at which progress is made over so very many parts

[Chairman Contd.]

of the programme? (Mr Perry.) There were elements of this programme, such as the submarine, on which we were able to take decisions at a very early stage and the work on the submarine could therefore go ahead with confidence that we would not later wish to change that arrangement. Various other elements such as the tactical weapons system have come along in due time.

2467. Has the Trident Cost Plan been issued and are the related control and monitoring procedures now in operation? (Mr Perry.) The Trident Cost Plan is updated annually. The first issue has now been promulgated. There is a structure overlooking the control of the Trident project as the National Audit Office's report lays out in paragraph 13. At the top level the oversight is exercised by the Trident group, beneath that is a Trident Watch Committee which is chaired by the Controller of the Navy and below that Rear Admiral Grove runs a regular series of meetings which take stock of the programme. A report is made to the Trident Watch Committee at 4 monthly intervals and Rear Admiral Grove makes reports at monthly intervals to a senior level.

2468. Is the programme still on target? (Mr Perry.) It is.

2469. What steps are you taking to improve the accounting arrangements. I understand that there were four Defence Votes with which we are concerned here and that introduces a complication of its own. How can you identify Trident costs more clearly and more promptly? This is all set out in paragraph 24.

(Mr Perry.) The main problem, and I do not regard it as a very serious one, is that within different Votes there are relatively small changes, differences in procedure and so forth. What the Trident Finance Office have been trying to do is to make sure that the reporting is done in a uniform format; that they can readily use data which is generated within the normal Vote control procedures. Where we have the financial aspects of the Votes being monitored on computer programmes and so forth they can take off the information that is required for the centralised financial control of Trident in an easily and readily available form.

2470. Even if you have set out a satisfactory framework of control at this early stage there must still be some risks in all elements of the programme. Where do you consider the main risk areas are and what are the main steps you may have taken to safeguard against them?

(Mr Perry.) The main difficulty in the Trident programme is less that there is great technical complexity in various elements of it but that there are a very large number of strands, all of which have to be brought together. It is less a technical risk than a project management task of sizeable proportions. The Audit Office have identified in the paper three areas, not of risk but of some uncertainty at the time that the paper was written: the tactical weapons system, the support facilities and the warhead arrangements. The uncertainties in the tactical weapons system were in the definition of the requirements. The requirements have now been defined. The support and the building works involve us in quite a lot of definition work to decide exactly what it is we need by way of shore facilities and that will be carried on during the next year or so.

Mr Park

2471. Rear Admiral Grove, I see that you have overall management responsibility, according to paragraph 14 of this report. Despite the fact that the C&AG has said that the overall approach to the Trident programme is much more efficient than on an earlier project, when I look at paragraph 13 I see that although you have got overall management responsibility you have got a fair bit of top-hammer. You have got a Trident Group comprising the Chief of Naval Staff, Chief of Defence Procurement, Chief Scientific Adviser, Controller of the Navy, the Chief of Fleet Support and Deputy Under Secretary. You have got a Trident Watch Committee as well. These are all subject to the responsibilities of Controller R&D Establishment. That is a fairly heavy amount of top-hammer. Your ship must be rolling a bit.

(Rear Admiral Grove.) The Trident Group, which is the top level group, was very heavily involved in the early days of the project because policy decisions were being taken; they used to meet fairly regularly, possibly every two months, and I had to report to them. As policy decisions were taken, it became clear to the Con-

[Mr Park Contd.]

troller of the Navy—and Trident is essentially a sea systems project—who was a member of the Trident Group, that as we settled down into real project management it then became much more sensible to have a lesser committee, consisting of the Controller of the Navy, the Chief of Fleet Support and the Controller R&D Establishments, Research and Nuclear. They were the three people at three- and four-star level who had large elements of the programme. The Controller of the Navy essentially has the submarine, the strategic weapons system, and the tactical weapons system; the Chief of Fleet Support has the Support facilities; CERN has the nuclear warhead area. So in fact I am reporting to that committee three times a year, which then puts me under the magnifying glass.

2472. But you are reporting to the Watch Committee more frequently are you not?

(Rear Admiral Grove.) No, I am reporting to the Watch Committee three times a year.

2473. To whom else do you report?

(Rear Admiral Grove.) I report to the Minister (AF) once a month with a broad brush report. What I do is split my task up into five general areas: the submarine, the strategic weapons system; nuclear warhead area; tactical weapons system and the support facilities. That is the way I break my programme up. I conduct monthly meetings where the directors in charge of these different elements must report to me against a programme management plan. That is how I get close visibility of the programme every month. I report in broad terms to Minister AF monthly. I report in detail to the Trident Watch Committee three times a year.

2474. I assume that before you go to these meetings you do a fair bit of preparation. I am quite sure you would not go in without having done that. How much time do you reckon it takes you over a year covering all this reporting and various committees?

(Rear Admiral Grove.) Well that is a large part of what my business is; it is keeping an eye in considerable detail on the project. We have a system whereby my five main directors have their own management plans below mine against which their deputy directors and ADs have to report. It

comes up to me in a fair amount of detail, as reported by these five directors, but they in turn have their own subsidiary plans below. They are obviously very close up with the detail of their particular area and then I take it from these five main directors.

2475. Do you not think this impinges on your ability to do the overall management or do you regard it as part of the job?

(Rear Admiral Grove.) No, we run the system which was used for Polaris. When I came into this job I looked at how Polaris was done and that was essentially done to time and to cost. I have structured my management system on that, with certain changes but essentially the same because that was a successful system. We largely regard it as management by exception. In other words, managers have milestones that they must meet and they report against the probability as to whether that milestone is in danger or not. If there is no danger and milestones are being met, then essentially you do not want to know about it. What you want to know about is where the potential problems are and where the milestones are not going to be met. We run a system of that sort of reporting. This, I believe, means you do not waste time on the large elements of the programme that are running perfectly satisfactorily. You concentrate your efforts on areas where there is threat.

2476. The Chairman did ask you about paragraph 24 and the fact that we have got four different Defence Votes. What bothers me about that paragraph is that the returns vary in format and coverage. Can I take it that the consideration that MOD are giving to this will mean that these returns will have these variations taken out so that all the departments covered by these four Defence Votes will not have to go looking for the particular item in which they are interested?

