



Prime Minister

GOVERNMENT RESPONSE TO TENTH REPORT OF THE ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

One of the key conclusions to emerge from the meeting on environmental policy under your chairmanship on 17 May was that we must adopt a much more positive stance on environmental matters. It was agreed that the Government response to the Royal Commission's Tenth Report would provide an early opportunity of publishing a comprehensive statement of our approach - for consumption both at home and abroad.

Since then, there has been extensive consultation between officials of my Department and other officials concerned, including Dr Robin Nicholson, about the terms of the Government response. The end result is that we now have a document which, I believe, seizes the opportunity offered by the Royal Commission's review to restate our pollution control achievements and philosophy in a much more compelling way than we have sometimes done in the past. A copy of the latest draft is attached.

Copies have already been circulated for final official comment on matters of detail. Subject to the incorporation of minor changes which may result from this, from further polishing within my own Department, and from points raised in Eric Ashby's debate on RCEP10 in the Lords on 29 October (I shall of course consult colleagues with a particular interest if we propose any material changes), I should be grateful for colleagues' agreement by next **Friday, November 9**, to publish the text in our Pollution Paper series as soon as possible.

I am copying this minute and attachments to all members of the Cabinet and to Sir Robert Armstrong.

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2 November 1984

RESPONSE TO RCEP10: DRAFT FOREWORD BY SECRETARY OF STATE

1984 has been a particularly busy year for all concerned with the protection of the environment. Major international conferences have been held on matters as diverse as transboundary air pollution and the health of the North Sea. We are now looking forward to a meeting of Environment Ministers from the world's leading industrial countries which I have called as part of the follow-up to this year's London Economic Summit. There is increasing awareness of the international dimension of many environmental problems; and the United Kingdom is deeply committed to helping to identify the international solutions they demand.

But we must also make sure that our own house is in order. The Royal Commission on Environmental Pollution's wide-ranging Tenth Report published earlier this year, has been a very effective reminder that despite the substantial improvement in the quality of our environment over the past three or four decades a wide range of issues still require attention. This response sets out how we intend to tackle them - and shows that there has been no weakening in our commitment to environmental protection.

I am very grateful to the Royal Commission for all the work which went into the production of their Tenth Report, and wish them well for their next, equally daunting, study on the question of pollution by wastes, including contaminated land.

INTRODUCTION

(i) Co-ordinated action to deal with environmental pollution in all its forms began in Britain in the early 1970s, although measures to deal with particular forms of pollution have a much longer history. The Government of the day surveyed the scene in 1970 [Ref] , and the Royal Commission itself examined all the main issues in its First Report. Another general statement of philosophy was published as the Government's report to the 1972 United Nations Conference on the Human Environment [Ref]

(ii) It is timely to review, once again, the state of the British environment and the success of our policies. The Government is grateful to the Royal Commission for its assessment in its Tenth Report. This appeared at a time when many of the objectives set down a decade ago - and some not recognised even then - have been achieved. Clean air is now a fact in our city centres. Detergent foam has gone from our rivers. Unleaded petrol is to be introduced. Motor vehicle emissions have been curbed. National emissions of sulphur dioxide have been reduced by 39%.

New measures have grappled with irresponsible tipping of toxic wastes. Controls over marine pollution by dumping and by discharges from land have been extended. These welcome advances have been highlighted in a recent Government booklet [Ref] and, in a more substantial form in the Government's Digest of Environmental Protection and Water Statistics which is, itself, a pioneering document equalled in few other western countries [Ref]

(iii) But these advances have themselves drawn attention to new needs. As we have dealt with acute pollution in "hot spots" such as urban centres, so we have exposed potential problems of long-term exposure to lower concentrations, sometimes far away from the sources of emission. And our concepts have

changed. Our previous pre-occupation with sectors of pollution - air, water or land - has been replaced by a concern to ensure that those substances which must go into the environment do so where they will do least harm: the concept of Best Practicable Environmental Option defined by the Royal Commission in its Fifth Report. Similarly, concern with curing pollution has been replaced by a quest for prevention, by substituting cleaner industrial processes, by screening and controlling new chemicals, and by dealing with more and more wastes within the factory fence.

(iv) The Government accept the broad analysis, and many of the detailed points in the Royal Commission's Tenth Report. The first part of this response discusses the general principles of pollution control in the United Kingdom, using this opportunity to state again the Government's philosophy. The second part deals with the detailed recommendations. The Government welcome the prospect of continuing analysis - and constructive criticism - from the Royal Commission, just as we welcome the growing public debate on environmental issues.

(v) As the Royal Commission recognises, a clear and well-informed public perception of these issues is crucial. Accurate information about the state of our environment, and reliable scientific analysis of the way environmental systems work, is essential for informed judgement. Risks should be measured as objectively as possible - with uncertainties made equally explicit. But the Government also accept that people's feelings do not always fit the neat mathematical order of estimated risk. Environmental policy must take these into account. Where they are the result of misconception, only information - which is accepted as unbiased and derived from open processes - is likely to remove them. Where they are the considered reaction to values that cannot be measured by science, they have to be taken very seriously in the political process. This seems to be at the heart of the present environmental debate. It guides our approach, stated in the following section, to research, policy analysis, confidentiality, and presentation.

PART I

1. The Government are firmly committed to improving the quality of our environment. Although much has already been done, we shall do more. We have announced our aim of reducing national emission of sulphur and nitrogen oxides by 30% by the end of the 1990s. We have launched a major scheme to clean up the Mersey, our largest estuary still suffering from severe pollution. We are at the forefront of the move to take lead out of petrol throughout Europe. But in taking actions such as these we cannot ignore costs, or escape the need to spend money wisely.

2. Six broad principles govern the British approach:

- A. the need to base decisions on a sound scientific foundation;
- B. the need to set realistic goals for environmental quality, taking account of the uses to which environmental resources are put and the value we place on its preservation;
- C. the need to take technical feasibility and cost into account in reaching decisions;
- D. the need to recognise interactions between different sectors of the environment, and to dispose of wastes where they will do least harm;
- E. the need to recognise the international dimension to many environmental problems, and to take international remedies accordingly;
- F. the need to inform the public about the state of the environment and the actions taken to improve it, if confidence in the overall policy is to be established and maintained.

