



PRIME MINISTER

INTEGRATED POLLUTION CONTROL

I enclose a draft consultation paper which sets out proposals for a new statutory framework within which Her Majesty's Inspectorate of Pollution (HMIP) would regulate the polluting emissions from scheduled industrial processes. The new arrangements are designed to give statutory expression to the cross-media approach to pollution control which underlay the creation of HMIP in April 1987.

Under the existing legal arrangements:

(a) HMIP regulates discharges to air from some 2000 industrial sites;

(b) under new proposals which have been agreed in principle, about 500 sites involving industrial processes which discharge the most hazardous substances to water (the "Red List") will also come under HMIP's oversight. There is some overlap between these two kinds of sites;

(c) currently there are no controls over the output of 'special wastes' - hazardous and difficult wastes specified in Regulations which are taken off-site for disposal.

Under the proposed new legal framework HMIP would regulate all the polluting discharges from the processes under its control looking in each case at the whole process and considering its impact on the environment as a whole. The new framework would provide for a more coherent application of existing controls, covering all media and where appropriate, requiring the use of "best available technology not entailing excessive cost". New standards of control would not be applied, except in the case of 'special wastes', the output of which would be subject to control for the first time.



Most large generators of 'special waste' are already regulated by HMIP in respect of their discharges to air or water. To avoid anomalies I propose that the generation of special wastes in significant quantities should become a new criterion for prescribing an industrial process for HMIP control. I do not believe that this criterion would add many sites to those already controlled by HMIP. Depending on the threshold fixed, the maximum number seems unlikely to exceed 500 and in practice will probably be much fewer. The consultation process will serve to clarify the numbers involved.

The new framework would go some considerable way towards implementing the Royal Commission on Environmental Pollution's concept of "best practicable environmental option" first put forward in 1976 and described more fully in a report published earlier this year. The Government has subscribed to this approach. It would also fulfil the remit given to HMIP in the Action Plan following the Efficiency Scrutiny Report, "Inspecting Industry: Pollution and Safety", to develop an integrated approach to pollution control, and would give HMIP a sound and coherent statutory basis.

The benefits of the new framework would be considerable. Because the industrial process and the impact of its discharges to the environment would be considered as a whole, the environment would gain through the optimisation of decisions on pollution control. Industry would gain partly through the technological efficiency that would come from looking at its operations in the round and partly from operating under a coherent system with one inspector granting a single authorisation.

I believe the proposals will generally be welcomed by industry. The additional costs of the new framework both in industry and in government should be small and should be offset, or more than offset, by gains in efficiency. I attach a draft Compliance Cost



Assessment which I propose to publish with the consultation document.

I would also expect the environmental world to give general support to the proposals, as a move in the right direction.

The proposals would require primary legislation. I also have a number of other environmental protection proposals which already have policy approval and which are also awaiting a legislative opportunity. I shall be bidding accordingly for a place in a future legislative programme. But I would make it clear in issuing the consultation paper that these proposals would have to wait for a suitable legislative opportunity.

I am hoping to issue this consultation paper, together with one on the Red List mentioned above, before Parliament rises for the Summer. I hope that we can reach agreement in correspondence, and should therefore welcome any comments by not later than 26 July.

I am copying this letter to members of E(A), the Lord President and to Sir Robin Butler.

Deborah Lamb

pp.NR

15 July 1988

(approved by the Secretary of State)
in draft & signed in his absence

INTEGRATED POLLUTION CONTROL : DRAFT CONSULTATION PAPER
EIGHTH DRAFT - 13.07.88

SUMMARY

1. The Government has given high priority to protecting the environment. It created Her Majesty's Inspectorate of Pollution (HMIP) to regulate discharges of harmful substances so that the control of the most serious pollution could be made more efficient and effective without imposing excessive costs or an increased regulatory burden on industry. Scientific evidence continues to accumulate that shows pollutants interact with many different parts of the environment. The Royal Commission on Environmental Pollution have stressed and the Government have accepted, that wastes should be disposed of according to the "Best Practicable Environmental Option" (BPEO).
2. The broad objective of this consultation is therefore to match the pollution control system more closely to our developing understanding of the nature of our surroundings. It has the following broad aims:
 - a. To develop an approach to pollution control that considers discharges from industrial processes to all media in the context of the effects on people and the environment as a whole;
 - b. To improve the efficiency and effectiveness of HMIP;
 - c. To streamline the regulatory system, clarifying the roles and responsibilities of HMIP, other regulatory authorities, and the firms they regulate;
 - d. To contain the burden on industry;
 - e. To maintain public confidence in the regulatory system by producing a transparent system that is accessible and easy to understand and clear and simple in operation;
 - f. To ensure that the system will respond flexibly, both to changing pollution abatement technology and to new knowledge on the effects of pollutants.

This consultation paper proposes that a system of integrated pollution control (IPC) should be introduced for certain types of industrial processes that discharge significant quantities of harmful wastes. HMIP would be the statutory pollution control agency for these industrial processes. Such processes would be prescribed by the Secretary of State according to published criteria.

3. HMIP would examine, and where appropriate grant consent to, the process technology and methods of operation to be adopted by the operator of a scheduled process and the levels of

- discharge to all three environmental media (air, land, and water) in the context of existing limits and the environment as a whole.
4. Before operating a scheduled process operators would be required to obtain the prior approval of HMIP by making application for an authorisation. Authorisation would be through the issue of a consent to which would be attached whatever conditions were thought necessary to protect people, and the environment as a whole.
 5. Consents would be reviewed at intervals by HMIP, or at the request of the operator.
 6. An enforcement and appeals regime would be used similar to those currently applied to discharges and proposed for discharges to air and water.
 7. The paper has 5 sections:
 - the first outlines the background to these proposals and the reasoning that leads the Government to believe integrated pollution control is needed;
 - the second and third examine the options on systems and legislation;
 - the fourth deals with issues of implementation that are largely independent of the exact method of integration chosen;
 - the fifth describes the arrangements for addressing comments to the Department.