(Mr Perry.) Yes indeed, that is the activity which the Trident Finance Office are at present engaged in.

2477. When do you expect them to complete that?

(Mr PAREN.) We have already taken steps to ensure that the monthly returns, which are provided to the Trident Finance Office, are in a standard form. The second part of this is increasingly to try to obviate the need for separate returns to that office

[Mr Park Contd.]

and provide information in a form which comes automatically out of the computer readouts that we are using for our own Vote account system. In that area we have probably now agreed to cover between 80 and 90 per cent of the programme in cost terms. There are still some problems in other areas to resolve because there are elements of Trident expenditure, particularly in the areas of support, which apply not only to Trident but to a very large number of other parts of the Fleet programme. It is in that area that we are still addressing the problem. But between 80 and 90 per cent will shortly be covered by a system of automatic computer-type returns; in the other areas we are at least ensuring that they come in a common format.

2478. When do you hope to complete this up to 100 per cent?

(Mr PAREN.) In the area that we still have to resolve there are still problems. I could not really at this stage forecast how long it is going to take to isolate, without creating in many cases a lot of additional work. If you are looking in the area of support where some elements apply to Trident, to other submarines, to other parts of the Fleet, to try to segregate those costs down to the last very small element can in the long term not be the best use of our time and resources. It is in that area that we still have to make judgments.

Mr Latham

2479. I take it that the Ministry of Defence and the Royal Navy attaches great importance to isolating the Trident so far as possible in terms of costing because of the likely effect on other parts of the Defence Budget if it is not isolated properly?

(Mr Perry.) Yes, it is the fact that the reporting and management of the Trident programme is rather different from that of many of our equipment programmes because of the public interest and parliamentary interest. It is also true to say that it is somewhat easier to identify the elements of the strategic systems because they are so special, because the arrangements for support and for running the strategic systems are very separate and clearly identifiable from the rest of defence activity so that we are able to do this in the case of Trident and indeed our other strategic programmes.

2480. So you would obviously be pretty strict in ensuring that other items of defence expenditure did not get laundered for the Trident account or vice-versa. (Mr Perry.) Yes.

2481. Rear Admiral Grove, when was the position of CSSE first created? Was it created for you or was it in existence before?

(Rear Admiral Grove.) The first position of Chief Polaris Executive commenced in 1963 with the signing of the Polaris Sales Agreement and Admiral Mackenzie was the first CPE. That ran during the period of procurement of Polaris. Once the system was accepted into service and the major part of the work ran down to the support of the system, the title changed to Assistant Controller Polaris for a short time and then became the Deputy Controller Polaris. When the Chevaline programme started it remained that way until the report in 1976 when the management of Chevaline was taken very firmly back into Projects. CPE was recreated then as he originally was back in 1963. When I took over the job in 1980 it was still Chief Polaris Executive and I then had the running of Polaris submarines and the continuing development of Chevaline. When the Trident programme was announced in the July of 1980 and we then started looking at our organisation as to how we might wish to alter it or not, we essentially based it on the original management structure that we had for Polaris, but bearing in mind this time that while we were procuring a new system, my prime job was the effectiveness of the existing one, with Trident close behind it. I sought permission to change my title to Chief of Strategic Systems Executive because it was a generic term and because I had responsibilities for Polaris, Chevaline and Trident. It was really from the onset of the Trident programme in July 1980 that we set up and modified our structure, but essentially based on the successful recipe of the last time round.

2482. How many staff do you have in total?

(Rear Admiral Grove.) Under the present system I have approximately 350—forgive me if I do not know them down to the last unit. A large number of them are in the strategic weapon system area. Although I have technical and financial accountability



[Continued]

[Mr Latham Contd.]

for the submarine the staff which belong to the Director General Submarines belong to the Deputy Controller Warships. The Director General Submarines is responsible to me for the submarine design but I do not own the staff. I directly have staff attributed to me of somewhere in the order of 350 but in fact I am affecting the work of people in other departments and the total sum of that would be much nearer 1,000.

2483. So basically you have two types of staff: those who are in effect supervising and coordinating and those actually at the sharp end designing submarines or whatever.

(Rear Admiral Grove.) Indeed.

Sir Michael Shaw

2484. In looking at the programmes and control of them am I right in thinking that so far as the submarines themselves are concerned and everything that goes with them very largely that is a matter entirely within the UK control? Progress and the programme can be pretty closely tied down.

(Mr Perry.) The element of the submarine programme itself for which we are to some extent dependent on the United States is that of the missile system compartment. You will probably remember from the previous open government publications that we are planning to use the missile system compartment to the American design of the Ohio class of boat and therefore our own design is linked into the American design. Of course they are very much further forward in their programme than we are so it does not create any problem for us.

2485. Does that mean to say that with one exception variations are entirely within your control and if in fact things go wrong they lie at your door rather than anywhere else unless it is to do with that particular aspect?

(Mr Perry.) Yes, on the submarine element of the programme.

2486. And all the ancillary shore-based facilities and so on?

(Mr Perry.) Yes.

2487. It is useful to have that for future reference.

(Mr Perry.) I shall regret that, shall I?

representation between ourselves and America? Presumably it is purely on the weapons side?

(Mr Perry.) Perhaps I could ask Rear Admiral Grove to answer that question. He and his opposite number work extremely closely together but he is in the best position to describe the relationship.

(Rear Admiral Grove.) Since the start of the Polaris Sales Agreement just over 20 years ago the Director of the Special Projects Office in Washington, who has run the Polaris, Poseidon and Trident programmes and CPE, Admiral Mackenzie as he was then, have met regularly with their staff every four months, alternatively in London and Washington to review the joint US/UK programme. The present Director SSPO, Admiral Clark and myself, have a jointly agreed programme and we review that every four months.

Having agreed it, they, as all the other departments I coordinate, answer to our programme requirements. I have to say that the cooperation and the support we get from the American Strategic Systems Projects Office is very good indeed. They regard our programme as their programme almost as much as their own and I get tremendous support from them. It is looked at in great detail three times a year and that is why we have the Trident Watch Committee three times a year as well, because that meets just after I have talked to the Americans so that the Trident Watch Committee can be aware of how things are going. I have an office with a small team within the American Strategic Systems Project Office permanently there. I have a Captain there and he sits in every Monday morning on Admiral Clark's progress meetings on his total Trident programme. He reports to Admiral Clark as he reports to me and I have an American cell in my office in London. So there is very close liaison between the two programmes.