These principles are discussed in more detail below.

The Scientific Foundation

3. Pollution is controlled in order to prevent damage or reduce risk to human health, livestock, crops, ecological systems, historic monuments and the countryside.

Because pollution damage is generally proportional to the amount of pollution to which these 'targets' are exposed, and to the duration of exposure, in theory it should be possible to establish strict scientific criteria on which to base controls. In practice this is more difficult because individual pollutants are not the only factors affecting these targets. They interact with one another and with climate; their effects on health can be affected by the age and robustness of individuals. In setting standards pollution control authorities must take account of the best evidence of the effects of a pollutant, but they must apply their judgement in context (this is the main reason why pollution control is often best delegated to the local level), and they must allow for uncertainty. Continuing scientific research is needed in order to improve understanding of the link between exposure and effect, and so enable us to judge the likely effectiveness of particular controls. Effective monitoring is also needed in order to record the changes in our environment (and hence the success of our policies).

Realistic Environmental Goals

4. However much we might wish to, we cannot turn the clock back and restore the environment to its pre-industrial state. Pollution control means getting rid of unacceptable damage and reducing risk. It does not mean that we never discharge the wastes of our society into the environment. Our aim must be to set goals of environmental quality which take account of the uses we wish to make of particular environmental resources, and of the feasibility and cost of achieving these goals. For example, tighter water quality standards apply to water courses which provide the domestic water supply than to those which are used for industrial purposes. This is simply recognition that it would be both costly and unnecessary to apply uniform standards regardless of use.

5. This does not of course mean that we cannot move progressively towards higher goals, taking advantage of technical advances. But it does mean that we should give top priority to defending areas which are of outstanding environmental quality, to tackling the worst problems vigorously, and to restoring as much of the environment as possible to acceptable quality on the best achievable timescale. In this context, the Government accepts the appropriateness of the Royal Commission's concept of the Best Environmental Timetable.

Making Use of New Technology

6. Pollution control has an inevitable cost. We must always try to compare this cost with the benefits of control, even though some of the benefits, such as the preservation of natural beauty, are impossible to value in strictly financial terms. Sometimes we cannot achieve the controls we would like because the technology is not available (as is currently the case for disposal of high level radioactive wastes); at other times it is too expensive. For example, flue gas desulphurisation is an efficient way of removing sulphur dioxide from power station plumes, but the Industrial Air Pollution Inspectorate has not required its installation, because at a capital cost of some £150 million for each major power station, they have regarded it as too expensive an imposition to constitute 'best practicable means'. This is an illustration of why the Government cannot necessarily accept international calls for the installation of the 'best available technology' for pollution control, regardless of the balance of costs and benefits. But we stand committed to the use of the best technology that is economically feasible.

7. Moreover, the Government attach great importance to technical developments that lower the cost of pollution control (and may help Britain to win orders in an expanding export market). That is one reason why we particularly welcomed the new Pollution Abatement Technology Award Scheme (PATAS) which is now well into its second year. This is a splendid example of active co-operation between the promoting bodies (the Royal Society of Arts, the Confederation of British Industry and the Department of the Environment) and the sponsors, the ERAS Foundation, in pursuit of a very worthwhile objective.

8. The winners last year included enterprising proposals for the treatment of effluent from pectin manufacture, for using earthworms to turn agricultural and industrial wastes into compost and animal feed, for disposing of sludge from water treatment tanks, and for solidifying and collecting oil spills without damage to aquatic life. But there are many other examples of progress outside the competition, including the recent announcement by the Central Electricity Generating Board to develop and test a low NOx burner at a working power station. A number of other examples are set out in paragraph [] of Part II below.

Interactions between different sectors of the environment

9. The Royal Commission has rightly pointed out that different sectors of the environment can sometimes exchange pollutants between them. The problems of 'acid rain' are a classical example involving transfers between air, soil and water.

The Government accept the concept of the Best Practicable Environmental Option / ^(BPEO) which the Royal Commission first enunciated in their Fifth Report. It is clearly right that wastes should be disposed of in the way which causes least harm to the environment as a whole, taking account of possible interactions as well as economic, geographic, technical and other relevant factors. Such decisions require very complex analysis but it is important that our waste disposal policies should stand the test of the BPEO principle.

The International Dimension

10. More and more pollution controls are now agreed at the international level. This has happened in part because some problems that now cause concern (such as acid rain, and the health of the marine environment) result from the discharge by many nations of substances that affect the shared resources of air, sea, or international rivers. It has also happened because pollution is often caused by mobile sources such as cars, aircraft and ships, or from chemicals that are traded widely.

11. Our membership of the European Community has led to the adoption of a series of measures which have done much to improve the quality of our environment, but many of the international problems go much wider than this. That is why we participate actively in many international bodies, such as the United Nations Environment Programme and the ^{of the Paris, Oslo and London Conventions,} Commissions, which are seeking ways and means of controlling pollution on a global or regional basis. Co-operation on research internationally has also broadened, as was shown at the London Economic Summit in June when it was agreed, as a result of an initiative by the United Kingdom, that the Summit Working Group on Technology, Growth and Employment should report by the end of the year on the areas of pollution control where further research is needed.

The Need for Information

13. The Government accept that the public cannot be expected to have confidence in the actions taken by pollution control authorities unless the reasoning behind those actions is explicit. As the Royal Commission recognises, both industry and pollution control authorities have shown welcome readiness to provide more information to the public about their activities in recent years, and we are keen to pursue their recommendation that this should be put on a more systematic basis. These issues are considered at greater length in Part II of this paper.

Presentation of UK Environmental Policies

14. However sound our concepts and our actions, we shall not make the best use of available resources unless we get our organisational structure right; nor shall we convince our audience at home and abroad unless we present our policies and achievements effectively. In Part II of this response, we describe some practical steps to strengthen the Department of the Environment and other Government Departments concerned with pollution control (paras [] []).