Note

This consultation exercise is one of several that the Department has launched recently on environmental protection issues. A list is at Annex 1. The proposals in this consultation are compatible with, but separable from, the current policy developments in the single medium pollution control systems. The proposals seek to establish a framework for integrated pollution control. They do not include any propositions on the stringency of controls in any medium.

PART I

THE CASE FOR INTEGRATION

Purpose of the consultation

1. This consultation exercise sets out the reasons for a move to integrated pollution control and seeks views on two more detailed topics:
 - a. the mechanism for implementing an integrated system of pollution control for processes prescribed for HMIP jurisdiction;
 - b. the form of the legislation needed to give HMIP the necessary statutory powers.

The first of these issues is analysed in part II, the second is discussed in part III.

The case for integration

2. The UK's existing pollution control system has been developed piecemeal over many decades. As a result control over discharges to the different environmental media is currently exercised by a range of different authorities operating under a variety of legislation. The last few years have seen a rapid growth in understanding of the inter-related nature of our environment which is outlined later in this section. This has led to a widespread appreciation that tighter standards in any one environmental medium generate pressures on the other media. Furthermore, the report of the World Commission on Environment and Development ("Our Common Future") lent currency to the view that economic development and environmental concerns should be complementary. Leading industrialists have responded positively to these developments; many companies already have their own environmental policies and strategies.
3. The further evolution of the UK pollution control system should take such developments into account, and recognise that no one part of the environment is necessarily separate from any other. The environment functions as an integrated whole and each part is to some degree dependent on the other. Recognition of this inter-relatedness would improve our ability to constrain and reduce pollution, and would have the following policy advantages:
 - a. Pollution control policy would more closely fit the real nature of the environment, leading to more streamlined and coherent regulation with the minimum of intervention. The waste management of a number of processes would benefit from a cross-media approach to pollution control.
 - b. The regulatory burden on industry would be reduced.

- c. More efficient use would be made of pollution control resources.

These points are examined in more detail in paragraphs 16 to 20.

The development of the UK approach to pollution control

- 4. Air and water pollution has been controlled by legislation in Britain since Victorian times. In the case of water, the tradition embodied in the Public Health Acts and the later Rivers: Control of Pollution Acts has focussed on the management of the receiving environment and on the imposition of conditions on all discharges which can affect its suitability for the uses to which it is put.
- 5. For air, the Alkali Acts from 1863 to 1906 established four broad principles:
 - a. controls would be applied when the scientific evidence justified it;
 - b. pollution should be prevented at source;
 - c. the best commercially viable technology should be used to effect abatement of emissions or discharges;
 - d. the polluter should bear the costs of the necessary controls.
- 6. Whatever the medium, preventive action to limit emissions and discharges to the environment remains at the heart of the UK approach to pollution control, and is taken whenever the scientific evidence warrants it. Within the preventive approach there are times when precautionary action is necessary before there is scientific certainty but where there is evidence of a serious risk that severe damage may result if early and appropriate action is not taken (as was done in the case of contamination of the atmosphere by chlorofluorocarbons).
- 7. Because of this well-established preventive and precautionary approach to pollution control, Britain now has a cleaner and safer environment than at any time since the Industrial Revolution. This does not mean, however, that all pollution problems have been solved. As the grosser forms of pollution are eliminated or reduced to acceptable dimensions, more insidious and intractable problems emerge. Acid rain and the ozone hole provide ample evidence of the complex and unexpected interactions that can occur between pollutants and various parts of the environment.

The Royal Commission on Environmental Pollution (RCEP)

- 8. The RCEP provides the Government with independent and authoritative advice on environmental pollution issues. It has already examined certain aspects of an integrated approach to pollution control. One of its most notable

contributions is the idea that wastes should be disposed of according to the "best practicable environmental option" (BPEO). In the 5th report of the RCEP, where the BPEO concept was first outlined, adopting a BPEO-approach meant reducing or modifying waste generation and directing what waste there was to the environmental sector where the least overall environmental damage would be done. In the recently published 12th report the RCEP have been more explicit in their definition:

"A BPEO is the outcome of a systematic consultative and decision making procedure which emphasises the protection of the environment across land, air and water. The BPEO procedure establishes, for a given set of objectives, the option that provides the most benefit or least damage to the environment as a whole, at acceptable cost, in the long term as well as in the short term."

9. As clearly set out in Pollution Paper 22 the Government has long accepted the concept of BPEO. Disposing of wastes according to the BPEO is one of the seven points of the "environmental charter" set out in "Protecting Your Environment - a Guide" which was recently issued in the name of the 5 Government Departments with prime responsibilities for environment protection.
10. If, however, the UK pollution control system is to be improved to take account of the integrated nature of the environment along the lines the RCEP have recommended, two consequences of current practice must be recognised. First, that pollutants have effects in media other than those into which they have been released, and second, that reducing opportunities to dispose of a waste to one medium often increases the need to dispose of the waste (or its modified components) into one of the other media. The optimal disposal route for a particular waste will only be found if both these points are taken into account, and the option selected that causes least overall damage to the environment. At present there is no statutory provision through which such a balanced "cross-media" approach to pollution control could be taken. Legislation is thus required to put the approach into practical operation.

Her Majesty's Inspectorate of Pollution (HMIP)

11. RCEP's long running interest in BPEO was accompanied by recommendations that a body with the necessary resources to implement a BPEO regime should be created with responsibility for ensuring that wastes were disposed with regard to minimising effects in all three environmental media (land, air, and water). These recommendations were echoed by an Efficiency Scrutiny of pollution control ("Inspecting Industry: Pollution and Safety") which stated:

"If pollution inspection treats air, land and water disposal as three separate issues there is therefore a danger that

- a. the allocation of available resources to each of the three media will not reflect an overall view of where the problems are most severe; and
- b. the end result will be a haphazard disposal of pollutants to one medium or another unrelated to an overall assessment of which medium is best for each particular pollutant in any particular circumstances."