2489. Would you say that system of surveillance and cooperation has grown directly out of Polaris experience or has it had to be looked at completely afresh?

(Rear Admiral Grove.) The system we adopted for Polaris was largely built on the system that the Americans built up themselves with Admiral Raeburn who started the project back in 1956. In fact we have to have common methods of reporting and

[Continued]

[Sir Michael Shaw Contd.]

The strength of the programme has been that it has been established and essentially the methods have stayed the same throughout the years.

2490. No cancellation charges or commitments. Does that mean that either the Americans can say they are finishing and not going ahead or we could say similarly?

(Mr Perry.) There may be a little bit of confusion here. Where in the paper it says there are no cancellation charges it means there are no inter-governmental cancellation charges. If we cancelled part of the programme we would of course have to pay the normal rundown costs to our contractors and suppliers in the way that we always do, but there are no cancellation charges as between the governments.

Mr Campbell-Savours

2491. You referred before to 20 per cent contingency.

(Mr Perry.) Yes; of the order of 20 per cent.

2492. Do I presume that contingency falls under two headings: project contingency and central contingency?

(Mr Perry.) Yes, that is correct. In the various elements of the programme there is a contingency element which the managers in charge of that element of the programme are primarily responsible for and then there is a central contingency for which Rear Admiral Grove is responsible. The 20 per cent is the total of all those elemental contingencies and the central contingency.

2493. Could you tell the Committee in public session what portion of the total contingency is project contingency?

(Mr Perry.) Six per cent is the central contingency so the remainder is spread between the elements of the programme.

2494. Do I presume that any information in the document marked "Secret" is information that cannot be made available to the public?

(Mr Perry.) Yes.

2495. Could I turn to nugatory expenditure. Do I correctly interpret that in this particular contract to be the almost penalty cost incurred by the switch from Trident I

to the switch from C4 to D5.

2496. In so far as there would be a gain to the Americans from switching from I to II because of economies of scale why do we have to pay that? Surely it would cost them more to produce the old system and they should have been pleased with our decision to switch in line with their decision to switch?

(Mr Perry.) These are simply cancellation charges or rundown charges amongst suppliers of Trident C4 equipments. These would have been for materials and so forth purchased in anticipation of us buying C4 and which were not used.

(Rear Admiral Grove.) The US Strategic Systems Project Office incurred nugatory expenditure themselves because they were procuring long-lead material for a larger C4 programme because the Trident II decision had not been made. When their government made the Trident II decision they had indeed incurred some nugatory expenditure themselves. This was for actual commitments that had been made at the time.

2497. Is that figure not high in so far as the Americans had everything to gain by the switch? Should they not have paid a far greater contribution to that nugatory figure?

(Mr Perry.) When you say "the Americans" I am not sure whom you are expecting to pay.

2498. The American Government in so far as they were equally purchasers of the same system.

(Mr Perry.) That was our contribution to the materials that we had ordered.

2499. So that is our contribution.

(Mr Perry.) Yes.

(Rear Admiral Grove.) That is entirely relevant to our bit of the programme and not to their total programme.

2500. Is it correct to say that the contract did not provide for offset purchase arrangements in the United Kingdom?

(Mr Perry.) Yes.

2501. Could you tell the Committee what extent plutonium purchases within the United Kingdom are included under the headings of expenditure on Trident. You

[Mr Campbell-Savours *Contd.*]

saying that the American Government were purchasing plutonium from the United Kingdom and that this plutonium was weapons grade. I must presume that this material is being used in the Trident system.

(Mr Perry.) I am sorry but this is an area I cannot go into in the public session.

2502. Is that because, whereas the Americans are free to talk about it under their legislation, you are not because of British legislation? There is an article in the *Guardian* which refers specifically to this particular purchase and the statement in the United States.  
(Mr Perry.) It is not legislation so much as trying to protect classified material.

2503. Could I turn you finally to the arrangements in Barrow-in-Furness where the submarine is built. In paragraph 8 it says "However, MOD informed me that, were there not a Trident programme, almost all of the projected £200 million investment, of which £25 million is being provided as loans from Defence Votes, would still be required to sustain the yard as a builder of modern warships". Does that mean that if Trident were not to go to Barrow that investment would still have taken place?

(Mr Perry.) Yes, Vickers at Barrow are of course a submarine builder and a nuclear submarine builder, quite apart from the Trident programme. As you will know, we have a large nuclear non ballistic missile submarine fleet which is built at Vickers and these facilities are the capital facilities that are required for a submarine builder such as Vickers to do that type of work.

2504. So it would be wrong for people in Barrow to say that the future of investment in Trident is in any way dependent on the Trident product? On the basis of what you have just said it would have taken place anyhow?

(Mr Perry.) I am hesitating over the words "in any way" because there are of course small elements one can perhaps associate with Trident that might not have taken place had the Trident programme not gone ahead, but by and large yes, that is a true statement.

Mr Maxton

2505. Could I look at the question of the

pluses, in terms of our costs, involved in transferring the refurbishment of missiles from Coulpport in Scotland to the USA. The net gain to the exchequer at the moment is £711 million, would that be right?  
(Mr Perry.) £716 million is the figure at 1983 average prices and US\$1.53 to the pound.

2506. How many jobs in fact would have been lost at Coulpport?  
(Mr Perry.) I do not have to hand a detailed assessment of the number of jobs involved at Coulpport. What I can say is that the whole of the money represented by that amount does not represent a transfer from the United Kingdom to the United States because a very large element of the support arrangements that would have had to be installed at Coulpport would have in fact been US equipment.

2507. But there will be a loss of jobs from the present manpower at Coulpport once the Trident programme is fully in force, is that right?  
(Mr Perry.) The position on jobs is still under review as to what the long-term effect in the Faslane and Coulpport area will be; it is not something we can give a firm answer on at the moment.