15. We accept the Royal Commission's criticism that the United Kingdom has not always presented its policies to best effect, particularly in Europe. At home, our achievements have sometimes been underrated and our policies misunderstood; in European discussions, positions have sometimes become polarised, so that it has appeared that we are pulling in a different direction from the rest of Europe when in fact we are trying to achieve broadly the same objectives.

16. We are determined to change this. In Europe we are pressing hard for agreement to achieve the use of ^{unleaded} petrol ^{by new cars} by the end of the decade and there is increasing recognition that our approach to some of the difficult water pollution issues which face us is legitimate and effective. Within the UK, the Department of the Environment's recent booklet 'Environmental Protection' [Ref] has helped to put the record straight about the very real environmental achievements of the past two or three decades.

PART II

A. GENERAL ISSUES

CONFIDENTIALITY (to be printed opposite a reprint of RCEP10:
7.8-7.16)

1. One of the 'Principles' outlined in Part I was the need to inform the public about the state of the environment. As the Royal Commission recognises, there has been a trend towards greater openness in environmental matters in recent years. Accident reports have been made generally available (the reports on the contamination of beaches at Sellafield in November 1983 are a recent example of prompt publication by the Government on a matter of understandable public concern); Government research reports are generally made available (although cost consideration may preclude formal publication); and pollution control authorities have been disclosing a steadily increasing flow of information, some required by statute but the rest voluntarily, in the interests of keeping the public informed about the state of the environment. Industry has played its part in this by readily agreeing to the publication of ^{much} information which, as the legislation stands, could be regarded as confidential.

2. The Government accept that this trend should now be accelerated. The environment is a common resource, and secrecy about the way in which one part of society is using that resource can cause concern amongst others - who may fear that it is being abused. In a debate in the House of Commons on 12 March 1984, Mr William Waldegrave, Parliamentary Under Secretary of State at the Department of the Environment, said that "the presumption must be in favour of openness in environmental matters" (Official Report Vol. 56, No. 117, Col. 128). Action now needs to be taken to convert principle into practice in relation to every sector of the environment in a way which is readily comprehensible to the public at large. Obscure procedures can be as effective as secrecy in 'fuelling fear'.

3. There are, however, cogent arguments against total openness. The Royal Commission itself recognises that there are good reasons for non-disclosure in certain situations - for instance, in cases of national security and genuine commercial confidentiality. Moreover, the Government believe that it would be wrong to introduce a new uniform system which either

i. entailed an unacceptable increase in costs for either industry or pollution control authorities; or

ii. required cumbersome bureaucratic procedures - for example to obtain exemption from disclosure on agreed grounds.

4. Our response to the Royal Commission's recommendations on this important subject therefore divides them into two categories: those that we can accept immediately, and those on which we believe that further work is necessary in order to establish the most workable and cost-effective regime, bearing in mind the considerations mentioned in the previous paragraph.

5. The Government accept:

i. the thrust of the Royal Commission's overriding recommendation that '... there should be a presumption in favour of unrestricted access for the public to information which the pollution control authorities obtain or receive by virtue of their statutory powers.';

ii. the Royal Commission's proposals concerning public registers under Part II of the Control of Pollution Act 1974. Regulations are to be made to allow public access to information on discharges to water and the consent conditions attached to them, and on measures taken by Water Authorities (in Scotland, River Purification Authorities) to monitor and ensure satisfactory compliance with those conditions. The Act provides for free inspection of the registers at all reasonable times and for copies of entries to be obtainable for a reasonable charge;

iii. the recommendation that the law should be changed to facilitate the disclosure of information about emissions to the atmosphere. This conclusion was announced by Mr John Gummer, ^{then} Minister of State at the Department of Employment, on 9 July 1984.*

He added that the Health and Safety Commission were continuing their examination of the possibilities for more extensive disclosure of information about other aspects of health and safety matters of interest to the public, having due regard to the considerations of commercial confidentiality. They intend to publish a consultative document shortly.

6. The Government recognise the force of the Royal Commission's other recommendations on confidentiality, and particularly the attraction of establishing a uniform regime. But we believe that further work is necessary, in conjunction with the bodies who will be most directly affected by any revised arrangements, on the details of such a regime. We therefore propose to establish forthwith a working party, consisting of representatives of the pollution control authorities and relevant Government Departments. Their remit will be to report to the Government within 12 months on the measures necessary to implement, in the most practicable way, a regime consistent with the Royal Commission's principal recommendation (see 5(i) above). The working party will be asked to pay particular attention to the costs of the scheme, ^{and} the need to avoid red tape.

7. Our overall objective in this area is to satisfy as fully as possible the public's legitimate demand for information without imposing a regime which could undermine the proper relationship between the pollution control authorities and industry.

B. WATER QUALITY AROUND THE COAST

As the Royal Commission observes, there has been a substantial reduction in estuarial pollution in the United Kingdom in the last decade and the general quality of waters around the coastline gives ground for encouragement. The river quality surveys^{for England and Wales}, the most recent of which was undertaken in 1980, show a marked reduction in the length of tidal rivers classified as poor or grossly polluted (from 820km in 1970 to 440km in 1980). Much is also being done to promote further improvement. There is continuing attention to industrial estuaries such as the Tyne and Tees and the programme to clean up the Mersey Basin will require a very substantial long-term commitment of public resources. Water authority programmes are also making substantial provision - some £100 million over the next four years in England alone - for capital works to improve sewage discharges to coastal waters, in particular by suitably designed and sited long sea outfalls which, as the Royal Commission indicate, represent a satisfactory means of sewage disposal.

Nevertheless, in the Government's view, the Royal Commission is right to conclude that water quality in some estuaries is not yet satisfactory and that many bathing waters and beaches still suffer from an undesirable degree of sewage contamination. The Government therefore welcome, and for the most part endorse, the Royal Commission's recommendations which will help to ensure that current progress is sustained and where possible extended.

(Opposite 7.39) The Royal Commission expressed concern that the implementation of ^{Part II of the} Control of ^{Pollution Act} 1974 should not be further delayed and that it should as soon as possible make the real contribution to water quality for which it was enacted.