The Scrutiny recommended that a new combined "Pollution Inspectorate" should be formed out of the existing separate Inspectorates.

12. In its response to the Scrutiny - the HMIP Action Plan - the Government accepted the need for such an inspectorate, and agreed that legislation would be necessary. Further, they said the main pollution control priorities of the unified Inspectorate would be:

"..the development of a more integrated approach to the control of pollution from major industrial processes."

and

"..to develop proposals for minimising as far as practicable both the amount and the harmful effects of wastes arising, in whatever form, from such processes."

13. Accordingly HMIP was established on 1 April 1987 as a first step towards integrated pollution control (IPC). Under the Director there are two Chief Inspectors, one responsible for Radioactive discharges and the disposal of radioactive wastes and the other responsible for certain non-radioactive discharges to air, to water and for certain aspects of land waste disposal.
14. The proposals in this paper relate solely to the responsibilities of the latter Chief Inspector and his staff in the AWW Division of HMIP. This group currently have statutory powers under the Health and Safety at Work etc Act (1974), for the control of emissions to air from processes scheduled under the Health and Safety (Emissions to the Atmosphere) Regulations 1983. The AWW Division also has advisory responsibilities for controlled wastes and for authorising and monitoring certain discharges to water (eg those from sewage treatment works).
15. Radioactive wastes are already effectively regulated in an integrated manner under the Radioactive Substances Act 1960. The approach adopted takes full account of impacts on man of alternative waste management scenarios and ensures that operators use best practicable means to achieve the best practicable environmental option. Radioactive wastes will not be considered further in this paper, although in the longer term they should undoubtedly form part of a fully integrated control system.

16. These proposals relate to England and Wales. They do not apply to Scotland and Northern Ireland which have separate statutes and arrangements for pollution control.

Practical benefits of integrated pollution control

17. Earlier in this section we set out the environmental justification for integration and the weight of opinion that has been convinced of its advantages. The practical benefits of the policy will be:
 - a. Improved ability to constrain and reduce pollution
18. As waste management would be considered in the round from the outset of the design of a plant it will become possible to select an optimal process which will be more durable and less prone to unexpected problems. It will be less likely that waste disposal will passively follow the line of least resistance which inevitably runs the risk of being haphazard, a waste of resources, and a source of future problems.
19. In an internal study in 1976, the Department of the Environment (DoE) and the Industrial Air Pollution Inspectorate (IAPI) estimated that over half the air pollution Inspectorate's scheduled processes might be suitable for "cross-media" control. A number of industrial sectors have already benefited from taking a more integrated approach to pollution control. These include:
 - chemical production
 - paint manufacture
 - metal plating/refining
 - cement production
 - leather tanning

In addition the need to reduce inputs of pollutants to the North Sea is likely to give rise to a number of difficult disposal problems that a more integrated approach to pollution control would help to resolve.

b. Reduced burden on industry

20. Major dischargers of harmful wastes would find that IPC would provide a streamlined authorisation procedure for scheduled processes. This would help industry view their disposal options in the round. In so doing they may save costs and identify new business opportunities. Industry would, of course, continue to apply other statutory requirements outside the scheduling system, such as the proposed duty of care for the disposal of land wastes. The integrated approach would, for the first time, provide a common cross-media control philosophy within which all these requirements, and the relationships between them, could be viewed.

c. More efficient use of pollution control resources

21. By obviating the need for HMIP to maintain a structure based on regulating discharges to the three media separately, better use would be made of its resources. The Inspectorate's existing advisory role, including the advice they provide to Waste Disposal Authorities, would continue.

International commitments

22. It is of prime importance that developments within the pollution control system in the UK should be fully compatible with EC legislation, and give due weight to international agreements such as the Ministerial Declaration adopted at the Second International Conference on the North Sea. The EC and other international organisations are moving towards the harmonisation of pollution control standards and procedures with increasing momentum. Already over 200 EC Directives apply standards of environmental protection in UK law.

The Government's overall intent

23. In introducing integrated pollution control the Government is not setting out to enlarge substantially the number of processes scheduled for control by HMIP or to set more stringent pollution control standards. The intention is to create a new framework within which control can be applied more effectively.

CONCLUSION

24. From the preceding analysis the Government has concluded that a method of integrated pollution control is needed which:
 - a. introduces an effective cross-media approach to pollution control leading to a real and lasting overall reduction in pollution;
 - b. fully accords with the UK's EC and international commitments;
 - c. builds upon the existing UK approach to pollution control in recognising the need to balance the application and cost of technology with effective protection of the environment in terms of, for example, Environmental Quality objectives [EQOs] and standards.
 - d. is clear and transparent in operation;
 - e. does not impose excessive costs or delays upon industry;
 - f. is practicable and cost-effective to implement;
 - g. is adaptable to future developments in both science and technology.

PART II

AN INTEGRATED POLLUTION CONTROL (IPC) SYSTEM

Outline of an operational framework

25. The Government envisages that the key elements in a regulatory system for IPC would be those currently used, or proposed for use, by HMIP to regulate emissions to air in conformity with the EC air framework Directives to regulate discharges to water in conformity with the proposed approach for red list substances, and to meet all relevant EQOs and standards. These elements would be:
- a. Technology-based control: The Inspectorate would apply an integrated approach to all the polluting emissions of plant operating scheduled processes. Any aspects of a non-scheduled process operated on the same site would also come within their purview if those aspects were relevant to the control of emissions from scheduled processes. HMIP would consider the process technology, discharge abatement techniques and waste disposal methods to be used to ensure the protection of people and the environment as a whole.
 - b. Scheduling: Processes to be subject to IPC would be prescribed by the Secretary of State on the basis of published criteria.
 - c. Prior approval: The operator would have to apply to HMIP for authorisation before operating a new scheduled process or substantially modifying an existing one.
 - d. Issuing authorisations: Within a specified time period, HMIP would, if satisfied, issue an authorisation setting out such conditions as it thought were necessary to protect people and the environment.
 - e. Review of authorisations: The authorisations would be subject to review at the instigation of either the operator or HMIP in the event of changes to the Process, new knowledge of the effects of pollutants or new technological developments. Transitional arrangements would ensure that existing authorisations continue to have effect until the new system is applied by the Inspectorate.