(Mr Patten.) It is true that the effect of the change from Coulpport to King's Bay will mean fewer jobs at Coulpport. If one is looking, however, at the effect of having the Trident fleet in Scotland—here I take Faslane and Coulpport together—and accept that we have still to publish our proposals in detail to the local authorities—in broad terms we would expect, as a result of maintaining Trident in Scotland, employment at Coulpport and Faslane taken together, to run on at its existing level. Clearly, during a period when you are constructing new facilities there is potential additional employment. In the long-term we would expect the levels of employment in Scotland to remain at around the level they are now. We do not see a major overall reduction.

2508. If in fact you just maintain Faslane as a submarine base for your other submarines, leaving out Trident altogether, would there be any appreciable loss of employment?  
(Mr Patten.) Yes, a major one.

2509. You would be losing large numbers of jobs from there. What numbers are

[Mr Maxton *Contd.*]

we talking about in that case in Faslane at the moment?

(Rear Admiral Grove.) Obviously as far as Coulpport is concerned, from the point of view of strategic systems support, once we dispose finally of the Polaris/Chevaline system which will not be until well into the 1990s, there will be a loss of jobs associated with the strategic system work because we are refurbishing and processing at King's Bay. But of course Coulpport does torpedo processing and the DGST(N) element has not yet firmed up in its mind how we would use the real estate at Coulpport, some of which will become vacant once Chevaline and Polaris go. We are also increasing the SSN fleet and the SSK fleet at Faslane and if you take all these elements together along with Trident, what Mr Patten is saying is largely true; the overall balance of jobs will stay roughly the same. In the strategic systems area at Coulpport it will clearly drop.

2510. Taking the point that was made about Barrow-in-Furness and the point you are now making about Coulpport and Faslane is there actually any real employment benefit, any improvement in employment, in the United Kingdom as a result of the adoption of the Trident system? I am not arguing obviously the strategic importance of it but the employment and economic importance of it.

(Mr Perry.) This is a very general question. In that a certain deployment of defence budget monies is used in employment, then one might argue that a defence budget of a given size creates a certain measure of employment. In the context of the saving to the defence budget by the decision to process at King's Bay of course that element is then available for redeployment, hopefully in the defence budget, in other activities. You will probably be aware that 90 per cent of what we spend in equipment procurement is spent in the United Kingdom so a large measure of that saving from going to King's Bay should in fact appear as United Kingdom employment.

2511. But the money you are saving might equally all be mopped up by unemployment being created among certain work forces in Coulpport and by there being a secondary social cost which nullifies any effect on your programme in terms of employment. Would I be right?  
(Mr Perry.) This is a matter on which

there are a great many views. There is a view that it will create other employment in other parts of the country and therefore there may be local issues raised but not a general issue.

2512. On this Committee before we have expressed some concern about the levels of profit allowed by the Ministry of Defence to companies selling their goods to the Ministry of Defence. What sorts of levels of profit are you giving in your procurement in this particular field?

(Mr Perry.) I am sure you will be aware that a review board has just been looking as part of its normal cycle at the levels of profit that we give to our suppliers on non-competitive work. The rate of profit is arrived at by analogy with the profit being earned by outside industry. There is a proper formal procedure whereby this is all investigated and comparability is the principle on which we operate.

Mr Maxton: One hopes you are more successful than in the past in keeping that comparability.

Mr Morris

2513. My question really arises out of the rumoured underspend by the Ministry of Defence on procurement. Is there any underspend of the budget for Trident anticipated in the current financial year?

(Mr Patten.) The answer for this year is that there will be a minor underspend on Trident compared with our forecast. We will be almost exactly on forecast for this year for strategic systems as a whole.

2514. What is a minor figure in Ministry of Defence terms?

(Mr Perry.) Could we answer this question in the private session.

Mr Silvester

2515. From the figures that you gave at the beginning of this session it was clear that the increase in the total cost of the Trident programme was wholly accounted for by increased inflation and exchange costs. Yet I notice from paragraph 5 of the C&AG's report that the contingency was 14.5 per cent. You are now quoting us 20 per cent and that is a very substantial increase. Are you able to say anything in public about it?

(Mr Perry.) I can broadly indicate what has happened there. In the earlier estimate

[Mr Silvester *Contd.*]

part of the costings were global costings which were not broken down into a great deal of detail. The contingency figure of the order of 20 per cent which I have given this afternoon arises primarily because now that we have gone into the programme in more detail we are able to identify the contingency element in the sub-components more precisely. Whereas before we had put in an overall figure for a particular area and therefore a contingency element would not have been included in the £1,100 million that you referred to, it has now been separately identified and pulled out to go into that 20 per cent figure. It is true to say that it is difficult in that situation, because we did not identify what was contingency and what was basic programme cost earlier, to say whether our provision for contingency has in fact risen or not. But my judgment is that our level of contingency is probably about the same as it was previously in actual money terms.

2516. Otherwise it sounds to me that the more certain you are what you are making, the less certain you are as to what it is going to cost.

(Mr Perry.) No, it arises out of a greater degree of identification of the elements in the individual components of the programme compared with the previous costing.

Mr Shersby

2517. Can you say to what extent the planned closure of United States production lines and the entering into of significant financial commitment in advance of the former endorsement of Naval Staff requirement is a potential weakness in financial control of the project? Can you give the Committee any assurances on that point?

(Mr Perry.) This was a matter which was gone into quite extensively when the House of Commons Defence Committee considered the Trident programme in March 1982. We have put in the paper the negative expenditure that we think arose from that decision. The amount of negative expenditure is not of course finally known yet because all the bills have not come in and there is a prospect that the US may wish to acquire some of this material. So the position is a little uncertain although the figure given in the paper is broadly right. I do not think I have anything to add to what has previously been said to the

[Mr Deakins *Contd.*]

marine. We have been doing a lot of prototype trials with machinery to prove it. We have a very fine test facility at Barrow where we put the whole of the propulsion machinery together—we do this with the SSNs now—and test it before it goes into the submarine. Obviously if something happened to one major element—and I cannot conceive of it at the moment—and the submarine was not ready; then you cannot put the Trident weapon system in any other submarine. But we have a coordinated programme now and it has to make sense and all the elements must come together so that we can deploy the submarine when we have planned to do it in the mid 1990s. We do network programming and identify critical paths.

2521. Apart from inflation and apart from exchange rate variations which are obviously unpredictable over a period of time, what would you say are the main risks of cost escalation in this project over and above the estimates we have been given?