In line with the Government's earlier commitments, about half^{of} the provisions of Part II have now been brought into force, covering in particular the extension of the control system and the introduction of public involvement. Within the next few months the wider enforcement powers will be made available to Water Authorities and regulations will be laid to provide for the establishment of public registers of discharge consents. Implementation of the few remaining provisions will then be subject to public consultation in the usual way.

The Government share the Royal Commission's wish that the Act should quickly make an effective contribution to the improvement of water quality, in particular by providing a framework for improvement programmes geared to stated water quality objectives. Accordingly the Government are now consulting ^{widely} on a timetable for withdrawal of the exemptions granted, as a transitional measure, to existing discharges. This programme will give Water Authorities and industry a planning framework for the regular review and upgrading of existing discharges and a means of ordering priorities and monitoring progress.

We intend to bring existing discharges within the scope of the Act in the order of their importance for the environment, starting with discharges to estuarial and coastal waters.

We will also use the powers in the Act for the regular and systematic review of those consents granted to Water Authorities under previous legislation for their own discharges to inland waters, to ensure that standards are maintained and, where appropriate, improved.

Improving the quality of estuarial waters and coastal waters (and bathing beaches) is expensive. The treatment system for sewage in Weymouth and Portland, the major part of which was completed this year, included 2.7 kilometres of sea outfall and a sewage screening plant; it will also involve the construction of about 20 kilometres of interceptor sewers to cut off flows of sewage from entering the sea untreated and to convey them to the screening plant. The project has so far cost £25 million. Current major schemes at Shield Hall on the Clyde, Langbaugh on the North East coast, ^{and at} Hastings and Bexhill are expected to cost £59 million, £14 million and £8 million respectively. These formidable costs are largely borne locally. They have to compete in the regional scheme of priorities: and all Water Authorities have other pressing claims on their investment funds - including the maintenance and renewal of sewers and water mains, the improvement of water supplies (eg to reduce plumbosolvency or nitrate content), or the extension of services to cater for new development.

Our principal concern must therefore be to get priorities right in the short term ^{to} and ensure that they are consistent with coherent longer-term objectives. We believe that

a continuation of current investment levels over the next 15-20 years should allow improvement of all estuaries (other than the Mersey for which separate plans exist) to fair quality (class B) and most to good quality (class A) and the elimination of those unsatisfactory sewage discharges to coastal waters which affect areas of environmental or amenity significance. If water authorities are able to invest more in these works, the rate of progress will be improved. The Government will also discuss with Water Authorities and other interested bodies the setting and publication of objectives on a wider scale for estuaries and other tidal waters; the methods of measuring and reviewing progress towards these objectives; and the priority to be accorded to them as against other general and regional water authority programmes.

(Opposite 7.45) The Government agrees that the elimination of discharges of crude sewage is an important long-term objective, but is doubtful of the advantages of setting a target date for elimination of all such discharges. The priority must be ^{to establish} clear and realistic programmes to deal with those unsatisfactory outlets which affect areas of amenity or environmental significance.

(Opposite 7.47) Council Directive 76/160/EEC requires Member Governments to ensure that waters which are identified as bathing waters should consistently achieve certain prescribed standards of bacteriological quality by 1986 save where derogations have been agreed. The UK Government expects to comply with this Directive in respect of all the 27 bathing waters identified. However, the Government recognise the criticism that many bona fide bathing waters were not identified and accepts that in many cases there is no satisfactory information available on their quality.

It is the Government's view that coastal bathing waters (defined for example by sites at which changing huts, car parks or toilets are provided on a substantial scale for bathers) should be monitored. We will soon open discussions with the authorities concerned on monitoring these waters and publishing the results. This should enable authorities to identify those areas where remedial action is required, although it is expected that, in many cases, water quality will already meet the standards of the Directive.

(Opposite 7.48) We note with interest the Royal Commission's recommendation on coliform bacteria and will be discussing it with the Commission of the European Communities. But the technical difficulties of improving on the sampling and analysis regime for coliform bacteria as it is at present laid down in the Directive should not be underestimated.

(opposite 7.50) The United Kingdom Government ratified the MARPOL Convention and its 1978 Protocol on 22 May 1980; in doing so^{it} was one of the first maritime administrations to become a party. But like many other maritime nations it has not yet ratified the optional Annexes III, IV and V. Inter-departmental discussions are currently taking place on ratification of Annex V (on litter), and the local authority associations and a sample of local authorities have been consulted on the costs of clearing marine litter from beaches.

(opposite 7.51) The Government consider public education on the problem of marine litter to be a matter of importance. Through our annual grant to the Keep Britain Tidy Group, we support the Group's Marine Litter Research Programme. The Group's litter abatement activities are aimed at educating and persuading the public not to create litter, and lay

particular emphasis on education in schools and the involvement of all sectors of the community (local authorities, voluntary groups, industry and commerce) in changing attitudes by raising environmental awareness. The need for proper waste management in all situations is central to their overall message. We have also consistently stressed to the shipping industry the need to avoid the disposal of garbage at sea and have recommended voluntary compliance with the provisions of Annex V of MARPOL, pending its entry into force. Shipowners have responded positively, and passenger ferry operators have standing orders banning the disposal of garbage into the sea. Particular problems exist for cruise liners when large numbers of the minor ports visited around the world have inadequate reception facilities. It is also difficult in existing liners to provide enough space on board for storage and new garbage processing machinery.

(opposite 7.52) We note the Royal Commission's view that tipping of colliery waste off the Durham coastline should be brought to an end. Spoil from collieries along the North East coast has been deposited on a number of beaches and at sea for many years. The Government recognise the strength of local feeling about these practices and the need to bring such tipping to an end as soon as practicable.