- f. IPC Notes: These would serve the same function as the BPM Notes currently issued by HMIP for air pollution control. They would be sources of information about preferred technologies and the discharge limits HMIP would expect to be met. BPM notes would guide the introduction of the system, with IPC Notes becoming available gradually. As with BPM Notes, they would be revised periodically. Industry would be consulted about the timetable for the preparation of these notes and their content and the timetable for upgrading existing plants to new standards along similar lines to the requirements of article 13 of the Air Framework Directive. The system of waste management papers would continue as at present.

OPERATIONAL DETAILS OF IPC

26. In addition to the outline, the Government is keen to obtain views, especially from those likely to be affected, on detailed aspects of the proposed regulatory regime (paragraphs 26-36).

Criteria for scheduling

27. Comments are invited on what criteria and thresholds should be used for scheduling classes of process for IPC by HMIP. It is envisaged that the processes scheduled for IPC would initially be:

- processes in Air Pollution Part A;*
- processes discharging "red list" substances to water and sewers in significant quantities;+
- processes generating large amounts of special wastes.**

This would represent a minimal change over the scope of existing or prospective controls. This is important in order to ensure that integration can be introduced without disruption to industry. It would, however, be the first time that producers of solid wastes were specifically included amongst processes liable to control by HMIP.

Footnote: 1.* "Air Pollution Part A" means those processes listed in Part A of the December 1986 Air Pollution Consultation Paper entitled: "Air Pollution Control in Great Britain: Review and Proposals"

2.+ "Red List" this is a list of harmful substances which will be subject to control by the use of BATNEEC to minimise discharges to water. The list will be specified in a separate consultation paper.

3.** "Special wastes" will be identified from the definitions given in the Control of Pollution (Special Wastes) Regulations 1980.

28. As the aim is to control industrial operations so that they do least possible harm to people and the environment as a whole a more finely-tuned objective might be a single coherent set of criteria applicable to all three environmental media which would determine the processes to be scheduled. At present the Government considers these might relate to the potential for harm of the substances discharged by a process to any medium, judged on the basis of:

- the toxicity of the substances discharged;
- their persistence in the receiving environment;
- the degree of difficulty of controlling the discharges or their effects;
- the potential for cross-media transfers between disposal routes.

However, a system of scheduling built on such a list is at present only a long term aim. It is the Government's intention that IPC would be introduced on the basis of the criteria set out in paragraph 26. The above list could be reconsidered at a later date in the light of experience. The criteria for scheduling, either initially as proposed in paragraph 26 or on a broader basis in the future as suggested in paragraph 27, would apply equally to all sectors of industry.

The means through which IPC would be achieved

29. The traditional means of HMIP control over processes scheduled for air pollution control has been the duty on the operator to apply the "best practicable means" (BPM) to prevent emissions arising at source and to render any emissions that do occur - in the words of the Health and Safety at Work Act (1974) - "harmless and inoffensive". This has proved a powerful and adaptable means of control, well understood and accepted by industry, which the RCEP has endorsed as being the appropriate means of applying the concept of BPEO. The Government is very much in favour of retaining the essence of the best practicable means approach in the proposed IPC system.
30. There are, however, some points of clarification which it would be helpful to incorporate into the legislation. As applied by HMIP and its predecessors over many decades, the term BPM entails using the best commercially available technology at a reasonable cost with maintenance and supervision of the process according to best practice. For the sake of international consistency of terminology, however, the Government thinks it appropriate to use the formulation found in the EC Directives of "Best Available Technology Not Entailing Excessive Costs" (BATNEEC) across all the media as appropriate. This formulation spells out more explicitly the considerations involved in applying BPM. Furthermore, the IPC system has to recognise that for water, apart from the red list, the control system is based on quality objectives for receiving waters.

31. In issuing an authorisation HMIP would examine the application in the context of the whole site in which the plant operating a scheduled process was located (see paragraph 24(a)). This would enable them to examine the relationship between a particular scheduled process and any other processes on that site, whether or not they were scheduled.

32. In determining an application for authorisation HMIP would consider:

- the proposed technology of the plant operating the process, so as to prevent harm to health and the environment;
- operation of the process and ancillary matters in accordance with best practice;

in the context of all existing standards, ensuring that no existing international, EC or UK standards, including quality standards and limit values, would be breached by any IPC consent. This would mean that HMIP would require the use of BATNEEC to prevent the emission or discharge of pollutants:

- a. In every case where EC Directives require this;
- b. For specified processes or harmful substances discharged to specified environmental media;

In addition, the overall pattern of wastes discharged from a plant operating a scheduled process would be considered by the Inspectorate, in the context of their consideration of the process, in order to render any emissions that do occur harmless and inoffensive to the environment as a whole.

In setting the terms and conditions of the authorisation the Inspectorate must observe all relevant quality objectives and conditions required by the NRA for the protection of the receiving water and must have regard to the views of other statutory consultees as appropriate.

33. The Government recognises that cost effective pollution control must strike a balance between the extent to which available technology is applied to minimise discharges and the capacity of the environment to absorb and neutralise a degree of contamination. For discharges to water the proposed red list identifies substances which are considered particularly harmful to the aquatic environment because of their toxicity and persistence; for these substances discharges must be minimised by the use of BATNEEC, with the added proviso that the resultant discharge must not lead to a breach of the environmental quality standard for that substance in the receiving water. But for almost all other substances discharged to water it is more appropriate to make use of the absorptive capacity of the environment and to set discharge limits for these substances which would satisfy the environmental quality objective for that particular receiving water.