(Mr Perry.) The part of the programme which is most uncertain is the construction programme, the shore facilities and the infrastructure work, because there is still more work to be done to define exactly what is required there and to plan that part of the programme. That is the area I would identify as being most uncertain at the moment.

Chairman

2522. Perhaps we can now come onto the arrangements with the United States. We now intend to spend about £3 billion in the United States. How do you satisfy yourself that this spending is properly controlled by the United States Government themselves and that the work is done economically, efficiently and effectively?

(Mr Perry.) Rear Admiral Grove has already indicated the very close working relationships that we have with the American Project Office who are running their part of the programme. As far as the control, supervision, of US suppliers is concerned, we are getting exactly the same oversight of them as the United States programme is getting, and since we can assume that they are looking after their interests, they are looking after our interests as well. As far as the detailed financial investigation is concerned, the

the National Audit Office report. As you will see from that report, although we depend to quite a large extent on reciprocal arrangements between auditors in these types of programmes, we do have the facility for our own auditors to visit the United States and to look at the records of the United States Project Office. We intend to take up that facility and make audit visits starting some time this year.

2523. I understand that the Ministry of Defence are helping United Kingdom contractors to compete for weapons systems sub-contracts. This is mentioned in paragraph 28. How much work has gone or how much do you expect to go to British companies?

(Mr Perry.) The arrangements we have agreed with the United States are that UK manufacturers will be able to bid on sub-component work on the same terms as US manufacturers. We are in the fairly early stages yet of the bidding and selection of the sub-contractor process, so it is not really possible to judge now how successful UK manufacturers will be. It is really very much up to them to put in technically successful and cost effective bids.

2524. How do you help UK contractors get business on this?

(Mr Perry.) You will know that we have a defence sales organisation who maintain very close liaison in all parts of the world and they can be of assistance in helping our suppliers.

(Mr PAREN.) We have a cell within the Defence Sales Organisation that has given assistance to UK firms. They have done it in a number of ways. They have visited the sub-system prime contractors in the United States to find out the type of work which would normally be put out by these sub-system prime contractors. Based on that information they have been able to brief extensively British industry. They have also taken steps to arrange that those system contractors come to the United Kingdom, again to explain to UK industry what are the possibilities for work in the States. I am pleased to say that a number of those US firms have then followed those up by visiting the United Kingdom and in fact undertaking evaluation of UK firms as to their suitability to do work on the programme. As a result of all of that work something like 300 British firms have shown

[Chairman *Contd.*]

system contractors in the United States and something like 250 UK firms are now approved contractors in the sense that they have been cleared by the American companies to bid into the Trident programme. The Americans are still at a relatively early stage in awarding contracts in that field. They started to award contracts in the main Full-Scale Engineering Development phase around about October of last year and the process of awarding contracts will carry forward for about another 18 months to two years, i.e. towards the end of 1985. It is really within that period that we shall see the extent to which British companies are going to be able to compete successfully for this work.

2525. Have you any clue at this stage how successful we might be in that? (Mr PAREN.) It is still very early stages to make an assessment of that kind. A number of firms have been awarded relatively small contracts; a lot of that is for evaluation quantities of material. If as a result of those small contracts they were awarded significant parts of the programme then British industry could do reasonably well. But it is very early days yet to make an evaluation of that kind.

2526. Can we turn now to the funding arrangements. I believe we pay quarterly in advance into a United States fund. Is this not an inequitable arrangement? Payment in advance is not a normal practice in British industry.

(Mr PERRY.) There are actually arrangements for making progress payments at least. It is the normal arrangement for overseas purchases from the States that we supply the US Government with funds. We are not funding US suppliers in advance; we are putting funds in place with the US Government which they can then draw down in order to make payments to the suppliers.

2527. Is this not payment in advance? Did you not seek to get better terms on this?

(Mr PERRY.) We are in the process of seeing whether some arrangements can be made. These were arrangements that were set up under the Polaris Sales Agreement and it would involve some renegotiation of the Polaris Sales Agreement in order to get a formal change in the funding arrangements.

States whether some change in those arrangements to reduce the amount of money that is resting in the bank could be devised.

2528. Does this kind of arrangement occur with any other supplier? (Mr PERRY.) Could I perhaps draw a distinction between the Polaris Sales Agreement and the Foreign Military Sales Agreement which this Committee looked at earlier on, where it is normal for the United States to ask for termination liability deposits to be made. These of course can be substantial sums which rest in balances during the life of the project. The Committee has previously given this their attention and the arrangements are normally that we do gain interest on those. The balances that we are concerned with here are working balances. We are providing to the United States Government what are essentially working balances.

2529. But the United States Government themselves do not pay in advance so the United States Government is benefiting from the money that we make available above a certain limit presumably?

(Mr PAREN.) All that we are doing is lodging money with the American Government against which they can pay bills as they arrive in that quarter. It is a requirement of their own legislation that they are not permitted to fund our work, in other words to be paying out of congressionally appropriated funds money to settle bills on our behalf and then to bill us afterwards. They have to have the money in place under their own rules in order to meet the bills as they arise. What we are doing is providing them with funds quarterly to pay the bills which they anticipate they will have to meet during that quarter.

Mr Campbell-Savours

2530. Could I take you back to contingency monies again. Did the United States advise us as to what that level of contingency should be in relation to project and central contingency funds?

(Mr PERRY.) There is a mixture. We make our own judgment and there is an element in the American assessment of cost as well.

2531. In the revaluation of the contract price that has effectively taken place has there been any movement in the percentage

[Mr Campbell-Savours *Contd.*]

allocated to either of the two contingency components since the inception of the arrangements?

(Mr PERRY.) The answer must inevitably be yes, but it would be a matter of very great detail to actually identify all the movements and elements of the programme that have taken place.

2532. Would I be wrong in saying that the fact that you are able to indicate an effective reduction in the cost could perhaps in part be due to the fact that you have simply rearranged the percentage allocated to contingencies? (Mr PERRY.) Yes, you would be wrong in saying that.

2533. If that is the case for what reason would the contingency element have moved?

(Mr PERRY.) I think I explained in answer to an earlier question when we were discussing why the contingency was now of the order of 20 per cent, compared with a somewhat lower figure in the earlier costing, that what I believed had happened was that there had been a closer identification of sub-elements of the programme which were previously given as global estimates and have now been split down. Parts of those global estimates have been identified as contingency, and now appear as such whereas previously they did not appear as contingency.