As we made clear in our response* to the CENE report on coal last year the costs of doing so in the immediate future are prohibitive. We are nonetheless determined to continue the search for a cost-effective and environmentally acceptable solution within a realistic time period. The experimental pipeline at Horden colliery will help to determine the optimum distance out to sea for disposal and the extent of any adverse effects on the marine environment. This is fully in accord with the spirit of the 'best practicable environmental option' approach endorsed by the Royal Commission. The Commission itself has recommended against the extension of existing off-shore dumping operations as a possible alternative. We accepted this in our response to the CENE report. We have now

* Coal and the Environment Cmnd 8877 HMSO May 1983

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agreed with the NCB that the amount of spoil reaching the marine environment over the next five years will be progressively reduced. It has also been agreed that remedial measures should be put in hand wherever practicable on the beaches most affected.

A number of specific measures designed to contain the area of beach affected by spoil disposal and to ensure that such areas are cleared regularly of any unsightly debris are to be put in hand by the Board as a first step towards full restoration. *These include the diversion of spoil to an inland quarry, a study into the feasibility of a containing bund, and a periodic sweep of the beaches.*

(opposite 7.53) We accept the Royal Commission's conclusion that there should be a more positive approach to the EC Waters for Shellfish Directive. The progressive implementation of Part II of the Control of Pollution Act 1974 will provide enhanced powers for the Water Authorities in this area, and as part of our continuing discussion with them we shall be seeking an extension of the implementation of the Directive.

(Opposite 7.56) We played a full and constructive part in the preparation of the international conference on the North Sea. As the country with the longest North Sea coastline, the United Kingdom has a strong interest in preserving its health and the Government welcome the Royal Commission's view that there is at present no substantial threat to the North Sea. Because of its assimilative capacities, the North Sea represents the best practicable environmental option for the disposal of certain types of waste under controlled conditions. Nevertheless we recognise the strength of international concern about the possible effects of inputs to the North Sea, and during the preparation for the conference we insisted on a thorough international scientific assessment ^{by experts from all the participating countries} of the environmental state of the Sea to isolate areas of concern.

This "quality status" paper has now been completed.

It has confirmed the UK's view that the health of the North Sea is generally good, and that damage is limited to certain coastal and estuarine regions, mainly on the Continental side. The UK will support any action aimed at protecting these endangered areas. The findings of the quality status paper support the results of studies by the International Council for the Exploration of the Sea (ICES), which through co-operative international programmes keeps the effects of man's activities on the North Sea under constant review.

(Opposite 7.57) Monitoring and research studies on the Irish Sea have been carried out by ICES, and more recently by the Joint Monitoring Group of the Oslo and Paris Commissions. Reports on these studies have been published and ICES have announced their intention to carry out a further analysis of the Irish Sea in the near future. In addition the UK environment departments have sponsored or carried out research and monitoring to determine the effects of discharges into the Irish Sea, and the results have been published. Reports on radioactive waste discharges appear annually, and a Government report on the effects of sewage sludge disposal is expected to be available towards the end of the year.

But we recognise that there is public concern about the area and welcome the seminar on the environmental health of the Irish Sea which was recently held by the Royal Society of Arts (RSA), in which Government officials participated. Possible follow-up measures are under consideration.

FOOTNOTE

These paragraphs have been written to reflect UK conditions. While for some matters, such as the essential features of the implementation of the Control of Pollution Act 1974, this is appropriate, there are as regards other matters important differences in respect of Scotland; the most significant of these are summarised here. Prior to the implementation of the Control of Pollution Act Part II, the extent of control by River Purification Boards of estuaries and tidal waters was much more extensive in Scotland than elsewhere. For this reason, much has already been done to deal with some of the more serious unsatisfactory discharges; in the last 10 years some £200 million has been spent by the Sewerage Authorities concerned. Future plans envisage a further £130 million being spent by these authorities and there has been, in addition, significant expenditure by industry. When all these plans are fully implemented only relatively small and local areas of pollution will remain to be dealt with. In line with this investment the most recent survey data disclosed that with the exception of local "black spots" estuarial conditions in Scotland are generally good and ^{that} only 25 km of the tidal reaches of rivers are still grossly polluted. While no Bathing Waters were designated in Scotland, the EC Directive's main criteria are applied to beaches in their area by some River Purification Boards and the results published. The application of the EC Shellfish Waters Directive has been assisted by the extensive control available to River Purification Boards; designations represent a fair proportion of current shell fisheries and there has been little pressure for further action.

C. AIR QUALITY

(Opposite 7.6 and 7.7) - Straw burning

We recognise the problems which can arise as a result of careless straw- and stubble-burning and have taken action to strengthen the model on which local authority byelaws in England and Wales are based. The model is broader in scope than its predecessor and reflects the Royal Commission's view that more reliable methods of control over straw- and stubble-burning are required if the practice is not to become a recurring problem.

Experience of the 1984 harvest is that observance of the byelaws and of the code of practice issued by the NFU has markedly reduced problems, but we shall continue to monitor the situation in future and will implement more stringent controls if necessary. Meanwhile, we do not consider that prohibition of straw- and stubble-burning would be a practical means of reducing the risks associated with the practice so long as there remains some 5-6 million tonnes annually of straw for which no alternative outlets are available.

There are major snags which will have to be overcome with all currently known alternatives, and we are not confident that quick or easy solutions will emerge. We agree with the Royal Commission that priority should be given to research and development of alternative uses of straw and we are currently spending some £2m a year in this area. In this connection we welcome the NFU's proposal to set up a computerised register of techniques for, and problems associated with, ploughing in straw rather than burning it.

In Scotland, a much lower proportion of the crop is burnt since most can be used for livestock purposes. Model byelaws for straw-burning have not been issued in Scotland.

(opposite 7.60) - Long-term monitoring

We accept the importance of long-term air monitoring in providing a basis for the development of air pollution control policies. But as the Royal Commission recognises, there are difficulties in designing networks appropriate to the purpose, because of the costs involved: it is all too easy to spend large sums acquiring data that are of little real value. Monitoring arrangements are reviewed periodically and steps have already been taken to increase (from 6 to 9) the primary sites on which the most important pollutants are measured nationally. These sites provide our input to the international monitoring system (EMEP - Co-operative Programme for Monitoring and Evaluation of the Long Range Transmission of Air Pollutants in Europe) concerned with the acid deposition problem, which now operates under the Long Range Trans-boundary Air Pollution Convention; they will also form the nucleus of the network being established (in response to the report of the Acid Rain Review Group*) to measure acid deposition in the UK.