34. HMIP would therefore examine a plant operating a scheduled process, employing BATNEEC, where required, as described in paragraph 31, to prevent the emission or discharge of pollutants. If the operation of BATNEEC still permitted significant air pollution further controls would have to be applied. When, in the case of red-list substances, the EQO and BATNEEC suggest differing levels on discharge the tighter of the two requirements would apply. The NRA, in consultation with HMIP, will determine whether any relevant EQO has been satisfied. For non-red-list substances discharged to water to which an EQO applies, meeting or falling within the EQO would be sufficient demonstration that environmental controls were being adequately operated. The consent would carry conditions to ensure that the discharges are rendered harmless and inoffensive to people and the environment as a whole.
35. HMIP would not set limits unnecessarily on discharges of little or no environmental significance. In many instances relating to existing plants they are likely to find that the current mix of discharges already meets the needs of IPC. In line with the responsibility given to them in the Action Plan, HMIP would develop close working relationships with the other pollution control authorities whose broader responsibilities for environmental quality complement the technological controls HMIP would bring to bear on the relatively small number of scheduled processes. The National Rivers Authority, local pollution control authorities (for example, District Councils and Waste Disposal Authorities), and Water Utilities would be consulted as appropriate when HMIP considered applications for consent from operators of scheduled processes. The detail of the interface between HMIP and the NRA is an issue which is not yet determined and which is covered in the consultation paper on the red list.

Deciding the details of the consent

36. The Government would be interested to receive views on the factors HMIP should bear in mind when determining a consent or its conditions. At present it is proposed that the following would be taken into account when deciding the details of a particular consent:
- the current state of technology;
 - the requirements of EC legislation and other existing standards and quality objectives (such as EQOs for water);
 - the view of the National Rivers Authority or any statutory consultee;
 - their perception of the risks of any discharges or the environmental risks inherent in the operation of any scheduled process (leaving health and safety matters to HSE);
 - environmental effects (using Environmental Assessment information as appropriate);
 - how the production processes and control techniques would be operated;
 - costs of the controls;

- any other relevant factors - IPC Notes giving generic guidance which operators could be sure HMIP would take into account.

Information to be included in IPC consents

37. Comments on the information to be included in consents would also be welcomed, especially as the information would be open to public examination (see para 42(iv) below). A list of the information that might be included on an IPC consent is given in Annex 2.
38. There will be a need to ensure that the development of IPC does not conflict in any way with controls dealing with risks to the health and safety of workers and the public, matters for which HSE has the regulatory responsibility under the Health and Safety at Work Act and allied regulations. HMIP will continue to maintain and develop an effective working relationship with HSE so that employers are not subjected to inconsistent requirements as regards either plant operation, or the design of new plant.

Pollution control of non-scheduled processes

39. There are no proposals to extend IPC to processes other than those regulated by HMIP. All other processes would continue to be regulated on a single-medium basis by pollution control authorities as presently applies under existing legislation.

PART IV

THE LEGISLATIVE FRAMEWORK

40. The existing pollution control system for most industrial processes is based upon the requirements of the Control of Pollution Act 1974 (COPA), the Food and Environmental Protection Act 1985 (FEPA) and the Health and Safety at Work etc Act 1974 (HSWA). Additional protection is provided by the Public Health and the Clean Air Acts.
41. COPA contains the main UK legislation governing the control of discharges to water and the disposal of waste to land. FEPA adds controls over pesticides and the disposal of waste at sea. Both Acts adopt a consent based approach to control. This requires anyone who discharges or disposes substances defined in the Act or regulations to obtain consent from the competent authority. HSWA, which contains the main UK legislation relating to the control of industrial air pollution, places operators of scheduled processes under a duty to use Best Practicable Means (BPM) to control their discharges to air; operations need the prior approval of HMIP.
42. The new legislative framework will need to build upon aspects of the related legislation which are now well established and widely understood. This will ensure that integration can be

introduced with the minimum of disruption to industry whilst maintaining the continuity of present controls - paying particular attention to the need to keep within all European standards and domestic control regimes, such as EQOs.

43. This suggests three main options for the practical operation of integration:

- a. A duty based approach, under which the operator of a particular scheduled process would be given a duty to achieve integrated control using BATNEEC as appropriate, in conjunction with a very brief consent. This model places the onus for achieving effective integration upon the operator. It would automatically adapt to changes in technology and would be simple for the Inspectorate to administer. However, it lacks clarity - neither statute nor the consent would specify what the operator would have to do to comply with the law and there would be no means of demonstrating that waste was being disposed of in the most effective manner. This option does not therefore meet the Government's requirement for a clearly defined and more transparent system.
- b. A consent based approach, under which all scheduled processes would require a detailed consent from the Inspectorate in order to operate. It does not suffer from the lack of clarity of the duty model since all of the operator's obligations are set out in the consent, leaving the onus on the Inspectorate to ensure that effective integration is achieved. Such a consent would, however, have a number of drawbacks in the context of integration:
 - it can never be comprehensive because no consent, no matter how long, can cover every eventuality;
 - it lacks an in-built dynamic towards cleaner technology because the terms of the consent would fix the process at a point in time; the operator would have no incentive to go further until the consent was renewed;
 - it would be resource intensive for the Inspectorate to implement because they would have to draw up very detailed consents.

For these reasons the Department has produced a third option which combines the elements of each approach that are most conducive to integration:

- c. A residual duty incorporated within a consent. Consent for the operation of particular scheduled processes would consist of specific provisions based largely, but not exclusively, on the technology to be employed and the emission limits to be observed. Contained within the consent would be a general statement of a residual duty to operate the process and carry out all other functions not specified in the consent in accordance with best practice and in a manner that renders any emissions that do occur harmless and inoffensive to people and the environment as a whole.

This option combines the legal and administrative clarity of the consent system with the adaptability, economy and comprehensiveness of the duty based model. It would also possess a visible momentum towards cleaner technology achieved through regular review of consents and pressure for cleaner operational practices achieved through the residual duty, which would automatically adjust to the latest developments.

The Government accordingly favours the residual duty model. It is the only option that would meet the criteria set out in paragraph 23 without placing an undue burden on either the operator or the Inspectorate. Comments are invited on the choice of this model.