2534. May I also take you back to this nugatory matter we were discussing before. In paragraph 11 it says, "The final amount will not be known for some time and will depend on negotiations on the US contracts and the disposal value of materials produced". Could you tell us what those materials are?

(Rear Admiral Grove.) These materials are essentially flight hardware material. You have to appreciate that with the Trident I programme, which of course has been in service since 1979 the Americans were coming very close to the end of their production line. In order for us to benefit and get the same contract prices, we had to come in and procure long-lead material to keep these lines going. That was essentially to do with the flight hardware for missiles. Obviously from the point of view of fire control systems and equipment to be fitted into the submarine, we had quite a long time before we had to commit

ourselves to money there. It was the fact that the Trident C4 missile production lines would be running down and therefore they had to procure the long-lead material for the UK increment being put on the end of their production. Essentially that is what that money was for.

2535. £18 million is quite a substantial amount of money. How do you know that you are getting the best price on disposal? Are we actually responsible for that disposal ourselves or is it being arranged by the Americans? Who is actually doing it? How do we know that we are not just being taken for a ride in what we actually receive?

(Rear Admiral Grove.) In this business there must be a certain amount of trust between the two governments. The Strategic Systems Project Office works very hard. It gets very closely monitored as regards the money that it spends and the same sorts of disciplines come in on the UK section of the programme as they do on the US section of the programme. But now that we have firmly gone away from C4 and the Americans are still running the system on, they in fact think they could use some of that UK material that would otherwise be wasted and that is where we are hoping to reduce that nugatory cost. As far as the cost of materials is concerned these are agreed under American contract arrangements which we fall in behind. We do not directly negotiate with American firms. The US Navy negotiates all the contracts with the American firms and we get the common contract prices. We get prices as if we had an enormous programme in fact. If we were doing it on our own as the French do, we would be paying astronomical sums. We are a very small programme tacked onto a large programme and we get the benefit of the economies of scale of that large programme.

Mr O'Brien

2536. Paragraph 29 refers to balances. Are these taken into consideration before the second quarterly payment is due? (Mr PERRY.) Yes.

2537. It refers to working balances. What do you actually mean by working balances. I appreciate that you need money there and a cashflow but is some level set before further monies are released? (Mr PERRY.) I believe that at the begin-

[Mr O'Brien *Contd.*]

ning of each period the American Project Office makes a judgment on what funds will be required during the following period and calls up that amount from the UK. So it will vary from period to period according to the incidence of payment during that period and in that process account is taken of any remaining balance at the end of the previous quarter in the amount that we actually fund.

2538. Is that assessment done on the ongoing programme or new work that may be introduced into that quarter?

(Mr Perry.) It is done on the basis of what payments the US Project Office will have to make on our behalf during that particular period.

2539. Is that because of ongoing contracts? Is it an actual assessment?

(Mr Perry.) Yes.

2540. So the assessments are done on any new contracts that may be obtained or ongoing programmes that are in being?

(Mr Perry.) Yes, I believe so. I am not quite sure that I have your point but throughout the project there are payments falling and an assessment is made by the United States Project Office of what payments will fall during the next period and we fund those payments less any outstanding balance from the previous period.

2541. Is the balance set at a certain figure? Do you top them up at all?

(Mr Perry.) If no payments were due to fall during that period then we would not pass any funds across.

(Mr PAREN.) The amount of money we pay each quarter reflects the estimate of how expenditure is expected to fall. It is an estimate based on the bills that will have to be paid in that quarter. If at the end of the quarter there happens to be a small amount left over then you take that into account in topping it up in the next quarter. The objective of course will be to have nothing left in the account at the end of each quarter and our performance over the years has been good; the balance has been something of the order of 2-2.5 per cent.

2542. So I take it that the topping up exercise is on actual assessments that are made or budget proposals for that quarter.

(Mr PAREN.) Yes.

(Rear Admiral Grove.) The Committee might like to be aware that there have been in fact occasions over the last four years when it has been negative and the Americans have indeed been out of pocket.

2543. Is that caught up in the following quarter?

(Rear Admiral Grove.) That is right. (Mr PAREN.) Yes.

2544. The Chairman referred to paragraph 28 and the assistance to UK firms in bids for contracts. What are the major pitfalls for UK firms in obtaining contracts? Are there any major pitfalls? I am thinking now of grants or grant aid in some of the regions. Do all UK firms have an equal opportunity in obtaining contracts?

(Mr Perry.) I believe I am right in saying that as far as we are concerned, yes. We are not doing anything that would give preference to one firm as distinct from another.

2545. Are the preferences to some firms looked at when the consideration is given? I am thinking now of firms who may have some benefit through enterprise zones or similar arrangements.

(Mr PAREN.) At the end of the day to get a contract a British firm will have to produce a proposal which is attractive technically, is attractive in terms of performance in timescale terms and is competitive in price. It will be on that basis that they are going to be successful or not, but it will be the American contractor who takes the view as between a number of competing proposals that he receives, whether they happen to be from British or American firms.

2546. Is the assistance which is given, given on a briefing exercise or is any material assistance given to UK firms?

(Mr PAREN.) No, a British firm will have to compete on its own merits. Our advice is to tell the firm how best to go about that task.

Sir Michael Shaw

2547. Are the quarterly payments made on an assessment as to what the future expenditure will be over that period, but in fact the bookkeeping, the reconciliation, is done once a quarter? There will be various expenses that have to be apportioned as between projects and all that is done once a quarter or is there a running balance kept?

[Sir Michael Shaw *Contd.*]

(Mr Perry.) The element we are talking about now only relates to the Trident programme. The funding is put in place at the beginning of the period, is drawn down by the United States Government and that funding is based on the estimate of the incidence of payment. It is drawn down as those actual payments occur and at the end of the period an appraisal is done of what has to be put in place for the next period and allowances made for any funding remaining in the account or any deficit and we move onto the next period.

2548. So they are actual payments. I wondered if there were expenses which had to be analysed periodically to sort out as to whether they belonged to us or somebody else. But if it is the actual payments may I ask a simple question. When I get my American Express bill every month that is sent straight to the bank and the bank has my authority to pay it. Why should that money not be put in a separate bank to our credit with the American Government empowered to draw cheques on it?