(opposite 7.61) The rural monitoring network

We accept that insufficient attention has been given to the acquisition of data of SO₂ in rural areas; and we agree that monitoring should be better tailored, subject to the availability of funds to provide general support for research on the effects of air pollutants. Rural monitoring is accordingly under review and the Royal Commission's advice will be taken into account as decisions on it are made.

(opposite 7.63) No_x and ozone monitoring

We have been conscious that baseline monitoring of NO_x and ozone was at a minimal, and barely acceptable, level. In view of the increasing significance of NO_x and ozone in relation to current environmental concerns, we have plans for extending

* "Acid Deposition in the United Kingdom" was written by the United Kingdom Review Group on Acid Rain and published by the Warren Spring Laboratory in December 1983

monitoring of these to the 9 primary national air-monitoring sites referred to above. Determination of the ^{ideal} number of sites

is always difficult, and the Tenth Report does not make clear the Royal Commission's reasons for proposing 25 sites for NO_x and 10 for ozone. We shall, however, consider the provision further in the light of the Commission's recommendation. It should be noted that monitoring in connection with the proposed EC Directive will call for essentially separate arrangements; monitoring for this purpose would need to be conducted at urban sites.

(opposite 7.62) Measuring methodology

Improvement in measuring methodology is a continuous process, and we fully accept the recommendation that improved techniques for the measurement of sulphur dioxide, smoke and the wet and dry deposition of other substances should be actively pursued at the Warren Spring Laboratory and elsewhere.

We agree that priority should be given to devising remedial measures for existing houses where radon concentrations are relatively high, and the Building Research Establishment and the National Radiological Protection Board (NRPB) are already undertaking research into this. In addition the NRPB are undertaking research to enable areas and houses at risk to be more readily identified. It is, however, clear that only a very small minority of existing houses are affected - depending on the underlying geology. The simplest step which can be taken to reduce radon concentrations is to increase ventilation, and there are other ^{good} reasons for doing this (see paragraph [] below [ie that opposite para 7.72]), but this may conflict with the aims of energy conservation. Ventilation of buildings is a complex matter and the Government are accordingly undertaking research to determine the degree of ventilation which will provide the best balance between the needs of indoor air quality and those of conservation.

Objectives for radiation exposure in the UK are set by reference to the recommendations of the International Commission on Radiological Protection (ICRP); NRPB advise the Government on the interpretation of ICRP recommendations and on any relevant European Community legislation. The figures recommended by the Royal Commission differ in some respects from the ICRP's recent recommendations on limiting exposures from natural sources of radiation, especially in relation to the circumstances in which particular action is justified. **Advice on this** has been sought from NRPB. When this advice is received, we shall consider, in the light of the results of the research mentioned above, what remedial measures are available and necessary for new and existing houses.

(opposite 7.70) Publicity on dangers of asbestos

We have published advice on the dangers of asbestos.* This will be updated as necessary. Separate advisory publications cover the building professions and the householder respectively and have generally been well received. A working party has been set up by the Health and Safety Commission jointly with the local authority associations to work on publicity for all sections of the building industry, and the Department of the Environment has also established links with the Institution of Environmental Health Officers on asbestos. This should ensure that up to date advice continues to be available and is widely disseminated. Further action along the lines suggested by the Royal Commission will be considered. As far as possible we propose to work through existing channels, eg Citizens Advice Bureaux, local authorities, and specialist trade and DIY journals.

(opposite 7.72) Publicity on ventilation

In our advice on energy conservation and the avoidance of condensation, we already warn householders not to seal their homes too tightly. Much of this advice stresses the need for additional ventilation when flueless heaters are used. Ventilation requirements are among the matters to be considered in a forthcoming revision of the national model building regulations.

(opposite 7.76) Unleaded petrol and carcinogens

We share the Commission's concern that we should not solve one health problem at the expense of introducing another. Subject to the constraints of the present state of knowledge on the nature of the emissions and their carcinogenic potential,

the Government will try to bear this important point in mind. Vehicle emissions are a matter for international discussion and agreement, notably within the ^{Euro}pean Community. In the recently published draft Directive on unleaded petrol, the European Commission has proposed a limit of 5% on the benzene content of fuel.

* [reference]

(Opposite 7.77, 7.78 and 7.79) Diesel engines and Smoke

We agree that there is considerable scope for improving the construction standard governing smoke emissions from diesel engined vehicles. But in the Government's view the scope for increasing effective enforcement against offending vehicles is much more limited.

The Department of Transport has already commissioned an assessment of possible technical improvements in the design of diesel engines so as to reduce smoke emissions and to maintain low emission levels during service. This assessment will enable the Department to work for more stringent limits in discussions of the expert working group under the UN Economic Commission for Europe. The Department will argue for the lowest limits that can be achieved by modern technology, taking into account the need to conserve fuel and to contain operating costs. Lower limits that may be agreed in Geneva, and incorporated in an ECE regulation, will need to be adopted by the European Community as an amendment to the current directive, before UK regulations can be changed. The Department will undertake further assessment work which, in the light of international discussions, appear desirable to support the UK position.

As regards vehicles in use, the Department of Transport checks heavy goods vehicles at their annual test and mounts such roadside checks as it can with available resources. In the Department's view, visual assessment by an experienced vehicle examiner is both expeditious and reasonably objective, at least as regards identifying the worst offenders. Although smoke meters exist, we doubt if an instrumented procedure would give significantly better results. Relatively few vehicles fail the annual test but, as the Royal Commission observe, this is not surprising given the opportunity to prepare for the test - and a low failure rate could be expected whatever the method of assessment. For these reasons, the Department have not given priority to the development of an objective test method for smoke, though some work is in hand at the Transport and Road Research and Warren Spring Laboratories.