PART IV

IMPLEMENTATION

44. Many of the details of implementation are largely independent of the choice of model. It is important, however, to give a brief outline of the main issues in this area to enable readers to put the proposed new system in context.

i. Enforcement

The system of enforcement would cover:-

- breach of the specific terms of a consent or its conditions;
- breach of a residual duty;
- emergency provisions;

These would build, as far as possible, upon existing practice in relation to air. HMIP would monitor compliance with the terms of a consent by visiting the plant, checking emission records and conducting their own monitoring when necessary. They would require powers to:

- issue infraction notices formally notifying operators of breaches in their consents;
- issue improvement notices stating what changes need to be made;
- rights of entry and powers to require information;
- issue prohibition notices stopping an operation to prevent discharges liable to cause imminent risk of personal injury;
- and, in the last resort, to prosecute for failure to comply with an improvement notice, a condition of a consent, or breach of a residual duty.

ii. Information needs of the Inspectorate

In order to carry out their new integrated role HMIP would require operators to supply information on a range of topics, including:

- the process and its relationship with the locality;
 - all of the emissions leaving the site, and the route they take;
 - operational data;
 - monitoring information;
 - the anticipated effects of significant emissions.
- On occasions HMIP may have to obtain information independently of that supplied by the operator.

iii. Appeals

Provision would be made for appeals by an applicant to the Secretary of State against refusal to grant consent or against the conditions of a consent or the terms of an enforcement notice.

iv. Public access to information and third party rights

It is proposed that the public registers of consents for discharges to water established under section 41 of COPA should be taken as a model for public access to information under the integrated approach. This provides the public with a quick and easy means of obtaining the key information about a scheduled process and its emissions whilst providing industry with a clear indication of the information that they have to make available. Applications would be advertised and there would be third party rights to make representations to the Inspectorate about them.

v. Charging

Government policy is to make charges to cover the cost of providing services to separately identifiable sections of the public. The objective is to ensure to the greatest extent practicable that the costs of public services are borne by those using them rather than falling on general public expenditure. This is in line with the "polluter pays principle."

It is proposed that the powers in HSWA to charge firms for regulatory activities should be consolidated in the integration provisions to allow for the recovery of Inspectorate costs which directly relate to the regulation of discharges which enable operators to carry out their business. The proposed charges would thus cover HMIP's authorisation, inspection, and enforcement activities, but not their policy advice, research and promotion of good practice, which serve wider Government objectives. The details of the scope and operation of charges will be developed in a separate consultation exercise.

Incentive charges aim to induce firms to reduce their polluting discharges. They can enhance the efficiency and effectiveness of pollution control by using the market to allocate pollution reductions amongst firms.

They may, however, involve considerable practical difficulties in, for instance, setting the charge levels to induce the required pollution reductions. There can be no guarantee that charges will induce the desired reductions in emissions. The Government does not rule out their possible introduction in future and will continue to study their relevance and practicality. But there are at present no plans to introduce incentive charges in the proposed integrated control provisions.

vi. Transitional arrangements

The legislation would provide that all those operating processes which have already been scheduled on the basis of their discharge to air, or are already subject to consent for their discharge to water, should be deemed to have an integrated consent until they are reviewed by HMIP. Only applicants for a new or revised consent would go straight to integrated control.

PART VI - RESPONSES TO THE PROPOSALS

45. This consultation paper has presented the Government's proposals for the method of introduction of integrated pollution control and the reasoning that lies behind them. We would welcome comments on these proposals and on the alternatives that have been considered.

46. Comments should be sent to

RECENT AND FORTHCOMING CONSULTATIONS ON ENVIRONMENT PROTECTION
POLICY

Air:

Air pollution control in Great Britain: Review and Proposals -
December 1986

Scheduling and Charging - in preparation

Waste:

Waste disposal law amendments - September 1986

Water:

Creation of the NRA - December 1987

Trade Effluent Discharges to Sewer - Easter 1988

Control of "Red List" substances - imminent

INFORMATION THAT COULD BE INCLUDED IN A CONSENT

Operator's details

The name of the Company Secretary and the Registered name and address of the registered office of the Company

The name and address of the company's site where the scheduled process is located, including postcode.

The nature of the business.

Location of the operator's premises - a map

Number and type of other scheduled processes on the premises

Discharge routes used by the process and the extent to which these are shared by other scheduled and non-scheduled processes

Details of scheduled process

The type of scheduled process.

The size of the process, and its role in the overall manufacturing activity of the premises

The location of the process - a map with grid reference.

Regulatory information

Description of the process technology to be used to prevent wastes arising and to render harmless those that do occur

Discharge limits for the process to all the media specifying concentrations in waste stream or total amounts in a given time period (including the possibility of not setting a limit in one or more media), and any allowances for start-up or exceptional conditions

Monitoring regime specifying what is to be measured, how often, and by whom.

Information on the relevant EQOs and EQSs/AQSs which discharges are designed not to breach so that the operator appreciates the context of his discharges

Specific additional items (eg sulphur content of fuel, regime for washing down dusty areas at specified intervals), which can include anything from the general area the Inspector considers require specific mention for the process/operator concerned.

A standard wording (with variations depending on the type of scheduled process) covering a residual duty to operate the plant properly, maintain records, maintain the plant in good order so

as to meet the specific conditions and ensure the effects of the plant on the environment as a whole are minimised - the guidance on this being contained in the "IPC notes" for the process.

INTEGRATED POLLUTION CONTROL: PRELIMINARY COMPLIANCE COST ASSESSMENT

Introduction

Description of the Proposal

It is proposed to replace the present system of separate controls on a firm's harmful air and water discharges by a single rationalised system of integrated pollution control covering major industrial processes' discharges of significant harmful wastes to all environmental media.

These proposals are compatible with, but separable from, the current policy developments in the single medium pollution control systems, on which the Department is currently consulting. The proposals here seek to establish the general principles and framework for integrated pollution control. They do not include any propositions regarding the stringency of controls in any medium.