(Mr Perry.) That is very much the sort of arrangement that we have.

2549. Clearly therefore it is available for interest from our point of view?

(Mr Perry.) It is usual to draw a distinction between working arrangements which do not normally attract interest and capital deposits which of course do. In just the same way that on working balances the United Kingdom Government does not normally enjoy interest on cooperative programmes, on working arrangements we do not pay them.

2550. May I ask Mr Judd whether he is happy with this?

(Mr Judd.) We would certainly like to see interest credited for our deposits but it has to be said that when we ourselves finance work there is an instruction in our own Government Accounting which prevents departments from undertaking work for outside bodies without it being funded in advance.

Mr Maxton

2551. What percentage of the total United States Trident programme is our particular element?

(Rear Admiral Grove.) As far as the R&D side is concerned we are paying a once-and-for-all contribution towards

R&D which in fact was published: US\$116 million. Our proportion of the production programme is somewhere under 10 per cent when talking about the number of missiles that they will procure and the number of missiles that we will procure.

2552. And research and development. (Rear Admiral Grove.) Research and development from the American point of view is about a US\$9,000 million programme, of which we are paying a fixed amount of US\$116 million at fiscal 1982 dollars.

2553. Would you consider that there would be an increase in the United States costs if we were not purchasing from them?

(Rear Admiral Grove.) There are swings and roundabouts here. Obviously, depending on the size of a production run, you negotiate with your contractor what the price will be. I think you will find—and I am talking generally now and not specifically—that at the beginning of a production programme when you are on learning curves the unit cost of missiles or an aircraft tends to be greater. Then as the benefit of the learning curve and production accrues you negotiate a second production run and costs come down. If the British were not participating in this then obviously the total number of missiles at the end of the day will be less and therefore it could be that the missile cost is fractionally more.

2554. If that is the case do you not think that both in terms of the financing arrangements and in terms of the contracts to British companies we are not doing very well?

(Rear Admiral Grove.) If I could answer that on a personal basis, I believe that we are obtaining one of the most effective strategic weapons systems in the Western world and we are getting it for a price as if we were part of a very large programme. I do not know how else you could procure a system that we are procuring in a cheaper way. If you know it, I would like to hear about it.

2555. My views on whether or not we require that sophisticated system is another matter which obviously I am not allowed to go into. Do you actually think that one British company is going to get any significant contract out of this at all?

[Mr Maxton *Contd.*]

(Mr Paren.) I would be very disappointed if one British company did not get a significant contract out of this order. Yes, I would.

2556. You really do think one will get one.

(Mr Paren.) I think that some British companies will get orders. Probably, being realistic, it will be a few companies getting sizeable orders rather than a large number of companies getting small orders.

Mr Shersby

2557. Would I be right in thinking that in fact the size of the firm is not necessarily of the utmost significance and that some of this very specialist work is done by relatively small firms?

(Mr Paren.) That is true.

2558. Can you say whether any steps are being taken by MOD to make sure that not only those small firms which already do this kind of very specialist work have the opportunity to have a crack at it but others who represent some of our best British high technology also have the opportunity to do so?

(Mr Paren.) What we have consistently tried to do is to make knowledge of this programme available to the widest possible list of companies. Inevitably we have done this primarily through working through trade associations and quite clearly we have worked first and foremost with those trade associations who have some contact with the defence industries.

2559. Is that done through the Department of Trade and Industry?

(Mr Paren.) It is done not only through the Department of Trade and Industry but through our own Ministry of Defence contacts with trade associations who have, through the nature of their business, close contacts with the Ministry of Defence. We would include, for example, those trade associations who are linked to the NDIC and things like that.

2560. I believe I am right in saying that in the United States the Small Business Administration does in fact take considerable steps to ensure that small firms in the States do get a fair share of defence contracts. I know we have nothing equivalent to that in the United Kingdom but the Department of Trade and Industry

do try very hard nevertheless to do what you have just described: make it widely known. Is it MOD policy to constantly try to widen the number of contractors who are involved in this type of work?

(Mr Paren.) Are you now talking about work on behalf of the United States?

2561. Yes.

(Mr Paren.) We have to say that we try to make it available to as wide an audience as we can. Probably there is a limit to which our own resources can be applied to do that. But we have approached all of the major trade associations and we have taken some of the American firms not just to London but to other parts of the country when they have been here. There are still firms that are approaching the defence sales organisation for information and as soon as we get those inquiries from firms we are only too pleased to pass on to them the wealth of the knowledge that has been so far acquired.

Mr Morris

2562. It would be fair to say that there is a degree of scepticism amongst British manufacturers as to whether or not they will get work. Have representations been made by UK Government to the US Government to ensure that at least there is a proper fair chance?

(Mr Pary.) Yes, the arrangements that we have described do just that. They do have the opportunity to bid on this sub-component work on an equal basis with American contractors. It really is up to them. I do not think we could possibly go to the United States and suggest that there should be some sort of premium on a programme of this sort or that we could mount an argument to say that there was some reason why UK contractors, even if they did not provide the most competitive bid should be allowed the job.

2563. Are you confident that equal means equal?

(Mr Paren.) I am confident that British firms are being given all the information that they can reasonably require. Having said that, I also acknowledge that on the Trident programme there is a history, particularly at the major level, of contractors being retained on the programme over long periods of time. This is because of the vital nature of the system to the

[Mr Morris *Contd.*]

American Government. Therefore in a sense sometimes to get onto that programme British firms have got to prove that they can offer something better than the current American firms on the programme. If you have two absolutely equal firms then there will be a natural tendency to stay with the experience that you have. I have no doubt that if there is an advantage, and one that can be shown, in what the UK firm offers, there is nothing in our dealings with the Americans which would suggest they would turn down that opportunity.

2564. Returning to the Third Report of 1980-81 in which I recall that we as a Committee were very critical of the previous financial arrangements on procurement from the US, what lessons have been implemented in the contracts for Trident?

(Mr Judd.) I really do not think I could answer that question; I am afraid I am not briefed to do so. I will gladly put in a note.