Although smoke from vehicles is an environmental nuisance, and thus may appear a suitable subject for local authority environmental health officers, official examination of heavy goods vehicles is most effectively done by examiners competent to check all aspects of the vehicle - including, where operators' premises are visited, arrangements for vehicle maintenance. The Department of Transport's vehicle examiners, organised on a regional basis, are best placed to do this and, in the Government's view, the involvement of local authority environmental health officers would not be cost-effective.

(opposite 7.81) Secondary pollutants

We welcome the Royal Commission's discussion of this issue and agree that more needs to be known about the extent and effects of secondary pollutants. Within the Government, the Department of the Environment is the coordinating body for research in this field, and the Government's current annual expenditure on relevant research is £600,000. A number of bodies - including the Atomic Energy Research Establishment, Harwell, Imperial College, London; Warren Spring Laboratory, the Institute of Terrestrial Ecology; and the University of Lancaster - are carrying out relevant projects under contract to the Department.

(opposite 7.86) Acid deposition research

We wholly accept the Royal Commission's view that acid deposition is one of the most important pollution issues of the present time and that high priority should be given to research in this field.

In the UK and other industrialised countries there is increasing public anxiety about the possible links between emissions from combustion processes, acid deposition and environmental damage. Recognising the urgent need for improved scientific understanding in these areas to provide the basis for policy decision-making, we have already substantially increased our support for research. The Department of the Environment's current expenditure on air pollution research is about £2.5m a year, of which about one half is directly concerned with the acid deposition problem. With the addition of other Government research expenditure - notably by the Scottish Office, the Welsh Office, the Meteorological Office, The Forestry Commission and the NERC - and of other expenditure by public bodies (notably the CEBG), total UK expenditure on relevant research is currently running at some £5m a year.

(opposite 7.87) Pilot schemes for SO₂ abatement

We accept the Commission's view that it is important for the CEBG to gain technical experience of the options available for sulphur dioxide abatement. So far as flue-gas desulphurisation (FGD) is concerned, the Board are confident that a full-scale plant could

if necessary be ordered without the need for a pilot project given the fact that FGD is, as the ^{Royal} Commission itself has pointed out, the best developed and most widely used of the existing technologies. They have already carried out detailed engineering assessment on a number of the available processes. As for other emission control technologies, an extensive programme of work is being carried out. The CEGB and the NCB are collaborating on extending the use of existing coal preparation technologies and the development in the longer term of new coal cleaning techniques. The Boards are also embarking on a joint programme at a cost of [£25m] on pressurised fluid bed (PFB) combustion at the large experimental facility at Grimethorpe. Together with the Department of Energy, they are jointly sponsoring a design study of a generating plant based on a PFB combustor which offers the advantages of reduced SO₂ and NO_x emissions as well as improved efficiency. A similar study, sponsored by the Department of Energy, CEGB and British Gas Council, is examining combined cycle generation based on the slagging gasifier. Other relevant work includes an investigation by the CEGB of special designs for low-NO_x burners and the installation of a pilot plant to study the removal of hydrogen chloride from power station flue gas - the high chlorine content of UK coal could reduce the efficiency of FGD. These programmes, which are costing over £10m, should enable the generating authorities and their suppliers to keep abreast of available abatement options. Since publication of the Royal Commission's report, the House of Commons Select Committee on the Environment has recommended that the United Kingdom should commit itself to meet targets for reduction of emissions which would entail an extensive programme of emission abatement. The response to the Select Committee's report* should be read for a fuller statement of the Government's views.

(opposite 7.89) Encouragement of restriction of use of gases affecting the stratospheric ozone: initiative in OECD to encourage a worldwide policy to restrict the use of such gases

The Royal Commission recognises that over the last few years scientific concern about stratospheric ozone depletion has

* [Reference

decreased but that uncertainties remain about the effects of chlorofluorocarbons (CFCs) and of other substances and that research must continue. We share their views and in the circumstances do not consider that a basis yet exists for the initiatives recommended by the Commission although we shall continue to study the evidence as it emerges in this and other countries. The UK has already accepted that restrictions in the use of CFCs is a wise precaution, and steps have been taken in the European Community to establish a voluntary agreement with industry that use of CFCs in aerosols be reduced by 30%. In practice a reduction of 35% has been achieved. We regard this as an appropriate response to the problem in the light of current knowledge.

In a wider context, the UK was instrumental in establishing a Coordinating Committee on the Ozone Layer within the United Nations Environment Programme which brings together most of the scientific experience and knowledge of the problem which is available in the world. The UK is also participating fully in negotiations to prepare a Convention on Protection of the Ozone Layer which will provide a framework within which action on ozone depleting substances can be taken rapidly if this is justified by the evidence.

(opposite 7.92) Resolution of the CO₂ problem

We accept that it is essential to continue to investigate the implications of the slow build-up of CO₂ which is occurring in the atmosphere.

Concern over this increased carbon dioxide concentration, arises from the possible consequential effect on climate. There are still major uncertainties about this, and the Meteorological Office, with its acknowledged expertise in modelling, is contributing to their solution with substantial support from the European Commission, and as part of a major international effort coordinated by the World Climate Programme. Work being undertaken within the Natural Environment Research Council is also contributing to development of understanding of the carbon dioxide balance, both historic and prospective. The United Kingdom is also participating in the work of the OECD Environment Committee which includes the development of environmentally favourable energy strategies.

D. GENERAL ISSUES

(i) STRUCTURE

The Government have taken a number of steps aimed at improving the existing mechanisms for environmental policy co-ordination and development in the United Kingdom. For example, the resources of the Department of the Environment's Central Directorate of Environmental Protection have been strengthened in key areas, eg to enable important work on the Government review of air pollution legislation to be taken forward; the Radiochemical Inspectorate has been strengthened and a Northern Office established; and the Ministry of Agriculture, Fisheries and Food have recently set up an Environment Co-ordination Unit with the specific objective of providing a strategic framework for co-ordinating that Ministry's work on environmental issues, including pollution, conservation and rural affairs.