Purpose of the Regulation

Q1. What is the origin of the regulation eg EC proposal, UK statute, request from industry/trade/interest group/other?

A1.1 The need to give HMIP a legislative basis for its operations concerning discharges to air, water and solid or land wastes in line with the HMIP Action Plan. This was highlighted in the 1986 Efficiency Scrutiny Report: "if pollution inspection treats air, land and water disposal as three separate issues there is therefore a danger that the allocation of available resources to each of the three media will not reflect an overall view of where the problems are most severe; and the end result will be a haphazard disposal of pollutants to one medium or another unrelated to an overall assessment of which medium is best for each particular pollutant in any particular circumstances" ("Inspecting Industry: Pollution and Safety", para 5.2).

1.2 Calls by the Royal Commission on Environmental Pollution (RCEP) (see their fifth, tenth, eleventh and twelfth reports) for effective and efficient systems for the integrated control of the discharge of pollutants to all environmental media (air, water and land wastes). This has been endorsed by industry (e.g. Chemical Industries Association).

1.3 To ensure that the UK system of pollution control complies with the requirements of EC Framework Directives and that, in particular, it complies with the implementation of the Air Framework Directive.

2. What is the problem requiring regulation? How severe is it?

A2.1 At present there are separate systems for the control of discharges to air, water and land, based on different principles and implemented through different agencies. The RCEP and the Efficiency Scrutiny Report argue that this can lead to inter-media pollution transfers due to application of controls on one media leading to additional discharges to another. This can result in the misallocation of resources and environmental damages and/or additional costly control measures subsequently being required. The CBI state in "Clean Up - It's Good Business" (p11) that "interviews ... confirm that adding on environmental protection equipment after start-up is always more expensive, as is having to respond to sudden unforeseen development ... in short, crisis management is costly; far better for the company - and the community - to build protection in".

2.2 In a study in 1976, the Department of the Environment and the Industrial Air Pollution Inspectorate (IAPI) estimated that over half the air pollution Inspectorate's scheduled processes might be suitable for 'cross-media' control. A similar position is likely to hold today and for other media such as water, where control on effluents in, say, the leather tanning and metal plating industries can lead to the generation of toxic sludges.

2.3 Importance of containing the costs to industry of achieving the tightening environmental standards demanded by the EEC.

Q3. What will be the benefits to the UK economy as a whole, to Government objectives, to consumers, traders or enforcement authorities?

A3.1 The proposals would provide a single streamlined system for the control of harmful discharges to all media, which would create greater clarity and transparency regarding both public and private sector responsibilities.

3.2 It would enable the most effective and efficient use to be made of HMIP's resources.

3.3 It would reduce the bureaucratic demands on firms operating scheduled processes who would in future have to deal with a single system of controls on their discharges to all media.

3.4 It would lead to more effective and efficient pollution controls by providing a clearly defined system for introducing best practice at an early stage in an industry's installation of a new process.

3.5 Efficient control of pollutants and wastes can be directly linked to efficient production and use of resources. A process which minimises its discharges is probably also making the most

efficient use of its resources. Thus the CBI tell their members in their good practice guide, 'Clean Up - It's Good Business', that "pollution control is cost control". This can be illustrated by the example of a firm operating a scheduled process which produces aromatic solvents by refining crude Benzole, a by-product of coke production. One stage of the refining process involves treatment with sulphuric acid and generates a by-product known as acid tar which contains a high proportion of sulphuric acid mixed with hydrocarbons. In the past this was disposed to landfill but the practice led to contamination of both land and water with acid and toxic hydrocarbons. A better option was found to be incineration in a purpose-built unit with partial clean-up of the discharge to air, albeit allowing some discharge of sulphur dioxide from a tall chimney. The discharge to water is neutralised, and energy is recovered by raising steam in a waste heat boiler.

3.6 This experience has been repeated in many cases. Cider production, chemical production, wheat processing, the development of spray paint for cars and the optimisation of kiln operations have all demonstrated the potential benefits from improving efficiency and reducing waste through an integrated approach. There is, however, considerable scope for further adoption of cleaner and more efficient technologies.

Q4. What is the existing regulatory provision, if any?

A4.1 Separate controls on a firm's discharges to air and water. Controls on the means of disposal of solid waste. No formal system for the integration of these controls.

Impact on Business

Q5. How does the proposed regulation compare with current practice in industry?

A5 It compares well with the practices of well managed firms and the CBI's recommendations in 'Clean up - It's good business', where they state that "Good environmental practice means watching all the elements.A well conceived environmental policy and putting it into effect is just part of good management". Firms not already adopting this approach would be encouraged to do so through the advice of HMIP.

Q6. Are there alternatives to regulation (e.g code of conduct or voluntary agreement)? Why have these been rejected?

A6.1 Alternatives to regulation have been considered (eg. code of conduct, voluntary agreements). Voluntary agreements, in particular, play a useful role in achieving environmental improvements. However, these alternatives failed to meet the Department's criteria for an efficient and effective system. (see paragraph 23 of the Consultation paper) since they do not satisfy the need for a clear and transparent system which is fully in

accordance with the UK's EC and international commitments. A well specified framework of regulations is needed because industry requires as much certainty and clarity as possible about the regulatory system to plan its operations efficiently.

A6.2 Nevertheless, the proposals embody considerable consensual aspects. They are based on the existing pollution control system of providing a clearly defined framework of controls which is applied flexibly through extensive consultation and agreement with firms on a case by case basis. Industry is familiar with and supportive of HMIP's past practice in this area.

Q7. What timetable is proposed for the introduction of the new regulations? Must all the measures be introduced at once or can these be introduced over a period?

A7. A consultation paper will be issued in the summer with a view to preparing legislation as soon as a legislative slot can be obtained. When enacted, the system would be applied to all new scheduled processes. For existing processes, the new integrated controls would be introduced gradually taking into account the economic and technical feasibility of any changes that might be required. It will also be necessary to prepare guidance and possibly, regulations covering the practical application of IPC, which would be drawn up in consultation with other Government Departments and industry.