(Mr Pary.) I am not too well briefed on this but I believe that in our Foreign Military Sales (FMS) arrangements I did make a distinction earlier between working arrangements and the termination liability which we normally have to deposit for foreign military sales. I believe I am right in saying that those are now deposited in interest-bearing accounts and then the working balances are drawn off.

(Mr Paren.) The distinction between what happens under the Polaris sales agreement and what happens under the FMS arrangements is that under FMS, not only do we have to fund the payment to be made each month, but we have to lodge sufficient monies for a programme to be run down if the UK should cancel their order. The arrangement which we have now agreed with them is that those additional funds which are there to fund potential cancellation costs on our behalf are now going into an account which is interest bearing. But we have never, on the Trident programme or on its predecessor programme, had to fund potential cancellation costs in advance. That is something that we benefited from by having negotiated quite different arrangements before these other FMS arrangements were instituted. It is also one of the reasons why perhaps we might find it difficult if we were to try to completely renegotiate our present Polaris terms in this field.

Mr Morris: Thank you, that is very helpful though it does not quite answer the question I asked so I should be grateful for the note.

Mr Silvester

2565. It seems to me that we have spent a lot of time talking about the potential loss of interest on the money that we are paying in advance but surely paragraph 27 indicates that taken overall the deal that we have with the United States is a very favourable one? Is that correct?

(Mr Pary.) Yes.

2566. Are you able in public to put any quantification on paragraph 27?

(Mr Pary.) I would rather leave that over until the private session.

2567. Would it be true to say that taking into account all the elements listed there, research and development, and overhead costs, and Rapiro, in your view we are still doing well in relation to the fact that we are gaining on the research and development costs?

(Mr Pary.) Yes.

Mr Latham

2568. Did any British contractors or sub-contractors get any work associated with the Polaris weapons system sub-contracts?

(Rear Admiral Grove.) There was no similar arrangement at the time of Polaris to the one that is now operating with Trident II. So the answer to your question is no.

2569. Have we any experience at all of building missiles of this kind?

(Rear Admiral Grove.) No. We came out of the big missile business in the Blue Streak era; these were essentially liquid propelled missiles. We have no real experience of solid propellant missiles of this size.

2570. I am thinking of the U.S. deals that we have successfully done with the Americans in technology in which we are very heavily involved such as aircraft engines. So I must ask what leads you to think that we are likely to do any good in this field?

(Mr Paren.) You are perfectly correct if you are talking about us supplying the missiles. But a programme of the size of the

[Mr Latham *Contd.*]

levels. We would accept that the main systems suppliers are going to remain American and that we are not going to get work in that area. Where we are hopeful of getting work is in some of the specialist fields at lower levels, and some reference has been made to that already, where we have a specialism to offer which is applicable to work that we do elsewhere in our defence programme.

#### Evidence heard in private

Mr Morris

2572. Mr Perry you were going to tell me what constitutes a "minor" sum in the Ministry of Defence.

(Mr Perry.) The question concerned the amount of underspend on Trident this year. Our judgment is that it is about \*\*\*.

2573. What does 10 cents on the exchange rate do to costs?

(Mr Perry.) I can tell you what one cent does: it is worth £25 million. The centre point is US\$1.53.

Mr Campbell-Savours

2574. I asked a question in relation to a document which is marked "Secret" and I presume information on plutonium sales, in so far as that material is used in Trident weapon systems, is subject to the same level of confidentiality. Can I therefore presume that as we are discussing this document in this Committee now that we can equally discuss the question of plutonium sales and if not can the difference be qualified for me between what is in this document and information that I am seeking about weapons grades plutonium sales and other plutonium sales?

(Mr Perry.) I am sorry but I do not think that I can discuss it even at a secret level if it relates to plutonium.

2575. If that is the case could I have an explanation as to why there is a difference between the value and status of that information as against the information in this document?

(Mr Perry.) Are you referring to the nuclear programme?

2576. I am referring to this particular document marked "Secret"—and a young lady has just been put in prison for revealing

2571. We wish them luck but we have still got the vast majority of the work in the building of the boats and the warheads themselves and that is British work is it not?

(Mr Perry.) Yes.

Chairman: We will continue for a brief period in private session.

such a document outside—and the information which I seek is equally secret; neither more nor less. As it affects the Trident programme, because we must presume that weapons grade plutonium is used in the Trident programme, surely I am in a position to get the information from you, or is this less secret.

(Mr Perry.) This document is graded secret. You are starting to talk about atomic material which is in another category.

Chairman

2577. Please feel free not to answer any questions put to you but perhaps we can take this up subsequently.

(Mr Perry.) That might be the way to proceed. If it is merely a question relating to Annex A and the section headed Nuclear Programme it may be possible to answer, but if it is a very specific question about nuclear material then I am afraid I am in difficulty.

Mr Campbell-Savours

2578. On the Nuclear Programme there is an item of expenditure, Second Trident Watch Committee, \*\*\* I presume that must cover weapons grade plutonium purchases. (Mr Perry.) It covers the nuclear programme.

2579. What I am trying to find out is whether that figure there includes purchases from the United States of weapons grade plutonium or whether it is our weapons grade plutonium which is shipped to the United States and used in the Trident programme?

(Mr Perry.) I am afraid I cannot give an answer on that.

Chairman: Thank you very much for coming along and answering our questions today.

Letter dated 6 April 1984 from HM Treasury to the

At Q.2564 Mr Morris asked me what lessons arising out of the Committee's Third Report, 1980-81, had been implemented in the contracts for Trident and I promised a note.

Strictly speaking that is a question for the Ministry of Defence and some of their answers bear on it, particularly those to QQ.2526-2529 and 2540-2542. I hope those answers assured the Committee that MOD confine their advances against Trident contracts strictly to the necessary working balances, thus minimising the cost to the UK taxpayer.

The Treasury Minute of 17 November 1981 (Cmnd 8413) gave more general assurances on behalf of the Ministry of Defence. More generally still, the Treasury specifically drew the attention of all departments to paragraphs 18-26 of the Committee's Third Report of 1980-81 and to the need to minimise such advance payments, to obtain interest on advances in excess of reasonable working balances wherever possible, and to see that final claims against such advances were substantiated promptly (a point which also arose on the Eighth Report of that Session).

I am sending a copy of this letter to the C&AG.

CH A JUDD