These measures supplement the arrangements recently introduced on the research side: the initiative announced at the London Summit (Part I, paragraph 11), and the new arrangement whereby the Royal Commission is invited to offer advice on the Department of the Environment's environmental protection research programmes before they are submitted to Ministers for approval.

We shall continue to keep our organisational arrangements under review. Our specific responses to the Royal Commission's recommendations are set out below:

(Opposite 7.26) The Confederation of British Industry first put forward their proposal for a high-level advisory body on cross-media environmental questions in 1976 following the Royal Commission's Fifth Report. The proposal has been considered again.

We fully accept the CBI's view that BPEO questions can arise at two distinct levels: individual local cases (eg in relation to emissions from a particular works) and strategic national issues (eg whether dumping at sea should be retained as a waste disposal option).

The CBI proposal is intended to address issues in the latter category. Our view is that the BPEO principle is already encompassed in the Government's approach to major environmental considerations, and that where necessary we would continue to seek advice from experts on specific issues rather than consulting an additional standing advisory committee. We propose therefore not to establish the kind of high-level body proposed by the CBI.

(Opposite 7.28) The Department of Transport is consulting the Health and Safety Commission about the desirability of establishing an independent source of advice on the transport of nuclear materials. We are not yet ready to announce conclusions but we accept that a valuable contribution could be made by members of the Radioactive Waste Management Advisory Committee (RWMAC) and members of the Advisory Committee on the Safety of Nuclear Instalations (ACSNI).

(opposite 7.29) We have for some time recognised the need for local government experience on the Radioactive Waste Management Advisory Committee, and on 3 May 1984 Mr Patrick Jenkin, Secretary of State for the Environment, announced the appointment to the Committee of the Scientific Adviser and County Analyst to Somerset County Council.

(opposite 7.30) The Nuclear Industry Radioactive Waste Executive (NIREX) is an executive body set up and financed by the nuclear and electricity generating industries. Although we had not thought that it would be appropriate for independent members to serve on NIREX, in view of the Royal Commission's recommendation we are now giving further consideration to the possibility in consultation with NIREX.

(opposite 7.98) We have considered whether to take out of abeyance the Commission on Energy and the Environment (CENE) in the light of the availability of advice on the environmental implications of energy development from existing bodies. We do not see a sufficient case for doing this. Should the future need for work on energy and the environment justify it, we would envisage enhancing the role of the Royal Commission itself ^{to provide such advice.} We have accordingly decided that the Commission on Energy and the Environment should now be abolished.

(ii) OTHER MATTERS

(opposite paragraph 7.17)

We agree that Pollution Paper No 9 ("Pollution Control in Great Britain - How It Works") has proved a valuable reference document, and accept that it must be kept up to date if that value is not to be diminished. A new version will be published shortly after this response, the need for updating will be reviewed annually thereafter, and further editions will be published as necessary.

(printed opposite paragraph 7.25) There can be no doubt that the pooling of manpower and equipment for pollution control will often be a sensible use of resources. The Department of Transport's Marine Pollution Control Unit ^{already} operates on this principle, and the Government commend the example set by the Boroughs of Cleveland Pollution Control Group and referred to in the Royal Commission's report. Arrangements of this kind are best determined at the local level, and pollution panels generally could provide a valuable forum for settling them. We shall encourage the pollution control authorities ^{to consider} what practical assistance they can offer in this area.

(opposite paragraph 7.95) Many of the technologies which would be required should research establish the need to reduce reliance on fossil fuel are already available. Nuclear power is already well established. The Department ^{of Energy's} current Energy Projections, which were published in 1982 as part of the Department's proof of evidence for the Sizewell Inquiry, include scenarios which suggest that the share of UK energy demand supplied by non-fossil fuels in 2010 might rise to a point within the range 21-34%. Most forms of renewable energy are at the stage where the immediate task is to establish the technical and economic feasibility of exploiting them on a commercial scale; as part of a continuing programme, the Department of Energy spent £11m on such work in 1983-84.

On the demand side, the Government already have a substantial programme to encourage the most efficient use of energy.

The Department of Energy will produce new energy projections from time to time as necessary.

(Opposite 7.101)

In co-operation with DHSS, QPCS, IAPI and other appropriate bodies the Department ^{of the Environment} will be initiating studies aimed at examining health patterns around sources of substances which are known to have health effects at high concentrations.

In the field of bioengineering the Department will be considering how best to guard against any environmental damage that may arise from the adoption and application of this technology. It is important that the Government take effective action if public confidence in this important new technology is to be preserved.

(opposite 7.102) There is no question of relaxing pollution control requirements in Enterprise Zones. The legislation governing pollution control makes no distinction between Enterprise Zones and other areas.

(opposite 7.105) A study of the availability of subsidies for investment in pollution control equipment in certain member states has been completed for the Department of the Environment by Environmental Resources Limited. This research was carried out in response to the House of Lords Select Committee on the European Communities' Report on the Polluter Pays Principle. Following a review of pollution charging systems in member states which is currently in hand, the Select Committee's report will be fully evaluated to assess whether or

not such instruments should be incorporated into UK pollution control policy. In this context, we welcome the adoption of the Regulation on Action by the Community Relating to the Environment at the European Council of Environment Ministers in June 1984. Amongst other things, this Regulation enables the Community to make grants towards the demonstration of new clean technologies (by pilot projects for example) in certain industries and the development of new techniques for monitoring certain pollutants.

(opposite 7.109) We agree with the Royal Commission that continuity and anticipation are essential components of forward planning. During the last decade environmental protection policy in the United Kingdom has moved significantly away from short-term reaction to obvious and immediate pollution problems towards a greater concentration on more subtle problems whose prevention requires long-term forward planning. This response sets out elsewhere our proposals for increased research and monitoring in specific areas, and for a more strategic approach to research generally. It also describes our longer-term proposals for improving water quality, particularly in areas where the Royal Commission have made criticisms. Our policy on the removal of lead from petrol, on an agreed timetable and in consultation with our European Community colleagues and the motor manufacturers, is an example of our general approach. We recognise the force of the Royal Commission's recommendation and we shall endeavour to extend it throughout all aspects of our environmental policy.

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