Q8. Can the period of operation of the new regulation be limited?

A8 No. Industry needs a well specified system of regulations to enable it to plan well into the future.

Q9. What consultations have there been with business? To what extent do the regulations take account of these consultations?

A9. Informal consultations during the development of the proposals. Formal consultations planned with industries coming within the scope of the proposal through their representative bodies and HMIP in their advisory role.

Q10. What will industry have to do to comply with the regulations?

A10. Firms with scheduled processes would have to apply the same procedures that they employ for discharges to air to all their discharges in one application made at a single time to one body. That is, they will have to apply for prior consent for a scheduled process, provide HMIP with information about their waste streams and implement any resulting required control measures.

Q11. Are certain sectors of industry or companies of certain size likely to be particularly affected by the regulation?

A11. The group affected would be the main dischargers of air and water pollutants and wastes. This will amount to about 2,600 industrial sites. Most of these are already separately subject to present air and water pollution control regimes and many are also significant generators of special wastes. The only exception would be some generators of special (land) wastes (very few in the initial stages, increasing gradually to no more than 500) who would become subject to controls to reduce waste generation at source.

A11.2 An approximate breakdown would be as follows:-

A)-2000 dischargers of air pollutants which are subject to control by HMIP in respect of air emissions.

B)-About 500 dischargers of red list substances to water, currently regulated by Regional Water Authorities, would be brought under HMIP Control. Of these, about 100 plants would already be subject to current air pollution control by HMIP (category A above). Of the remaining plants in this category, more than half would be in the (cadmium) metal plating, with the rest in agrochemicals formulation, paints and pigments, and timber treatment sectors.

C)-The additional generators of special wastes (as defined in Control of Pollution (special wastes) Regulations 1980) referred to above which will eventually total no more than 500. These plants would mainly be in the (non-cadmium) metal plating, mechanical engineering and metals fabrication sectors. Only the most significant waste generators would become subject to integrated pollution controls.

Q12. What will be the cost to industry to comply with the regulation?

A12.1 The introduction of new controls on solid waste generators (group C above) and the requirement to provide additional information on waste streams is likely to place some small additional costs on these firms. These would, however, be contained since the IPC controls would build on the present record keeping system required to comply with the special wastes regulations.

12.2 For Groups A and B, the proposed system should not involve additional data collection in the majority of cases. It would entail bringing together existing information on discharges to all media which may yield some small administrative savings for many firms.

12.3 Any increased costs would be experienced by only a few of the 2,600 most serious polluters, which would be mainly, but not exclusively, large industrial processes. Such costs are

therefore unlikely to be significant in the context of the industry as a whole, with the possible exception of a few small firms with inefficient waste management practices. Such firms would receive guidance and technical advice from HMIP on how to improve the efficiency of their operation. This would include arrangements to spread any additional costs through the phasing in of new technology.

12.4 The additional costs, however, should be largely offset by efficiency savings in the form of reduced bureaucratic burdens for firms and more effective and efficient pollution control techniques (see A3.3 - 3.4 above). The overall costs to industry operating scheduled processes are not therefore expected to be any greater under the proposed system than under the existing sectoral controls, and in many cases they could be less in the longer term.

12.5 It has been collectively agreed at Ministerial level in the context of the proposal to amend waste disposal legislation that disposal standards are too low. This will result in a small increase in the cost of solid waste management which will be borne by firms unless they can implement improved waste reduction measures. The integration proposals are designed to facilitate the implementation of such measures during a firm's installation of a new process.

12.6 The Health and Safety at Work Act grants powers to charge firms for regulatory activities which are not currently exercised by HMIP. They would be consolidated into the new proposals. The total costs of charges to all industry will be between £1.5m-2m p.a; which would be of the order of £500-£700 p.a. for each plant.

12.7 Views would be welcome from industry on the financial implications of these proposals.

Q13. Is there any scope for making specific provisions for small firms/exempting them from the regulation's requirements?

A 13.1 Careful consideration will be given to the position of small firms. The system would incorporate de minimis provisions to ensure that it only applied to major dischargers of the most harmful substances. The vast majority of small firms are not significant dischargers and would therefore not fall within the system. Where small firms do discharge significant pollutants HMIP will give consideration to the need not to entail excessive costs.

Wider Impact of the Regulation

Q14. How will the regulation be enforced? By central or local authorities?

A14. By HMIP as a central agency. The regulations currently enforced by other Pollution Control Authorities should not be changed.

Q15. What will be the cost to Government of introducing the new regulation?

A15.1 Demands on the Inspectorate are increasing irrespective of IPC as a result of policy decisions taken since their formation regarding the adoption of new controls on processes discharging 'red list' substances to water, the introduction of cost recovery charging and the requirement to work closely with the NRA.

15.2 The chief effect of the proposed changes would be the need for some additional administrative support. The increase in resources for HMIP solely attributable to integration would be small - in the order of three additional Inspectors and two support staff out of a total current complement of 202. There would also be a transitional increase of the burden on the Inspectorate whilst the scheme is launched and IPC notes are produced, but it may be possible to offset this to some extent by a temporary re-allocation of resources and by buying-in advice.

A15.2 The implementation of the proposals would result in a reduction in public expenditure of about £1.5m-2m p.a., which is the level of the cost recovery charges for HMIP's authorisation activities (see A12.6 above).

Q16. What will be the costs to local authorities of the new regulation?

A16. Nil.

Q17. What can be taken to measure the effectiveness of the new regulation in meeting its objective?

A17.1 Line management systems and MINIS would be used to monitor HMIP's operational efficiency. Summary performance indicators would be published in HMIP's annual report (e.g. number of authorisations issued, number of inspections etc)

A17.2 A strategy for policy evaluation is being prepared which would provide periodic checks that the policy is meeting its objectives. This will be carried out through: reporting by inspectors; supplemented by detailed studies of specific plants to indicate the environmental effectiveness of and economic efficiency of the policy. The detailed studies would include assessments of the economic and environmental impacts of integration.